

**THE ROLE OF MADA TO IMPROVE PADDY  
SUB-SECTOR IN KEDAH DARUL AMAN**

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**MASTER OF SCIENCE (MANAGEMENT)  
UNIVERSITI UTARA MALAYSIA  
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SUB-SECTOR IN KEDAH DARUL AMAN**

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This Master Project paper submitted to:  
Othman Yeop Abdullah Graduate School of Business  
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## ABSTRACT

Agriculture still plays an important role and gives contributions through its projects or programs to the development of Malaysia; self-sufficiency level has been focused on paddy and rice production with the granary areas as the concentrated area for paddy production areas. Kedah, which known as the “Rice Bowl of Malaysia”, is one of the states in Malaysia with the biggest granary areas, and it is under the management of Muda Agriculture Development Authority (MADA). Even though MADA contributes about 38.90% to the total national rice production but MADA still faces the low productivity issue. This study conducted to explore the programs/projects that have been planned and implemented by MADA and the government to overcome the issue. Moreover this study also wanted to analyse the impact of the programs, projects and policies to increase total paddy production and improve the paddy sub-sector in Muda Area, Kedah. This study used descriptive analysis with observation, seminar, and interview with MADA and UPEN representatives as the source of primary data. Data checking of the official document, related articles and journals are used as the secondary data. There are five programs/projects that have been planned and implemented by MADA in order to overcome the productivity issue and with good management of paddy farms under MADA it will continually improve. The impact of the programs and policies by MADA and the government show a positive impact, each of the programs and policies contribute to the increase of total production and the average gross yields the paddy production in Muda Area, Kedah.

## ABSTRAK

Pertanian masih memainkan peranan yang penting dan memberi sumbangan melalui projek-projek atau program pembangunan di Malaysia, tahap sara diri telah memberi tumpuan kepada pengeluaran padi dan beras dengan kawasan jelapang padi sebagai kawasan pekat bagi kawasan pengeluaran padi. Kedah, yang dikenali sebagai "Jelapang Padi Malayia", adalah salah satu daripada negeri-negeri di Malaysia dengan kawasan jelapang padi yang terbesar, dan ia adalah di bawah pengurusan Lembaga Kemajuan Pertanian Muda (MADA). Walaupun MADA menyumbang kira-kira 38,90% kepada jumlah pengeluaran beras negara tetapi MADA masih menghadapi isu produktiviti yang rendah. Kajian ini dijalankan untuk meneroka program / projek yang telah dirancang dan dilaksanakan oleh MADA dan kerajaan untuk mengatasi isu. Selain itu kajian ini juga mahu mengkaji impak program, projek dan dasar-dasar untuk meningkatkan jumlah pengeluaran padi dan meningkatkan padi sub-sektor dalam Kawasan Muda, Kedah. Kajian ini menggunakan analisis deskriptif dengan seminar pemerhatian, dan temu bual dengan wakil MADA dan Unit Perancang Ekonomi Negeri (UPEN) sebagai sumber data primer. Data memeriksa dokumen rasmi, artikel dan jurnal berkaitan digunakan sebagai data sekunder. Terdapat kira-kira lima program / projek yang telah dirancang dan dilaksanakan oleh MADA untuk mengatasi isu produktiviti dan dengan pengurusan yang baik ladang padi di bawah MADA ia akan terus meningkatkan. Kesan program dan dasar oleh MADA dan kerajaan menunjukkan kesan positif, setiap program dan dasar menyumbang kepada peningkatan jumlah pengeluaran dan hasil kasar purata pengeluaran padi di Kawasan Muda, Kedah.

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**Kedah Darul Aman, January 2013**

**Dian Rahmita Sari**

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## **LIST OF ABBREVIATIONS**

<b>MADA</b>	<b>Muda Agriculture Development Authority</b>
<b>KADA</b>	<b>Kemubu Agriculture Development Authority</b>
<b>PSUK</b>	<b>Pejabat Setia Usaha Kerajaan</b>
<b>UPEN</b>	<b>Unit Perancang Ekonomi Negeri</b>
<b>EXCO</b>	<b>Executive Committee</b>
<b>FAMA</b>	<b>Federal Agriculture and Marketing Authority</b>
<b>JPS</b>	<b>Jabatan Pengairan dan Saliran</b>
<b>FO</b>	<b>Farmers Organization</b>
<b>IADA</b>	<b>Integrated Agriculture Development Area</b>
<b>LPP</b>	<b>Lembaga Pertubuhan Peladang</b>
<b>SIPP</b>	<b>Paddy Production Incentive Scheme</b>
<b>BERNAS</b>	<b>Beras Nasional Berhad</b>

# CHAPTER I INTRODUCTION

## 1.1 Background of the Study

Agriculture remains the most likely source of significant economic growth in many developing countries (Okezie & Baharuddin, 2012) and Malaysia is one of those countries. Agricultural sector in Malaysia has been the core sector of the Malaysian economy for many years, even though nowadays development focuses on industry sectors. Agriculture still plays an important role and gives contributions through its projects or programs to the development of Malaysia. Hence the sector plays a vital role in partially meeting the food requirements of the nation and it is always the policy of the government to encourage domestic food production wherever feasible (Nik Fuad, 2005).

Related to ability of agriculture sector to provide enough food or food security for its people, Malaysia has no specific policies on food security, but it has been embedded in the theme of the self-sufficiency level that referred to paddy or rice sector. Since rice is the main staple food in Malaysia, self-sufficiency level has been focused on paddy and rice production (Alam, Siwar, Murad & Toriman, 2011) and the rice growing and paddy production areas are concentrated in the granary areas.

Kedah is one of the states in Malaysia with the biggest granary areas, also known as 'Rice Bowl of Malaysia' (Malay: *Jelapang Padi*). With its agricultural fits climate and topography characteristic, most of the population of Kedah, especially in the rural areas, still rely on this sector as their source of income. Paddy has risen up and become the main crop of this state. Below are types of crops planted in Kedah in five years range from 2006 to 2010.

**Table 1.1 Types of crops in Kedah year 2006 – 2010**

Crops Area (Hectares)	2006	2007	2008	2009	2010
Paddy	210,331	210,972	210,900	116,571	116,571
Rubber	158,989	166,713	**	Other agency	Other agency
Palm Oil	76,330	75,096	**	Other agency	Other agency
Sugar cane	6,482	N.A	79.2	79	115
Tobacco	191	92	N.A	N.A	Other agency
Fruits	16,984	N.A	16,552	17,000	26,675
Coconut	3,176	N.A	3,090	3,090	3,402
Vegetables	1,287	N.A	1,344	1,330	1,440
Others	392	N.A	622	630	680

