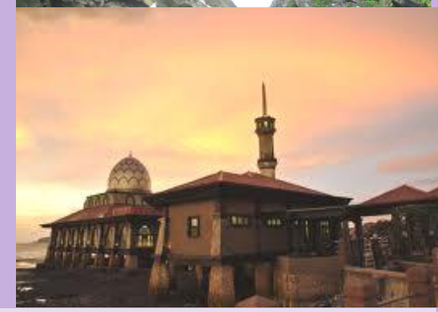
KORIDOR UTARA™ MALAYSIA



PERLIS STRATEGIC DEVELOPMENT PLAN 2012-2030

PERLIS STRATEGIC DEVELOPMENT PLAN
2012-2030

August 2013

Foreword

Assalamualaikum Warahmatullahi Wabarakatuh,
Salam Sejahtera, Salam Perlis and Salam 1 Malaysia.

The Perlis Strategic Development Plan (PSDP) aims to transform Perlis into a state that is free from poverty and developed society with high-income by 2030.

The PSDP will complement two earlier studies – Perlis Maju 2015 and Perlis Structure Plan 2030, while adding new dimensions to its progress and thus propel Perlis into Malaysia's mainstream development.

The PSDP includes plans, programmes and projects to transform the economy of Perlis and is expected to bring development to all parts of the state, including in rural villages.

The socio-economic component of the Plan will ensure that direct assistance is provided to thousands of households. Efforts will include the development of low cost housing, assistance given to Bumiputera SMEs through credit and marketing support, as well as assistance for paddy farmers.

It is expected that the GDP per capita would increase by three-fold at the end of the Plan's time-frame. The benefits will be distributed as equitably as possible in order that all residents of Perlis can enjoy the fruits of development.

The successful implementation of this Plan will require the full cooperation of all stakeholders. All groups in the state – the people, private sector, civil service, and political leaders need to cooperate closely. Their contributions are invaluable in achieving the noble goal of the PSDP.

Finally, the State Government would like to express appreciation to all parties involved in the formulation of the PSDP.

Thank you.

"1 Malaysia, People First, Performance Now"

YAB TUAN AZLAN BIN MAN

MENTERI BESAR OF PERLIS

Foreword

The Perlis Strategic Development Plan 2012-2030 is a plan designed to enhance the economy of the State of Perlis and to transform it into a high income State by the year 2030. Since it was drawn up after in-depth studies and wide-ranging consultations, I am confident that the Plan will receive tremendous support and cooperation from all State officers.

The Perlis state administration will provide full assistance in ensuring the success of its implementation. The task of implementing this plan is formidable and will demand a highly responsive state machinery, one capable of attracting private investments, addressing and resolving bureaucratic impediments, expediting planning approvals and ensuring the incorporation of SMEs into the economy. There must also be policies to attract, retain, and develop talent within the State.

The entire PSDP encompasses sixty-four comprehensive project proposals across six economic sectors. These projects are potentially attractive to local and foreign investors, besides bringing direct socio-economic benefits to Perlis' residents. The six economic sectors comprise agri-food, manufacturing, trade and services, tourism, education and urban development.

The PSDP 2012-2030 aims to create highly skilled human capital, high-income jobs among youths, eradicate poverty, boost incomes and improve the quality of life in Perlis by the year 2030. Apart from the above benefits, the PSDP is projected to create new jobs. These will help curb migration from the state. It is estimated that one third of total households in the State will benefit from programmes such as poverty eradication, low-cost housing, and entrepreneurship development.

The support of all stake-holders, including State and Federal leaders, government officers, the private sector, and last but not least the local community is vital to ensuring the success of the Plan.

Let us work together for a better Perlis!

Thank you.

DATO' AZIZAN BIN HAMID

PERLIS STATE SECRETARY

Foreword

The Perlis Strategic Development Plan (PSDP) is a state-driven initiative that provides a comprehensive list of proposed projects to be implemented in order to transform the State of Perlis into a high income state. Perlis has much to offer and is blessed with natural resources waiting to be optimised. Given the opportunity to flourish, the development of Perlis would contribute to Malaysia's overall competitiveness whilst achieving its long desired prosperity, with equality in the distribution of wealth to its citizens.

The PSDP will provide the basis for Perlis to catch up economically with the rest of the country. From a regional perspective in general, and the state in particular, Perlis has tremendous potential in tourism, agriculture, manufacturing, trade and services, education and urban development. It is hoped that with this potential and the right direction from the PSDP, the State of Perlis would be able to achieve its objective of developing its economy.

PSDP, with its proposed programmes and projects, will also contribute to a more balanced development in the country as a whole. The successful implementation of the plans will enable Perlis to be a state that not only stands on its own, but will also be able to compete with others for its fair share of development outcomes and results.

The plan would enable the State of Perlis to broaden private sector involvement in its development, in line with Phase 2 of Koridor Utara's blueprint. With the successful implementation of the PSDP, I believe Perlis will be able to achieve its objectives of becoming a high income state.

Koridor Utara-Reach for the stars!

Thank you.

DATO' REDZA RAFIQ

CHIEF EXECUTIVE

NORTHERN CORRIDOR IMPLEMENTATION AUTHORITY (NCIA)

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

EXECUTIVE SUMMARY

The Perlis Strategic Development Plan (PSDP) is a development plan comprising policies and programmes that articulates the vision of development for Perlis. The PSDP also provides a description of the proposed projects and how they fit into the strategy and plans for the economic transformation of the State.

The PSDP has taken into account all major development plans done for Perlis, including views and comments from all levels of the State government. Some ideas from earlier plans have been incorporated into this Plan following extensive consultation processes.

Based on an understanding of the key issues and challenges, the Plan adopts the vision statement of "Accelerating Economic Transformation for Perlis to be an Urbanised and High Income State by 2030". By 2020, 63.2% of the population would be urbanised and this will rise to 75% by 2030. This vision is aligned with other State plans such as the Perlis Maju 2015 as well as Perlis Structure Plan 2030.

Under the PSDP, Perlis' economy would grow by 6% p.a. from 2010 to 2020 and 8% p.a. from 2020 to 2030. The mean per-capita GDP for Perlis would be RM36,000 by 2030.

The entire PSDP involves sixty-four detailed project proposals across six economic sectors– agri-food, manufacturing, trading and services, tourism, education and urban development. These are intended to help Perlis achieve its vision of becoming an urbanised and high-income State by 2030.

Agriculture is an important sector, accounting for 48,127 hectares or 58% of the total land area. Currently it faces several constraints that impinge on its efficiency, productivity and competitiveness, namely uneconomic farm size, limited access to technology and capital, lack of entrepreneurship and management skills and poor linkage to markets. This Plan proposes various measures to overcome these constraints. With regards to livestock, the key challenges and issues are: lack of suitable land, poor basic infrastructure, lack of knowledge and skills, high feed cost, poor breeding systems and endemic diseases. Given its potential for higher value activity, a detailed feasibility study is proposed. As for fisheries, its share of agricultural output is probably the highest in the agri-food sector. Five project initiatives are proposed: upgrade the Kuala Perlis fish landing area, relocate the proposed Aquaculture Industrial Zone along flood mitigation channels, establish a marine finfish seed production zone, establish a spirulina farm, and develop a recreational fish centre at Kuala Perlis.

Manufacturing and processing has a 10% share of the Perlis economy, and is the third largest sector after services and agriculture. The key challenges include its small SME sector and a lack of industrial agglomeration that could pull other industries into Perlis. The key proposals are to use the cluster approach in developing the manufacturing sector, to extend industrial linkages further upstream by strengthening links with resource-based sectors,

increase food production and supply chain development, to leverage on regional industrial spill-overs, and harness the ETP's and NCIA's manufacturing driven programmes.

A total of 13 projects are proposed, comprising four clusters: (1) Halal High Value Manufacturing (Halal Park), (2) Industrial Development Park at Pauh Putra, (3) Agri-Biotech Park in the Chuping Valley, and (4) Others (Rubber Processing Industrial Cluster, Minerals and Resources Mining.)

"Trade and Services" is a huge and highly diversified economic sector making up 58% of GDP in Perlis. Sub-sectors such as the distributive trades, i.e. retail and wholesale, restaurants, transport and communications are largely dominated by SMEs. Education, hotels, tourism and government services are other economically significant sub-sectors. Education and government are mainly driven by the public sector, while there is a mix of public and private sector involvement in tourism.

In terms of strategic direction, the potential is the proposed Padang Besar ICD. There is a great potential for its development from the double-tracking project, which is even more attractive because road haulage transport will further congest traffic around the Penang Port and increase haulage cost. The Plan aims to improve the freight services as well as the ICD services. Other initiatives include: designating a Special Economic Zone (to include a Free Industrial Zone), developing a Wholesale and Retail Zone/Complex, and expanding boat building and repair services. Finally, a hypermarket in Perlis can help to address two key issues: reduce the spending leakage from Perlis and build the supply chain for Perlis' resource-based products to reach the urban markets of Malaysia.

In terms of tourism, Perlis is situated at the confluence of major tourism hotspots, viz. Langkawi, Penang, and south Thailand. Unfortunately, Perlis has not been able to retain its tourists, with only 0.7 million tourists passing through in 2008, of which 78% are from Thailand. Almost 70% of them come via Padang Besar. This is unfortunate; though Perlis is a small State, it is not short of tourism products. The State has a unique biodiversity, including limestone features, a man-made lake, and its signature fruit, the Harumanis mango.

The five strategic thrusts for tourism involve cultivating partnerships with industry players, developing a tourism strategy via a large promotions campaign, leveraging tourism to add value to the rural economy, increasing accessibility from Langkawi to Perlis, and promoting Perlis as a premier tourist destination. Ten projects in the Plan are: upgrading existing products (Sg Batu Pahat, Gua Kelam, Perlis State Park, Wang Kelian Tourism town), developing new ones (Agrotourism corridor, wellness resort, recreational fishing centre, and Perlis River Promenade), and setting up a Kuala Perlis Tourism Complex as a gateway to Langkawi.

With regards to the education sector, Perlis has twelve institutions of higher learning that comprise 3 universities, 2 colleges, 2 professional training institutions, 4 general training institutes and 1 post-secondary institution. These institutions produce 8,000 graduates every year, of which approximately a quarter are degree graduates, about half are diploma holders and another quarter are certificate graduates. They represent an economic resource for the State but so far there is little retention of graduates in the State. Other issues include the

relative isolation of the tertiary educational institutions in the State, and the feasibility of establishing private tertiary education institutions to attract local and international students.

The Plan proposes the setting up of an education hub, where the defining characteristics are: teaching, research and development linkages, knowledge production, innovation, advisory and consultancy services, and a centre for entrepreneurship development and promotion. Such a hub would contribute to the development of a knowledge-based society and also have multiplier effects for Perlis. Building the hub could also be enhanced if twinning programmes can be developed with foreign universities. Possible options include linking up with well-renowned Thai universities such as Chulalongkorn University or the Prince of Songkhla University through twinning programmes.

Several project initiatives are proposed: (1) developing the Perlis Education Hub which includes establishing a reputable international university branch campus, (2) setting up an academic-industry nexus to ensure greater innovation amongst industries, (3) establishing a strong culture and model for transformation, and (4) establishing an agro-technology university branch campus.

The physical development of Perlis is important for the well-being of its residents. The major components of infrastructure are generally well developed for the present but greater investments are needed for the future, in line with the vision of Perlis as a developed State. Lately, Perlis has suffered from major floods that have inundated large parts of the State, incurring huge economic losses.

The government has completed a flood mitigation study, which has been approved for implementation. The Timah Tasoh Lake will be upgraded for flood mitigation and proposals for increasing the treatment capacity have been made. Other water treatment plants are also being upgraded. A sanitary landfill is being planned. New sewerage treatment systems are being proposed for other towns and key development areas in Perlis.

In terms of ICT, there is already a major blueprint, the Perlis State ICT plan 2010-2015, which is an ambitious plan to propel Perlis into the ranks of a Multimedia Super Corridor (MSC) designated zone. It is proposed that Perlis should follow the K-Perak model. With regards to Perlis Net, the plan is to launch it in the Pauh Putra Campus and Kangar Maya, a new township, where there is likely to be greater demand due to a concentration of students. It is also proposed that a cyber centre be established in Kangar Maya.

As for transportation, all three modes – road, rail and water – are available in Perlis. The key issues in the sector are: an unsatisfactory public transport system and road system that needs upgrading, absence of a direct connection to the North-South Expressway (NSE), and the lack of a rail-line through Kangar. The strategic direction seeks to improve transport connectivity between the main towns and nodes and ensure that the economic hinterland is well served. The proposed projects are: a revised NSE link (Alor Setar, Kangar, Padang Besar), a new coastal highway (Kuala Perlis, Satun), a busway (Arau, Kuala Perlis), the Kangar Ring Road, the Integrated Transport Terminal (Kangar Maya) and upgrading the road to Wang Kelian.

Spatial and urban development is a major theme of the PSDP. The Strategic Plan envisages a focus on urban development in four key nodes: Kangar, Kuala Perlis, Padang Besar and Arau. The vision is that Perlis will be a city-state by 2030. By then 75% of Perlis' population is envisaged to live in urban centres. The Kangar Local Plan has established urban limits and zoned all these areas for urban use.

The key issues with respect to urbanisation in Perlis are: the current low population, its small size and lack of readily available land with development potential, the high cost of doing business due to its remoteness, its weak economic structure and low private investment.

The spatial development strategy comprises two broad initiatives: corridors and key development areas. The three main corridors via Chuping Valley are: (1) Kuala Perlis-Kangar-Arau- Pauh Putra, (2) Kangar-Beseri-Padang Besar, and (3) Arau-Mata Ayer-Beseri. The proposal is to increase their connectivity and linkages with each other. In terms of Key Development Areas (KDA), five strategic urban centres and three non-urban zones are proposed. The urban KDAs are: Kangar, Padang Besar, Chuping, Kuala Perlis, Pauh Putra. The non-urban zones are: MADA agriculture, non-MADA mini granary, and Chuping Agri-Food Farming zone.

Any development plan must be people-centred and address socio-economic issues. The key socio-economic issues considered to be of strategic importance are: to eradicate rural poverty, raise agricultural productivity, improve the level of competitiveness of SMEs and Bumiputera businessmen, minimise flood damage, and enhance developmental impact across all socio-economic groups. The beneficial impact of these programmes would cover a large swath of the lower socio-economic group in Perlis as follows:

- Help 1,327 poor households through direct assistance.
- Build 2,000 units of affordable housing via the PR1MA programme in Perlis, with the State government providing land, management of resettlement, and financing through a Federal loan. Repayment will be on a cost basis, so as to ensure self-sustainability.
- BCIC/SME programmes: About 6,000 entrepreneurs will be assisted through various programmes such as TERAJU (growing the fittest firms), extension of AIM (micro-credit), and introducing marketing programmes to uplift the micro-firms.
- Paddy productivity: 8,000 farmers (beneficiaries of EPP programmes in Perlis) will be assisted through investment in irrigation intensity, 'estatisation' of paddy land and greater adoption of technology (e.g. hybrid seeds, clearfield production systems, etc.).
- Flood mitigation: to alleviate the impact of floods in Perlis while providing options for aquaculture farming and recreational use of retained water.

In total, about 17,000, or about one-third of the 53,000 households in Perlis, would benefit from these programmes.

The PSDP is a complex plan which needs management of technical and financial inputs and extensive stakeholder involvement. To implement this plan successfully, State commitment

and ownership is necessary, as well as a very substantial increase in financial and other resources.

Five policies and programmes would be needed to ensure that the development process under the PSDP is facilitated. They are:

1. Investment incentives that would contribute towards attracting investors to Perlis;
2. Removal of land constraints (e.g. MRL) to attract investors;
3. A sustainable level of government financing to support the development initiatives;
4. Building the capacity of key government institutions in Perlis to strengthen institutions for better service delivery and to create a business friendly environment; and
5. A regional development strategy that would enable Perlis to cooperate with her neighbours to increase competitiveness.

The first four relate to creating a more investor-friendly environment in Perlis. The fourth is aimed at building up State government finances, and the last is to build regional alliances in order to be more competitive.

The following indicators can be utilised to measure the performance and success of the Plan. These are outcome indicators, meaning that they measure the desired goals, and not the intermediate results.

Indicator	2020	2030
Population	265,000	317,000
GDP per capita	RM19,000	RM36,000
Poverty Rate	2%	0%
GDP Growth per Annum	6%	8%
Urbanisation	63%	75%

CHAPTER 1

GAP ASSESSMENT AND DEVELOPMENT CHALLENGES

1. GAP ASSESSMENT AND DEVELOPMENT CHALLENGES

1.1 INTRODUCTION

There is a need to transform Perlis from a humble “small State” economy into an economic powerhouse with an emphasis on increasing productivity, competitiveness, innovation, and value-added activities in key economic sectors. In this regard, new and out of the box ideas are needed when identifying new growth sectors and leveraging on its strategic position within the Northern Corridor Economic Region (Koridor Utara), the Indonesia, Malaysia, Thailand Growth Triangle (IMT-GT) and even the Greater Mekong Sub-Region (GMSR).

The Perlis Strategic Development Plan, 2012-2030 covers the development of all the key economic sectors in the State up to 2030, including the identification of new growth sectors and value-added economic activities. It reviews the economic sectors from the first Outline Perspective Plan (1971-1990) to the present and takes into account the strategic position of Perlis within the Koridor Utara, IMT-GT and GMSR.

This Perlis Strategic Development Plan (PSDP) is consistent with the vision and mission thrusts and goals of the State, Koridor Utara and Malaysia. The objective is to attain a ‘developed’ status by 2015 (Perlis Maju 2015). This PSDP will give focus to the current development efforts, support the strong growth momentum needed over the remainder of the 10th Malaysia Plan period (2011-2015), and accelerate growth in the 11th Malaysia Plan (11th MP), 12th MP and 13th MP period (2015-2030).

Productivity in Perlis will need to grow rapidly in all sectors, reflecting the thrust of moving the State’s economy rapidly up the value chain through greater investment, application of technology and knowledge. To attain the desired productivity growth, it is clear that the emphasis must also be to improve the quality of the labour force, especially the number of skilled workers. In addition, a faster growth rate is necessary for Perlis if the gap in gross domestic product (GDP) per capita and average monthly household income between the State and the national average is to be narrowed.

It is envisaged that Perlis will be a catalyst for growth for the Koridor Utara. The initiatives established will look at strategies focusing on:

- Attracting high-value manufacturing activities;
- Capitalising on agro-based resources and related downstream industries;

- Positioning Perlis as a Tourist Destination Hub;
- Promoting the service sector and knowledge innovation;
- Positioning Perlis as a Regional Logistics and Seaport Hub;
- Improving the quality and quantity of infrastructure;
- Increasing the level of investment in Perlis;
- Enhancing the socio-economic standards and participation of the Bumiputera Commercial and Industrial Community (BCIC) in the local economy; and
- Promoting and integrating Perlis with the regional development in the context of the Koridor Utara, IMT-GT and GMSR.

The outcome of this Strategic Development Plan will be to accelerate the growth of Perlis in a viable, equitable and sustainable manner. The execution of the Plan will be through the introduction of practical, realistic, and implementable projects to create the greatest impact to the local populace, State, region and country.

Perlis is located at the northern-most part of the west coast of Peninsular Malaysia bordering Thailand. It is the smallest State in Malaysia in terms of size, population and economy. It has a land area of about 810 square kilometres, with a population of 231,541 people in 2010. Together with Kedah, Kelantan and Terengganu, it has one of the highest poverty rates in Peninsular Malaysia. It registered a poverty rate of 6.0% against the national average of 3.8% in 2009. The GDP of Perlis in 2010 was RM2,946 million, with the services sector contributing RM1,717 million, agricultural sector RM790 million, manufacturing RM278 million, construction RM65 million, and mining and quarrying RM15 million. The State government plans to transform Perlis into a developed State by 2015. Towards this end, it has premised the development of the State's economy on the following key sectors: agriculture, manufacturing, tourism, trade, logistics, and education, to enable it to be more competitive and resilient.

Kangar is the capital of Perlis while Arau, the Royal Town, is located 10km from Kangar. Another important town is Padang Besar at the Malaysia-Thailand border. The main port and ferry terminal is at Kuala Perlis, linking the State to Langkawi Island, which is about 25km from its coastline.

1.2 REVIEW OF DEVELOPMENT PLANS

With strategic plans like the Economic Transformation Programme (ETP), 10th Malaysia Plan (10th MP), New Economic Model, Koridor Utara Blueprint, *Perlis Maju 2015*, and Perlis Structure Plan 2030, Perlis faces the pressure of living up to the expectations of achieving the desired goals as set out by these national and sub-national plans and programmes. In developing Perlis, an exponential acceleration is essential to achieve the ambitious growth that will transform Perlis into a developed state as well as a high-income State by the given timeline.

The Tenth Malaysia Plan (10th MP) outlines the aspirations of both the Government Transformation Programme and the New Economic Model. The 10th MP sets the stage for a major structural transformation that a high-income economy requires.

The New Economic Model lists out eight Strategic Reform Initiatives to drive the Malaysian economy towards becoming a high-income, inclusive and sustainable economy. These are: (1) Re-energising the private sector to lead growth, (2) Developing a quality workforce and reducing the dependency on foreign labour, (3) Creating a competitive domestic economy, (4) Strengthening the public sector, (5) Fostering transparent and market-friendly affirmative action, (6) Building the knowledge-based infrastructure, (7) Enhancing the sources of growth, and (8) Ensuring the sustainability of growth.

To achieve this, structural changes are needed to sustain growth to move from an economy that competes on cost and natural resources to one driven by productivity and innovation, and to attract and retain talent and attract companies and capital. Seven core strategies have been designed to support this change: (1) Creating a private sector-led economy, (2) Supporting innovation-led growth, (3) Rationalising the role of government in business, (4) Developing small and medium enterprises (SMEs) as an engine of growth and innovation, (5) Competing globally, (6) Putting in place the infrastructure for growth and (7) Focusing on key engines of growth, i.e. NKEAs.

Likewise, the goal of Perlis Maju is for Perlis to achieve a developed and high income status by 2015. Five implementation objectives are outlined in this plan to transform the civil service and to strengthen the management of economic resources to create a more prosperous State and society. The objectives are:

1. To deliver public services to improve efficiency and effectiveness of the delivery system;
2. To strengthen the management of economic resources for the State and communities;
3. To strengthen planning in a holistic and balanced development to enhance the competitiveness of the State;
4. To transform human capital, to enhance self-esteem and appreciation of moral values; and
5. To strengthen infrastructure development and management to enhance quality of life.

1.3 SOCIO-ECONOMIC TRENDS

This section discusses the socio-economic trends and highlights the gaps and the development challenges of Perlis. For the past five decades, Perlis has lagged behind in terms of socio-economic development. Being a small State with a small population, Perlis faces a huge challenge in trying to keep up with the pace of development led by larger and more economically advanced states in the country. The following sub-sections highlight and discuss some of the gaps and key challenges required for an economic transformation of Perlis.

1.3.1 Population

The Population Census 2010 enumerated Perlis' population at 231,541, accounting for 0.8% of the total population in Malaysia. Over the last 10 years it grew at an average annual rate of 1.2%, the lowest among the states in Malaysia. If this growth rate were to continue, Perlis' population will reach 294,300 by 2030. At this rate Perlis would only double its population in 57 years, i.e. by 2067, which may not fulfil the human capital requirements to support the economic development plans of Perlis.

Table 1.1: Population Projections, 2010-2030

Year	Projection (past trends)	Structure Plan[2]
2010	231,541[1]	240,100
2020	261,061[3]	298,600
2030	294,346[3]	354,700

Sources:

1. *Population Distribution and Basic Demographic Characteristics, 2010, Department of Statistics Malaysia*
2. *Perlis Structure Plan 2030*
3. *Perlis Strategic Development Plan Report, 2012*

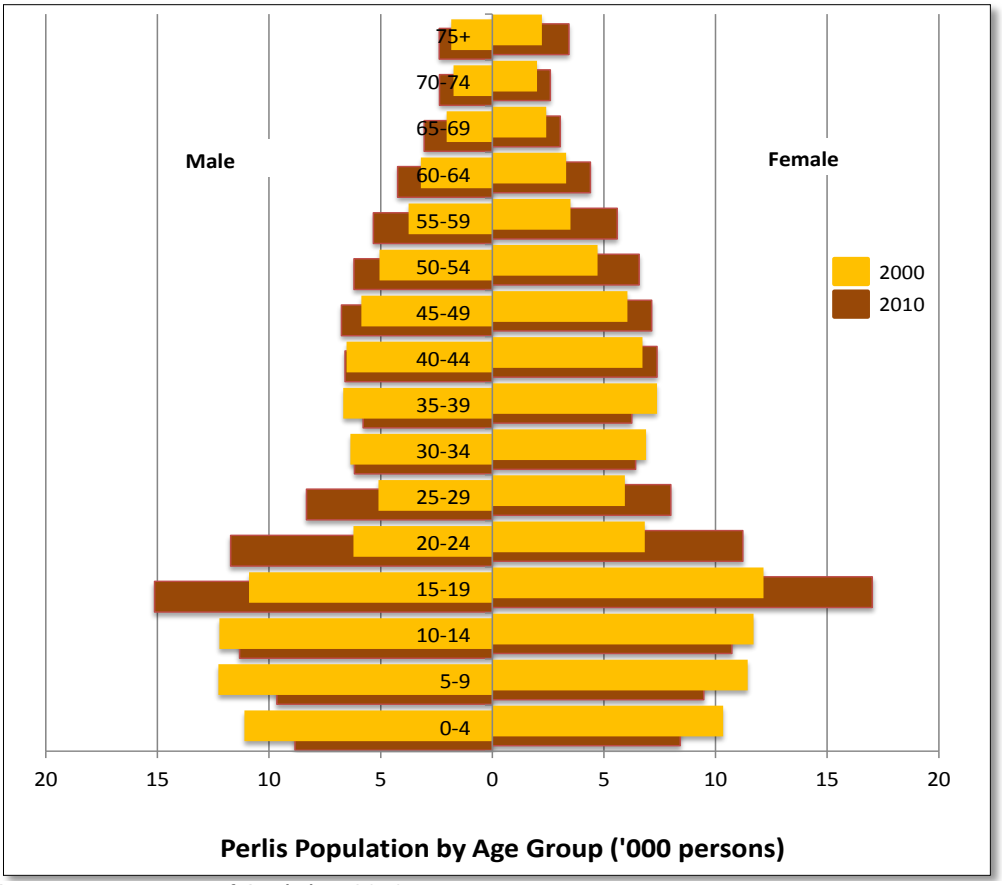
In the recent Migration Survey conducted by the Department of Statistics, Perlis continues to be a net losing State. In spite of the influx of a student population into Perlis as a result of the setting up of many educational institutions, it has not boosted population growth in the State. Over the period 2009-2010, about 1,700 people migrated out of Perlis, while 1,500 people migrated into Perlis, resulting in a net-out migration rate of 1 person per every 1000 population. It could be due in part to the fact that students "in-migrate" for their education and later "out-migrate" on completion of their studies instead of staying behind in Perlis to look for jobs.

However, the age distribution of the population between the two census years of 2000 and 2010 shows an increase in the young population, comprising mainly students in higher educational institutions. This "15-19" age group grew at an annual rate of 4.2%, significantly higher than the overall population. However, those in the "30-39" age group have shrunk over the last 10 years. This loss of the prime working age group is a serious setback for Perlis, as it is this group that usually forms the experienced and skilled group of working professionals and managers that Perlis lacks. This finding is not surprising, as a study carried out by the Ministry of Human Resources (MoHR) shows that Perlis has on average the lowest salaries and wages among all the states in Malaysia. Low salaries are usually a push factor in economic migration. If this outflow is not stemmed, Perlis will continue to lose the skills and talents needed for the economic transformation of the State.

At the other end of the spectrum, those aged 65 and above increased between 2000 and 2010. Old age dependency increased from 10% to 11% between 2000 and 2010, indicating an aging population trend. This population cohort is not in the labour force and does not

contribute to economic development, but Perlis will need to ensure that facilities such as health and social support are available to support them.

Figure 1.1: Distribution of Population by Age Group, 2000 and 2010



Source: Department of Statistics, 2010

1.3.2 Urbanisation

Since 1970, urbanisation in Perlis has increased dramatically from 0% to 51.4% (urban population: 116,691) in 2010, compared to 71% in Malaysia (**Table 1.2** and **Figure 1.2**).

In 2010 the State capital of Kangar was the only urban centre in Perlis with a population of 10,024. The remaining urban population was found in the built-up areas at the periphery of the town boundaries.

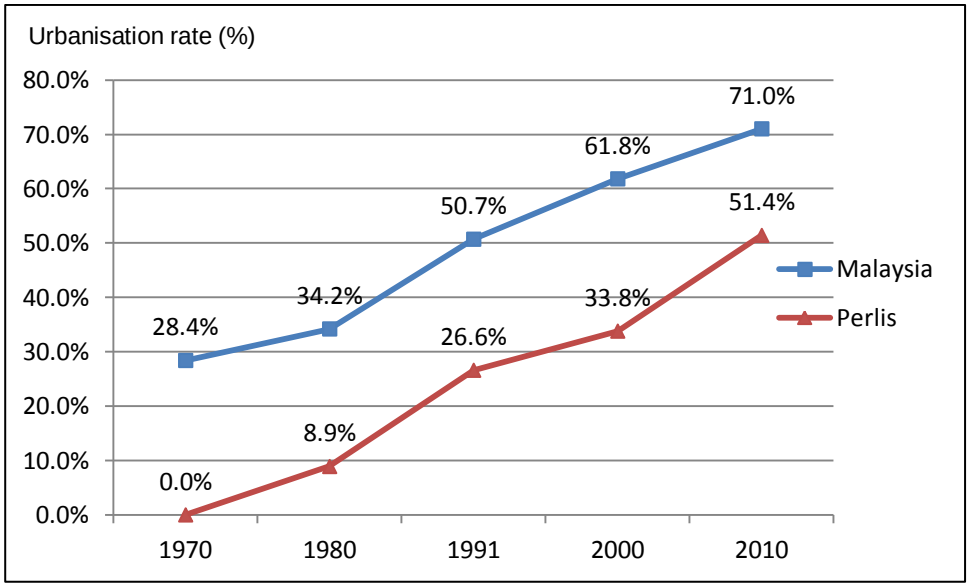
The next largest town, Simpang Empat, had a population that was one-fifth of the size of Kangar, at 2,379 persons (Source: Population Census 2010: Population Distribution by Local Authority Areas and Mukim).

Table 1.2: Urbanisation in Malaysia and Perlis State

Year	1970	1980	1991	2000	2010
Malaysia					
Urban	2,962,795	4,492,408	8,898,581	13,725,609	20,124,970
Rural	7,476,635	8,643,701	8,664,839	8,477,005	8,209,165
Total Population	10,439,430	13,136,109	17,563,420	22,202,614	28,334,135
Urbanisation Rate	**28.4%**	**34.2%**	**50.7%**	**61.8%**	**71.0%**
Perlis State					
Urban	0	12,949	48,838	67,080	118,978
Rural	121,062	131,833	134,986	131,255	112,563
Total Population	121,062	144,782	183,824	198,335	231,541
Urbanisation Rate	**0.0%**	**8.9%**	**26.6%**	**33.8%**	**51.4%**

Source: Population Censuses, 1970, 1991, 2000 and 2010, DOS, Malaysia

Figure 1.2: Urbanisation Rate of Malaysia and Perlis



Source: Population Censuses, 1970, 1991, 2000 and 2010

1.3.3 Labour Force and Employment

The labour force participation rate (LFPR) was 55.5% in 2010, having declined from a high of 58.1% in 2007. This rate is rather low when compared to the national average (62.7%), suggesting that a large proportion of the population is out of the labour force. One can assume that a large portion of them are students.

In 2010, the total employed was 80,500 in a labour force of 83,300 persons or 96.6%, which means almost full employment. The unemployment rate was only 3.4% in 2010.

A large proportion of the employed population is found in the services sector (64.7%). In 2010 the industry and agriculture sectors in Perlis employed 16,300 (20.3%) and 11,300 (14.0%) employed persons respectively. (see **Table 1.3**)

Table 1.3: Perlis: Employment by Industry, 2010

Sector	2005	%	2008	%	2010	%
Service	41,200	55.7	50,300	61.6	52,100	64.7
Industry	19,300	26.1	17,600	21.5	16,300	20.3
Agriculture	11,800	15.9	12,000	14.7	11,300	14.0
Others	1,700	2.3	1,800	2.2	800	1.0
Total Employed Persons	**74,000**		**81,700**		**80,500**	**100.0**
Total Labour Force	76,200		84,000		83,300	
Total Unemployed Persons	2,200		2,300		2,800	
Unemployment Rate (%)	2.88		2.74		3.36	

Notes:

1. *Agriculture refers to agriculture, hunting, forestry and fishing*
2. *Industry refers to mining, quarrying, manufacturing, electricity, gas, water supply and construction*
3. *Services refer to wholesale and retail trade; repair of motor vehicles, motorcycles, personal and household goods, hotels, restaurants, transport, storage, communication, financial intermediation, real estate, tenancy, business activities, public administration, defence (compulsory social security), education, health, social work, community service, social and other personal activities.*
4. *Others refers to private households with employed persons, extra-territorial organisations and bodies*

Source: Labour Force Survey Report Malaysia, 2010, Department of Statistics

With a large portion of the employed population in the services sector, it is not surprising that their occupations also fall mainly into the Service Workers, and Shop and Market Sales Workers categories. Comparing the occupational structure of Perlis to that of Malaysia, there is a higher proportion of service workers in Perlis than the national average, while the share of Plant and Machine Operators and Assemblers is lower. Again, the study by MoHR shows that this category of workers has the lowest salaries when compared to their counterparts in other states in Malaysia, commanding only about 57% of the national average salary for this category (see **Table 1.4**)

With current population growth and a 55.5% LFPR the number of persons in the labour force would be about 97,800 in 2020 and 110,200 in 2030 (**Table 1.5**). This number would not be sufficient to support the plan for economic transformation unless several issues and challenges can be addressed. These include job opportunities, competitive salaries and other socio-economic attractions made available to stem the outflow of population to other more economically advanced states.

Table 1.4: Perlis: Employment by Occupation Type, 2010

Occupation	Number			Percentage Distribution	
	Male	Female	Total	Perlis	Malaysia
Legislators, Senior Officials and Managers	3,900	1,700	5,700	7.1	7.5
Professionals	3,600	3,300	6,800	8.4	6.3
Technicians and Associate Professionals	4,900	4,500	9,300	11.5	14.8
Clerical Workers	2,300	4,900	7,200	8.9	10.2
Service Workers, Shop and Market Sales Workers	8,800	7,900	16,700	20.7	16.8
Skilled Agricultural and Fishery Workers	8,800	1,000	9,900	12.3	11.3
Craft and Related Trade Workers	8,000	900	8900	11.0	10.5
Plant and Machine Operators and Assemblers	4,800	1,800	6,600	8.2	11.8
Elementary Occupations	7,200	2,400	9,600	11.9	10.7
Total Labour Force	52,200	28,400	80,500	100.0	100.0

*Note: * The sum of individual figures may not equal to the total shown in the above table because of independent rounding to one decimal place. However, the differences are insignificant.*
Source: Labour Force Survey Report Malaysia, 2010, Department of Statistics.

Table 1.5: Labour Force Projections, 2010-2030

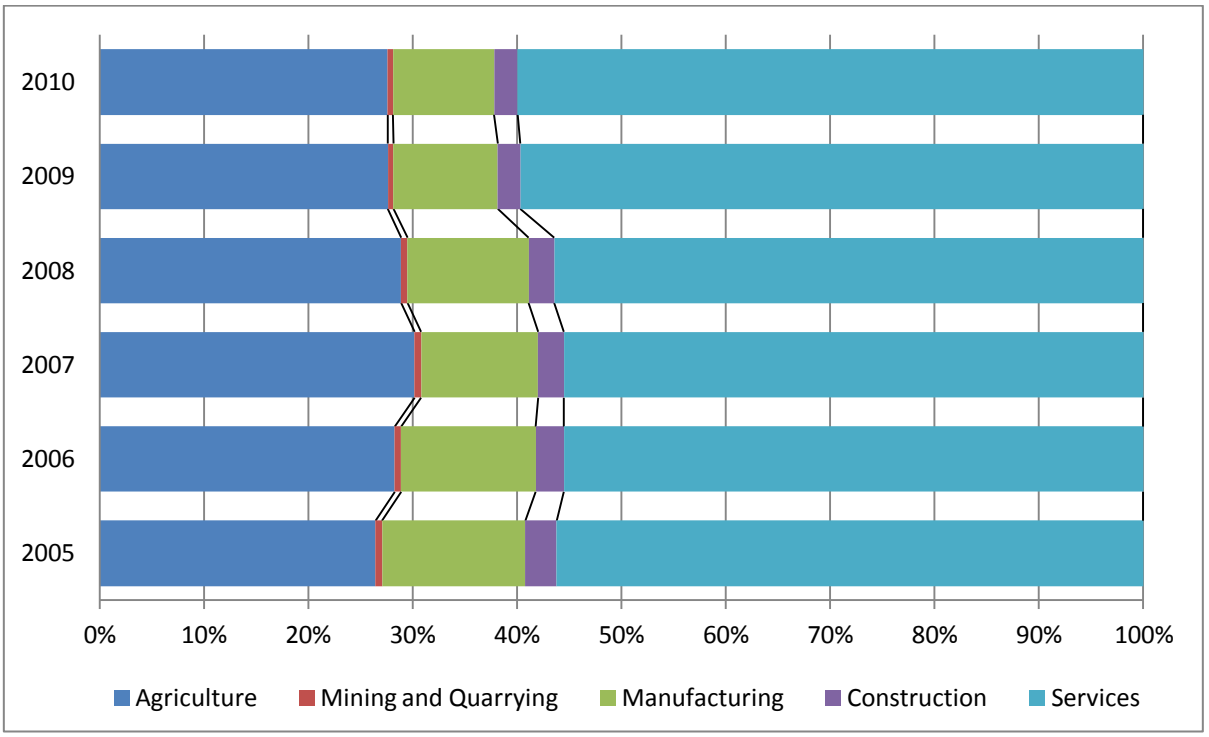
	2010	2020	2030
LFPR	55.5%	55.5%	55.5%
Unemployment Rate	3.4%	3.4%	3.4%
Population 15-64 (‘000)	156.2	176.2	198.6
Total Labour Force (‘000)	83.3	97.8	110.2
Employed Population (‘000)	80.5	94.4	106.5

Source: Department of Statistics, 2010, with constant assumptions of 2010 levels, based on current trends

1.3.4 Economic Growth

The economic landscape of Perlis has changed over the last five years, with the services sector increasing its dominance from 52.3% in 2005 to 58.3% in 2010. On the other hand, manufacturing has been steadily decreasing its share of the economic pie from 12.8% to 9.4% for the corresponding years.

Figure 1.3: Economic Structure of Perlis, 2005-2010



Source: Department of Statistics, 2005-2010

The gross domestic product (GDP) of Perlis grew at an average rate of 2.8% per annum between 2005 and 2010 (see **Table 1.6**), with the services and agriculture sectors registering a healthy growth of 5.0% and 4.6% respectively. However, this is still far below the growth rate achieved by Malaysia as a whole.

Although the GDP per capita for Perlis increased from RM11,327 in 2005 to RM12,270 in 2010, it is still lower than the national average.

The services sector is an important component in the Perlis economy, where 64.7% of the working population contributed 58% to the State's GDP in 2010. The agricultural sector is the second largest component, contributing 26.8% of the State's GDP and employing 14% of the workforce.

The average labour productivity for all sectors in Perlis was lower than the Malaysian average in 2010. However, the productivity of the agricultural sector in Perlis (RM69,900) was three times higher than the national average (see **Table 1.7**). Despite contributing to more than half of the State's GDP, the productivity of the services sector was only RM32,000. If the services sector was to reach a productivity level that is similar to the national average, its GDP contribution would be increased to RM2.48 billion from the current RM1.72 billion.

Table 1.6: Perlis: Gross Domestic Product by Economic Activity (Sector), 2005-2010

RM million (in constant 2000 prices)	2005	2010	Average Annual Growth Rate (%) 2005-2010
Agriculture	631	790	4.6%
Mining and Quarrying	17	15	-2.5%
Manufacturing	329	278	-3.3%
Construction	71	65	-1.8%
Services	1,343	1,717	5.0%
Total GDP (Perlis)	2,560	2,946*	2.8%
Total GDP (Malaysia)	449,250	559,554	4.5%
GDP per capita (RM)			
Perlis	11,327	12,274	-
Kedah	7,886	9,476	-
Penang	25,722	29,091	-
Perak	10,606	12,259	-
Malaysia	17,194	19,807	-

Sources:

1. *DOS, GDP by State 2005-2009*
2. *http://www.statistics.gov.my/portal/images/stories/files/LatestReleases/gdp%20negeri/gdpnegeri_2010/Table1.xls*
3. *http://www.statistics.gov.my/portal/images/stories/files/LatestReleases/gdp%20negeri/gdpnegeri_2010/Table2.xls*

**Includes export duties*

Table 1.7: Perlis: Sectoral Breakdown of GDP, Employment and Labour Productivity, 2010 (in 2000 prices)

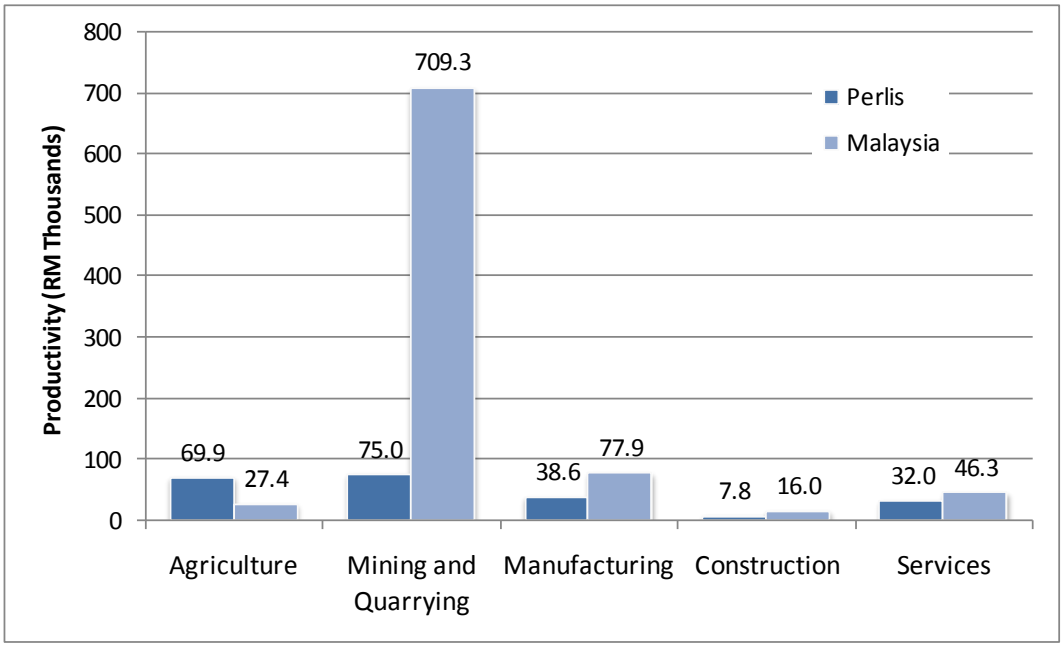
Perlis	GDP 2010		Employment 2010		Labour Productivity (RM)
	RM million	%	Number	%	
Agriculture	790	26.8	11,300	14.0	69,912
Mining and Quarrying	15	0.5	200	0.2	75,000
Manufacturing	278	9.4	7,200	8.9	38,611
Construction	65	2.2	8,300	10.3	7,831
Services	1,717	58.3	52,100	64.7	32,956
Perlis	**2,946**	**100**	**80,500**	**100.0**	**36,596**

Sources:

1) http://www.statistics.gov.my/portal/images/stories/files/LatestReleases/gdp%20negeri/gdpnegeri_2010/Table1.xls

2) http://www.statistics.gov.my/portal/download_Economics/files/DATA_SERIES/NEGERI/EXCEL/TABLE12.xls

Figure 1.4: Labour Productivity Level by Economic Sectors, 2010



Source: Department of Statistics, 2010

1.4 BUSINESS AND INDUSTRIAL PROFILE AND STRUCTURE

Information on businesses registered with Kangar Local Council shows that as of 2011, a total of 5,520 firms were registered, with the majority being in the services industry. About 37.7% of them are located in Kangar. Only 4% are involved in manufacturing.

Table 1.8: Businesses Registered with Kangar Local Council by Industry, 2011

Industry	Number	%
Sales, Maintenance, Repair of Motor & Vehicles	568	10.3
Restaurants & Mobile Food Service Activities	782	14.2
Services of Personal & Household Goods	463	8.4
Wholesale Trade	266	4.8
Warehousing & Storage	125	2.3
Education	405	7.3
Retail Trade (Except Vehicles and Motorcycles)	2,280	41.3
Entertainment, Sports, Amusement & Recreation Activities	56	1.0
Professional, Scientific & Technical Activities	79	1.4
Other Services	277	5.0
Manufacturing	219	4.0
Total	**5,520**	**100.0**

Source: Kangar Local Council, 2011

1.4.1 Productivity of the Industrial Sector

Data obtained on the principal indicators for the main sectors in Perlis shows an increase in the productivity levels as indicated by output per worker.

Although the number of manufacturing firms declined from 2005 to 2008, the gross value of output increased in 2008. As a result of the increase in the prices of raw materials, the value-added for the manufacturing sector in Perlis had decreased. In addition, Perlis has not generated any significant manufacturing employment. The total number of persons engaged in the manufacturing industry was 4,553 workers in 2008, down from 5,349 workers in 2005.

Between 2005 and 2008, the productivity level for the agricultural sector increased from RM45,500 to RM82,500 per worker, while that for the manufacturing sector increased from RM191,600 to RM251,500 per worker. Although the unit labour costs for the manufacturing sector remained the same between 2005 and 2008, the agricultural sector showed a reduction, which suggests that the cost to produce a unit of goods or services in 2008, compared to that in 2005, had been reduced.

Table 1.9: Principal Statistics and Productivity Indicators by Sector

Perlis	Agriculture		Manufacturing		Selected Services
	2005	2008	2005	2008	2008
Number of Firms	60	26	255	229	2,119
Output (RM million)	44	68	1,025	1,145	384
Value-added (RM million)	18	32	293	289	231
Number of Workers	967	820	5,349	4,553	8,473
Salaries (RM million)	11	10	73	86	68
Value of Assets (RM million)	39	24	496	488	217
Worker/ Firm	16.1	31.5	21.0	19.9	4.0
Gross Output / Worker (RM'000)	45.5	82.5	191.6	251.5	45.3
Value added / Worker (RM'000)	18.1	38.6	54.8	63.5	27.2
Fixed Assets / Worker (RM'000)	40.3	29.7	92.7	107.2	25.7
Salaries Paid / Worker (RM'000)	11.1	12.8	13.6	18.8	8.0
Unit Labour Cost	0.24	0.15	0.07	0.07	0.18

Sources:
1) *DOS, Various Issues of Economic Census for Agriculture*
2) *DOS, State/District Data Bank Malaysia, 2010 and Report on the Annual Survey of Manufacturing Industries 2010*

The change in the productivity of the agricultural sector is mainly due to the fisheries industry rather than paddy. Based on data from the Fisheries Department, marine fish landing increased from 133,047 tonnes in 2005 to 189,358 tonnes in 2008, an increase of 7%. On the other hand, paddy production has been relatively stable at 110,000-120,000 metric tonnes per year for the corresponding period.

However discussions with those in the industry have identified several issues: uneconomic farm size; low productivity and income; limited access to technology and capital; lack of entrepreneur and management skills; and lack of supply chain linkages to the market.

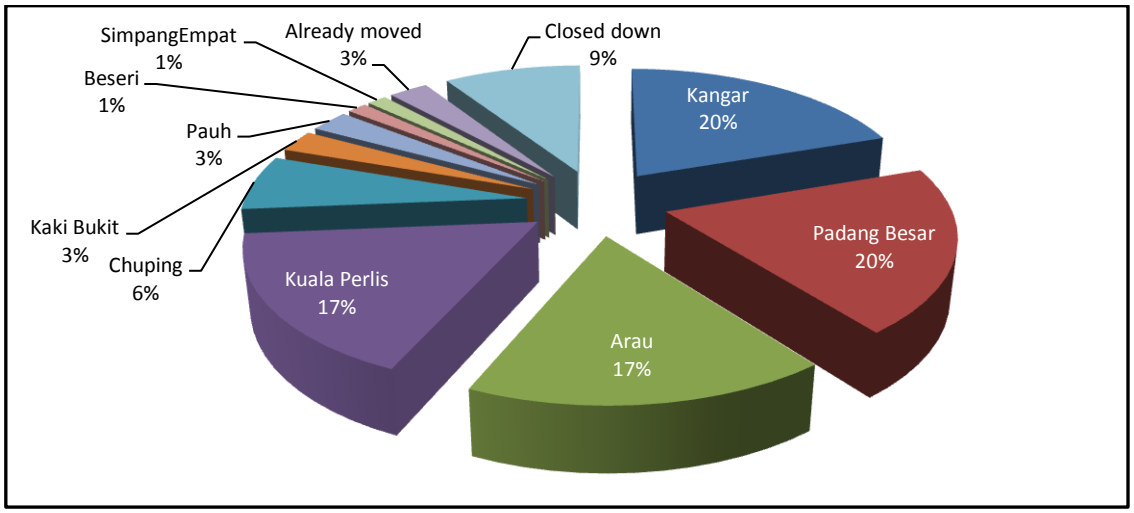
On the other hand, there was insufficient data to show the change in the services industry between the three years. Only data on selected services were available. These sub-sectors include accommodation services, travel agencies and tour bus operators, shipping and forwarding agencies, road haulage, wholesale & retail trade and motor vehicles.

1.4.2 Survey of Establishments

An independent listing survey carried out for the PSDP located 76 establishments in the Kangar-Jejawi, Arau, Kuala Perlis and Padang Besar industrial estates.

Of these, 67 establishments are in operation, with the majority being located in Kangar, Padang Besar, Arau and Kuala Perlis. SMEs account for the majority (89%) as shown in **Figure 1.5** and **Table 1.10**. On average, these have 20 workers or less per establishment with one third engaged in the food and beverage business.

Figure 1.5: Distribution of Establishments by Status of Operation and Location in Kangar-Jejawi, Arau, Kuala Perlis and Padang Besar Industrial Estates



Source: Listing Survey, 2011, PE Research

Table 1.10: Number of Operating Establishments by Size and Location

Town/Location	Micro	Small	Medium	Large	Grand Total
Arau	2	8	-	2	12
Beseri	-	1	-	-	1
Chuping	-	3	-	2	5
Kaki Bukit	-	2	-	-	2
Kangar	3	8	2	2	15
Kuala Perlis	1	9	1	-	11
Padang Besar	-	12	-	1	13
Pauh	-	2	-	-	2
Simpang Empat	-	1	-	-	1
Grand Total	**6**	**46**	**3**	**7**	**62**
%	**9.7**	**74.2**	**4.9**	**11.3**	**100.0**
No of Employees	**21**	**858**	**363**	**4,231**	**5,473**

Source: Listing Survey, 2011, PE Research

Table 1.11: Number of SMEs by Location and Business Activity

Town	Food & Beverage	Logistics	Other Services	Other Manu-facturing	Concrete	Quarry-ing	Ice Cubes	Grand Total
Arau	3	-	-	6	-	-	1	10
Beseri	-	-	-	-	-	-	1	1
Chuping	-	-	-	1	1	1	-	3
Kaki Bukit	1	-	1	-	-	-	-	2
Kangar	5	-	5	-	1	2	-	13
Kuala Perlis	6	-	-	2	1	-	2	11
Padang Besar	2	9	1	-	-	-	-	12
Pauh	-	-	-	-	2	-	-	2
Simpang Empat	-	-	-	1	-	-	-	1
Grand Total	**17**	**9**	**7**	**10**	**5**	**3**	**4**	**55**

Source: Listing Survey, 2011, PE Research

There are seven large-sized establishments that dominate the business profile in the area, as shown in **Table 1.12**. The number of employees from these establishments range from 170 to 2,000 workers.

Table 1.12: Top Key Stakeholders in Perlis

Company Name	Business Activity	Number of Employees
Shorubber (Malaysia) Sdn Bhd	Gloves	2,000
Cement Industries Of Malaysia Berhad	Masonry Cement, Portland Cement (Ordinary)	761
Kilang Gula Felda Perlis Sdn Bhd	Molasses, Sugar Refining	600
Mediquip Sdn Bhd	Latex Dipped Medical Devices	300
Masfloor Sdn Bhd	PVC Flooring Manufacturer	200
HPA Industries Sdn Bhd	Herbal Coffee Manufacturing	200
Water Dragon Fishing Net Industry Sdn Bhd	Manufacturing Fishing Net and Ropes	170

Source: Listing Survey, 2011, PE Research

In the focus group discussions, participants have revealed some of the issues and challenges faced by them. These are small SMEs and narrow manufacturing base, low value-added and lack of innovation, low rate of adoption of progressive technology, lack of connectivity and transportation linkages which limits economic growth potential in manufacturing, lack of industrial and manufacturing focal growth nodes which offer competitive incentives to lure large corporations and foreign investment, and lack of strategic thrusts that focus on growing the manufacturing sector.

1.5 TRADE FLOWS

As the majority of trade in Perlis is conducted via Padang Besar, the trade flows can be analysed by looking at the flow of goods through this checkpoint.

The most recent figures on the inbound commodity flow for Padang Besar show that auto parts, rubber and E&E comprise the largest categories of imported goods into the State. Trade with Southern Thailand has been forged over many years.

Table 1.13: Padang Besar Inbound Commodity Flow (2010)

Rail		Road			
Containerised		Containerised		Non-Containerised	
100,378 TEU		38,470 TEU		637,651 MT	
Commodity	TEU 2010	Commodity	TEU 2010	Commodity	MT 2010
Rubber	98,370	Auto Parts	14,426	Auto Parts	264,625
Perishables	240	Perishables	8,733	E&E	241,032
Others	1,768	E&E	8,156	Perishables	112,864
		Computer Parts	4,462	Others	19,130
		Others	2,693		

Source: Royal Malaysian Customs, Padang Besar, quoted by Frost & Sullivan in "Feasibility Study for Padang Besar Inland Clearance Depot, April 22, 2011"

Table 1.14: Padang Besar Outbound Commodity Flow (2010)

Rail				Road			
Landbridge		Containerised		Containerised		Non-Containerised	
10,400 TEU		30 MT (~3TEU)		24,699 MT (~2,058 TEU)		764 MT	
Commodity	TEU 2010	Commodity	MT 2010	Commodity	TEU 2010	Commodity	MT 2010
Sugar	2,600	Electronics	20	Auto Parts	19,760	Seafood	496
E&E	2,080	Rubber Tyres	4	Electricals	2,963	Auto Parts	138
Building Material	5,720	Others	6	Seafood	1,976	Electricals	130

Source: Royal Malaysian Customs, Padang Besar, quoted by Frost & Sullivan, ibid.

As of 2007 a variety of goods are transported across the border of Malaysia and Thailand. Goods that constitute the current cross border traffic include cement, gypsum, food products and containerised cargo. The main flow of goods between the points in two countries takes place as follows:

- Cement from Bukit Keteri (Malaysia)/ Wakaf Bharu (Malaysia) to Thailand via Hat Yai;
- Gypsum from Thong Soon (Thailand) to various cement plants in Malaysia;
- Food products from Bangkok to Malaysia; and
- Containers between ICDs in Thailand and ports and ICDs in Malaysia.

Thailand's Southern Peninsula, which is part of the IMT-GT, is dominated mainly by agriculture, with major contributions from fishing (shrimp farming), rice production and tree crops (rubber, oil palm, and coffee). Other important sectors include tourism and mining (tin, monazite, barite, lignite or brown coal and gypsum).

Table 1.15: Top Five Export Commodities from Songkhla (2006)

Rank	Commodity	Value (THB mil)	Destination
1	Rubber Sheets	118,763.91	China, USA, India
2	Machinery and Spare Parts	29,271.62	China, Japan, Malaysia
3	Rubber Gloves	17,038.07	Argentina, Belgium
4	Fishery and Frozen Seafood	16,697.48	USA, China, Belgium
5	Canned Food	13,291.96	Argentina, USA

Source: Songkhla, Sadao, Padang Besar Customs, compiled by the Provincial Commerce Authority, quoted in "Logistics Development Study of the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT)", Ruth Banomyong, Centre for Logistics Research, Faculty of Commerce & Accountancy, Thammasat University, 2008, http://www.imtgt.org/Documents/Studies/Logistics-Development-Study.pdf

Table 1.16: Top Five Import Commodities to Songkhla (2006)

Rank	Commodity	Value (THB mil)	Origin
1	Machinery & Spare Parts	18,011.64	China, Japan, Malaysia
2	Construction Equipment	15,134.82	China, Germany, Japan
3	Recording Devices	13,072.05	China, Japan, Malaysia
4	IC Board	11,127.64	China, Canada
5	Fishery and Frozen Seafood	8,309.98	Indonesia, Japan

Source: Songkhla, Sadao, Padang Besar Customs, complied by the Provincial Commerce Authority, quoted in "Logistics Development Study of the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT)", ibid.

Tables 1.15 and **1.16** show the top five commodities crossing the borders between Thailand (Songkhla) and Malaysia (Perlis and Kedah). It is noted that Thailand exports mostly agricultural products to Malaysia, while Malaysia exports industrial goods to Thailand. Rubber products are the main commodity of Southern Thailand. Rubber products exported from Songkhla are loaded onto seagoing vessels in Penang for their final destination. Malaysia plays an important role as a transit country for Thai export goods especially from Southern Thailand. In comparison to Thai exports, Malaysian exports to Thailand are quite small in terms of value, with most of the goods being heavy industrial equipment utilised locally in Southern Thailand. Among ASEAN countries, Malaysia is the second biggest trading partner for Thailand after Singapore and has the highest ratio of border trade in terms of value compared to other neighbouring countries such as Myanmar, Lao PDR or Cambodia.

The second major trading point in the State is Kuala Perlis. Kuala Perlis had a modest increase in imports between 2010 and 2011 of RM1,936,208, which equates to an increase of 2.9%. This brought the total imports for 2011 to RM69,222,777. However, exports over this period increased by a much larger amount; by 51% between 2010 and 2011. Total exports from Kuala Perlis were valued at RM27,393,465 in 2011. The main exports were snack food, tinned food, flour and various types of fish.

The Kuala Perlis Terminal is used mainly by passengers transiting to Langkawi, other surrounding islands and Thailand. It is estimated the annual passenger traffic at 2 million. Based on passenger expenditure on ticket purchase, food and miscellaneous (RM35), revenue generated by Kuala Perlis is estimated at RM70 million per year.

Table 1.17: Imports and Exports From Kuala Perlis (RM)

	2010	2011	Trade
Import (RM)	67,286,568	69,222,777	• Boat Repair • Assorted Fish
Export (RM)	18,162,901	27,395,465	• Snack Food • Tin Food • Flour • Shellfish and Fish • Cooking Oil

Source: Perlis Customs Department

1.6 INCOME DISTRIBUTION AND POVERTY

Perlis has the highest level of poverty in Peninsular Malaysia. There was only a marginal improvement in the level of poverty in Perlis when the incidence of poverty in Perlis decreased to 6.0% in 2009 from 6.3% in 2004. However, the poverty level in Perlis is still high compared to the average in Peninsular Malaysia. There are three times more poor households in Perlis than the average number for Peninsular Malaysia (see **Table 1.18**).

Although the mean household income in Perlis increased from RM 2,046 in 2004 to RM2,617 in 2009, it has the second lowest mean household income after Kelantan. This means that the rate of increase in mean household income has been faster for other states in Malaysia over the last five years. This implies that the slower increase of mean household income in Perlis will not be sufficient to bring about a large reduction in poverty if no extra effort is introduced to hasten the increase in levels.

Table 1.18: Selected Poverty Statistics, Malaysia, 2004 and 2009

Items	2004			2009		
	Perlis	Peninsular Malaysia	Malaysia	Perlis	Peninsular Malaysia	Malaysia
Incidence of Poverty (%)	6.3	3.6	5.7	6.0	2.0	3.8
No. of Poor Households ('000)	3.0	162.3	311.3	3.2	102.2	228.4
Mean Poverty Line Income (PLI) (RM monthly)	587	661	691	n/a	763	800
Mean Per Capita PLI (RM monthly)	140	152	155	n/a	194	198
Poverty Gap Index (%)	n.a	0.8	1.4	n/a	0.4	0.8
Total Households ('000)	47.6	4,497.8	5,459.3	53.2	4,998.2	6,024.5
Mean Households Size						
Average	4.2	4.4	4.5	n/a	4.1	4.2
Urban	n/a	4.3	4.4	n/a	4.0	4.1
Rural	n/a	4.7	4.8	n/a	4.4	4.5
Poor	n/a	6.7	6.7	n/a	6.4	6.4

Sources:
(1) Tenth Malaysia Plan, 2011-2015
(2) Ninth Malaysia Plan, 2006-2010
(3) Koridor Utara Blueprint, Chapter 6

Table 1.19: Incidence of Poverty by State, Malaysia, 2004 and 2009 (%)

State	Mean Household Income (RM)		Incidence of Poverty (%)	
	2004	2009	2004	2009
Malaysia	3,249	4,025	5.7	3.8
Peninsular Malaysia	3,387	4,162	3.6	2.0
Perlis	2,046	2,617	6.3	6.0
Kedah	2,126	2,667	7.0	5.3
Perak	2,207	2,809	4.9	3.5
Penang	2,531	4,407	0.3	1.2

Source: Tenth Malaysia Plan, 2011-2015

Compared with other states in Peninsular Malaysia, Perlis has the highest Gini Coefficient in 2009. Perlis' Gini Coefficient increased from 0.423 in 2004 to 0.434 in 2009, indicating that income inequality increased over the last five years.

Table 1.20: Gini Coefficients by State, 2004 and 2009

State	Gini Coefficient	
	2004	2009
Malaysia	0.462	0.441
Peninsular Malaysia		
Perlis	0.423	0.434
Kedah	0.387	0.408
Perak	0.393	0.400
Penang	0.398	0.419

Source:http://www.epu.gov.my/c/document_library/get_file?uuid=bc7f0f87-72d4-48d8-8e8f-65920e480783&groupId=34492

According to the poverty statistics (see **Table 1.21**), the household poverty line income (PLI) and per capita PLI for Perlis in 2010 was RM720 and RM180 respectively. These levels again are far lower than the national average for Peninsular Malaysia. Most of the poor households in Perlis were found in the coastal areas where fishing is the main livelihood.

Table 1.21: Incidence of Poverty and Hardcore Poverty, 2010

State	Incidence of Poverty			Incidence of Hardcore Poverty		
	Number of Poor Households	Poverty Line Income		Number of Poor Households	Poverty Line Income	
		Household	Per Capita		Household	Per Capita
Perlis	1,327	720	180	587	430	100
Malaysia	34,374	720	180	5,936	430	100

Source: Perlis State Development Office

1.7 DEVELOPMENT INDICATORS

Several indicators could define the relative State of Perlis' development. These indicators are shown **Table 1.22**. One way of assessing whether Perlis has achieved developed status is to compare its indicators with that of the Malaysian average or with a specific State, e.g. Melaka.

Compared to the GDP per capita for Melaka and Malaysia as a whole, Perlis lagged far behind. Other development indicators show Perlis' slower progress rate in the accessibility to communications such as telephone and internet penetration. Compared to Melaka and Malaysia as a whole, internet penetration in Perlis was only 174 per 1,000 population compared to 590 for Melaka and 317 for Malaysia respectively.

Table 1.22: Indicators of Development (Selected indicators)

No	Indicator	Perlis	Melaka (as at Oct 2010)	Malaysia
1	GDP Per Capita	RM13,928	RM48,034	RM43,492
2	GDP Growth Rate (%)	2.8	-0.4	4.5
3	Unemployment Rate (%)	3.3	2.4	3.6
4	Income Distribution (Gini Coefficient)	49.6	41.0	46.2
5	Poverty Rate (%)	6.0	0.5	3.6
6	Life Expectancy: Total	74	73	74
7	Infant Mortality (per 1,000 live births)	6.3	8.2	6.5
8	Population Growth Rate	1.2	2.1	2.1
9	Criminal Cases (per 100,000 population)	51.6	723.5	792
10	Physicians per 1,000 Population	1.12	1.2	1.5
11	Dependency Ratio	48.2	61.0	57.3
12	Access to Electricity (% of Population)	100	100	100
13	Access to Telephone + Mobile (per 1,000 population)	731	1,332	1,028
14	Access to Internet/Broadband (per 1,000 population)	174	590	317

Source: UPEN Perlis, 2010

Other areas of development not shown in the data above relate to accessibility, such as public transportation, road infrastructure and utilities. Some of the issues raised are as follow:

1. Public Transportation

- Unsatisfactory public transport system. The limited public transport in the State results in car dependency, causing social and economic deprivation due to infrequent public transport services;

- Absence of an integrated public transport terminal in Perlis. Mobility of people and goods are affected by the public transportation system. The public transportation system needs to be enhanced in order to make it a compelling alternative to private transportation; and

- No direct connection from the North-South Expressway to Kangar, Perlis. As such, transportation links to markets and tourist destinations are long, often inefficient and a major disadvantage to the local industries.

2. Utilities

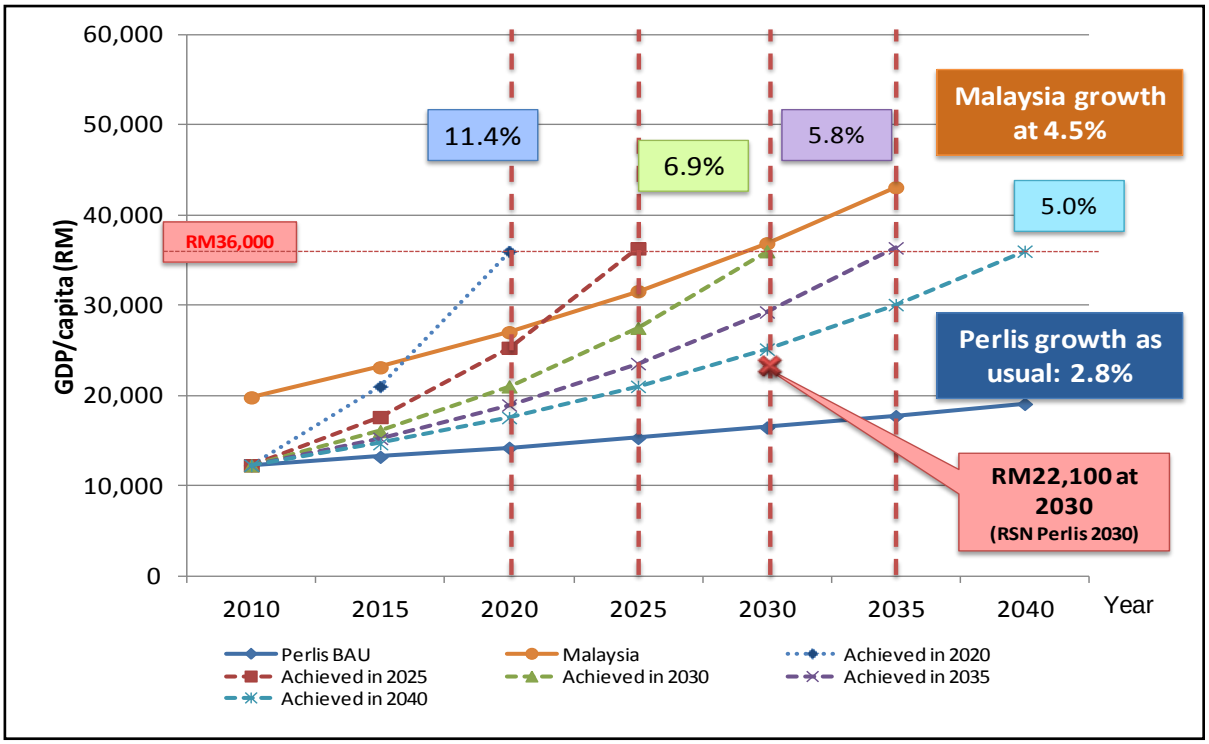
- Lack of water supply to the rural areas;
- Waste Disposal – The current dump site is not a sanitary landfill and poses an environmental hazard; and
- Drainage - Large areas of Perlis are low-lying and flood-prone. Existing rivers, drains and channels are not able to cope with the excess run-off and causes flooding after severe rainfall. Local drains do not have sufficient capacity, and are blocked by rubbish and other obstructions, rendering them unable to drain the flood waters.

However, there are other indicators that show that Perlis is doing better than the rest, such as a lower crime rate compared to a more urbanised State such as Melaka.

1.7.1 Growth Scenarios

Various growth scenarios that would fulfill the desired objective of the Perlis Strategic Development Plan are discussed here. The rationale for this exercise is to show the capacity and level of commitment needed to achieve the goals set by the State.

Figure 1.6: Various Scenarios for GDP Per Capita by Different GDP Growth Rates



Source: Perlis Strategic Development Plan Report, 2012

Figure 1.6 shows various GDP per capita scenarios by different GDP growth rates. Over the past five years, Perlis' economy grew at an average of 2.8% p.a. As this rate was achieved before the PSDP began, it can be used as the background rate of growth. At this rate of growth, Perlis' per capita GDP would only grow to about RM20,000 per annum by the year 2040.