*Source: Kedah Department of Agriculture*

N.A : Non-Available

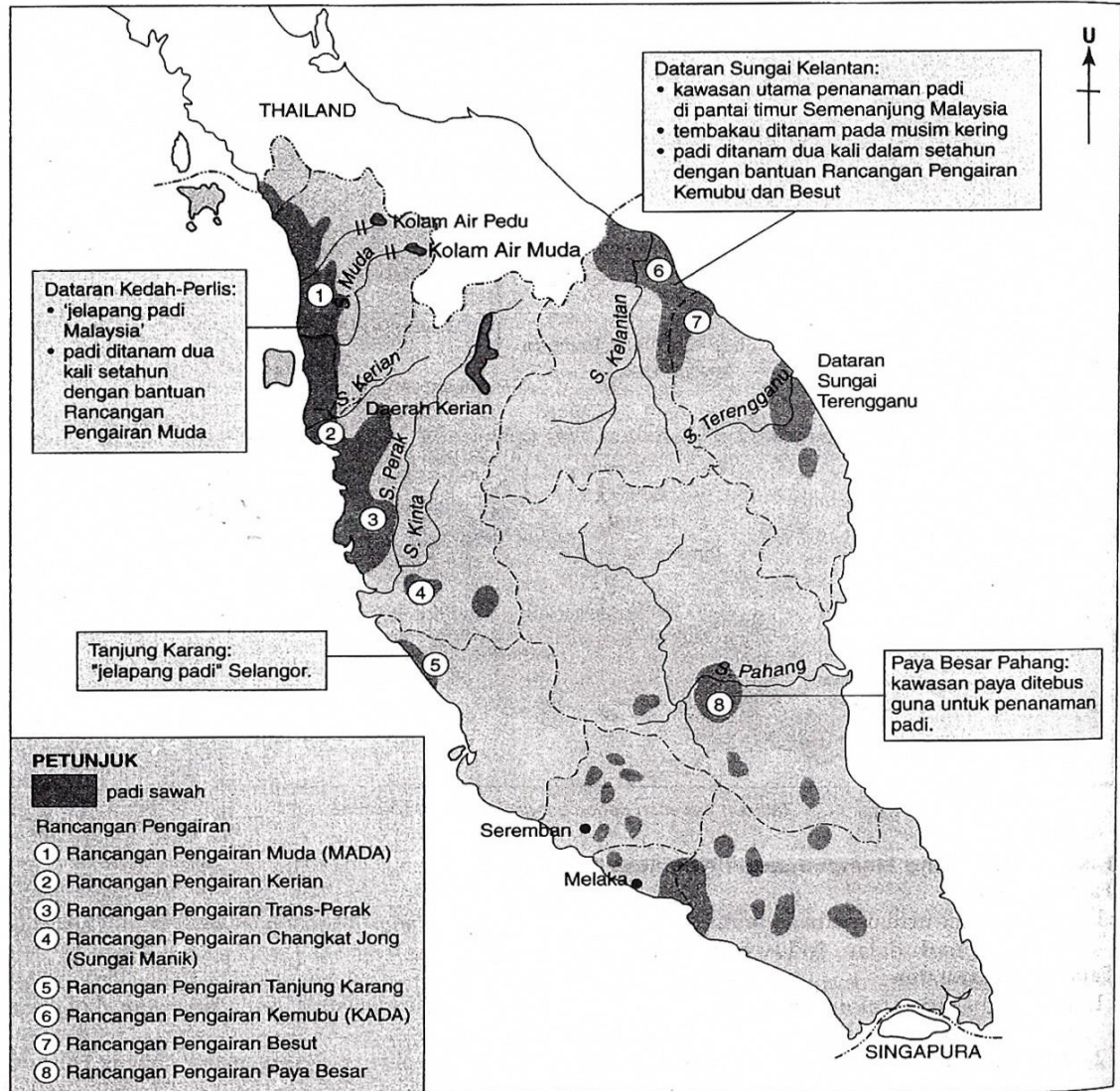
P : First Data

\* : Estimated data

\*\* : Not defined

Table 1.1 shows that the largest allocation of land used in the state agriculture sector from 2006 to 2010 is Paddy sector. The second largest allocation is for rubber and the third largest is allocated to fruit sector which is now being promoted by the Kedah government in a program called 'Holland of the East'.

There are eight main granary areas in Peninsular Malaysia i.e. Muda Agricultural Development Authority (MADA), Kemubu Agriculture Development Authority (KADA), Kerian Sungai Manik, Barat Laut Selangor, Pulau Pinang, Seberang Perak, Ketara, and Kemasin Semerak. In Kedah, the granary areas are managed by the MADA which also covered irrigated paddy farms in Perlis. Among eight granary areas, MADA is the most important area and dominant entity as given in Nik Fuad (2005) since it is the largest contributor and has the largest irrigated areas among others. Figure 1.1 shows the granary areas in Peninsular Malaysia.



**Figure 1.1**  
**Granary areas in Peninsular Malaysia**

Source: [http://wwwsmkpujutgeografi.blogspot.com/2012\\_01\\_01\\_archive.html](http://wwwsmkpujutgeografi.blogspot.com/2012_01_01_archive.html)

Total paddy planted in Muda Area is 96,558 Ha with total paddy production from its 4 regions with 27 localities and 55,130 farmers is 976,192 Metric Tonne in 2009. This means that Muda Area contributes about 38.90% to the total national rice production. The details of MADA total production can be seen in Table 1.1 and Appendix I shown 4 regions of Muda Area.

**Table 1.2 National Rice Productions From the Granary Areas.**

Granary Area	Area (Ha)	Area (%)	Contribution to national Production (Metric Tonne and %)	
			2009	%
MADA	96,558	23.22	976,192	38.90
KADA	32,167	7.74	209,950	8.37
IADA K.S.Manik	27,829	6.69	187,117	7.46
IADA B.L Selangor	18,814	4.52	202,633	8.07
IADA P. Pinang	10,305	2.48	107,285	4.28
IADA SBG.PERAK	8,529	2.05	70,294	2.80
IADA KETARA	5,156	1.24	49,082	1.96
IADA K.SEMERAK	5,220	1.26	16,853	0.67
<b>Total Granary</b>	<b>204,578</b>	<b>49.20</b>	<b>1,819,406</b>	<b>72.51</b>
<b>Total Non-Granary</b>	<b>211,213</b>	<b>50.80</b>	<b>690,072</b>	<b>27.50</b>
<b>Malaysia</b>	<b>415,791</b>	<b>100.00</b>	<b>2,509,478</b>	<b>100.00</b>

*Source: Adapted from Muda Agriculture Development Authority, MADA, PPT, 2012*

Although only a third of the Muda Area has tertiary development, the production of paddy from Muda Area helps contribute to the country self-sufficiency level about 40% of the nation paddy production. Intensification of tertiary system in the remaining area is set to increase the production in Muda Area with new mandate from the government that agriculture is the third engine of growth for the nation economy. Hence, rice production in Muda Area will continue to play important role in the nation development.



According to this matter, researcher based this study to gain knowledge about the programs that have been planned and done by the government to improve or to manage agricultural sector especially paddy sub-sector in Kedah. This study also wanted to study about the involvement of government policies in terms of agricultural sector improvements. Moreover, researcher's expectation of this study is to be benefit for Aceh government. Since Kedah and Aceh have some similarities in agriculture potential, it is hoped that Kedah could be a role model to Aceh to enhance its agriculture sector especially for paddy crops.

## **1.2 Problem Statement**

Agriculture particularly paddy sub-sector considered as less profitable sector in terms of low productivity and income than other sectors should be proved otherwise by farmers in the Muda area. Among the factors identified as contributing to the low level of productivity, including an average of uneconomic farm size, low level of mechanization and unsystematic farm management practices. MADA management definitely identifies the problem and takes proactive steps to alleviate the issues (Syed Razak, 2004). To meet the national food requirement and broaden the export capacity of the agricultural sector, all the major food commodities show the improvement in the self-sufficiency levels but not for paddy or rice.

Therefore, MADA needs to make or design effective programs or projects to overcome the issue. Based on this issue, this study wanted to explore the programs, projects that have been planned and implemented by the government and MADA together with the policies, to improve the agricultural sector especially paddy sub-sector in Muda Area in Kedah.

### **1.3 Objectives of the Study**

1. To study MADA's and government's programs and projects in order to improve paddy sub-sector in Muda Area, Kedah.
2. To study the impacts of MADA's programs and projects and the policies that have been made and implemented by the government for the improvement of the agriculture sector to the paddy farmers' income.

### **1.4 Research Questions**

There were questions raised up to conduct on this study. These lists of questions mentioned were as follows:

1. What are the programs and projects that were made by MADA and government to improve the paddy sub-sector in Kedah especially in Muda Area?
2. What are the impacts of those programs and projects in terms of agriculture sector improvement in the paddy farmers' income.
3. What are the impacts of the government policies in terms of agriculture sector improvement in the paddy production?

### **1.5 Significance of the Study**

The findings of this study provide knowledge about the improvement of agriculture sector by MADA in Kedah. The findings of this study will provide information for other students and researchers, as one of the sources which help in the learning process. This study also will provide valuable information related to the policies and action plan by the Malaysia's government to improve Aceh's agricultural sector. The finding from the study provides essential references and evidence for future

researchers on agricultural sector especially in Muda Area. In point of fact, similar research can be conducted in different aspects to enhance the stability and reliability of the study.

### **1.6 Scope of the Study**

This study was conducted in Kedah which is known as the ‘Rice Bowl of Malaysia’ and the state with the largest irrigated paddy area among other states in Malaysia. The main focus of this study is the paddy sub-sector, government’s programs, projects and policies and their implementation to improve paddy sub-sector in Muda Area in Kedah Darul Aman.

## **CHAPTER II STATE ECONOMIC PLANNING UNIT**

### **2.1 Introduction**

Wisma Darul Aman, the center of state's governmental activities of Kedah, is the landmark of Alor Star as the capital city of Kedah and the pride of the people of Kedah as well. Wisma Darul Aman, which also houses the State Legislative Assembly Complex as a whole contains administrative offices of the State Government offices as follows; KDYMM Tuanku Sultan and DYTM Raja Muda Offices, of Chief Minister's Office, Members of the State Executive Council, State Secretary Office, Executive Council Office, the Office of General Laws Counsel, State Financial Office, State Development Office, Economic Planning Unit and others. The organizational chart for Wisma Darulaman can be found in Appendix II.

The role of the state secretary's office (PSUK) as the prime mover of the social-economic policies, which is outlined by the state government has become more challenging periodically. Align with the development of the public service sector on the federal and world level, PSUK also faced with new challenges and high expectations from stakeholders and customers (Aziz, 1993).

This is strongly connected with the office vision and mission. The vision of PSUK is to be one of the best state public services in Malaysia by the year 2014. The mission is to be responsible for the development's agenda and the administration of the Kedah Darul Aman State in an effective and efficient ways not only for the state itself but the people as well.

These are the roles of the PSUK Office:

- a. Coordinating, implementing and monitoring the development's policies that have been decided by the State/Federal.
- b. Coordinating and managing the State Civil Service staff to enhance the service quality by managing human resources efficiently.
- c. Coordinating and implementing the policies of the development of socioeconomic to improve the well-being of the people.
- d. Planning and monitoring the implementation of policies and development projects undertaken by the Local Government Authority to meet the aspirations of the ruling and the federal government/state.
- e. Coordinating, implementing and monitoring all activities involving formal, semi-formal and also informal events which involving the KDYMM Tuanku Sultan and KDYMM Tuanku Sultanah and other events decided by state and federal governments.
- f. Implementing, coordinating, and reviewing all decisions that have been made by the state and federal government to ensure the smooth implementation of these decisions.