Obviously, at this rate of growth the gap between Perlis and the national average would continue to widen. The Perlis Structure Plan proposals have set an economic target of RM22,050 per capita by the year 2030. This target would seem to be low if Perlis were to aim to achieve high income and developed nation status.

If Perlis wants to achieve RM36,000 GDP per capita (the national definition for a high income nation), it could grow at different rates and reach the target in various years. The rates of growth and the year it can achieve this target are shown in **Figure 1.6**.

- 11.4% p.a. - Achieve the target in year 2020;
- 6.9% p.a. - Achieve the target in year 2030;
- 5.8% p.a. - Achieve the target in year 2035; and
- 5.0% p.a. - Achieve the target in year 2040.

1.8 EDUCATION

As of 2011, there were twelve (12) tertiary educational service providers/institutions in Perlis, with the majority being public-funded institutions (only two are private institutions). Unlike private institutions that recruit their own students, public-funded institutions receive students from the government. There are only two institutions that are engaged in Research and Development (R&D) activities Universiti Malaysia Perlis (UniMAP) and Allianze University College of Medical Sciences (AUCMS), and only one that has a degree programme in collaboration with a foreign university (AUCMS). There are five categories of educational institutions available in Perlis as shown in **Table 1.23**.

Table 1.23: Categories of Educational Institutions in Perlis

Type of Institutions	Name of Institutions	Category of Courses
Universities	• Universiti Malaysia Perlis (UNIMAP) • Universiti Teknologi Mara (UiTM)	• Diploma • Degree • Post Graduate
	• Allianze University College of Medical Sciences	• Foundation • Diploma • Degree
Colleges	• Kolej Antarabangsa Teknologi dan Profesional • Institut Pengajian Tinggi Islam Perlis	• Diploma
Training Institutes (Professional)	• Institut Perguruan Perlis	• Diploma and Degree Courses in Teaching
	• Kolej Jururawat Masyarakat Kangar	• Certificate Courses in Nursing
Vocational Training Institutes	• Politeknik Tunku Syed Sirajuddin • Institut Kemahiran MARA Berseri • Institut Latihan Perindustrian	• Certificate
	• Institut Kemahiran Belia Negara Kuala Perlis	• Diploma
Post Secondary Vocational Institutions	• Kolej Komuniti Arau	• Skills Certificate

Source: Public and Private Training Institutions Survey, 2011, PE Research

According to a survey conducted specially for this plan, the 12 institutions in Perlis offer 44 certificate courses, 69 diploma courses and 48 degree courses. The top three certificate courses are in the automotive, electrical, and mechanical disciplines; for diploma courses they are in business management, engineering and ICT; and for degree courses they are in education, chemical, business management and engineering. There are only two agricultural courses in Perlis offered by UiTM (see **Table 1.24**).

While these institutions train more than 8,000 graduates annually, job creation for high skilled jobs remain low in Perlis. With limited job opportunities in Perlis, most leave for other areas offering more lucrative job opportunities such as Penang and the Klang Valley. A ready supply of highly trained workers is an untapped advantage for Perlis in its development plans.

Table 1.24: Number of Courses by Educational Category and Course

Course	Certificate		Diploma		Degree	
	No.	%	No.	%	No.	%
Nursing	1	2.3	1	1.4	-	-
Automotive	8	18.2	-	-	-	-
Electrical	7	15.9	2	2.9	-	-
Electronic	3	6.8	6	8.7	-	-
Mechanical	8	18.2	3	4.3	-	-
Medical	-	-	1	1.4	1	2.1
Metal Fabrication	2	4.5	-	-	-	-
Education	-	-	6	8.7	5	10.4
Fashion and Design	2	4.5	-	-	-	-
Food Processing and QC	1	2.3	-	-	-	-
Architectural Drafting	5	11.4	-	-	-	-
Chemical	-	-	3	4.3	5	10.4
Business Management	1	2.3	9	13.0	7	14.6
Accountancy	-	-	3	4.3	1	2.1
Engineering	-	-	10	14.5	22	45.8
Other Science Courses*	-	-	4	5.8	3	6.3
ICT	3	6.8	9	13.0	3	6.3
Agriculture**	-	-	1	1.4	1	2.1
Services	3	6.8	8	11.6	-	-
Art Design	-	-	3	4.3	-	-
Total	**44**	**100.0**	**69**	**100.0**	**48**	**100.0**

Note:
** The courses included in this category are Science, Industrial Chemistry, Polymer Technology, Science in Chemistry, Science in Applied Chemistry, Science in Physics, Science Biology, Marine Technology, Planting Industry Management and Science Plantation Technology & Management.*
*** Courses offered by UiTM*
Source: Public and Private Training Institutions Survey, 2011, PE Research

1.9 LAND USE

Perlis is still a 'green' State. The analysis of existing land use showed that agriculture accounted for 54,560 ha or 67% of the land area. Most of the agricultural land use in Perlis is cultivated with paddy, rubber and sugar cane. The built-up area is dominated by institutional and residential use. Other land use comprises forests, vacant land, water bodies and roads (**Table 1.25** and **Figure 1.7**).

According to the Kangar Local Plan, the total built-up area in Perlis is estimated to increase from 9,799.5ha or 12% of the State in 2008 to 15,816.3ha or 19.3% by 2020. The increase in the built-up area is mainly realised by rezoning agriculture land to urban use, i.e. residential, commercial, industrial, institutional and community facilities (**Figure 1.8**).

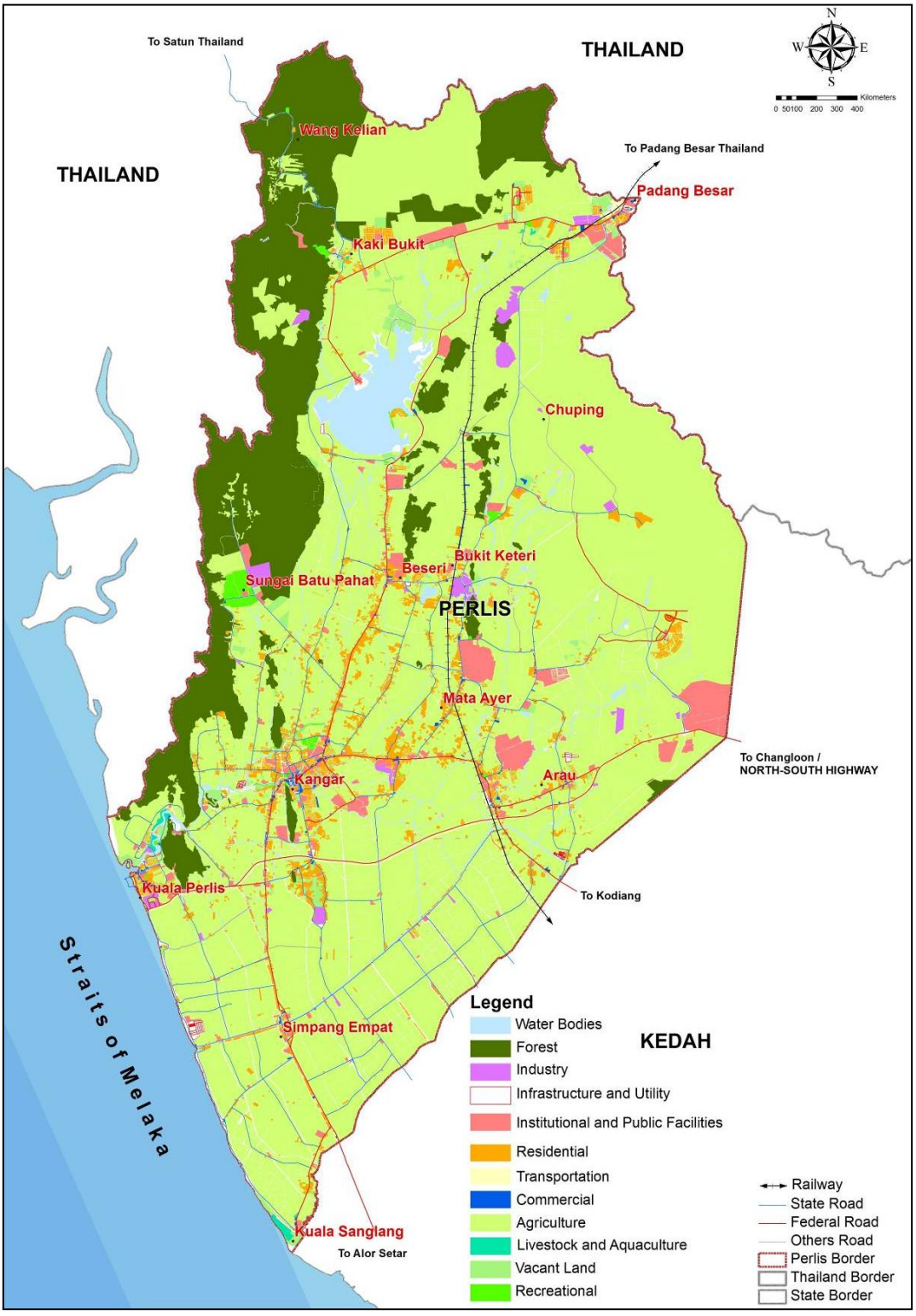
Table 1.25: Land Use Change in Perlis (2008-2020)

Land Use	Existing (2008)		Future (2020)	
	Area (ha)	%	Area (ha)	%
Residential	3,039.92	3.71	5,434.38	6.63
Commercial	197.37	0.24	711.76	0.87
Industrial	282.63	0.34	1,214.79	1.48
Institutional & Community Facilities	2,281.88	2.79	3,281.81	4.01
Sports & Recreational	810.95	0.99	1,272.78	1.55
Infrastructure & Utility	87.82	0.11	90.29	0.11
Roads	3,098.93	3.78	3,810.5	4.65
Total Built Up Area	**9,799.50**	**11.96**	**15,816.31**	**19.30**
Agriculture	54,560.10	66.59	50,011.1	61.04
Forestry	12,179.10	14.87	12,776.2	15.59
Vacant Land	1,429.08	1.74	-	-
Water Bodies	3,963.43	4.84	3327.59	4.06
Total Non-Built Up area	**72,131.71**	**88.04**	**66,114.89**	**80.70**
Total Area	**81,931.21**	**100.00**	**81,931.2**	**100.00**

Source: Adapted from the Kangar Local Plan, 2009-2020 (Printed on August 2011).

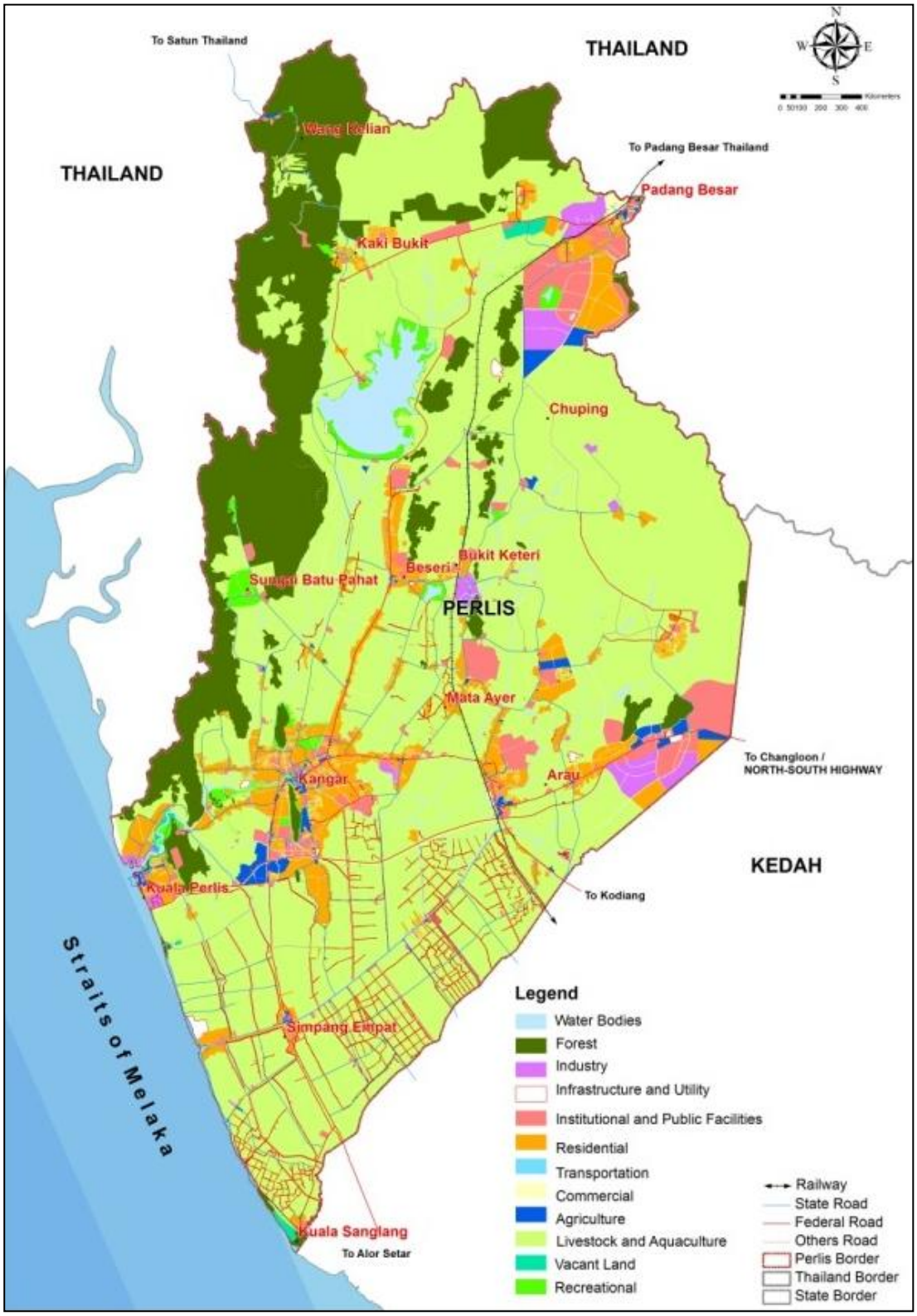
The land use change by category of land use in Perlis State is shown in the table above. One of the key issues is that most of Perlis is under reserve land (water, forest, road etc.), granary or Malay reserve land. This imposes a heavy constraint on other higher value development. If Perlis is to develop further, some of these constraints need to be addressed.

Figure 1.7: Existing Land Use, Perlis



Source: Kangar Local Plan, 2009-2020.

Figure 1.8: Future Land Use Zoning of Perlis, 2020



Source: Kangar Local Plan, 2009-2020.

1.10 TOURISM

Perlis is the gateway from Southern Thailand through the inland entry points at Padang Besar and Wang Kelian as well as the jetty check point at Kuala Perlis. In 2008 a total of 695,681 tourists arrived in Perlis through these entry points, with Padang Besar as the most popular, especially for visitors from Southern Thailand. The bulk of international tourists were from Southern Thailand (77.69%), and tourists from the UK, Germany and USA were the other significant segments, mostly Free Independent Travellers (FITs) or backpackers taking the overland trip into Malaysia via Southern Thailand (**Table 1.26**).

Table 1.26: Top Ten Tourist Arrivals in Perlis, 2008, by Country of Residence

Country of Residence	Tourist Arrivals Based on Entry Point				
	Padang Besar	KTM	Kuala Perlis	Wang Kelian	Total
Singapore	941	508	-	214	1,663
Australia	1,200	721	36	344	2,301
New Zealand	697	741	30	737	2,205
Canada	987	1,217	21	1,171	3,396
United Kingdom	2,327	1,934	85	3,874	8,220
United States of America	1,777	1,832	-	1,500	5,109
Germany	2,028	1,851	18	3,417	7,314
France	1,100	311	5	988	2,404
Thailand	470,810	5,075	7,826	56,771	540,482
Japan	314	755	-	84	1,153
Other countries	89,244	11,291	2,461	18,438	121,434
Grand Total	**571,425**	**26,236**	**10,482**	**87,538**	**695,681**

Source: Reviewed from Analysis and Findings Report of RTMPK, Tourism Sector Study, 2009

1.10.1 Accommodation

Data from the Ministry of Tourism shows a 40.9% hotel occupancy rate in 2010 for the 15 hotels (638 rooms). Since 2007, the occupancy rate has been declining (see **Table 1.27**). The number of hotel guests, in particular those from foreign countries, fell sharply, recording a negative average annual growth rate (AAGR) of 19%. The relatively poor performance of the sector points towards the lack of product development, destination management and focussed marketing.

Table 1.27: Perlis Average Hotel Occupancy Rates and Hotel Guests, 2005-2010

Year	Hotel Occupancy Rates	Number of Hotels	No. of Rooms	Hotel Guests		
				Malaysians	Foreigners	Total
2005	59.5	12	546	76,917	13,230	90,147
2006	61.7	13	540	83,934	14,469	98,403
2007	63.8	13	540	90,972	15,166	106,138
2008	62.0	15	630	58,907	10,678	69,585
2009	45.9	15	630	86,872	15,675	102,547
2010	40.9	15	630	74,227	4,542	78,769

Source: http://corporate.tourism.gov.my/research.asp?page=facts_figures

Of these 15 hotels, there is only one 4-star hotel in Perlis. The majority of the hotels are unrated. This suggests that efforts to improve quality and service should be undertaken to attract tourists.

Table 1.28: Number of Hotels and Rooms by Star Rating, 2010

Hotel Grade	Hotels	Rooms
4-star	1	145
3-star	-	-
2-star	-	-
1-star	1	24
3-orchid	-	-
2-orchid	2	75
1-orchid	1	22
Unrated	10	362
TOTAL	**15**	**638**

Source: Leisure Property Stock Table, Q1 2011, Property Stock Report, Valuation and Property Services Division, MOF
Note: Orchid-rated is for budget hotels

However, based on the Analysis and Findings Report of the Kangar Local Plan (RTMPK), there are 29 accommodation facilities with a total of 1,013 rooms in Perlis. These range from dormitories, homestays, chalets, budget hotels to a 4-star hotel. The budget accommodations in Kuala Perlis are popular with transit visitors, while the 3-star and above hotels are highly dependent on meetings, incentives, conferences, and exhibitions (MICE) packages. In 2009, the official average room occupancy rate (AROR) for the 29 accommodation facilities in Perlis was 65 per cent. This rate differs greatly from the one

provided by Tourism Malaysia due to the inclusion of smaller hotels such as homestays and dormitories that are not covered by the Ministry. Interviews with hotel operators revealed that the number of hotels in Perlis, in particular those rated 3-star and above, is not sufficient to meet the demand of visitors, especially during public holidays, school holidays and university convocations, thereby forcing visitors to stay in hotels in Alor Setar. Otherwise, the availability of accommodation is deemed sufficient on normal days.

1.10.2 Tourist Assets in Perlis

Tourism development is also deemed as a key contributor towards economic development for the State of Perlis. In addition to being a 'green' state, Perlis has a variety of existing as well as new tourism assets, each with its unique features.

Padang Besar, Wang Kelian and Kuala Perlis have the potential to be developed as competitive tourism centres instead of just being tourism transit points. However, the right promotional activities to market these assets need to be initiated.

In addition, these attractions are being individually managed by government agencies that lack tourism knowledge and skills. As a result of poor maintenance, lack of interpretation and uncoordinated promotion, it has limited the various destinations from offering a satisfying tourist experience.

The tourism industry players in Perlis currently do not have the capacity to handle inbound tourism. Most of the high end resorts in Langkawi bypass Perlis, taking their guests on ecotourism trips to Tasik Kenyir and Royal Belum because of the real or perceived unreliability of the operators in Perlis. Border town tourism has also been restricted to almost a one way flow of Malaysian tourists to the Southern Thailand side to buy lower order goods.

The ecotourism attractions in Perlis, especially Perlis State Park, have not been able to compete with similar attractions in the other states such as Taman Negara (Pahang), Royal Belum (Perak), or Tasik Kenyir (Terengganu). The total number of tourist arrivals to the Perlis State Park in the year 2010 was very low, with only 1,978 arrivals. Although the year 2011 saw an increase, with 2,917 tourists, these figures are still too low for an ecotourism attraction.

Table 1.29: Tourist Arrivals to the Perlis State Park & Gua Kelam in 2010 and 2011

Gua Kelam				Total	Perlis State Park				Total
Domestic		International			Domestic		International		
2010	98,485	2010	132	98,617	2010	1,884	2010	94	1,978
2011	133,842	2011	102	133,944	2011	2,776	2011	141	2,917

Source: Perlis Forestry Department, 2012

Perlis also does not have special events to attract visitors despite having unique features such as a distinctively cool December month ('Perlis winter'), and popular local culinary and agri-tourism products. However, Perlis does have a popular seasonal fruit, the mango variety Harumanis that has attracted tourists.

Some challenges to the industry are:

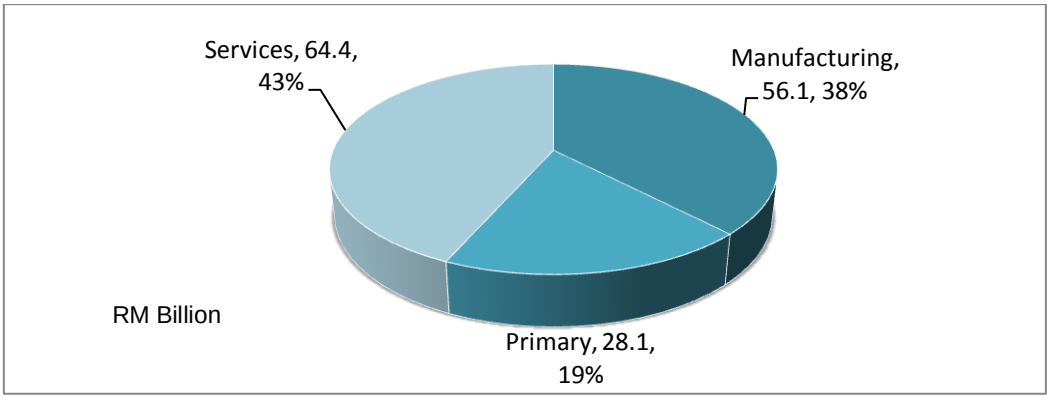
- Perlis is currently excluded from the mainstream tourist circuit, suffers from a lack of promotion, and has a hazy tourist image. Despite being the Northern gateway to Malaysia, it attracts mainly low yield visitors from Southern Thailand and international Free Independent Travellers;
- Although Perlis is blessed with distinct natural and rural tourism resources, these have been developed in a fragmented manner;
- Poor implementation and maintenance have resulted in a temporary suspension of funding from Ministry of Tourism Malaysia (MOTOUR);
- The tourist attractions at Sungai Batu Pahat are being individually managed by government agencies that lack tourism knowledge and skills. As a result there is poor maintenance, lack of interpretation and uncoordinated promotion activities. These have prevented the destination from offering a satisfying tourist experience;
- The Perlis State Park is not included in the current list of ecotourism sites under the Malaysia Mega Biodiversity Hub (MMBH), an ETP initiative to scale up and promote premier ecotourism sites in the country;
- Border town tourism has been restricted to the almost one way flow of Malaysian tourists to Southern Thailand. The tourist traffic to Wang Kelian, which used to peak at 70 buses every Saturday, has dwindled;
- Bad road design has resulted in poor traffic flow and congestion during weekends and schools holidays at Kuala Perlis, which is a vibrant transit point to Langkawi;
- The tourism industry in Perlis currently does not have the capacity or service quality to handle high quality inbound tours. The unreliability of tour operators in Perlis has also caused tourists to bypass the State;
- Currently, most of the tour guides registered in Perlis work in Kuala Lumpur, Penang, Langkawi, etc. Perlis also does not have special events to attract visitors, despite having unique features such as a distinctively cool December month ('Perlis winter'), and popular local culinary and agrotourism products; and
- The transformation of Langkawi into a Top 10 Island and Ecotourism Destination could generate significant multiplier effects for the tourism industry in Perlis.

1.11 INVESTMENT (FDI/DDI)

The continued economic growth of Malaysia and its mission to become a high-income nation by 2020 relies heavily on its ability to successfully attract foreign direct investments (FDI) and domestic direct investments (DDI). Under the Economic Transformation Programme, private investment is one of the main catalysts for growth. A target of 92% of the total RM1.4 trillion investments needed has been earmarked to be secured from private sources. In order to achieve this level, investments of RM120 billion are required each year.

On the back of a number of high profile initiatives implemented by the Malaysian government in 2011, namely the ETP and 10th Malaysia Plan (10th MP), the total investments approved in the Malaysian economy increased to RM148.6 billion.

Figure 1.9: Total Investments (Approved) in the Malaysian Economy, 2011



Source: MIDA

These figures indicate that the economy exceeded the target RM120 billion per annum by 24% for the year 2011, which ensures that the country is on track towards its 2020 ETP objectives.

In terms of manufacturing projects approved in the five economic corridors for 2011 and 2010, the total capital investment for 2011 was up by 38% from 2010. The Koridor Utara has the highest capital investment, with RM15.27 billion for 2011, with Sabah Development Corridor in last position with RM921.4 million. **Table 1.30** and **Figure 1.10** summarises the number of projects and approved investments for each of the economic corridors for 2010 and 2011.

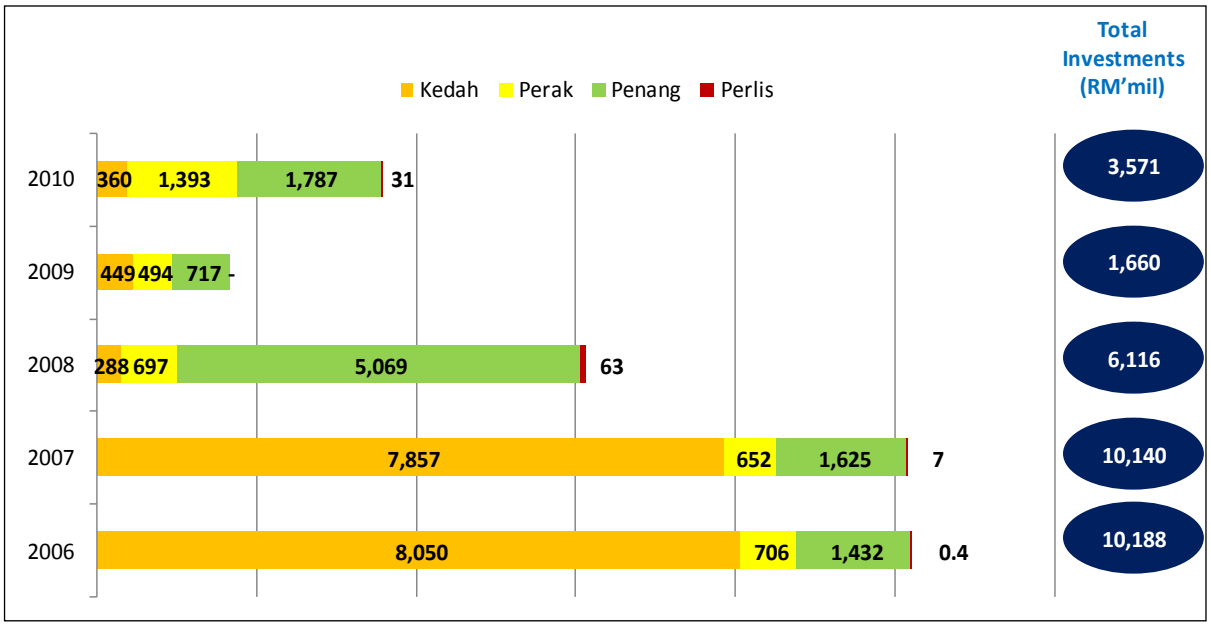
Table 1.30: Total Capital Investments by Economic Corridor

Economic Corridor	2010		2011	
	No. of Projects	Total Capital Investment	No. of Projects	Total Capital Investment
Northern Corridor Economic Region	178	14,230,034,975	154	15,265,343,555
East Coast Economic Region	27	3,536,224,111	45	4,559,259,165
Sabah Development Corridor	39	1,325,610,877	27	921,423,709
Sarawak Corridor of Renewable Energy	27	3,033,466,969	26	8,230,586,462
Iskandar Malaysia	112	2,905,687,484	124	5,678,632,914
Total	**383**	**25,031,024,416**	**376**	**34,655,245,805**

Source: http://www.mida.gov.my/env3/uploads/PerformanceReport/2011/Report.pdf, Page A11

Between 2006 and 2010, domestic investment in the manufacturing sector of the Koridor Utara was RM36.1 billion. In 2010 Penang had attracted 50% of domestic manufacturing investment in the Koridor Utara states amounting to RM1.7 billion. Over this 5-year period, Perlis only managed to attract RM102 million in investments in this sector. This represented only 0.3% of the total manufacturing inflow into the region. It is also important to note that domestic investments into the Koridor Utara have shrunk by 185% since 2006 (refer **Figure 1.10**).

Figure 1.10: Domestic Investment Statistics: Approved Manufacturing Projects by Koridor Utara States, 2006-2010 (RM million)

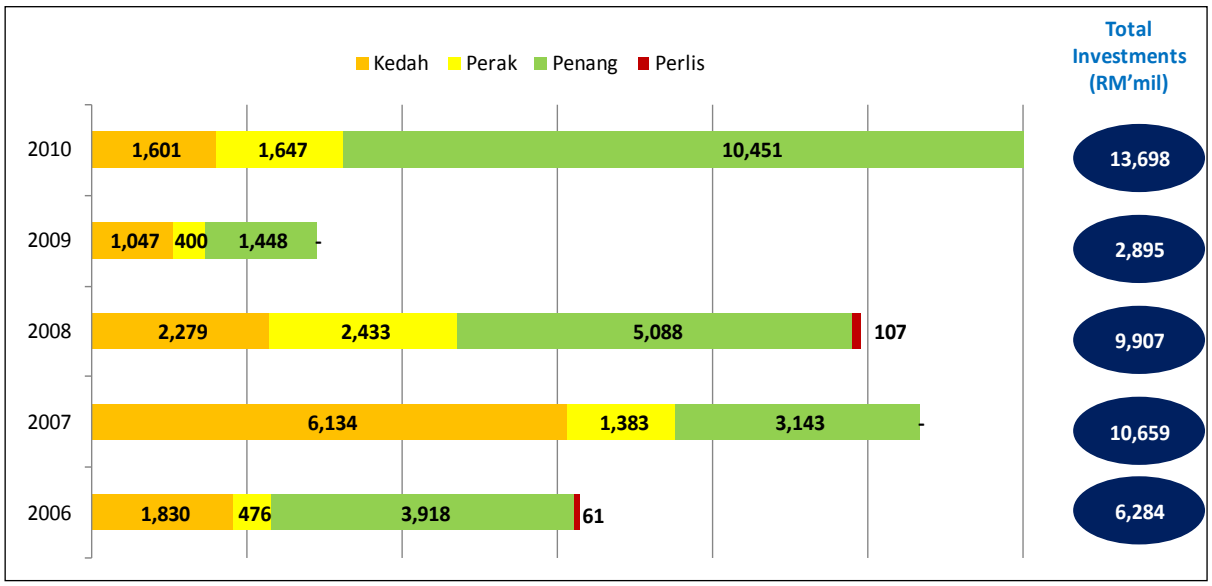


Source: MIDA

However, over the same period, foreign investments into the Koridor Utara have increased by 118%, with most of them concentrated in Penang. Perlis only managed to secure RM167 million, or 0.4% of the total regional manufacturing investment between 2006 and 2010. Overall, the largest investment inflow was into Penang (RM24 billion), with Kedah and Perlis recording RM12.8 billion and RM6.3 billion respectively.

Based on figures obtained from MIDA, Perlis is ranked last of all the Malaysian states for investments in both 2011 and 2010 (RM23.3 mil and RM31.4 mil respectively). Perlis was unable to secure investments in 2009 and failed to attract any foreign venture in the manufacturing sector in 2010.

Figure 1.11: Foreign Investment Statistics: Approved Manufacturing Projects by Koridor Utara States 2006-2010 (RM million)



Source: MIDA

Table 1.31: Total Private Sector Investments by State, 2010 and 2011

	2010						2011					
	New		Expansion		Total		New		Expansion		Total	
State	No.	Total (RMmil)	No.	Total (RMmil)	No.	Total (RMmil)	No.	Total (RMmil)	No.	Total (RMmil)	No.	Total (RMmil)
Penang	64	2,846.0	64	9,392.0	128	12,238.0	61	4,487.2	48	4,618.8	109	9,106.0
Selangor	207	4,354.9	118	6,286.9	325	10,641.8	171	4,383.8	92	4,357.4	263	8,741.1
Sarawak	26	3,488.8	17	456.3	43	3,945.0	29	8,172.0	14	281.3	43	8,453.4
Johor	94	5,559.5	78	1,905.5	172	7,464.9	104	2,854.9	84	3,729.7	188	6,584.6
Kedah	28	291.7	21	1,668.9	49	1,960.6	23	4,696.1	19	1,439.9	42	6,136.0
Negeri Sembilan	17	593.5	18	699.1	35	1,292.6	24	4,610.8	14	1,294.6	38	5,905.4
Melaka	16	885.6	21	745.5	37	1,631.1	22	639.9	17	3,723.9	39	4,363.7
Pahang	7	979.9	6	58.8	13	1,038.7	11	1,220.8	14	1,817.2	25	3,038.0
Terengganu	7	662.9	2	1,665.0	9	2,327.9	7	57.0	8	1,335.7	15	1,392.7
Perak	33	2,764.4	16	275.3	49	3,039.7	20	843.3	10	141.6	30	984.9
Sabah	29	1,227.2	10	98.4	39	1,325.6	20	845.8	7	75.6	27	921.4
Kuala Lumpur	4	55.0	-	-	4	55.0	15	174.7	4	133.0	19	307.6
Kelantan	3	139.0	2	30.6	5	169.6	1	80.0	4	48.6	5	128.6
Perlis	1	31.4	-	-	1	31.4	3	23.3	-	-	3	23.3
Labuan	1	14.9	-	-	1	14.9	-	-	-	-	-	-
Total	537	23,894.7	373	23,282.3	910	47,177.0	511	33,089.5	335	22,997.3	846	56,086.8

Source: MIDA

Presently Perlis ranks second last out of all the states and Federal Territories in Malaysia for total capital investments in 2011 (**Table 1.31**). Penang tops the list with RM9,106 million. The State of Perlis will be able to attract more investments and increase the flow of FDI/DDI if the creation of high value-adding manufacturing clusters is prioritised in the State.

One of the major contributions to the lack-lustre performance of FDI/DDI in Perlis is the lack of private investments.

1.12 SME AND BCIC

1.12.1 Small and Medium Enterprises (SME)

The common definition of Small and Medium Enterprises in the manufacturing, manufacturing-related services and agro-based industries are enterprises with full-time employees not exceeding 150 or with annual sales turnover not exceeding RM25 million[1]. In 2009 there was a total of 194 SMEs in the manufacturing sector in Perlis State, with a total gross output of RM309 million. The value-added of SME manufacturing amounted to RM51 million, while the value of fixed assets was RM50.6 million. The SMEs in manufacturing industries employed about 1,394 workers in Perlis in 2009.

The Census of Establishments and Enterprises in 2005 showed a total of 5,920 SME establishments in Perlis, with employment amounting to 19,268 persons. The majority of these SMEs were from the services sector (59.4%), which accounted for the largest share in terms of gross output (RM582 million), value-added (RM270 million), fixed assets (RM1,536 million) and employment (12,660 persons). This is followed by the agricultural sector (35.2%) and manufacturing sector (5.5%) respectively (see **Table 1.32**).

The average size of the SMEs in Perlis is 3.3 workers per firm. In terms of productivity, as measured by gross output per worker and value-added per worker, Perlis State managed to achieve RM49,000 and RM20,100 respectively. Fixed assets per worker were valued at RM90,100 and the salary paid per worker was RM6,300. In addition, the fixed assets per worker showed that capital intensity of the services sector (RM121,300) was considerably higher than the manufacturing sector (RM24,600) and agricultural sector (RM36,000). As for the unit labour cost that measures the proportion of labour cost to total output, SMEs in the agricultural sector had a much lower cost at 0.05 compared to the manufacturing (0.12) and services sector (0.14).

The manufacturing sector was mainly dominated by the textiles and apparels industry (34.1%), followed by food products and beverages (21.5%) and the metal and metal products industry (20.1%).

[1] http://www.smecorp.gov.my/v4/node/14

Table 1.32: Perlis: Profile of SME by Sector

	Perlis			
	Manufacturing	**Services**	**Agriculture**	**Total**
Number of SMEs	323 (5.5%)	3,514 (59.4%)	2,083 (35.2%)	5,920 (100%)
Output (RM million)	269 (28.5%)	582 (61.6%)	94 (9.9%)	945 (100%)
Value-added (RM million)	87 (22.4%)	270 (69.6%)	31 (8.0%)	388 (100%)
Number of Workers	3,248 (16.9%)	12,660 (65.7%)	3,360 (17.4%)	19,268 (100%)
Salaries (RM million)	33 (27.0%)	84 (68.9%)	5 (4.1%)	122 (100%)
Value of Assets (RM million)	80 (4.6%)	1,536 (88.4%)	121 (7.0%)	1,737 (100%)
Worker/ Firm	10.1	3.6	1.6	3.3
Gross Output / Worker (RM'000)	82.8	46.0	28.0	49.0
Value added / Worker (RM'000)	26.8	21.3	9.2	20.1
Fixed Assets / Worker (RM'000)	24.6	121.3	36.0	90.1
Salaries Paid / Worker (RM'000)	10.2	6.6	1.5	6.3
Unit Labour Cost	0.12	0.14	0.05	0.13

Source: Census of Establishments and Enterprises, 2005 by DOS (Reference Year 2003)

However, the number of SMEs in the manufacturing sector had declined over the years. In 2005, the Census of Industries and Enterprises showed there were 323 SMEs. By 2009, the Survey of Manufacturing Industries showed that the number fell by 40% to only 194. Productivity had increased significantly with gross output per worker increasing by 168% and unit labour costs decreasing. Although the number of establishments decreased, the increase in productivity shows a possible consolidation of the sector, where establishments are able to operate more efficiently and effectively (see **Table 1.33**).

There were about 20 SMEs in the handicraft industry as of May 2011 out of which six SMEs were involved in forest products, five SMEs create textile-based handicraft and nine SMEs produce various crafts. Nonetheless the handicraft industry is quite small in Perlis.

Within the services sector more than 80% of 3,514 SMEs from the Census of Establishments and Enterprises are in the distributive trade (wholesale & retail trade) and restaurant industries. However, there is no updated data to allow analysis. On the other hand, data from SME Corp shows that of the 119 SMEs registered with their agency in 2011, 41.2% are in distributive trade and 26.9% are in the food and beverage industry. The shares of these two main business activities together are in line with the data from the census.

Table 1.33: Profile of SMEs in Perlis in the Manufacturing Sector

Industry	No of SMEs	%
Textiles and Apparels	110	34.1
Food Products and Beverages	69	21.5
Metal and Metal Products	65	20.1
Furniture	18	5.6
Wood and Wood Products	13	4.0
Publishing, Printing & Reproducing of Recorded Media	10	3.1
Machinery and Equipment	10	3.1
Chemical and Chemical Products	7	2.2
Non-metallic Mineral Products	5	1.5
Tobacco Products	5	1.5
Electrical and Electronics	3	0.9
Manufacturing not elsewhere classified	3	0.9
Rubber and Plastics Products	2	0.6
Paper and Paper Products	2	0.6
Leather Products	1	0.3
Total SMEs	323	100.0

Source: Census of Establishments and Enterprises, 2005 by DOS (Reference Year 2003)

For the agricultural sector, the main activities were subsistence agriculture, plantations, and horticulture industries (93%), followed by fisheries and its supporting services (6.2%).

SMEs in Malaysia can apply for financial assistance through the Matching Grants Schemes, Soft Loans, Skills Upgrading Programmes and New Programmes under SME Corp Malaysia. In 2011 a total of 29,700 grants, soft loans and new programmes were approved, with investments totalling to RM1,942 million in Malaysia. For the SMEs in Perlis, a total of 86 applications were received under the Matching Grant Schemes, of which 45 companies have been approved grants amounting to approximately RM2 million. This appears to make up a small percentage (4.28%) of the total investments approved under the matching grant schemes. The links between SME/BCIC and large industries are rather weak. This has not encouraged SMEs to leverage on the bigger players.

1.12.2 Bumiputera Commercial and Industry Community (BCIC)

Given that about 86 per cent of the population in Perlis are Bumiputera, the government has actively been involved in promoting Bumiputera in Commercial and Industry Community. The Tenth Malaysia Plan, 2011-2015 (10th MP), has emphasised that "the Bumiputera must leverage on their abilities to participate in the economy in a more holistic, effective and sustainable manner. The priority and focus will be towards building competitive Bumiputera enterprises and to raise the participation of Bumiputera in senior management levels"[2].

In terms of active registered business in Perlis, about 77 per cent of them are owned by Bumiputera. In 2010, the Bumiputera in Perlis owned commercial units valued at RM58 million, compared to RM225 million owned by Chinese and RM65 million by registered companies. They also owned the majority of stalls situated in buildings, including food courts, which are valued at RM4.83 million or 69 per cent share of the value of all stalls in the State.

The BCIC initiatives in Perlis are aimed at enhancing the capacity and capability of Bumiputera entrepreneurs. For now the wealth creation and high-income jobs components has a lesser impact on the Bumiputera in Perlis. Hence these programmes need to be enhanced to suit the needs of SMEs in Perlis, especially in marketing and innovation.

Perlis has the least number of participants in the country for its economic development programmes for Bumiputera. Interviews with key BCIC institutions revealed that there is a growing demand for BCIC programmes in Perlis, including lessons on entrepreneurship, schemes offering financial assistance, and the provision of business premises.

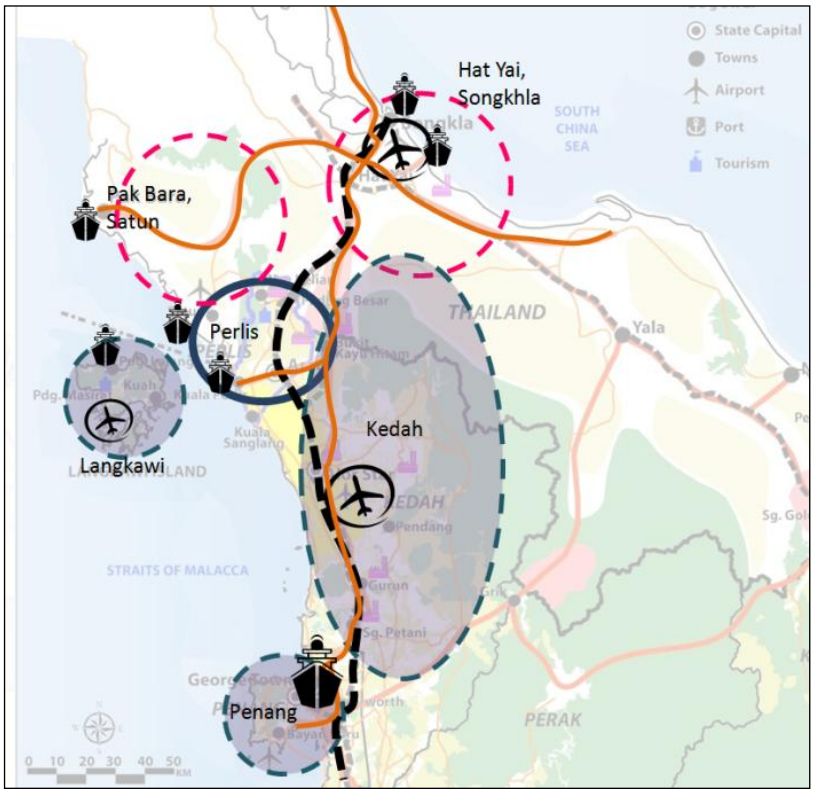
1.13 DEVELOPMENT IN NEIGHBOURING AREAS

The economic potential for the northern states of Perlis, Kedah and Penang in sectors such as tourism, agriculture, trading and services, manufacturing and processing, etc is supported by the Koridor Utara development plan.

Perlis is a small State located between Kedah, Langkawi, Penang, and the Thai provinces of Satun and Songkhla. In terms of economic activity, Perlis has a strong relationship with its neighbouring states and the southern provinces in Thailand. The towns in proximity to Kangar, Perlis include: Changlun (38km), Alor Setar (67km), Alor Setar Airport (60km), Bukit Kayu Hitam (45km), Langkawi (60km, 1 hour by ferry), Hat Yai/ Songkhla (90 km) and Satun (65km) (see **Figure 1.12**).

[2] Tenth Malaysia Plan, 2011-2015, page 19

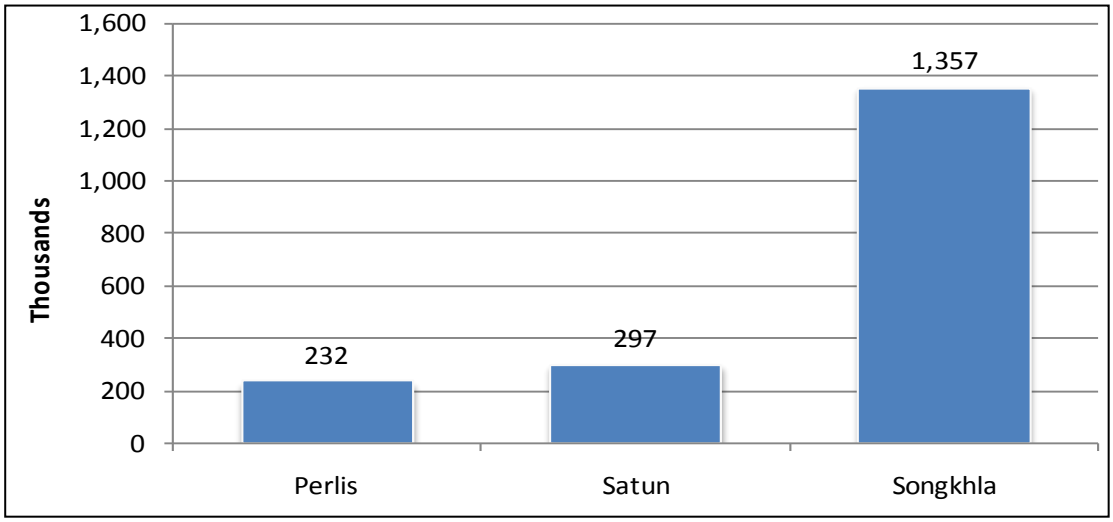
Figure 1.12: Location of Perlis in Respect of Neighbouring States/Provinces



Source: Perlis Strategic Development Plan Report, 2012

In 2010, Satun province had 297,000 residents while Songkhla had 1.357 million residents (**Figure 1.13**). As Satun and Songkhla are popular tourist destinations, it would have a substantial transient population.

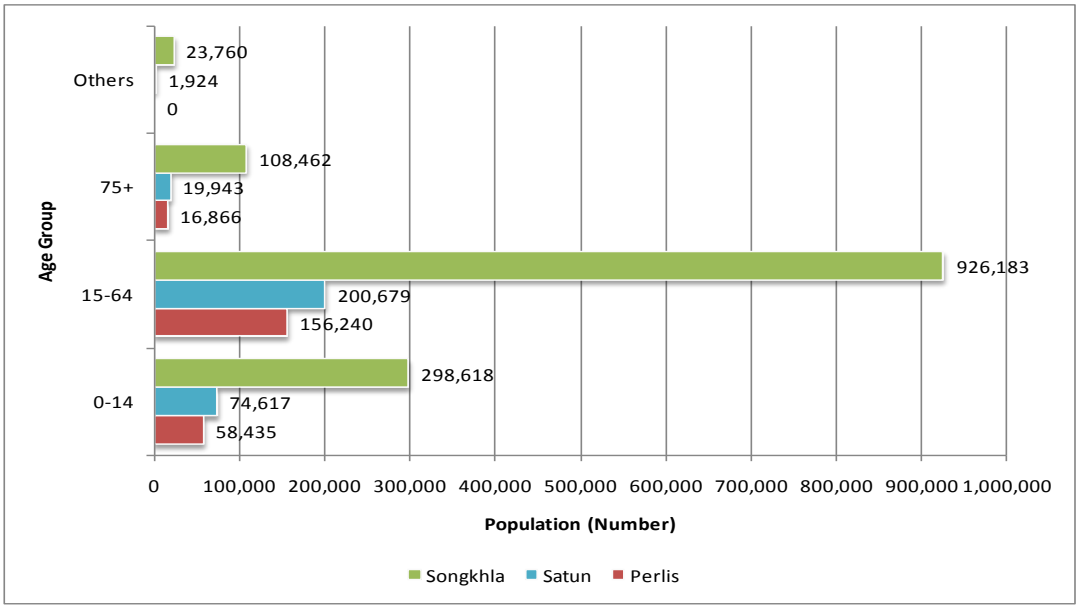
Figure 1.13: Comparison of Population: Perlis, Satun and Songkhla, 2010



Sources:
1) Perlis: Population Distribution and Basic Demographic Characteristics, Department of Statistic Malaysia
2) Satun: Department of Provincial Administration, Ministry of Interior, Thailand
3) Songkhla: Department of Provincial Administration, Ministry of Interior, Thailand

Production of primary resources is another important economic activity for Satun while Songkhla is a major rubber producing province in Thailand. These two Thai provinces are a potential hinterland for Perlis' economic development. The combined population of these three areas comprise a significant productive population in the 15-64 age group that may be available to support Perlis' proposed accelerated future socio-economic growth. This working age group accounts for 67% of Satun's and 68% of Songkhla's population (see **Figure 1.14**).

Figure 1.14: Comparison of Working Age Group of Perlis, Satun and Songkhla



Sources:
1) Perlis: Population Distribution and Basic Demographic Characteristics , Department of Statistic Malaysia
2) Satun: Department of Provincial Administration, Ministry of Interior
2) Songkhla: Department of Provincial Administration, Ministry of Interior

While Satun and Songkhla have a larger working population of 166,000 and 825,000 workers respectively, they have a lower unemployment rate compared to Perlis. Perlis may be able to attract neighbouring Thai workers, as it has a higher per capita GDP, partly contributed by higher average annual workers' salary.

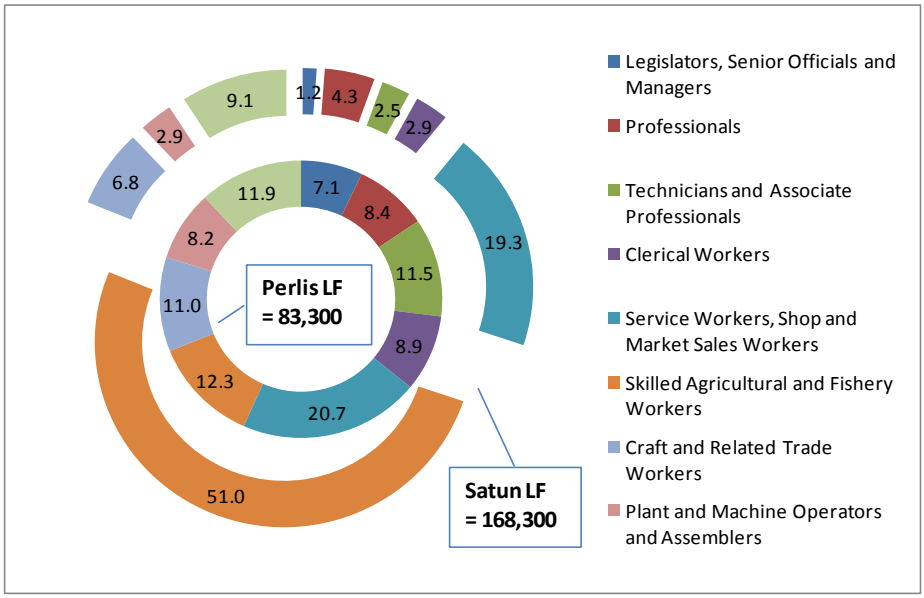
Table 1.34: Comparison of Labour Force of Perlis, Satun and Songkhla

	Perlis (2010)	Satun (2011 Q1)	Songkhla (2011 Q1)
Total Working Population	80,500	166,373	825,794
Total Labour Force	83,300	168,300	835,214
Total Unemployed	2,800	1,927	9,420
Unemployment Rate (%)	3.36	1.14	1.13

Note: Satun: Average data from Q1 to Q4 in 2010
Sources:
1) Perlis: Labour Force Survey Report Malaysia, 2010, Department of Statistics
2) Satun: Statistical Tables, Labour Force Survey: 2011, Provincial Level, National Statistical Office
2) Songkhla: Statistical Tables, Labour Force Survey: 2011, Provincial Level, National Statistical Office

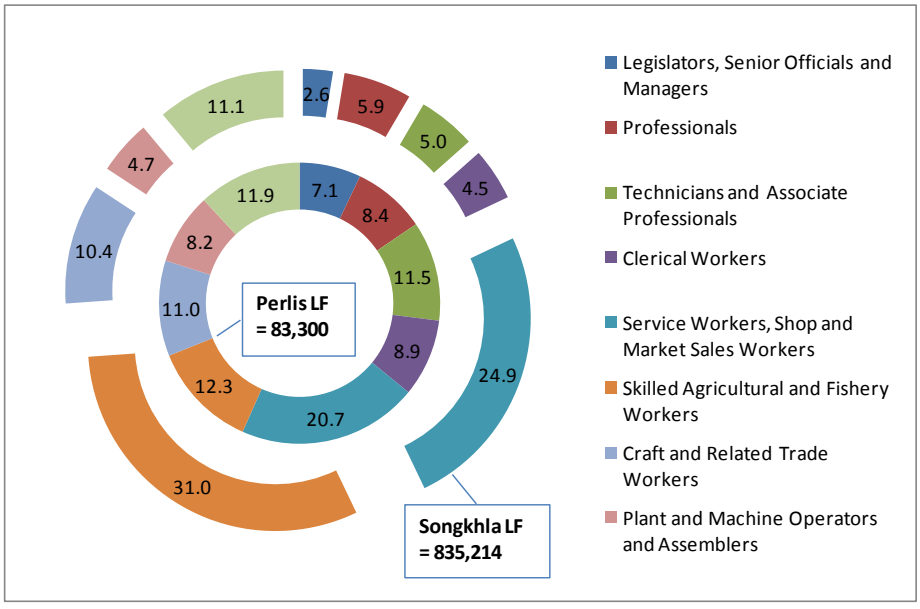
The working population of the three areas by occupation is illustrated in **Figure 1.15** and **1.16** below. In 2010 Perlis' work force was evenly spread out, with more service, shops and market sales workers (20.7%). Another 12.3% were skilled agricultural and fishery workers. In comparison, there are more service workers in Satun and Songkhla – 19.3% and 24.9% respectively. The agricultural sector is the biggest employer of workers, with 51%t of Satun's and 31% of Songkhla's work force engaged in it.

Figure 1.15: Labour Force Comparison for Perlis and Satun



Sources:
1) Perlis: Labour Force Survey Report Malaysia, 2010, Department of Statistics
2) Satun: Statistical Tables, Labour Force Survey: 2011, Provincial Level, National Statistical Office

Figure 1.16: Labour Force Comparison for Perlis and Songkhla



Sources:
1) Perlis: Labour Force Survey Report Malaysia, 2010, Department of Statistics
2) Songkhla: Statistical Tables, Labour Force Survey: 2011, Provincial Level, National Statistical Office

1.14 SUMMARY OF KEY CHALLENGES

- Land with encumbrances such as Malay Reserve Land, granary areas, etc. are a barrier to development;
- Lack of technology in upstream agricultural production has resulted in lower yield.
- Weak linkages of industries across the value chain;
- Lack of investments (domestic or foreign) and private sector participation to transform the economy of Perlis;
- Limited contribution of SMEs and BCICs to the Perlis economy due to weak links between SME/BCIC and large industries;
- Lack of awareness about skills availability in Perlis;
- Weak promotion of tourism products and destinations and lack of tourism services and facilities;
- Inefficient delivery system due to the government's lack of capacity for implementation; and
- Lack of accessibility to Perlis, especially proper road linkage infrastructure.

CHAPTER 2

STRATEGIC DEVELOPMENT FRAMEWORK: VISION, STRATEGIC DIRECTIONS, ECONOMIC PILLARS AND REGIONAL STRATEGIES

2. STRATEGIC DEVELOPMENT FRAMEWORK: VISION, STRATEGIC DIRECTIONS, ECONOMIC PILLARS & REGIONAL STRATEGIES

2.1 INTRODUCTION

The Perlis Strategic Development Plan articulates the vision of development for the State. To achieve it, the PSDP is based on a detailed understanding of the requirements and needs of the State as well as constraints and challenges. A strategic planning exercise was undertaken to develop the approach to reaching the desired goals within a given timeline.

Table 2.1: Key Challenges and Strategic Directions

Key Challenges	Strategic Directions
a. Land with encumbrances is a barrier to development	a. Focus on high-impact sectors by adopting an integrated approach and moving up the value chain
b. Lack of technology in upstream agricultural production	b. Building the dynamics of technology adoption and diffusion
c. Weak linkages of industries across the value chain	c. Creating competitive local clusters to meet the challenges of a global economy
d. Lack of investments (domestic or foreign) and private sector participation to transform the economy of Perlis	d. Strengthening participation of SMEs and BCICs through a cluster approach and supply chain management
e. Limited contribution of SMEs and BCICs to the Perlis economy	e. Optimising existing education and entrepreneurial base for innovation
f. Lack of awareness about skills availability in Perlis	f. Attracting private sector participation to leapfrog economic growth
g. Weak promotion of tourism products and destinations and lack of tourism services and facilities	g. Developing a quality urban living environment in Perlis
h. A delivery system that is suitable for more private sector investments in larger scale development projects	h. Leveraging on regional collaboration
i. Lack of accessibility to Perlis, especially proper road linkage infrastructure	i. Enhancing capacity of government and increasing efficiency in the delivery system
	j. Strategic public sector investments in infrastructure to improve quality of life

Sources:
(1) Structure Plan Perlis 2030
(2) Findings from workshop 2012

Strategic directions are important to drive the economic transformation of Perlis in keeping with guiding principles for action by the State. A concrete course of actions is required to

transform Perlis into a high-income State. The key challenges and strategic directions for Perlis is summarised in **Table 2.1**.

2.2 VISION STATEMENT FOR PERLIS

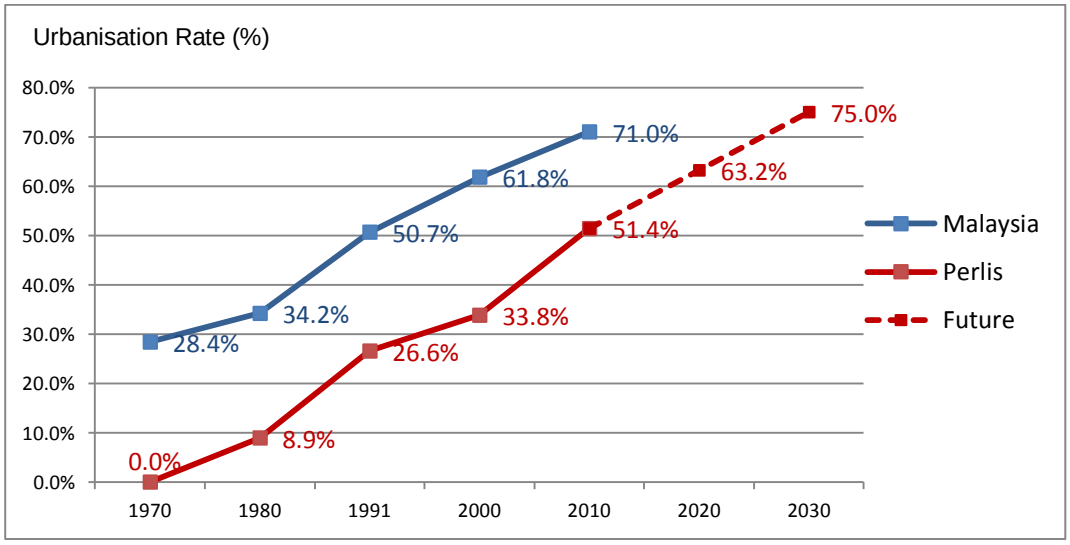
The proposed Vision for Perlis is "**Accelerating Economic Transformation for Perlis to be an Urbanised and High-Income State by 2030**".

This Vision envisages a roll out in two phases. By 2015, with the *Perlis Maju* Plan, Perlis will have a majority of its population living in urban areas. By then, Perlis would have attained a sustainable process of development. By 2030 Perlis would become a State where there is high average household income.

By 2020 the level of urbanisation in Perlis would contribute significantly to its economic growth. There is a strong positive link between the levels of human development and urbanisation as cities spearhead their countries' economic development.

It is envisaged that more than 60% of Perlis' population would be urbanised by 2020. Urban centres with an expected population of 5,000 or more would include: Kangar (81,300), Padang Besar (24,500), Kuala Perlis (19,500), Beseri (13,500), Arau (12,000), and Pauh Putra (7,200). By 2030, Simpang Empat would also join the ranks of these urban centres. **Figure 2.1** shows the urbanisation trends and rates in Perlis.

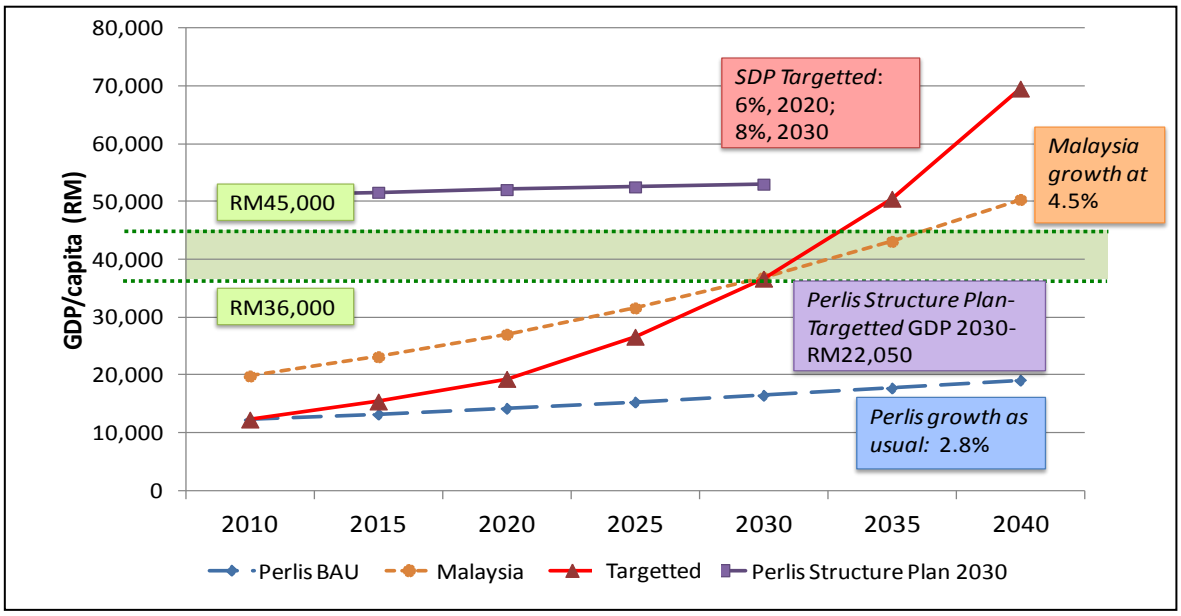
Figure 2.1: Perlis Urbanisation Rate



Source: Perlis Strategic Development Plan Report, 2012

During the past five years, Perlis' economy grew at 2.8% p.a., which is a very low rate. With the PSDP, Perlis is expected to grow at a much faster rate: 6% p.a. between 2010 and 2020, and 8% p.a. between 2020 and 2030 (see **Figure 2.2**).

Figure 2.2: Per Capita GDP Growth Rate, 2010-2030



Sources:

1. *National Physical Plan 2005*
2. *Perlis Structure Plan 2030*
3. *Perlis Strategic Development Plan, 2012*

Note: BAU is Business as Usual

The PSDP seeks to transform Perlis into a high-income State by 2030. To achieve the goal or vision, strategic directions and approaches need to be developed. These strategic directions define the core competencies required to achieve the targets. The vision, driven by strategic directions, has to be supported by key economic pillars with existing resources as well as newly proposed high impact projects and initiatives that will leapfrog the economy exponentially.

2.3 PLANNING FRAMEWORK

The planning framework for PSDP is guided principally by several key parameters such as GDP, population and labour force size and urbanisation rate which Perlis hopes to achieve by 2030.

If PSDP growth accelerates, migration trends could likely reverse. With socio-economic attractions available to stem the outflow of population to other more economically advanced states, Perlis is expected to reach a population of 265,000 by 2020 and by 2030, the population is likely to reach 317,000.

Table 2.2: Population Projections, 2010-2030

Year	Projections (Past Trends)	Projections with PSDP Implementation
2010	231,541[1]	231,541
2020	261,061[2]	265,000
2030	294,346[2]	317,000

Sources:
1 Population Distribution and Basic Demographic Characteristics, 2010, Department of Statistics Malaysia
2 Perlis Strategic Development Plan Report, 2012

With implementation of the PSDP, greater job opportunities and higher salaries are expected, which would result in the labour force participation rate increasing to about 60.5% by 2030. Between 2010 and 2030, employment is expected to grow from 80,500 to 125,000, with the creation of 44,500 new jobs.

Table 2.3: Labour Force Projections, 2010-2030

	2010	2020	2030
LFPR	55.5%	55.5%	60.5%
Unemployment Rate	3.4%	3.4%	3.4%
Population 15-64 ('000)	156.2	178.8	213.9
Total Labour Force ('000)	83.3	99.2	129.4
Employed Population ('000)	80.5	95.9	125.0

Source: Perlis Strategic Development Plan Report, 2012

Table 2.4: Projected Urbanisation in Malaysia and Perlis

Year	2010	2020	2030
Malaysia			
Urban	20,124,970	-	-
Rural	8,209,165		
Total Population	28,334,135		
Urbanisation Rate	71.0%		
Perlis State			
Urban	118,978	166,950	237,750
Rural	112,563	98,050	79,250
Total Population	231,541	265,000	317,000
Urbanisation Rate	**51.4%**	**63%**	**75%**

*Note: * Estimated urbanisation rate of the Perlis Structure Plan is 36% for year 2008 (before the Census 2010)*

By the year 2030, Perlis would be a high income and urbanised State, with a targeted urbanisation rate of 75%. This is almost double the urbanisation rate targeted in the Perlis Structure Plan (39%).

There are seven urban centres identified in the Perlis Structure Plan, which would accommodate up to 75% of the State population by 2030, namely Kangar, Padang Besar, Kuala Perlis, Pauh Putra, Beseri, Arau and Simpang Empat. **Table 2.5** shows the details.

Table 2.5: Estimated Population by Key Urban Centres, 2010-2030

Centres	2010		2015		2020		2025		2030		AAGR (2010-2030)
	Pop	%	Pop	%	Pop	%	Pop	%	Pop	%	
Kangar	66,200	28.6	73,400	29.6	81,300	30.7	90,100	31.1	99,900	31.5	2.1
Padang Besar	12,600	5.4	17,600	7.1	24,500	9.2	34,300	11.8	47,800	15.1	6.9
Kuala Perlis	13,400	5.8	16,200	6.5	19,500	7.4	23,500	8.1	28,300	8.9	3.8
Pauh Putra	2,100	0.9	3,900	1.6	7,200	2.7	13,300	4.6	24,600	7.8	13.1
Beseri	10,500	4.5	11,900	4.8	13,600	5.1	15,500	5.3	17,600	5.6	2.6
Arau	10,500	4.5	11,200	4.5	12,000	4.5	12,800	4.4	13,700	4.3	1.3
Simpang Empat	3,700	1.6	4,100	1.7	4,600	1.7	5,200	1.8	5,800	1.8	2.3
Key Urban Centres	119,000	51.4	138,300	55.8	162,700	61.4	194,700	67.2	237,700	75.0	3.5
Other Rural Areas / Centres	112,500	48.6	109,400	44.2	102,300	38.6	95,100	32.8	79,300	25.0	-1.7
State	231,500	100.0	247,700	100.0	265,000	100.0	289,800	100.0	317,000	100.0	1.6

Sources: Perlis Strategic Development Plan Report, 2012 estimates and State and Federal data

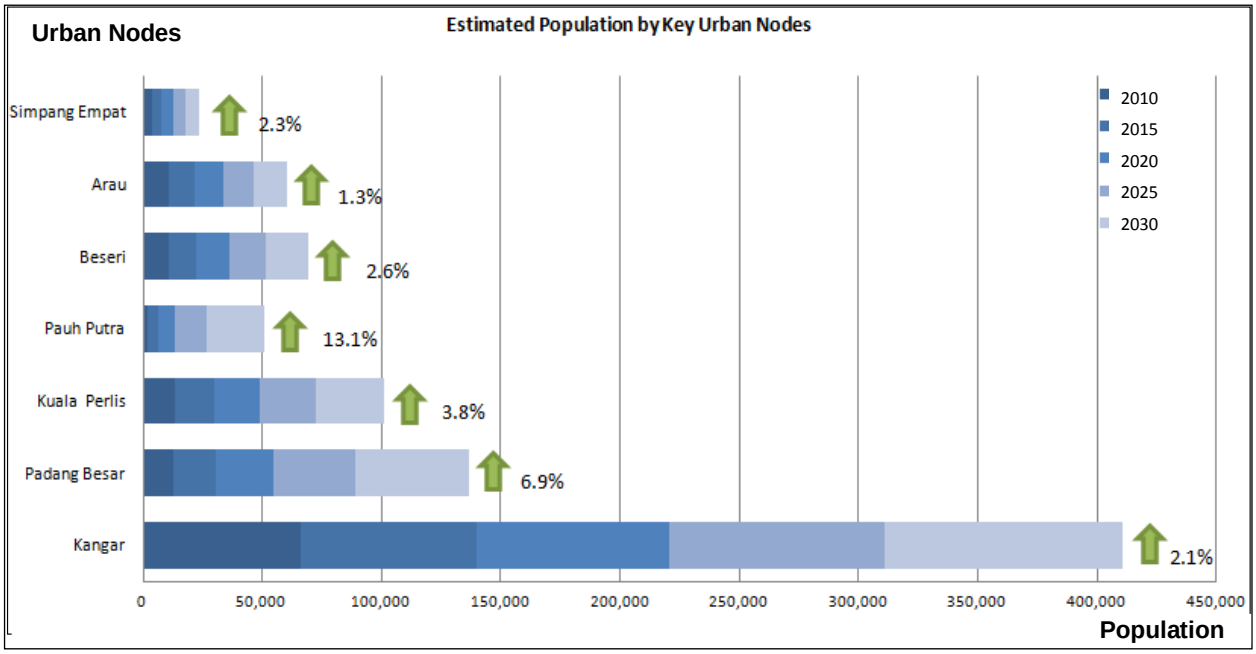
Among the seven key urban nodes, Kangar, the capital, will have the largest population of about 100,000 in 2030, while Simpang Empat which is in the middle of the granary reserve would have a population of about 5,800.