PSUK is divided into two sections namely Pentadbiran (Management) and Unit Perancang Ekonomi Negeri (the State Economic Planning Unit/UPEN). Management section deals with the administration all matters related to human resources, finance, event management and protocol, administration and management of buildings and assets. UPEN section itself is more focus on the development of macro and each sector. PSUK

organizational charts can be found in Appendix III (Fail Meja Penolong Pengarah Pertanian, 2012).

## **2.2 UPEN**

UPEN Kedah was established on August 6<sup>th</sup> 1973 by the second Prime Minister of Malaysia Amat Berhormat Tun Abdul. UPEN responsibilities are to design and monitor the development on the state level in order to achieve the state's development fundamentals.

Ever since UPEN has formulated the long-term development plan of Kedah, moreover, UPEN also provides the list of every development projects in the 5-year plan under the federal and state government financial support. The vision of UPEN is to be an efficient and effective a socioeconomic development planning agency of Kedah.

UPEN's mission is to enhance the socioeconomic development phases and move forward with the plan of strategic projects, to increase the level of life quality and well-being of its people with an effective development plan, to encourage optimising the use of the state's natural resources.

There are several functions of UPEN Kedah for instance: response to develop and evaluate the policies, strategies and socioeconomic development programs on the state level, responsible for data collecting and publishing the Statistic Book of Kedah annually; makes planning and provide the development projects for a 5-year plan and the midterm review of the state.

Furthermore , UPEN also coordinates the plan related to activities at the inter sector level; making plans for the implementation of state's special projects; monitoring the performance of every development programs/projects undertaken by sector; developing and providing state-level economic development plan.

Moreover, UPEN also plays a role as the secretariat to the state privatization program; act as an intermediate agency between the State and the Federal; and as the secretariat of Executive Committee (EXCO) for these sectors below:

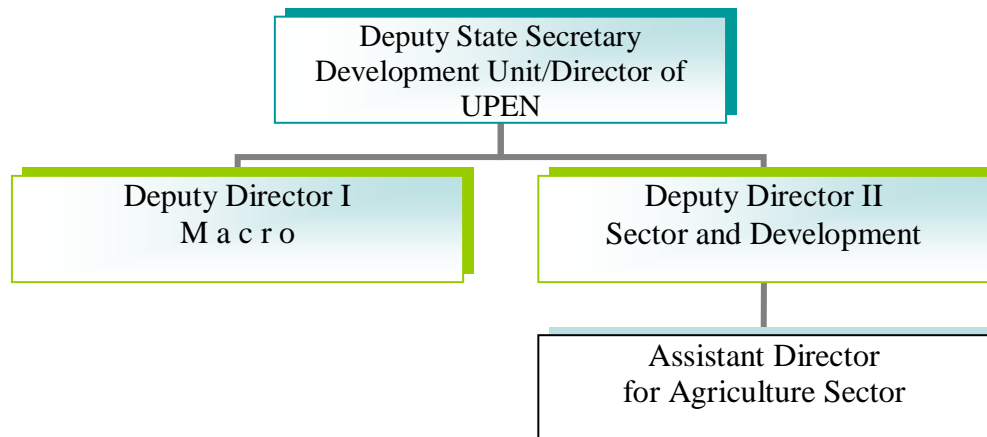
- a. Agriculture and Agro-based Industry.
- b. Rural development.
- c. Industry, Investment, Biotechnology Development and IMT-GT.
- d. Works and Public Facilities.
- e. Regional Planning, Transport and IMT-GT.
- f. Rural Development and Poverty Eradication.
- g. State Economic Planning and Environment.
- h. Council of Village / Community, Women and Family Development,
- i. Tourism.
- j. ICT, Science and Technology.
- i. Council of State Action and Malaysian Centre for Geospatial Data Infrastructure (MyGDI).

Most of the development in Kedah is more focused on the agricultural sector. One of the reasons is agriculture is a sector which experienced a steady growth. It is also in accordance with Kedah's mission. The Kedah's mission is to become the destination for investment and food production hub in Malaysia. In order to achieve this mission, UPEN has designed an Halatuju Pembangunan Pertanian Negeri Kedah Darul Aman 2008-2015 (Kedah Darul Aman's Agricultural Development Direction 2008-2015) as the

policy or fundamental of all the projects or programs in term of the development in the agricultural sector.

### 2.3 Agriculture Sector and Development

Kedah as agricultural state is one of the states with natural characteristic which is suitable for agricultural expansion. Kedah is known as a rice-producing state in history and until now the government still working continuously to move forward the development of agriculture, with the definite targets to increase farmers' income because it has been known that most of the villagers, especially in rural areas still depend on this sector as their main source of income. Agriculture is under the authority of Deputy II for the sector and its development of the two sections under the direction of Deputy State Secretary (Development) / Director of UPEN. Below is the organizational chart for agriculture sector under UPEN.

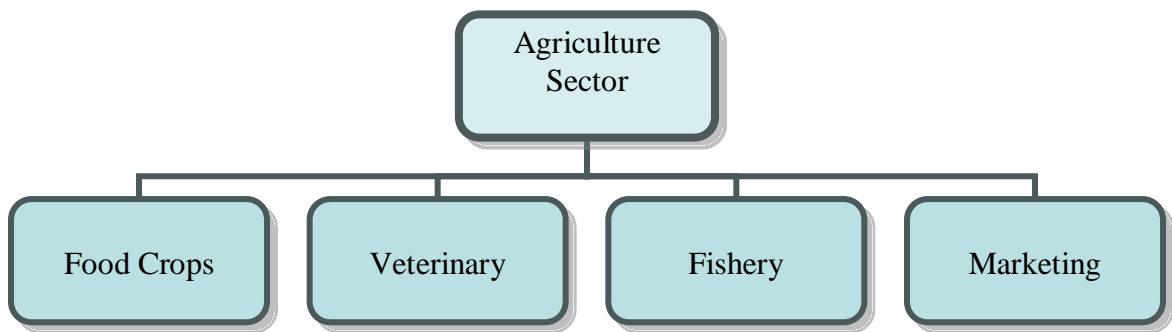


**Figure 2.1 Organizational chart of agricultural sector**

*Source: Fail Meja Penolong Pengarah Pertanian, UPEN Kedah*



There are four sub sectors in the agricultural sector; food crop, veterinary, fishery, and marketing as shown in Figure 2.2. The food crop sub sector mostly focuses on projects the ‘Rice Bowl of Malaysia’ and ‘Holland of the East’. Veterinary, in this sub sector, there are many partially commercial and commercial veterinary have been built by the government. As for the fishery sub sector, marine capturing fish which has been given many contributions especially inshore fisheries and deep-sea fisheries. Marketing as the least important activity for every product, where Federal Agriculture and Marketing Authority (FAMA), is the leading food and agricultural marketing agent.



**Figure 2.2 Agricultural Sector and Development Focuses**

*Source: Halatuju Pembangunan Pertanian Negeri Kedah Darul Aman 2008-2015*

The objectives of the agricultural sector is to plan the implementation of the agricultural program, veterinary, and fisheries based on the direction of the agricultural plan 2008-2015, to control and supervise the projects for the food and ‘Holland of the East’. Moreover, this sector also needs to ensure the private sector which are involved in the agricultural project could raise their income and productivity. The synchronization between the report of all the programs or projects which impact to farming, veterinary, and fishery activities is also made by this sector in UPEN.

## **CHAPTER III LITERATURE REVIEW**

### **3.1 Introduction**

This literature review discusses on the definition and theories about the problem in this study which includes MADA's programs, projects and the impacts of policies to increase and improve the paddy sub-sector in Muda Area in Kedah.

### **3.2 MADA**

In Kedah, one big plan to generate an economic community of farmers, Muda Agriculture Development Authority (MADA), was formed in 1970. Muda Irrigation Scheme was conducted under the provisions of the Rancangan Malaysia Pertama (First Malaysia's Plan). It is the integration of three government agencies function namely Jabatan Pengairan dan Saliran (JPS), Jabatan Pertanian and Lembaga Pertubuhan Peladang (LPP) ([www.mada.gov.my](http://www.mada.gov.my)).

MADA's mission is to be the leading agency in the development of a modern, efficient and stable rice industry in Malaysia, and also as the prime mover in the socio-economic development of the farming community in the Muda Area. The main objectives of this project are to reduce reliance on rice imports and increase farmers' income.

MADA has been entrusted to sustain the duties as outlined, namely to promote, stimulate, facilitate and assist economic and social development in the Muda Area; to plan and undertake the Muda Area regarding matters of the agriculture development in accordance with the authority provided to MADA by the States of Kedah and Perlis.

Covered an area of 125,987 hectares in Kedah, and about 20,304 hectares of the area is in Perlis. Hence, MADA has set two main goals i.e to develop and increase well-being of the country's yield requirement.

To ensure that the set goals can be successfully achieved, MADA has set key functions that should be performed efficiently and effectively, as follows: providing agricultural services and irrigation infrastructure to meet the needs rice country; managing water resources efficiently and effectively; increasing revenue through activities non-rice farmers; developing agro-based industries and creating commercial entrepreneurs' standard; shaping and developing farmers' institutions; assisting farmers' economic and social development.

After the irrigation scheme project, MADA also provided follow-up project, known as Project Muda II. This project is based on the aim of MADA to raise the farmers' income by introducing the double cropping system and direct seeding system. Since MADA is the largest paddy granary area in Malaysia, its performance is extremely important as it influences the overall rice industry performance (Nik Fuad, 2005).

Ever since, MADA role is not merely a matter of providing technical support and assistance of irrigation farming, but it has become a center of community development. In addition from the paddy matters, MADA also provides programs for socio lives of farmers. Income generating programs were extended with small industries such as snack products, fruit crops, protection of freshwater fish, goats and so forth. In fact, the aspects of this development bypassed to engage students and make it a comprehensive community development plan.

### **3.3 Programs, projects and policies to improve agriculture sub-sector**

Program is a series of steps to be carried out or goals to be accomplished or, a program is a system of projects or services intended to meet a public need (ardictionary.com). In other words, agriculture program is a series of steps made by the government in order to achieve the agriculture sector development goals in terms of the improvement of the sector. While project according to Merriam-Webster.com (2013) is a specific plan or design, by which agricultural project is a specific plan to achieve the program aims. Hence, programs or projects that have been made can serve as a guide or outline to the implementation of the development of what have become the focuses of government and achieve the goals of development.

Programs and projects are important in the implementation of every policy. There are many forms of government policy. It could be in the forms of commitment, Ministerial statements etc., and it could be created formally in the terms of government policy. According to Tovo (2011), policy is a statement of principles and/or values that mandate or constrain the performance of activities used in achieving institutional goals. While a good policy is a policy that get implemented and acceptable politically and socially, realistic, act as a guide and make sure the consistency but flexible at the same time (Tovo, 2011). A good policy should be based on experience with clear and measurable targets which can be measured and monitored.

According to Robson, Rottger and Shepherd (2011), agricultural policy options to support sustainable intensification of crop production could include:

- Seed sector development;
- Farmer education and extension;

- Incentive schemes for adoption of sustainable price;
- Schemes to value ecosystem services and penalize unsustainable practices;
- Integrated approaches to soil fertility management;
- Investment in irrigation and rural infrastructure for processing, storage and transport;
- Promotion of private sector input delivery and removal of policy constraints that act as a disincentive for this;
- Formulation of policies that promote sustainable rural financial intermediation.

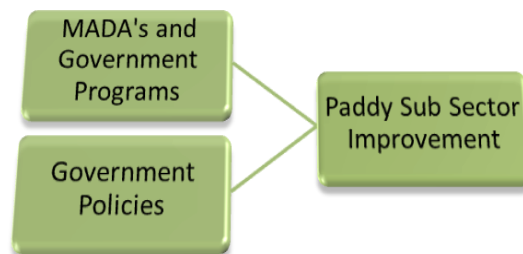
According to Nik Fuad (2005), government programs and policies designed to influence production, producer incomes, prices, imports, stocks and self-sufficiency level have been a prominent feature of the Malaysian rice sector for many years. The Malaysian government attempts to influence the supply and demand for rice through infrastructural development and market interventions, the principal objectives to increase incomes of farmers and the national rice self-sufficiency level (Nik Fuad, 2005).

The relevant long-term development strategy for the agricultural sector in Malaysia, and other developing countries, is to raise the productivity. Improvements in agricultural productivity will create social and economic ripple effects. With increased incomes, small farmers can better feed their families, send their children to school, provide for their health, and invest in their farms. This makes their communities economically stronger and more stable (Gates and Gates, 2011).

### 3.4 Framework of the Study

A conceptual framework (theoretical framework) is used in research to outline possible courses of action or to present a preferred approach to an idea or thought. Theories are formulated to explain, predict, and understand phenomena and, in many cases, to challenge and extend existing knowledge, within the limits of the critical bounding assumptions. The theoretical framework introduces and describes the theory which explains why the research problem under study exists (<http://libguides.usc.edu/content.php>).

This study is going to identify programs and projects that have been planned and implemented by MADA and the government to improve the agriculture sector in Kedah. Moreover, this study is also going to analyse the impact of the policies related to the improvement of agriculture sector especially paddy sub-sector through farmers' income. Below is the framework of this study.



**Figure 3.1**  
**The case study framework**

## **CHAPTER IV METHODOLOGY**

### **4.1 Research Design**

Qualitative research is an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting Cresswell, (1994 in Shelmerdine, 2011). It aims to generate descriptions and situational interpretations of phenomena for modifying understandings of the phenomena (Shelmerdine, 2011) According to Hancock (1998), case study as one of the major types of qualitative research design is one of research approaches which can take a qualitative or quantitative stance. Case study research used to describe an entity that forms a single unit such as a person, an organisation or an institution.

Qualitative case study is an approach to conduct research that facilitates exploration of a phenomenon within its context using a variety data sources. This ensures that the issue is not explored through one lens, but rather a variety of lenses which allows for multiple facets of the phenomenon to be revealed and understood. Once the researcher has determined that the research question is best answered using a qualitative case study and the case and its boundaries have been determined, afterwards researcher must consider what type of case study will be conducted (Baxter an Jack, 2008). According to Yin, (2003 in Baxter and Jack, 2008), there are three types of case study; explanatory, exploratory, and descriptive.

This study uses the descriptive analysis. Descriptive study is a study which describes and interprets data and this study has a limitation in the effort to solve a

problem, situation or event as it is, therefore descriptive study is merely revealing facts or facts finding (Nawawi, 2007 in Khoirun Nisa', 2008).

In this study, researcher will describe and present the data which was obtained, related to the programs and projects done by Muda Agriculture Development Authority (MADA) in order to improve the agricultural sector by increasing farm' productivity and the policies related to improve agriculture sector.

#### **4.2 Data and Data Source**

This study is using the primary and secondary data. The primary data researcher obtained by doing an interview with Unit Perancang Ekonomi Negeri (UPEN) and MADA representatives by attending a meeting with open questions session, seminar, doing an observation at UPEN and MADA. The secondary data researcher acquired with data checking from the previous study of agricultural sector in Malaysia and Kedah especially. Other resources for the secondary data are from the Agricultural Development Guidance of Kedah Darul Aman State 2008-2015, Kedah Development Action Plan 2010 (Agricultural Sector), and related documents from UPEN and MADA, articles and journals.

#### **4.3 Data Analysis**

Data analysis according to Bogdan and Biken (1982) in Nisa' (2008) is the effort by means of working with data, organizing data, sort it out to be a small manageable units, synthesizing data, searching and finding the patterns, discovering what important and what have been learned, and deciding what can be told to others.

Based on this theory, researcher will describe and interpret about all data researcher obtained while researcher doing industrial attachment at UPEN from 17th



September 2012 until 20th December 2012. With the limit of only 3 and half months industrial training, researcher aware that the data got was also limited.

### **Limitation of the Study**

Researcher did not include interview with farmers, this is due to the limitation of time and transportation to get to the farmers. Researcher did not deny that this study might have lack of data validity, bias and lack of objectivity.

## **CHAPTER V FINDINGS AND DISCUSSION**

### **5.1 Introduction**

Kedah has continually tried to make an effort to improve the agricultural sector in the state through the Muda Agriculture Development Authority (MADA). MADA has been designed, planned and implemented some programs and projects. Within these programs and projects it is hoped that farmers become more productive, active in every aspect of farming activities.

### **5.2 Programs and Projects**

Government and MADA have been designing and implementing several highly rated programs and projects to improve the agricultural sector which could be done by overcoming the productivity issue. Paddy farms in non-granary areas will be converted to the cultivation of high-value crops such as vegetables and fruits, as well as the aquaculture activities. The management of paddy farms in granary areas will continue to be improved through the formation of more mini estates and group farms. Concerted efforts will be continued to increase yield through better ground leveling, efficient water management, use high yielding varieties, increasing both planting and cropping intensity as well as minimizing post-harvest losses.

The following details about some programs and projects planned by the government and MADA;

**a. Three models of land management;**

There are three models for managing the land that the farmers have, it is mentioned and explained as follows;

*Fixed rental:* This model requires the tenant to pay to landowner a fixed rental every season, part of which is paid in advance, e.g. five seasons of rental paid in advance. All risks of the venture including fluctuations in the paddy price of unmilled rice and costs of farming are borne by the tenant;

*Profit sharing:* This model practice is the tenant and land owner share the risks, revenue and costs of the venture. However, the tenant guarantees the landowner a minimum income equivalent to the prevailing rental rate; and

*Management fee:* The landowner hires the tenant to farm land. The tenant receives a fee for every tonne of net output produced. All fluctuations in revenue (i.e. paddy price) and costs are borne by the landowner.

**b. Land Integration Program.**

Reserved for farmers who own small farm and the farm is outside the granary areas (outside MADA and Jabatan Pengairan dan Saliran (JPS) schemes), to be able to turn to other businesses or other commodities. By doing so, farmers are expected to get opportunities to get a better income. Moreover, farmers will not deal with the water supply problem; since paddy needs and used a large amount of water therefore it must be managed carefully. Thus, the focus of paddy crops could be centralized around the granary areas.