In terms of population growth, the new urban centre of Pauh Putra is estimated to have the highest average annual growth rate at 13.1%, whereas Arau and Simpang Empat will have the least growth with an AAGR of 1.3% and 2.3% respectively. The future growth in Arau will be directed towards Pauh Putra as intended by the Local Plan.

The GDP for Perlis is expected to grow from RM2,946 million in 2010 to RM11,400 million in 2030, while the State GDP per capita is expected to grow from RM12,275 (2010) to RM

36,000 (2030), an increase of an additional RM23,725 over the next twenty years. **Table 2.6** summarises the key parameters of the development of Perlis under the PSDP.

Figure 2.3: Urban Population & Average Annual Growth Rate by Urban Centres, 2010-2030



Source: Perlis Strategic Development Plan Report, 2012

Table 2.6: Key Indicators for the Planning Framework of Perlis

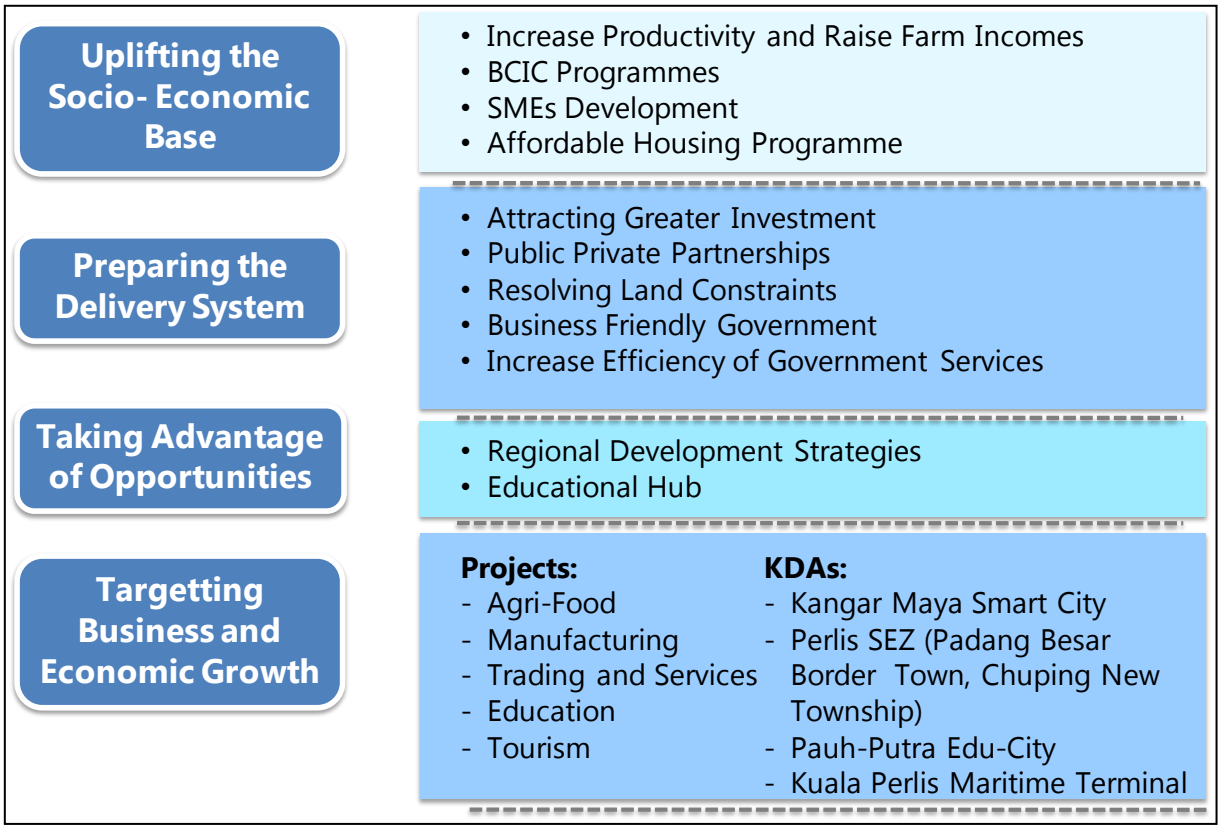
	2010	2020	2030
GDP (RM million)	2,946	5,000	11,400
GDP Growth		6%	8%
GDP Per Capita (RM)	12,275	19,000	36,000
Population	231,541	265,000	317,000
Labour Force	83,300	99,200	129,400
Employment	80,500	95,900	125,000
Urbanisation Rate	51.4%	63%	75%

Source: Perlis Strategic Development Plan Report, 2012

2.4 PERLIS DEVELOPMENT STRATEGY

The development strategy for Perlis is based on four objectives as shown in **Figure 2.4**.

Figure 2.4: Perlis Development Strategy



Source: Perlis Strategic Development Plan Report, 2012

To achieve the development objectives, the PSDP will adopt the following approaches:

Development Objective	Approach
Uplifting the Socio-Economic Base	Strengthening SMEs through Cluster Development • Attract technology investments • Seek potential partners in Penang and other technology centres Strengthening SMEs through Supply Chain Management • Adopt supply chain concept to further develop SMEs • Extend supply chain approach to rural farming households

Development Objective	Approach
Preparing the Delivery System	Attracting greater Private Sector Participation to Leapfrog Economic Growth • Institution to promote Perlis to private investors and to GLCs Enhancing Capacity to Improve Efficiency in the Delivery System • Raising the level of the capacity of government and related agencies • Raising the level of State Government finances to a sustainable level • Setting up of a new (or revamped) institution to attract investments to Perlis • Enhancing the linkages with local universities and research institutions to access and keep abreast of new developments and trends • Monitoring the progress of all development initiatives and assessing their performance • Thorough programme to enhance the role and capacity of the government to further pursue development strategies and goals
Taking Advantage of Opportunities	Optimising the Existing Education and Entrepreneurial Base for Innovation • Promote creativity, innovation and self-employment Leveraging on Regional Collaboration • Strengthen linkages with neighbours through IMT-GT and GMSR
Targetting Business and Economic Growth	Focus on High-Impact Sectors • 16 Flagship Projects with high impact on employment, economic output and investment Building the Dynamics of Technology Adoption and Diffusion • improve the knowledge base of firms by strengthening links with research institutes/universities already in Perlis • local universities to foster research and strengthen technology diffusion • draw upon research pool in Northern Region

Development Objective	Approach
Targetting Business and Economic Growth	Creating Competitive Local Clusters • transform and upgrade traditional clusters such as agriculture by adding more value-added activities to its traditional production base • dairy cluster, rice cluster, fruit cluster, herb cluster and mushroom cluster • strategically linked to manufacturing and processing, complementing the value chain from upstream to midstream to downstream Creating a Modern Urban Living Environment • improved facilities for resolving the problem of squatters, poverty and other social issues • liveable city Strategic Infrastructure Investments to Improve Quality of Life and Strengthen Economic Linkages • infrastructure investments to improve connectivity and accessibility to Perlis • infrastructure investments (proper water supply, flood mitigation, and sewerage systems) to improve attractiveness of doing business in Perlis

2.4.1 Strategic Economic Pillars and Priority Industries for Perlis

The strategic directions of the PSDP aim to drive its economy towards achieving its vision for development. The PSDP is supported by six economic drivers that are capable of transforming its economy. They are: agri-food, manufacturing and processing, trading and services, tourism, education and training and urban development.

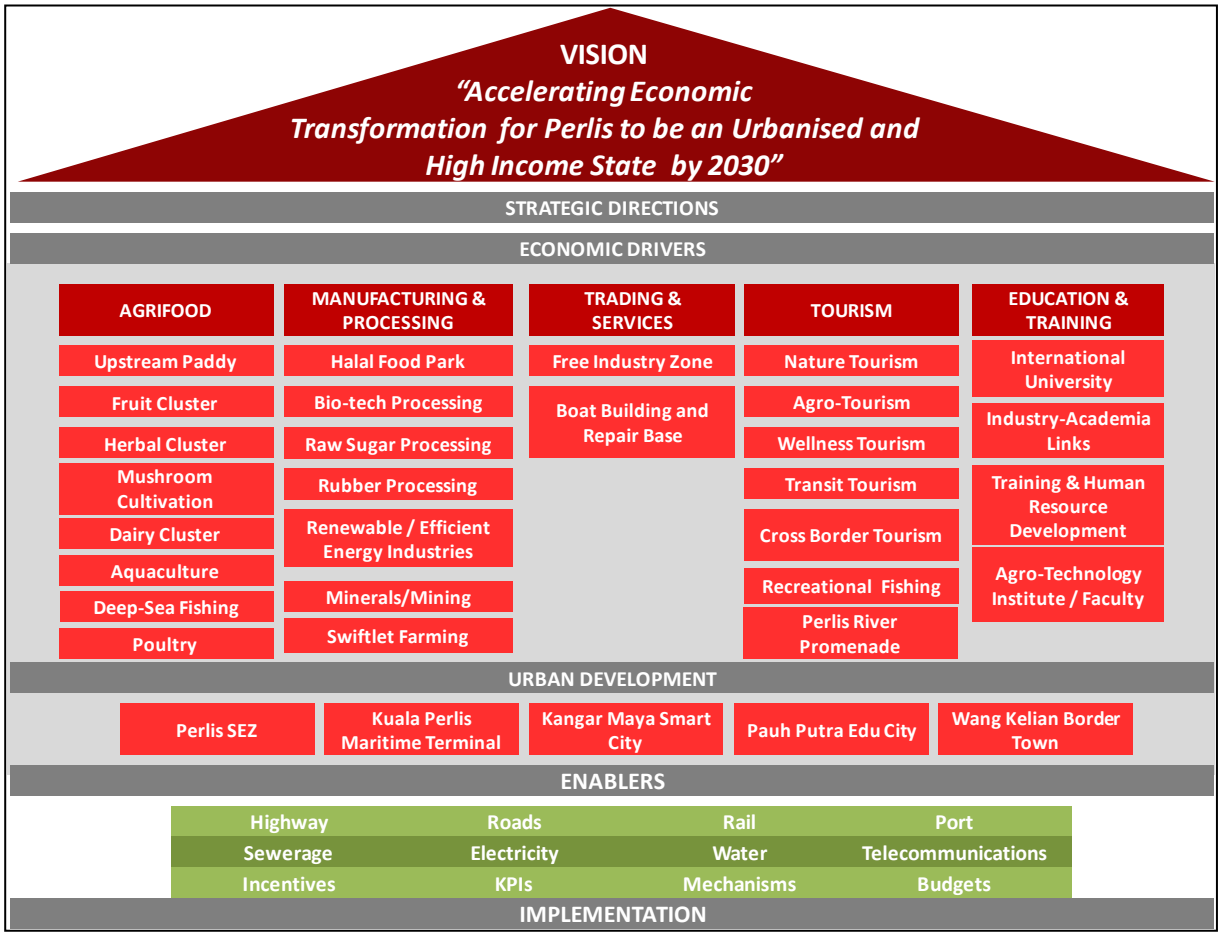
Figure 2.5 gives an overview of the pillars and the priority projects. In summary, there are 64 strategic projects. Each is targeted to address one or more specific issues, cutting across sectors, and together they form a strategic plan to achieve the desired vision for the State.

Strategic projects, without proper implementation, will remain merely great ideas. The PSDP has proposed implementation strategies that will drive each project, so that they can assist in accelerating the economic transformation of Perlis into an urbanised and high-income State by 2030.

2.4.2 Flagship Projects

Flagship projects are a group or cluster of projects that together have a high impact on the local economy in terms of employment and output. They are grouped together because of their integrated and complementary nature. Some of the flagship projects consist only of one project but their anticipated impact is high and would resolve some long standing issues on the ground. In this regard, flagship projects should be financed as a collection of projects so that together their output is more than the sum of their parts. Thus, the value of the flagship projects is in achieving a greater impact and in improving and enhancing outcomes. **Table 2.7** shows the flagship projects that have been developed as part of the PSDP.

Figure 2.5: Economic Pillars and Catalytic Enablers



Source: Perlis Strategic Development Plan Report, 2012

Table 2.7: Flagship Projects

No	Projects
1	Transformation of the Perlis' Paddy Industry
2	Infusion of New Agri-Food Upstream Production Projects
3	Agri-Bio-Tech High-Value Manufacturing Park
4	Intensive Aquaculture & Fish Seed Production Zone
5	Halal High-Value Processing Park
6	Expansion of Investor-Ready Industrial Parks
7	Renewable Energy & Resource-Based Initiatives
8	Malaysia's 1st Rubber Processing Industrial Cluster
9	Perlis Cross-Border Special Economic Zone
10	Pauh Putra Education City
11	Attracting Transit Tourists to Perlis
12	Kuala Perlis Maritime Initiatives
13	Kangar Maya Smart City
14	Spurring Economic Growth Through Transportation
15	Perlis Waterway Corridor
16	Sustainable Utility Programmes

Source: Perlis Strategic Development Plan Report, 2012

2.4.2.1. Description of Flagship Projects

1. Transformation of Perlis' Paddy Industry

Perlis has an important role in the nation's food security. There are 26,503 ha. of paddy planted area inclusive of MADA and non-MADA areas, producing 120,000 tons annually with a gross value of RM120 million. This flagship project looks at increasing paddy yield, with a focus on scaling up the productivity of paddy cultivation as well as production of high-value paddy seeds like fragrant rice in non-granary areas. In addition to the focus on yield and productivity, it also aims to increase the income of farmers in Perlis. Most of these projects are aligned to the vision of the nation's Economic Transformation Programme in support of food security in Malaysia. There are four projects under this flagship, and they are: AG1 (scaling up and strengthening paddy farming), AG2 (increasing farm income at non-MADA areas), AG3 (fragrant rice cultivation), and AG4 (certified paddy seeds).

2. Diversification to Increase Farmers Income

The ETP has recognised that farming incomes need to be supplemented with income from other sources. If farmers cannot be weaned away from cultural farming practices, perhaps they can supplement their income through other farming related activities that are higher in

terms of value added. These projects are in line with Entry Point Projects the EPP's emphasis on value- added agricultural-based activities. There are four projects under Flagship 2, viz. AG5 (fruit cluster), AG6 (dairy cluster), AG8 (*Kampung*-Chicken breeding), and AG9 (herbal cluster).

3. Agri Bio-Tech High-Value Manufacturing Park

An Agri Bio-Tech park is proposed to house Entry Point Projects (EPPs) with bio-technology elements, whether through cultivation or manufacture of high-value products. They include cultivation in a controlled environment, bio-technology processes or intensive farming that could create high yield in a short time as well as other bio-technology related manufacturing processes and products such as bio-plastics can leverage on the sugar extracts in Perlis. This flagship project aims at moving up the value chain of processing high value products through the use of technology in the agri-food sector. There are five projects under Flagship 3, viz. HT1 (Agri BioTech Park – Phases 1 and 2), HT2 (mushroom), HT3 (spirulina), HT4 (Swiftlet), and HT5 (bio-tech plant).

4. Intensive Aquaculture & Fish Seed Production Zone

This flagship project covers mainly aquaculture fishing activities by increasing the areas and volume of aquaculture production. Besides the main catch fish sources which could be threatened by overfishing, aquaculture projects, including a major Aquaculture Industrial Zone alongside the proposed flood canal, would help mitigate a decline in fisheries throughput. There are three projects, viz. AG7 (AIZ), AG10 (marine finfish), and AG11 (marine shrimp).

5. Halal High-Value Processing Park

Malaysia is already acknowledged as a world-renowned *halal* hub and Perlis shares borders with neighbouring countries that constantly seek *halal* products. With potential supply from its food production zones, a *halal* high value park is targeted to produce halal certified products that can meet the high global demand. The EPPs under this flagship project plan to develop high value products that can meet the large demand. There are five projects, viz. HM1 (Halal Food Park), HM2 (Halal beverages), HM3 (snack food and sauce), HM4 (gelatin), HM5 (Halal meat).

6. Expansion of Investor-Ready Industrial Park

The continued demand for industrial parks by local and foreign industrial investors in Malaysia calls for increasing the supply of industrial parks. Perlis, with its strategic locational advantage with the neighbouring countries, can provide a conducive environment for investors to carry out their industrial activities. The industrial park for this flagship project requires infrastructure at site, ready and packaged with incentives. The Park aims at housing technology intensive industries, precision parts manufacturing and other industrial sectors that require industrial sites to be ready to operate. There are two projects, viz. IP1 (Pauh-Putra Tech Park) and IP6 (Plastic-to-Fuel Technologies).

7. Green Technology & Renewable Energy Initiatives

Having a rich supply of natural resources, Perlis should explore green technology and renewable energy EPPs. Admittedly this is a new area. However the government has approved generous incentives to encourage industrial firms to invest in this area. This flagship project is focussed on natural resources and minerals. There are several potential projects, and include a feasibility study to exploit non-metallic mineral products (e.g. dolomite), and energy (the IP2 Solar farm). A third project, which has been described elsewhere (HM3) is downstream mushroom processing that uses wood wastes as the base for its production.

8. Malaysia's 1st Rubber Processing Industrial Cluster

Perlis still has about 14,000 ha of rubber. If the rubber plantations in Southern Thailand, and neighbouring Kedah were included, the flagship project, a Rubber Processing Industrial Cluster, could work. Perlis is the transhipment point for rubber products bound for Penang Port and other rubber-based industrial firms located in Penang. Thus the plan is to try to set up a rubber cluster near to Padang Besar in order to be close to the raw material (rubber latex, wood, etc.). A greenfield rubber cluster project has not been tried before, and it would really be interesting to find out how such a concept can work with existing players in an entrenched industry.

9. Perlis Cross-Border Special Economic Zone (SEZ)

As a border State Perlis is a gateway to Thailand, Myanmar and beyond. A special economic zone hosting a cluster of economic activities from high value cultivation to the manufacturing of high value goods would capitalise on FDI in this region. The proposed SEZ would enable the State to lobby for attractive incentives to investors. It is important to note that the SEZ in the Chuping Valley is a targeted initiative of the Rural Transformation Programme. This programme intends to transform rural areas into liveable areas. Clustering this new township with the SEZ would create a critical mass to ensure that together all the projects would leverage on their strong points to transform the economy of this rural area. There are six projects, viz. TS1 (FIZ in Padang Besar), TS2 (expansion of ICD), TS3 (wholesale and retail zone), UD2 (border town at Padang Besar), ED4 (Agro-Tech Faculty), and UD3 (Chuping New Township).

10. Pauh-Putra Education City

The "*Negeri Ilmu*" status would give Perlis an edge to provide quality education and act as an education hub. The hub will house international and local tertiary institutions where specific skill sets are related to real-life manufacturing activities in Perlis. The EPPs under this flagship recognise the importance of retaining skills and talents to support the economic activities and raise them to the next level in the future. In the past few years, 8,000+ graduates graduated from various institutions of higher Learning (IHLs) in Perlis. This is a highly skilled workforce that can be tapped by industries in Perlis. Hence there are three projects, viz. ED1 (Edu Hub), ED2 (industry-academia nexus), and ED3 (Pauh-Putra Edu-City).

11. Attracting Transit Tourists to Perlis

This flagship project covers all the tourism projects that are aimed at attracting transit tourists by generating interest in nature-related tourism activities. Perlis has many tourism products but they are poorly managed. Almost 700,000 tourists pass through its territory every year. Perlis is also located close to many international tourism hotspots as well as to major customers (as in Penang, Langkawi and also the Klang Valley). Hence the flagship projects are intended to close the gap and capitalise on missed opportunities. There are 10 projects, viz. TM1 (Sungai Batu Pahat transformation), TM2 (Agrotourism Corridor), TM3 (handicrafts), TM4 (Wang Kelian Border Town), TM5 (Kuala Perlis Tourism Complex), TM6 (Perlis State Park), TM7 (recreational fishing), TM8 (Perlis Hillside Resort & Spa), TM9 (team building events), and TM10 (river promenade).

12. Kuala Perlis Maritime Initiatives

This flagship project looks at maritime-related industries in Kuala Perlis as a fish landing hub as well as existing boat-building activities. Fish landing in Perlis is estimated at 180,000 tonnes per year, with a gross value of over RM1 billion (assuming RM6 per kilo). A fisheries hub in Kuala Perlis would add greater value to the fisheries industry if fresh fish can be assured. The fisheries industry can strengthen food security in the country. Boat building is also an important industry that is growing every year. Additionally, it is estimated that there are 2 million passenger movements through the Kuala Perlis terminal to Langkawi and other Thai destinations. The Kuala Perlis Maritime Initiatives would enable other maritime services to be launched that may eventually see greater trade and economic activities pass through Kuala Perlis. There are three projects, viz. UD5 (multipurpose maritime terminal), MT1 (fish landing point), and MT2 (boat building and repair).

13. Kangar Maya Smart City

Kangar, the capital of Perlis, is also its heart and soul. It is set to be developed as a city, with urbanised activities like malls and wired-up Internet broadband services to cater for surrounding institutions. There are three projects, viz. UD1 (Kangar Maya), IT1 (Perlis EduNet), and IT2 (ICT development programme).

14. Spurring Economic Growth through Transportation

Transportation has a vital role to support economic industries. It provides the link between the producing areas with their markets, i.e. cities and urban regions. A good transport system that lowers the cost of transport would be very important to industries that need to be in rural areas. Both components – infrastructure and services – need to be developed. Whether it is public transport or highways, these supporting enablers will keep activities going, linking one place to another efficiently. There are six projects, viz. HW1 (Alor Setar-Padang Besar Highway), HW2 (Kuala Perlis-Satun), UT1 (Bus Rapid Transit), UT2 (Kangar Ring Road), UT3 (ITT), and UT4 (Kaki Bukit-Wang Kelian).

15. Perlis Waterway Corridor

With the western diversion canal being constructed, not only would floods be mitigated but it can also act as a tourism corridor, where tourists can enjoy recreational activities and scenic

views if the canals are positioned as a waterway corridor. There is only one project, EU1 (Flood Mitigation Scheme), and this can be linked with the River Promenade Project (TM10) to redevelop riverine areas in order to bring about a higher quality river system that can support the service economy (see Melaka River Rehabilitation System). At the same time, it can spur the redevelopment of the squatter areas and support tourism. It is also important to note that the waterway corridor can incorporate a fish aquaculture project (see AG7 – AIZ).

16. Sustainable Utility Programmes

This flagship project houses all the utility programmes like water supply, gas service area and electricity supply to Perlis. These are enablers that will support the various industries that will take place in Perlis, as infrastructure and facilities are important to ensure smooth delivery of processes for different industries. There are five projects, viz. EU2 (sewerage), EU3 (solid waste), EU4 (natural gas services), EU5 (water supply) and EU6 (electrical distribution).

CHAPTER 3

SECTORAL DEVELOPMENT STRATEGIES: HIGH IMPACT INITIATIVES AND PROJECTS

3. SECTORAL DEVELOPMENT STRATEGIES: HIGH IMPACT INITIATIVES AND PROJECTS

This Chapter is divided into two parts: The Economic Drivers (Part 1) and The Enablers (Part 2). The economic drivers are projects under the five pillars of the Strategic Development Plan to drive Perlis to be a high-income State by 2030. They include projects in the Agri-food, Manufacturing, Trading and Services, Tourism and Education sectors.

For each of these sectors, key background data is provided. This is followed by a discussion of the key issues and challenges for each sector. Sectoral strategies are then proposed. For each project, its main features are described and indicators provided, such as anticipated employment creation, investment requirements and the proposed size of the project.

The enablers that support this economic growth are contained in Part 2. There is a summary of the existing capacity of the infrastructure type, and the investments needed, to support the objectives of this Strategic Development Plan. There are 64 projects in the SDP Perlis. The list of projects is shown in **Table 3.1**.

Table 3.1: List of SDP Perlis Projects

Code	Project Name
AG	**Agri-Food**
AG1	Scaling Up and Strengthening the Productivity of Paddy Farming in MADA Areas
AG2	Increasing income of Rice Farmers Through Crop integration During the Off-Season in Non-MADA Paddy Areas
AG3	Cultivation of Fragrant Rice in Non-Granary Paddy Areas
AG4	Production of Certified Paddy Seeds in Mini-Granary Areas of Perlis
AG5	Development of a Tropical Seed Development Centre and the Fruit Cluster, with Emphasis on Mango and Jackfruit
AG6	Development of a Dairy Cluster
AG7	Establishment of an Aquaculture industrial Zone in West Diversion Channel, Perlis
AG8	*Kampung*-Chicken Breeder Farming
AG9	Development of the Herbal Cluster in Perlis as Flagship Herbal Products
AG10	Establishment of a Marine Finfish Seed Production Zone
AG 11	Establishment of a Marine Shrimp Production Zone
HT	**Agri-Food Bio-Tech Farming (Agri-Bio-Tech Park)**
HT	Agri Bio-Tech Park
HT1a	Agri Bio-Tech Park Phase 1

Code	Project Name
HT1b	Agri Bio-Tech Park Phase 2
HT2	Upstream Mushroom Farming for High Value-Added Halal Processing
HT3	Establishment of a Spirulina Farm
HT4	EBN Integrated Processing Centre with Swiftlet House Programme
HM	**Halal High Value Manufacturing (Halal Park)**
HM1	Halal Food Park
HM2	Health Beverages, Functional Foods, Milk & Juices Processing
HM3	Halal Snack Foods & Sauces Processing
HM4	Halal Gelatin Manufacturing
HM5	Halal Meat Processing
IP	**Industrial Development Park**
IP1	Pauh-Putra Technology Park
IP1a	Pauh-Putra Technology Park Phase 1
IP1b	Pauh-Putra Technology Park Phase 2
IP2	Renewable Energy: Solar Farm
IP3	Bio-Technology Processing Plant from Upstream Raw Materials
IP4	Rubber Processing Industrial Cluster (RPIC) Development
IP5	Minerals & Resources Mining
IP6	Plastic-To-Fuel Technologies
TS	**Trading & Services**
TS1	Free Industrial Zone
TS2	ICD and its Future Expansion
TS3	Wholesale and Retail Zone
MT	**Multi-Purpose Maritime Terminal**
MT1	Upgrading Fish Landing Point at Kuala Perlis to be a Fisheries Transhipment Hub
MT2	Boat Building and Repair Base
TM	**Leveraging Tourism**
TM1	Transforming Sungai Batu Pahat into a Major Family-Fun Tourism Destination and Privatizing These Facilities
TM2	Development of Agrotourism Corridor as a Scenic Route
TM3	Setting Up of Small Scale Tourism Enterprises and Incubators to Produce Handicrafts for the Langkawi Tourism Market
TM4	Setting Up of the Wang Kelian Border Town
TM5	Establishment of Kuala Perlis Tourism Complex
TM6	Upgrading of Tourist Facilities at Perlis State Park and Gua Kelam for Group-Based Activities

Code	Project Name
TM7	Development of Recreational Fishing Centre
TM8	Development of a High-End Perlis Hillside Resort, Spa, and 21st Century Village
TM9	Organisation of Signature Tourism Events of International Standard
TM10	Perlis River Promenade Development
UD	**Urban Development**
UD1	Kangar Maya Smart City
UD2	Padang Besar Border Town
UD3	Chuping New Township
UD4	Pauh-Putra Edu-City
UD5	Kuala Perlis Maritime Terminal
ED	**Education & Training**
ED1	Establishing a Reputable International University Branch Campus
ED2	Strengthening Industry-Academia Collaboration for Socio-Economic Benefit
ED3	Training and Human Resource Development
ED4	Establishing an Agro-Technology University Branch Faculty
EU	**Environment & Utilities**
EU1	Flood Mitigation Scheme
EU2	Central Sewerage System
EU3	Solid Waste Disposal Facilities
EU4	Extension of Natural Gas Service Area
EU5	Water Supply System
EU6	Improving Electricity Distribution System
UT	**Urban Transport**
UT1	Improvement of Public Transport through Bus Rapid Transit (BRT)
UT2	Kangar Ring Road
UT3	Integrated Transport Terminal (Kangar Sentral)
UT4	Upgrading Kaki Bukit-Wang Kelian Road
IT	**Information Technology**
IT1	Perlis MSC EduNet
IT2	Perlis MSC Technology/ICT Development Programme
HW	**Highway Link**
HW1	Highway (Alor Setar-Kangar-Padang Besar)
HW2	Highway (Kuala Perlis-Satun)

Part 1: Economic Drivers

3.1 AGRI-FOOD

3.1.1 Introduction

The agri-food sector[1] in Perlis is important to the State economy. In 2009, the State's agricultural sector contributed 26.8% to the GDP and accounted for about 14% of the labour force. In terms of the physical land area in 2008 about 48,127 hectares or 58.7% of the total agriculture area was used for paddy cultivation. Most of the farmers in Perlis are individual small-scale operators, with very few large-scale farmers.

In 2010, fish landings from Perlis amounted to 162,046 tonnes. As for fish-based industries, this sector is largely handled by micro SMEs, with *belacan* and *pekasam* as the main products.

In 2009, aquaculture production from brackish water was only 362 tonnes (valued at RM4.85 million), with 99% of the production from pond culture. Freshwater aquaculture production was 531 tonnes (valued at RM1.76 million), with most of the production from freshwater pond culture (81%), followed by cement tanks (19%), and freshwater cages (0.1%). The current livestock industry in Perlis is small and organised on an informal basis.

3.1.2 Issues and Challenges

Currently, the agricultural sector in Perlis has several constraints which impinge on its level of efficiency, productivity and competitiveness. These include:

- Uneconomic farm size, low productivity and income;
- Limited access to technology and capital;
- Lack of entrepreneurial and management skills; and
- Lack of supply chain linkage to the market.

3.1.3 Strategic Direction: Agriculture

In order to modernise the agri-food sector, programmes must be put in place to restructure it, especially with regards to the production structure of smallholders. The restructuring will include the following elements:

- Consolidation of smallholdings to become larger mini-estate entities or nucleus estates;
- Consolidated farms to be managed professionally;

1 The Sectoral Report for 'Strategic Development Pillar 1: Agri-food' can be found in Annexes 1, 2 and 3.

- Establishment of marketing linkages with the private sector through the food supply chain; and
- Enhanced role of the private sector as anchor companies.

The strategic directions for the development of crop clusters in Perlis will include**:**

- Development of potential agri-food clusters;
- Increasing efficiency and productivity through technology adoption & innovation;
- Enhanced land productivity through crop integration;
- Focused development of identified crops in specific zones;
- Participation of the private sector as anchors along the value chain;
- Enhancing food safety and quality;
- Improving the marketing system; and
- Strengthening institutional support services.

The strategic location of Kuala Perlis has made it a focal point for the regional fisheries trade. Currently, the existing facility at the Kuala Perlis fishing port has limitations with regard to international landings. Hence a better strategy is needed for the fisheries trade. As for fishery-based industries, the revenue capture can be stimulated through improved raw material supply. An increase in raw materials can support existing micro, small and medium enterprises (MSME) that are involved in processing food for the fish snack market and industrial production of fish-based products, particularly fish meal.

3.1.4 Project List

Based on the above strategic initiatives, the following project initiatives are proposed:

- AG1: Scaling up and strengthening the productivity of paddy farming in MADA areas
- AG2: Increasing farm income of rice farmers in non-MADA paddy areas through crop integration during the off-season, with emphasis on watermelon and sweet corn
- AG3: Cultivation of fragrant rice in non-granary paddy areas
- AG4: Production of certified paddy seeds in the mini-granary areas of Perlis
- AG5: Development of a Tropical Seed Development Centre and the Fruit Cluster, with Emphasis on Mango and Jackfruit AG6:Development of a dairy cluster
- AG7: Establishment of an Aquaculture Industrial Zone in the west diversion channel
- AG8: Kampung-chicken breeder farming
- AG9: Development of the herbal cluster for flagship herbal products
- AG10: Establishment of a Marine Finfish Seed Production Zone
- AG11: Establishment of a Marine Shrimp Production Zone
- HT2: Promoting upstream mushroom farming for high value-added Halal processing
- HT3: Establishment of a spirulina farm

3.1.5 Project Description

a) AG1: Scaling Up and Strengthening the Productivity of Paddy Farming in MADA Areas

The project has three components:

1. Improvement of irrigation intensity in MADA from 18m/ha to 30 m/ha at the rate of 800 ha/yr. The total area for 10 years is 8,000 ha (50% of MADA Perlis).
2. Establishment of paddy mini-estates through the consolidation of farms in MADA Perlis, estimated to be about 8,000 ha by 2020.
3. Adoption of new technologies such as use of certified and hybrid seeds and the Clearfield Planting System, to eradicate weedy rice (padi angin).

Jobs[2]	Investments (RM million)	Land Size (ha)
-3,000	250	16,158

b) AG2: Increasing Income of Rice Farmers in Non-MADA Paddy Areas through Crop Integration during the Off-Season, with Emphasis on Watermelon and Sweet Corn

The project involves increasing the income of farmers through crop diversification during the off-season via cultivation of watermelon and sweet corn. A dedicated supply chain involving anchor companies will be established to ensure project sustainability and improved marketing system. The target production area by 2030 is 3,000 ha for watermelon and 1,000 ha for sweet corn.

Jobs	Investments (RM million)	Land Size (ha)
2,180	33.3	6,587

c) AG3: Cultivation of Fragrant Rice in Non-Granary Paddy Areas

The project involves increasing farmers' income in dedicated non-granary rainfed paddy areas of about 6,587 ha through the production of fragrant rice (MRQ 76) and crop integration during the off-season. The areas involved will include:

- Minor Irrigation Schemes (Small JPS Skim): 3,656 ha.
- Others (Rainfed): 2,931 ha

Jobs	Investments (RM million)	Land Size (ha)
-2,000	32.8	5,000

[2] The reduction of jobs for the paddy projects is a necessary consequence of the estatisation of the paddy area under EPP10. This is due to better labour utilisation and mechanisation under the project. Since most of the farmers are of the aging population cohort, this is seen as a way forward for the paddy sector.

d) AG4: Production of Certified Paddy Seeds in the Mini-Granary Areas of Perlis

The main objective of the project is to produce about 10,000 tonnes of certified seeds per season (20,000 tonnes/ year) to meet the requirements of paddy farmers in Kedah and Perlis. The project will involve an area of 2,500 ha in the mini-granary areas of Perlis.

The project has three components:

1. Improvement of irrigation intensity in the Mini Granary (irrigated) areas: 2,500 ha.
2. Conversion of the mini-granary areas into certified paddy seeds production areas.
3. Establishment of a paddy seed processing mill.

Jobs	Investments (RM million)	Land Size (ha)
-1,000	25.3	2,500

e) AG5: Development of a Tropical Seed Development Centre and the Fruit Cluster, with Emphasis on Mango and Jackfruit

Tropical Seed Development Centre is a research centre specialised in the breeding of high quality tropical hybrid seeds and improvement of agricultural products. The activity in this centre are the acquisition and development of high-value tropical, sub-tropical, sub-temperate and temperate germplasm, the multiplication of stock seeds, the production and multiplication of hybrid seeds, the distribution of seeds as well as breeding activities. The project will be developed in an area of approximately 50ha in the Agro Bio-Tech Park in Chuping Valley.

The Fruit Cluster project involves the expansion of the cultivation of Harumanis mangoes, Sala mangoes, and jackfruits (J32) in existing areas. The planting of these fruits would be concentrated in certain areas. The project will involve the expansion of Harumanis mangoes cultivation under a controlled environment in the Agro Bio-Tech Park in Chuping Valley.

Jobs	Investments (RM million)	Land Size (ha)
5,000	56.3	2,500

f) AG6: Development of a Dairy Cluster *(Feasibility study)*

This is a feasibility study and its aim is to establish a large commercial nucleus dairy on a 500 hectare land plot within the FELDA-Chuping region. Technical support, training and marketing of farm produce would be provided for satellite dairy entrepreneurs in cluster areas, who will supply cattle and fresh milk to the value chain to further develop the dairy industry in the State.

Investments (RM million)	Land Size (ha)
0.5	500

The feasibility study focussed on these issues: land availability for livestock projects; breed stock; expertise and skilled personnel for projects; handling & distribution facilities; production of dairy breeders, and promoting value-chain participation.

g) AG7: Establishment of an Aquaculture Industrial Zone in the West Diversion Channel

Establishment of freshwater cage culture in the West Flood Diversion Channel will use the concept of an aquaculture industrial zone (AIZ). In the AIZ, necessary infrastructure such as mooring facilities, walkways and basic amenities (electricity, water and telecommunications) would be provided. Individual investors will then set up farms and use these infrastructure facilities.

Jobs	Investments (RM million)	Land Size (ha)
398	22.7	180

h) AG8: *Kampung*-Chicken Breeder Farming

The proposal is to establish a large commercial *kampung*-chicken breeder farm to produce day-old-chicks for outgrowing farmers in Perlis. This farm shall be located away from residential areas. It will enable local farmers to get involved on a full-time or part-time basis in *kampung*-chicken rearing in Perlis. The proposed initiative is an Anchor Operator model, where operators carry out contract farming. The Anchor Company would develop the market, thereby sustaining the profitability for local farmers. Training in *kampung*-chicken rearing methods and protocols will be provided. a fully integrated operating system for *kampung*-chicken in Perlis will be put in place, thereby making the region a key *kampung*-chicken production zone in the country.

Jobs	Investments (RM million)	Land Size (ha)
128	29.3	50

i) AG9: Development of the Herbal Cluster for Flagship Herbal Products

The project involves the cultivation of Misai Kuching, Pegaga and Pepper as flagship herbal products in existing *kampung* areas. The planting of these herbs would be concentrated in certain, preferably/ targeted areas. It is estimated that target areas by 2030 for Misai Kuching would amount to 100 ha, Pegaga 100 ha, and pepper 200 ha. Farmers will cultivate the promoted crops as mono crops in paddy areas (off-season) or intercrop in rubber areas and become contract out growers to the Anchor Company.

Jobs	Investments (RM million)	Land Size (ha)
2,000	9.3	400

j) AG10: Establishment of a Marine Finfish Seed Production Zone

The proposed AIZ for the marine finfish seed production zone will be located at Kg Tanah Timbol, Kuala Sanglang, covering an area of 10ha. The proposed site is currently covered by mangroves and a bio-technical characteristics assessment needs to be done to ensure the suitability of the site for aquaculture development. In addition, all necessary infrastructures for the AIZ such as a hatchery, laboratory, packaging area, roadway for transportation, amenities (i.e. electricity, water, telecommunication and fuel) and wastewater treatment will need to be provided.

Jobs	Investments (RM million)	Land Size (ha)
86	5.8	10

k) AG11: Establishment of a Marine Shrimp Production Zone

The establishment of a Shrimp Aquaculture Industry Zone will be based on the concept of AIZ, which is analogous to an industrial estate. The proposed project location is Kuala Perlis with an area of 40 ha. Shrimp farmers would be provided with the necessary infrastructure such as a laboratory, storage facilities, aerator, generator, water pump, roadway, basic amenities and wastewater treatment. They can in turn set up other related infrastructure, including restaurants, around the main facilities.

Jobs	Investments (RM million)	Land Size (ha)
65	12.8	40

l) HT2: Upstream Mushroom Farming for High Value-Added Halal Processing

The project involves high intensity farming of mushrooms such as shitake, oyster and ganoderma in the Agri Bio-Tech Park in Chuping Valley. About 30 growing houses will be established in Chuping by an anchor company. Farmers will also be encouraged to become out growers by having contract farming agreements with the anchor company.

Jobs	Investments (RM million)	Land Size (ha)
50	227.1	25

m) HT3: Establishment of a Spirulina Farm

The proposed establishment of a spirulina farm located at Agri Bio-Tech Park, Chuping, would require an area of 10 ha. It will concentrate on the production of algal food supplements, particularly spirulina. The necessary infrastructures required are: a green house, sealed glass bioreactors, a housed and transparent tank for cultivation, filtering equipment for harvesting and a laboratory. The cultivation of algal food will be controlled by the modular bioreactor cultivation system since it provides a controllable environment for algal growth. Moreover, the system can also produce high value algae.

Jobs	Investments (RM million)	Land Size (ha)
50	91	10

Mushroom farming proposed in Perlis

Paddy fields in Perlis

Proposed growing house for mushroom farming within the Agri Bio-Tech Park

Rice mill located at Simpang Empat

3.2 MANUFACTURING

3.2.1 Introduction

The manufacturing and processing sector[3] is one of the principal components of the Strategic Development Plan for Perlis. This sector provides the much needed impetus for change in the region as it is heavily linked to value-adding activities. It is envisaged that this sector will contribute RM1.81 billion to the State GDP. This works out to 29% of the potential GDP contribution from the proposed sectors.

3.2.2 Issues and Challenges

Based on discussions with various stakeholders in Perlis and brainstorming through two workshops, the following manufacturing issues and challenges were identified:

- Small SME sector and narrow manufacturing base;
- Low value-added and lack of innovation;
- Low rate of adoption of progressive technology within the manufacturing fraternity;
- Lack of connectivity and transportation linkages, which limits economic growth potential;
- Lack of industrial and manufacturing focal growth nodes which offer competitive incentives to lure large corporations and foreign investment;
- Exodus of human capital to more developed states in search of job opportunities and higher income;
- Lack of strategic thrusts that focuses on growing the manufacturing sector in the State;
- Inability to leverage on the State's strategic position within IMT-GT and GMSR;
- Lack of funding from the Federal government, which limits the implementation of the Structure Plan; and
- Imminent need to move up the value chain within the sector.

3.2.3 Strategic Direction: Manufacturing

The strategic direction for the manufacturing sector will revolve around the agriculture (food processing), biotechnology, renewable energy and mining sectors. The objective is to increase value-added in manufacturing activities by strengthening existing industries, promoting new industries and moving into more profitable and higher value-adding industries. The rationale for targeting the agricultural sector is that it is the second largest contributor to the State's GDP, and can be leveraged by the manufacturing sector in Perlis.

Manufacturing sector clusters, proposed as part of the plan, would have direct linkages with the agri-food sector. The State has to move up the value chain to focus on high-technology and high-value products to generate a higher GDP contribution to the economy.

The strategic directions for the manufacturing sector are as follows:

[3] The Sectoral Report for 'Strategic Development Pillar 2: Manufacturing' can be found in Annex 4

- SD1: Integrating cluster approach to manufacturing
- SD2: Developing and leveraging on upstream linkages
- SD3: Capitalising on the global food economic scenario
- SD4: Developing demand-driven initiatives, with links to the global supply chain
- SD5: Leveraging on the spill-over of regional industrial activities
- SD6: Incorporating an anchor company operating model
- SD7: Ensuring consistency with the ETP and Koridor Utara-driven manufacturing initiatives
- SD8: Creating high-income manufacturing jobs & developing a quality workforce
- SD9: Capitalising on the "green" technology trend
- SD10: Competing for investments both domestically and internationally

3.2.4 Project List

The manufacturing projects can be categorised under the following groups:

1. Halal High Value Manufacturing (Halal Park)

- HM1: Halal Food Park
- HM2: Health Beverages, Functional Foods, Milk & Juices Processing
- HM3: Halal Snack Foods & Sauces Processing
- HM4: Halal Gelatin Manufacturing
- HM5: Halal Meat Processing

2. Industrial Development Park

- IP1: Pauh-Putra Technology Park
- IP2: Renewable Energy: Solar farm
- IP6: Plastic-to-Fuel Technologies

3. Agri Bio-Tech Park

- HT1: Agri Bio-Tech Park[4]
- HT4: EBN Integrated Processing Centre with Swiftlet House Programme
- IP3: Bio-technology processing plant from upstream raw materials

4. Others

- IP4: Rubber Processing Industrial Cluster Development
- IP5: Minerals & Resources Mining

[4] HT2 Upstream Mushroom Farming and HT3 Spirulina Farm are under the Agricultural sector.

3.2.5 Project Description

1. Halal High Value Manufacturing (Halal Food Park)

a) HM1: Halal Food Park

The Padang Besar Halal Food Park will focus on food-based products within the development area of 89 ha (220 acres). The existing area of 30 acres currently has 12 shop lots.

Development of Halal Food Parks will be monitored by the Halal Development Corporation (HDC) to facilitate its development and qualify for HALMAS[5] status. Park operators and industries operating in HALMAS Parks can apply for Halal incentives provided by the HDC and the Ministry of Finance (MOF).

Investments (RM million)	Land Size (ha)
856.1	98

b) HM2: Health Beverages, Functional Foods, Milk & Juices Processing

The processing plant will be located at the Halal Food Park in Chuping Valley and will require 40 ha of land. The processing of health beverages, and milk and juices will need to comply with Good Manufacturing Practice standards, the Hazards Analysis Critical Control Points, and other health standards. Packaged beverages with the HALMAS status can be exported to the ready Halal markets.

Jobs	Investments (RM million)	Land Size (ha)
128	353.1	40

c) HM3: Halal Snack Foods & Sauces Processing

The processing plant will require larger lots within the Halal Food Park as it focuses on producing Halal snack foods and sauces with raw materials from the upstream cultivation of mushrooms and high value fish aquaculture.

The processing of the snack foods and sauces will be based on Good Manufacturing Practice, the Hazards Analysis Critical Control Points, and other health standards. Snack foods and sauces with the HALMAS status can be exported to the Halal market.

Jobs	Investments (RM million)	Land Size (ha)
90	181.8	20

[5] HALMAS (Halal Malaysia) is an accreditation given to Halal Park operators who have successfully complied with the requirements and guidelines stipulated under the HDC designated Halal Park Development. It is also a mark of excellence for Halal products with the highest quality, integrity and safety.

d) HM4: Halal Gelatin Manufacturing

The processing plant will be within the Halal Food Park that focuses mainly on producing Halal gelatin for pharmaceutical materials manufacturing. The gelatin can be extracted from livestock reared in Perlis itself. The processing of the gelatin will be based on Good Manufacturing Practice, the Hazards Analysis Critical Control Points, and other health standards. HDC and CCM[6], a private firm, will play a major role in supporting the Halal gelatin manufacturing for pharmaceutical manufacturing, as they are looking into research and development.

Jobs	Investments (RM million)	Land Size (ha)
122	137	15

e) HM5: Halal Meat Processing

This project involves importation of Halal raw meat products from the Provinces of Satun and Songkhla and elsewhere.

Meat processors will import various types of meat from identified accredited Halal sources in Southern Thailand at the most competitive prices to be used as raw materials for their secondary processing. Priority will be given to semi-processed products, particularly boneless products, as it requires less manual input for cutting and deboning activities. The Department of Veterinary Services and JAKIM[7] will need to approve the identified abattoirs and processing plants based on the Halal standards established in Malaysia.

Processing will be focused on high-value Halal food products such as satay, chicken nuggets, burgers, sausages, Halal gourmet products, curried meat products, Halal gelatine and collagen.

Jobs	Investments (RM million)	Land Size (ha)
121	127.4	14

[6] Chemical Company of Malaysia

[7] Jabatan Kemajuan Islam Malaysia

2. Industrial Development Parks

a) IP1: Pauh-Putra Technology Park

Pauh-Putra Technology Park will comprise medium-sized industries which would link R&D, industry and academia. Potential industries that can be carried out in the Technology Park include healthcare equipment, bio-fertilisers, agri-chemicals, and precision products.

The development of this Park will be done in two Phases. The first phase (250 ha) will house the projects identified in this Strategic Development Plan while the 2nd phase (164 ha) is for future expansion and other industries which cater for the resource-based industries.

Jobs	Investments (RM million)	Land Size (ha)
1515	3,613.4	414

Note: The large investments include industrial investments that are attracted to set up production facilities in this Technology Park.

b) IP2: Renewable Energy: Solar Farm

There is plan to build a 10MW solar farm on a 25 ha site in the Pauh-Putra Technology Park. This project targeted to procure 44,000 photovoltaic modules, of which 50% are to be purchased locally.

Jobs	Investments (RM million)	Land Size (ha)
86	227.6	25

c) IP6: Plastic-to-Fuel Technologies

Syngas@Saham Utama is a committed investor and has already begun its Research & Development operations. Its plant will manufacture machines that convert plastic waste into diesel fuel. These machines will be sold to any company which has plastic waste to be converted into diesel.

An expansion of the project after 2020 is envisaged and will be carried out in the Pauh-Putra Technology Park.

Jobs	Investments (RM million)	Land Size (ha)
100	224.9	25

3. Agri Bio-Tech Park

a) HT1: Agri Bio-Tech Park

The Agri Bio-Tech Park is a cluster of technology parks that will be designated for specific agricultural products using bio-technology or high-technology intensive farming.

Additionally, an Agri Bio-Tech branch of a university within the area will enhance R&D to further increase productivity or develop higher-value products.

This Park is envisaged to house green initiatives like mushroom houses, a controlled environment for green-house effect for specific agricultural produce, namely Harumanis mangoes, and various industrial activities using bio-technology. There are two phases for this project - about 200 ha of land in Phase 1 and 210 ha in the second phase.

Jobs	Investments (RM million)	Land Size (ha)
800	3580.8	410

Note: the large investments have included industrial investments that are attracted to set up production facilities in this Technology Park.

b) HT4: EBN Integrated Processing Centre with Swiftlet House Programme

This proposed project involves two elements which are interdependent, i.e. an Integrated Processing Centre (IPC) at Simpang Empat and a central collection and processing point for edible bird's nests (EBN) farmed in the State and in the Koridor Utara. There is also a possibility that the centre can serve as a processing point for bird nests, where the local workforce can be employed to clean and process them into high value food products. The Integrated Processing Centre can have the following components:

- Collection and sorting facility
- Processing area
- Packaging area
- Labelling & Branding Programme

Part of this project is a Koridor Utara programme whereby participants are given the house drawings, best practice guidelines, bio-security and commitment by the IPC to purchase EBN.

Jobs	Investments (RM million)	Land Size (ha)
194	108	10

c) IP3: Bio-technology Processing Plant from Upstream Raw Materials

The Bio-Plastics Processing Plant will process raw materials like sugarcane, cassava, kenaf, corn, wheat, etc into bio-plastics, catering especially to the medical industries market or plastic packaging market. The development of the processing plant will be in Chuping Valley and will be done in phases, with the target to have a full-fledged manufacturing line by 2020 that covers the whole value chain.

Jobs	Investments (RM million)	Land Size (ha)
114	441.8	50

4. Others

a) IP4: Rubber Processing Industrial Cluster Development

The RPIC requires 100 ha of land for industries related to rubber. This leverages on the abundance of rubber trees on FELDA land in northern Peninsular Malaysia as well as Southern Thailand. It calls for various industrial lots to be leased to private investors in the rubber industry to process natural rubber into high-value rubber products for medical applications, industrial gloves and condoms.

Jobs	Investments (RM million)	Land Size (ha)
220	874.5	100

b) IP5: Minerals & Resources Mining

This project calls for a detailed feasibility study on the availability of minerals and resources like dolomite, gold and coal for mining. The Geoscience Department will assess whether the deposits can be commercially mined and exploited.

Jobs	Investments (RM million)	Land Size (ha)
260	226.4	25

Mining activities (left) and the Bio-Tech Park (right) at Sg. Batu Pahat

3.3 TRADE AND SERVICES

3.3.1 Introduction

In 2010 the services sector[8] contributed RM1.71 billion or 58.3 per cent to Perlis' GDP. It has been and remains the largest contributor to the local economy, with the main components being the various sub-sectors in the distributive, wholesale and retail trades. The main driver for the development of the trading and services sector will be the logistics infrastructure. It is good logistics which will give Perlis an edge over its neighbours.

3.3.2 Issues and Challenges

The key issues and challenges emerging from various discussions with stakeholders and two workshops are as follows:

- Missed opportunity of the Padang Besar Depot due to lack of value-added services.
- Poor transport connectivity (road, rail) between the major towns in Perlis impedes the growth of small traders.
- Threats to road transport through Bukit Kayu Hitam; easier and faster via Penang Port.
- Low utilisation of Kuala Perlis Fish Products Centre.
- Illegal trade (e.g. diesel smuggling), leading to loss of business for genuine businessmen and revenue for the government.

3.3.3 Strategic Direction: Trade and Services

The strategic directions for trading and services are as follows:

SD1: Designation of Padang Besar as a Special Economic Zone; upgrading of the Padang Besar bazaar areas and designating them as Free Zones for wholesale commercial and retail trades.

SD2: Leveraging on the double-tracking passenger railway system to make Perlis a tourist stop-over. Tourism promotion and package deals to attract transit tourist spending at the border towns.

SD3: Enhancing utilisation of the Kuala Perlis Fish Products Centre to include fish products from Adang Archipelago and Tarutao islands through joint tourism promotion with Satun Province.

SD4: Expanding Kuala Perlis boat-building and repair capability and leveraging on deep sea fishing.

SD5: Attracting investments in trading, logistics, boat-building, maintenance and repair jobs in line with the ETP and Koridor Utara-driven trading and services initiatives.

3.3.4 Project List: Services and Trading

- TS1: Free Industrial Zone (as part of Special Economic Zone)

[8] The 'Sectoral Report for Strategic Development Pillar 3: Trading and Services' can be found in Annex 7.

- TS2: ICD and its future expansion
- TS3: Wholesale and retail zone
- MT1: Upgrading fish landing point at Kuala Perlis to be a fisheries transhipment hub
- MT2: Boat-building and repair base

3.3.5 Project Description

a) TS1 Free Industrial Zone (FIZ)

The Free Industrial Zone in Padang Besar is 153.33 ha, which includes the existing Padang Besar depot. The area for future expansion of the ICD and general industries is located adjacent to the proposed Rubber Processing Industrial Cluster, which will be allocated for the manufacturing of high value rubber goods. The proposed FIZ is for goods that are brought into or manufactured in the FIZ for the export market. This is supported by the export of Halal food and other manufactured goods from the Special Economic Zone.

Companies operating in a FIZ can enjoy duty-free imports of raw materials, including packaging materials, machinery, and equipment used directly in the production of approved products as stated in their manufacturing licence (ML). The FIZ manufacturers are also exempted from the payment of sales tax, excise duty and service tax.

Jobs	Investments (RM million)	Land Size (ha)
400	568.1	153

b) TS2: ICD and its Future Expansion

The project proposes to expand the depot in Padang Besar and to allow it to offer other services instead of just being a terminal. It is proposed that it will be upgraded and expanded into a Class I ICD with transit time under 6 hours, with full services such as break-bulk, stuffing and unstuffing, and container and vehicle maintenance.

This will enhance the trading sector in Perlis, with high impact manufacturing and industrial activities proposed for the next 20 years. As the proposed ICD is located within the Special Economic Zone, special incentives are to be given to those that trade and export/import goods within it. Infrastructure has to be provided, including basic utilities and amenities, proper roads and access, an upgraded Customs, Immigration and Quarantine (CIQ) centre, and upgrading of the container yard for better operation of the ICD.

Jobs	Investments (RM million)	Land Size (ha)
100	228.8	38

c) TS3: Wholesale and Retail Zone

This project has been proposed in the Kangar Local Plan, and it envisages a facelift of Kompleks Arked Niaga and Gapura Square Centre, turning the area into a comfortable business area with pedestrian walkways. Further enhancements on the stalls will make the retail area attractive for both tourists and the trading community to carry out retail activities in the zone, with car parks, parking for tourist buses, and other basic amenities.

There is scope for Perlis to leverage on the following new tourism products in this proposed zone:

- Buyung Kechor (Pots used for *laksa*)
- Souvenirs e.g. pewterware from Perlis dolomite, e.g. key chains, ash trays, etc.
- Mats, purses, bags, etc. made out of bamboo and *ibus* leaves
- Wood-carved products in the Langkasuka motif as seen on bus-stops in Perlis
- Better quality leather goods from Thailand, which are currently sold in Kuala Lumpur e.g. at Uptown, Jalan Tuanku Abdul Rahman, etc.

Jobs	Investments (RM million)	Land Size (ha)
50	35.6	3

d) MT1: Upgrading Fish Landing Point at Kuala Perlis to be a Fisheries Transhipment Hub

The proposed hub at Kuala Perlis would be:

- A fully integrated fishing base incorporating the infrastructure to enable:
  - Efficient, quick berthing, bunkering services for fishing and fish trading boats
  - Sanitary handling of fish landed at the port.
  - Commercial infrastructure to support trading and movement of fish.
- Linked closely with tourism and recreation, the fishing hub will need to incorporate:
  - Tourism-oriented commercial infrastructure such as upmarket fish retail shops, souvenir stands and seafood restaurants.
  - a fishery-based industrial area.

Jobs	Investments (RM million)	Land Size (ha)
30	55	11

e) MT2: Boat Building and Repair Base

The boat-building and repair base is projected to increase its activities, catering to deep sea fishing vessels, fish product collection vessels, and barter trade vessels.

Jobs	Investments (RM million)	Land Size (ha)
250	750.2	33

Ferry Terminal (left) and fishing village (right) at Kuala Perlis


Retail centre (left) and ICD (right) at Padang Besar

3.4 TOURISM[9]

3.4.1 Introduction

Perlis is the country's gateway from Southern Thailand through the entry points at Padang Besar and Wang Kelian as well as the jetty check point at Kuala Perlis. In 2011 a total of 695,681 tourists arrived in Perlis through these entry points. Padang Besar was the most popular, especially for visitors from Southern Thailand.

Perlis has a variety of existing tourism products as well as new tourism assets, each with its unique features. Besides being tourism transit points, Padang Besar, Wang Kelian and Kuala Perlis have the potential to be competitive tourism centres. Tourism products emphasising heritage, agriculture and food, archaeology and geology and coastal tourism will be developed and promoted through continuous strategic management[10].

[9] The detailed Sectoral Report for 'Strategic Development Pillar 4: Tourism,' can be found in Annex 5.

[10] Draft RTMPK 2009-2020

3.4.2 Issues and Challenges

The main issues and challenges faced by the tourism sector in Perlis are as follows:

- Perlis is currently excluded from the mainstream tourist circuit and has a hazy tourism image. Despite being the northern gateway to Malaysia, it attracts mainly low yield visitors from Southern Thailand and international Free Independent Travellers.
- Although it lacks a clear tourist image, Perlis is blessed with distinct natural and rural tourism resources such as the only semi-deciduous forest in the north of Malaysia (Perlis State Park), limestone hills and caves, a unique cave mining history and the MADA 'rice bowl'. These tourism resources should be developed to showcase their distinctive features and differentiate Perlis from the other attractions in the country.
- The ecotourism attractions in Perlis, especially Perlis State Park, have not been able to compete with similar attractions in the other states such as Taman Negara (Pahang), Royal Belum (Perak), and Tasik Kenyir (Terengganu). The Perlis State Park is not included in the current list of ecotourism sites under the Malaysia Mega Biodiversity Hub (MMBH), an ETP initiative to scale up and promote premier ecotourism sites in the country.
- Border town tourism has been restricted to the almost one way flow of Malaysian tourists to Southern Thailand. The tourist traffic to Wang Kelian, which used to peak at 70 buses every Saturday, has dwindled.
- Kuala Perlis has recently developed into a vibrant transit point to Langkawi but bad road design has resulted in poor traffic flow and congestion during weekends and school holidays.
- The tourism industry in Perlis currently does not have the capacity or service quality to handle high quality inbound tours. Most of the high end resorts in Langkawi take their guests on ecotourism trips to Tasik Kenyir and Royal Belum because of the real or perceived unreliability of tour operators in Perlis.
- For Perlis to leverage on a revitalised Langkawi, the capacity of its tourism agencies and players need to be significantly enhanced. Currently most of the tour guides registered in Perlis make a living in Kuala Lumpur, Penang and Langkawi, etc. Perlis also does not have special events to attract visitors despite having unique features such as a distinctively cool December ('Perlis winter'), and popular local culinary and agrotourism products.

3.4.3 Strategic Direction: Tourism

Five strategic thrusts are proposed to drive the tourism industry in Perlis. These thrusts are supported by ten development drivers and 6 enablers:

Strategic Thrust 1: Strengthening and expanding the capacity of the Perlis tour operators to improve their service quality and to develop partnerships with industry players in the surrounding tourist hotspot destinations

Strategic Thrust 2: Developing and promoting a distinctive tourist image of Perlis

Strategic Thrust 3: Leveraging on the pivotal role of tourism to add value to the rural economy of Perlis

Strategic Thrust 4: Complementing the existing and future role of Langkawi as a major tourist destination by leveraging on its proximity, accessibility and connectivity to Perlis

Strategic Trust 5: Marketing and promoting Perlis as a premier destination for sports tourism, team building sessions and outdoor activities that are niche tourism markets

3.4.4 Project List

Ten (10) key projects have been identified to drive tourism development in Perlis. They are:

- TM1: Transforming Sungai Batu Pahat into a major family fun-tourism destination and privatizing these facilities
- TM2: Development of the agro-tourism corridor as a scenic route
- TM3: Setting up of small scale tourism enterprises and incubators to produce handicrafts for the Langkawi tourism market
- TM4: Setting up of the Wang Kelian Tourism Town
- TM5: Establishment of the Kuala Perlis Tourism Complex
- TM6: Upgrading of tourist facilities at the Perlis State Park and Gua Kelam for group- based activities
- TM7: Development of a recreational fishing centre.
- TM8: Development of a high-end Perlis hillside resort, spa and 21st Century Village (feasibility study)
- TM9: Organisation of signature tourism events of international standard
- TM10: Perlis River Promenade development

3.4.5 Project Description: Tourism

a) TM1: Transforming Sungai Batu Pahat into a Major Family Fun-Tourism Destination and Privatizing These Facilities

The main proposal for the Sungai Batu Pahat area is to privatise and enhance the tourist experience and integrate them into a tourism 'honey pot'.

A revitalised Sungai Batu Pahat will offer a tourist experience based on "family fun", by improving the existing tourism products in terms of presentation, interpretation and service quality.

These attractions will be linked into a vibrant tourism circuit where visitors can buy a single entrance ticket to visit and patronise all the attractions over a 3-day period.

Once this circuit is established, it can then be linked to the attractions at Gua Kelam to form an attractive tourism corridor with the potential of being promoted as a 'must visit' destination.

Jobs	Investments (RM million)	Land Size (ha)
300	204	15

b) TM2: Development of the Agro-Tourism Corridor as a Scenic Route

This project aims to connect the agro-tourism resources within the State via the scenic route in addition to acting as a Pro-Poor Tourism tool. The proposed corridor will follow the existing road system to form a loop from Kangar to the MADA paddy rice bowl, Harumanis mango plantations and Chuping sugar cane plantations. Appropriate R&R facilities will be developed, with tourist facilities and retail outlets for local communities to showcase and sell local agro-tourism products and handicrafts.

Investments (RM million)	Land Size (ha)
40	34.8

Snake Park (left) and Herbal Park (right) at Sungai Batu Pahat

c) TM3: Setting Up of Small Scale Tourism Enterprises and Incubators to Produce Handicrafts for the Langkawi Tourism Market

Project TM3 aims to create a network of small-scale tourism enterprises and incubators that cater to the Langkawi tourism market. This project mainly involves the establishment of handicraft artisan-suppliers and incubators within the proposed Kuala Perlis Maritime City.

These incubators shall have a dual function: first, as a tourist attraction, and second, as the production centre for high quality handicrafts to be ferried to Langkawi via Kuala Perlis. The main physical component of this project is the construction of a handicraft complex within the proposed Kuala Perlis Maritime City, which can accommodate between 10-20 handicraft suppliers/incubators.

Jobs	Investments (RM million)	Land Size (ha)
400	24.2	2

d) TM4: Setting up of the Wang Kelian Tourism Town

Wang Kelian is a small settlement located at the northwest corner of Perlis. Even though it has limited land due to hilly terrain and forest reserves in the surrounding area, it has the potential to be developed as a tourism and gateway town.

To accelerate the tourism and economic growth in Wang Kelian, it is proposed that it be developed into a tourism town with a CIQ complex with institutional use, especially for safety, security, administration and staff housing for public servants. In addition there will be a bazaar, shopping arcade, budget hotels, food court, residential houses and local service centres.

Jobs	Investments (RM million)	Land Size (ha)
365	396.9	45

e) TM5: Establishment of the Kuala Perlis Tourism Complex

This project proposes the development of a tourism complex in the Kuala Perlis Maritime City to help leverage on the positioning of Kuala Perlis as the premier gateway to Pulau Langkawi. The key targets are transit tourists who would patronise the various tourism facilities in this complex. It would have a Tourist Information Centre, kiosks for travel agencies and car rental companies, budget hotels, tourism-based SMEs and incubators, a food tourism hub offering unique local delicacies, and a hall for cultural performances.

Jobs	Investments (RM million)	Land Size (ha)
150	20.4	1

f) TM6: Upgrading of Tourist Facilities at Perlis State Park and Gua Kelam for Group- Based Activities

This project proposes the upgrading of the existing tourism complex at the Perlis State Park by providing the necessary facilities for group-based activities such as extreme sports, team building and a canopy walk. An interactive environmental education centre is also proposed to provide activities and facilities for school groups as well as for children while their parents are away shopping at Wang Kelian. For Gua Kelam, there is an urgent need to improve the existing facilities that have been affected by flooding, the internal train track that has been operationally stalled for years, and the overall maintenance and presentation. Once the existing tourism facilities at Gua Kelam are rehabilitated, it can then be packaged and sold as part of the Sungai Batu Pahat-Gua Kelam corridor.

Jobs	Investments (RM million)	Land Size (ha)
50	22	2

g) TM7: Development of Recreational Fishing Centre

The project for the establishment of a recreational fisheries centre would capitalise on the current surge in interest in recreational fishing as well as support synergistic economic activities. The complex will have two major thrusts:

- A recreational pond complex for short stay duration tourists who may not have the time or resources to travel to sea.
- A jetty for angling boats to berth. The boats will enable 1 to 2 trips offshore for angling.

The complex will be based on the food court business model; the centre will consist of a number of related component activities operated independently under a central management.

Jobs	Investments (RM million)	Land Size (ha)
50	3.3	2

h) TM8: Development of a High-End Perlis Hillside Resort, Spa and 21st Century Village (feasibility study)

Project TM8 proposes a study for a high-end wellness resort at Wang Kelian and a pilot 21st Century Village at Homestay Ujung Bukit. The key components of this project are a 100 to 200-room high-end resort focused on traditional Malay massage, alternative medicine, aromatherapy, herbal treatment, weight reduction and stress relief.

Investments (RM million)	Land Size (ha)
2	10

i) TM9: Organisation of Signature Tourism Events of International Standard

Project TM8 proposes the organisation of State signature tourism events of an international standard. Two major events are proposed: the Perlis Adventure and Extreme Sports Event, and the Perlis Fruit and Food Festival. The first event is a collection of sports, adventure and extreme sports event held at specific locations over a period of three days. Some examples of these events are cycling, mountain biking, extreme sports, paintball and a kayak race. The recently held Arau Run is a good example. The Perlis Fruit and Food Festival, on the other hand, can be organised during the harvest and major fruiting seasons, and can incorporate food festivals to showcase Perlis food.

Investments (RM million)	Land Size (ha)
100	6.3

j) TM10: Perlis River Promenade Development

Sungai Perlis flows through the Kangar Town Centre towards the sea at Kuala Perlis. The scenic landscapes such as the fishing jetty, fisherman's wharf, paddy fields, traditional villages, Museum Indera Kayangan and historical Kangar along the river offer tremendous opportunities to tap on the tourist potential of the river. At the same time, underutilised and derelict land at strategic locations can be capitalised for high-end riverside housing development. In addition, the river reserve can be developed as a linear waterfront park with activity nodes to enhance the vibrancy and liveliness of the town centre.

Jobs	Investments (RM million)	Land Size (ha)
520	200.3	12

Sign board (left) shows map of Perlis State Park and view point (right) from Wang Kelian

3.5 EDUCATION[11]

3.5.1 Introduction

Perlis has great potential to be developed into an education hub. As of 2011 there were a total of 12 tertiary educational service providers/institutions in Perlis, with the majority being public-funded institutions (only two are private institutions). Only two are engaged in R&D activities (i.e. UniMAP and AUCMS[12]). Additionally, AUCMS has a degree programme with a foreign university.