**c. Mini-Estates Program**

Some of the rice acreage in the scheme will be developed as scale farming in the form of farm group, while the rest will be pursued on a smaller scale.

Large-scale farming, currently being developed in three models, i.e., models of agricultural entrepreneurs, mini model estate Farmers Organization (FO) and group model Department of Agriculture. This model will serve as a legal entity.

**d. Crop Rotation Program**

As for areas that are not economically viable and potentially at risk of water shortages with high operating costs can be shifted to other crops such as vegetables, limes, etc. While in a region with a strong social barriers farmer can be implemented interval program beyond the paddy season, for instance planting vegetables, etc.

**e. Alternative Employees Immersion Program**

There are two programs that can be done to overcome the age issue, such as;

- Development of the downstream industry projects, small or large for agricultural products either with rice-based commodities, such as flakes, etc.
- Primarily for the elderly farmers, to be able to hand over their farm to their heirs or sell the farm to the private sector so that it can manage and give better output.

Table 5.1 shows the improvement of MADA's programs and projects before the project started and after the project started. The differences are in terms of gross average yield, total production, value production, cropping intensity, labor use, income

and poverty level. The results are absurd between before and after the projects done by MADA.

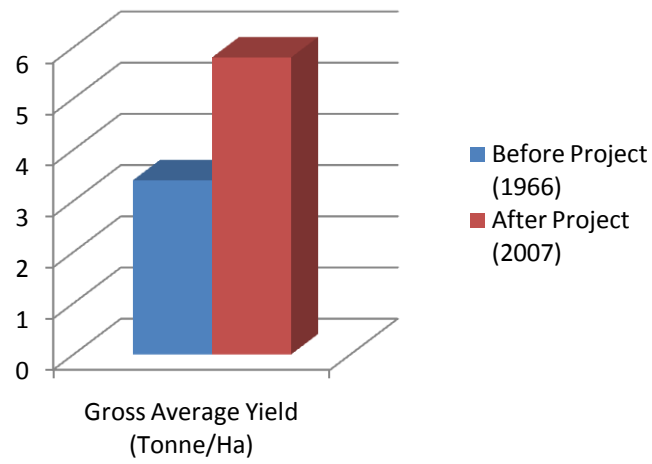
**Table 5.1 Impact of Muda Irrigation Scheme to Farmer's Income**

Impact	Before Project	After Project
Gross Average Yield (tonnes/ha)	3.4 (1966)	5.8 (2007)
Total Production	316,992 (1966)	1,090,972 (2007)
Value of Production (RM)	8.5 MIL	709 MIL
Cropping Intensity	100%	198%
Labor (manhours/season)	615 (1974) Transplanting	199.4 Direct Seeding
Net Household Income (RM/Year)	1,092	15,391
Net Household Income (RM/Month)	91	1,283
Monthly Per Capita Income (RM)	18.20	256.52
% Poverty Level		
Poor	72	2.3
Hardcore Poor	N/A	1.0

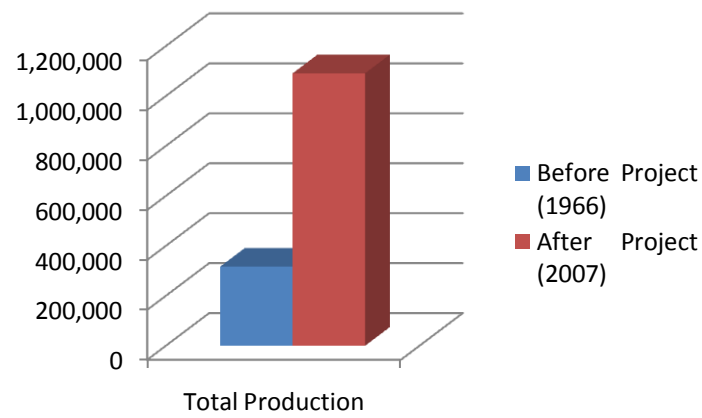
*Source: Muda Agriculture Development Authority, MADA, 2012.*

- Note:
1. Production value (RM) does not include subsidy
  2. Base on GMP (RM 750/tones)
  3. Poverty Level (2007): Poor = RM660/month, Hardcore Poor = RM400/month

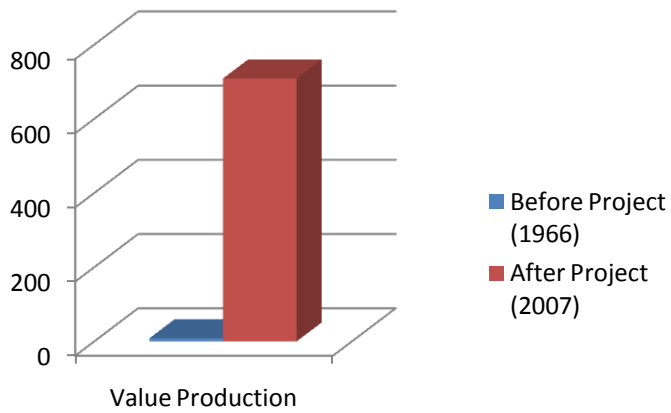
Table 5.1 shows that the gross average after the project has increased from 3.4% in 1966 to 5.8% in 2007, the trend is shown in Figure 5.3. Total production was also increased after the project runs for only 316,992 in 1966 and the number gain about 1,090,972 after the project as it is depicted in Figure 5.4. Improvement also occurs in production value with 8.5 Million before the project, after the project started it raise up to 709 Million in 2007, as well as the cropping intensity with 198% increase after the project implemented, each of the impact is illustrated in Figure 5.5 and Figure 5.6.



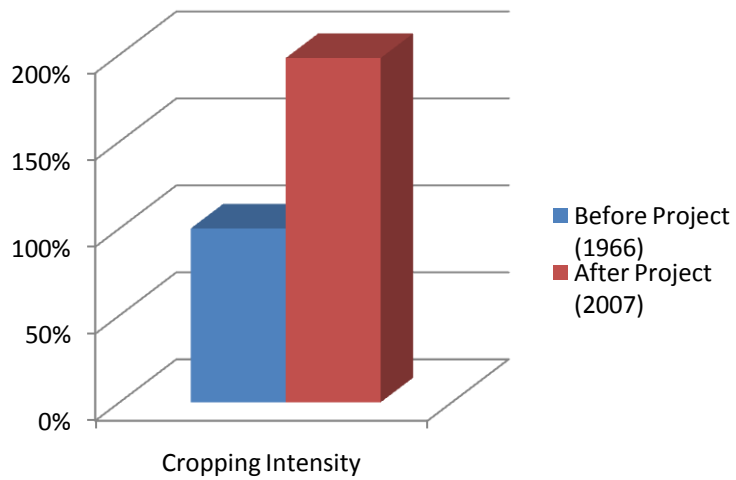
**Figure 5.1**  
**The Comparison between Gross Average Yield in 1966 and 2007**



**Figure 5.2**  
**The comparison between Total Production in 1966 and 2007**

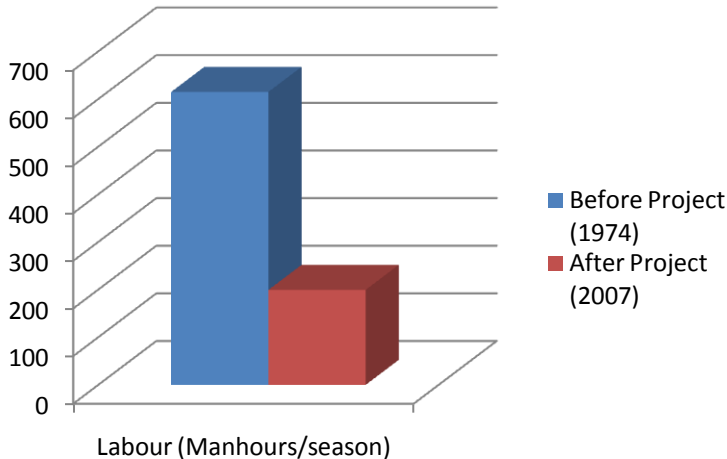


**Figure 5.3**  
**The comparison between Value of Production in 1966 and 2007**



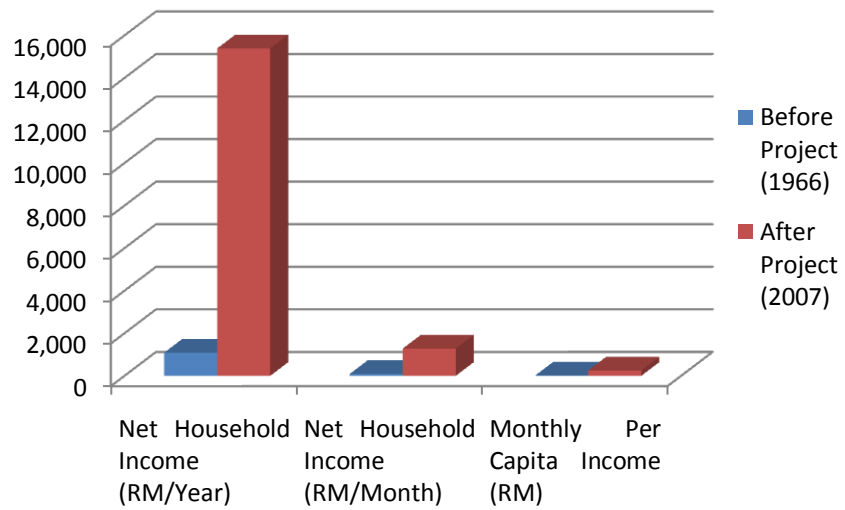
**Figure 5.4**  
**The comparison between Cropping Intensity in 1966 and 2007**

The used of labor in 2007 declined from 615 the used of man hour of each season it becoming only 199.4 man hours in 2007, the declining trend can be seen in Figure 5.7. As for the income, whether it is net household income annually or monthly along with the monthly per capita income shows the rising trend from 1966 to 2007 for each above the 100%. This is clearly shown in Figure 5.8. Above all the most interesting progress is poverty level; it decreased from 72% in 1966 to become only 2.3% of poor farmers in 2007. It could be concluded that this decline percentage of poor farmers caused by the increase of the farmers' income, the trend is shown in figure 5.9.