The 12 institutions offered 182 courses in 20 fields of study for the years 2010 and 2011. Forty-eight of these courses are at degree level, 69 at diploma level and 44 at certificate level. A total of 9,137 students graduated in 2011 as compared to 8,628 in 2010. About 50% of these graduates are at the diploma level, with 25% each for degree and certificate levels. About 30% of the graduates are from the Science and Business Management streams. At the degree level, the majority of graduates are from the Engineering and Business Management courses, while at the diploma level, the courses preferred are services and ICT.

3.5.2 Issues and Challenges

1. There appear to be mismatches between the demand for certain types of graduates (at all levels) and their supply within Perlis.
2. With 25 private universities and 22 private university colleges in Malaysia, the viability of setting up another private university or college needs careful study. A host of academic, operational, financial and marketing challenges need to be met. A financially less risky approach will be to twin with an existing local college or university. Private colleges or universities that recruit from the local market may find it attractive to set up campus in Perlis, especially if there are incentives and support provided by the government.
3. Due to distance, the courses offered in Perlis attract lower enrolment rates compared to institutions in other states in Malaysia. Therefore it becomes imperative to offer niche-based courses.
4. Research and development institutions include the SIME Seed Centre in Changlun, RB Technology in Pauh Putra, MARDI's research centre, FRIM research centre, UniMap's research centres and UUM's various centres (e.g. COLGIS13).
5. In addition to R&D, there is also the business aspect of consultancies, advisory services and commercial research that can assist the public sector or private firms. Consultancies outsourced to universities and lecturers have a commercial and business value and can be organised and marketed to local institutions.

[11] The Sectoral Report for 'Strategic Development Pillar 5: Education' can be found in Annex 6.

[12] Universiti Malaysia Perlis and Allianze University College of Medical Sciences

[13] College of Law, Government and International Studies, Universiti Utara Malaysia

6. Setting up a university from scratch is a major undertaking and much hinges on the quality of its teaching staff. The quality of the teaching staff, together with the reputation of the university, contributes to its overall status. Similar concerns apply to the R&D institutions.
7. Finally, new colleges and universities need the support of the government at all levels – for licensing requirements, academic programmes, recruiting staff and students, land, permission to build, accreditation, etc.

3.5.3 Strategic Direction: Education

Perlis already has the elements of an educational hub as there are already 12 tertiary educational institutions. However, there are some key problems. First, the elements of a hub are not well known or visible. As such it remains in the background. Second, it does not have certain features which will make the hub function more effective, e.g. strong industry-academic linkages. Third, it is almost wholly public-sector driven, which makes the hub fairly sustainable only if it enjoys State or Federal support. Fourth, it is situated in a fairly rural setting, which means that it has to extend its links beyond the State. Despite these constraints, there are benefits of setting up an educational hub in Perlis. It is an opportunity for new knowledge and skills not only for Perlis' youths but students from the surrounding areas.

Existing institutions can strengthen their academic and research collaboration and their expert and advisory services, thus benefiting industries, government and society. The multiplier effects of a concentrated student population create demand for housing, food, recreation and services, thus contributing to the local economy. The spill-over effects on the property market and other business activities are measurable. Four high impact projects are recommended for the establishment of an educational hub.

3.5.4 Project List

The four project initiatives required to create an educational hub in Perlis are:

- ED1: Establishing a reputable International University Branch
- ED2: Strengthening industry–academia collaboration for socio-economic benefits
- ED3: Training and human development
- ED4: Establishing an Agro-Technology University Branch Faculty

3.5.5 Project Description

a) ED1: Establishing a Reputable International University Branch Campus

This aim is to attract an international acclaimed and reputable university to set up their branch campus in the educational hub of Perlis. The benefits of attracting students from the surrounding region (e.g. Greater Mekong Region) will be enormous as students will gain an international degree at their doorstep at a cheaper cost.

There are many students, especially from China and Africa, seeking opportunities for low-cost international degrees. The 173.32 ha of land assigned in Perlis for a branch campus can be split into two parts, with a portion dedicated to establish the campus. a reputable foreign university and brand name will enable students to earn a respected degree at an affordable price. The courses can be as specialised as needed. There are foreign universities seeking opportunities to open branch campuses, and this should be vigorously explored.

These universities are keen to tap fee-paying students from local and the burgeoning regional Asian markets who are keen on locally and internationally accredited courses, particularly those conducted in English. Given that Malaysia is a world pioneer and leader in twinning programmes, Perlis State, with assistance from the Federal government, may be able to attract an international university to Perlis by facilitating licensing, accreditation to student recruitment, and access to land.

Jobs	Investments (RM million)	Land Size (ha)
1,000	1565.5	205

b) ED2: Strengthening Industry–Academia Collaboration For Socio-Economic Benefits

It is important to match existing institutions offering industry relevant courses with industries in the northern belt of the country. R&D Centres of Excellence surrounding such industries can be created to generate a more vibrant innovative entrepreneurial R&D community in Perlis through research collaboration with key industry players. The absence of an industry-academia nexus is due to gaps in information which can be resolved by an NCIA-initiated ‘Research-For-Industry’ Centre.

Investments (RM million)	Land Size (ha)
100	4.8

c) ED3: Training and Human Resource Development

Serious effort need to be made to better match education and training to skill needs. This would involve detailed skills-needs analysis of firm and training–needs analysis of school-leaves and workers, and revamping education and training for industry requirements. At later stages, a NCIA and State-initiated Skills Centre should be established as a joint industry-government institution to upgrade worker skills. The highly successful Penang Skills Development Centre (PSDC) can be used as a model.

Investments (RM million)	Land Size (ha)
250	8.1

d) ED4: Establishing an Agro-Technology University Branch Faculty

The branch faculty should complement and supplement UiTM Perlis, (which now graduates about 140 diploma/ degree holders in agriculture,) and Kolej Komuniti Arau, (which trains 50 youths per year in food processing and Q.C.), by focussing on R&D activities. This can be done via collaboration with:

- Sime Darby's Seed Centre in Changlun, Perlis
- Mardi's Research Centre in Kangar, Perlis
- FRIM's Research Centre in Kepong, Selangor
- UUM (Kedah's) COLGIS Research Centre, and
- UniMAP's joint research project with various bodies, including the MoA and Malaysian Biotechnology Corporation.

This initiative fulfils the need to create greater visibility for the education hub planned for Perlis especially in the area of agro technology. The full potential of Perlis, an agriculture-based State, has not been fully exploited. There would be more local and international interest if it catered to high end industry based initiatives.

Jobs	Investments (RM million)	Land Size (ha)
350	252.5	32

Part 2: Enablers

3.6 INFRASTRUCTURE

3.6.1 Introduction

A good infrastructure is necessary not only to improve the quality of life but to strengthen Perlis' image as a 'green' state. The infrastructure sector[14] covers water supply, electricity supply, sewerage, solid waste management, natural gas, and drainage and flood mitigation. Telecommunication infrastructure is covered under the ICT sector (Information and Communications Technology), while infrastructure for irrigation (supply and drainage) is briefly described in several parts of the agricultural sector report found in Annex 1.

A review of the existing condition of various infrastructure sub-sectors in the State has been carried out in this study. Based on this review and discussion with the relevant agencies and service providers, an analysis of the strengths, weaknesses, opportunities and threats was carried out. Preliminary recommendations and strategies have also been described. Major infrastructure projects required to support economic growth in Perlis have also been identified. Estimated costs, location and land area requirements for these major projects have been described in this report.

3.6.2 Project List

Eight initiatives are needed to improve the infrastructure sector, as follows:

- EU1: Flood Mitigation Scheme
- EU2: Central Sewerage System
- EU3: Solid Waste Disposal Facilities
- EU4: Natural Gas Service Area Extension
- EU5: Water Supply System
- EU6: Electricity Distribution System
- IT1: Perlis MSC EduNet
- IT2: Perlis MSC Technology/ ICT Development Programme

3.6.3 Drainage and Flood Mitigation

a) EU1: Flood Mitigation Scheme

Large areas of Perlis are low-lying and flood-prone. The 2010 floods inundated approximately half of the State, causing extensive damage to infrastructure as well as to agriculture and commerce. Approximately 47,000 hectares of land were flooded and

[14] *The Report for Infrastructure as an Economic Enabler is in Annex 8.*

63,000 people were affected by the floods. The capital Kangar was also severely flooded and major roads were cut off. Discussions with JPS indicate that the estimated loss due to the flood was in the region of RM 200 million. The Timah Tasoh dam regulates the flow in Sungai Perlis by releasing or storing water. During heavy rain, excess water is released from the dam and causes flooding downstream (Sungai Korok and then Sungai Perlis). Diversion channels have been proposed by Jabatan Pengairan dan Saliran (JPS) to safely divert the excess flows. There are two proposed diversion channels, viz. the East Flood Diversion Channel, which diverts the flow east of Kangar town into the irrigation channels in Kedah, and the West Flood Diversion Channel, which diverts water flows west of Kangar town into Sungai Perlis before discharging into the sea.

The West Flood Diversion Channel has been approved by the State and Federal governments, and detailed design work can be expected to be underway soon. The estimated cost for the West Flood Diversion Channel is RM 260 million.

The West Diversion Flood Channel will alleviate floods to a large extent. a more complete solution would be to construct the East Flood Diversion Channel as well. This is because the East Flood Diversion Channel will not only carry excess flows from the Timah Tasoh Dam, but will be able to divert flows that come down from the upper catchment of Perlis that do not flow into the Timah Tasoh dam. This is because the greater part of the Sungai Perlis drainage catchment lies outside the Timah Tasoh dam catchment. Planning and design of the East Flood Diversion Channel should commence and be constructed in the near future to ensure that the State is fully protected against major floods.

Jobs	Investments (RM million)	Land Size (ha)
25	550.3	3

3.6.4 Sewerage

b) EU2 Central Sewerage System

The existing sewerage system in Perlis consists of a variety of systems such as mechanical sewerage treatment plants (STP), communal septic tanks, individual septic tanks and pour-flush latrines. Mechanical STPs are available in planned developed areas such as the town centres and housing schemes, while communal septic tanks and individual septic tanks are used in older housing schemes. In the rural areas, septic tanks and pour flush latrines are used.

The existing sewerage system in Kangar has been recently upgraded by the introduction of a central sewerage system. The plant located at Wang Bintong has a current capacity of 30,000 PE (population equivalent) and a future expansion capacity of 80,000 PE. This will ensure that most of the premises within Kangar will be

connected to the central sewerage system in the near future. Apart from Kangar, the other towns in Perlis do not have a centralised sewerage system. The key focal node areas of Arau-Kuala Perlis and Padang Besar are expected to be developed intensively and therefore it is recommended that a centralised sewerage system be provided for these areas.

Investments (RM million)	Land Size (ha)
160.3	3

3.6.5 Solid Waste Management

c) EU3: Constructing Solid Waste Disposal Facilities

The management of solid waste collection and disposal in Perlis has been taken over by the concessionaire company Environment Idaman Sdn Bhd. Presently the total domestic, commercial and industrial solid waste amounts to between 100 to 120 tonnes per day. The solid waste is disposed in a dumping site located in Padang Siding, Pauh. The dump site utilises a 'control tipping' technique to dispose the solid waste. Leachate and gas collection, treatment and disposal facilities are not available at the dump site.

The amount of solid waste generated will increase in line with population and economic growth. A proper solid waste disposal facility is therefore required for the State of Perlis. A sanitary landfill has been planned by *Jabatan Pengurusan Sisa Pepejal Negara* (JPSPN) in Rimba Mas. It is imperative that this landfill is commissioned as soon as possible.

Investments (RM million)	Land Size (ha)
120.3	30

3.6.6 Natural Gas

d) EU4: Natural Gas Service Area Extension

The Petronas Gas Utilisation (PGU) pipeline supplies natural gas to the existing Independent Power Plant (IPP) at Kuala Sungai Bharu in Perlis. From this line a city gate has been constructed at Kg Padang Petani, where the high pressure in the pipe is reduced to medium pressure for distribution to the consumers. From the city gate onward, the natural gas pipeline is operated and maintained by Gas Malaysia Sdn Bhd (GMSB). At present GMSB has only one customer located at the Jejawi Industrial Park in Perlis. This customer is Shorubber Sdn Bhd, a rubber glove manufacturer which consumes 700,000 cubic meters/month of natural gas.

This study proposes new industrial areas be established in the focal node areas of Chuping/Padang Besar, Kuala Perlis and Pauh Putra/Arau. The proposed industrial areas are of varying sizes: in the case of Padang Besar/Chuping the proposed industrial areas are in excess of 700 ha. Relatively smaller industrial areas have been proposed for Kuala Perlis and Pauh. Industrial land in Kuala Perlis amounts to about 44 ha, of which the integrated maritime facilities take up 30.4 ha. In Pauh, the industrial land proposed is in the region of 360 ha. It is recommended that the existing natural gas pipeline in Perlis be extended to serve these new industrial areas.

Investments (RM million)	Land Size (ha)
50.3	-

3.6.7 Water Supply

e) EU 5: Water Supply System

The percentage of population served by piped water is high for Perlis and compares favourably against the Peninsular Malaysia and Federal Territory of Labuan average. It is understood that the actual production/demand in the State is in excess of 200 million litres per day (MLD) and that the State has barely sufficient water to meet current demands. The treatment plant design capacity in Perlis currently stands at 223 MLD.

The other main challenge for the State of Perlis is that it has limited water resources. The National Water Resources Study (2000-2050) had projected that the per capita water supply in Perlis would become critical by 2010. To a certain extent this forecasted shortage has been overcome by importing water from Kedah. It is likely that this situation will continue in the near future and that Perlis will continue to rely on water from Kedah.

The future water needs for Perlis must be met by two-pronged planning:

- **Increasing the water supply capacity** in the short and medium term to immediately address potential water supply shortages. This will ensure that water supply demand can be met for the proposed development programmes as recommended in this study.

- **Reducing losses in the delivery** system by improving the efficiency of the water supply system in the medium and long term, especially reducing non-revenue water. It is recognised that non-revenue water reduction programmes are normally carried out over a span of many years.

To address the potential water supply shortage in the near future, it is recommended that additional water treatment plants be constructed in Timah Tasoh and Arau with a combined capacity of 130 MLD. This would increase the production of treated water to

360 MLD, which is expected to be able to meet immediate demand and the long-term supply requirements.

Investments (RM million)	Land Size (ha)
200.3	12

Tasik Timah Tasoh, a dam for water supply and flood mitigation

3.6.8 Electricity Supply

f) EU6: Electricity Distribution System

Electricity supply in Perlis is provided by *Tenaga Nasional Berhad* (TNB) through a series of electrical main intake substations, distribution sub-stations, and transmission and distribution networks. One hundred per cent of the population of Perlis is provided with electricity supply. There is sufficient capacity to meet current and future demands although expansion of the distribution networks to serve new developments will be required to ensure that safe and reliable electricity supply can be provided to consumers.

To strengthen the distribution network in Perlis and to cater for expected high demand in the Padang Besar/Chuping area, the existing 33 kV line from Arau to Padang Besar is to be upgraded to 132 kV and new 132 kV Main Intake sub-stations will be required in the Padang Besar/Chuping areas.

The project consists of two main components:

- Upgrade of the existing 33 kV overhead transmission lines to 132 kV overhead transmission lines from the Chuping Main Intake to Padang Besar. The length of this overhead transmission line is approximately 25 km.
- Construct new 132/33 kV Main Intake substations at Padang Besar and upgrade the existing 132 kV Main Intake Sub-Station at Chuping. The new 132/33 kV sub-station at Padang Besar will be located adjacent to the overhead transmission

line way-leave and will step down the transmission voltage for distribution to the consumers.

Investments (RM million)	Land Size (ha)
80.3	102

3.6.9 ICT

Perlis' aspiration to be designated a MSC zone led to the adoption of the Perlis Strategic ICT Plan 2011-2015. Implementation of the Plan is delayed by the search for an agency to manage and lead it.

3.6.9.1. Perlis Net

g) IT1: Perlis MSC EduNet

To set up a High Speed Broadband (HSBB) network, Perlis needs to leverage on the strength of its user base and the education sector. Demand creation coupled with growth potential is vital not only for infrastructure deployment, but for services as well.

The real opportunity is to have broadband penetration and deployment within the education group, as they can utilise the myriad of opportunities for broadband services and related ICT initiatives. A Campus Access Network in and around the educational hubs in Kangar Maya (being the concentration of student accommodation and off campus living) will be a logical start for e-education and on-line curriculum use.

Incentives will be required for the System Integrator to lead the project and to deploy infrastructure in Perlis. It requires subsidies and guarantees for off take from the educational sector (UniMAP, UiTM, other educational facilities), rent free land/government and campus buildings, cheap trunk and aggregation from Telekom Malaysia. Integration with Urban Development and Economic Free Trade Zones projects could also help to increase traffic in the HSBB network.

The network design needs to be sufficiently detailed. Attention should be given to access switches, including management and security components. The network design is then applied over the hub campus area, with provision for IP addressing structures, matching of specific building requirements to the network models and specification of network management requirements. Business specific requirements and data centre plans need to be incorporated.

An OPEX Model can be developed whereby the cost of investment for the campus access network shall be deployed by the system integrator company in exchange for a fixed monthly fee. Contributions can be obtained from the Ministry of Higher Education or from the participating campuses and students (bundled and deducted as part of the fees), whereby they have full access to campuses, government buildings and land/sites free of charge. Guarantees for service off-take will be required.

A pilot project with UiTM and private sector candidates can be launched to test the participation rate in the campus focus network.

Investments (RM million)	Land Size (ha)
250	50.3

3.6.9.2. Perlis ICT Programme

h) IT2: Perlis MSC Technology/ ICT Development Programme

The creation of an integrated technology programme in the form of a Knowledge Hub in conjunction with the corridor economic zone development would attract youths and students. It could take the form of an incubator and specific labs, invigorate the education sector and feed into strategic sectors in areas such as cloud computing, applications development and data centre development and management.

In Kangar Maya the facilities and existing education sector clusters in Perlis can be the ground zero for technology excellence development. This is commensurate with the Kangar Maya Smart City initiative for which the Project Components include ICT Innovation / Incubator / Cyber Centre.

A tie up with Multimedia Development Corporation is proposed to tap their accelerated grant programme for academic development and incubator labs for application development, etc. This is consistent with MDEC's criteria for Cyber Centres and establishment of MSC status for Institute of Higher Learning (IHLs) such as the initiative under neighbouring Perak in Meru Jaya.

Investments (RM million)	Land Size (ha)
200	20.3

3.7 TRANSPORTATION

3.7.1 Introduction

Good public transport will in the long run discourage car use, road accidents and pollution, thus contributing towards a 'greener' Perlis. The existing transportation network in Perlis consists of road, rail and water transport. Air transport is via the Sultan Abdul Halim Airport located in Alor Setar, Kedah, about 60 km from Kangar. Perlis is not directly connected to the North South Expressway, the national main highway. The major economic corridors of Kangar and Padang Besar are only linked by Federal roads.

The national rail network extends into Perlis but it has only three stations, viz. Padang Besar (with passenger and freight service for traffic to Songkhla, Thailand), Arau (for traffic to Langkawi) and Bukit Keteri. Kuala Perlis connects with Langkawi, Penang and Satun, Thailand, by ferry. The detailed report for transportation as an economic enabler is in Annex 9.

3.7.2 Issues and Challenges

Issue and challenges can be categorised into three key elements, namely road transportation issues, current development planning gaps and institutional issues.

a) Road Transportation Issues

- Unsatisfactory public transport system. The limited public transport in the State results in car dependency, causing social and economic deprivation due to infrequent public transport services;
- Absence of an integrated public transport terminal in Perlis. Mobility of people and goods are affected by the public transportation system. The public transportation system needs to be enhanced in order to make it a compelling alternative to private transportation;
- The road system in urban areas and borders needs to be upgraded;
- No direct connection from the North-South Expressway to Kangar, Perlis. As such, transportation links to markets and tourist destinations are long, often inefficient and a major disadvantage to the local industries; and
- Absence of a railway line through Kangar, Perlis. High speed rail should have Kangar as the gateway town/city. Kangar should be made the hub of the north, with transport lines radiating out to connect to various important destinations (eg. Langkawi, Bangkok, etc.).

b) Current Development Planning Gaps

- The road proposals in the Koridor Utara for Perlis involve road upgrading. One of the planned or proposed projects by NCIA is the Central Spine, which entails straightening, widening and building of new roads from Changlun to Padang Besar.
  - Perlis should have its own transportation service network masterplan incorporating the role and functions of road, rail, sea and air facilities and services at State level;
  - Based on National Physical Plan Policy 23: In recognition of the inter-relationship between land use and transport, an integrated national transportation network shall be established.

  The Electrified Double Track Ipoh-Padang Besar project is a 329-km northern railway project that integrates with KTM's main line from Ipoh to Johor Bahru. The major stations in Perlis are at Arau and Padang Besar, while the minor station is at Bukit

Keteri. When completed in 2013 the entire electrified dual track rail will stretch 968-km, from the south to the north Peninsular Malaysia.

- Kangar as the capital city of Perlis does not have a rail link; and
- National Physical Plan Policy 24 calls for all state capitals to be linked via the high-speed rail network, with the rail stations acting as focal points for community and transportation activities.

c) Institutional Issues (State and border)

The IMT-GT Council has decided not to have too many border crossings to reduce smuggling activities. However there are still some important issues that need to be resolved, in particular issues that are related to the existing institutional framework. Transport rules and regulations need to be relaxed in order to promote efficient cross-border logistics and transportation**.** This can be carried out by abolishing the transportation quota between Thailand and Malaysia, particularly on perishable goods, and eliminating required upload and download practices at the cross-border areas and through mutual recognition of:

- Road vehicle registration;
- Transport operating license;
- Vehicle inspection certificates; and
- Vehicle insurance across the border.

3.7.3 Strategic Direction

One of the objectives of the proposed projects is to improve transport interconnectivity between the main development areas in Arau, Kangar, and Padang Besar and link it to the rest of the country via the North-South Expressway. Connectivity between the State capital, Kangar and the districts as well as ensuring that the road transport network in Kangar keeps pace with the proposed developments are stressed. It seeks to expand Perlis' economic hinterland with an additional link into southern Thailand.

3.7.4 Project List

- HW1: New Expressway (Alor Setar – Kangar – Padang Besar)
- HW2: New Highway (Kuala Perlis - Satun)
- UT1: Improvement of public transport through Bus Rapid Transit (BRT) (Arau – Kuala Perlis – Kangar)
- UT2: Ring Road for Kangar
- UT3: Integrated Transport Terminal (Kangar Sentral)
- UT4: Upgrading the Kaki Bukit to Wang Kelian Road (R15)

3.7.5 Project Description

a) HW1: New Expressway (Alor Setar – Kangar – Padang Besar)

The proposal is to connect Padang Besar, an important economic centre to the North-South Expressway. The link of approximately 70km length will improve connectivity between Perlis and the other states.

Jobs	Investments (RM million)	Land Size (ha)
150	693.1	70

b) HW2: New Highway (Kuala Perlis - Satun)

This proposed coastal highway links Kuala Perlis and Satun with a 35km road connection which 5km in Perlis and 30km in Thailand. The existing road connection involves Kuala Perlis – Hat Yai – Wang Kelian – Satun. By developing this road, it will enhance the connectivity between the two towns.

Jobs	Investments (RM million)	Land Size (ha)
80	46.2	35

c) UT1: Improvement of Public Transport through Bus Rapid Transit

The proposed 'Bus Way' is about 26km long, and will encompass 20km of Changlun Kuala Perlis Highway and 6 km of R1 and R3 road. There will be three main stations for the proposed 'Bus Way' - KTM Arau, Proposed Kuala Perlis Terminal, and Proposed Kangar Sentral.

Apart from these main stations, several stops will be introduced to facilitate travel. These stations will also be facilitated with Park and Ride facilities.

Three proposed routes will provide a dedicated track to be used by buses. The 'Bus Way' is either separated from roadways or will be a part of roadways but segregated from it, normally by kerbs. It is proposed to have two main routes:

1) Route a: Direct route from KTM Arau to Kuala Perlis Terminal

2) Route B: KTM Arau – Kangar Sentral – Kuala Perlis Route

Jobs	Investments (RM million)	Land Size (ha)
50	18.3	26

d) UT2: Kangar Ring Road

To cater for the long term future traffic volume, two ring roads, which are the 'Outer Ring Road', about 50km, and the 'Inner Ring Road', about 18km, are proposed. These ring roads are needed to meet the future traffic demand.

Jobs	Investments (RM million)	Land Size (ha)
50	385.3	68

e) UT3: Integrated Transport Terminal (Kangar Sentral)

Kangar Sentral is planned to be a transportation hub, which incorporates the bus services and proposed High Speed Rail services. To have a public-friendly and attractive transport system, Kangar Sentral will act as a major dispersal hub for Kangar City Centre. It will not only be a major hub for Kangar City Centre but will also help to disperse people to different places. The proposed high speed rail system can work as a main line to form an extensive, nationwide distribution network via Kangar Sentral. The planning for a pedestrian network and the design of pedestrian facilities is also essential for a transport hub. The west side of Kg. Repoh is proposed as a location for the integrated public transport terminal, Kangar Sentral.

Jobs	Investments (RM million)	Land Size (ha)
50	51.3	2

f) UT4: Upgrading the Kaki Bukit to Wang Kelian Road

Wang Kelian is proposed to be a new border tourism town for Perlis. As Wang Kelian is located in a valley in the Nakawan Range, the access road to the town is narrow, winding, undulating and prone to accidents. To spur the development of Wang Kelian, the road needs to be upgraded from the existing 12km two-lane (two-way) road to a dual-two carriageway road.

Jobs	Investments (RM million)	Land Size (ha)
25	123.3	12

CHAPTER 4

SPATIAL DEVELOPMENT STRATEGIES: URBANISATION AND KEY DEVELOPMENT AREAS

4. SPATIAL DEVELOPMENT STRATEGIES: URBANISATION AND KEY DEVELOPMENT AREAS

4.1 INTRODUCTION

The regional economy and the recent past trend of urbanisation in Perlis State, as outlined in Chapter 1, provide the framework in formulating the spatial development strategy for the State. As virtually all the economic activities and projects need to take place on land, the spatial development strategy seeks to ensure efficient and environmentally sustainable economic-spatial integration. More specifically, the strategy will allocate adequate suitable land for various land uses, such as industry and housing, supported by an effective transportation network and appropriate infrastructure to meet the future development needs.

Residential Property

Based on the Population and Housing Census 2010, the number of residential units in Perlis increased by 23.6%, from 50,242 units in year 2000 to 62,114 units in 2010 (**Table 4.1**). Over the same period, the increase in the number of households was less at 8,487 new additional households, i.e. from 44,863 in 2000 to 53,350 in 2010. The average household size also declined from 4.60 in 1991 to 4.26 in 2010. The K-value (household/unit) also decreased, suggesting a high level of vacancy of housing units. Bearing the possibility of mismatch of housing types and locations, the availability of existing total housing stocks to meet the current housing needs of all the households in the State is adequate.

Table 4.1: Number of Housing Units and Households in Perlis, 1980-2010

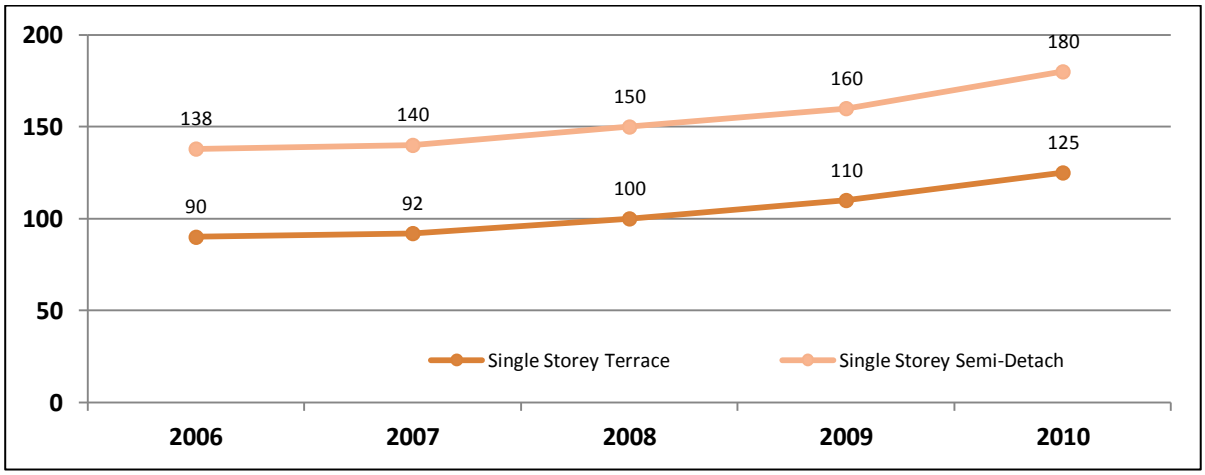
Year	1980	1991	2000	2010
Housing Units	33,605	44,576	50,242	62,114
Households	32,009	39,973	44,863	53,350
Ave. Household / unit (k-value)	0.95	0.89	0.89	0.85
Ave. Household Size	4.52	4.60	4.42	4.26

Source: Preliminary Count Report, Population and Housing Census 2010

By type, the majority of the houses are traditional village houses (63.3%), followed by planned housing units in housing schemes (28.7%) (**Figure 4.2**).

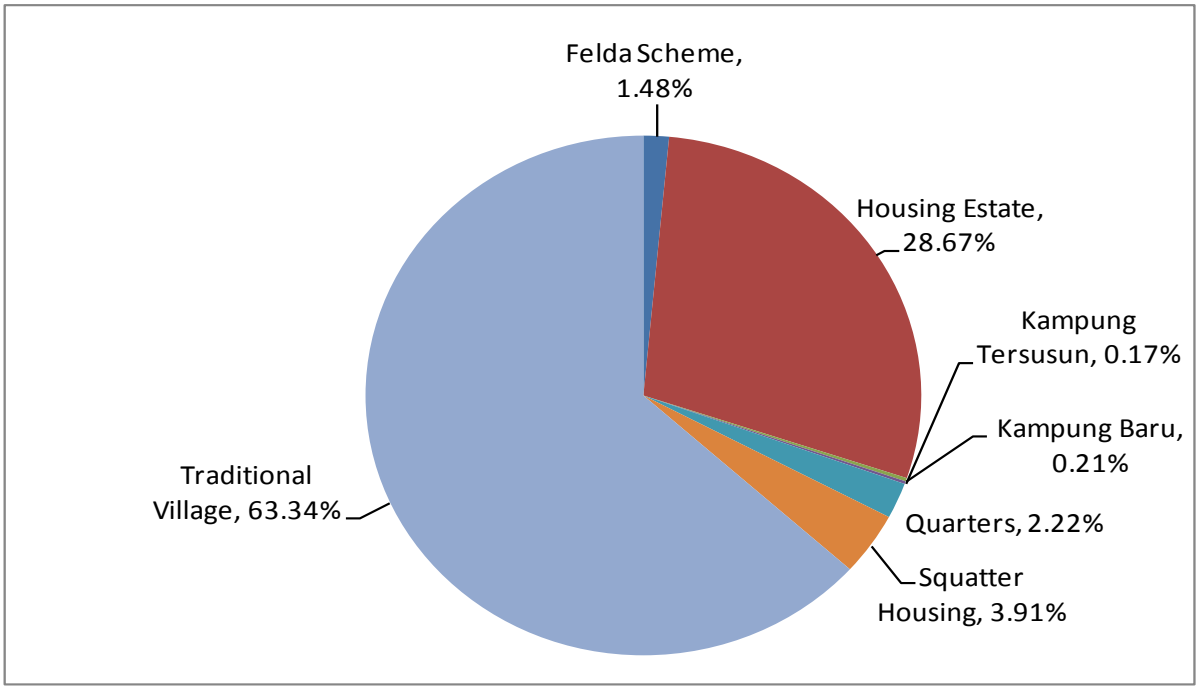
Generally, the past trend indicates that the prices of residential property in Perlis were stable[1]. However in Kangar the prices of residential property recorded an upturn of more than 30% in the last 5 years (**Figure 4.1**). In Kangar the average price of a single storey terrace house is about RM125,000, while for single storey semi-detached houses, the price per unit is about RM180,000.

Figure 4.1: Average Price Movements of Residential Property in Kangar



Source: Property Market Report 2010, Ministry of Finance

Figure 4.2: Existing Housing Types in Perlis



Source: Laporan Penemuan, Rancangan Tempatan Kangar, 2009-2020

[1] Property Market Report 2010, MOF

Based on the projected population increase in Perlis, a total of 34,885 new housing units by 2030 are needed (see **Table 4.2**). This will require the development of new housing areas, especially in the urban centres, to meet the housing needs of new households; replace unfit housing, and housing clearance affected by development; relocate squatters; and reduce overcrowding.

Table 4.2: Estimated Additional Housing Due to Population Increase, 2010-2030

Year	2010	2015	2020	2025	2030
Population	231,500	247,700	265,000	289,800	317,000
Household Size	4.26	4.18	4.10	4.03	3.96
Total Housing Units Required *(K Value=1)*	**54,343**	**59,258**	**64,634**	**71,911**	**80,051**
Additional Housing Units Needed	-	4,915	5,376	7,277	8,140
Natural Replacement	1,101	1,233	1,389	1,520	1,650
Immediate Replacement					
Dilapidated Housing	*452*	*0*	*0*	*0*	*0*
Squatter Housing	*1,832*	*0*	*0*	*0*	*0*
Actual Housing Units Needed *(in the next 5 years)*	**3,385**	**6,148**	**6,765**	**8,797**	**9,790**
Cumulative Housing Needs	-	**9,533**	**16,298**	**25,095**	**34,885**

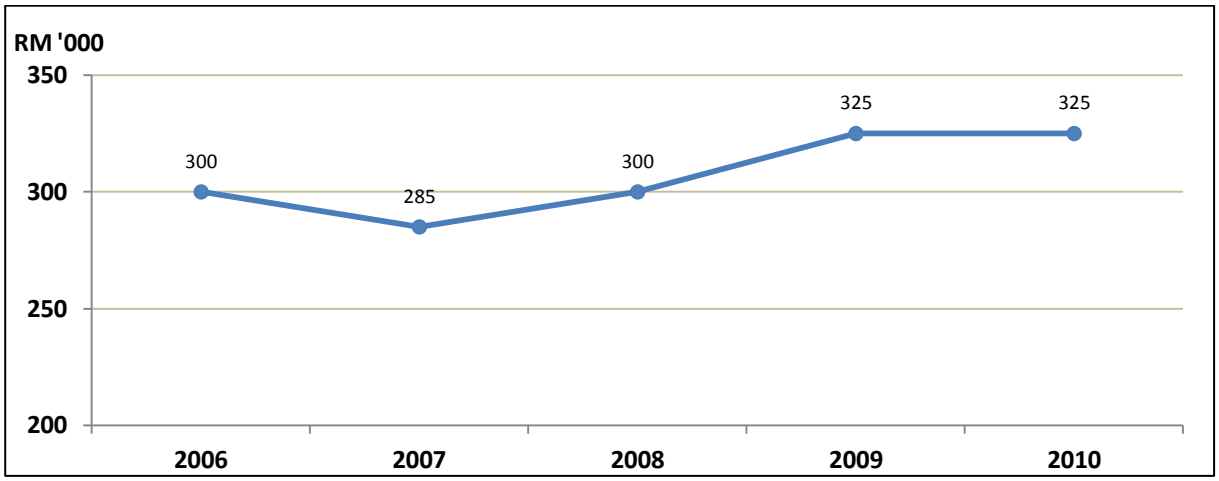
Sources: Perlis Strategic Development Plan Report, 2012, and Perlis Structure Plan, 2030

Commercial and Industrial Properties

During 2000 to 2008, commercial floor space in Perlis increased at a rate of 2.4% a year, from 782,072m^2 to 937,570m^2. Shop lots were the largest contributor, accounting for 3,066 units (762,710m^2), while shopping complexes and offices contributed 8.1% (88,817m^2) and 7.8% (86,043m^2) respectively.

For commercial properties in Kangar, the average price of a double storey shop is about RM300,000 (**Figure 4.3**). However, similar shops in the upcoming commercial hub in Arau are priced higher than RM400,000. Part of the reason is the free market land status and its proximity to several higher learning institutes such as Kolej Matrikulasi, UiTM Perlis, Politeknik and UniMAP.

Figure 4.3: Average Price Movements of Double Storey Shops in Kangar, 2006-2010



Source: Property Market Report 2010, Ministry of Finance

For industrial properties, the main industrial estates in Perlis are currently located in Jejawi (30.7 ha), Chuping (26.7 ha), Kuala Perlis (32.8 ha) and Padang Besar (13.3 ha) (**Table 4.3**).

Besides the existing industrial estates there are plans to develop several new industrial estates such as Phase 2 of Kuala Perlis Industrial Area (29 ha) and a Technology Park at Pauh Putra (200 ha). With the development of the Technology Park in Pauh Putra, the State will step into the arena of high-technology and high-value manufacturing industries. Multinational companies will be incentivised to start operations in Perlis.

Table 4.3: Industrial Areas in Perlis

Industrial Area	Developed Areas (ac)	Unsold Areas (ac)	Lot No. Available for Sale	Lease Period (Years)	Industry
Padang Besar	87.62	-	-	60	General Industry
Kuala Perlis	56.08	1.1	Lot 24	60	General Industry
Chuping	55.24	8.0	Lot 13, 14, 15,16 ,17, 18,19 & 20	60	General Industry
Jejawi	27.76	-	-	60	Light/Medium Industry
Total	226.7	9.1	9 lots	-	-

Source: State Economic Development Corporation, Perlis

To support the increase in population of Perlis between 2010 and 2030, more new jobs in the industrial sector will need to be created. Based on the Perlis State Structure Plan, this will require an additional 329 ha of land for industrial development between 2010 and 2030. Perlis will also move up the value chain into the Higher Value Service sector in line with the

ETP. It is estimated that at least 454,972m^2 of new commercial floor space will be required by 2030, mostly in the key urban centres as outlined in the Perlis State Structure Plan and Kangar Local Plan.

Table 4.4: Estimated Commercial Floor Space and Industrial Land, 2010-2030

Year	2010	2015	2020	2025	2030
Total Commercial Floor Space (m^2)	1,024,208	1,112,958	1,243,060	1,362,830	1,479,180
Total Industrial Land (ha)	216	266	361	459	545

Source: Report of Survey, Perlis Structure Plan 2030

The Perlis State Structure Plan 2030 and the Kangar Local Plan form the basis for guiding the formulation of the spatial development strategy for the Strategic Development Plan for Perlis, given their statutory status (i.e. legal land use plans) and functions (i.e. development control) under the Town and Country Planning Act and its rules. Nevertheless by building on the existing structure and local plans the PSDP will endeavour to further strengthen, fine-tune and rationalise the current spatial development strategies, taking into account the changing trends, issues and future challenges. These include the New Economic Model, Economic Transformation Programme, 1Malaysia concept, high-income economy, eco-towns, smart urban growth, etc. In addition, it will add more (and higher) value to the local and structure plans by being more action-orientated and project-focused in the preparation of project identification briefs and conceptual development layouts for proposed new township development, expansion and improvement/ revitalisation.

4.2 OVERALL SPATIAL DEVELOPMENT STRATEGIES

In drawing up spatial development strategies, the global spatial development trends, best planning practices worldwide, and State's commitments and desired contribution to nation building have been taken into consideration. While each key development area is different in terms of its scale, landscape setting, heritage, biodiversity values, economic base, employment mix, etc. there is a set of common planning principles which apply to all of Perlis' key development areas. In addition to spurring economic activity, the end goal is to foster a 'clean, green' Perlis.

4.2.1 Spatial Planning Guiding Principles

The spatial development strategies are guided by the following spatial planning principles:-

1. **Deliver sustainable land use planning and development:** The core principle underpinning spatial planning is sustainable development. It is a fundamental determinant of the quality of places and people's life, e.g. it creates liveable towns,

protects productive rural areas/ natural resources, and supports a vibrant and prosperous economy.

2. **Concentrate development in existing major urban nodes with greatest growth potential along growth corridors:** It involves focusing growth selectively in a few larger strategic urban nodes, taking the view that concentrated investment is more likely to get a cumulative effect than investment dispersed thinly over many medium-sized and smaller settlements. In view of the small population, limited land supply and budgetary constraints faced in Perlis, it is important to maximise the use of existing and committed infrastructure; to build up a critical population mass and market demand; and to provide economies of scale for more and better public utilities and social amenities.
3. **Create compact, energy efficient urban forms with clear local identity:** This will help to restrict urban sprawl, preventing encroachment into the MADA granary area and containing damage to environmentally sensitive areas such as Tasik Timah Tasoh and the Perlis State Park. The aim should therefore be:
    - to facilitate provision of a viable public transport system;
    - to reducing greenhouse gas emission;
    - to promote higher energy efficiency and liveability; and
    - to encourage urban regeneration to improve economic efficiency, vibrancy and image of the urban areas.

4.2.2 Spatial Framework

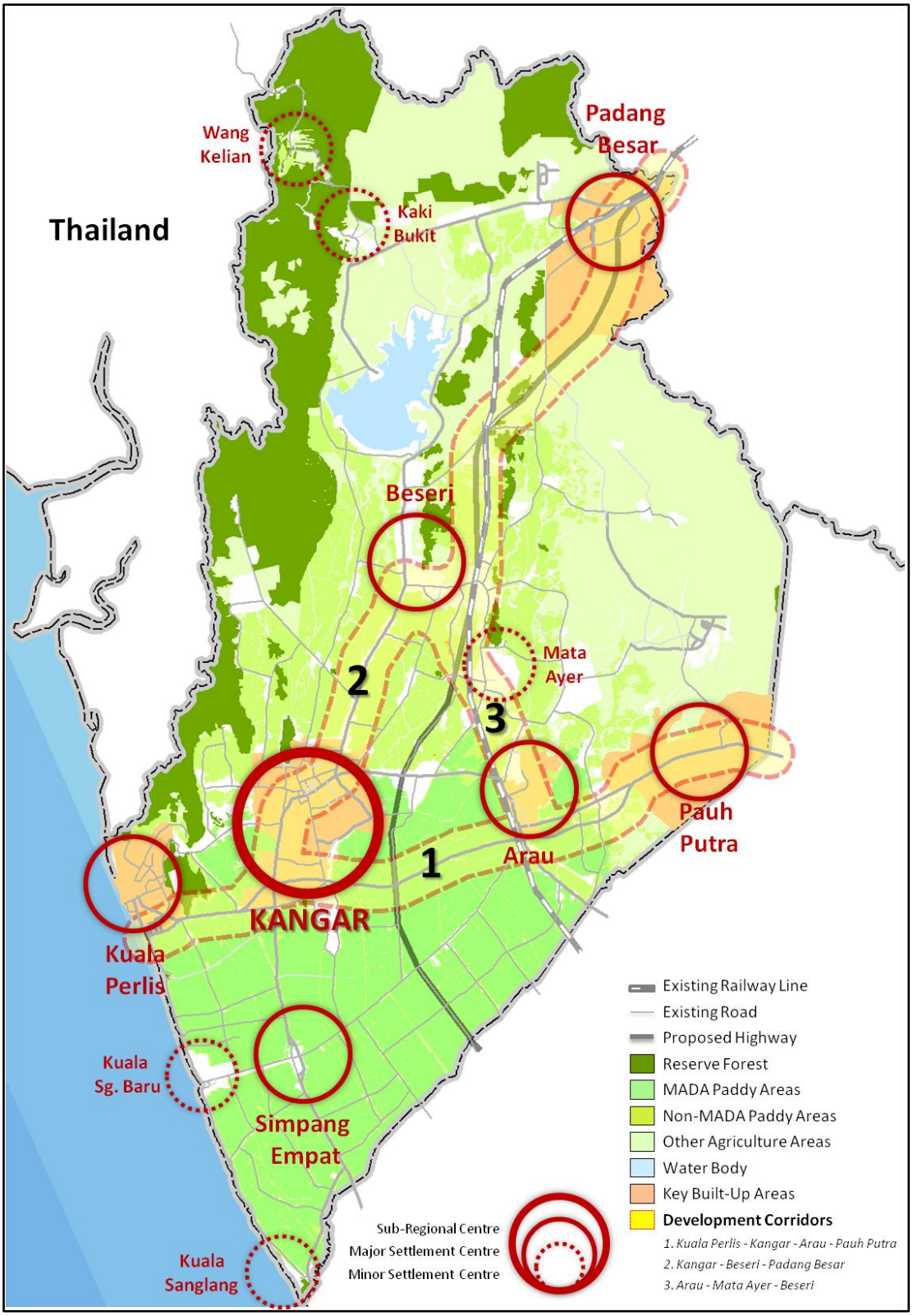
With respect to future urban and job centre development, the major constraints faced include the lack of readily available development land arising from the small size of the State. This is aggravated by a high proportion of environmentally-sensitive and granary areas; a low population, leading to a smaller consumer base and labour force; limited financial resources; poor accessibility and remoteness resulting in higher cost of production and doing business; weak economic structure due to over-dependency on low value agriculture production; low private investment and intense competition due to economic globalisation and trade liberalisation.

The opportunities available for urban growth and change include leveraging on regional economic collaboration and partnership, especially trade, tourism and industry with southern Thailand; affordable land prices; good infrastructure and utilities; large number of institutes of higher learning to produce the much-needed skilled professionals and knowledge workers; and the availability of preferential financial incentives and enhanced development assistance, particularly for infrastructure provision/ upgrading by virtue of being a low-income State.

To ensure adequate supply of urban land with development potential within Perlis' urban growth corridors, defined urban growth boundaries are an important priority for the State government. A ready supply of accessible, affordable and well serviced land in each of the

designated key development areas forms a significant part of the State's overall competitive strength as a place of choice to live, work and do business.

Figure 4.4: Future Spatial Framework of Perlis



Source: Perlis Strategic Development Plan Report, 2012

4.3 MAIN DEVELOPMENT CORRIDORS

From a spatial perspective, not all locations have the same inherent characteristics, (e.g. location advantage and accessibility), for accelerated urban development. Empirical evidence indicates that the urban sector in larger urban centres located in growth corridors along major highways have more potential ingredients for economic growth. Therefore, it is critical for the government to give appropriate support, such as infrastructure provision, complimentary policies and enhanced incentives in the designated main development corridors to facilitate private initiatives.

For these reasons, three (3) main development corridors have been identified in Perlis. As shown in **Figure 4.4**, they are:-

- Kangar - Beseri - Padang Besar (via Chuping Valley)
- Kuala Perlis - Kangar - Arau - Pauh Putra
- Arau - Mata Ayer - Beseri

The main highway essentially serves as the backbone and lifeline of the development corridor. Not only does it link the different urban centres located along the highway, but also provides efficient accessibility to other development corridors in other states and the outside world. Within each main development corridor, there are urban centres, each sharing a common or complimentary focus (economic cluster concept). Much greater emphasis will be given to nurturing and fostering home-grown business activities based on the development of local resources and comparative advantage.

On this basis, the following major development corridors, centres and their main focus areas have been established, as shown in **Table 4.5**.

Table 4.5: Major Development Corridors and Their Focus Areas

Main Development Corridors	Urban Centres	Focus
Kuala Perlis - Kangar – Arau - Pauh Putra	Arau - Pauh Putra	• Royal Town • Administration • Education Hub • High-Tech Manufacturing • Retail • Transit Terminal
	Kuala Perlis - Kangar	• Urban Conurbation • Administration • Commerce and Retail • E-Commerce • Maritime Industries • Public Transport Terminal • Maritime Terminal

Main Development Corridors	Urban Centres	Focus
Kangar - Beseri - Padang Besar	Kangar	• Administration • ICT & Multimedia Services • Urban Tourism
	Beseri	• Residential Areas • Tourism (Melati Lake)
	Padang Besar	• Cross Border Trade • Free Zones • Special Economic Zone • Agri- Biotech Industries • Halal & High Value Manufacturing • Cross Border Tourism
Arau – Mata Air – Beseri	Arau	• Retail • Administration
	Mata Air - Beseri	• Residential Areas • Mineral & Resource Based Industry

Source: Perlis Strategic Development Plan Report, 2012

For other centres outside of the Main Development Corridors, the development focus could be categorised into agriculture and tourism-related activities (**Table 4.6**).

Table 4.6: Areas Outside Main Development Corridor and Their Focus Areas

Sectors	Centres	Focus
Agriculture	Simpang Empat	• Agro – Service Town • Swiftlet Nest Processing Centre
	Kuala Sanglang	• Fishery
Tourism	Sg Batu Pahat	• Agro-Tourism • Herbal and Fruit Cultivation • Ecotourism • Agro Service Town
	Timah Tasoh – Kaki Bukit	• Ecotourism (Gua Kelam) • Water Supply
	Wang Kelian	• Cross Border Trade • State Park

Source: Perlis Strategic Development Plan Report, 2012

4.4 STRATEGIC URBAN CENTRES AND STRATEGIC PROJECT INITIATIVES

The Spatial Development Framework also provides guidance for the way in which each Key Development Area (i.e. project site and its related surrounding economic hinterland) structure planning process is carried out to attain its expressed functional focus. Towards this end, emphasis will be placed on land use zoning together with improvement of the transportation network and infrastructure, to create the best environment to facilitate private initiatives.

Among others, each Key Development Area shall address issues such as:-

- Broad form of development (residential, industrial, commercial, mixed-use etc.) that is appropriate for each area;
- Location, role and function of town centres;
- Local employment areas/ job centres for each area;
- Strategic transport network, including principal public transport system required to support urban development, so that those who live in the urban nodes are able to access jobs and services;
- Strategic infrastructure facilities and services needed to enable economic growth and urban development;
- Integrated local open space network to provide for the future amenity and recreation needs of the urban node as well as to protect the natural features/ character, biodiversity and clean waterways in an urban environment;
- Edges between urban development and granary areas, areas of high biodiversity, landscape or drainage significance need to be defined; and
- Conceptual design and layout of the key development area, including the major components of the project initiative.

These catalytic projects will need to be promoted vigorously to the private sector for priority implementation to boost economic growth. It shall be noted that certain key initiatives, e.g. integrated commercial-hotel complex in the KDA, are economically linked to its adjacent hinterland, e.g. agro-tourism corridor.

Table 4.7: Key Development Areas and Key Initiatives

Location	Cluster	Key Initiatives
Kangar	Tourism/ Commerce, Services & Logistics	• Kangar Maya Smart City, incorporating mixed-use & commercial such as ICT Hub, Innovation/Incubator/ Cyber Centre, Integrated commercial complex/lifestyle mall; institution & DUN Perlis; residential use. • Perlis River Promenade, including river cruise and terminals; high-end housing; mixed development; commercial; institution; and parks.

Location	Cluster	Key Initiatives
		• Inner and Outer Ring Road. • Kangar Maya Public Transport Terminal.
Padang Besar	Tourism/ Commerce, Services & Logistics	• Upgrading of Padang Besar Border Town involving expansion of ICD and development of Wholesale & Retail Zone including Border Wholesale Centre; shopping street & mall; ICT facilities; Integrated Transport Terminal & railway station • Designation of Special Economic Zone & Free Zone
	Manufacturing	• Halal Food Park focusing on halal high value manufacturing including health beverages; functional foods; milk and juice processing; snack foods & sauces processing; meat processing ; and pharmaceutical & neutraceutical • Agri Bio-Tech Park specialising on bio-technology processing factories for downstream rubber processing; mineral and resource processing; sugar processing facility; and herbal cluster processing
	Education	• Branch campus of reputable international university.
Kuala Perlis	Tourism/ Commerce, Services & Logistics	• Maritime Terminal including Integrated Fish Port; jetty for passenger and cargo; hotel & shops; exclusive housing; floating restaurant; and angling centre & recreational fishing • Small-scale tourism enterprises & incubators for handicrafts • Kuala Perlis tourism complex • Kuala Perlis Transport Terminal • Key initiatives by others will include Marine Enforcement Agency Centre and development of a Maritime City at the foreshore area
Pauh Putra	Education	• Development of Pauh Putra Edu-City encompassing private learning institute, mixed-use, and commercial, residential, and institutional land utilization
	Manufacturing	• Pauh Putra Technology Park focusing on High value manufacturing industries; and SME Park with emphasis on plastic conversion machinery and process manufacturing
Arau	Tourism/ Commerce, Services & Logistics	• KTM Arau transit station
Wang Kelian	Tourism/ Commerce, Services & Logistics	• Upgrading tourism facilities at Perlis State Park

Location	Cluster	Key Initiatives
Beseri (Batu Pahat)	Tourism/ Commerce, Services & Logistics	• Wellness Resort & Recreation Centre overlooking the Timah Tasoh Lake • Agrotourism corridor as a scenic route
Simpang Empat (MADA)	Agriculture	• EBN Integrated Processing Centre with Swiftlet House Programme
Outside Urban Centres (High value-added agriculture)	MADA Agriculture Zone	• Scaling up productivity of paddy farming • Sala mangoes in MADA area • Off-season crops • Kampung-chicken breeder farming
	Mini-granary Areas (outside MADA)	• Fragrant rice and processing facility • Production of certified paddy seeds
	Chuping Agri-Food Biotechnology Farming Zone Batu Pahat Agriculture Zone	• Focus on upstream mushroom farming; Spirulina farming; dairy cluster farming; Harumanis mangoes controlled environment cultivation; kampung chicken breeder farm; herbal farming; fruit cluster with emphasis on mango, jackfruit, watermelon outgrower programme
	Kuala Sanglang Marine Fish Zone	• Marine Finfish Seed Production

Source: Perlis Strategic Development Plan Report, 2012

With respect to the strategic transportation proposals, it is imperative to extend the North-South Expressway from Alor Setar to Padang Besar via Kangar. Not only will it have significant impact on urban expansion particularly in Kangar Town and Chuping new township development, but more importantly, bolster the economic growth of Perlis. Another important new transportation route is the building/ upgrading of the Kuala Perlis-Satun Highway and the Wang Kelian road which will enhance cross-border trade and tourism. However, based on future traffic volume demand and availability of the existing high quality highway, it is more cost-effective to convert the proposed PERSEL (Spur railway line identified in the Structure Plan) to a dedicated bus rapid transit with integrated terminals linking Pauh Putra – Kangar - Kuala Perlis.

Table 4.8: Enabling Transportation Initiatives

Category	Location	Existing Projects	New Transportation Initiatives
Urban Transportation	Kangar Kuala Perlis	Kuala Perlis Public Transport Terminal	• New Inner Ring Road • New Outer Ring Road • New Integrated Kangar Sentral
Roads	Kuala Perlis – Satun. Wang Kelian	Existing winding road through Perlis State Park to Wang Prachan in Thailand	• Building a new coastal highway from Kuala Perlis to Satun • Road expansion and upgrading of the Wang Kelian Road
	Alor Setar - Kangar - Padang Besar	Existing Federal Route 7 which is congested and unsafe for further expansion	• New expressway linking Alor Setar - Kangar - Chuping Valley –Padang Besar
Bus	Arau - Kangar - Kuala Perlis	-	• Converting the PERSEL proposal to bus-way system connecting the following 5 bus stations: • KTM Arau (transit station) • Pauh Putra Public Transport Terminal • Kangar Maya Public Transport terminal • Kangar Town Bus Station • Kuala Perlis Public Transport Terminal
Rail	Alor Setar – Arau - Padang Besar (double track)	On-going electrified, double tracking railway	• New KTM Arau station (to be developed as a transit station linked to the busway system)
	Alor Setar - Kangar - Padang Besar (high speed)	-	• Feasibility study for new high-speed rail as integral part of long term Pan-Peninsular Malaysia high speed rail system
	Kangar	-	• Transit Station For High Speed Train at Kangar (Kangar Sentral)
Water	Kuala Perlis - Kangar	-	• River cruise, boat parks and jetties.

Source: Perlis Strategic Development Plan Report, 2012

In terms of public utilities, it is essential to increase the water supply system by expanding the Tasik Timah Tasoh reservoir and the water treatment plant capacities. To mitigate major downstream flooding in the State, the East Flood Diversion Channel should be constructed to complement the committed West Flood Diversion channel, with the aim of diverting excess flow from the Tasik Timah Tasoh dam. For natural gas, it is recommended that the current gas pipeline be extended to new urban nodes and industrial parks to support development.

Table 4.9: Enabling Infrastructure & Utilities Initiatives

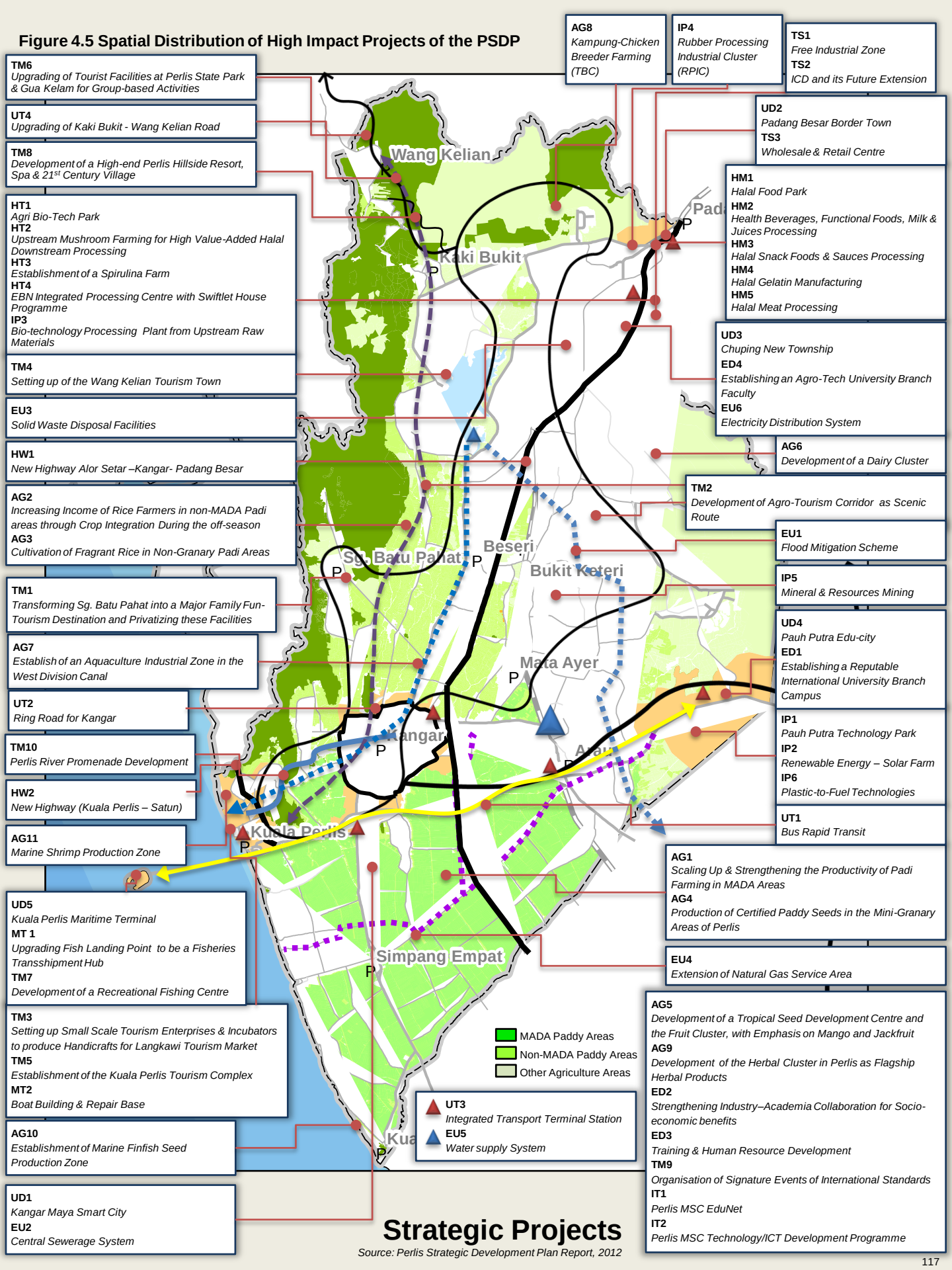
Category	Location	Existing Projects	New Infrastructure Initiative
Water	Perlis State	Timah Tasoh lake reservoir & treatment plant	• Water supply system
Drainage	West and East of Kangar	Western Flood Diversion Channel	• East Flood Diversion Channel for flood mitigation
Telecom-munications & Broadband	Kangar, Padang Besar, Chuping, Pauh Putra , Kuala Perlis, Arau and Beseri	Broadband coverage in 18 hot zones located throughout Perlis' towns	• Perlis Net • Perlis Technology/ ICT Development Programme
Solid Waste Disposal	Perlis State	Existing dumpsite at Padang Siding	• Sanitary landfill in Rimba Mas
Sewerage	New urban nodes & industrial parks	Central sewage system in Kangar	• Central sewerage system for Kangar
Gas	New urban nodes & industrial parks	1 city gate at Kg. Padang Petani	• Extension of gas supply service area especially to Chuping New Township and Agri Biotech Park

Source: Perlis Strategic Development Plan Report, 2012

A future micro-land use zoning plan for the KDA has been prepared to guide future development. Within this broad physical framework, conceptual design and layout plans are drawn up for the various components of the project, including supporting transportation network and infrastructure facilities. It will also illustrate any likely potential spin-off development from launching the project initiative.

Project themes and underlying rationales are explained and accompanied by a description of the projects and their principal components. The components of each project are described in detail with respect to market positioning and target groups. The spatial distribution of these projects is shown in **Figure 4.5.**

Figure 4.5 Spatial Distribution of High Impact Projects of the PSDP



TM6
Upgrading of Tourist Facilities at Perlis State Park & Gua Kelam for Group-based Activities

UT4
Upgrading of Kaki Bukit - Wang Kelian Road

TM8
Development of a High-end Perlis Hillside Resort, Spa & 21st Century Village

HT1
Agri Bio-Tech Park
HT2
Upstream Mushroom Farming for High Value-Added Halal Downstream Processing
HT3
Establishment of a Spirulina Farm
HT4
EBN Integrated Processing Centre with Swiftlet House Programme
IP3
Bio-technology Processing Plant from Upstream Raw Materials

TM4
Setting up of the Wang Kelian Tourism Town

EU3
Solid Waste Disposal Facilities

HW1
New Highway Alor Setar –Kangar- Padang Besar

AG2
Increasing Income of Rice Farmers in non-MADA Padi areas through Crop Integration During the off-season
AG3
Cultivation of Fragrant Rice in Non-Granary Padi Areas

TM1
Transforming Sg. Batu Pahat into a Major Family Fun-Tourism Destination and Privatizing these Facilities

AG7
Establish of an Aquaculture Industrial Zone in the West Division Canal

UT2
Ring Road for Kangar

TM10
Perlis River Promenade Development

HW2
New Highway (Kuala Perlis – Satun)

AG11
Marine Shrimp Production Zone

UD5
Kuala Perlis Maritime Terminal
MT 1
Upgrading Fish Landing Point to be a Fisheries Transshipment Hub
TM7
Development of a Recreational Fishing Centre

TM3
Setting up Small Scale Tourism Enterprises & Incubators to produce Handicrafts for Langkawi Tourism Market
TM5
Establishment of the Kuala Perlis Tourism Complex
MT2
Boat Building & Repair Base

AG10
Establishment of Marine Finfish Seed Production Zone

UD1
Kangar Maya Smart City
EU2
Central Sewerage System

AG8
Kampung-Chicken Breeder Farming (TBC)

IP4
Rubber Processing Industrial Cluster (RPIC)

TS1
Free Industrial Zone
TS2
ICD and its Future Extension

UD2
Padang Besar Border Town
TS3
Wholesale & Retail Centre

HM1
Halal Food Park
HM2
Health Beverages, Functional Foods, Milk & Juices Processing
HM3
Halal Snack Foods & Sauces Processing
HM4
Halal Gelatin Manufacturing
HM5
Halal Meat Processing

UD3
Chuping New Township
ED4
Establishing an Agro-Tech University Branch Faculty
EU6
Electricity Distribution System

AG6
Development of a Dairy Cluster

TM2
Development of Agro-Tourism Corridor as Scenic Route

EU1
Flood Mitigation Scheme

IP5
Mineral & Resources Mining

UD4
Pauh Putra Edu-city
ED1
Establishing a Reputable International University Branch Campus

IP1
Pauh Putra Technology Park
IP2
Renewable Energy – Solar Farm
IP6
Plastic-to-Fuel Technologies

UT1
Bus Rapid Transit

AG1
Scaling Up & Strengthening the Productivity of Padi Farming in MADA Areas
AG4
Production of Certified Paddy Seeds in the Mini-Granary Areas of Perlis

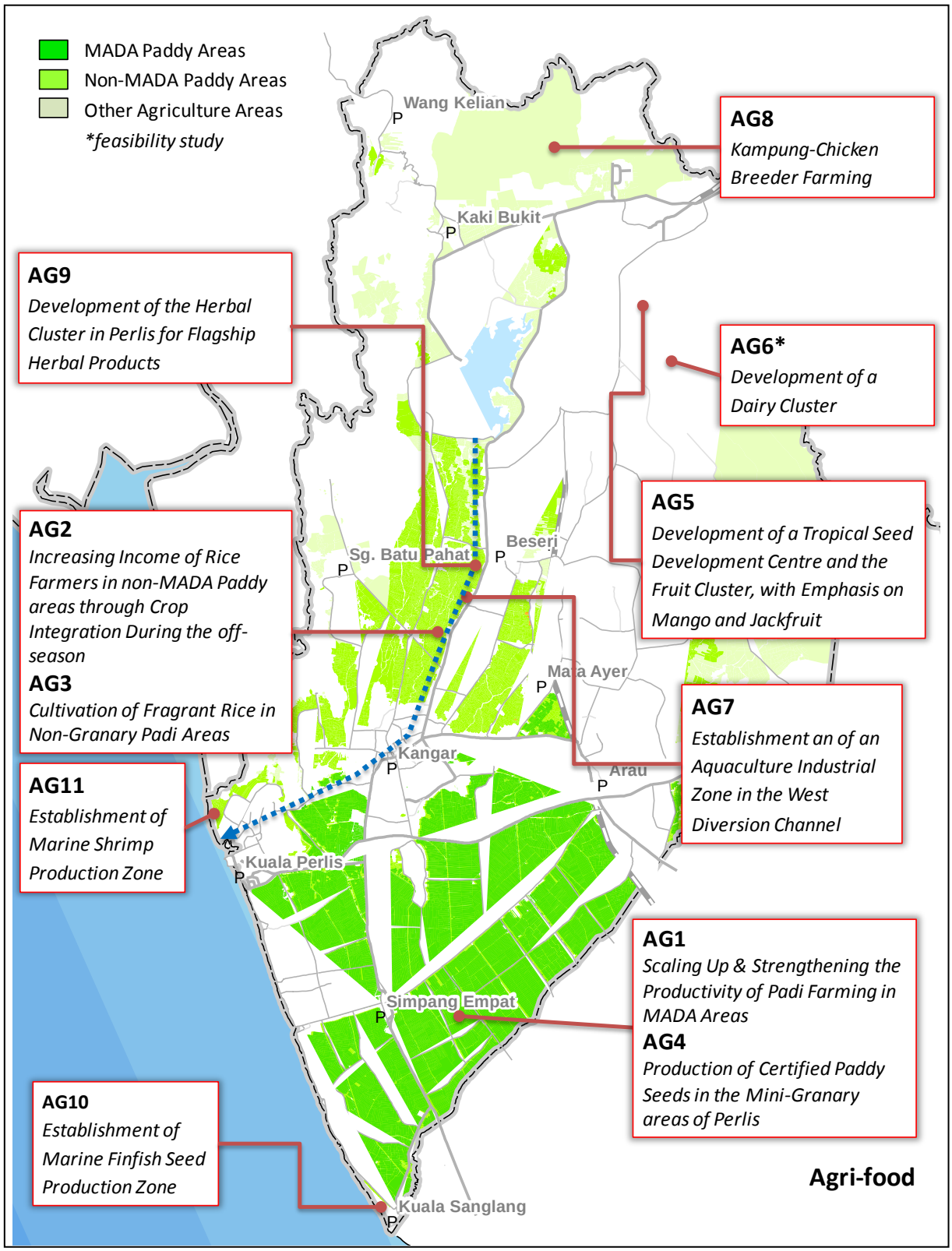
EU4
Extension of Natural Gas Service Area

AG5
Development of a Tropical Seed Development Centre and the Fruit Cluster, with Emphasis on Mango and Jackfruit
AG9
Development of the Herbal Cluster in Perlis as Flagship Herbal Products
ED2
Strengthening Industry–Academia Collaboration for Socio-economic benefits
ED3
Training & Human Resource Development
TM9
Organisation of Signature Events of International Standards
IT1
Perlis MSC EduNet
IT2
Perlis MSC Technology/ICT Development Programme

Strategic Projects

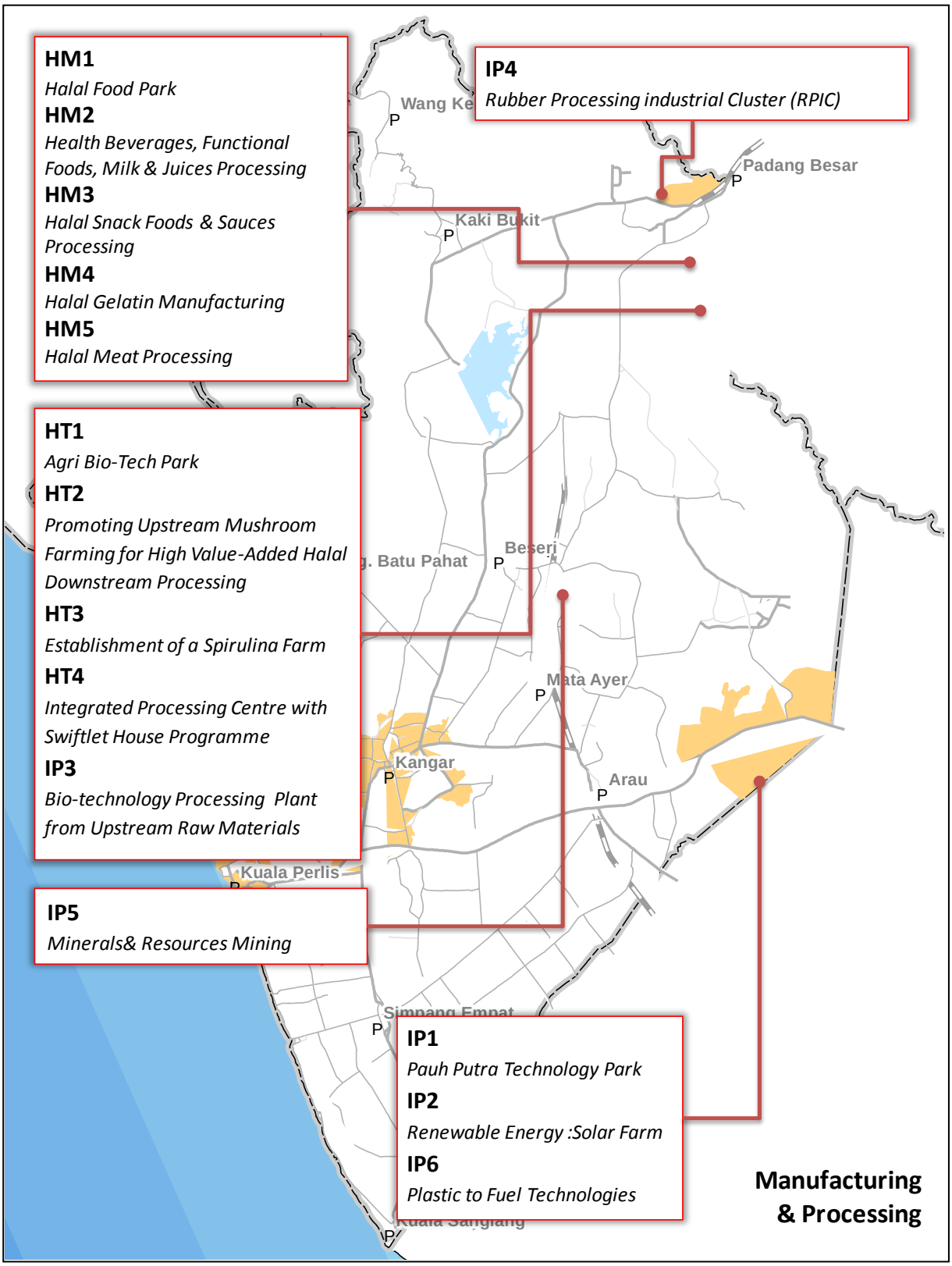
Source: Perlis Strategic Development Plan Report, 2012

Figure 4.6: Spatial Distribution of Agri-Food Projects



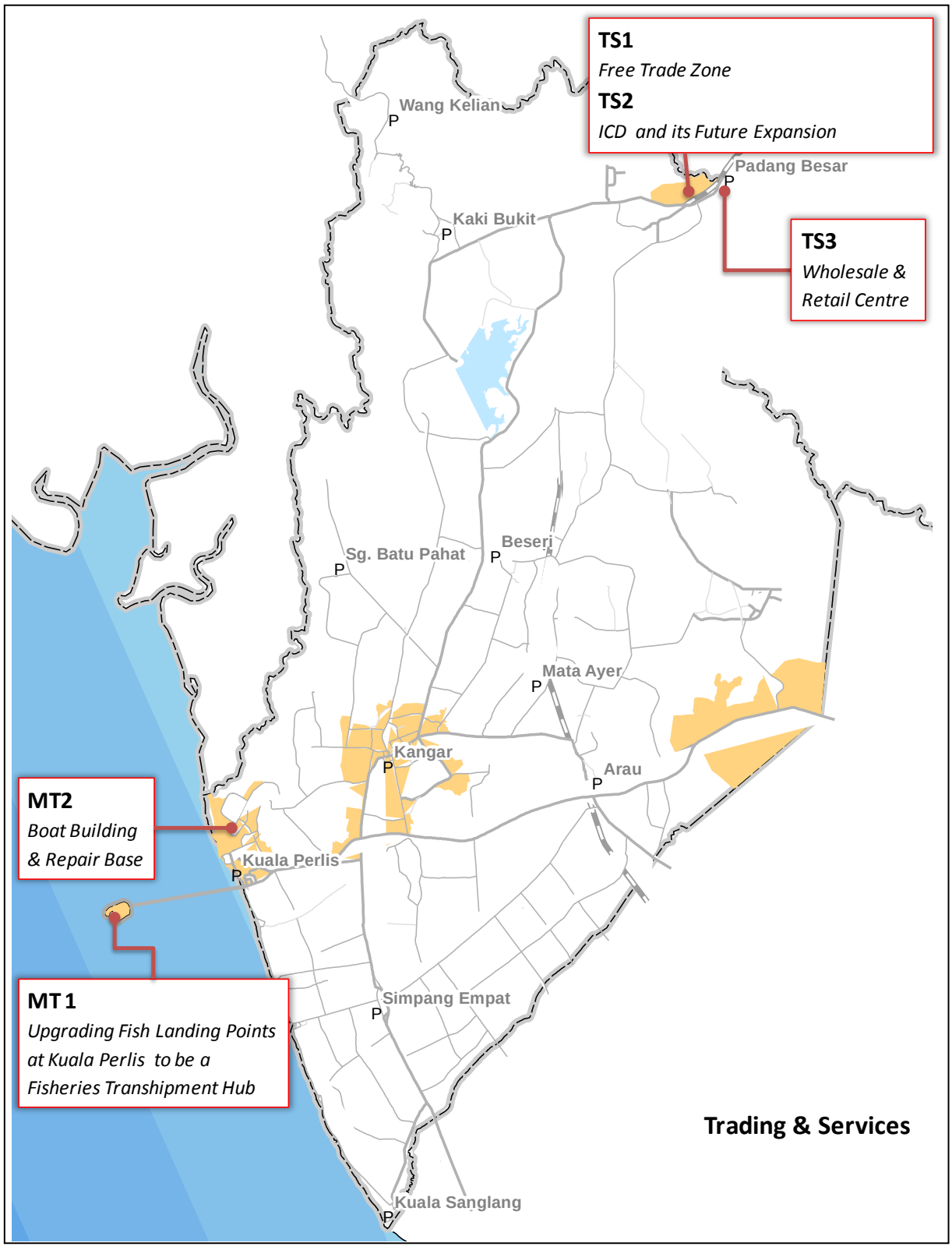
Source: Perlis Strategic Development Plan Report, 2012

Figure 4.7: Spatial Distribution of Manufacturing & Processing Projects



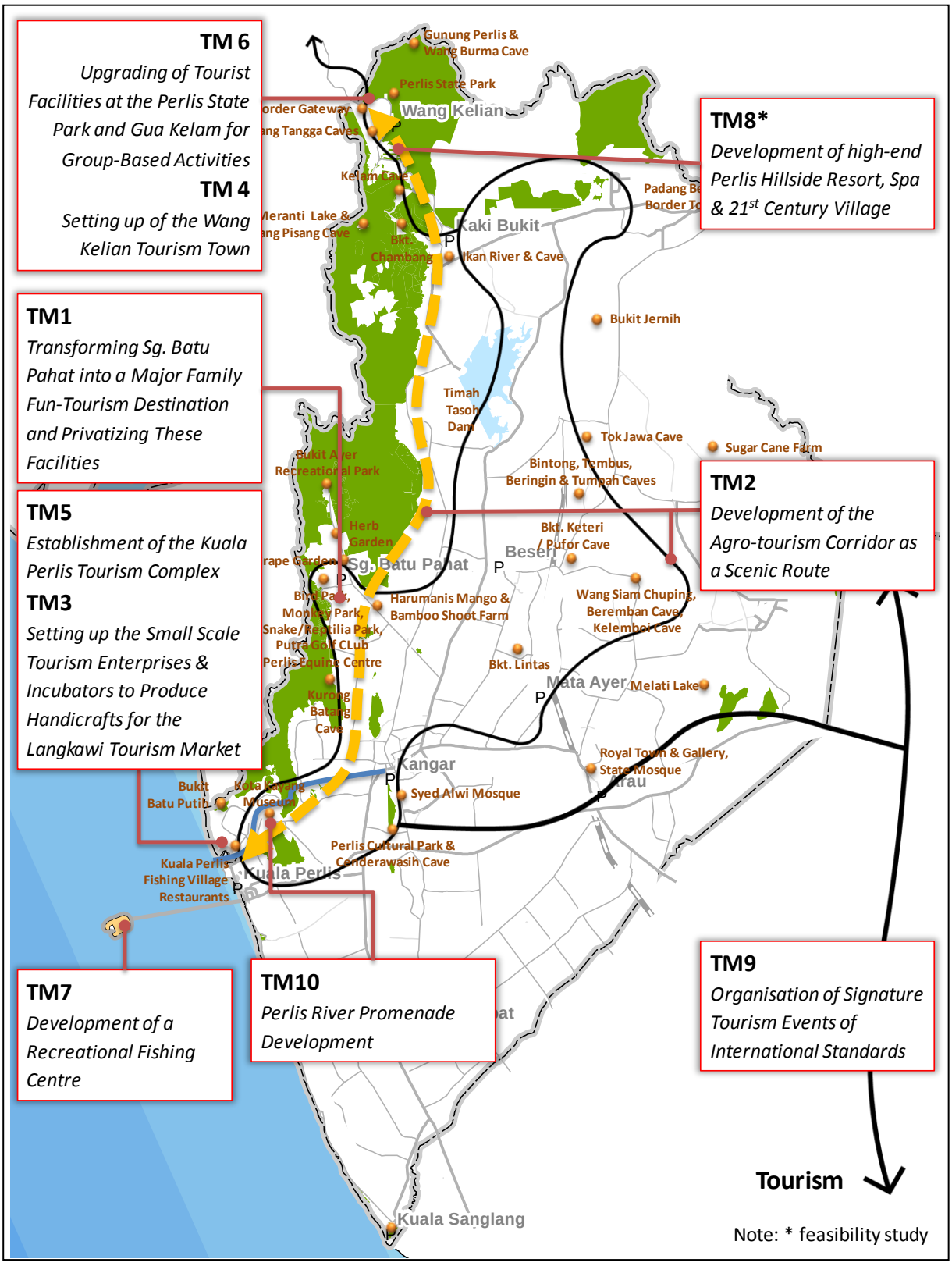
Source: Perlis Strategic Development Plan Report, 2012

Figure 4.8: Spatial Distribution of Trading & Services Projects



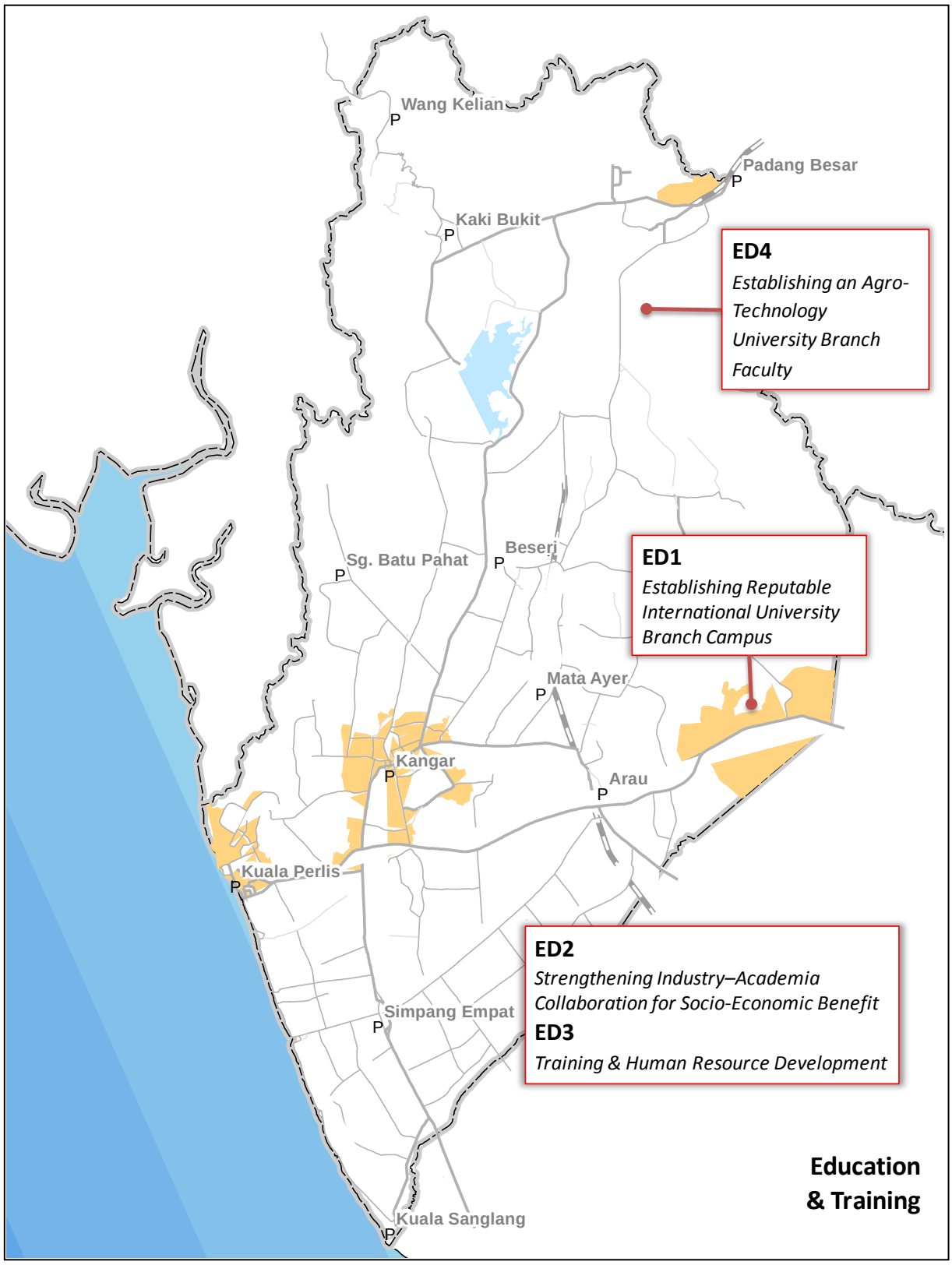
Source: Perlis Strategic Development Plan Report, 2012

Figure 4.9: Spatial Distribution of Tourism Projects



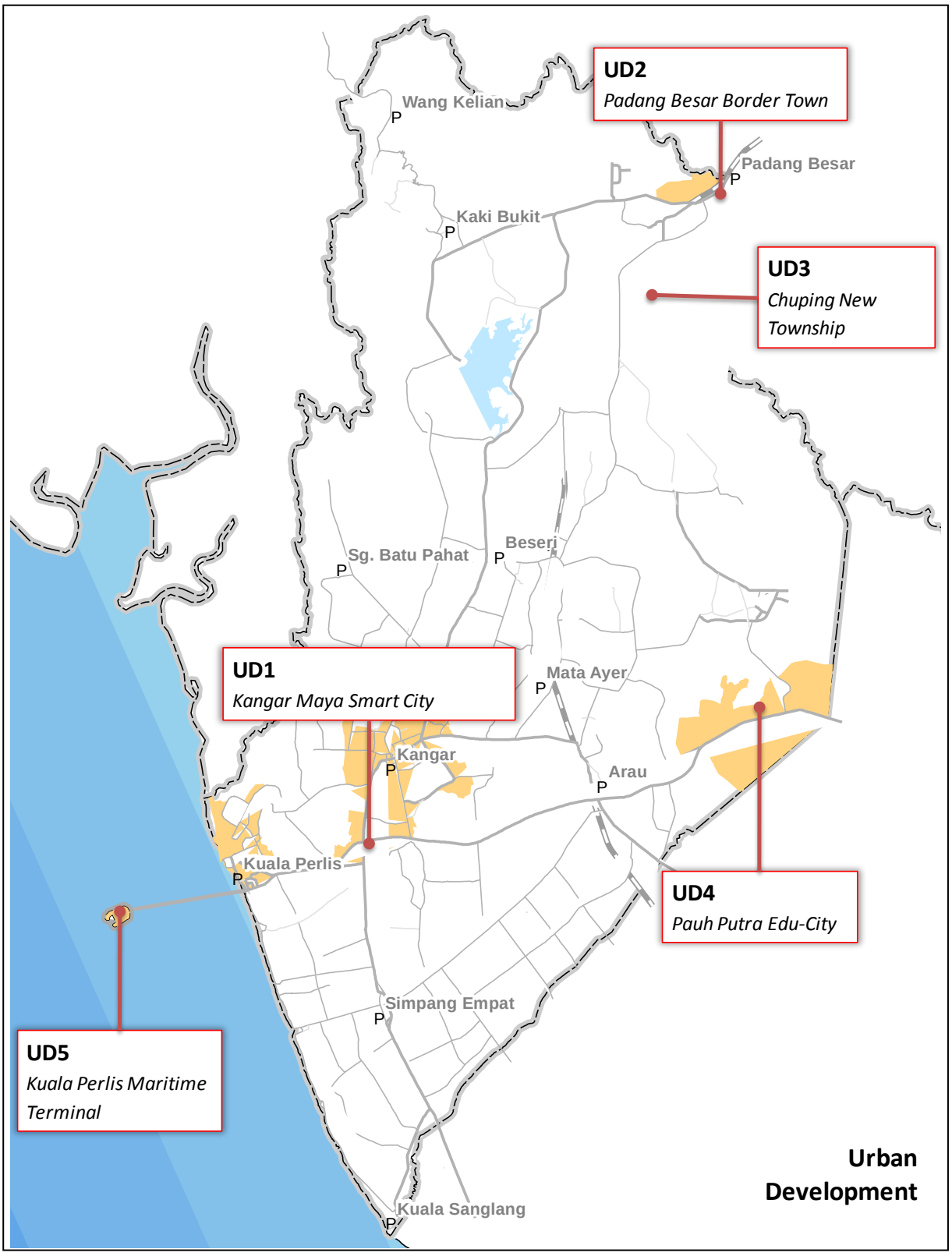
Source: Perlis Strategic Development Plan Report, 2012

Figure 4.10: Spatial Distribution of Education and Training Projects



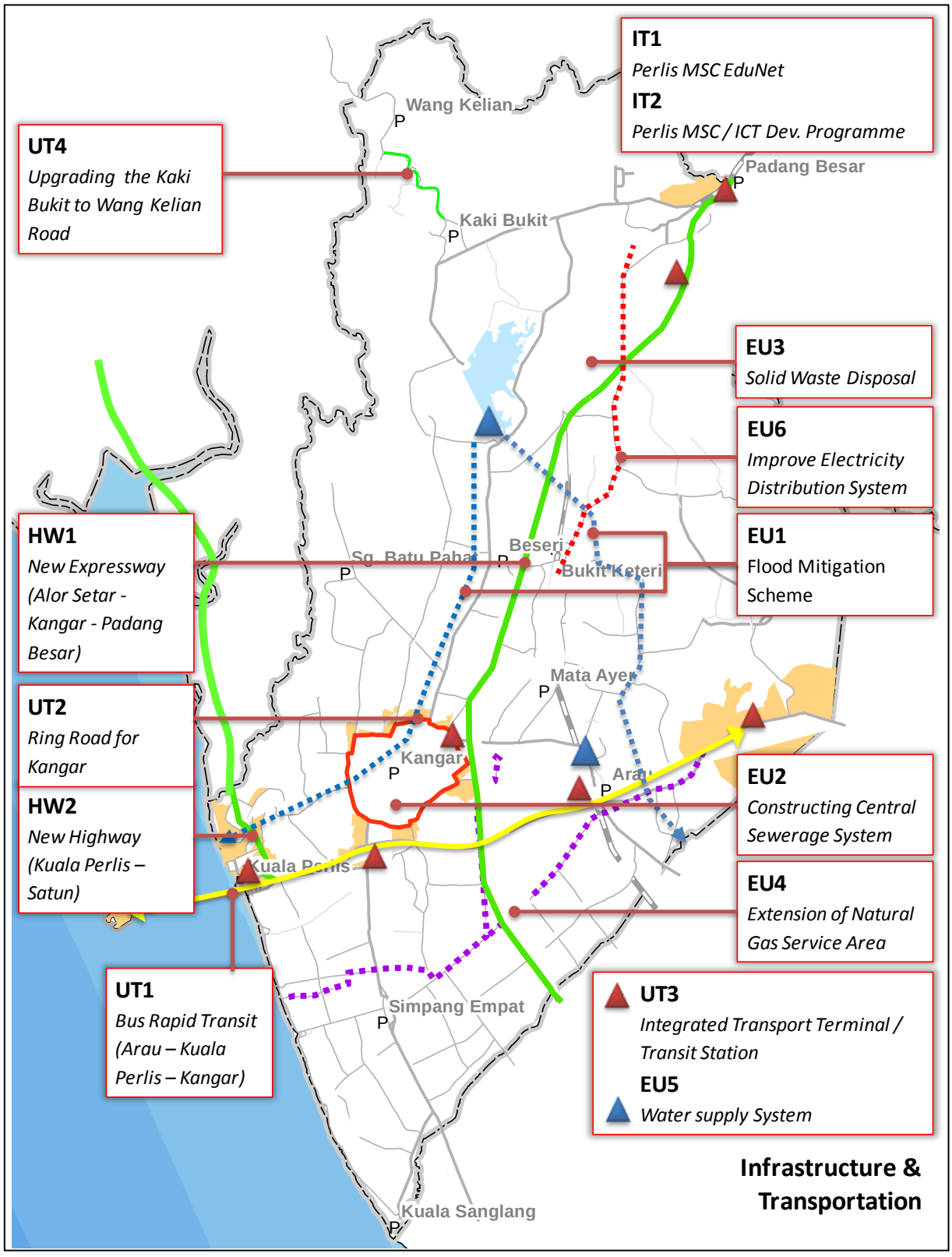
Source: Perlis Strategic Development Plan Report, 2012

Figure 4.11: Spatial Distribution of Urban Development Projects



Source: Perlis Strategic Development Plan Report, 2012

Figure 4.12: Spatial Distribution of Enabling Infrastructure and Transportation Projects



Source: Perlis Strategic Development Plan Report, 2012

4.5 STRATEGIC URBAN CENTRES

Perlis is a State with small population size and currently has a limited number of high-value economic activities (i.e. manufacturing and services), which are dispersed in many small settlements. The absence of a critical population mass in the existing urban centres makes it extremely difficult to attract, generate and support value-added economic activities and social facilities, thus resulting in slow urban growth and weak downstream industries. The lack of private sector investments are clearly reflected in the setting up of only 7 local investment companies and 4 operating foreign investment companies listed in Perlis as of 2010 (*Source: MIDA*).

As evident in most countries, the higher the level of urbanisation, the higher the level of development and quality of life the people enjoy – advanced countries are normally more than 80% urbanised.

The main spatial development thrust for Perlis is to concentrate on the scarce resources likely to be available by:

- Exploiting fully the growth potential of a few major strategic urban centres and their associated industrial areas along the primary growth corridors to gain the benefits from economies of scale, large pool of knowledge workers, infrastructure availability, and good accessibility to markets and raw materials supplies; and
- Focusing on key economic drivers using the industry clusters approach to be located in the identified urban centres based on their competitive advantages and their synergistic linkages to the surrounding agriculture and natural resource hinterlands.

As Perlis has a small domestic market coupled with the absence of an airport and seaport for import/export, it is crucial that the mainstream economic activities have efficient accessibility for its finished products in large urban markets as well as raw material supplies. To reduce transportation cost and delivery time, the corridors along the existing and committed highways and railways hold great potential for future development. In addition, the existing urban centres with excellent infrastructure, social facilities, and serviced industrial estates are all found along these transportation routes. As such, the appropriate growth strategy is of selective concentrations at locations which are able to provide the agglomeration economies so highly valued by entrepreneurs.

For PSDP Perlis, four (4) urban centres have been identified as the key focus for urban development. They are:

- Kangar
- Kuala Perlis
- Padang Besar
- Pauh Putra

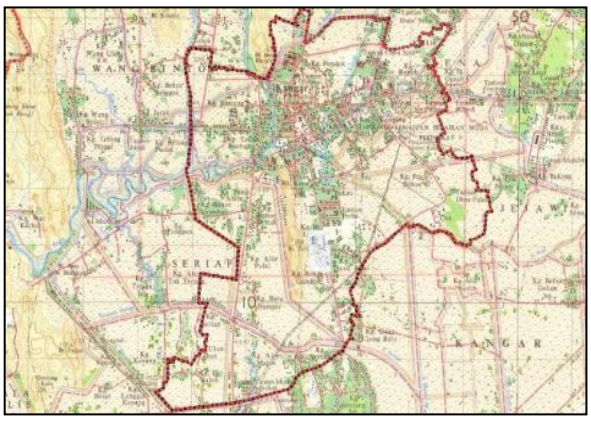
To enable the identification of strategic urban development projects, a physical assessment was made to determine the availability and suitability of land for various future uses. An analysis on the strengths, weaknesses, opportunities and threats (SWOT) was also undertaken to find out the viability for future growth.

4.5.1 Kangar

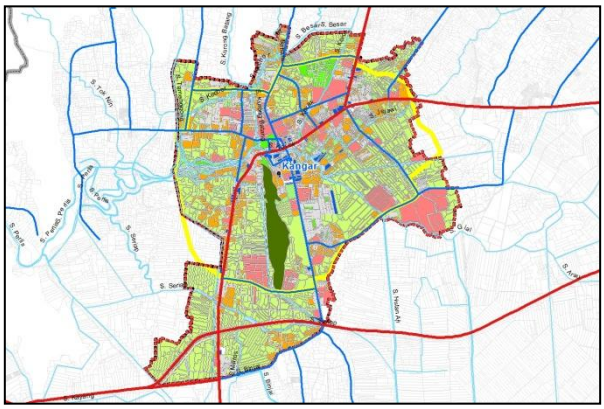
As the State capital, Kangar has played the role as the main commercial, social and administrative centre for Perlis. The National Physical Plan designated Kangar as the State Growth Conurbation. Based on its inherent resource strengths and growth prospects, the Perlis State Structure Plan 2030 identified Kangar as the sub-regional Centre in the State settlement hierarchy.

Figure 4.13: Spatial Conditions of Kangar

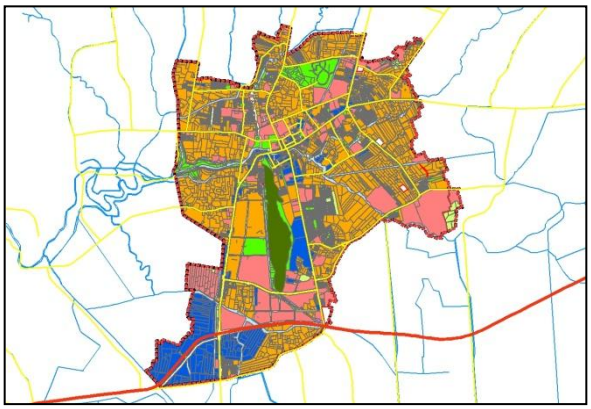
Satellite Image



Topography



Existing Land Use



Future Land Use Zoning

The total population of Kangar was about 59,390 people in 2000. In terms of ethnicity, 61% were Bumiputera and 34% were Chinese. Of this, around 12,500 people lived in the town centre while 41,900 resided in the built-up area.

Table 4.10: Existing and Future Land Use in Kangar

Land Use Category in Local Plan	Existing Land Use (ha)	Future Land Use (ha)	Land Use Change (ha)
Agriculture	1,196	136	-1,060
Residential	530	1,228	698
Commercial	53	267	214
Institutional	273	395	122
Others *(vacant land; river; forest, etc.)*	932	958	26
Total	2,984	2,984	-

Source: Perlis Local Plan, 2009-2020

The total land area of Kangar is 2,984 ha (29.84 km^2). The area is utilised mainly for agriculture, i.e. 1,196 ha or 40% of total land area, and followed by 530 ha or 18% of residential use. Land for commerce and services make up only 53 ha or 2%. In general, the topography is flat, with scattered limestone outcrops. The Perlis River traverses through the town centre, flowing east to west and draining out to the sea at Kuala Perlis. However, this vital river asset has not been harnessed to improve the liveability and economic value of the urban centre.

On the basis of the SWOT evaluation of Kangar urban centre, Kangar Maya Smart City (KMSC) and Perlis River Promenade developments (**Figure 4.14**) are recommended strongly as priority projects for quick win implementation. These two strategic tourism and ICT project initiatives are expected to catalyse the future economic growth in terms of job creation, income generation and urban development of Perlis State in keeping with the nation's NKEA. Not only will they contribute significant multiplying effects and spin-offs, the proposed cyber centre will also spearhead and leapfrog Perlis into a new high-value service economy. The detailed concept and urban design of Kangar Maya Smart City and Perlis River Promenade will be elaborated in **Figure 4.25** and **Figure 4.27** respectively.

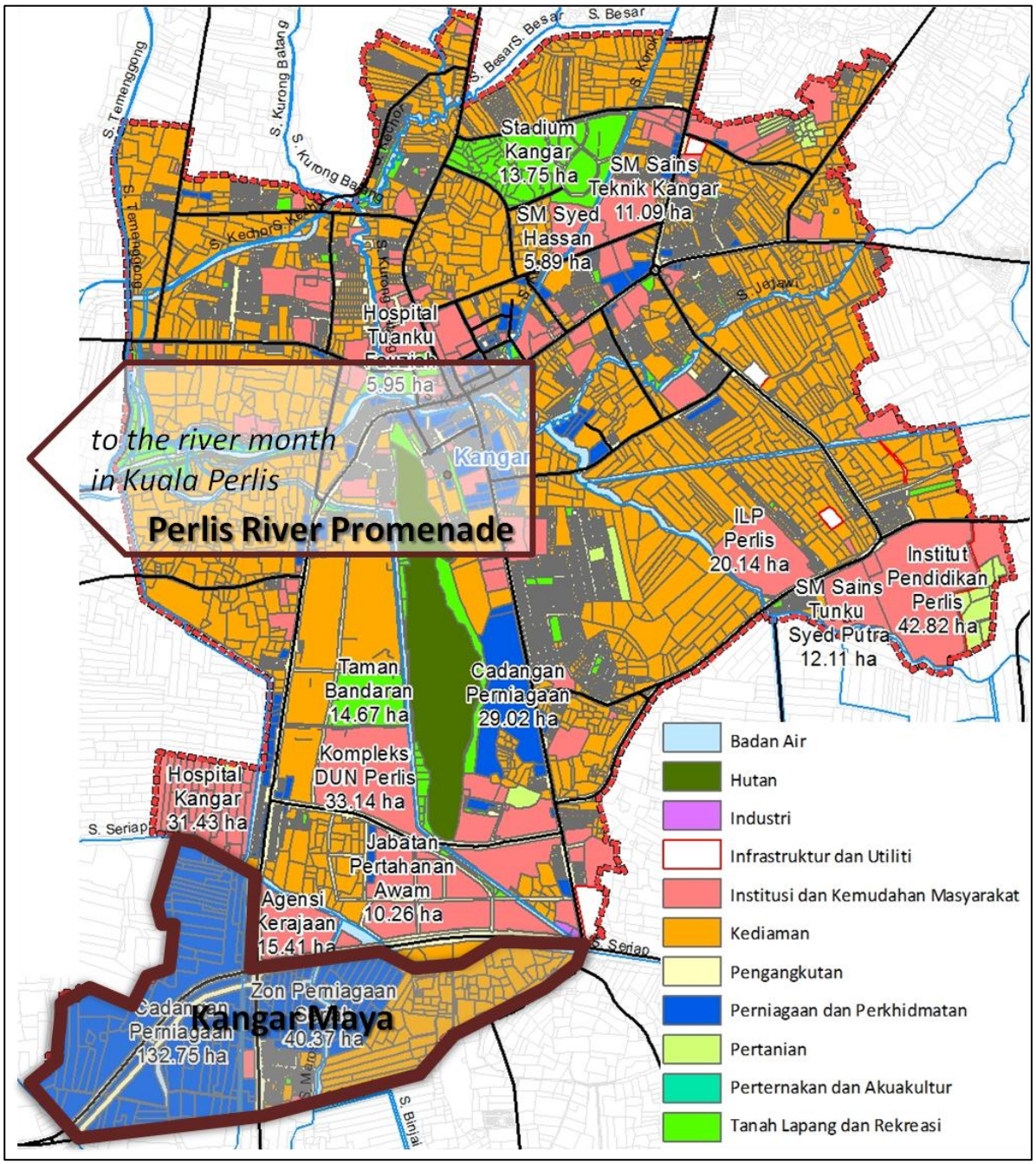
Figure 4.15 depicts the proposed concept plan, indicating the future land use zoning and development of Kangar Maya Smart City. Located strategically at the Kangar urban fringe around the intersection of Arau–Kuala Perlis Highway with Alor-Setar–Padang Besar Highway, the KMSC covers an area of about 274 ha. It is conceived as a relatively self-contained city within Kangar city to work, live and play. Essentially, it consists of two core components, i.e. the new State administrative centre at the north-eastern KMSC (so-called "mini-Putrajaya") and the ICT-related commercial precinct at the western KMSC ("mini-MSC"). In this respect, commercial and mixed-use activities are the largest consumers of land, taking up 150 ha or 55% of the total area, followed by residential activities, occupying 64 ha or 23% of total area.

Table 4.11: Strengths, Weaknesses, Opportunities and Threats of Kangar

Strengths	Weaknesses
• State capital, main commercial and service centre. • Proposed Kangar Maya Commercial Hub Development Project around Kg. Utan Ibus, Kg. Seriab & Kg.Batu Hampar in Kangar Local Plan 2020. • Availability of key infrastructure & utilities. • Strategically located at intersection of 2 major development corridors, i.e. Kuala Perlis - Pauh Putra and Kangar - Padang Besar • Scenic Perlis River with heritage significance and touristic value.	• Low order of goods and services, particularly fashion goods and professional services. • Low intensity of development. No large-scale shopping mall, business/ ICT park and riverside development. • No integrated multi-modal transportation terminal & poor public transportation system. • Small domestic market and low purchasing power. • Low level of BCIC participation. • Mostly Malay Reserve Land and small land parcels, posing difficulties in land consolidation for comprehensive development. • Occurrence of flash floods.
Opportunities	**Threats**
• State's aspiration in creating a City-State, sub-regional Centre and Kangar Maya. • Up-scaling the services sector (K-economy) as advocated by nation's ETP. • Regeneration of underutilised brown-field sites and injecting new lease of life to Sg. Perlis. • High level of shopping expenditure leakage outside Perlis. • Low level of urbanisation (35% in 2005), with growth capabilities.	• Economic leakages to south Thailand, particularly Hat Yai. • Increasing traffic congestion and environmental pollution. • Loss of jobs and population arising from growing suburbanisation and urban sprawl. • Out-of-town shopping complexes and hypermarkets jeopardising the viability and vitality of Kangar Town Centre. • Protection of MADA granary areas restricting expansion at its urban fringe.

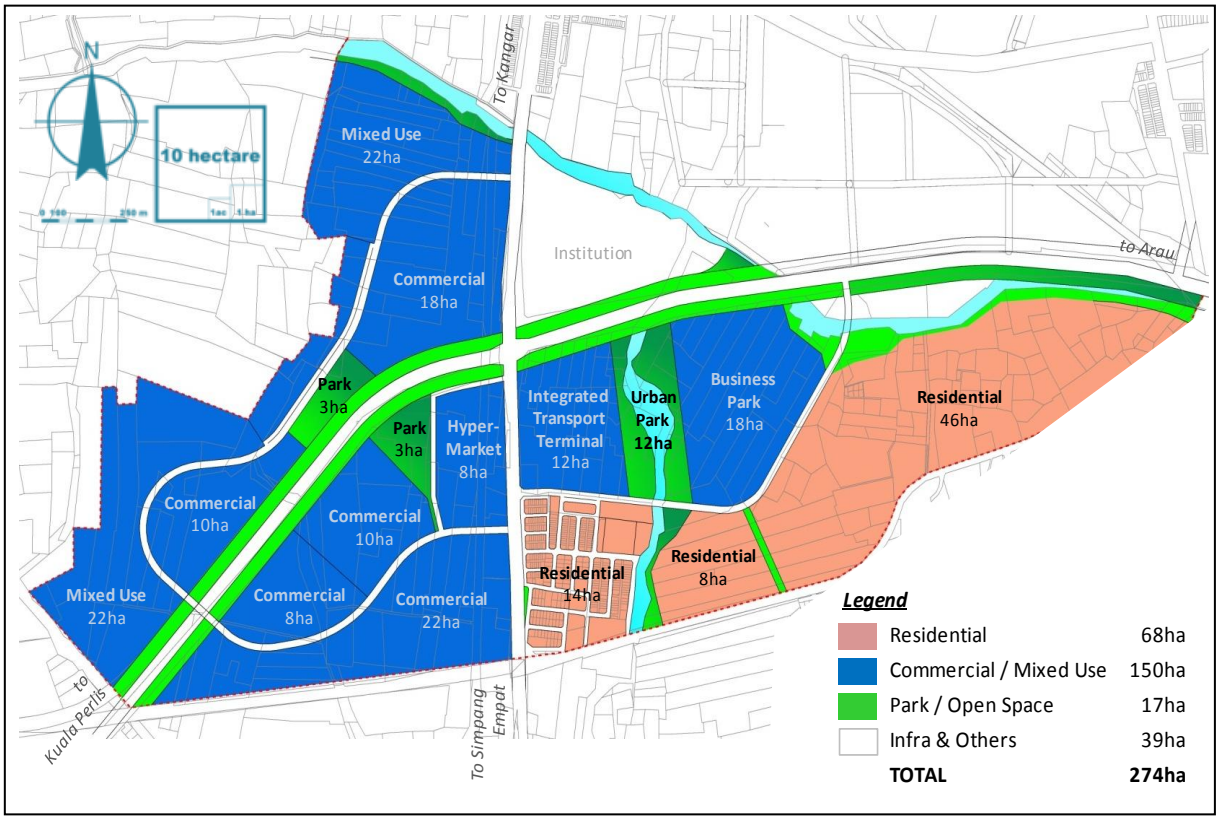
Source: Perlis Strategic Development Plan Report, 2012

Figure 4.14: Location of Kangar Maya and River Promenade in Kangar



Source: Perlis Strategic Development Plan Report, 2012

Figure 4.15: Proposed Concept Plan of Kangar Maya



Source: Perlis Strategic Development Plan Report, 2012

4.5.2 Kuala Perlis

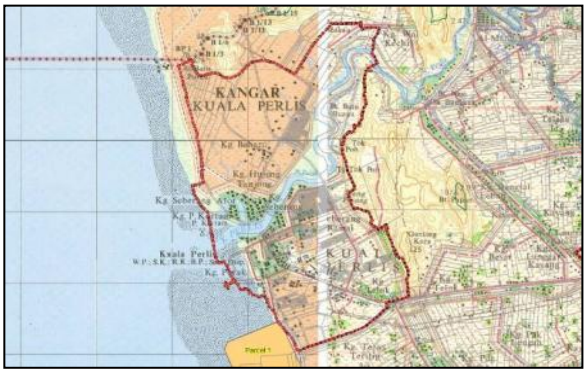
Kuala Perlis currently functions as an important local commercial and service centre, fish landing centre, transit centre for tourists to/from Langkawi and Phuket via ferry, and urban tourism centre catering for seafood enthusiasts. The National Urbanisation Policy identified Kuala Perlis as a Minor Settlement Centre, while the Perlis State Structure Plan proposes it as a Major Settlement Centre.

In 2000, the total population in Kuala Perlis was approximately 12,700 people. It consisted of about 82% Bumiputera and 18% Chinese. In terms of spatial distribution, 910 persons were found in the town centre, while 11,780 persons were in the built-up area.

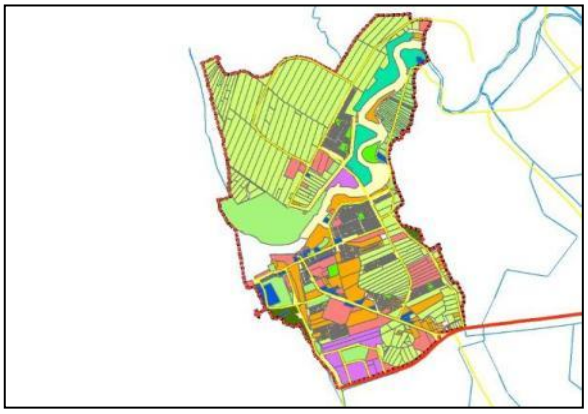
Kuala Perlis occupies a land area of about 916 ha (9.16 km^2). The largest land component is agricultural activities (385 ha or 42% of total land), followed by residential activities (107 ha or 12%). Commercial, institutional and industrial use take up around 105 ha or 11%. Generally, the topography is relatively flat along the coast and undulating inland, with substantial Class 2 ESA (environmental sensitive areas) at the eastern border. The area is drained by Perlis River, with the town centre situated at the river mouth. There are also several squatter fisherman villages occupying the northern part of the Perlis River mouth and its river reserve. These squatter settlements will have to be relocated to protect the river reserve.

Figure 4.16: Spatial Conditions of Kuala Perlis

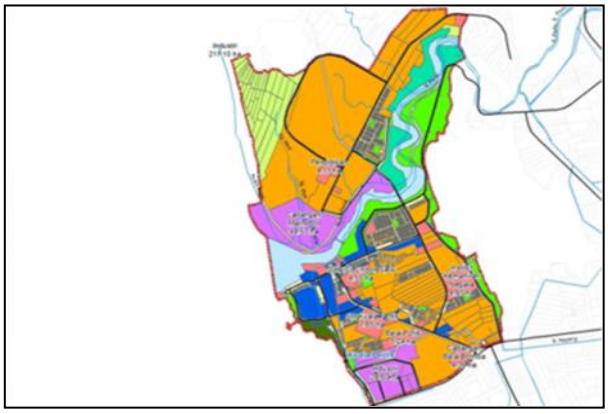
Satellite Image



Topography



Existing Land Use



Future Land Use Zoning

Table 4.12: Existing and Future Land Use in Kuala Perlis

Land Use Category in Local Plan	Existing Land Use (ha)	Future Land Use (ha)	Land Use Change (ha)
Agricultural	385	110	-275
Residential	107	348	241
Commercial	19	44	25
Institution	59	52	-7
Industry	27	78	51
Others *(vacant land; river; forest, etc.)*	319	284	-35
Total	916	916	-

Source: Local Plan Kangar, 2009-2020

A SWOT analysis was carried out with a view to match and integrate viable economic projects with suitable land location for cost-effectiveness and ease of implementation. The main merits and demerits of each location will form the basis for choosing the right type of

project with appropriate supporting infrastructure at the right place that can achieve the Perlis SDP's objectives. These are as follows:

Table 4.13: Strengths, Weaknesses, Opportunities and Threats of Kuala Perlis

Strengths	Weaknesses
• Fast growing commercial and service centre. • Urban tourism with close proximity and good accessibility from Kangar, especially seafood restaurant. • Transit centre/ gateway via ferry to Pulau Langkawi (shortest distance), Phuket and south Thailand. • Leverage on the high-end tourist market in Langkawi serving as service and outsource centre, especially for local handicraft. • Fish landing centre with LKIM jetty and support facilities.	• Large number of squatters along Sg. Perlis river reserve. • Muddy coast, shallow sea draft and coastal siltation, requiring frequent costly dredging and engineering works for shipping. • No vehicle bridge over Sg. Perlis adjacent to the existing town centre. • Location and design of LKIM jetty adversely affecting hydraulic current flow and coastal/ river sedimentation. • No coastal road along the west coast of south Thailand linked to Kuala Perlis.
Opportunities	**Threats**
• State Structure Plan envisions transforming Kuala Perlis into a Maritime City, with proposals to develop the city on reclaimed land at the foreshore. • Well-positioned to be driven by marine-related industries. • Capitalise on transit tourists, since Padang Besar (shopping tourism), Perlis State Park & Sg. Batu Pahat (ecotourism) and MADA area (agro-tourism) are less than 30 minutes drive away. • Reclamation of coastal land for fishing port-related infrastructure and marine-based facilities. • Potential for recreational fishing. • Highway to Satun via Bt. Puteh will enhance its trading function.	• Likely relocation of the proposed Maritime City development south of Kuala Perlis on reclaimed land. Although in a less strategic location, the facilities there may duplicate or replace the existing and committed facilities and functions of Kuala Perlis. • Deterioration of marine habitat and declining fish resources. • Stiff competition from Kuala Kedah, which has almost similar objectives. • Coastal tourism along the designated Andaman Leisure Corridor in south Thailand, including Phuket. • Proposed development of a fishing port at Satun.

Source: Perlis Strategic Development Plan Report, 2012

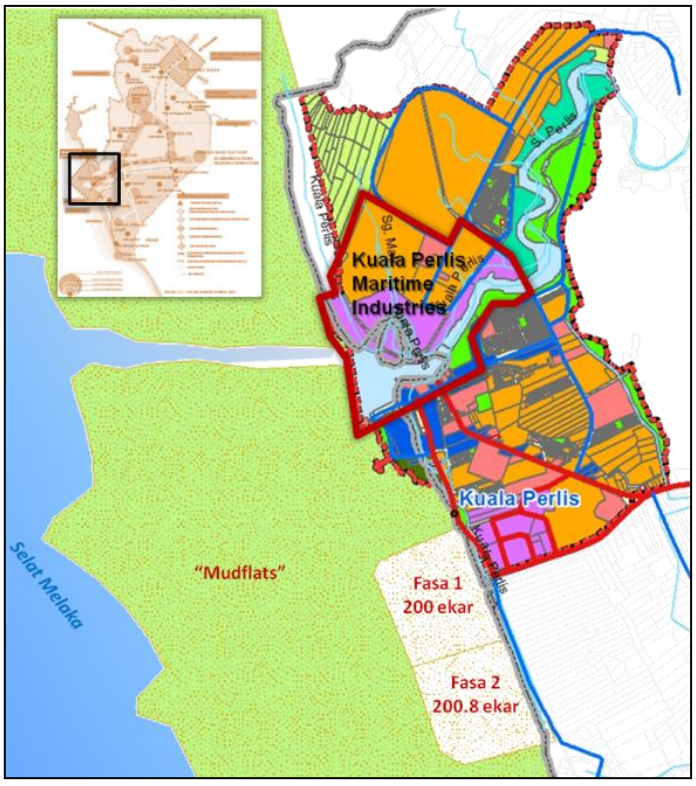
Most developments have occurred in and around the town centre at the southern coastal part of Sg. Perlis rather than the northern portion of Sg. Perlis. This is due largely to good accessibility and the absence of physical constraints. Although the Draft Kangar Local Plan has zoned the northern river mouth area of Sg. Perlis for industrial use, much of this land is part of the river reserve and may not be suitable for future development. Not withstanding this, existing boat building activities should be allowed to expand, as it is located at a

sheltered part of the mouth. With the decision to locate the new Maritime city to the south side of the town, it is likely that the future direction of urban growth will be to the south, whilst the northern part of the river mouth of the Sg Perlis could be developed as Coastal Parkland and an integral component of the Perlis River Promenade project

Figure 4.17: Potential Strategic Project Initiatives in Kuala Perlis

Kuala Perlis Maritime Terminal
• Pier and Terminal • Land Reclamation

K. Perlis Maritime Industries
• LKIM/ Fish Landing Centre • Pusat Komuniti dan Teknologi Nelayan (Pularis[2]) • Ferry Terminal • General Cargo/ Bulk Terminal • Resettlement of Squatter Housing



In view of the extended mudflats near the coast (almost 3 km wide), it is proposed that a pier structure is developed that will accommodate both a fish landing and passenger jetty that can be located at the deeper draft. Unlike a breakwater, the pier structure is like a long bridge that could be arched at sections to allow passage for fishing vessels and the flow of ocean

[2] Project that benefit the 30,000 community Perlis, increase ICT knowledge for fishing communities and increase income through rental of buildings of Fishermen's Associations

currents, thus minimising environmental impacts and coastal erosion. The pier structure can also be optimised to serve other that could be developed for real estate development (see **Figure 4.18**).

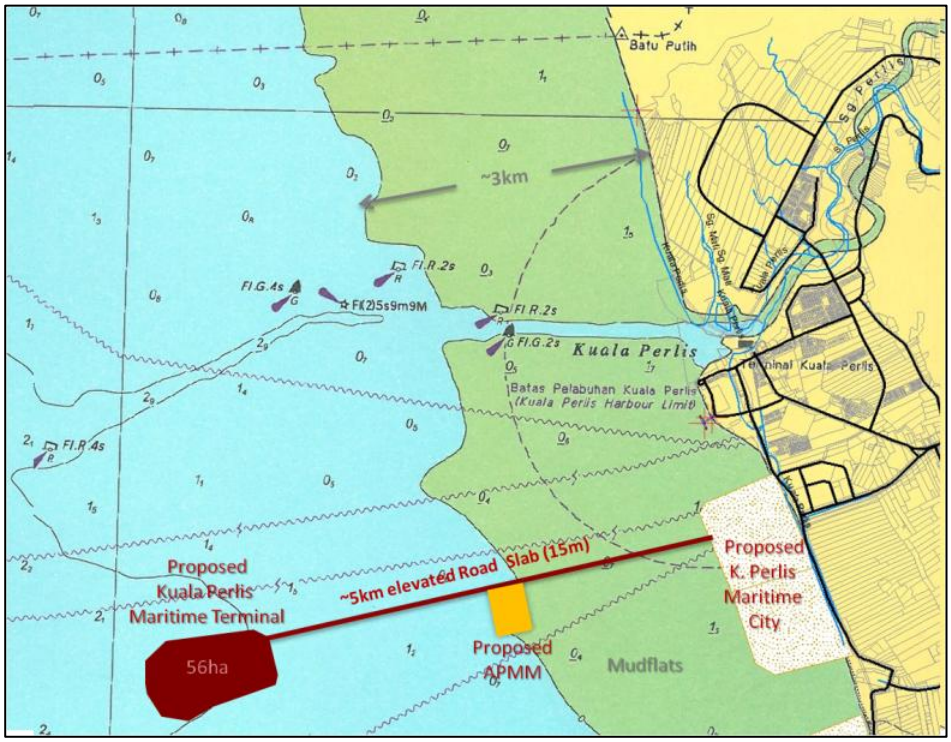
Kuala Perlis is susceptible to devastation from tsunamis that could be triggered by an earthquake or shifting of the tectonic plates as witnessed in the 2004 Indian Ocean tsunami that was caused by an earthquake with its epicentre off the west coast of Sumatra, Indonesia. Depending on the direction of the waves, there is a chance that Kuala Perlis could be adversely impacted by a tsunami.

Figure 4.18: Good Practice Model: Maritime Terminal Development in Miami, USA

The predicted Chart datum of 11.4m tsunami height will have an impact on all coastal development in the Kuala Perlis area, as the town is basically low lying. It will be difficult to avoid flooding that occurs as a result of the tsunami, which could also have an impact as far as away as Kangar. However what could be mitigated is the damage to the buildings. Ironically, putting the terminal 5 km into the sea may result in less wave energy impact on the terminal than on structures at the shore. However, there are some mitigation measures that can be taken to reduce the impact of the wave action, thus reducing the loss of lives and property as well as economic disruption:

1. Construct buildings/ structures on the maritime terminal strong enough to withstand a tsunami;
2. Construct tsunami walls at strategic locations, such as at the fishing port and passenger terminal to divert the wave action;
3. Construction of new commercial buildings in Kuala Perlis to be at least 4 storeys high, with flat roofs to facilitate evacuation to the higher floors; and
4. Introduce Emergency Response Management Plan similar to what has been done in Phuket, e.g. Tsunami warning sirens; directional signs to higher ground; designation of lead agency to manage tsunami emergency; establishment of designated evacuation centres; and preparation and rehearsal of SOP (Tsunami Standard Operating Procedures).

Figure 4.19: Location of Kuala Perlis Maritime Terminal in Kuala Perlis



Source: Perlis Strategic Development Plan Report, 2012, based on map by Survey and Mapping Department

Figure 4.20: Concept Plan of Kuala Perlis Maritime Terminal

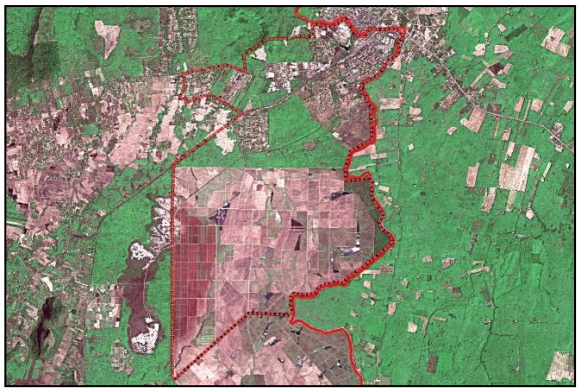
Source: Perlis Strategic Development Plan Report, 2012

Figure 4.20 presents the Concept Plan for the Kuala Perlis Maritime Terminal. It will focus primarily on marine-related economic activities and high-value waterfront development to maximise the viable return on its high development investments and to attract high net worth entrepreneurs to invest, do business and live in Perlis. In addition, it aims to relocate certain marine-based facilities, e.g. the ferry terminal and the fishing port, which is facing shallow sea draft and coastal siltation. It also offers new opportunities for enhanced tourism, e.g. a luxurious hotel and premier shopping mall, as well as seaside developments, e.g. general cargo berth and high-end sea-view / access housing.

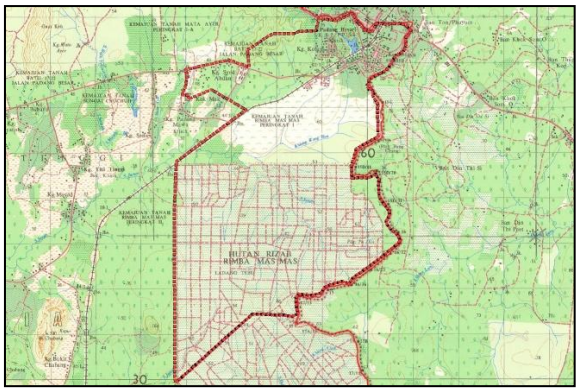
4.5.3 Padang Besar

Padang Besar serves critical cross-border functions in terms of trade, industry, tourism and logistics. It can capitalise on the plentiful raw material supplies as well as tap on the large Muslim market in south Thailand. This can be achieved largely through bilateral collaboration and strategic alliances in economic projects, trade facilitation programmes, joint-development of costly infrastructure, and facilities sharing for mutual benefit. The National Physical Plan considered Padang Besar as a Special Feature Town performing unique strategic border functions, which can contribute significantly to national well-being and good image. The Perlis State Structure Plan selected Padang Besar to act as a Major Settlement Centre.

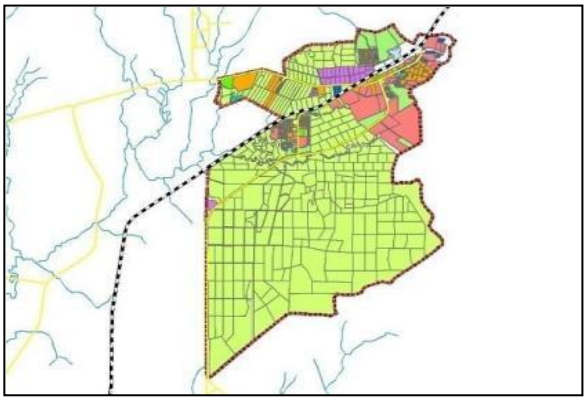
Figure 4.21: Spatial Conditions of Padang Besar



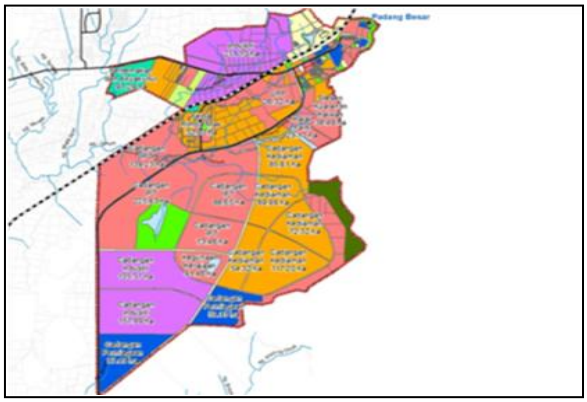
Satellite Image



Topography



Existing Land Use (most land within the urban limits is currently agriculture land)



Future Land Use Zoning

Padang Besar occupies a land area of about 3,195 ha (32 km^2). The largest land usage is agriculture (2,053 ha or 64% of total land), followed by institutional use (170 ha) and industrial land (122 ha) respectively.

In terms of topography, Padang Besar is generally flat. Bordering Thailand in the east, both territories are separated by a concrete wall, with a checkpoint at the northeast of Padang Besar.

For purposes of this Plan, the Padang Besar area includes the border town of Padang Besar and the new town development at Chuping Valley. It is synonymous with the area defined as the Perlis SEZ.

Table 4.14: Existing and Future Land Use in Padang Besar

Land Use Category in Local Plan	Existing Land Use (ha)	Future Land Use (ha)	Land Use Change (ha)
Agriculture	2,053	22	-2,031
Residential	101	588	487
Commercial	15	166	151
Institution	170	838	668
Industry	122	505	383
Others *(vacant land; river; forest, etc.)*	734	1076	342
Total	3,195	3,195	-

Source: Kangar Local Plan, 2009-2020

1. Economic Activities

The key economic activities of the Padang Besar area are described below.

a) Agriculture

Currently the main crops are rubber, sugarcane and paddy. Rubber is mainly planted by the FELDA settlers at Rimba Mas, while the sugarcane plantation is owned and operated by FELDA Global Ventures Sdn. Bhd. However, FELDA Global Ventures is currently downsizing its sugarcane plantation and plans to replant it with rubber and oil palm.

b) Manufacturing

The main industrial area is the Padang Besar Industrial Park, which occupies approximately 47 ha of land and is designated for general industries. The price of the industrial land is about RM54/m^2.

c) Tourism, Commerce & Services

Presently the tourism, commerce and services activities are concentrated in the Padang Besar Town Centre. Based on the Padang Besar Special Area Plan, there are 711 commercial premises in Padang Besar. Of these, 86% are occupied. There are also 212 informal commercial units in Padang Besar operating in the wet and dry markets, consisting of permanent and temporary stalls.

d) Logistics / ICD

In 1983, Multimodal Freight, a wholly–owned subsidiary of KTMB (Malaysia Railways), set up an ICD at Padang Besar. The main activity of the ICD is the rail shipping of laden containers from southern Thailand to Penang Port, a distance of about 180 km. Laden containers are brought into the ICD by road, off-loaded in the container yard, and subsequently loaded onto trains. Twelve (12) daily train services handle an average throughput of 8,000 tonnes a month, hence over 100,000 TEUs per annum.

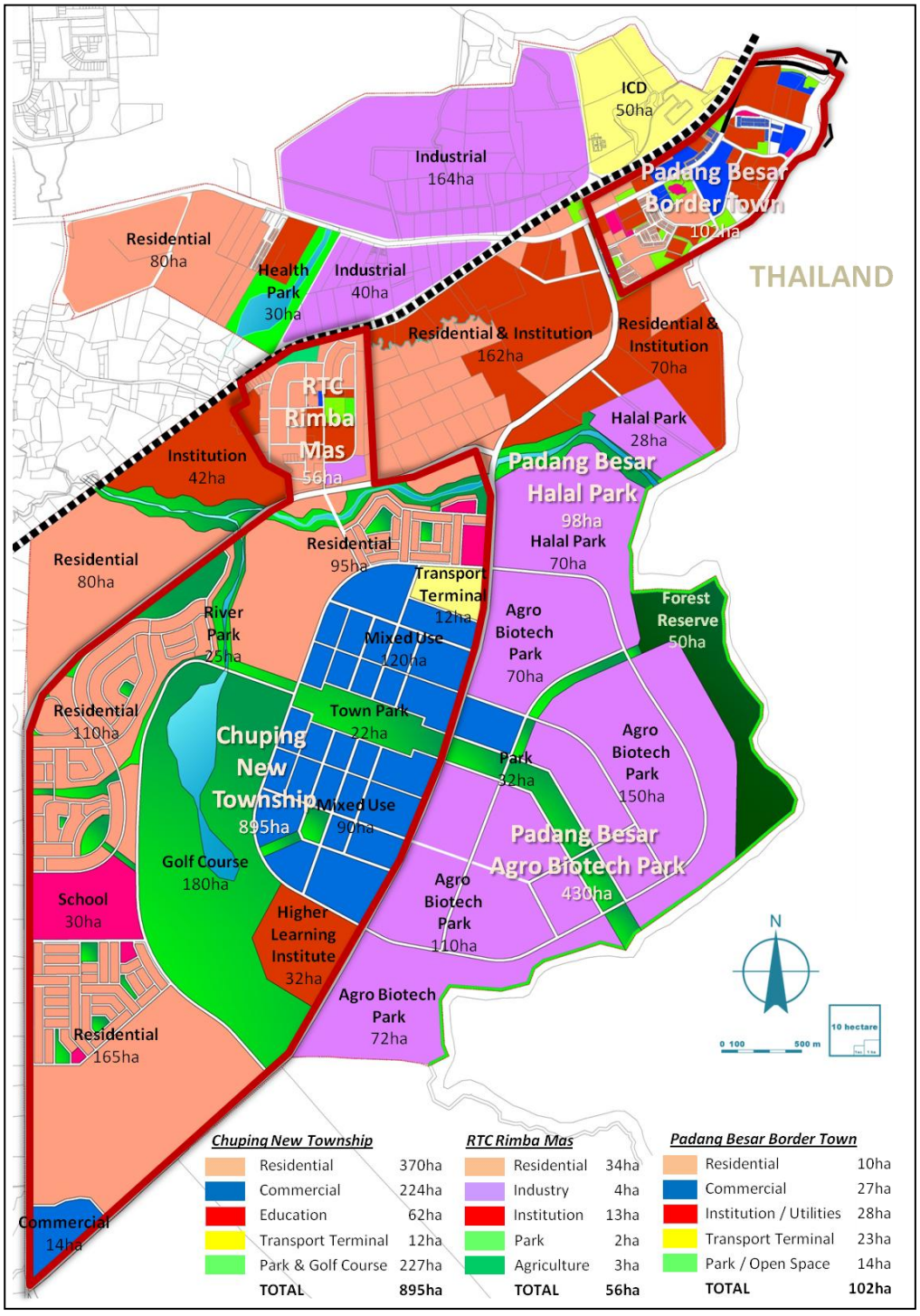
The internal and external factors that are favourable and unfavourable to the development of Padang Besar are determined in the SWOT analysis as follows:-

Table 4.15: Strengths, Weaknesses, Opportunities and Threats of Padang Besar

Strengths	Weaknesses
• Existing thriving commercial and service centre with high growth potential. • Cross-border town functions, in terms of trade, industry & tourism, with a large Muslim market in south Thailand. • Electrified double-track railway line under construction. • Low labour cost & affordable land prices. • Committed large-scale greenfield Chuping Valley Township for mixed-use, ICD under construction, Halal Food Processing Park, etc.	• Lack of knowledge and skilled labour force. • Low global competitiveness, small domestic market and low level of private investment. • Weak economic growth rate, low value-added and majority micro-enterprises. • Inadequate enabling infrastructure & difficult accessibility, notably absence of expressway, airport and seaport. • Lack of raw material supplies except paddy, fish, and dolomite.
Opportunities	**Threats**
• State Structure Plan advocates the designation of Padang Besar as the Major Settlement Centre as well as a Special Economic Zone to boost economic growth. • Strategically located at the focal point of IMT-GT. • Logistics and distribution hub, particularly of exports of south Thailand to Penang seaport. • Federal government support in the form of fiscal assistance, infrastructure provision & policy incentives for economically lagging and low-income Perlis State. • Strong case to lobby direct extension of North-South Expressway from Alor Setar to Padang Besar for facilitating national integration.	• Proposal for a deep seaport development at Songkhla and Pak Bara in south Thailand. • Proposed Special Border Economic Zone in Thailand between Padang Besar to Hat Yai. • Competition from Bukit Kayu Hitam development with similar objectives. • Protectionism and trade tariff barriers, especially from Thailand. • Cheap imports from trade liberalisation and economic globalisation under WTO & AFTA commitments.

Source: Perlis Strategic Development Plan Report, 2012

Figure 4.22: Proposed Concept Plan for Padang Besar



Source: Perlis Strategic Development Plan Report, 2012

The SWOT assessment shows that the cross-border town of Padang Besar provides tremendous opportunities for further expansion and upgrading of its tourism, commercial and services, logistics, warehousing and distribution, manufacturing, and agricultural development. In addition, the adjoining new Chuping Township development on a greenfield site should be planned and developed together with the Padang Besar Border Town

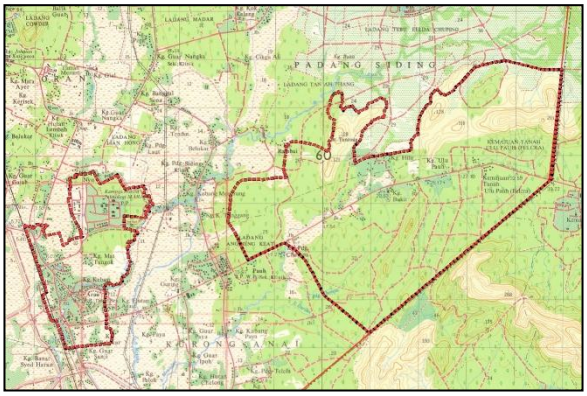
expansion in an integrated and holistic manner. Economic growth and diversification can be achieved largely by strengthening regional economic collaboration and partnership, especially with southern Thailand; improving its enabling infrastructure and utilities; providing enhanced Federal Government financial assistance, incentives and policy support; and enhancing skilled labour and entrepreneurship development. **Figure 4.22** indicates the proposed Concept Plan for Padang Besar. For Padang Besar Border Town, commercial activities cover 27 ha or 26% of the total land area; followed closely by the transport terminal, occupying 23 ha or 22.5% of the total land area.

4.5.4 Arau - Pauh Putra

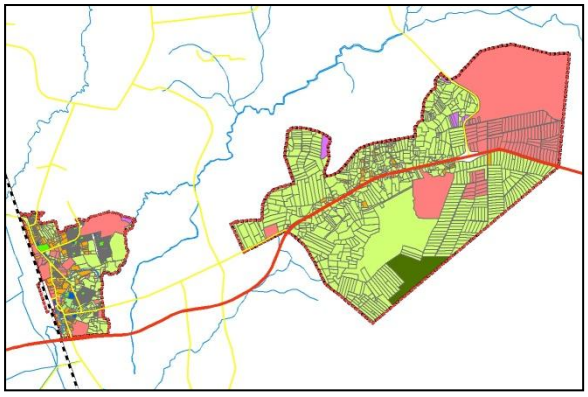
Presently, Pauh Putra is a satellite town of the long-established Arau town. Arau is a royal town of Perlis and also a transit station for rail passengers to Langkawi. Pauh Putra is a proposed new urban centre located about 7 km to the east of Arau. The total land area within the urban limits of Arau is 729 ha (7.29 km^2) and 2,306 ha (23 km^2) for Pauh Putra. In general, the topography in both areas is flat, with scattered hills in Pauh Putra, e.g. Bkt. Tuntong (128m).

Figure 4.23: Spatial Conditions of Arau - Pauh Putra

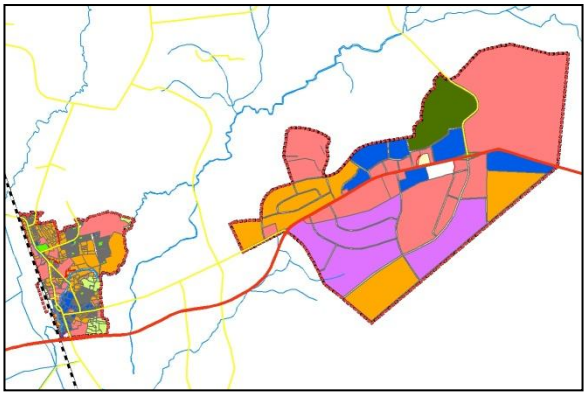
Satellite Image



Topography



Existing Land Use



Future Land Use Zoning

At present, both areas are utilized largely for agricultural and institutional use. Commercial activities are only found in Arau (8ha), whereas industrial development is located in Ulu Pauh (46 ha). With several flagship projects proposed within the surrounding area, Arau - Pauh Putra will be transformed into a major modern township with a predominant middle-class. These two adjoining towns will eventually be merged as a conurbation, although each will be planned and developed with its own distinctive local character and identity.