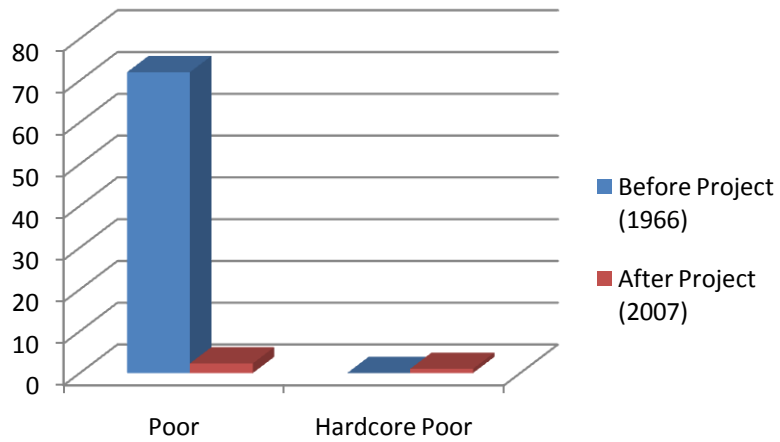


**Figure 5.5**  
**The comparison between Labor (Man hours/season) in 1966 and 2007**





**Figure 5.6**  
**The comparison between Net Income/Year/Month and Monthly per Capita Income in 1966 and 2007**



**Figure 5.7**  
**The comparison between Poor and Hardcore Poor in 1966 and 2007**

### 5.3 Policy Implication

This study will discuss five previous, new programs and policies which have been done by MADA and the government. These programs and policies are double cropping system, fertilizer subsidy, 10 Tonne Package, Incentive scheme and food security policy. Table 5.2 shows about the detail of these programs and policies impacts towards paddy production in Muda Area, Kedah.

**Table 5.2 The Impacts of MADA/Government Policy towards Increasing Paddy in Muda Area (1965-2009)**

Phase	Year	MADA's Program/Government Policy	Average Gross Yield (Tonne/Ha)	Total Production (Tonne/Ha)	% Increment		Note
					Average Yield	Total Production	
I	1965	Before RPM	3.370	316,992	-	-	Single Cropping/year
II	1976	Implementation of Double Cropping/year	4.178	770,815	23.9	143.2	Double Cropping Entirely the Whole Muda Area
III	1980	Paddy Fertilizer Subsidy Scheme	4.674	866,183	11.9	12.4	The Scheme Started in Year 1979
IV	2004	Implementation the 10 Tonne Package	5.475	1,055,457	17.1	21.8	The package started in season 2/2001(Focus on technology)
V	2008	Paddy Production Incentive Scheme	5.700	1,100,695	4.1	4.3	The scheme started in season 1/2007 (Focus on technology and management)
VI	2009	National Food Security Guaranteed Policy	6.150	1,187,663	7.9	7.9	Started in season 2/2008

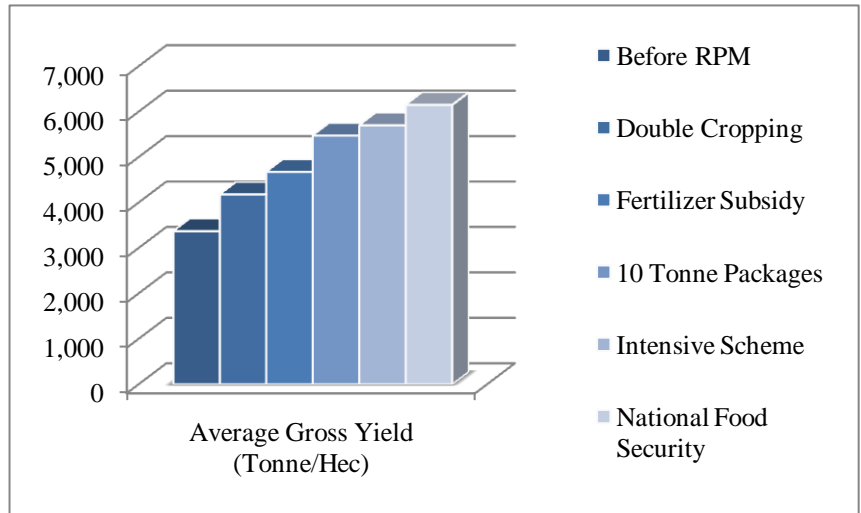
*Source: Adapted from Muda Agricultural Development Authority, MADA, 2012*

It can be seen in Table 5.2 that double cropping contributes to increase paddy total production about 143.2% and its average gross yields increase for 23.9% from the before RPM year. According to Koninck (1988), the generalization of the double cropping of paddy by MADA considerably success, it changes the patterns of paddy production especially in Muda Area. Fertilizer subsidy also shows its positive contribution to paddy total production. The total production increases about 12.4%, the

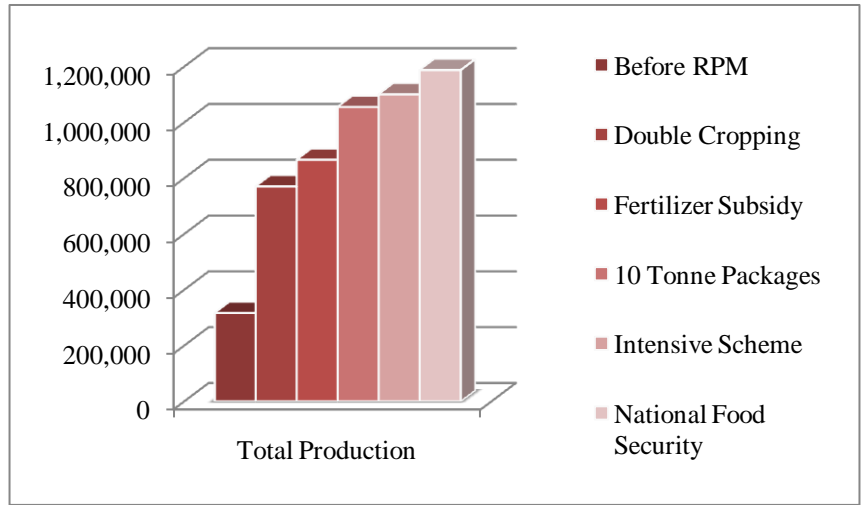
average gross yields is 11.9% after the policies implication in 1980. This result is in line with the previous study by Sarris, (2005 in Ramli, Shamsudin, Mohamed and Radam, 2012) mentioned that high government subsidies on inputs such as fertilizer and irrigation have continually benefited the rice producers in India.

Paddy production incentive scheme (SIPP) also known as the action plan to increase the national rice production. This program was introduced as a result of high world's oil prices which affected the operating costs and agricultural inputs' prices. Three incentives in this programs such cost of diesel RM100/Ha/Season, incentives of agricultural inputs RM140/Ha/Season and incentive for paddy yield improvement which granted by BERNAS. The impact of these three incentives to the total production is only about 4.3% while the average gross yields increase for 4.1%.

National food security policy program (2008-2010) contains short and long terms measures to increase productivity of the agro-food including the increase of rice production. Subsequent to this problem, the "quick win" action was introduced to increase productivity of paddy and production of rice under the National Food Security Policy. This policy contributes to paddy total production about 7.9% increases with the same increase percentage of the average gross yields. Figure 5.1 and Figure 5.2 show the increasing trends of average gross yields and total production of paddy as the impact of programs and policies by MADA and the government.



**Figure 5.8**  
**Average Gross Yields Impacts of MADA/Government Policy towards Increasing Paddy in Muda Area (1965-2009)**



**Figure 5.9**  
**Total Production the Impacts of MADA/Government Policy towards Increasing Paddy in Muda Area (1965-2009)**

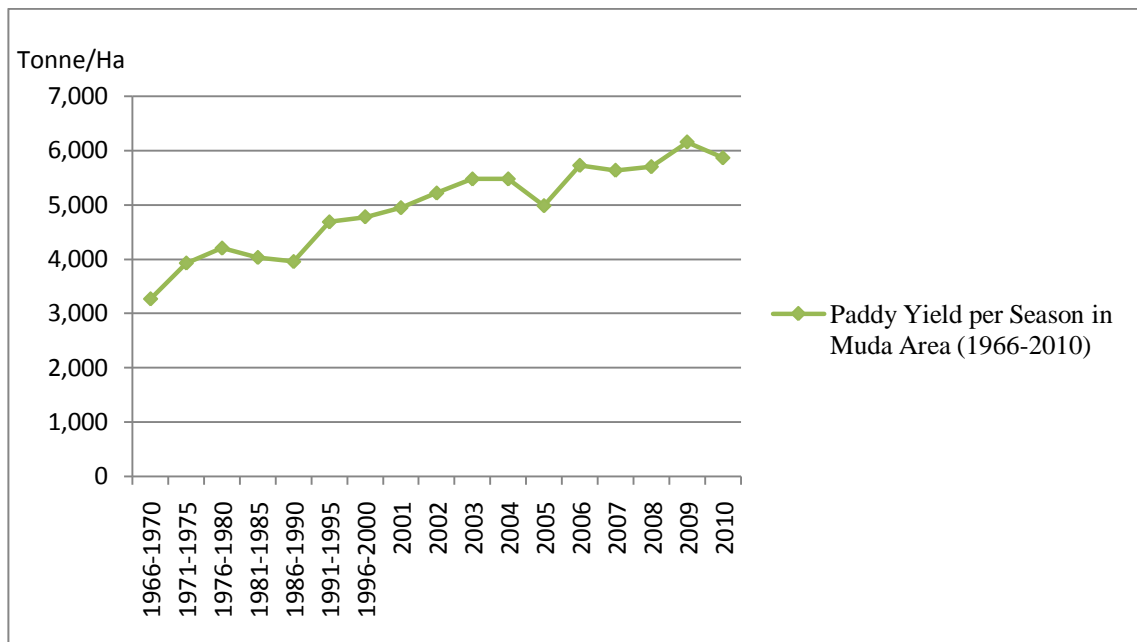
**Table 5.3 Paddy Yield per Season (Tonnes/Ha) from 1966 - 2010 in Muda Area**

Year	Yield per season (tonnes/ha)	Year	Yield per season (tonnes/ha)
1966 – 1970	3,268	2003	5,474
1971-1975	3,927	2004	5,475
1976-1980	4,202	2005	4,982
1981-1985	4,030	2006	5,724
1986-1990	3,954	2007	5,634
1991-1995	4,684	2008	5,700
1996-2000	4,778	2009	6,155
2001	4,945	2010	5,863
2002	5,215		

#note: total areas affected by flood: 18,246 ha (season 2/2005)

*Source: Adapted from Muda Agriculture Development Authority, MADA, 2012*

It can be seen from the table above that during the year 1986-1990 the decrease of paddy yields happen, due to the lack of water or no irrigation supply at the time, and in 2005, Kedah was suffered by floods all over the state which also affected the yields of paddy in Muda Area.



**Figure 5.10**  
**Increasing Trend of Paddy Yields per Season in Muda Area 1966-2010**

With the support of the policies that have been set by the government from the beginning of the founding of MADA in 1970 as one of the management of the rice planting areas. It can be seen that the production of paddy has increased not only the production as shown in Table 5.3 but also the income of farmers, although in certain years during period 1986-1990 and in 2005 paddy yield declined,. Broadly speaking, the production of rice is moving in a positive direction with the trend shown in Figure 5.10. Double-cropping system, the government subsidy, the introduction of technology and food security policy is several programs/projects and policies that give a very good impression for the production and improvement of the agricultural sector.

## **CHAPTER VI CONCLUSION AND RECOMMENDATION**

### **6.1 Introduction**

Based on the data, observations and findings that researcher obtained in this study on the programs/projects and policies in order to improve the paddy sub-sector and increase the paddy production in Muda Area, Kedah. Researcher comes up with conclusions and recommendations on the issues as follows;

### **6.2 Conclusion**

Muda Agriculture Development Authority (MADA) and the government has designed and implemented several programs and projects in order to improve the productivity level on paddy farm especially in Muda Area. These programs and projects are the three models of land management, the land integration program, mini-estates or group program, crop rotation program and alternative employees' immersion program. Moreover, these programs and projects contribute to the increase not only the production but also the income of the farmers in Muda Area, Kedah.

In line with the programs and projects, policies also contribute to the increase of total production of paddy in Muda Area especially the double cropping, 10 tonne package, fertilizer subsidy and the national food security policy. Besides that, with the steady increase of the paddy total production, average gross yield and yields per season the target of MADA to become the main paddy producer achievable.

### **6.3 Recommendation for UPEN and Agriculture Sector in General**

During the industrial training and after studying the agricultural sector in Kedah and Malaysia, researcher would like to give some ideas based on researcher understanding as follows;

- In terms of data, it is expected that to pay more attention to the data synchronization among the agriculture institutions, so it will not cause the confusion and make the information accessible those who want to do research in agriculture.
- The government is expected to find or form better ways to overcome the issues in agriculture sector, so subsidy will not be the only way to solve any agricultural issues. There must be some new approaches to make farmers could be more productive and committed to farming especially paddy farming activities.

### **6.4 Recommendation for Government of Aceh**

By studying the agriculture sector in Kedah, mainly in Muda Area, researcher found and experience the totality or commitment that come from the government to better manage and improve the agriculture sector. The government, federal and/or state, has put agriculture as one of their priority in the development program. Not only in terms of improving the management system but also in terms of integration among the agencies which are involved in agriculture sector to support, promote, and solve the issues in unity.

Malaysia has introduced the more efficient ways in paddy planting process by using technologies. Within good infrastructure and farm management system under MADA control in Muda Area, make the acquisition and the use of technology to work



efficiently. The technology use program will become more effective if it is supported by the appropriate information system among farmers and the farming environment.

All those mentioned above are expected to be inputs to Aceh government in order to improve its agriculture sector. There are still many issues needs solving in Aceh, such as the management system, information system, effective programs and policies, technology adaptation process for farmers, and better infrastructure. Hence, the Aceh's agricultural sector could be more advanced, the production will increase and hopefully that farmers in Aceh could live a better life and out of the poverty line.

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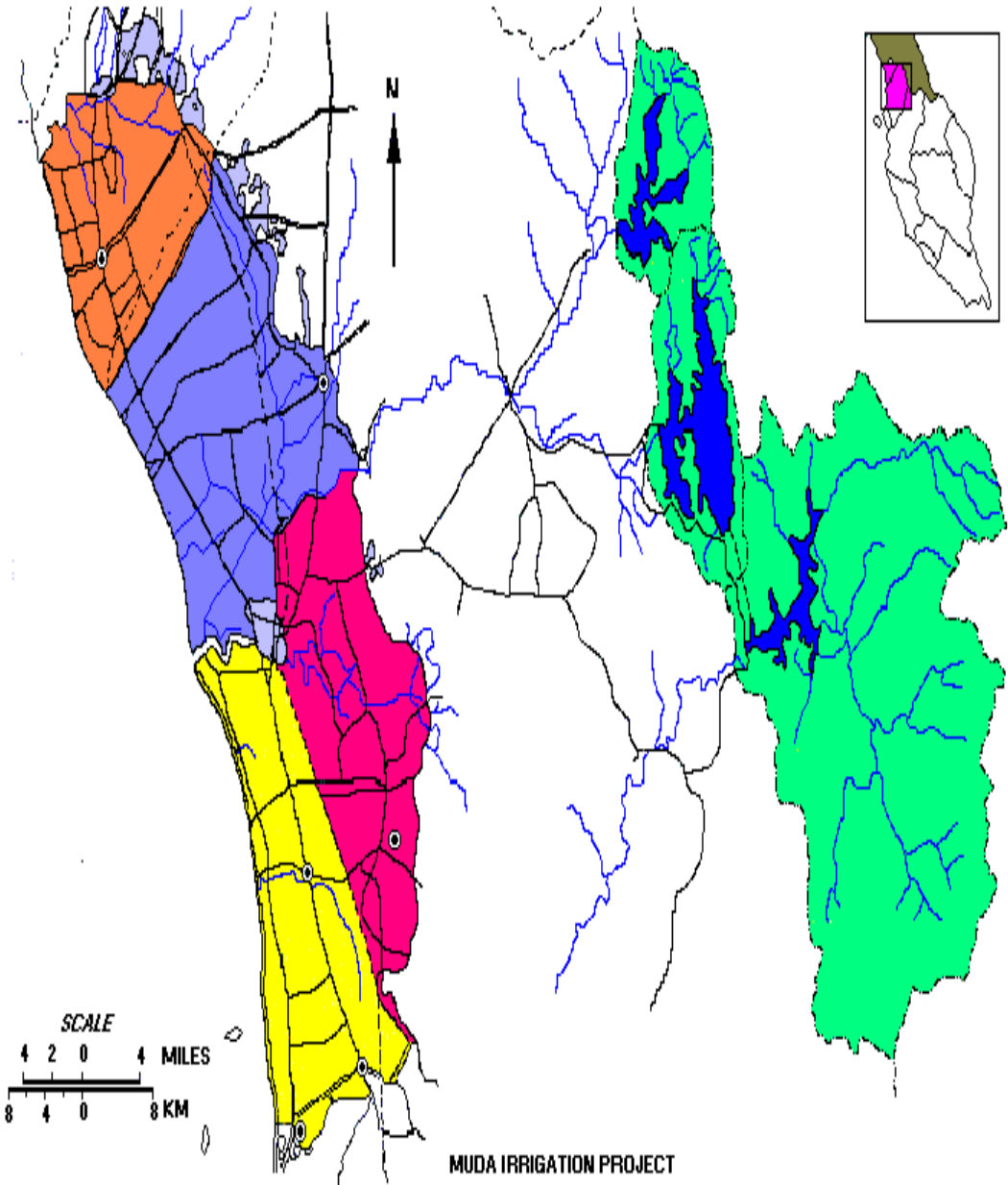
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[www.mada.gov.my](http://www.mada.gov.my)