Table 4.16: Existing and Future Land Use in Arau-Pauh Putra

Land Use Category in Local Plan	Arau (ha)			Pauh Putra (ha)		
	Existing	Future	Change	Existing	Future	Change
Agricultural	144	51	-93	1,520	115	-1,405
Residential	84	168	84	17	303	286
Commercial	8	27	19	-	145	145
Institutional	225	227	2	519	796	277
Industry	2	-	-2	46	350	304
Others *(vacant land, river, forest, etc)*	266	256	-12	204	597	393
Total	**729**	**729**		**2,306**	**2,306**	

Source: Kangar Local Plan, 2009-2020

The conurbation of Arau - Pauh Putra has been promoted as an Education / Knowledge City. Currently this is a high growth potential area with houses and various institutes of higher learning such as Universiti Technology MARA, UniMAP, Politeknik Tuanku Syed Sirajudin and Maktab Rendah Sains Mara. As a result, this existing higher education nucleus has the potential to grow into a bigger edu-cluster due to its synergistic linkages and agglomeration economies. On the demand side, it will provide the much needed skilled manpower and entrepreneurs to fuel the State's ambitious economic transformation vision and programme.

In identifying economic projects to strengthen the development of this conurbation, a SWOT analysis was undertaken as follows:

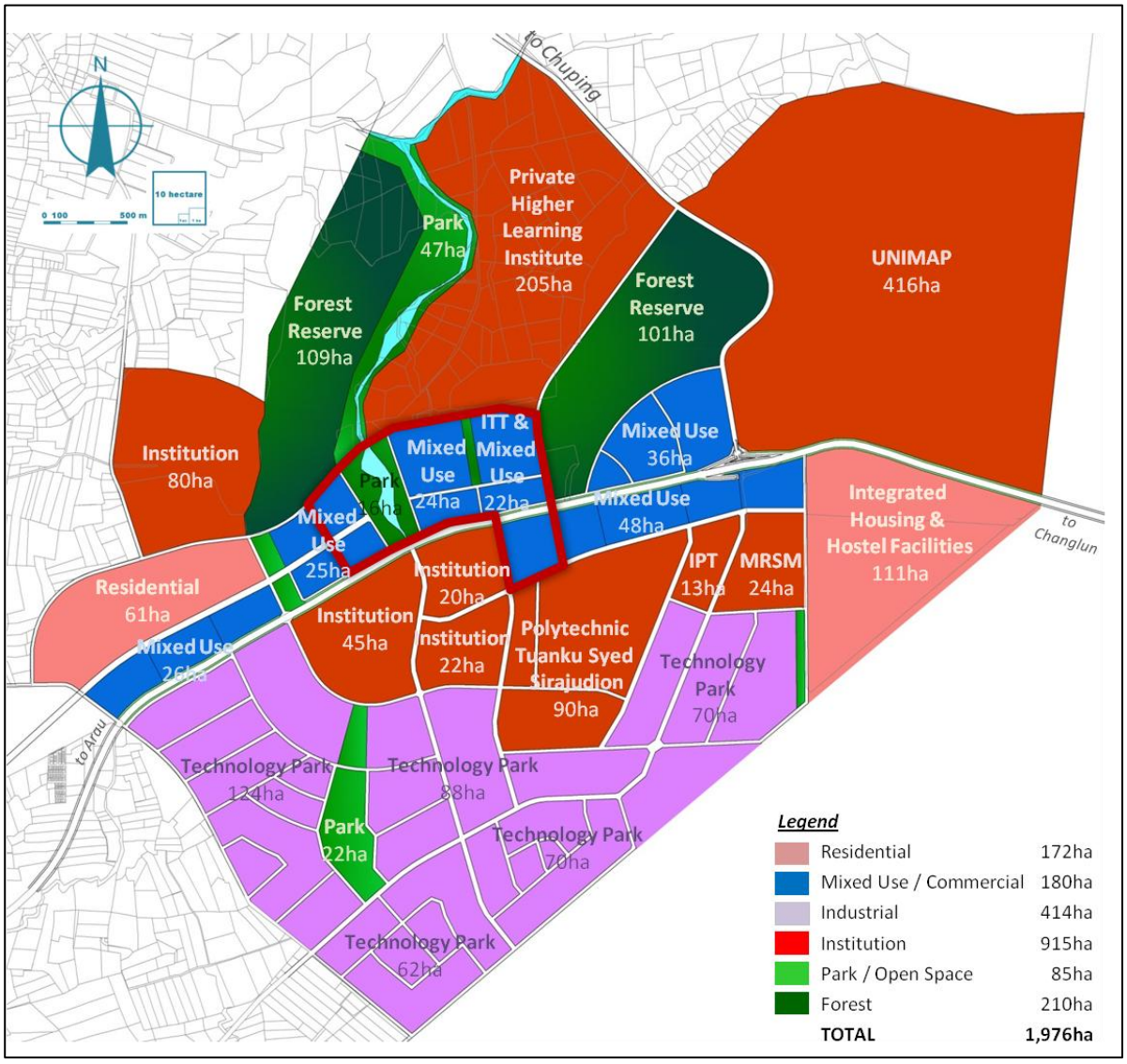
Table 4.17: Strengths, Weaknesses, Opportunities and Threats of Arau-Pauh Putra

Strengths	Weaknesses
• Concentration of many institutes of higher learning, including UniMAP. • High future demand of skilled and knowledge workers due to economic diversification and the growth of the services sector. • Easy accessibility via the existing Kangar-Changlun Highway. • Close proximity to Kangar Town Centre for trendy lifestyle living. • Proximity to UUM in Sintok, Kedah. • Conducive learning environment and comparatively lower cost of living/ education. • Availability of free market land.	• Lack of in-situ infrastructure and social amenities. • Poor coverage of high-speed broadband communication network for use of Internet services. • Lack of student accommodation availability in existing residential areas. • No vibrant and lively urban centres, particularly leisure and recreation activities, in the neighbourhood. • Ad hoc and piecemeal development, as no master plan has been drawn up for an education cluster hub development.
Opportunities	**Threats**
• State's aspiration to become a *Negeri Ilmu* (Knowledge State). • The availability of a large potential pool of south Thailand's student/ undergraduate market. • Availability of large plots of rubber estate land for setting up full-fledged campuses. • Government support for establishing an international university with niche courses. • Government encouragement for collaboration between academia and industry.	• Intense competition from large urban centres in more developed states, especially Kuala Lumpur, Penang and Johor Baharu. • Many small-sized universities with relatively small budgets have difficulty recruiting high quality academic staff and students and establishing good research labs and libraries. • Fear of the international university undermining the growth of local universities. • Difficulty in attracting private sector R&D and high tech / biotech industries to locate and work with unranked/ unbranded universities

Source: Perlis Strategic Development Plan Report, 2012

To utilise local advantages and support the development of higher learning institutes in Arau -Pauh Putra, two key strategic project initiatives have been proposed, i.e. Pauh Putra Edu-City and Pauh Putra Technology Park. It is envisaged that close collaboration between academia and industry, particularly in applied research and practical skills, will be encouraged and fostered to make graduates employable. In addition, incubators will be built to promote and nurture start-ups among innovative and enterprising graduates. (See **Figure 4.24**)

Figure 4.24: Concept Plan for Pauh Putra



Source: Perlis Strategic Development Plan Report, 2012

4.6 STRATEGIC URBAN DEVELOPMENT PROJECTS

Within the strategic urban centre of Kangar, Kuala Perlis, Padang Besar and Arau-Pauh Putra, a number of strategic Urban Development Projects have been identified. It forms an integral part of the urban centres where the PSDP intends to establish by taking urgent, intensive action to implement high-impact projects. Each of these strategic urban projects will have a main development focus.

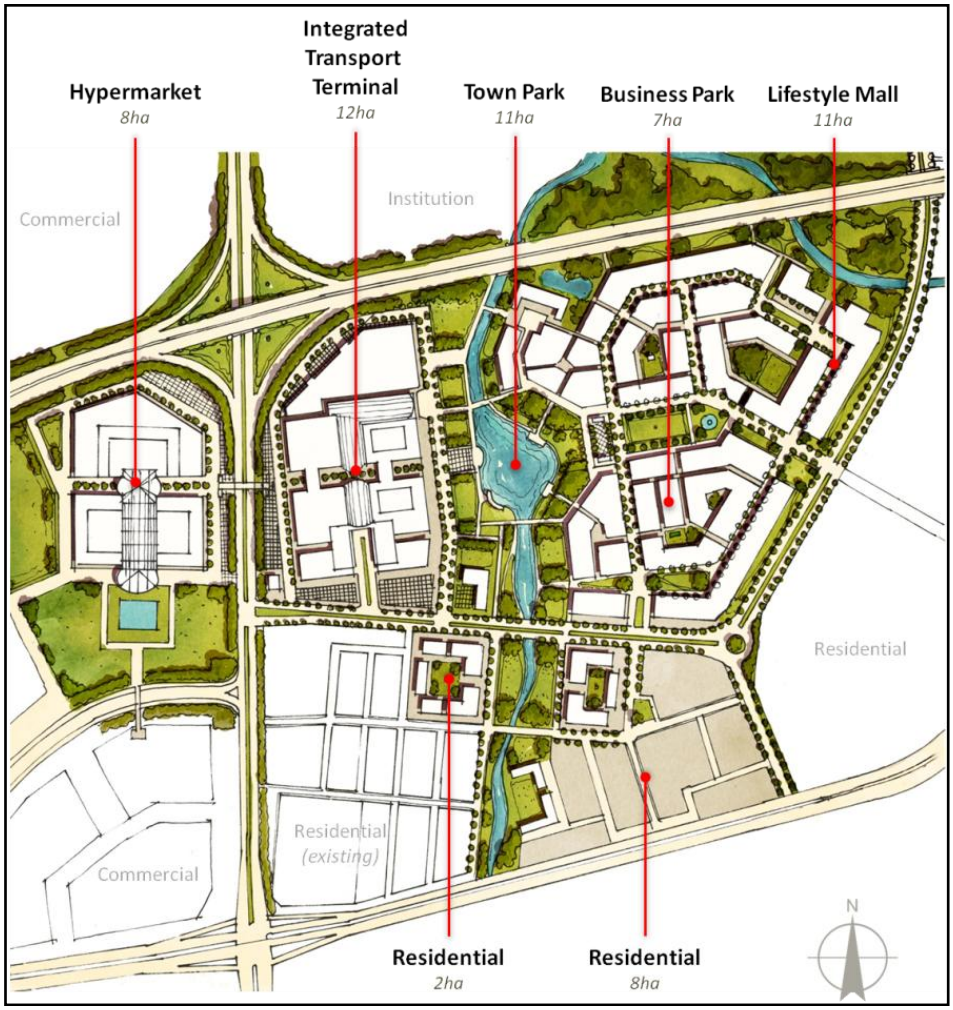
For urban development, seven spatial project initiatives have been identified that will underpin the main economic pillars that have potential to be promoted for private sector development, i.e.:

1. Kangar Maya Smart City;
2. Perlis River Promenade;
3. Kuala Perlis Maritime Terminal;
4. Padang Besar Border Town;
5. Chuping New Township;
6. Pauh Putra Edu-City;
7. Wang Kelian Border Town.

4.6.1 Kangar Maya Smart City

Kangar Maya Smart City has been conceived as the main urban node in Perlis that is linked by a broad array of electronic, wireless and optically networking technologies, particularly for the use of ICT. It has been mentioned in the Perlis State Structure Plan as the future ICT Hub and Mini Multimedia Super Corridor (MSC) to move up the State's economy to a high-valued services sector (K-economy). Located in the centre of the Development Corridors in Perlis, Kangar Maya has synergistic links with the Pauh Putra Edu-City as well as the border trading centres of Padang Besar and Kuala Perlis.

Figure 4.25: Illustration Plan of Kangar Maya Smart City



Source: Perlis Strategic Development Plan Report, 2012

Not only can it be interconnected locally and globally by high-speed broadband communication infrastructure to enhance its competitive edge, it can also support the creation and growth of a knowledge-based economy, including online shopping, e-commerce, e-banking and content development (refer **Figure 4.25).**

In this respect, the main components of the development are office, retail, residential, and urban park. More specifically, the projects identified include ICT Innovation/ Incubator/ Cyber Centre, Integrated Commercial Complex / Lifestyle Malls, Sports Halls, Business Park, supported with Smart Infrastructure Facilities (ICT) and Integrated Transportation Terminal (ITT) that will be linked to the Bus Rapid system between Arau and Kuala Perlis. This ITT should be differentiated from Kangar Sentral, which is a long term proposal that will be developed in tandem with the High Speed Rail proposal.

Figure 4.26: Illustrations of the Kangar Maya Smart City

Table 4.18: Impact of Kangar Maya Smart City

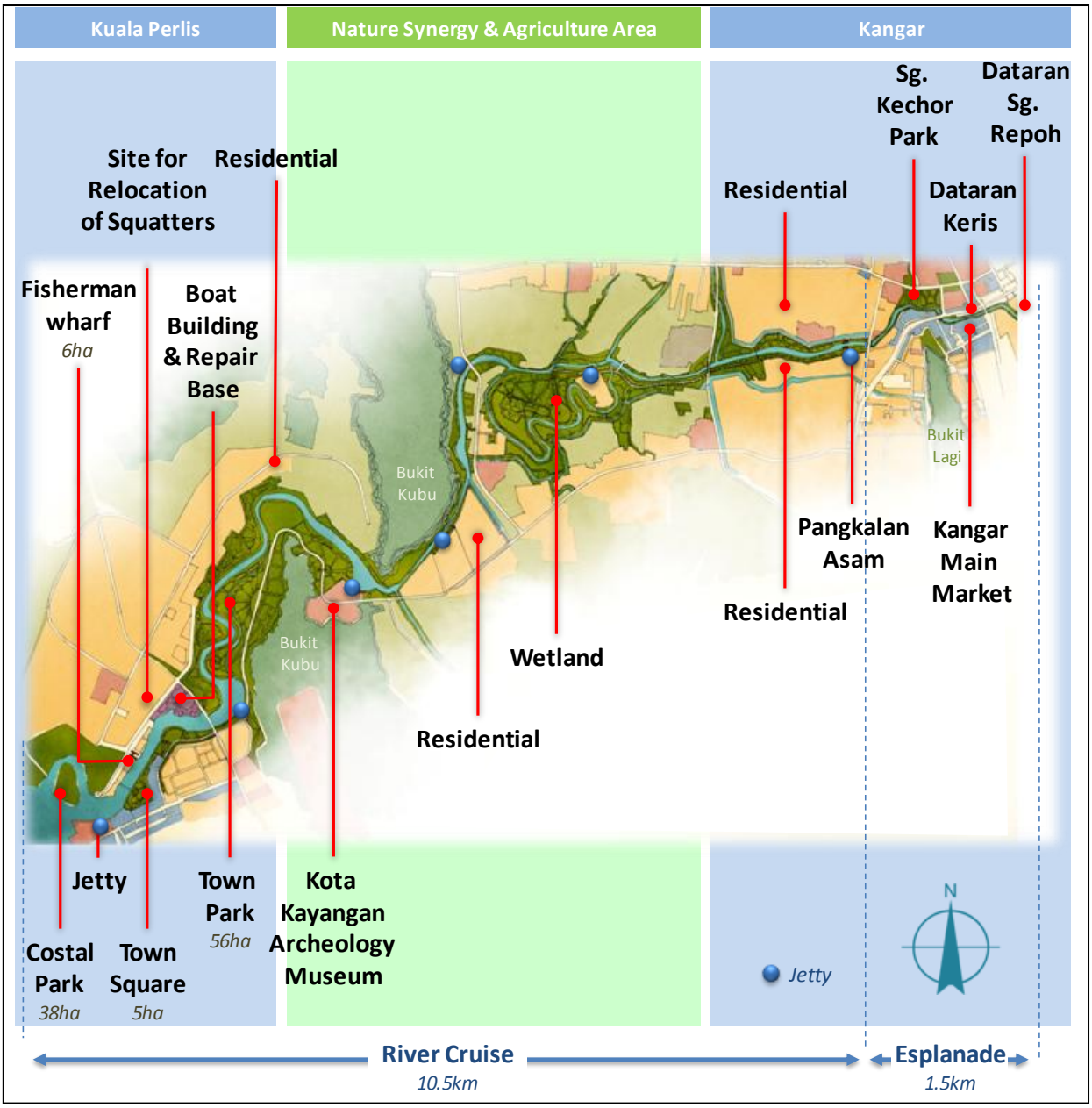
Jobs	Investments (RM million)	Land Size (ha)
838	1,487.3	60

4.6.2 Perlis River Promenade

The Perlis River flows right through the heart of Perlis State and bisects Kangar Town. This town has evolved around the river corridor for its commerce and transportation. The Perlis River's potential as a key economic and social hub needs to be fully harnessed by initiating the proposed River Promenade Project (**Figure 4.27**). The aim is to revitalise and develop the river and its adjacent environment into a vibrant and liveable waterfront with high economic value by 2020 for Perlis State as a whole. The major components of the project initiative are:

- River Boat Cruise with several docking stations at key points of interest, including traditional kampong visits and fishermen villages, State Museum, bird watching, wetlands and mangrove forest, limestone caving;
- River cleaning, river rehabilitation, and treatment of sullage water;
- Beautification, including the building of parks and riverfront promenade development; and
- Fishermen's' wharf

Figure 4.27: Illustration Plan of Perlis River Promenade



Source: Perlis Strategic Development Plan Report, 2012

The river boat cruise is a new tourist product to attract more tourists to Perlis. It will commence at Kuala Perlis and terminate at Pengkalan Asam in Kangar Town, with several docking stations at tourist hotspots, e.g. State Museum at Kota Kayangan and with a model traditional Malay Kampung. A proper site will be allocated along the river mouth at Kuala Perlis for boat building and boat park for the fishermen.

To cater to the growing affluent and middle-class, high-end and exclusive waterfront housing could be built. Along the river front within the Kangar Town Centre, a linear river promenade with pedestrian walkways, bicycle paths and jogging tracks interspersed with green parks will be developed all the way up to Dataran Sg. Repoh. Once the river promenade is completed, the people will be able to relax at outdoor cafés; walk and cycle safely and conveniently; take part in water sport activities along riverbanks; and enjoy many public green spaces along the waterfront (refer **Figure 4.27** and **Figure 4.28** for the illustration of the proposal).

Figure 4.28: Illustrations of the Perlis River Promenade

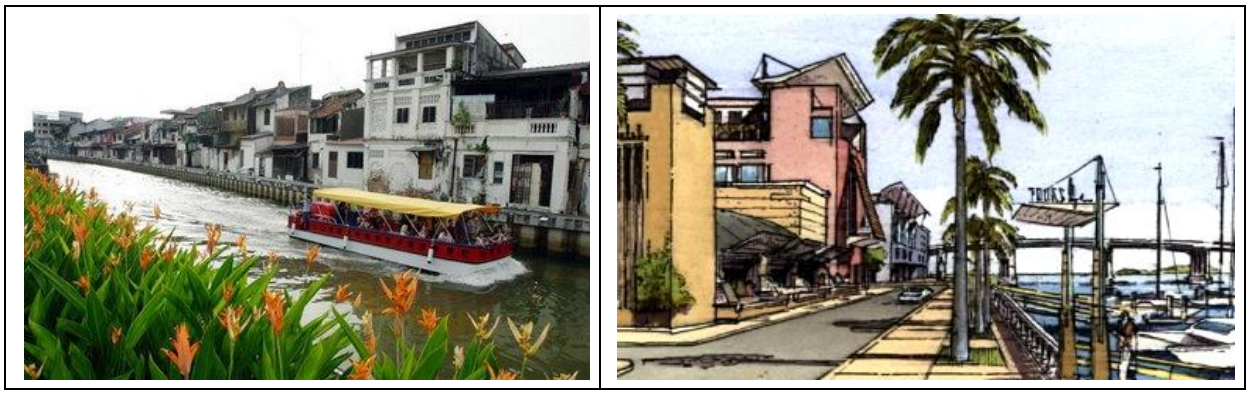


Table 4.19: Impact of Perlis River Promenade

Jobs	Investments (RM million)	Land Size (ha)
520	200.3	12

4.6.3 Kuala Perlis Maritime Terminal

Most developments have occurred in and around the town centre at the southern coastal part of Sg. Perlis rather than the northern portion of Sg. Perlis. This is due largely to good accessibility and the absence of physical constraints. There are proposals by the private sector to develop a Maritime City on reclaimed land about 2 km to the south of the town, thus avoiding the submarine high voltage electricity supply cable linking the mainland and Pulau Langkawi. Therefore future urban growth and associated economic development is likely to be focused to the south of the town. In order to optimise on the infrastructure it is proposed that all three reclamation island projects involving the Maritime Terminal, Maritime Enforcement Agency Reclaimed Site and the Maritime City share the cost of the common 5km pier structure.

After several discussions with the relevant stakeholders, including the Maritime Department (Headquarters), the preferred option is as shown below. The main justifications include:

- Land reclamation at the mainland entry point to the Maritime Terminal for a proposed massive mixed-use development (i.e. Maritime City) by a private company is underway and can share a part of the total cost for constructing the 5 km road pier over the sea to the Maritime Terminal for mutual benefit (refer **Figure 4.19**);
- Committed development on a proposed reclaimed island by the Marine Enforcement Agency of Malaysia can contribute a proportion of pier development cost;
- Direct road connection to the Kuala Perlis - Kangar - Arau - Pauh Putra - Changlun Highway and easy accessibility to the Kuala Perlis town centre;
- All-tide boat docking, including for the Fishery Port and Ferry Terminal to Langkawi; and
- Large-scale waterfront development including premium seafood and beverage outlets, luxury goods shopping and lifestyle mall, recreational fishing centre, and high-end housing to cater for the growing affluent and middle-class market.

The main facilities at the terminal will include:

- *Fishery Port Terminal* that will provide an all-tide boat docking facility. This facility will serve fishing boats in the northern states of Peninsular Malaysia, south Thailand and also include fishing boats from north Sumatra and Myanmar. The Kuala Perlis Fishing Terminal currently lands 152,000 tonnes of fish (2009), with an estimated value of RM685 million. The terminal will provide quick berth and bunkerage services, cold room facilities, sanitary handling of fish landed and the commercial infrastructure to support trading and movement of stock;
- Passenger Ferry Terminal to Langkawi and Satun. This terminal, when built, will eventually replace the existing facility and cater to increasing tourist arrivals to Kuala Perlis, which averaged 2 million last year;
- General Cargo Terminal with Barging Facilities to facilitate trade with Thailand. Popular items traded with Thailand include cooking oil, sugar, flour and fuel. The Thais mainly export agriculture products such as rubber sheets, fishery and canned food, while the Malaysian exports were mainly machinery & spare parts and recording devices;
- The Tourism Complex will have a Tourist Information Centre, kiosks for travel agencies, budget hotels, car rental and handicraft outlets, a food court, and a hall for cultural performances (Project TM5);
- Recreational Fishing Centre (TM7). The centre could include outdoor angling ponds for marine fish, indoor angling ponds for prawns (udang galah) as well as jetty and boat services for offshore angling;
- Boutique Waterfront Development, including seafood and beverage outlets, luxurious goods shopping and lifestyle mall, hotels, and holiday homes to cater for the growing affluent and middle-class market, with sufficient parking facilities;

- Shuttle Bus Services that will operate between the centre and the main bus station at Kuala Perlis. Technically, it is also possible to link this system with the Bus Rapid Transit (Project UT1) plying Arau- Kangar and Kuala Perlis.

Table 4.20: Impact of Kuala Perlis Maritime Terminal

Jobs	Investments (RM million)	Land Size (ha)
529	870.8	56

Figure 4.29: Illustration Plan of the Kuala Perlis Maritime Terminal

Source: Perlis Strategic Development Plan Report, 2012

4.6.4 Padang Besar Border Town

The Padang Besar Town Centre serves and supports cross-border functions in terms of trade, industry, tourism and logistics for the Padang Besar hinterland. More specifically, it offers a higher order of goods and services, such as fashion goods and specialist services, to its surrounding population catchment. The Perlis State Structure Plan has positioned Padang Besar as a major Settlement Centre. In addition, a Special Area Plan (RKK) has been prepared to create a vibrant, exciting and thriving town centre.

To accelerate the economic growth and urban development in Padang Besar, the PSDP has proposed the following development initiatives:

- Redevelopment of the Padang Besar Town in conformity with the Special Area Plan prepared for the area
- Padang Besar Industrial Park

Figure 4.30: Proposed Development Plan of Padang Besar

Source: Padang Besar Special Area Plan

The Padang Besar Town will undergo urban regeneration and be transformed into an urban township that befits its status as an international border town. Padang Besar will be developed as a centre for the movement of goods, traffic and people, and will subsequently become a principal development node in Perlis. This will include a new commercial area consisting of a festival and expo site for Seasonal Festivals. The Arked Niaga Complex and Gapura Square Centre will be given a physical facelift, which will include a pedestrian walkway linkage (see **Figure 4.30**). In addition Padang Besar Town will also focus on the residential area development with adequate community facilities for the public, in addition to an Integrated Transport Terminal.

Table 4.21: Impact of Padang Besar Border Town

Jobs	Investments (RM million)	Land Size (ha)
506	94.9	103

Figure 4.31: Illustrations of Padang Besar New Development

Source: Padang Besar Special Area Plan

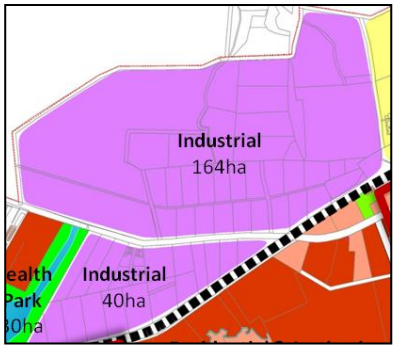
Padang Besar Industrial Park, located at the north-west of Padang Besar Town, incorporates an ICT, industrial park (i.e. RPIC and Free Zone) and residential area. At the south of Padang Besar Town, there are institutions and government quarters. The function and detailed explanation of the components in Padang Besar area are as follows:

Padang Besar ICD

The existing Padang Besar ICD will be expanded and will offer value-added services instead of just being a transshipment depot. It will be upgraded and expanded into a Class I ICD, with transit time of less than 6 hours and full services such as break-bulk, stuffing and un-stuffing, and provide container and vehicle maintenance.

Padang Besar Industrial Park (RPIC & Free Zone)

Adjacent to the Padang Besar ICD, the existing Padang Besar Industrial Park will be expanded to cater for general industries, especially for industries related to rubber products (RPIC) and the development of a Free Industrial Zone.



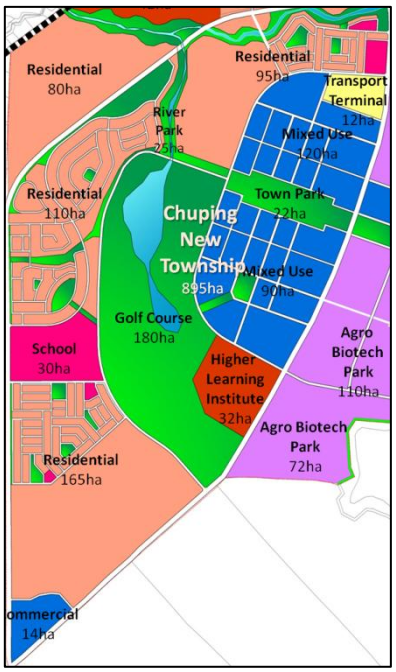
4.6.5 Chuping Valley New Township

To capitalise fully on the plentiful raw material supplies as well as to tap on the large Muslim market in south Thailand through bilateral economic collaboration and strategic alliances, Padang Besar has been extended to inject new emerging growth sectors and enterprises, including the establishment of a high value-added Agri Biotechnology Park, Halal Food Park and Chuping New Township.

To accelerate the economic growth of Padang Besar, it is proposed that a relatively balanced and self-contained Chuping New Township with a high quality liveable environment be developed to support the new growth sectors in Padang Besar. The components of the township development are mixed-use, residential and commercial property and an integrated transport terminal, higher learning institute, golf course and urban park.

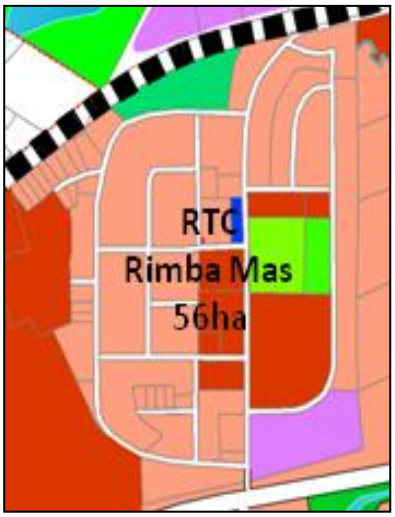
The project will also include the improvement and transformation of the existing FELDA village Rimba Mas, through better accessibility, greater education opportunities and rolling out affirmative policies to ensure no one is left out from mainstream development in Padang Besar. Towards this end, it is proposed that a Rural Transformation Centre (RTC) at Felda Rimba Mas be established, to be supported by SME industries, a collection, processing and packaging centre (CPPC) and local shops. The Rural Transformation Centre is about 2 ha in size and will support the SME industries at Padang Besar and Chuping Valley.

The other key initiatives within the Chuping Valley Development will include an extension of the Padang Besar Halal Park and Agri Bio-Tech Park.



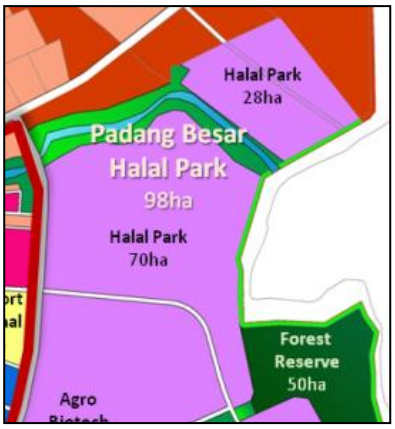
Chuping Valley New Township

To accelerate the economic growth of Padang Besar, it is proposed that a relatively balanced and self-contained Chuping New Township with a high quality liveable environment be developed to support the new economic sectors. The township will also accommodate an agro-technology branch campus that will offer specialised agro technology courses to attract foreign students to Perlis



RTC Rimba Mas

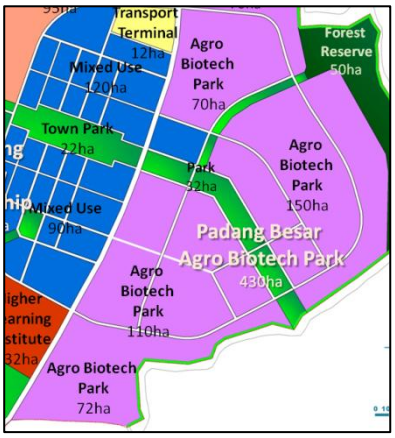
The project is to improve and transform the existing FELDA village, Rimba Mas, through better accessibility, greater education opportunities and affirmative action policies. Development of a Rural Transformation Centre at Felda Rimba Mas will be supported by a Service cum Job Centre (4 ha), comprising SME industries, CPPC and local shops.



Padang Besar Halal Park

The Padang Besar Halal Park will focus on food-based products within a development area of 98 ha (242 acres). The existing area of 30 acres currently has 12 shop lots.

The development of a Halal Park will be monitored by the HDC to facilitate its development and provided/ certified with HALMAS status.



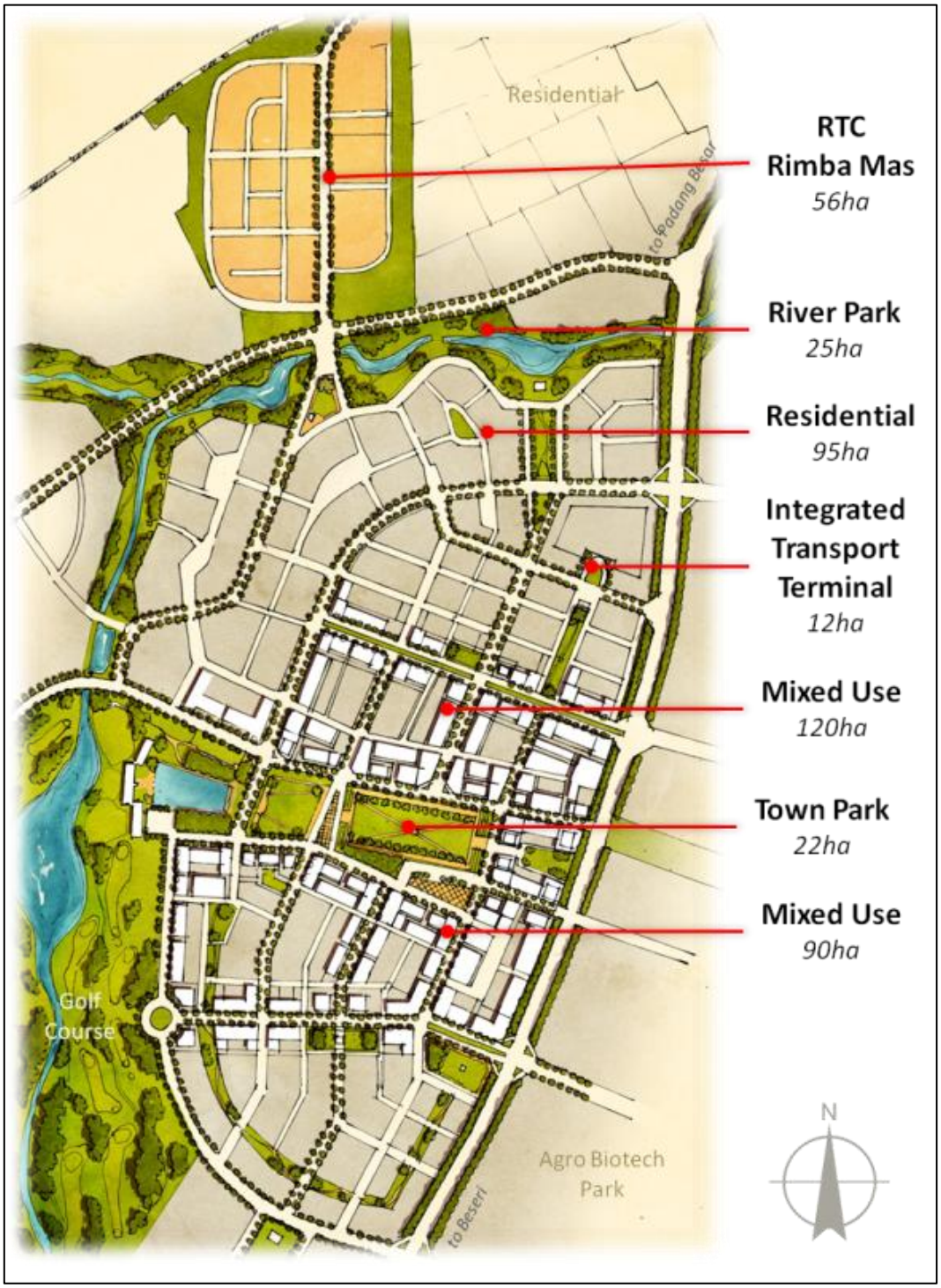
Agri Bio-Tech Park

The Agri Bio-Tech Park is expected to be a cluster for specific agriculture products using bio-technology or high-technology intensive farming methods for the agro-processing industries. The Park will have high-value agriculture products as well as high-value industries with a focus on bio-technology industries. Some of the high-technology upstream agricultural activities that will be located on-site are mushroom cultivation, spirulina farm, etc.

Table 4.22: Impact of Chuping New Township

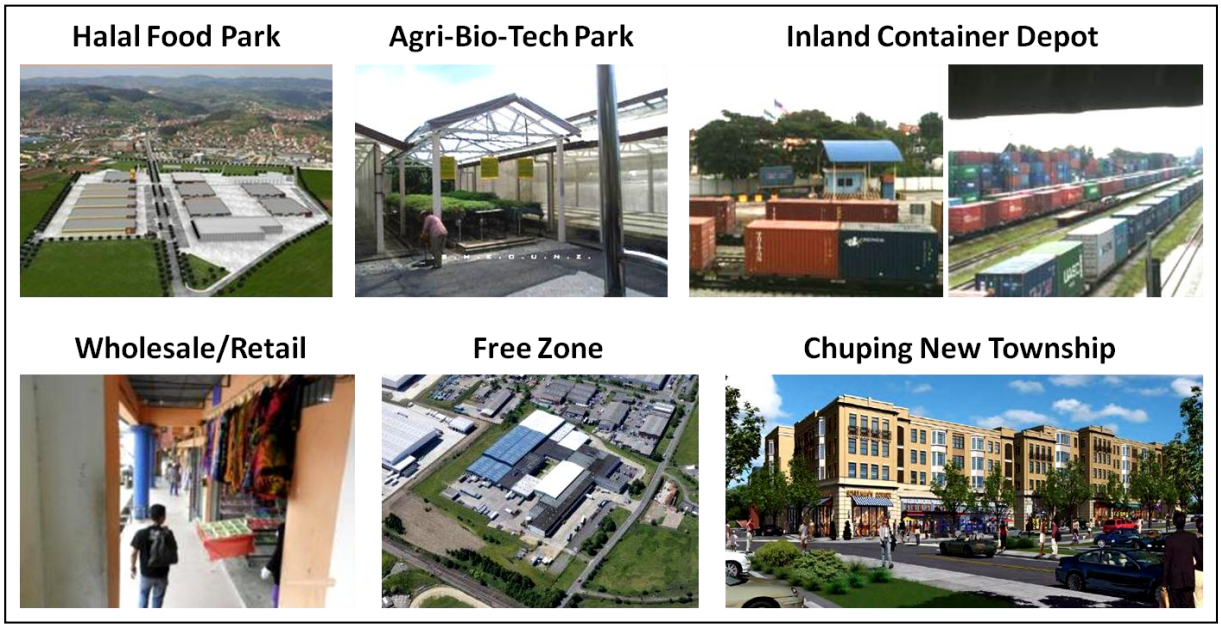
Jobs	Investments (RM million)	Land Size (ha)
995	8,163	895

Figure 4.32: Illustration Plan of Chuping New Township in Padang Besar



Source: Perlis Strategic Development Plan Report, 2012

Figure 4.33: Illustrations of Chuping Valley New Development



Source: Perlis Strategic Development Plan Report, 2012

4.6.6 Pauh Putra Edu-City

Pauh Putra has been identified as the seat of higher learning and skill training in Perlis, with great potential to grow larger and to enhance its quality due to the increasing provision of leading-edge edu-structures and agglomeration economies. To meet the future human resource needs of the Perlis' high-income economy by 2030, it is imperative to focus on producing high-technology workers and top-notch entrepreneurs with innovative and creative ideas. Thus it is essential to build and foster close academia-industry collaboration to ensure the skills and knowledge acquired by graduates are able to meet the requirements of industry (i.e. employable). In addition, it is important to encourage edu-tourism, particularly from south Thailand, as a new source of revenue-earning and to boost economic growth. (see **Figure 4.34** and **Figure 4.35**)

On this basis it is proposed that the Pauh Putra Edu-City development consist of commercial, residential, public facilities and institutional components. In particular, the Pauh Putra Edu-City's high-impact projects include a new private university, a new trendy lifestyle town centre with a vibrant shopping street and a large landscaped public square, common facilities such as a sophisticated library with specialised books and supercomputer facilities, a technology park including Incubators and an R&D centre, and a private university campus.

Table 4.23: Impact of Pauh Putra Edu-City

Jobs	Investments (RM million)	Land Size (ha)
769	4,950	84

Figure 4.34: Illustration Plan of Pauh Putra Edu-City

Source: Perlis Strategic Development Plan Report, 2012

Figure 4.35: Illustrations of Pauh Putra Development

Source: Perlis Strategic Development Plan Report, 2012

4.6.7 Wang Kelian Tourism Town

Wang Kelian is a settlement located at the northeast of Perlis. Even though it is not a major urban centre and has limited available land for urban development due to its hilly terrain and reserve forest in its surrounding area, it has the potential to be developed as a tourism town.

As the second gateway to Thailand from Perlis, Wang Kelian is also the main entrance point to Perlis State Park and is located on the tourist trail from Satun – Wang Kelian – Sg Batu Pahat – Kuala Perlis.

To accelerate the tourism and economic growth in Wang Kelian Tourism Town, the following development components have been proposed: (see **Figure 4.36** and **4.37**)

- CIQ complex;
- Institutional use, especially for safety, security, administration and staff housing for public servants;
- Bazaar, shopping arcade and budget hotels;
- Food court; and
- Residential houses and local service centre.

Figure 4.36: Illustration Plan of Wang Kelian Tourism Town

Source: Perlis Strategic Development Plan Report, 2012

Table 4.24: Impact of Wang Kelian Tourism Town

Jobs	Investments (RM million)	Land Size (ha)
365	397	45

Figure 4.37: Illustrations of Wang Kelian

CHAPTER 5

SOCIO-ECONOMIC DEVELOPMENT STRATEGIES: IMPROVING THE QUALITY OF LIFE

5. SOCIO-ECONOMIC DEVELOPMENT STRATEGIES: IMPROVING THE QUALITY OF LIFE

5.1 INTRODUCTION

Any development plan must "develop" the people as much as the economy. While most of the Perlis Strategic Development Plan deals with the economic aspect, this part of the Plan would address the socio-economic issues that are considered to be of strategic importance: eradicate rural poverty, raise agricultural productivity, improve the level of competitiveness of SMEs and Bumiputera businessmen, minimise flood damage, and continue to address "obstacles" to the development process. The Plan would also seek to enhance the beneficial aspects of developmental programmes or increase the impact across the intended socio-economic groups.

The choice of programmes is based on the extent of the impact. Although only a small number of programmes have been proposed, the beneficial impact would cover a large swath of the lower socio-economic group of Perlis.

The socio-economic programmes would assist these sectors/groups in Perlis:

- Poor households: 1,327 households (587 hard core poor)
- Affordable Housing Programme: 2,000 units (1,832 squatters)
- BCIC/SME programmes: about 6,000 (5,920 entrepreneurs)
- Paddy Productivity: 8,000 farmers (beneficiaries of EPP programmes in Perlis)
- Flood mitigation: estimate 500 households

In total, there would be about 17-18,000 beneficiaries of the socio-economic programme of the PSDP. As there are 53,000 households in Perlis (2010), this means that the PSDP would benefit about one-quarter of all households in Perlis (refer **Table 5.1**).

Table 5.1: Socio-Economic Programmes for Perlis

Socio Economic Programme				
Poverty Eradication	**Increase Paddy Productivity**	**BCIC and SME Development**	**Housing Programme**	**Flood Mitigation**
• Three approaches to target the poor- by sector, household, and individual level • To find out why there is still a significant proportion of households that are poor, examine all available resources and personnel, and monitoring and evaluation programmes	• Improvement of irrigation intensity • Estatisation of paddy land • Adoption of technology e.g. Hybrid seeds, clearfield production system • Increment of productivity from 4-5 tonnes /ha to 8-10 tonnes /ha	• Expand the programme • Increase the fund size • Increase no. of 'sahabat' • Expand to other services : • Logistics, marketing, technology support, linkage with research institutions and universities • To grow beyond their micro-level status into larger firm operations.	• 1Malaysia Housing Programme Corporation (PR1MA) to build public housing • 2,000 housing units but build them over a 5-year period or 400 units per year • Selling price RM35,000 per unit • Hire-purchase RM550/month over 10 years • Hire-purchase RM350/month over 15 years	• Approved West Flood Diversion Channel will alleviate the current flood problems • The East Flood Diversion Channel has to be built • The diversion channel can be provided with additional features, including irrigation function, aquaculture activities, and recreational use
The socio-economic programme would assist these sectors/groups in Perlis:				
1,327 households	8,000 farmers	6,000 entrepreneurs	2,000 units	500 households

Note: Sahabat refers to Micro-credit borrower.
Source: Perlis Strategic Development Plan Report, 2012

5.2 POVERTY ERADICATION

Despite the decline, the number of poor households in Perlis had increased from 3,000 households in 2004 to 3,200 households in 2009 due to population increase.

Perlis had the second lowest mean household income in Peninsular Malaysia after Kelantan: the average household income was RM2,617 in 2009, an increase of 21.8 % over five years. Although the mean household income in Perlis increased more than the mean for Peninsular Malaysia between 2004 and 2009, it did not significantly reduce the relative incidence of poverty.

The State also recorded the highest incidence of moderate and severe under-nutrition among children aged under-five in 2008. It was estimated that 9.9% of the children aged

under five years are moderately under-nourished, compared to 5.8% for the whole country. In terms of severe under-nourishment of children aged under-five, Perlis reported 0.9% compared to 0.5% for Malaysia.

Based on the *e-kasih* definition of poverty, 2,912 households were below the mean per household PLI of RM760 while 521 households had a mean per household PLI below RM460. The majority of the low income households are large in size with 46% of households have between five and seven members. About 78.5% of the households are headed by persons aged between 16 and 65. Education attainment of household heads was generally low. 38% of household heads do not have skills while 16% have agricultural skills. Another 16% were reported to be good in house repair and maintenance. The rest are in various jobs: fisheries, cooking, construction, and motor mechanics. More than half of the household heads are salaried workers: 29% are self-employed while 12.9% of them are unemployed.

E-kasih has 353 poverty alleviation programmes in Perlis as shown in **Table 5.2**.

Table 5.2: Poverty Alleviation Programmes in Perlis

Type of Programmes	Number of Programmes
Economy	196
Social welfare	41
Soft skill training (Minda Insan)	42
Education support	39
Basic needs	26
Land and agriculture development	9
Total	353

Source: https://www.ekasih.gov.my/Semakan/Pages/CarianProfailBantuan.aspx

1. Recommendations

There are **three approaches** to target the poor:

Note: Sector targeting is to target the agriculture sector and craftsman (pertukangan rumah)

Three actions are recommended:

- Improve the quality and quantity of education, training, skill development, productivity, housing, and entrepreneurship development among poorer section of the community;
- Government should examine all available resources and personnel that can help target the poor so that they can be assisted more directly; and

- A more comprehensive monitoring and evaluation programme with more participatory and community based development approaches should be implemented.

Table 5.3: Measures / Programmes for Each Targeting Level

Targeting Level	Sectoral Level	Household Level	Individual Level
Measures/ Programmes	• Creation of new jobs and investment in ○ agri-food, ○ manufacturing, ○ tourism, ○ trading, ○ services, and ○ education sector	• Affordable housing programme ○ open to poor families ○ repayment is structured to be self-sustaining and modest due to government involvement • Agricultural schemes	• Associated with welfare payments • BCIC programmes, e.g. AIM

Source: Perlis Strategic Development Plan Report, 2012

5.3 INCREASE PADDY PRODUCTIVITY

Perlis is an agricultural State, and agricultural land use accounts for 60% of its total area (see **Figure 5.1**). The two major crops in Perlis are paddy and sugar cane. As such by improving the productivity of both crops it would increase the total output from this sector.

Between 1982 and 2000, the number of farmers declined from 23,400 to 16,000, and further declined between 2001 and 2010, from 15,300 to 10,300. The attrition has been both long term and continuous in the past 10 years.

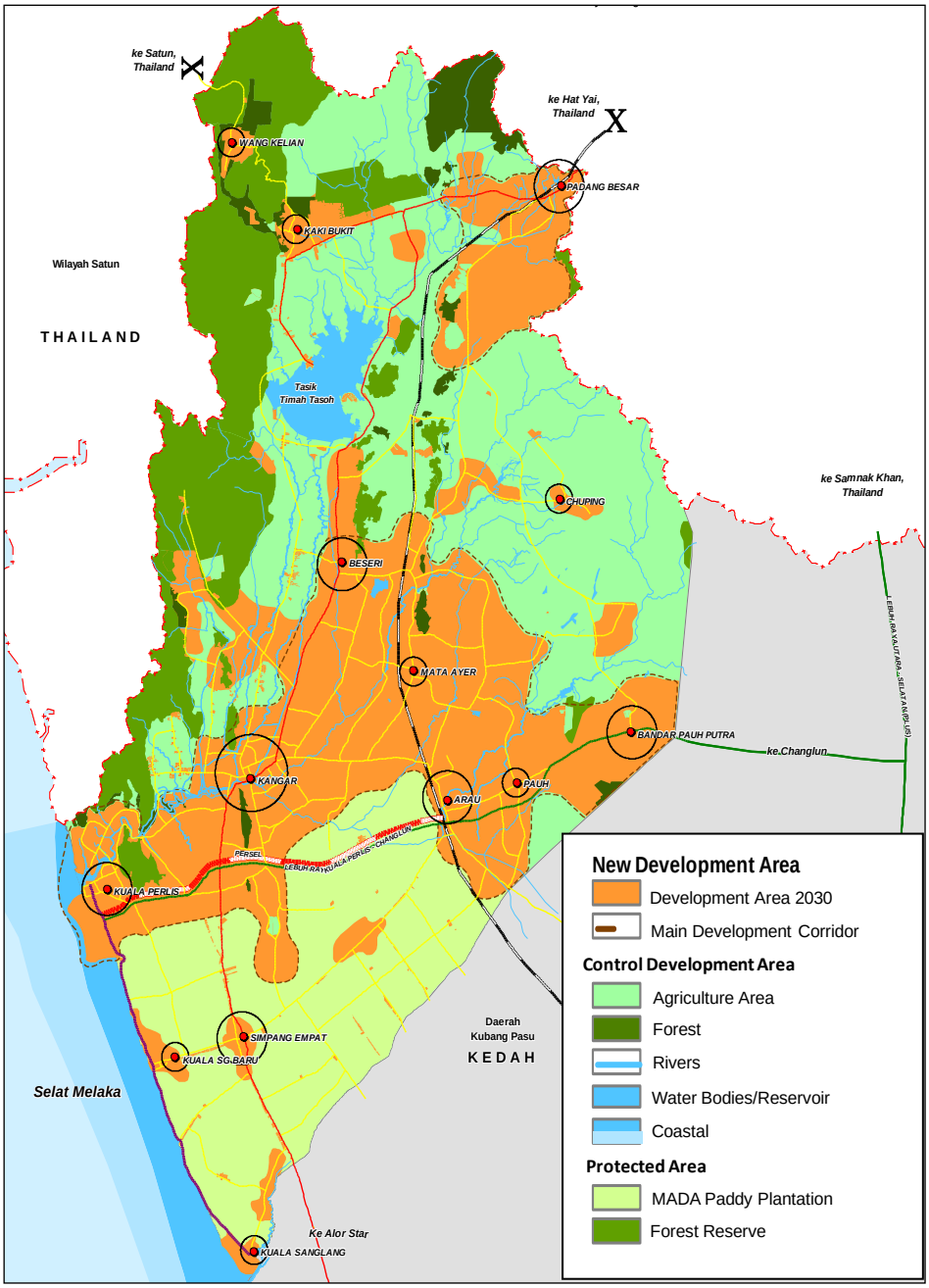
Paddy sector in Perlis is estimated to involve about 8,000 farmers occupying about 16,000 hectares or an average of about 2 hectare/farmer. Using the average farm size as a guide, the estimated farm income is about RM10,000 annually.

Paddy farm productivity in Perlis has been hampered by small size farms and farm fragmentation due to the second generation (*faraid*) problem. Farming is becoming a secondary occupation, as farmers can procure services. The other main cause of outmigration from farming is the success of the education system, whereby the educated seek employment in better paid jobs. Given this trend, the share of off-farm incomes has risen. Concomitantly, private investments in farms have dropped to the point where it affects poor crop establishment, non-optimal application of pesticides, poor fertiliser management, and high harvesting losses.

Paddy farming is a highly subsidised activity and has continued due mainly to the government support to the agricultural sector generally and the paddy sector more specifically. The government has invested in developing and improving irrigation systems,

seed technology, fertiliser subsidies and price support programmes. In this regard, the government sees value in ensuring that the industry survives.

Figure 5.1: Land Use Map of Perlis



Source: Perlis Local Plan, 2015

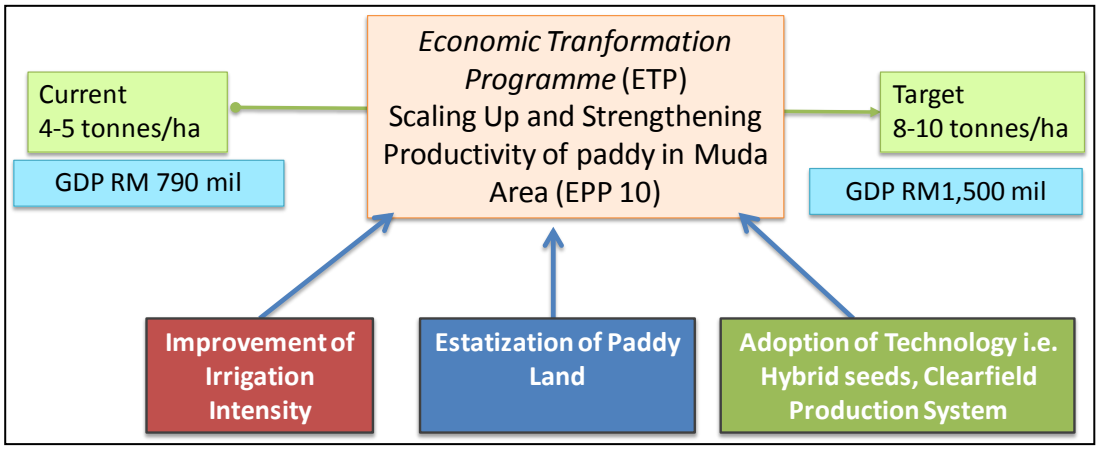
Any effort that would enhance the productivity of the paddy sector could provide huge gains to the farmers and uplift their socio-economic status. In this regard, the ETP has one particular entry point project, which is to upscale and strengthen the productivity of paddy production in the MADA area. **Figure 5.2** shows the EPP graphically.

The ETP target is to raise the average productivity of the farms from 4 tonnes per hectare to 8 tonnes. This can be achieved by addressing the key ground level problems, viz. improvement in the irrigation intensity, estatisation of the paddy farms, adoption of hybrid seed technology and other production systems.

The production of rice hybrids has been successful in other countries (e.g. in China) as such hybrids can increase yields by 15% to 20%. Attempts are being made by MARDI to evaluate whether or not certain varieties can be adopted in Malaysia, especially in the granary areas.

If combined with other high value-added crops (e.g. mangoes and mushroom) and farm activities (livestock), it is possible that farm incomes from the entire agricultural sector can be improved significantly. This Strategic Plan has several project proposals to increase farm output. The economic benefits of such a programme are expected to be large. In fact, it is estimated that it could double the sectoral GDP of the agricultural sector.

Figure 5.2: EPP for Paddy Plantation



Source: Perlis Strategic Development Plan Report, 2012

1. Recommendations:

The goal is to double the productivity of paddy farms in the MADA area. This Plan proposes various new agri-food projects that would result in shifting towards high value added farming activities (refer **Chapter 3, Section 3.1 Agri-food**).

It is proposed to address the key issue of freeing up land where it is not used productively and to reallocate the land to farmers who are willing to invest and raise the overall productivity. Such land matters are sensitive because of the legal and institutional characteristics of farming. Hence, land markets have not developed as fully as they should be. It is therefore important to develop a more efficient land market so that both the owners and the farmers would jointly benefit (win-win).

5.4 BCIC AND SME DEVELOPMENT

SMEs in Perlis are mainly micro-type establishments, defined as establishments with fewer than 5 workers. About 93% of all SMEs in Perlis belong to the micro category compared to 79% for the nation as a whole. As such, the key character of Perlis SMEs is that they are extremely small enterprises operating on a family basis catering to local needs, and sometimes at subsistence levels. In 2005, there were 5,920 SME establishments in Perlis.

Table 5.4: Types of SMEs in Perlis and Malaysia

SMEs	Micro	Small	Medium	Total SMEs	%
Perlis	5,549	340	31	5,920	1.1
Malaysia	434,939	100,608	12,720	548,267	100.0

Source: Tabulation based on DOS (2005) Census of Establishments and Enterprises

The SMEs are largely concentrated in two sectors: services and agriculture. In the services sector, retail and restaurants account for 71% of all service firms. In the agricultural sector, 92% are in farming. By focussing assistance in these sectors would help change a large segment of Perlis SME.

Furthermore, about 25,000 or 30% of all workers in Perlis are self-employed or unpaid family workers. When compared to the national average of less than 20%, this proportion is fairly high.

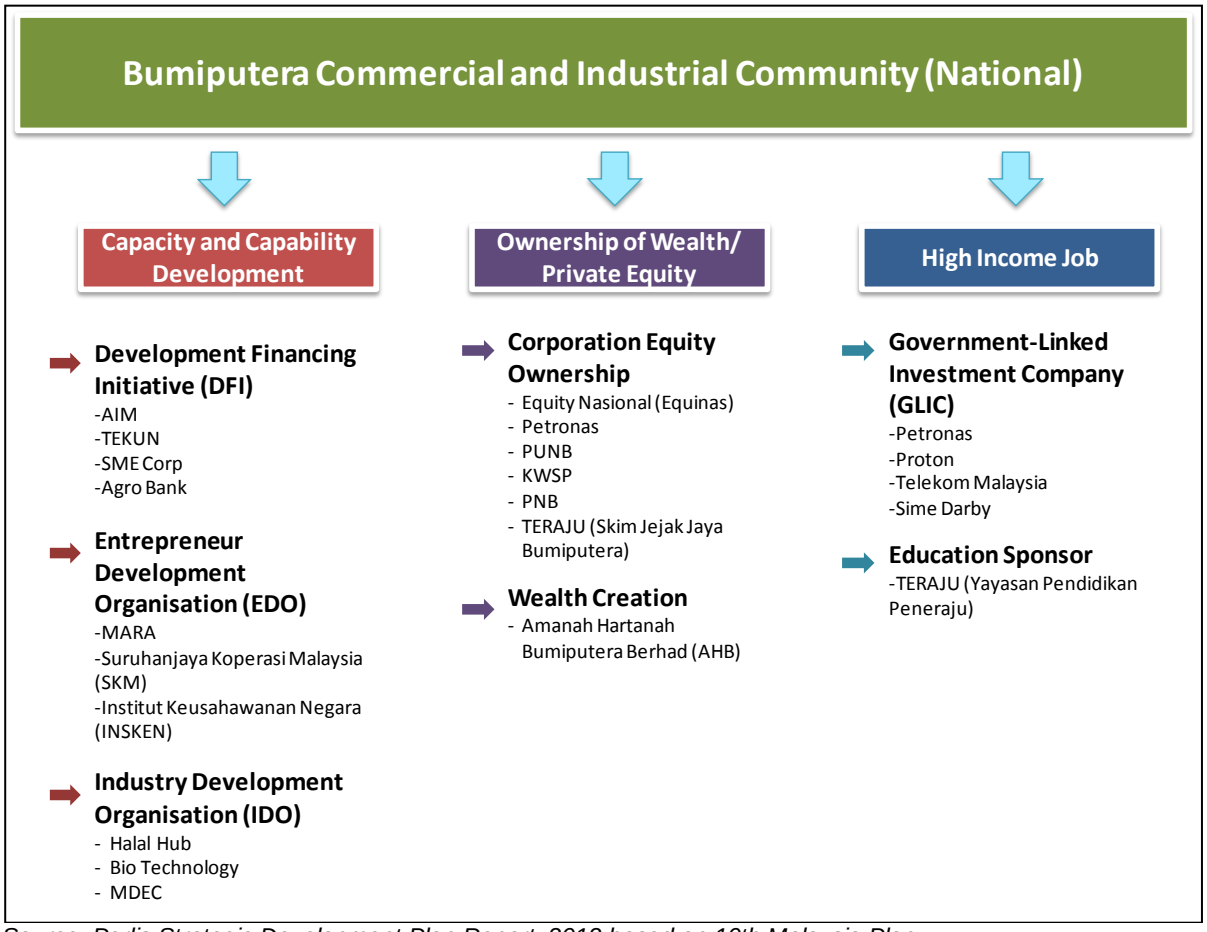
The economic character of micro level establishments is well known, especially in the nature of the industries that are most prevalent in Perlis. Several successful entrepreneurs from the list of institutions providing support, such as AIM and TEKUN, mentioned that reflecting on their growth, the average SMEs are limited by

- size,
- low capacity to utilise technology,
- local market reach,
- poor financial resources ,
- lack of innovative capability,
- absence of private sector support (i.e. even though there appears to be a demand for services (technology, financial, markets).)

Hence their dependence on external support and guidance is much greater than that of larger firms and government programmes to support the BCIC are extremely necessary.

The main BCIC programmes for Malaysia are grouped into three major components: (i) Capacity and Capability Development; (ii) Ownership of Wealth/ Private Equity; and (iii) High Income Job as shown in **Figure 5.3**.

Figure 5.3: BCIC Programmes and their Components



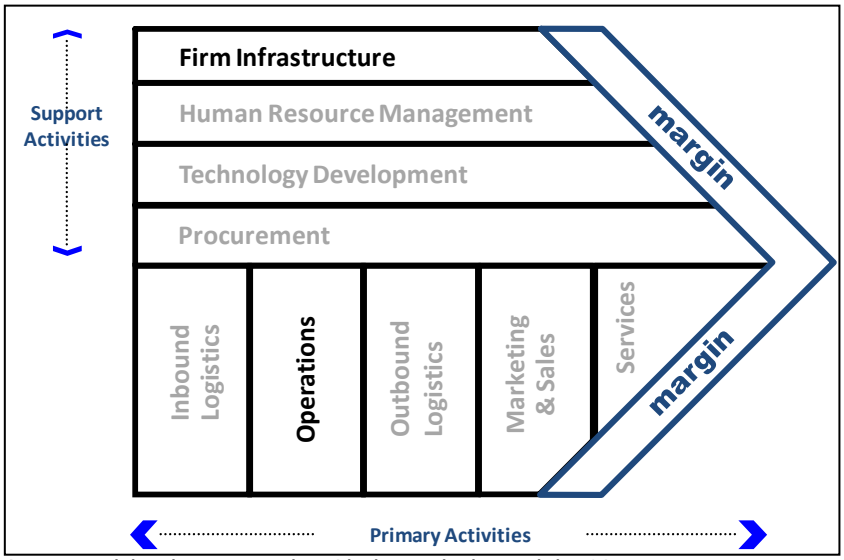
Source: Perlis Strategic Development Plan Report, 2012 based on 10th Malaysia Plan

However in Perlis, only the "Capacity and Capability Development" component is available. The other two components are either too weak or not present at all. The key institutions that provide the two support programmes are the large GLCs.

Analysing the programmes in Perlis via a value chain model (**Figure 5.4**) shows that they are concentrated within a narrow range of support. The focus of the support is mainly on the operational side, which is usually in grants or subsidies to procure equipment and machines. In terms of supporting activities, the support consists of loans and financial support. Often there would be several agencies providing financial grants and loans.

Thus it appears that a broader approach to BCIC programmes is necessary. Programmes should cover the entire range of the value chain so that they provide the basis for SMEs and the entrepreneurs to receive support at various levels of their growth and development. It is found that such an overview is absent because agencies act on their own mandate without the benefit of collaboration with each other. **Figure 5.5** shows the main activity support areas: (in-bound) logistics, operations, outbound logistics, marketing and services.

Figure 5.4: Value Chain Model: Analysis of BCIC/SME Programmes



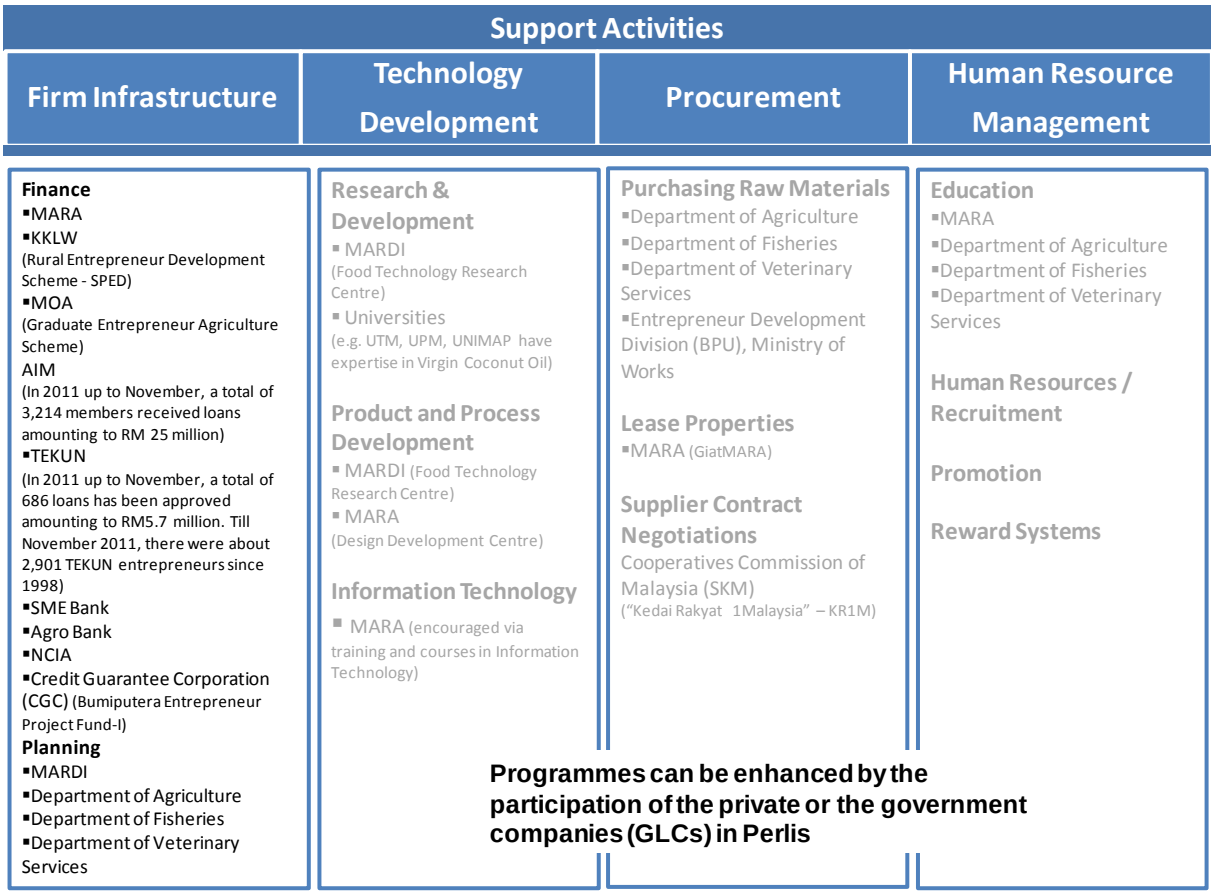
Source: Michael Porter, Value Chain Analysis Model, 1985

Figure 5.5: Programmes in the Main Activity Area and their Gaps in Perlis

Primary Activities				
Inbound Logistics	**Operations**	**Outbound Logistics**	**Marketing & Sales**	**Services**
Warehousing -Department of Agriculture (Workshop at Wang Kelian) **Management / Basic Material Handling** - Department of Veterinary Services - Department of Agriculture - Department of Fisheries **Inventory Control Transportation**	**Machine Tools** - KEMAS -(Rural Economy Support) - MARDI - Department of Veterinary Services - Department of Fisheries - Department of Agriculture **Packaging** ▪ FAMA (1Malaysia Best) ▪ MADA (grants) ▪ SMIDEC (grants) **Testing** -MARDI (Food Research Centre) **Assembly** **Maintenance**	**Warehousing** **Transportation** **Management Purchasing**	**Advertising** ▪ MARDI ▪ FAMA (*1Malaysia Best*) ▪ SEDC (One District One Industry) **Promotion** ▪ MADA ▪ FAMA (Agromas brand and 1Malaysia Best) ▪ SEDC (One District One Industry) **Marketing** •FAMA (AgroBazaar K-Shoppe) **Price Allocation Management Marketing Resources**	**Customer Service**
Programmes can be enhanced by the participation of the private or the government companies (GLCs) in Perlis				

Figure 5.6 shows the gaps in the supporting programmes. Most of the programmes that could be identified as important for SMEs are focussed on the financial side.

Figure 5.6: Programmes in the Supporting Activities and their Gaps



1. Recommendations:

i) Expand programme to increase their reach to more entrepreneurs and SMEs.

This will entail increasing the AIM fund size by five times from RM20 million to RM100 million over the next 20 years. Their "*sahabat*" base could increase from the current 3,000 to 12,000. Doing this gradually would ensure their growth is based on their programme strengths, which inculcates business viability, sustainability, and collective support by their network, while giving them a basis for growth. AIM can expand their planning programme to look into how to grow their micro-level establishments into small and medium sized enterprises. They could also undertake evaluation on a systematic basis and try to expand their capacity-building programmes amongst the entrepreneurs. They are already doing this but this activity needs to be scaled up if their programme is to be expanded.

ii) Expand the other services so that more comprehensive SME and BCIC support programme could be put in place in areas such as logistics, marketing, technology, linkage with research institutions and universities.

These are key areas that would enable the SMEs to grow beyond their micro-level status into larger firm operations. The SME Corp is the logical institution to coordinate such activities because they have a dedicated role in developing SMEs. Other institutions have their specific roles, but it is proposed that they coordinate their programmes together to achieve a greater overall effect.

iii) More concerted effort to develop Bumiputera entrepreneurs who can grow into larger firms.

The TeraS programme, that was jointly launched by TERAJU-PEMANDU in July 2011, aims to develop Bumiputera entrepreneurs in the 12 NKEA sectors into world-class entrepreneurs. A RM2 billion facilitation fund has been set up. From that amount RM100 million has been allocated for the development of Bumiputera companies in the Northern Region. For this purpose, TERAJU has established a one-stop centre in Penang.

To qualify for this programme firms must have fulfilled certain minimum conditions, e.g. proof that they are not solely reliant on government contracts, preferably hold a minimum 3-star SCORE (SME Competitiveness Rating for Enhancement) rating, possess a favourable credit rating as assessed by Credit Bureau Malaysia and must demonstrate capability to be profitable and to grow significantly. This means that the SMEs will need to scale up and accelerate their growth to successfully compete in the mainstream economy. Such a programme, although highly selective, would be extremely useful to develop a class of very enterprising Bumiputera who can be the pillars of the private sector in Perlis.

5.5 HOUSING PROGRAMME IN PERLIS

UPEN Perlis has indicated that there is a squatter problem in Perlis that must be resolved as part of the social equity objectives of the State. A survey had been carried out recently, and the number of squatter units was estimated to be 1,832. The distribution of the squatters by their location is shown on **Table 5.5**. The housing programme should be expanded beyond squatters, as there is a demand for low cost houses. In this regard, there is a current Federal policy known as PR1MA or Perumahan Rakyat 1 Malaysia, which is to construct affordable housing for the people.

PR1MA has a concept of 1Malaysia Housing Programme Corporation plans and coordinates the building of affordable housing units across the nation on land provided by State governments.

These units would then be distributed to those who are eligible for such housing. The eligibility criteria are available on the web[1]. Among the criteria, the most notable is the applicants' monthly household income should not exceed RM7,000.

The initial rollout of the PR1MA programme is in Klang Valley and Seremban. The programme envisages 42,000 housing units in 20 strategic locations. The cost of these homes is estimated to be between RM150,000 and RM300,000. Buyers must stay for a minimum of 10 years before the housing units can be resold.

Table 5.5: Number and Distribution of Squatter Housing Units in Perlis

Planning Block	Location of Squatters	No. of Units	Land Area (Acres)
BP1	Kuala Perlis	1,097	80
	Bintong	23	2
	Titi Tinggi	344	25
BP3	Indera Kayangan	54	4
	Sena	4	
	Santan		
	Beseri	56	4
BP4	Sanglang	131	10
	Tambun Tulang	67	5
	Total	1,832	130

Source: Unit Perumahan & Kerajaan Tempatan, Kawasan Setinggan Utama, Perlis

1. The Key Issue(s):

- How much would a low cost housing unit in Perlis cost?
- What is affordable (hire-purchase)?
- What kind of housing solution is possible? (lease, hire-purchase, purchase)

A key issue is the price of low-cost housing. A price of RM25,000 per unit was set many years ago. With inflation, the average price of a low cost housing unit has risen.

2. The Current Practice

The usual solution has been to depend on the private sector to provide low cost housing, so that they can ease the housing shortage problem. This strategy is not the best one. This is because the private sector will find ways to deliver a product that is suited to the price, rather than deliver the solution as is required.

[1] see http://pr1ma.net/eligibility/

Low cost houses are built by private sector developers to ease the housing shortage problem. These developers are able to provide low price housing by using cheap building materials. Therefore, most of these low cost houses are of poor quality, small, costly to maintain, of poor infrastructure and problematic to its occupants. The reason for this poor record is that they are saddled with a problem which is truly the government's responsibility to solve.

3. The Proposed Solution

It is proposed that the State government ask the 1Malaysia Housing Programme Corporation (PR1MA) to build public housing in Perlis. This would cater not only to the squatters but also to those who need housing and quality living. The issue is not merely to create housing but to create a comfortable living environment in which the poor and needy can live.

The 1Malaysia Housing Corporation (1MH-Corporation) would need to ensure the following:

1. Design and construction of quality housing within a certain budget,
2. Calling of contracts and supervising the building of public sector housing,
3. Managing and maintaining the public housing in order to ensure they deliver quality housing services to their constituents.

In this regard, the housing programme should start with the 2,000 housing units but build them over a 5-year period or 400 units per year. It is assumed that the 1MH-Corporation can access financing at low levels (i.e. 4% p.a.). The low interest loans over a 10 or 15-year period are the sovereign loans available to the Finance Ministry.

Instead of using the housing prices set by PR1MA, the PSDP proposes to use RM35,000 as the price limit as set by the Perlis State Secretariat.

An estimate of about RM70 million would be required. The period of borrowing would be for 10-15 years to enable the 1MH-Corporation to build and sell the units, and then to repay the loan. The 1MH-Corporation would have an operating budget of RM100,000 annually (with 10% inflation) to pay for office, staff and its administration.

Given this level of financing, the 1MH-Corporation would be able to offer housing to resettlers in various forms, viz.

- to purchase the property outright,
- to purchase under a mortgage scheme, or
- to just rent and stay.

These various options would require the potential occupants (or tenants), to pay the following rates:

- Hire-purchase RM550/month over 10 years
- Hire-purchase RM350/month over 15 years
- Purchase RM35,000

Under these repayment rates, assuming there is no default, the housing programme for Perlis can successfully be achieved, and the housing problem can be resolved through dedicated but subsidised financing from the Federal government (Treasury) and land provided by the State. It is important to note that this housing programme is completely self-financed but requires substantial government involvement, including managing mortgage payments and sustaining the programme over the mortgage period.

In terms of land requirements, a total of 130 acres of land would be needed to resettle the squatters (see **Table 5.7**). Another 12 acres is needed to cater to the other demand of 168 units of housing (non-squatter). A total of 142 acres of land is needed to cater to the housing programme under this Plan.

5.6 FLOOD MITIGATION

To provide full protection from floods, the East Flood Diversion Channel is proposed. The recently approved West Flood Diversion Channel will alleviate the current flood problems in Perlis but will not provide complete protection as it caters for excess flow only from the Timah Tasoh dam and the dam's upper catchment. The East Flood Diversion Channel will be able to cater for the remaining catchments that do not flow into the Timah Tasoh Dam.

The diversion channel can be provided with additional features to increase its value. These will include:

- Irrigation functions to provide water during dry seasons and drain water during wet seasons for agricultural activities, including paddy.
- Aquaculture activities in areas in the vicinity of the canal as well as possibly within the canal itself, although water quantity and quality issues need to be addressed.
- Recreational use, as the water body in the canal can be an attraction for the public and can be used for water-based activities.

It also noted that apart from these diversion channels, JPS carries out many other drainage (and irrigation) projects, which include river improvement, local drainage schemes, and other flood mitigation schemes in Perlis. JPS Perlis also maintains and operates the Timah Tasoh dam. These supporting projects will also need adequate funding and will complement the major flood diversion schemes proposed in this Plan.

It is estimates that 500 households would be likely to benefit from the flood mitigation scheme based on ground observations.

5.7 YOUTH DEVELOPMENT POLICY

A key goal of development strategy involves improving the economic and social prospects for the people of Perlis, particularly its youths. The State has suffered an outmigration of its young labour force in the 1990 to 2000 period. Since 2000, the largest growth rate of the population has come from the 15-19 age cohorts, mainly due to student enrolments in the 12 institutions of higher learning. More than 8,000 graduates pass out from these institutions every year. If they can find work in Perlis, then they are likely to stay back to work; if not, they migrate to other urbanised regions. The PSDP's accelerated development of the Pauh Putra Edu-City as well as the Technology Park associated with it would create sufficient jobs to ensure the retention of highly trained youth.

Another key issue is youth unemployment. The single most effective way to break this vicious cycle is to upgrade work-related skills, productivity and wages among youths in poorer households. These should be based on a thorough assessment of the training needs of these youths and the actual skill-sets needed by investors. Training programmes should involve schools, post-school skill centres, private firms, and in the case of social issues, ground-level NGO's. Relevant, lively programmes, including work-shops and internships will encourage more local youths to be active participants and beneficiaries of the five economic growth sectors targeted under the PSDP.

Another programme would be to expand and intensify the BCIC/SME programme in the State provide opportunities for potential young entrepreneurs, who can help expand the SME base while benefitting from a wider industrialisation strategy.

5.8 KEEPING PERLIS GREEN

The PSDP can also be regarded as a plan that targets sustainable development because it has key elements that promote green growth.

First, Perlis conjures up the image of an idyllic, clean and green State. With almost three-quarters of its land devoted to agriculture, and its low population density, the reality is in line with its image. The State can capitalise on this advantage. A clean, green State not only provides a healthy, high quality of life, but can be a selling point for eco and sustainable tourism, particularly of the type that spreads benefits to rural villages ('bed and breakfast' lodges), small towns (budget hotels) and SME's (tours, restaurants, transport).

Additionally, the State is also promoting green growth projects. In particular, a solar project proposal has been received and the State is currently facilitating its implementation. Perlis has also signed on a wind power project with SIRIM. There is also the plastic-to-fuel project that will recover waste and convert it into energy.

Among the agri bio-tech projects is a proposal to utilise agricultural waste as raw material for mushroom farming. This project will require a highly controlled environment that produces mushrooms as high value natural food, snack food and for the Halal food market.

In addition to these ‘green’ projects, improvements to drainage, housing, public transport and waste disposal, have been recommended under the PSDP. Similarly, the proposed Perlis River Promenade, Wang Kelian Tourist Town, and Kuala Perlis Maritime Terminal also exploit the State’s natural assets while improving the environment.

The PSDP will leave the natural beauty of Perlis intact, including the iconic limestone hills as well as a Nakawan Range that provides a scenic backdrop to the allure of the State. In this regard, the State will be able to utilise these green assets to pursue development in a sustainable way.

CHAPTER 6

STRATEGIC POLICIES AND PROGRAMMES

6. STRATEGIC POLICIES AND PROGRAMMES

6.1 INTRODUCTION

This Chapter discusses five (5) policies and programmes considered to be of importance to the implementation of the economic component of the PSDP. They are:

1. Investment incentives that can contribute towards attracting investors to Perlis;
2. Removal of some land constraints, e.g. Malay Reserve Land (MRL), in order to attract investors;
3. Building the capacity of key government institutions in Perlis and strengthening institutions for better service delivery and a business friendly environment;
4. A sustainable level of government financing to support the development initiatives being considered; and
5. A regional development strategy that will enable Perlis to cooperate with its neighbours to form a larger and more competitive entity.

The first three relate to creating a more investor-friendly environment in Perlis. The fourth is aimed at building up State government finances, and the last is to build regional alliances in order to be more competitive. The various sub-sections provide justification and rational for these policies.

6.2 RATIONALE FOR INVESTMENT INCENTIVES

Investment incentives are necessary to stimulate economic development in the developing world. The belief extends to the private sector as being the prime mover in generating economic growth, based on investment and entrepreneurship.

It is recognised that past efforts in investment promotion for Perlis have not worked well. It is important to note that for the PSDP, investments, both public and private, are vital for its success. In this regard, the PSDP needs to create an investment climate conducive for the private sector to take over the government's current role as the main engine of economic growth.

Investment incentives are needed to compensate for market failures or certain cost disadvantages. For instance firms would incur higher cost of transport as Perlis is located far from the main domestic or export markets. The following are proposed:

- Promote value-added features to new and existing industries; transform and expand the target economic focus areas – agriculture, manufacturing, tourism, education and logistics;
- Commit to growth with social equity by introducing programmes that accelerate growth in the targeted economic areas such as the BCIC and SMEs; and
- Enhance public and private sector participation (PPP) - private sector-led and driven by market imperatives.

6.2.1 Financial Incentives

Tax incentives, both direct and indirect, are provided for in the Promotion of Investments Act 1986, Income Tax Act 1967, Customs Act 1967, Sales Tax Act 1972, Excise Act 1976 and Free Zones Act 1990. These Acts cover investments in the manufacturing, agriculture, tourism (including hotel) and approved services sectors as well as R&D, training and environmental protection activities.

There are two generic types of tax incentives:

1. **Direct tax incentives** grant partial or total relief from income tax payment for a specified period, and
2. **Indirect tax incentives** come in the form of exemptions from import duty, sales tax and excise duty.

The main direct incentives are pioneer status (PS) and investment tax allowance (ITA). The Pioneer Status is for promoted companies, e.g. those producing high-technology products (100%) or those in knowledge-intensive activities or "Strategic knowledge–based status". Alternatively, the ITA is designed for projects with large capital investment and long gestation periods; it is usually 60% of qualifying capital expenditure incurred within a five-year period.

Financial incentives proposed for Perlis to encourage companies to undertake promoted activities in Perlis include tax exemption, soft loans, grants, venture capital funding, and flexible land lease arrangements at the discretion of the State Government.

The recommendations set out below are over and above the existing set of incentives offered by MIDA. As a matter of policy, they will have to be assessed by the relevant agencies and undergo due process of review by the Government.

6.2.2 Proposed Financial Incentives for Promoted Sectors in Perlis

1. Agriculture

- To strengthen national self-sufficiency for agricultural produce - reduce the dependency on imported food materials and address food security issues
- To become Malaysia's modern food zone and increase the country's efficiency in food production
- To enable trained and experienced agronomists to set up modern farming SMEs
- To encourage large corporations to undertake promoted agricultural activities

Proposed Incentives
• PS - 100% tax exemption, 10 years (*Pioneer period to commence the year the companies are taxable) • ITA - 100% qualifying capital expenditures (CAPEX), 10 years • Reduction of import duties, sales tax and stamp duties, initial 5 years

2. Tourism

- To promote projects with large capital investment and long gestation.
- To promote Perlis as a premier tourist destination offering high quality and value for money experiences
- To reduce the cost of doing business in Perlis

Proposed Incentives
• PS - 100% tax exemption, 10 years (* Pioneer period to commence in the year the companies are taxable) • ITA - 100% qualifying CAPEX, 10 years • Exemption on import duties & sales tax - for materials used for construction, first 5 years • Stamp duty exemption - on land acquired for development under the PSDP

3. Manufacturing and Processing

- To promote and concentrate the location of industry clusters to generate extensive linkages, and have significant impact on the local economy.
- To expand and upgrade current predominant manufacturing and processing into higher value-added activities
- To promote the growth of new industries which are sustainable and financially viable
- To encourage investments in new and ground-breaking areas such as biotechnology and agribusiness

Proposed Incentives
• PS - 100% tax exemption, 10 years (* Pioneer period to commence in the year the companies are taxable) • ITA - 100% qualifying CAPEX, 10 years • Reinvestment allowance (RA) - 100% on qualifying capital expenditure incurred by the companies for 10 consecutive years from the first year of reinvestment. • Factory building incentive - government to build and lease factory, cost to be amortised via lease within a specified period of investment • Exemption from import duties, sales tax and stamp duties, initial 5 years

4. Free Trade Zone

- To promote export-oriented projects with large capital investment

Proposed Incentives
• PS – 100% tax exemption • ITA – 100% qualifying capital expenditure

5. Education & Employment

- To prepare knowledge workers in the fields required by key drivers
- To encourage research in the fields of new technology and development
- To provide financial assistance to entrepreneurs and companies - encourage the creation and the development of new and existing companies involved in the promoted sectors

Proposed Incentives
• PS - 100% tax exemption, 15 years • ITA - 100% qualifying CAPEX, 15 years • Employment tax credits – to companies for hiring of local workforce • Double Deduction - R&D expenditure • Grants and special funds for BCIC & SMEs - fund to train Malaysian citizens, maximum RM1mil

6. Urban Development & Logistics

- Necessary to fast-track projects that are strategic and important
- Promote Perlis as a centre for regional connectivity and a centre for processing

Proposed Incentives
• PS - 100% tax exemption, 10 years (* Pioneer period to commence in the year the companies are taxable) • ITA - 100% qualifying CAPEX, 10 years

7. Non-Financial and Other Incentives (Federal Government)

Recommended Incentives	Ministry/ Agency
• Allow foreign workers – provided that 30% unskilled workers must be sourced locally	• Ministry of Home Affairs and Ministry of Human Resources
• Freedom to source for knowledge workers globally	• Department of Immigration/ Talent Corp
• Special programmes for entrepreneur and BCIC development	• MOF and MITI
• For the Tourism Sector - Electricity tariff review for hotels similar to manufacturing	• Ministry of Energy, Water & Communications

8. Proposed Financial Incentives for the Perlis State Government

Promoted Sector	Recommended Incentives	Rationale
• Agriculture – Crops, Livestock, Aquaculture	• 30-50% reduction of land conversion premium	• To encourage large corporations to undertake promoted agricultural activities
• Tourism	• 30-50% reduction of land conversion premium	• To promote projects with large capital investment and where long gestation period is involved
• Manufacturing & Processing	• 30-50% reduction of land conversion premium	• Encourage investments in new biotechnology and agribusiness

6.3 FREEING UP LAND WITH CONSTRAINTS

6.3.1 Malay Reserve Land in the Key Urban Nodes

The Perlis Reservations Enactment 1353 is the legislation that provides for the restrictions of dealings on Malay Reserve Land or MRL. Under this Enactment, MRL cannot be charged or leased to anyone who is not Malay or Siamese as defined in the Enactment. Such land cannot also be alienated, sold, leased or disposed to non-Malay or non-Siamese persons. However, certain institutions are allowed to have dealings on MRL, and these are listed in Schedules C (cooperatives) and D (financial and commercial institutions) of the Enactment. All dealings contrary to the provisions in the Enactment shall be null and void. As such, these restrictions effectively create a special land market for MRL, where non-Malay and non-Siamese are excluded.

Currently, a substantial part of the western half of Perlis is under Malay Reserve Land status. **Figure 6.1** shows the approximate MRL boundary in Perlis, which amounts to 36,500 ha or 45% of the total State area. Land around Kangar, Kuala Perlis, Beseri, Simpang Empat and

Kuala Sanglang is under MRL status. Urban nodes in Arau, Pauh and Padang Besar / Chuping Valley to the east of the State are outside the MRL areas.

The MRL status adversely affects the market value and the marketability of such lands. There were several instances of land developed by the SEDC in Kuala Perlis that were difficult to sell while there was another instance of a Hypermarket (Tesco) that had wanted to open a facility in Kangar, but was hampered by these restrictions.

Such a situation can also jeopardise the implementation of the Perlis Strategic Development Plan, especially urban development projects located on MRL land. Urban development nodes are particularly susceptible to restrictions imposed by the MRL and it may be expedient that such lands are released from these restrictions.

1. Solution within the Law

The Perlis Malay Reservation Enactment (Section 4) allows for the degazettement of Malay Reserve Land by the State Council. The Federal Constitution (Article 89), however, requires replacement of land similar in size and character as the MRL that would be degazetted. This is to ensure that the total area under MRL in the State remains the same.

Various State governments have used this route to replace MRL in areas that are critical to development, so that the public or private sectors can have access to these areas. For instance, MRL land in Langkawi that was degazetted has been replaced with land in Pendang. It is all the more important to do it now, as it would be more onerous and expensive once the land is built up.

2. Potential areas in Perlis where replacement may be required

The Perlis Strategic Development Plan has identified a number of key urban focal areas around Kangar and Kuala Perlis that are encumbered with the restrictive provisions of MRL, which adversely affect the urban expansion of these towns. Ideally, all town land within the Urban Growth Limits identified in the Local Plan should be excluded from Malay Reserve status. Some of the projects identified in the PSDP include the Kangar Maya Urban Development Project (274 ha) and the Kuala Perlis Maritime Terminal Project (56 ha) (see **Figure 6.1**).

There are also proposals for land reclamation in the offshore areas of Kuala Perlis for the development of a Maritime City and the Maritime Terminal. It is imperative that all reclaimed lands are not encumbered by the MRL restrictions if the project is to be viable.

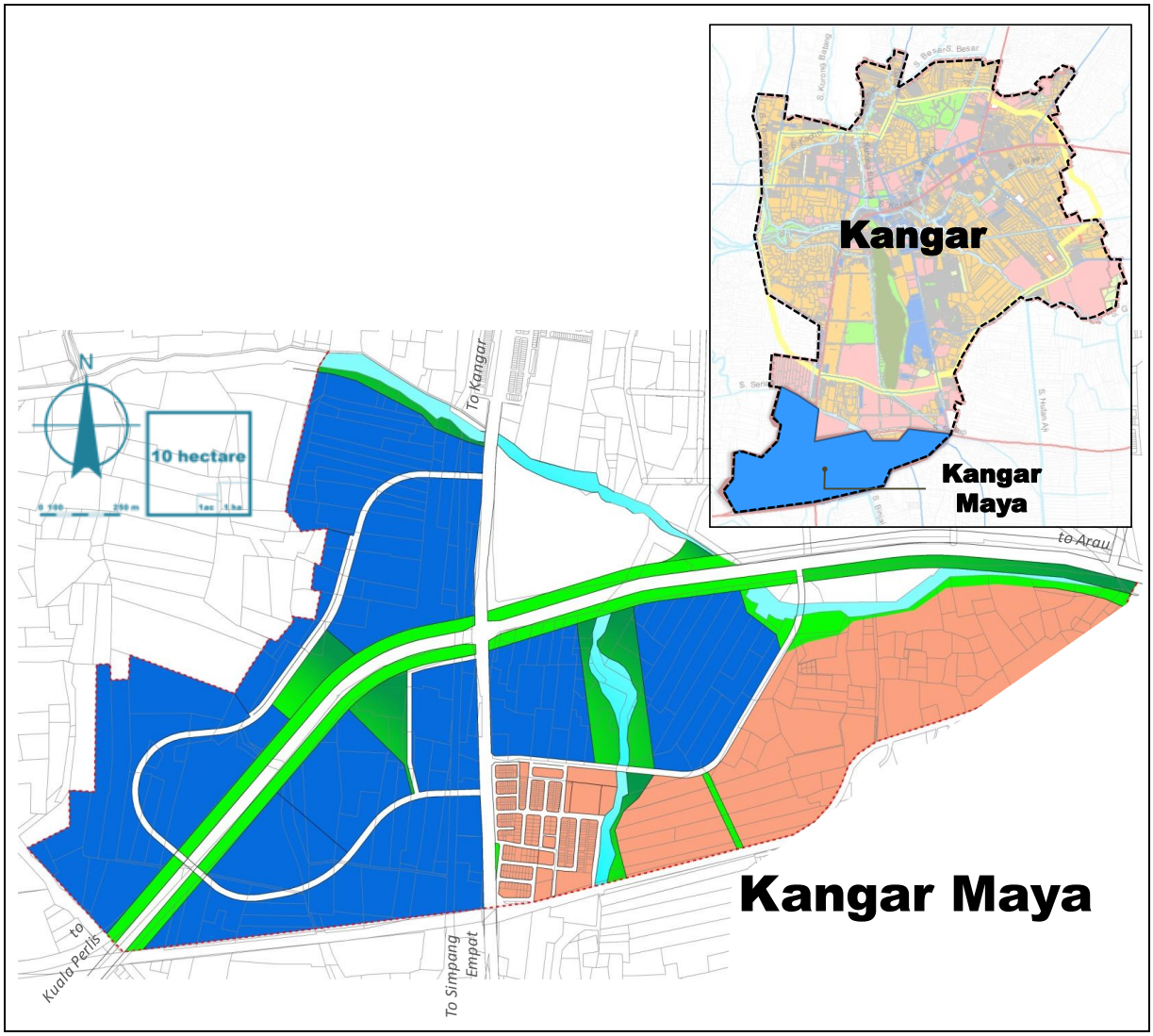
The State PTG is currently preparing a policy paper to this effect to obtain an early decision on the matter from the State Government. The Plan supports such an initiative, as it would have a beneficial impact on the strategic lands in the proposed development site and focal node.

6.3.2 Policy Review on Forest Reserve Land

The proposed development of a tourism town in Wang Kelian will encroach onto Forest Reserve Land. Under the National Forestry Act 1984 the State Authority has to replace such land by setting aside a new permanent forest reserve land of equal or greater area if it wishes to develop existing permanent forest reserve land.

It is estimated that approximately 56 ha of land is required for the development of the Wang Kelian Border Town (see **Figure 4.28**).

Figure 6.1: Malay Reserve Land



Source: Perlis Strategic Development Plan Report, 2012

6.3.3 Development Land in the Padang Besar SEZ

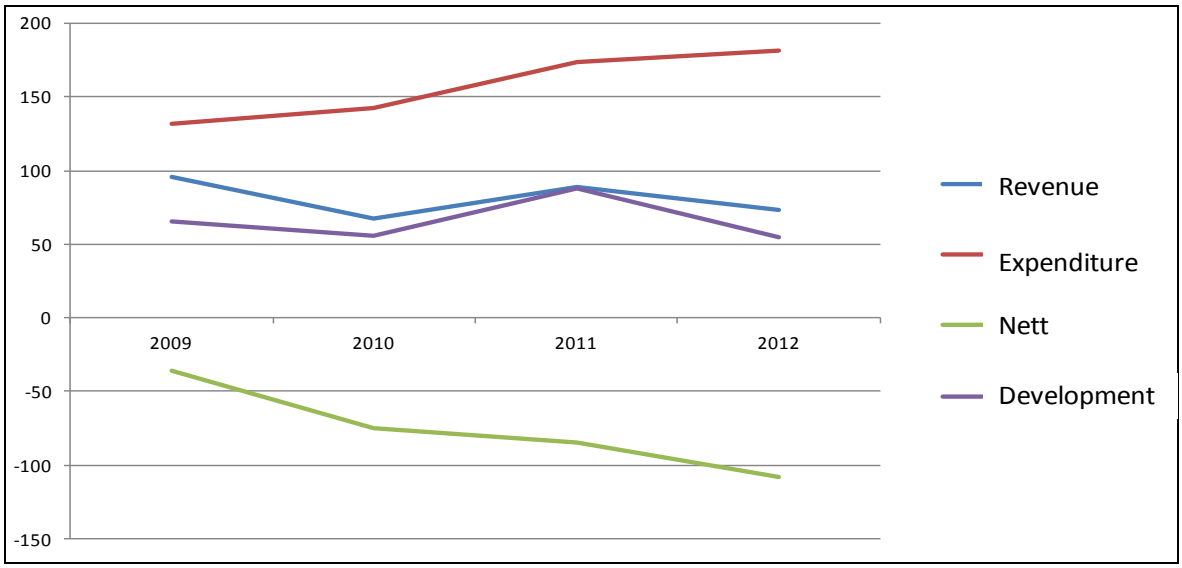
The Padang Besar SEZ covers an area of 26 km^2. In order to encourage foreign investment in the SEZ, the land purchase process should be simplified. Subject to limitations imposed on the purchase price by the Federal Government, the State Authority is also empowered to impose a levy under the National Land Code s433B on foreign purchasers. It is proposed that no additional levy be imposed other than the usual land premiums and land taxes on any land within the SEZ in order to promote foreign investment in the area.

6.4 SUSTAINABLE FINANCING FOR THE STATE GOVERNMENT

6.4.1 State Government Finances

Over the past three years (2009-2011), Perlis has consistently spent more than what it earns in terms of State revenue and expenditures. In 2011, the estimated annual revenue was RM89 million but the expected expenditure was estimated at RM174 million. The annual deficit has been growing: from RM36 million in 2009 to a projected RM108 million in 2012. In addition, Perlis also invests about RM55 to RM88 million annually in its development budget, which comes from the Federal government's coffers. The deficit situation is clearly unsustainable in the long term because it constrains the State's capacity to finance its own development. The financial status of the Perlis State government is shown in **Figure 6.2.**

Figure 6.2: Revenue-Expenditure Trends for Perlis, 2009-2012



Source: UPEN Perlis, 2011

On the revenue side, direct tax is only about 15% of total revenue. About 30% to 40% of the revenue is from Federal government reallocation, i.e. capitation and road maintenance grants based on population headcount and length of Federal roads within the State. The rest of it is from non-tax revenue. Here sales of government services constitute the largest item, and in this sub-category, the largest item is revenue from the sale of water. Hence, Federal

government reallocation and non-tax revenue sources contribute roughly about the same proportion to the total State revenue. A few important points are relevant here:

- As a proportion of State revenue, direct land taxes in Perlis have remained relatively stable, at about 10% (varies from 8% to 13%) over the period.
- When compared to Penang, Kelantan and Sabah, Perlis' land taxes are somewhere in the middle. (For Penang and Kelantan, land taxes contribute 35% and 25% of total State revenue respectively, whereas it is only 2% for Sabah. The case of Sabah is unusual as it has other sources to finance its budget, e.g. oil palm sales tax revenue, which accounts for about 20% of total State revenue.)
- In terms of State financial resources, it is clear that Perlis depends more on Federal allocation than the other states (e.g. Kelantan, Melaka). Perlis State revenue (without Federal allocations) contributes 50+% of total revenue, compared to 70% for Kelantan, Negeri Sembilan and Penang, and 60% for Melaka. Perlis is highly dependent on the Federal government.
- The revenue from natural resources as a proportion of State GDP is low in resource-poor States like Perlis and Penang, with ratios of about RM2,500 per million GDP compared to RM12,000 per million GDP for Sabah.
- Hence Perlis can get more tax revenue if it could attract and generate more economic activity. With more development, taxation on land dealings would generate more direct and indirect tax revenue for the State and this would be done without incurring more cost.
- The recently presented 2012 State Budget shows a projected expenditure of RM181 million for operating expenses and RM54 million for development. This means a deficit spending of RM108 million, on the back of projected government revenue of RM73 million.
- It is postulated that a transformation of the State's economy would be required to turn State finances around.

Table 6.1: Perlis State Government Revenue, 2009 - 2011

	2009	2010	2011
60000 Tax Revenue			
61000 Direct Tax			
Total Quit Rent (e.g. current, arrears)	9,278,200	8,700,000	8,950,000
Total Direct Tax (e.g. drainage and irrigation tax)	12,050,589	11,408,000	11,708,000
Total Indirect Tax (e.g. entertainment)	-	-	-
Total Tax Revenue	12,050,589	11,408,000	11,708,000

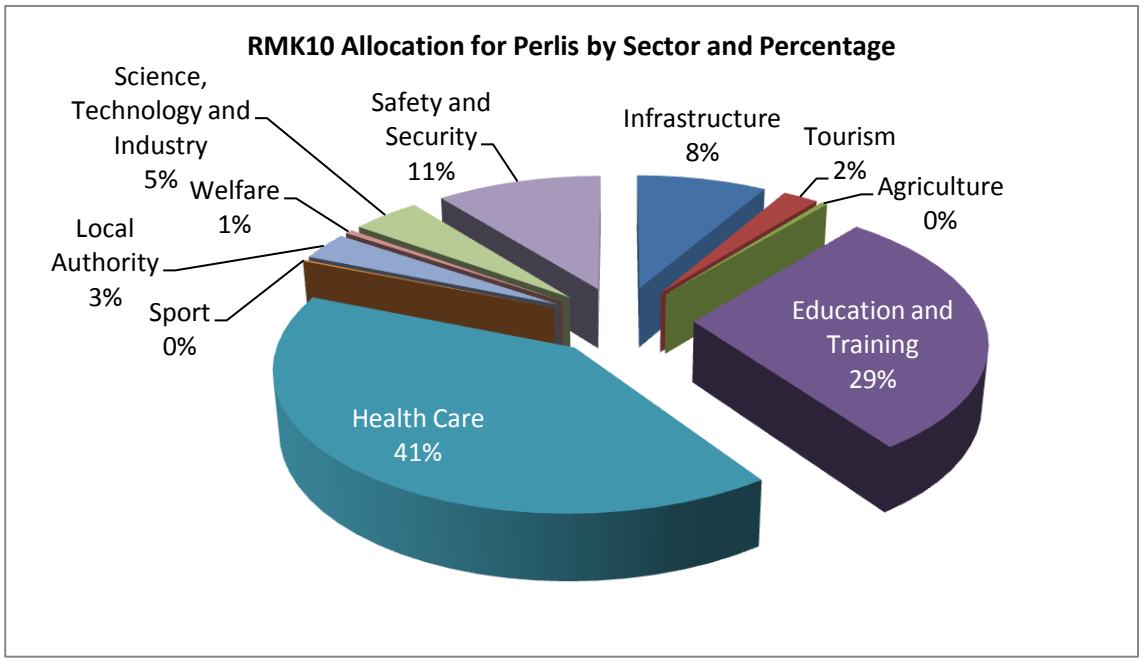
70000 Non-Taxable Revenue			
Total Non-Tax Revenue (e.g. license, permit, services)	39,086,134	29,598,260	40,476,472
80000 Non Revenue Receipts			
Total Non Revenue Receipts (e.g. refund of general expenses)	44,801,108	26,080,270	26,080,270
Grand Total Revenue of State Government	95,937,831	67,086,530	78,264,742

Source: Perlis State Budget 2011

6.4.2 Development Budget

The PSDP also analysed the development expenditures under the 10th Malaysia Plan. **Figure 6.3** shows the 10MP allocation for Perlis. The two biggest items are healthcare (41%) and education and training (29%). These two items already account for 70% of the total development expenditures. Allocations that would contribute to economic competitiveness, such as tourism, agriculture and infrastructure, only make up about 10% of the development budget. Hence, it would appear that a significant shift in the State's development budget towards the direction of economic projects is required to invest in growth-type projects.

Figure 6.3: 10th MP Budget



Source: Perlis Rolling Plan 1 2011-2012

To address the State government financial deficits, combined actions on both revenue generation and appropriate reductions of lower priority expenditures are needed. First, the State should leverage on the various Federal institutions such as the NCIA, PEMANDU, the EPU, the national committee on IMT-GT, and other regional institutions for resources to help implement the State's development programmes, especially those with a strategic direction. Such support is absolutely critical for implementing the strategic plan. Secondly, the State has to consider the types of expenditure that are important through value management exercises. Value management is a process to seek maximum returns on a project from well-managed costs. The returns in this case are not just financial, but also functional or beneficial to the project end-users, and sustainable.

With better financial and turnover management, the revenue for the State will increase, and with higher revenue, the State will be able to provide more resources for the Strategic Development Plan 2030.

6.5 CAPACITY BUILDING AND INSTITUTIONAL STRENGTHENING

The entire success of the PSDP hinges on the ability of State institutions to implement the plan. These institutions should therefore be reformed and rejuvenated, if necessary.

The Perlis State Government is organised along the lines of the Federal system, which gives the UPEN responsibility for economic planning and the delivery of economic results through implementation by line agencies. Economic planning is a difficult task, especially when the State is small and has few resources. Moreover, there is no special unit or agency to help the State in that direction. UPEN's role in this area needs to be beefed up considerably. As Perlis is a relatively small State, it also has fewer officers than is usually required to do the work. In this regard, any development plan is not easy to start up. The Perlis Maju Plan is a case in point. It took a long time before a committee was established, and it still needs support. This clearly shows that the capacity of the State needs to be upgraded and enhanced if it is to fulfil its objective.

The following are proposed to enhance capacity within the State:

- First, it should set up a special taskforce to monitor, review and assess the progress of all State economic development plans. Such a taskforce would develop specific KPIs for the plans. They would need to train special officers to do this work on a periodic basis. These officers would assess the progress of the plans, identify the problems and devise actions to resolve them. This special taskforce would report to the Menteri Besar who chairs the task force.
- Second, to fine-tune economic plans, it should set up a Research Unit with support from local universities. For instance, the UUM has several faculties which could contribute to the studies. This Research Unit would undertake focussed research in areas that are deemed critical and important to Perlis' economic development. The Unit would identify the types of studies, analyse and estimate the required resources to do the work, and liaise with the experts from the universities.

- Third, Perlis should continue to leverage on Federal agencies, especially those that are concerned with implementing strategic projects, such as the following:
    - PEMANDU
    - NCIA
    - BCIC programmes
- It is absolutely vital that these Federal agencies provide the seed funds to ensure the strategic transformation process for Perlis.
- Fourth, capacity building of the key economic agencies within the State should be made a priority. The key agencies include UPEN, SFO, SEDC, Perlis Maju Taskforce Unit, MPK, and PTG. The focus of the capacity building exercise would be to develop an appreciation of the following areas: economic and financial assessment of projects and programmes; understanding their social and economic impact; understanding of the Federal policies and means to leverage agencies mandates to jointly achieve State objectives and appreciation of private sector investments.

6.6 REGIONAL COOPERATION

Located in the north-west corner of Peninsular Malaysia, Perlis is surrounded by economic giants: Penang with its industrial and tourism base and Langkawi and southern Thailand with their tourism strengths. There are the brisk economic and trading activities of cross-border towns of Changlun and Danok as well as Padang Besar. In this regard, a regional approach would enable Perlis to take advantage of regional strengths and collaborate with neighbours in order to punch above its economic weight.

Many studies have indicated that innovation and specialisation are the necessary ingredients for the growth of small regions. Perlis, with its tertiary institutions, has the basis for developing a distinctive strategy for innovation and specialisation as part of a wider regional development objective.

Thailand[1] is also well known for its agricultural development. Malaysia on the other hand is interested to pursue a Halal agri-food policy. Combining both these initiatives could be beneficial to both regions. Interestingly, Perlis has tertiary educational institutions but little specialisation in agriculture that Thailand has. Thailand would like to improve the level of English in their education, a comparative advantage which Malaysia has. As such, there are several ways in which a regional development strategy would work for both regions.

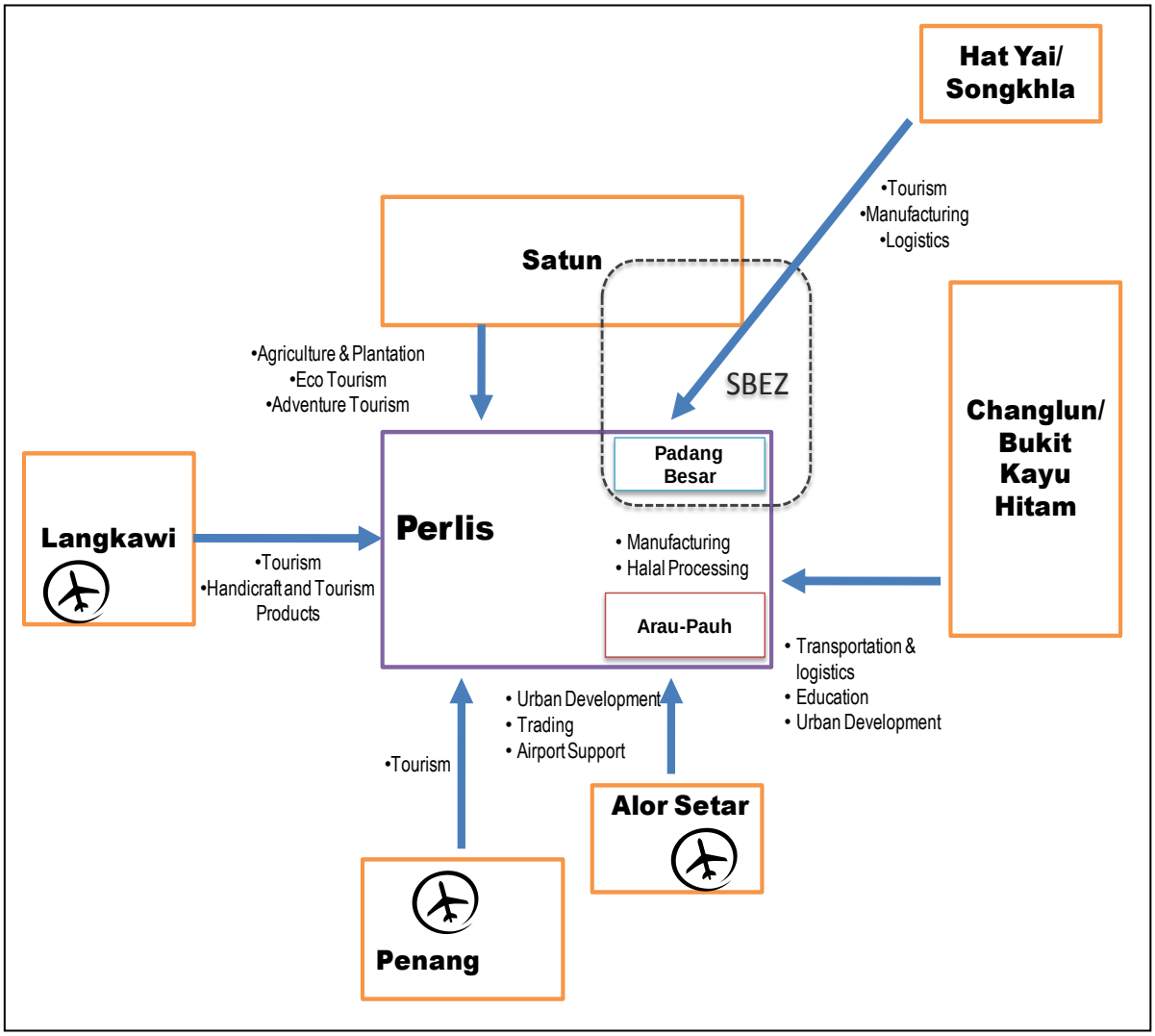
The new economic geography of distributed production networks postulates that comparative advantages can be created in niche competitive regions. The conditions are physical connectivity, being part of a cost-effective value chain, and demonstrating competitiveness vis-à-vis other areas. Increased and better communications are also a necessary part of the

[1] The recent bombings (31 March 2012) in southern Thailand are disturbing. Such incidents do not inspire investor confidence. However, one needs to take a strategic view of such matters. The incidents are confined to the urban centres and have not spread to rural areas.

equation. There are a number of important developments that may contribute to taking this regional approach.

First, Perlis has been collaborating with its neighbours, Thailand and Kedah, in various ways. The border trading activities between Thailand and the northern towns have characteristics of economic linkages. Rubber-based products (latex, rubber goods and rubber wood), and electrical and electronic components are shipped through Padang Besar to Penang. Tourists pass through Perlis to Langkawi and Satun. Border town shopping attracts tourists from outside the neighbouring states. Fisheries products landed in Kuala Perlis are from Thai fishing boats. Despite these activities, there is no comprehensive mapping of potential linkages that could be further developed.

Figure 6.4: Regional Relationships of the Key Players



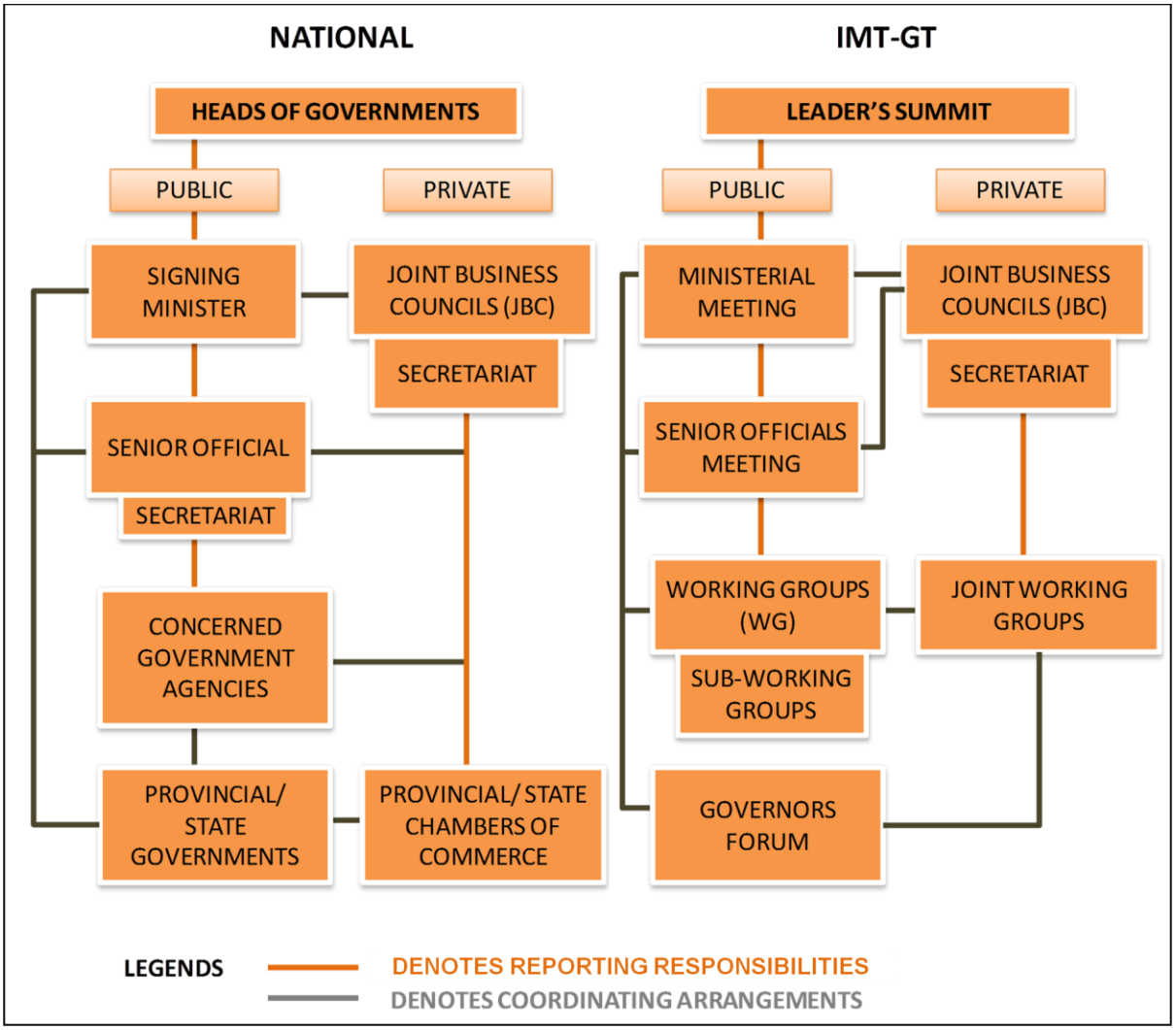
Source: Perlis Strategic Development Plan Report, 2012

Second, the Federal government has undertaken several initiatives with the Thai government through IMT-GT and the Joint Development Strategic Malaysia Thailand forum. The Leader's Summit is the highest decision-making body in IMT-GT, which sets the major goals and basic

directions for cooperation, followed by the Ministerial Meeting, and the Senior Officials Meeting.

Business facilitation with southern Thai counterparts at different levels should be developed further, as the private sector has been identified as a key player in promoting economic cooperation in IMT-GT. The Joint Business Council at both the national and IMT-GT levels serves as the private sector counterpart of the governmental IMT-GT institutions. Its main tasks are to foster closer relations and cooperation among various business interests in the IMT-GT, and to be an advocate for private sector participation in IMT-GT development.

Figure 6.5: Institutional Structure for the National and IMT-GT Forums



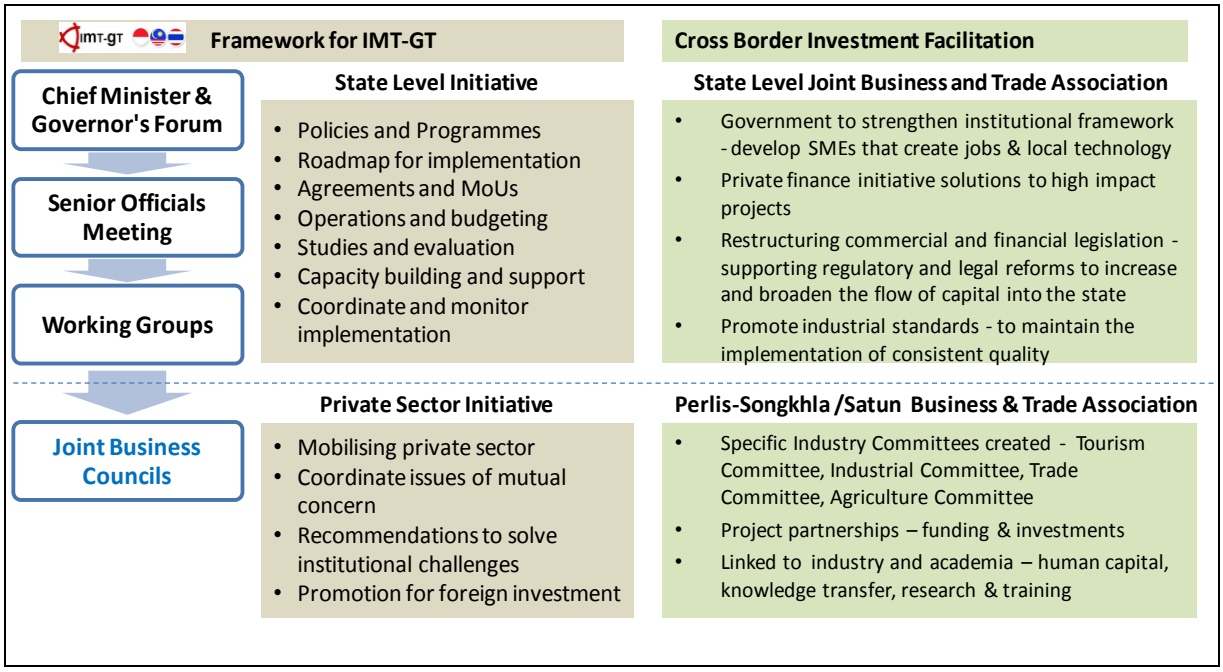
Source: http://www.imtgt.org/Structure.htm

It is proposed that a State Level Joint Business and Trade Association be created as a State Level Initiative for the governments of Perlis and Thailand to strengthen regional co-operation. A new Joint Business Council, the Perlis – Songkhla/ Satun Business and Trade

Association, should be created with a specific focus to increase trade and investments between the two regions, while encouraging active private sector participation. **Figure 6.7** shows the proposed organisation structure for the association.

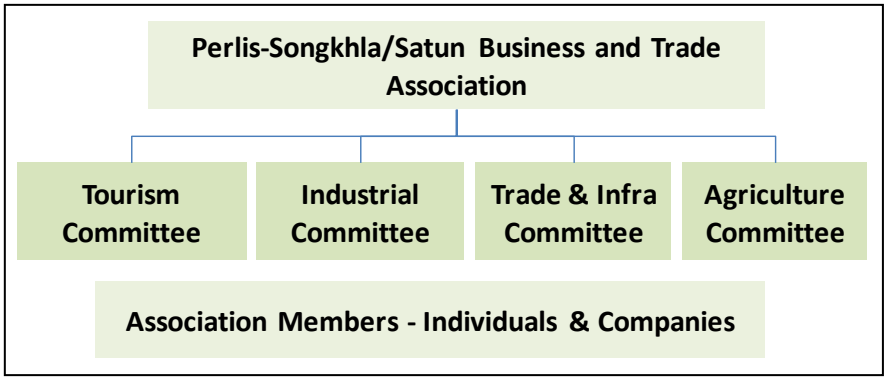
It is recommended that the Perlis – Songkhla/ Satun Business and Trade Association have representatives from Perlis and Songkhla as board members. Membership of the association is open to individuals and companies who participate in industry-specific committees.

Figure 6.6: Framework for Cross-Border Investment Facilitation



Source: Perlis Strategic Development Plan Report, 2012

Figure 6.7: Proposed Organisation of the Perlis-Songkhla/Satun Business Trade Association



Source: Perlis Strategic Development Plan Report, 2012

Opportunities for regional cooperation could be explored in the following areas:

- Pauh-Changlun-Danok - **Education-Industry Hub, Manufacturing**
- Padang Besar - **Border Town – Trading, Manufacturing**
- Kuala Perlis-Taratao-Langkawi-Penang – **Tourism**
- Wang Kelian-Thaleban – **Tourism**
- Padang Besar-Satun-Songkhla – **Distribution, Halal Agri-Food Network**

6.6.1 Border Economic Zone Authority

With Perlis, Kedah, Perak and Kelantan being states bordering Thailand, with links to East Asia and China, a Special Border Economic Zone can potentially be developed. Such a zone can exploit the comparative advantage of southern Thailand and northern Peninsular Malaysia. The advantage is found in their comparative strengths: production in southern Thailand and value-added processing and exports through Malaysia.

This programme calls for a detailed study and thorough planning through joint efforts of NCIA and ECERDC. A proposed joint Border Economic Zone Authority can be formed through a joint committee. With its establishment, these States will assist each other in managing Federal funds for particular cross-border investments, setting up of CIQs, and ensuring security of trade within and between States. Such frameworks are not new and have been implemented in other parts of the world.

With the development of this joint-authority, projects proposed in the PSDP that have direct and indirect linkages to border development as well as those proposed in Koridor Utara can be jointly developed to boost the economy of the four states. This development will in turn contribute to the growth and economy of the nation holistically. However the has to be done at an early stage and a policy framework has to be drawn out for this to be adopted effectively and efficiently.

6.7 PERLIS CROSS-BORDER SPECIAL ECONOMIC ZONE (SEZ)

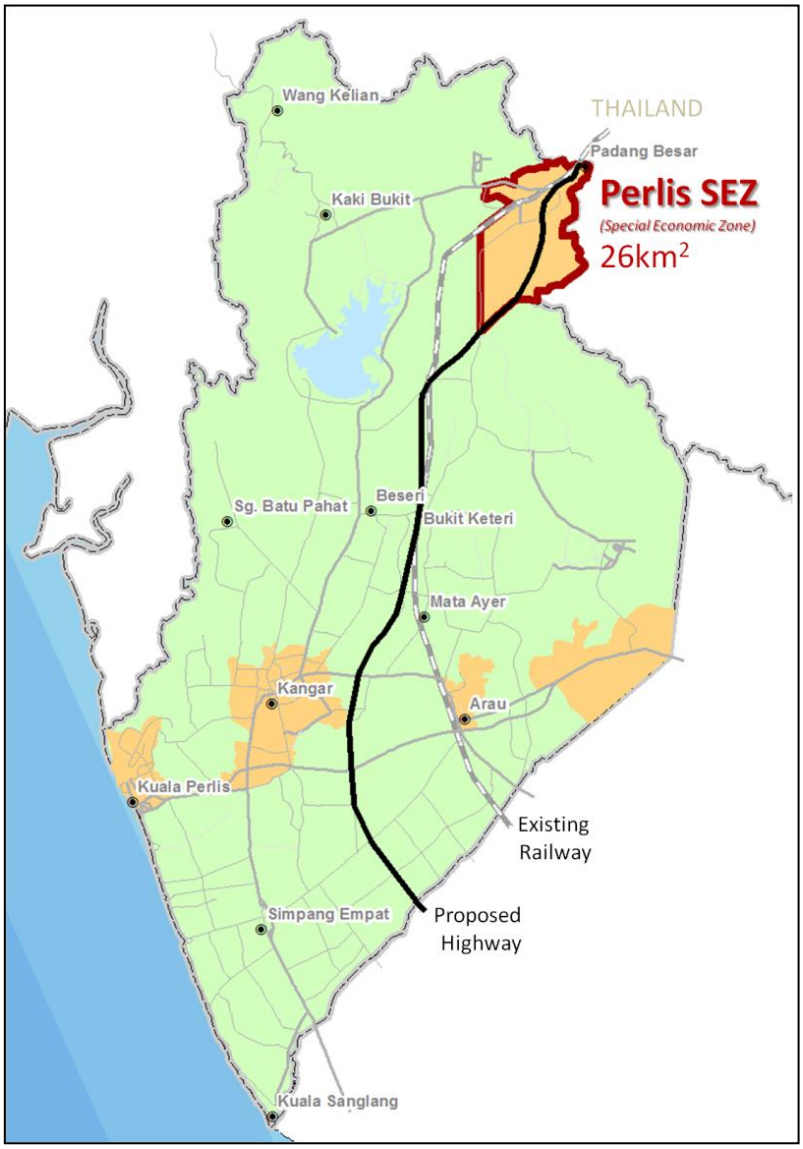
An SEZ is an enclave of enterprises operating in a well-defined geographic area, where certain economic activities are promoted by a set of policy measures that are not generally applicable to the rest of the country.

For many countries, Special Economic Zones have traditionally had both a policy and an infrastructure rationale. In terms of policy, the SEZ can be a useful tool as part of an overall economic growth strategy to enhance industry competitiveness and attract foreign direct investment.

The Perlis Cross-Border Special Economic Zone covers an area concentrated with manufacturing and industrial activities. The Cross-Border SEZ, covering the areas of Padang Besar and Chuping, can host some of the major high impact projects proposed in the PSDP.

The location of the proposed SEZ is shown in **Figure 6.8**. It covers an area of about 26 km^2. The SEZ is located within the Mukim Titi Tinggi, has a current population of about 12,600, (2010) and is projected to increase to 47,800 by 2030.

Figure 6.8: Perlis Cross-Border SEZ



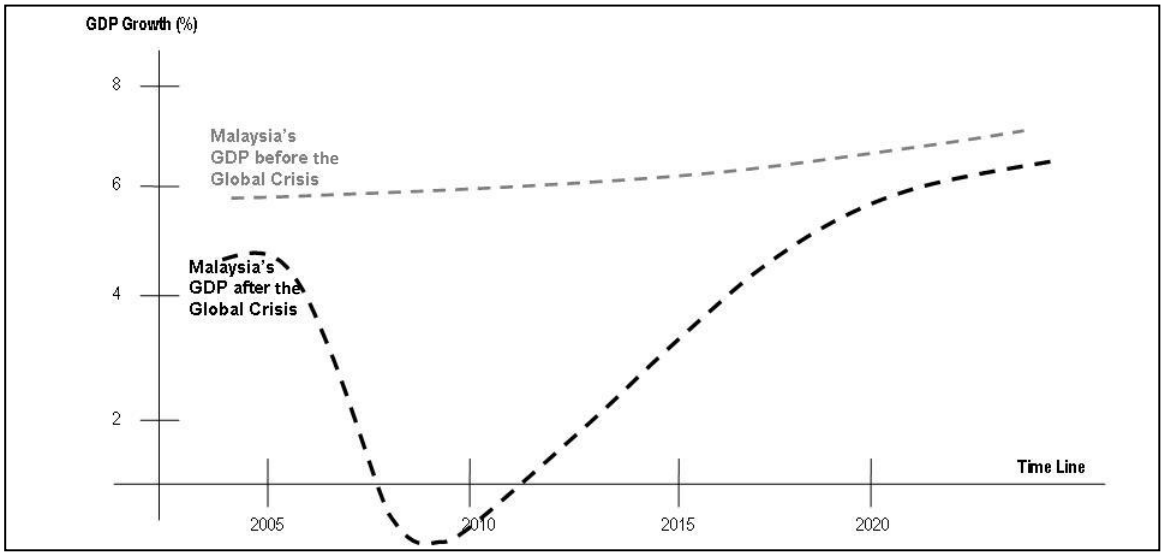
Source: Perlis Strategic Development Plan Report, 2012

6.7.1 Urgency for an SEZ in Perlis Cross-Border Development

The Malaysian economy registered approximately 5.1% economic growth in 2011, amidst the international financial turmoil and rapid deterioration in the global economic environment (refer to **Figure 6.9**). To date, the implementation of programmes under Budget 2011 has seen progress. The NKRAs and NKEAs targets were also achieved within the timeline.

With regards to the demand side, private consumption and investment opportunities are targeted to support growth, while economic expansion on the supply side will be driven by improvements in technology and labour productivity as well as the efficient use of capital. Despite the uncertainties in the external sector, the economy is envisaged to grow between 5%-6% in 2012, underpinned by resilient domestic demand (Economic Management & Prospects 2012).

Figure 6.9: Slowdown in GDP Growth of Malaysia as a Result of the Global Economic Crisis



Source: Ministry of Finance: Economic Management & Prospects

High commodity prices, stable employment and a supportive financing environment sustained the strong growth in private consumption in the first half of the year 2011. Support also came from the bonus payments for civil servants and cash rebates for fuel subsidy in the second half of the year. The rapidly worsening global economic conditions however resulted in a decline in private investment activity in the second half of the year.

In order to become a developed State by 2020 and a high-income State by 2030, Perlis has to exponentially increase its productivity and efficiency, as projected by economic indicators of the Perlis Strategic Development Plan.

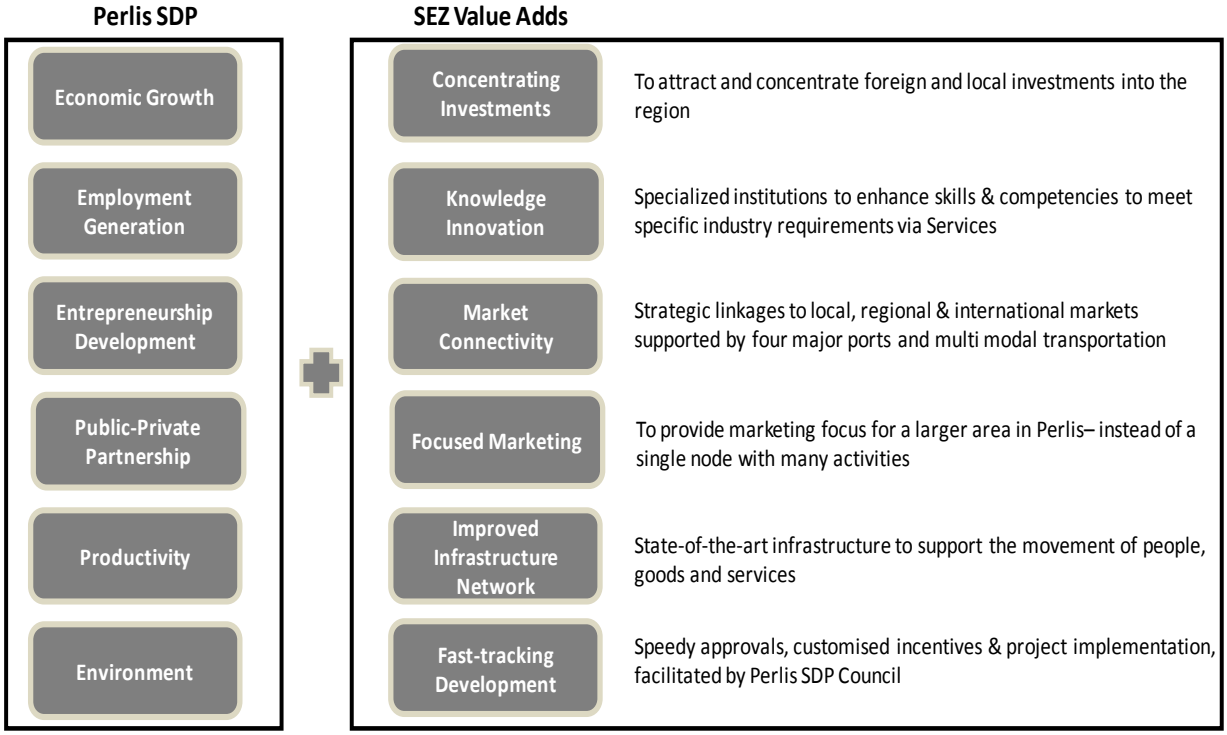
Given the impact of the global economic crisis it is clear that the PSDP targets will not be able to attain the desired level of productivity without accelerated growth. Hence the Perlis

Cross-Border SEZ will be an innovative regional development concept to enable Perlis to achieve the targets of the PSDP.

6.7.2 Value Addition of the Perlis Cross-Border SEZ

The PSDP provides a guiding framework for a mission and vision driven development – in the form of growth, distribution and sustainability. The strategy to achieve the vision is by moving up the value chain and focusing on high impact initiatives. An integrated approach linking all areas within the value chain is utilised. The approach cuts across key economic drivers including Agri-Food, Manufacturing & Processing, Trading & Services, Tourism, Education & Training and Urban Development.

Figure 6.10: Objectives of the Perlis Cross-Border SEZ



Source: Perlis Strategic Development Plan Report, 2012

In ensuring the adoption and implementation of the PSDP, the public sector, involving all its key stakeholders and agencies, plays an important role in spearheading the main action plan, with the private sector managing projects within the SEZ. Participation from both public and private sectors is key to ensuring success in the adoption and implementation of the PSDP.

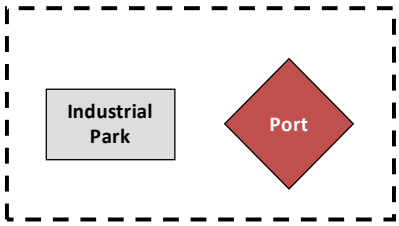
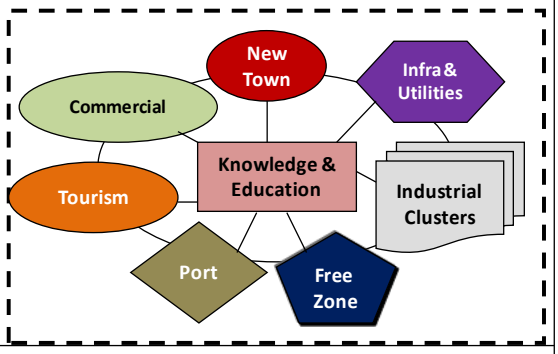
Bringing this set of guiding principles forward, the Perlis Cross-Border SEZ will further strengthen the mission and vision of the PSDP. Essentially the SEZ will become an area where investments can be concentrated and where focused marketing and promotional efforts can be undertaken with the aim of fast-tracking developments within Perlis.

Given the emphasis on the SEZ, it is also important to note that all PSDP projects and programmes outside the SEZ will still proceed as planned. In summary, the SEZ is a catalyst to accelerate growth of the Perlis.

6.7.3 Development Model for the Perlis Cross-Border SEZ

Remodelling the traditional concept, the Perlis SEZ will incorporate an integrated development approach which comprises commercial, residential, educational, industrial, service and knowledge components. The SEZ will have an orientation towards building up capacity for knowledge innovation that can be linked across each component in the SEZ.

Figure 6.11: Comparison of Traditional Industrial Parks with the SEZ Model

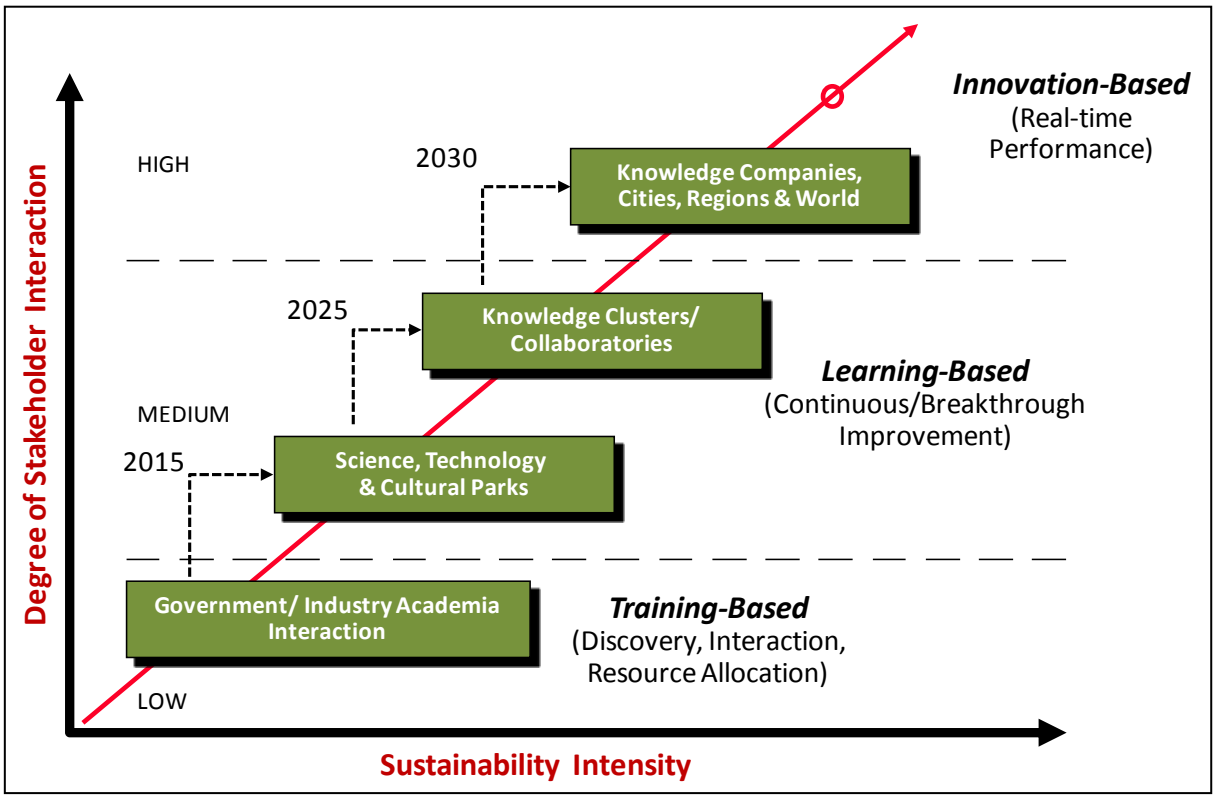
Concept	Traditional Industrial Park	Special Economic Zone Model
		
Purpose	• Promotes export-based industries	• Integrated Development Approach – Commercial, Residential, Education, Industries, Service & Knowledge Components
Characteristics	• Government-led development • Stand-alone developments • Incentives apply to export-based industries • Orientation on foreign direct investments • Low level of domestic consumption • Slow urbanisation impact • Employment of low-skilled workforce	• Public Private Partnership- public sector provides infrastructure support, private sector to develop • Focal point for economic growth • Multi market approach, not just exports • Orientation towards local and foreign investments • Acceleration on transfer of knowledge & technology • Increased domestic consumption

Source: Perlis Strategic Development Plan Report, 2012

It is important the SEZ provides a larger focus on local urban development and economic growth. The knowledge and innovation component will therefore prepare the local populace through training, skills development and enhancement of education to enable Perlis to move up to a higher level in the knowledge and economic value chain.