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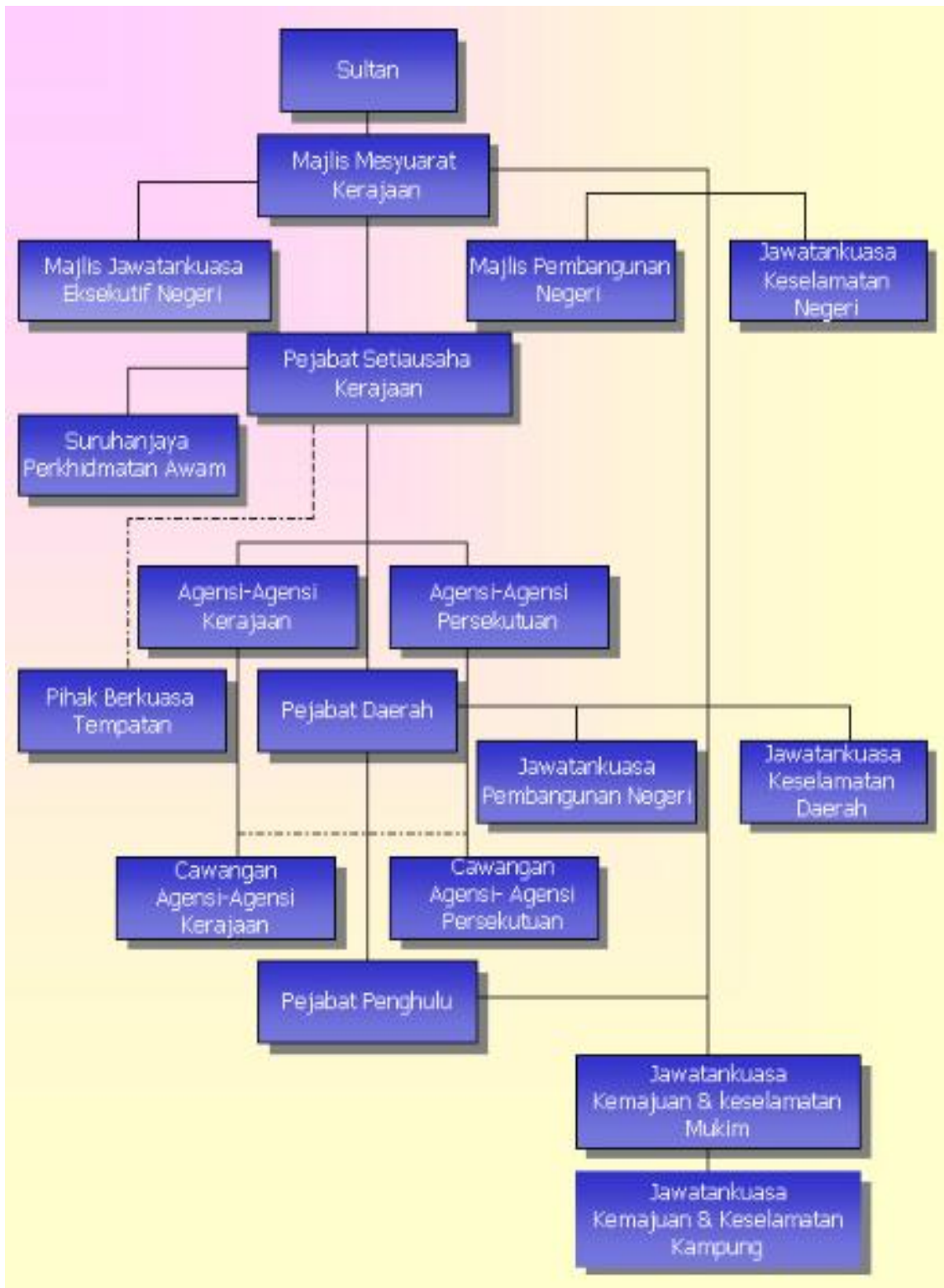
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**APPENDIX I**



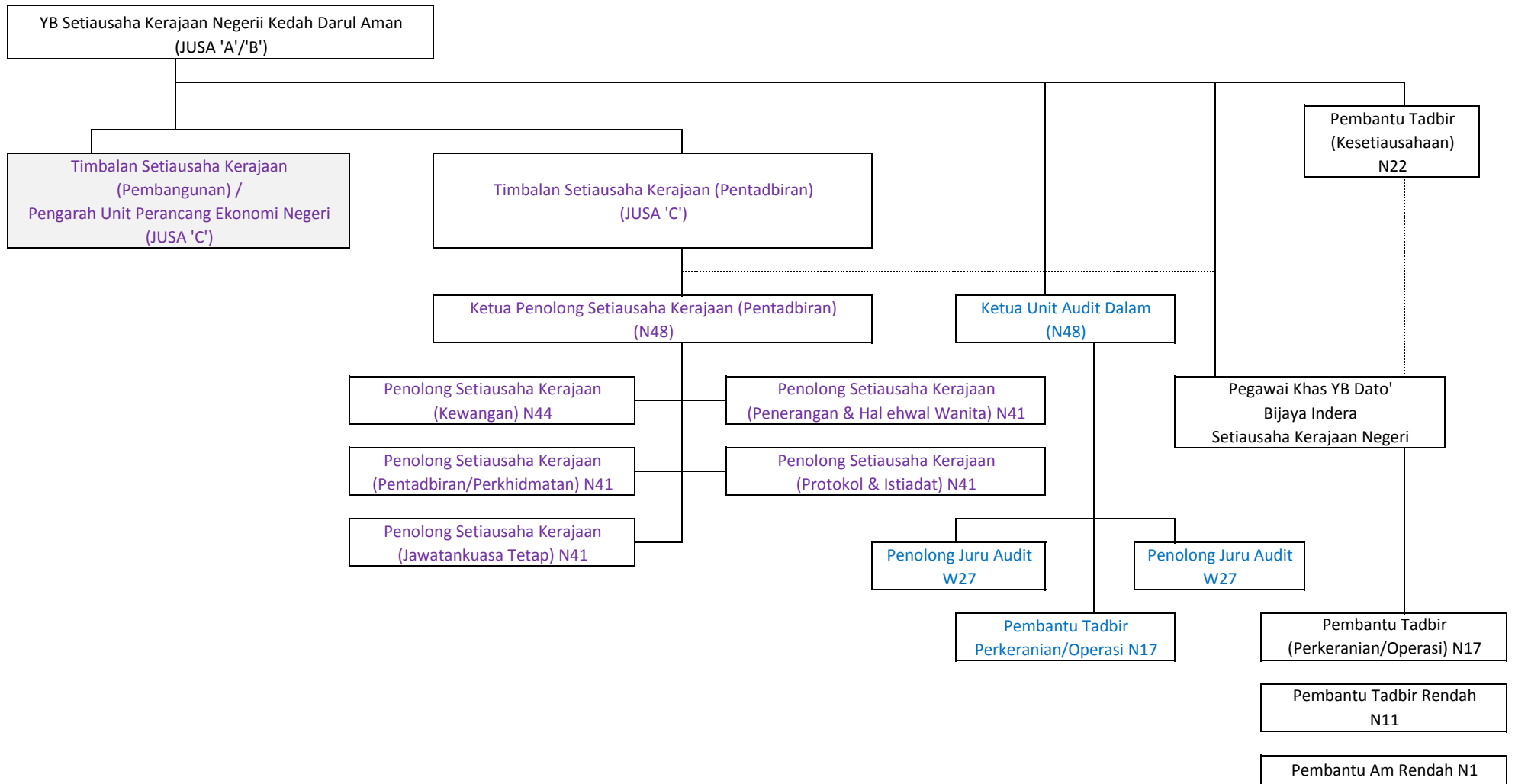
**MUDA IRRIGATION PROJECT**  
General Plan of 4 MADA Districts, Reservoirs and Catchment Area

## APPENDIX II



APPENDIX III

**ORGANIZATION CHART  
PEJABAT SETIAUSAHA KERAJAAN NEGERI KEDAH DARUL AMAN**



Source: <http://psuk.kedah.gov.my/home4/new.php?jab=psuk#>