Given the need to move the Perlis economy higher up the value chain, strong efforts by both the public and private sector are necessary to upgrade the quality of human resources through generic and specialised skill training via industry-academia collaboration.

Figure 6.12: Perlis Cross-Border SEZ Transition Model



Source: Perlis Strategic Development Plan Report, 2012

CHAPTER 7

PHASING AND FINANCIAL PLAN

7. FINANCIAL PLAN AND PROJECT PHASING

7.1 INTRODUCTION

The overall objective of the PSDP is to accelerate the development of the State to become an 'urbanised and a high-income State by 2030'. This chapter estimates the yearly funding requirements for the PSDP and project phasing till 2030, the final year of the PSDP.

The financial plan will look at the overall funding required for the PSDP. In particular, the financial plan estimates the full cost of each project and disaggregates the cost by capital expenditures (investment) and operating expenditures (OPEX). As the projects are launched at different periods, the project costs would also be distributed over time. The financial plan would also identify the funding sources, i.e. funding by the government or the private sector. For commercial projects, a stream of revenue is also expected. The financial plan would show these characteristics as well as their impacts.

In terms of the phasing, it would be desirable to spread the projects over several years in order to minimise inflationary pressures. Some of projects can be launched straight away but others may face constraints. Constraints could range from land that needs to be acquired and handed over to the project proponent, to removing restrictions on the land, securing funds via funding cycles, securing planning controls or resettling existing occupants on the land. Hence project phasing enables better management of projects, so that their impact can be maximised and social cost minimised.

Following a sectoral assessment of the issues affecting industry and development in the State, a comprehensive set of projects has been identified.

7.2 PROJECT CYCLE

The project cycle describes the sequence of actions and activities to achieve the vision and objectives of the PSDP, where the commencement of one phase is dependent on the completion of the previous one. In total, these six key stages have a direct impact on the implementation of the strategic development plan, and consequently the financial plan.

Table 7.1: Project Cycle Colour Coding

	Feasibility Study/Approval/Planning - Milestone: Project Launch
	Design/Land Acquisition - Milestone: Project Ground-breaking
	Infrastructure/Incubation - Milestone: Infra to site completion
	Construction/Project Development - Milestone: Project Completion
	Revenue Start
	Peak Production / Revenue/Investment

1. **Feasibility Study/ Approval/ Planning**
   The first phase of any development process requires certain actions and decisions, such as
   - Studies to establish financial feasibility
   - Project planning to determine the amount of time required for the project
   - This phase ends with the project launch.

2. **Design/ Land Acquisition**
   - All necessary planning approvals and permissions
   - Land acquisition
   - Resolving land constraints, e.g. Malay Reserve Land
   - Design of the project and its components
   - This phase concludes with the project ground-breaking

3. **Infrastructure/ Incubation**
   - Incubation, pre-operating or pilot period
   - All infrastructure pertaining to the project site is to be completed
   - This phase concludes when the infrastructure to the site is completed

4. **Construction/ Project Development**
   - Commencement of project construction
   - All project development is to be addressed in this phase

5. **Revenue Start**
   - This phase indicates when the project revenue is expected

6. **Peak Production/ Revenue/ Investment**
   - This is the stage of peak production, revenue stream, when all investments are realised

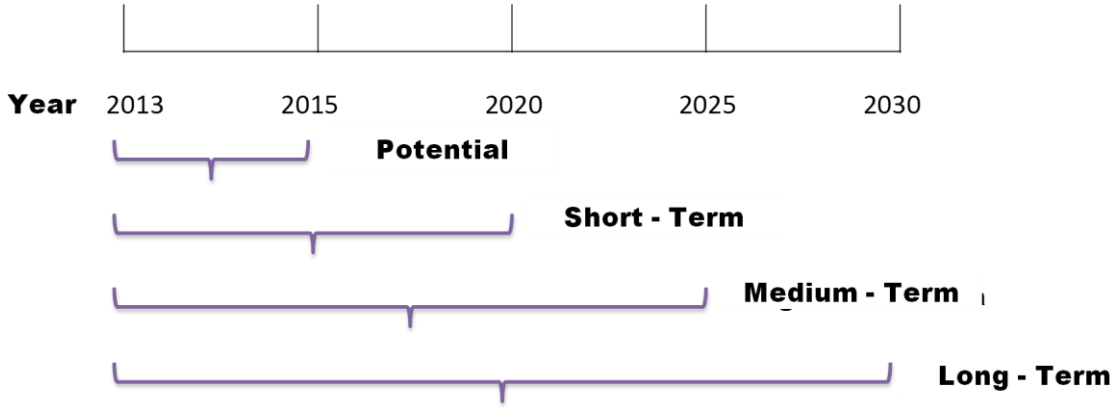
7.3 POTENTIAL, SHORT-TERM, MEDIUM-TERM AND LONG-TERM PROJECTS

a) Potential projects are projects where

- Implementation can commence during the 10th MP period and/or before 2015
- It is easy to implement
- There are no fiscal, financial, planning barriers, etc

b) Potential, Short-Term, Medium-Term and Long-Term Projects

For potential, short term, medium term and long term projects, the time line referenced below is used:



- Projects which can be commence on /before 2015 are potential projects.
- Projects which can be completed before 2020 are short-term projects.
- Projects which can be completed before 2025 are medium-term projects.
- Projects which can be completed before 2030 are long-term projects.

c) For PSDP, there are 26 potential projects, 33 short-term projects, 2 medium-term projects, 1 long-term project and 2 feasibility studies. (refer **Figure 7.1** to **7.9**)

All proposed projects have been classified into this phasing method. There are 26 projects classified under potential projects. The list of potential projects is shown in **Table 7.2.**

Table 7.2: Potential Projects

Code	Potential Projects
AG1	Scaling Up and Strengthening the Productivity of Paddy Farming in MADA Areas
AG2	Increasing Income of Paddy Farmers Through Crop Integration During the Off-Season in Non-MADA Paddy Areas
AG4	Production of Certified Paddy Seeds in Mini-Granary Areas of Perlis

Code	Potential Projects
AG5	Development of a Tropical Seed Development Centre and the Fruit Cluster, with Emphasis on Mango and Jackfruit
AG7	Establishment of the Aquaculture Industrial Zone in West Diversion Channel, Perlis
AG8	*Kampung*-Chicken Breeder Farming
AG9	Development of the Herbal Cluster in Perlis as Flagship Herbal Products
ED2	Strengthening Industry-Academia Collaboration for Socio-Economic Benefits
ED3	Training and Human Resource Development
EU1	Flood Mitigation Scheme
EU3	Constructing Solid Waste Disposal Facilities
EU4	Extension of the Natural Gas Service Area
EU5	Improving the Water Supply System
EU6	Improving the Electricity Distribution System
HT2	Upstream Mushroom Farming for High Value-Added Halal Downstream Processing
IT1	Perlis MSC EduNet
IT2	Perlis MSC Technology/ICT Development Programme
TM1	Transforming Sungai Batu Pahat into a Major Family Fun-Tourism Destination and Privatizing These Facilities
TM2	Development of the Agrotourism Corridor as a Scenic Route
TM3	Setting Up of Small Scale Tourism Enterprises and Incubators to Produce Handicrafts for Langkawi Tourism Market
TM6	Upgrading of Tourist Facilities at Perlis State Park and Gua Kelam for Group-Based Activities
TM7	Development of a Recreational Fishing Centre
TM9	Organisation of Signature Tourism Events of International Standard
TS3	Wholesale & Retail Zone (Padang Besar)
UT1	Improvement of Public Transport through Bus Rapid Transit (BRT)
UT4	Upgrading the Kaki Bukit-Wang Kelian Road

7.4 PROJECT PHASING

For ease of analysis all projects and programmes are also organised according to the Malaysia Plan periods and by the year of implementation. The following figures show the time plan for each of the projects and programmes proposed under the PSDP. A more detailed phasing by quarter ensures more accurate implementation.

The project phasing also coincides with the budget planning process of the 10th, 11th, 12th and 13th Malaysia Plans, viz.:

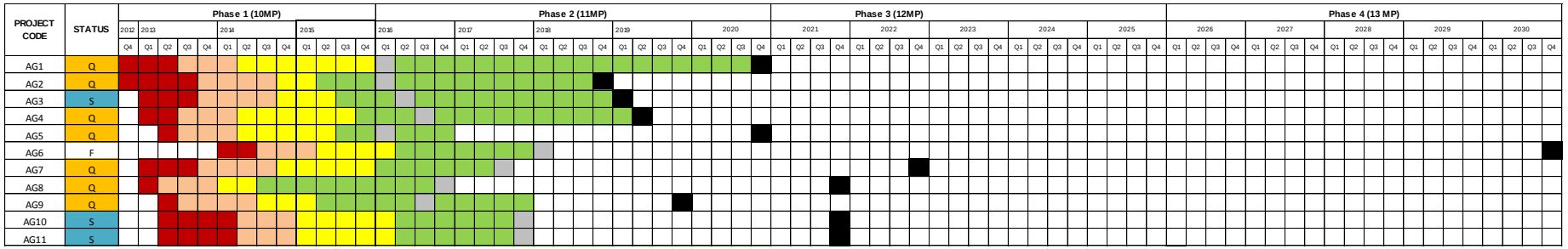
- Phase 1 (2012, 2013, 2014 and 2015),
- Phase 2 (2016-2020),
- Phase 3 (2021-2025), and
- Phase 4 (2026-2030).

This summary also takes into account the potential projects.

Legend of Project Status and Colour Code

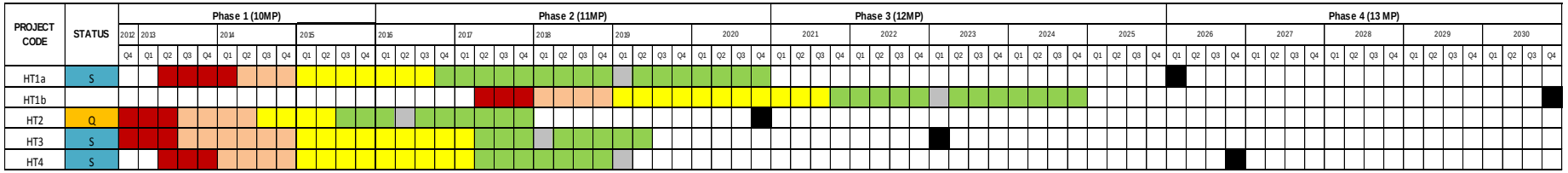
Potential Project	Q			Feasibility Study/Approval/Planning - Milestone: Project Launch	
Short Term	S			Design/Land Acquisition - Milestone: Project Ground-breaking	
Medium Term	M			Infrastructure/Incubation - Milestone: Infra to site completion	
Long Term	L			Construction/Project Development - Milestone: Project Completion	
Feasibility	F			Revenue Start	
				Peak Production/ Revenue/Investment	

Figure 7.1: Agri-Food Project Phasing



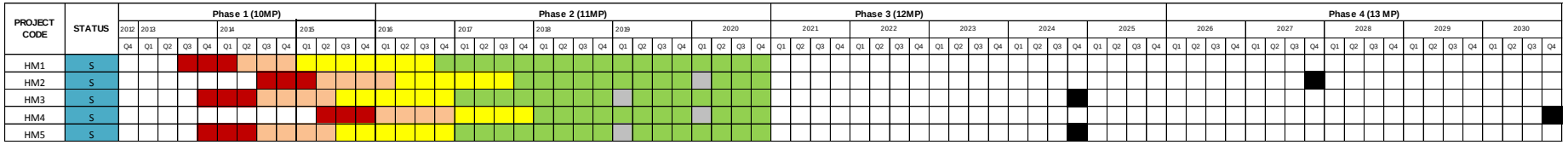
AG	Agri-Food	AG	Agri-Food
AG1	Scaling Up and Strengthening the Productivity of Paddy Farming in MADA Areas	AG7	Establishment of an Aquaculture Industrial Zone in West Diversion Channel, Perlis
AG2	Increasing Income of Rice Farmers Through Crop Integration During the Off-Season in Non-MADA Paddy Areas	AG8	Kampung-Chicken Breeder Farming
AG3	Cultivation of Fragrant Rice in Non-Granary Paddy Areas	AG9	Development of the Herbal Cluster in Perlis as Flagship Herbal Products
AG4	Production of Certified Paddy Seeds in Mini-Granary Areas of Perlis	AG10	Establishment of a Marine Finfish Seed Production Zone
AG5	Development of a Tropical Seed Development Centre and the Fruit Cluster, with Emphasis on Mango and Jackfruit	AG 11	Establishment of a Marine Shrimp Production Zone
AG6	Development of a Dairy Cluster		

Figure 7.2: Agri Bio-Tech Park Phasing



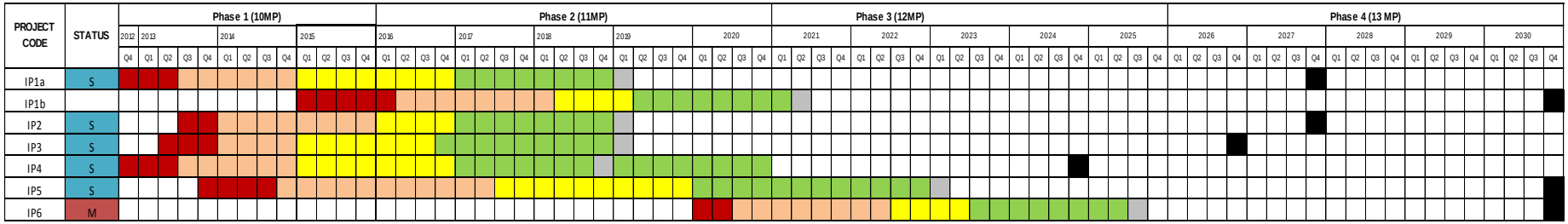
HT	Agri-Food Bio-Tech Farming (Agri-Bio-Tech Park)	HT	Agri-Food Bio-Tech Farming (Agri-Bio-Tech Park)
HT	Agri Bio-Tech Park	HT2	Upstream Mushroom Farming For High Value-Added Halal Downstream Processing
HT1a	Agri Bio-Tech Park Phase 1	HT3	Establishment of Spirulina Farm
HT1b	Agri Bio-Tech Park Phase 2	HT4	EBN Integrated Processing Centre With Swiftlet House Programme

Figure 7.3: Halal High Value Manufacturing (Halal Park) Phasing



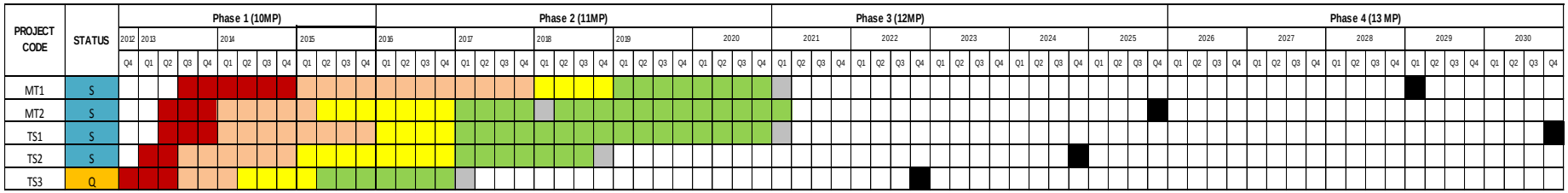
HM	Halal High Value Manufacturing (Halal Park)	HM	Halal High Value Manufacturing (Halal Park)
	SME Halal (Licensed Manufacturing Warehouses)	HM3	Halal Snack Foods & Sauces Processing
HM1	Halal Food Park	HM4	Halal Gelatin Manufacturing
HM2	Health Beverages, Functional Foods, Milk & Juices Processing	HM5	Halal Meat Processing

Figure 7.4: Industrial Development Park Phasing



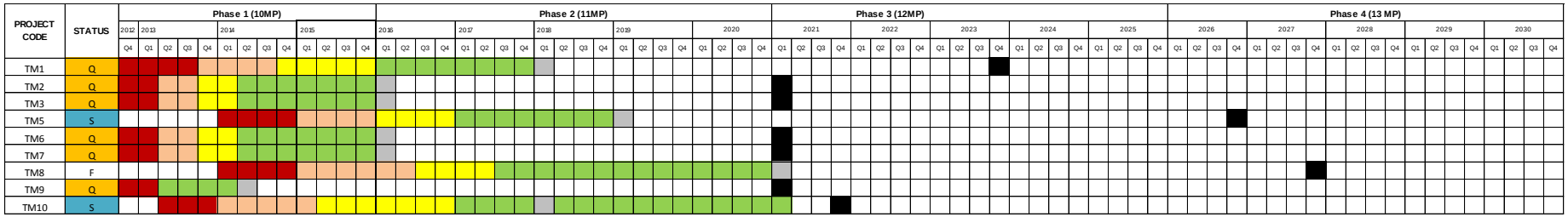
IP	Industrial Development Park	IP	Industrial Development Park
IP1	Pauh-Putra Technology Park	IP3	Bio-Technology Processing Plant From Upstream Raw Materials
IP1a	Pauh-Putra Technology Park Phase 1	IP4	Rubber Processing Industrial Cluster Development
IP1b	Pauh-Putra Technology Park Phase 2	IP5	Minerals & Resources Mining
IP2	Renewable Energy: Solar Farm	IP6	Plastic-to-Fuel Technologies

Figure 7.5: Trading, Services and Multi-Purpose Maritime Terminal Phasing



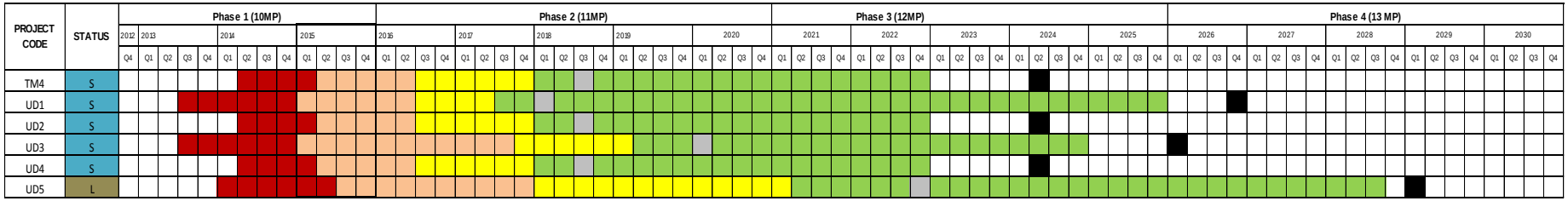
TS	Trading & Services	MT	Multi-Purpose Maritime Terminal
TS1	Free Industrial Zone	MT1	New Fish Landing Point at Kuala Perlis Into a Fisheries Transhipment Hub
TS2	ICD and its Future Expansion	MT2	Boat Building & Repair Base
TS3	Wholesale & Retail Zone		

Figure 7.6: Tourism Phasing



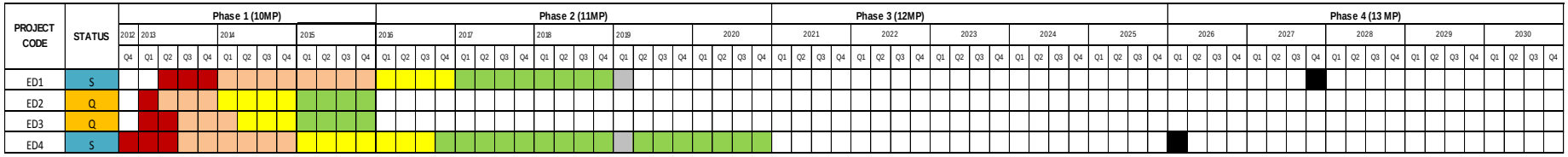
TM	Leveraging Tourism	TM	Leveraging Tourism
TM1	Transforming Sungai Batu Pahat Into a Major Family-Fun Tourism Destination and Privatizing These Facilities	TM6	Upgrading of Tourist Facilities at Perlis State Park and Gua Kelam For Group-Based Activities
TM2	Development of Agrotourism Corridor as a Scenic Route	TM7	Development of Recreational Fishing Centre
TM3	Setting Up of Small Scale Tourism Enterprises and Incubators To Produce Handicrafts For the Langkawi Tourism Market	TM8	Development of a High-End Perlis Hillside Resort , Spa, and 21st Century Village
TM4	Setting Up of the Wang Kelian Border Town	TM9	Organisation of Signature Tourism Events of International Standard
TM5	Establishment of Kuala Perlis Tourism Complex	TM10	Perlis River Promenade Development

Figure 7.7: Urban Development Phasing



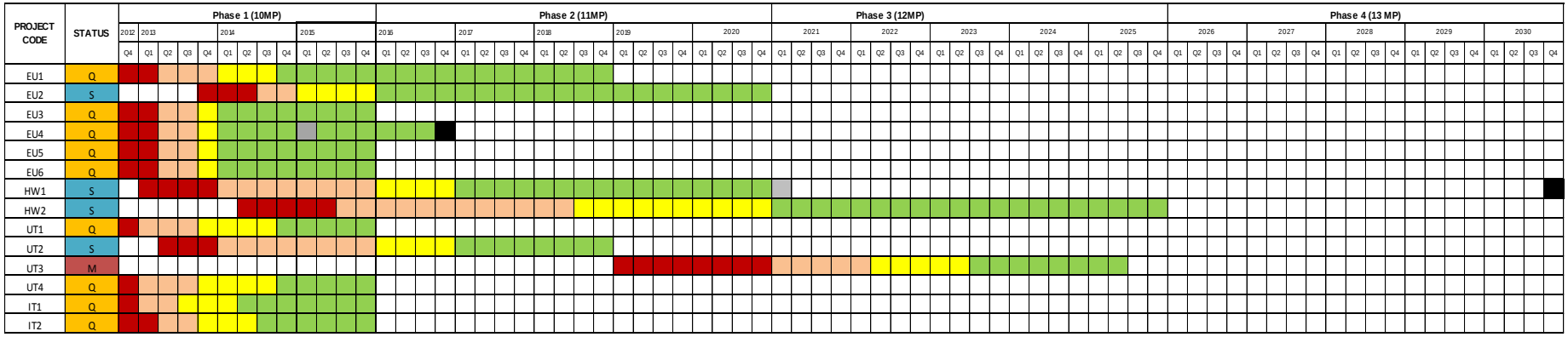
UD	Urban Development	UD	Urban Development
UD1	Kangar Maya Smart City	UD4	Pauh-Putra Edu-City
UD2	Padang Besar Border Town	UD5	Kuala Perlis Maritime Terminal
UD3	Chuping New Township		

Figure 7.8: Education Phasing



ED	Education & Training
ED1	Establishing a Reputable International University Branch Campus
ED2	Strengthening Industry-Academia Collaboration For Socio-Economic Benefit
ED3	Training and Human Resource Development
ED4	Establishing an Agro-Technology University Branch Faculty

Figure 7.9: Enablers Phasing



EU	Environment & Utilities
EU1	Flood Mitigation Scheme
EU2	Central Sewerage System
EU3	Solid Waste Disposal Facilities
EU4	Extension of Natural Gas Service Area
EU5	Water Supply System
EU6	Improving Electricity Distribution System
UT	**Urban Transport**
UT1	Improvement of Public Transport through Bus Rapid Transit (BRT)
UT2	Kangar Ring Road
UT3	Integrated Transport Terminal (Kangar Sentral)
UT4	Upgrading Kaki Bukit-Wang Kelian Road

IT	Information Technology
IT1	Perlis MSC EduNet
IT2	Perlis MSC Technology/ICT Development Programme
HW	Highway Link
HW1	Highway (Alor Setar-Kangar-Padang Besar)
HW2	Highway (Kuala Perlis-Satun)

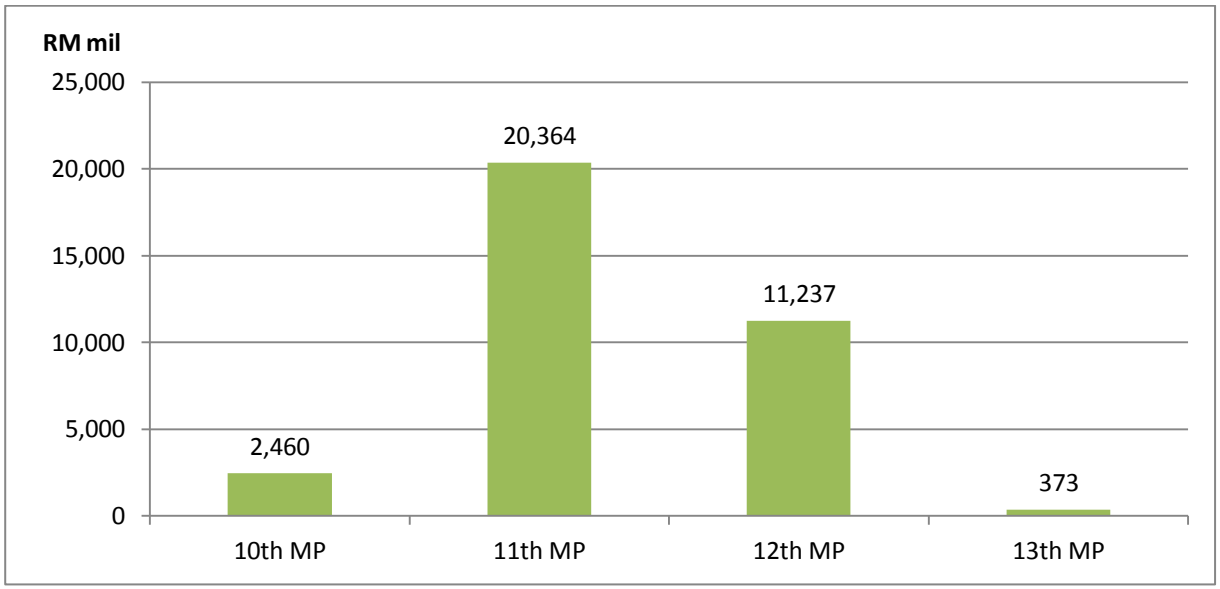
7.5 OVERVIEW OF PROJECT BUDGETS & INVESTMENTS

7.5.1 Potential Investments

The PSDP would require RM34.5 billion investments by 2030. The bulk of the investments would be incurred during the 11th and 12th Malaysia Plans (90% of the total).

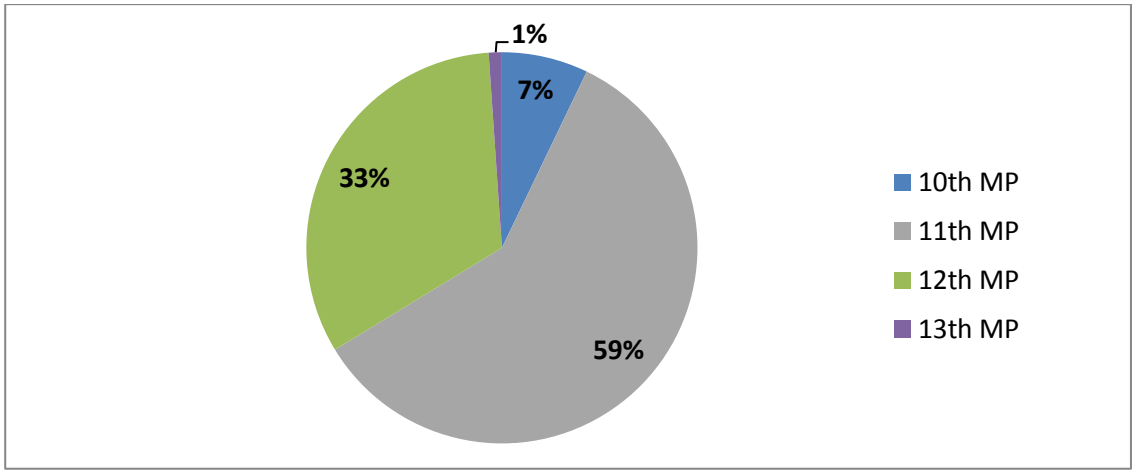
During the 10th MP, a total of RM2,460 million in investments would be required as a catalyst for the next three phases of the Plan. Additional investments for the rest of the 2016 – 2030 period are estimated to be RM31,974 million (see **Figure 7.10**). Most of the initial investments are envisaged to be public investment in infrastructure to make the State more attractive for private investment.

Figure 7.10: Potential Investments by Malaysia Plan Periods (RM million)



Source: Perlis Strategic Development Plan Report, 2012

Figure 7.11: Breakdown of Investments by Phase, %

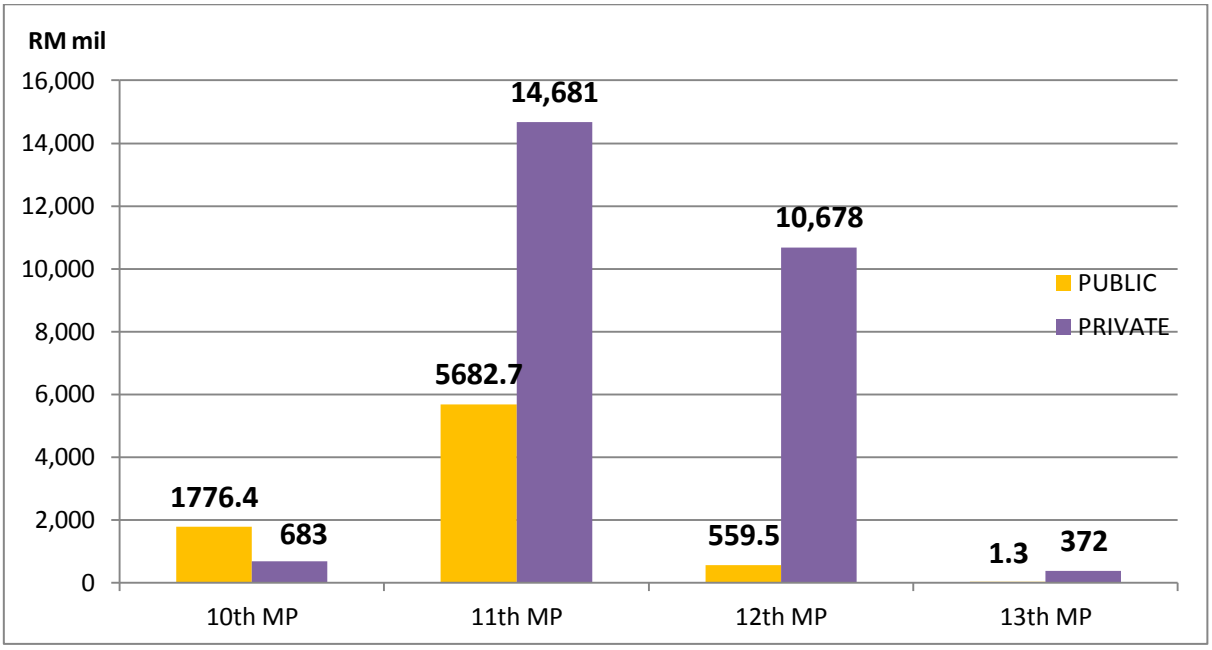


Source: Perlis Strategic Development Plan Report, 2012

About 77% of the total investments by 2030 is estimated to be from the private sector. About 23% is expected from public sources (government). For the remainder of the 10th MP it is anticipated that public funding would total RM1,776 million or 72% of the phase's total. The 77% share for private sector investments is in line with the Economic Transformation Programme.

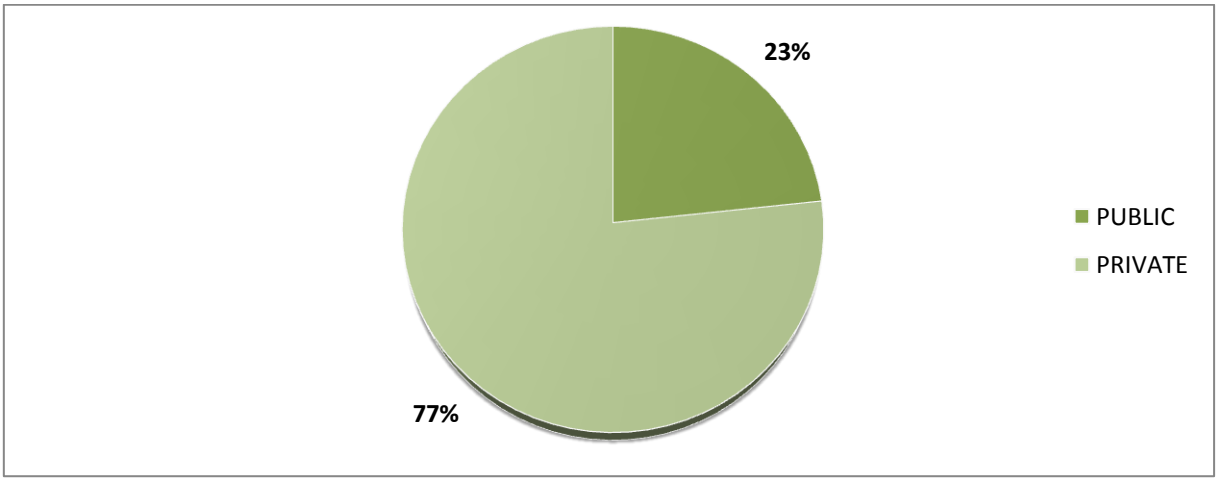
The majority of public investments for the PSDP in the 10th MP are in infrastructure improvements such as flood mitigation, natural gas supply, water supply and electrical distribution system. These improvements and upgrades address the issues and concerns raised by existing businesses and potential investors.

Figure 7.12: Total Potential Investments by Phase: Public Vs Private (RM million)



Source: Perlis Strategic Development Plan Report, 2012

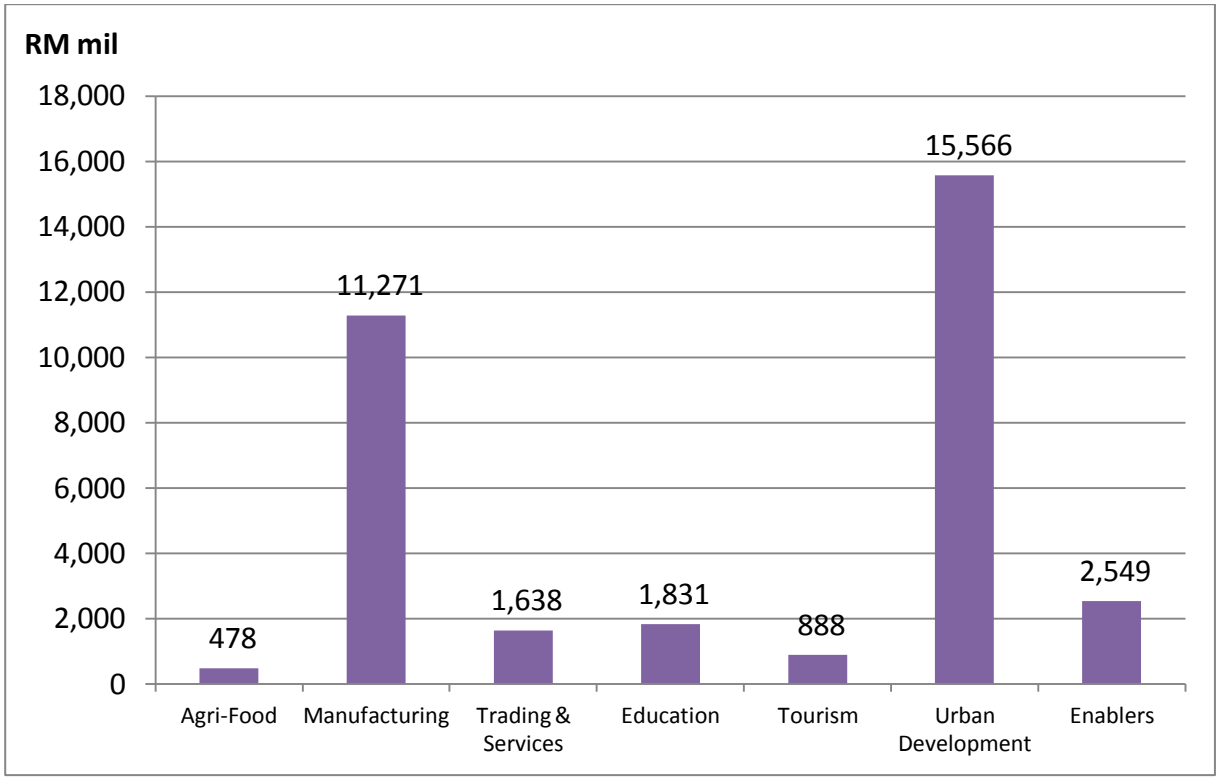
Figure 7.13: Total Investment: Public Vs Private



Source: Perlis Strategic Development Plan Report, 2012

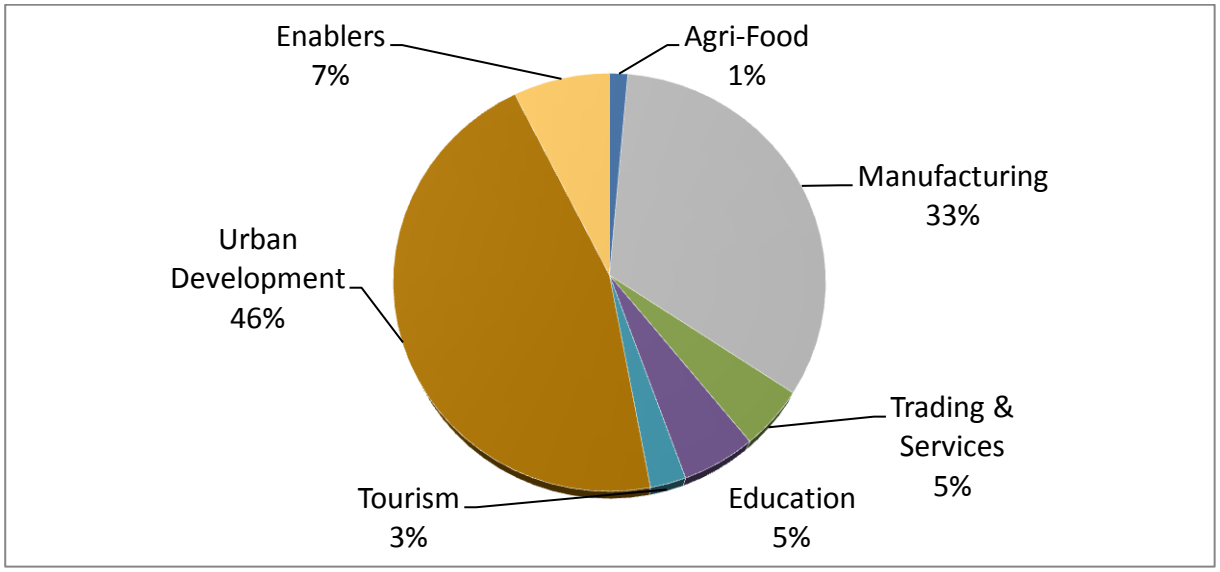
Urban development will require estimated investments of RM15,566 million by 2030. This accounts for 46% of the total investments (**Figure 7.14**). The next highest are manufacturing, with RM11,271 million (33%), and the enablers with RM2,549 million (7%).

Figure 7.14: Estimated Investment Breakdown by Sector (RM million)



Source: Perlis Strategic Development Plan Report, 2012

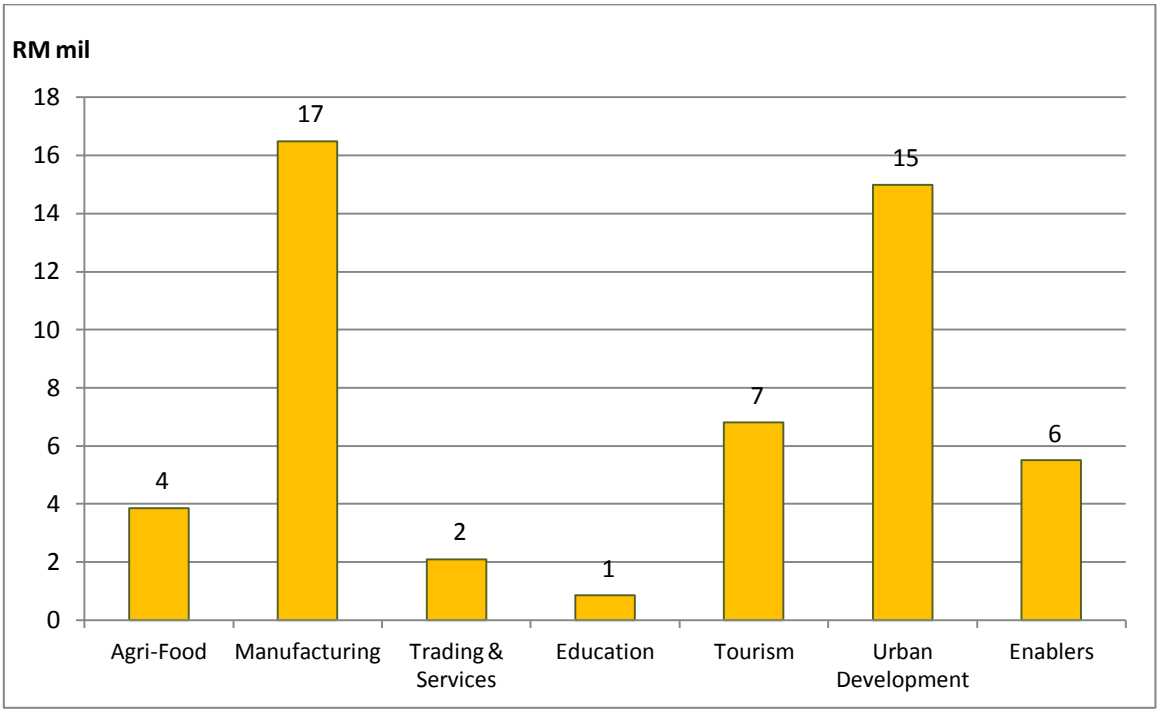
Figure 7.15: Total Investments by Sector



Source: Perlis Strategic Development Plan Report, 2012

The proposed expenditures can also be grouped under operating and development expenditures. The total operating expenditure for all the economic sectors is RM52 million. The majority of this is for the feasibility studies that will need to be carried out prior to the implementation of the projects.

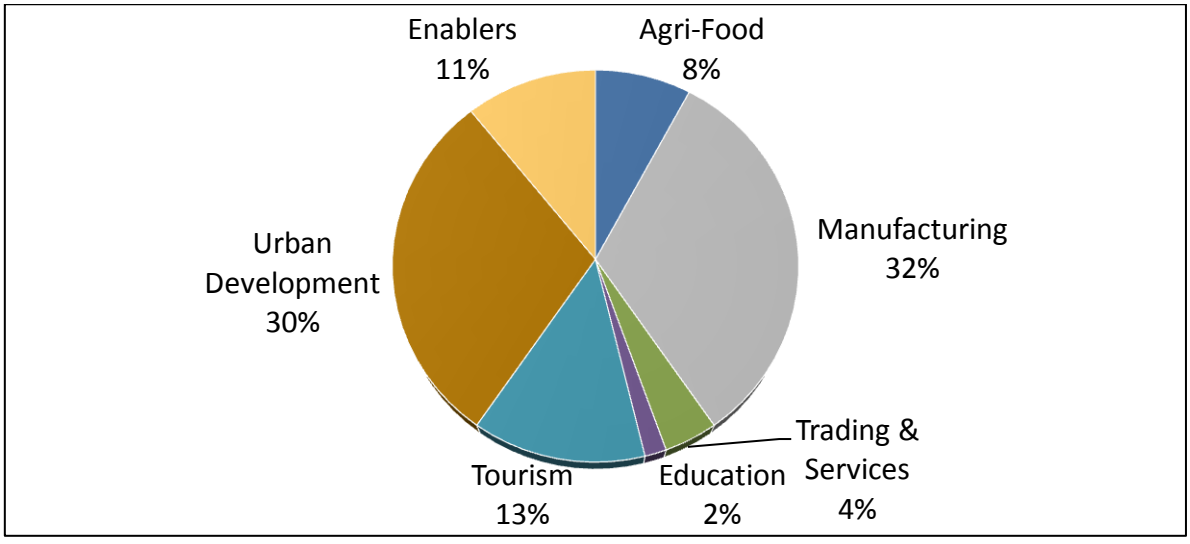
Figure 7.16: Total Estimated Operating Expenditure by Sectors (RM million)



Source: Perlis Strategic Development Plan Report, 2012

Most of the operating expenditure from public sources will be in the areas of urban development (30%), manufacturing (32%) and Tourism (13%) (see **Figure 7.17**).

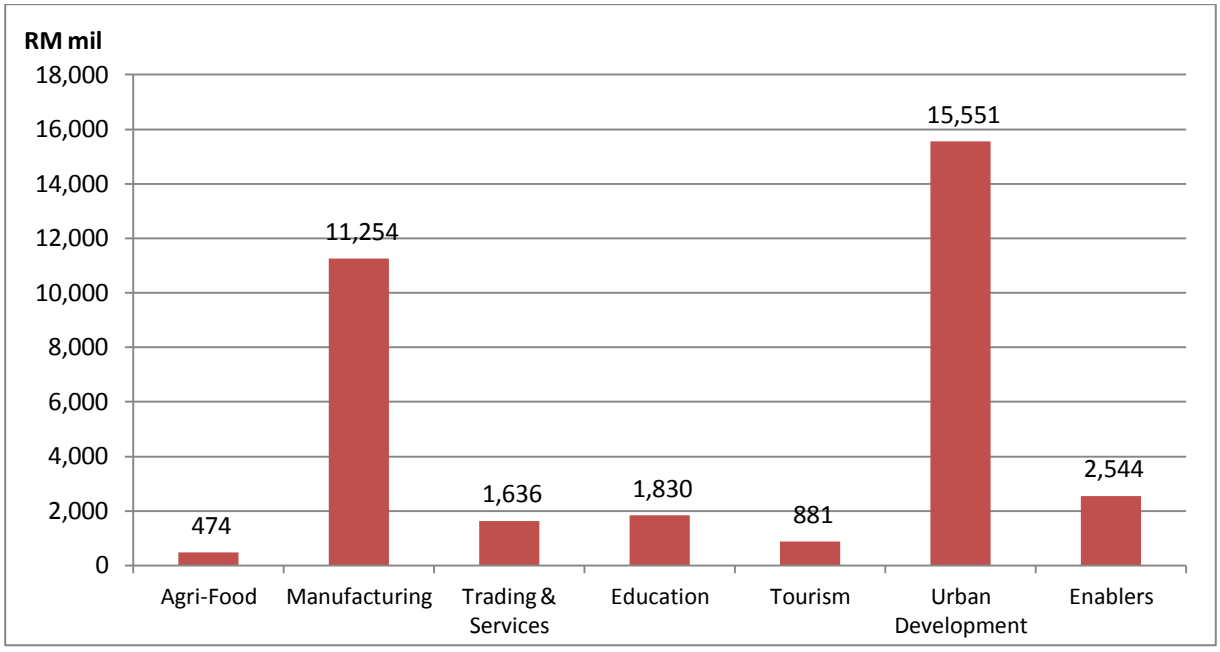
Figure 7.17: Operating Expenditure (Public)



Source: Perlis Strategic Development Plan Report, 2012

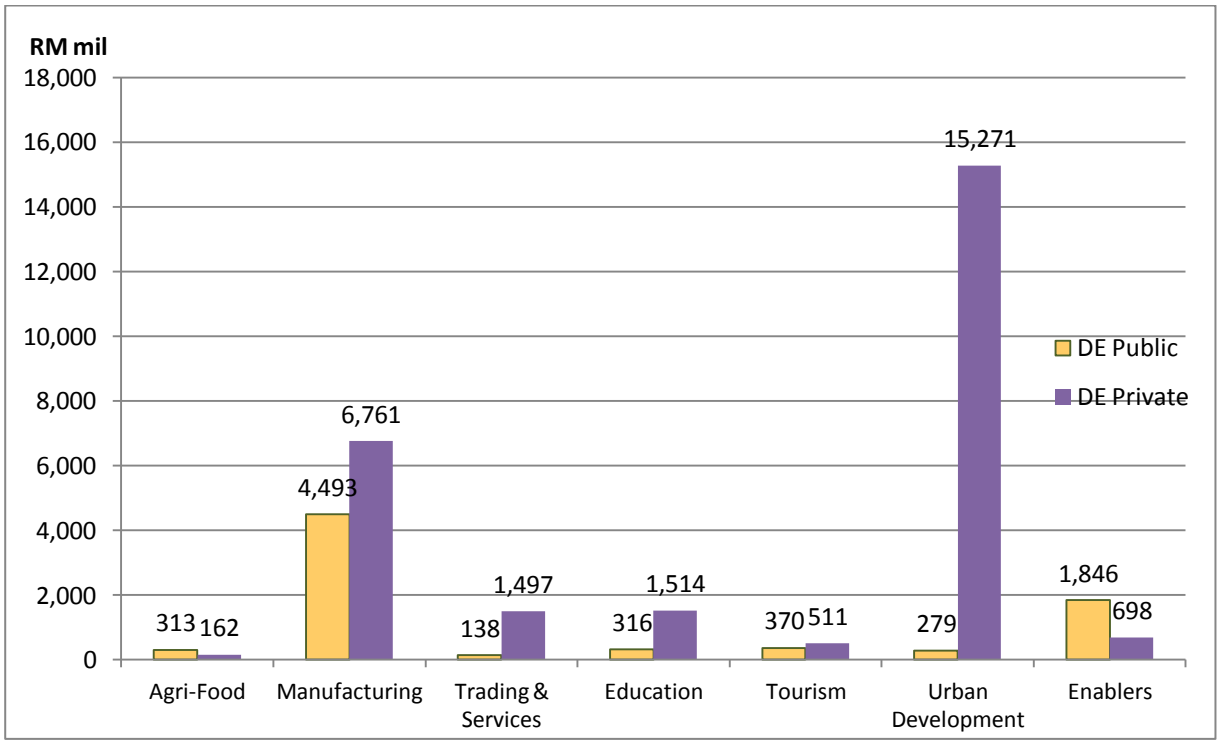
Development expenditure (DE) is estimated at RM34,170 million until 2030, mostly for urban development and high infrastructure and construction costs. (see **Figure 7.18**). DE fro programme is estimated at RM212 million.

Figure 7.18: Total Development Expenditure (RM million)



Source: Perlis Strategic Development Plan Report, 2012

Figure 7.19: Development Expenditure: Public Vs Private Breakdown (RM million)



Source: Perlis Strategic Development Plan Report, 2012

Private investment drives all of the economic sectors proposed in the PSDP, except for the enablers which include highways and other public infrastructure works. Total DE from private sources is RM26,414 million and total DE from public sources is RM7,756 million. This means private DE equates to 77% of the overall total investment required for the selected projects. (see **Figure 7.19**).

CHAPTER 8

IMPACT OF THE STRATEGIC DEVELOPMENT PLAN

8. IMPACT OF THE STRATEGIC DEVELOPMENT PLAN

8.1 INTRODUCTION

This Chapter analyses the impact of the proposed PSDP on Perlis. This will be done by examining KPIs and indicators that provide quantitative measures for Perlis.

The vision for the PSDP is to be “an urbanised and high income” state by 2030. As such, the appropriate indicators shall be urbanisation and high income. Four quantitative measures proposed for measuring the impact are the rate of urbanisation, GDP, GNI and job creation. An analysis of these indicators will provide an understanding of the anticipated impact.

After discussing the impact of the PSDP, the chapter will examine where economic growth would occur, where jobs would be created, and the sources of the anticipated investments. The last section of this Chapter proposes the planning framework for Perlis that consists of a set of KPIs and indicators for monitoring the performance of the PSDP.

8.2 IMPACT OF THE PSDP

Table 8.1 shows the four indicators of development for Perlis. The impact of the PSDP can be seen in three of them, i.e. population, GDP and per capita GDP.

Table 8.1: Impact of PSDP

Years	Urbani-sation	Population			GDP (RM million)			GDP/capita (RM)		
		Current Trend	Structure Plan	PSDP	Current Trend	Structure Plan	PSDP	Current Trend	Structure Plan	PSDP
2010	51.4%	231,541	240,100	231,541	2,946	2,946	2,946	12,275	12,700	12,275
2020	63.0%	261,061	298,600	265,000	3,920	4,800	5,000	15,020	16,070	18,800
2030	75.0%	294,346	354,700	317,000	4,870	7,820	11,400	16,600	22,050	36,000

Source: Perlis Strategic Development Plan Report, 2012 and compilation of State and Federal data.

The urbanisation rate is expected to grow from 51.4% in 2010 to 63% in 2020, and 75% by 2030. The urbanisation rate is a trend and pattern that reflects lifestyle changes and also economic patterns, e.g. job creation and agglomeration economies. As such the PSDP can be said to have an indirect impact on the urbanisation rate.

For the other three indicators, the PSDP has a more direct impact. With respect to population, the PSDP will likely reverse the trend of outmigration, which has been very clearly seen over the past three decades, especially in the past 10 years. The anticipated investment, economic growth and job creation of the PSDP will slow and possibly reverse this outmigration trend. This trend is likely to occur also because of the large number of graduates from the institutions of higher learning in Perlis. If appropriate jobs are created in Perlis, there is a high likelihood that they will stay back to work.

Based on the current population growth rate of 1.2% p.a., Perlis' population in 2030 would be less than 295,000. Under the Perlis Structure Plan, the targets are more ambitious – at 354,000, but the PSDP target is 317,000, which involves a modest slowing down of the rate of outmigration. This projection is a conservative forecast and actual trends could be different, depending on how the rest of the economy changes.

In terms of the economic growth, the PSDP is expected to make the greatest impact. If the planned investments from the government and private sector are made according to the PSDP schedule, the size of the Perlis economy would reach RM5 billion by 2020 and RM11.4 billion by 2030. Under the other scenarios, the Perlis economy would grow slower. Using present rates of economic growth, the Perlis economy would be about RM5 billion by 2030, but under the Structure Plan forecast, it would be RM7.8 billion.

Clearly the PSDP is based on stimulating economic forces through large investments by the private sector and government, and producing greater output through technology and innovation, which hopefully can be sustained beyond the planning period. This will build the economic base for future growth.

The outcome of economic growth at the per-capita level is seen in the per capita GDP. Although population growth rate is slightly higher under the PSDP, the per capita GDP is still expected to grow to reach about RM36,000 by 2030. At this rate it would be more than double what would have been the current growth, which would reach only about RM16,600 in 2030. The PSDP forecast would enable Perlis to narrow the gap with the rest of the country.

8.3 POTENTIAL GDP, GNI AND JOB CONTRIBUTION

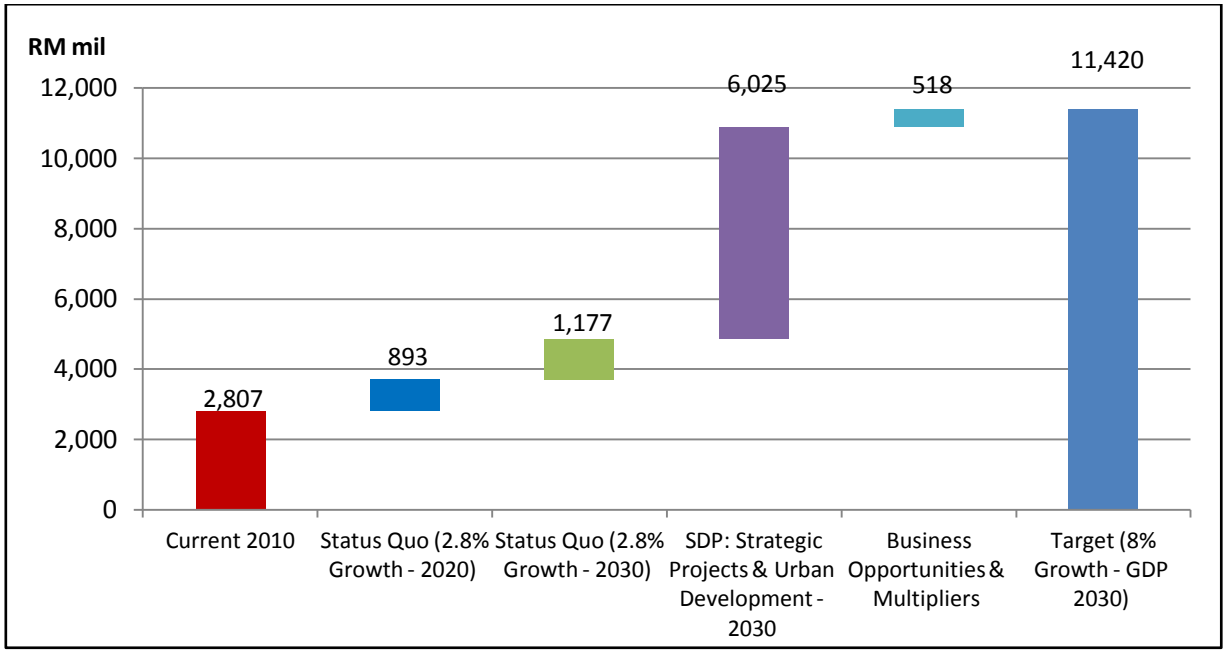
8.3.1 Potential GDP Contribution

The Gross Domestic Product or GDP is the value of the final goods and services produced in a country or region within a given period of time. It is one of the indicators to assess the health of the country's or region's economy.

To reach the targeted GDP of RM11.4 billion, a growth rate of 6% through to 2020 and 8% from 2020 to 2030 is required. Growth at these rates will be accomplished through the addition of high-value activities in Perlis following an Integrated Value Chain Approach. This

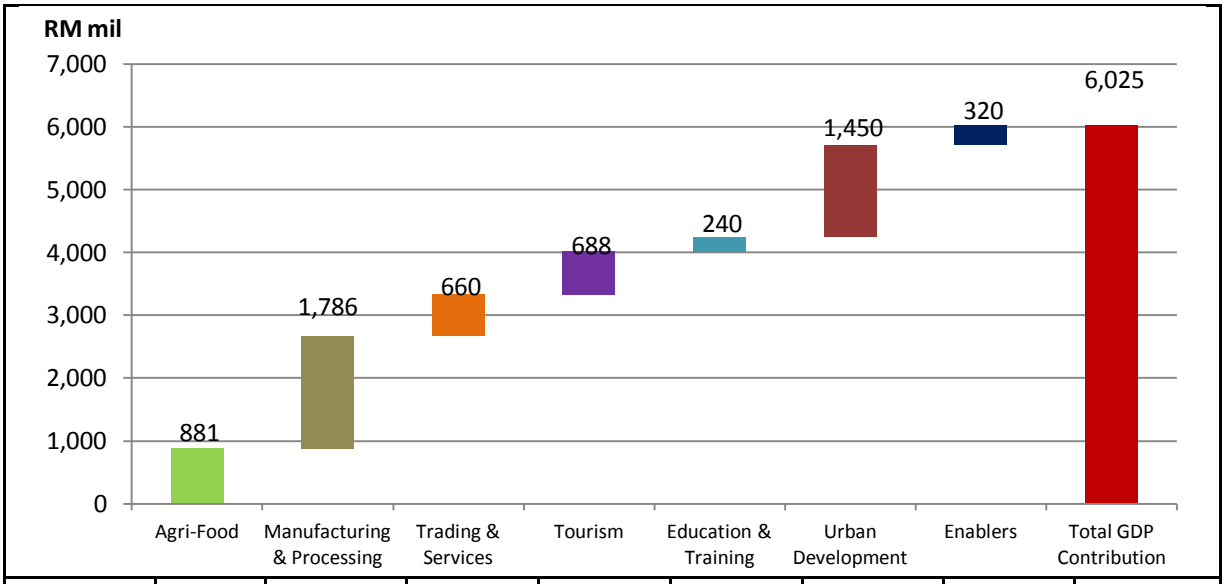
will help Perlis attain high income status by 2030 in line with the overall vision of Malaysia as outlined in the Economic Transformation Programme. A total of RM 6.02 billion GDP is targeted for Perlis under the PSDP. (see **Figure 8.1**).

Figure 8.1: GDP Target by 2030



Source: Perlis Strategic Development Plan Report, 2012

Figure 8.2: Sector Contribution to Targeted GDP, 2030



% of GDP	*8%*	*16%*	*6%*	*6%*	*2%*	*13%*	*3%*	*53%*

Source: Perlis Strategic Development Plan Report, 2012

The five economic pillars (i.e. Agri-food, Manufacturing & Processing, Trading and Services, Tourism and Education & Training) and two components (i.e. Urban Development and Enablers) make up the targeted GDP of approximately RM6 billion. As shown in **Figure 8.2**,

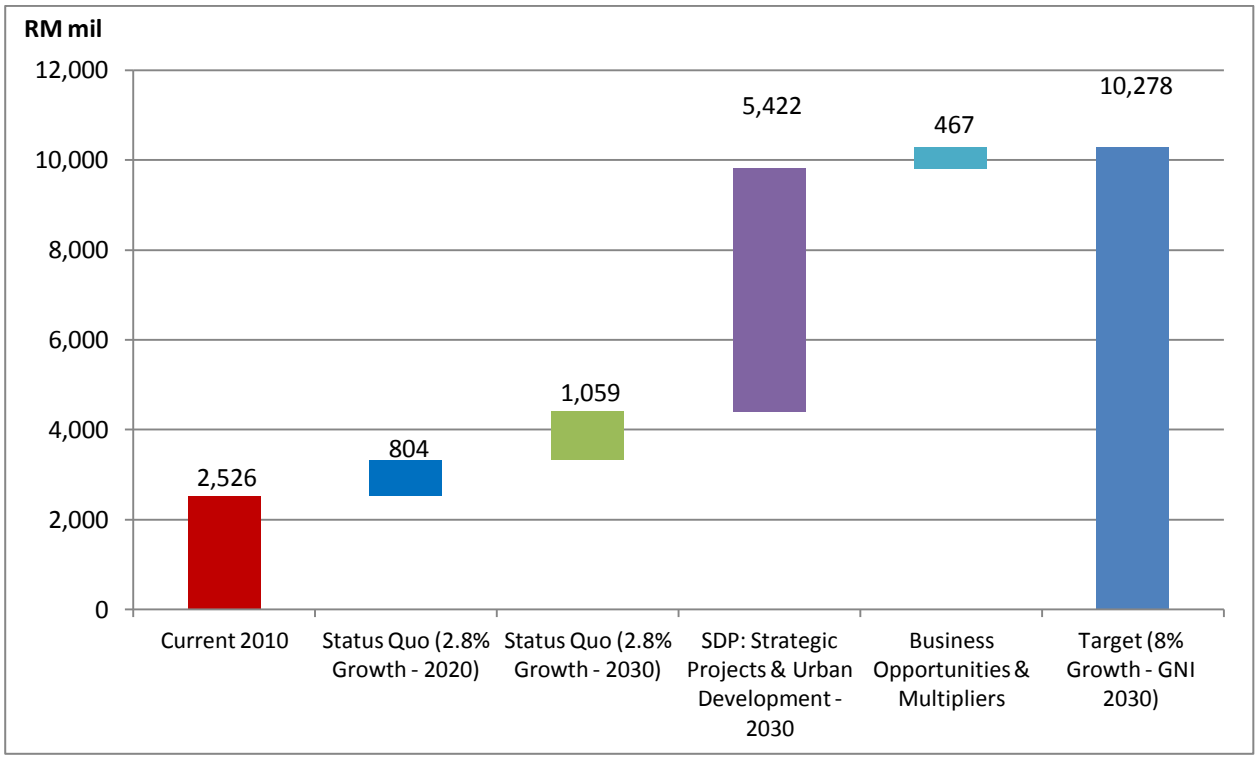
the total contribution of PSDP to Perlis' GDP is 53%. The largest contributor to the targeted GDP is manufacturing and processing with just over 16%, followed by urban development and agri-food, the next largest contributors with 13% and 8% respectively.

8.3.2 Potential GNI Contribution

The Gross National Income or GNI is the total income accruing to the citizens of a country. It is equal to the GDP, that is nett of income or remittances from abroad. Net income from abroad includes income earned by foreign corporations in Malaysia or by Malaysian corporations abroad. It also includes income repatriated by foreigners living in Malaysia or by Malaysians living abroad. The use of GNI in smaller areas (such as Perlis) has been seen in earlier corridor studies (e.g. ECER).

From our analysis the GNI contribution of the PSDP will be RM5.4 billion by 2030 and will attain RM10.3 billion by 2030 if the proposed projects, policies and programmes are successfully implemented. (See **Figure 8.3**)

Figure 8.3: GNI Contribution to 2030 Target



Source: Perlis Strategic Development Plan Report, 2012

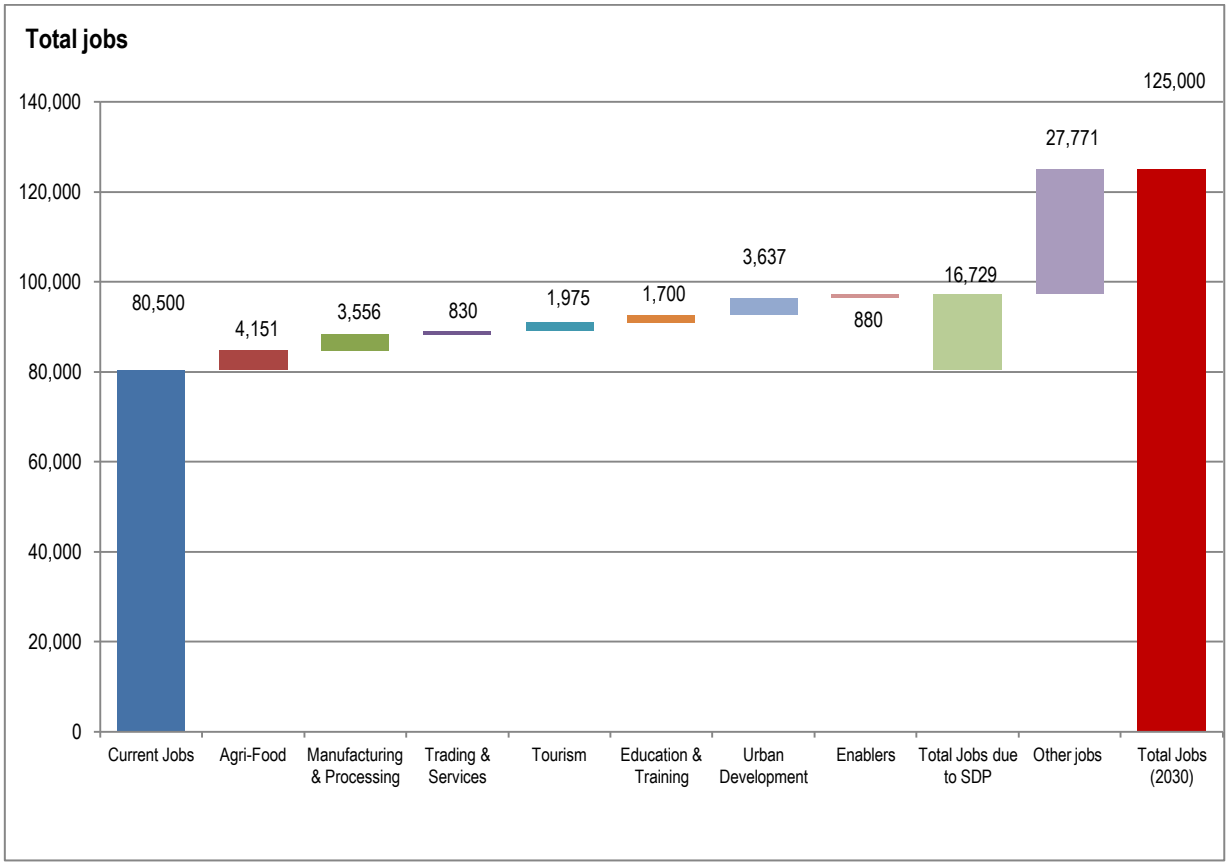
8.3.3 Potential Job Creation

In any development proposal, job creation is an important factor to consider due to its socio-economic impact on the populace. The multiplier effects of the projects and jobs are positive and can invigorate the entire state of Perlis. The current employment in Perlis is 80,500. By 2030 employment would increase to 125,000. With the PSDP about 16,000 jobs could be directly created with the implementation of the proposed projects. The remaining 28,000 new jobs can be attributed to spin-offs that could be linked to the projects, or other sectors not directly related to the PSDP projects.

Agri-food and urban development are the two largest contributors to the overall job creation, with 4,000 jobs (28%) and 3,600 jobs (23%) respectively.

Through this accelerated economic development plan, job opportunities in the state will grow by 15% by 2030. Given the existing population base and students graduating from educational institutions, it is estimated that this increase would be easily absorbed by the anticipated demand from the various PSDP projects.

Figure 8.4: Preliminary Job Creation, Overall and by Sector, 2030



Source: Perlis Strategic Development Plan Report, 2012

8.4 PLANNING FRAMEWORK

This final section proposes a set of indicators for monitoring the performance of the Perlis PSDP. It pulls together projections and forecasts that have been made in this report.

Table 8.2 is a summary for the Key Performance Indicators to be achieved by 2020 and 2030. The population for Perlis is expected to increase from 231,541 persons in 2010 to 317,000 in 2030. The labour force for 2010 is estimated at 83,300, and expected to increase to 129,400 in 2030, with the creation of 46,100 new jobs. The urbanisation rate was 51.4% in 2010 and is expected to increase to 75% by 2030. Total investment for 2005-2010 was RM268 million; however a much higher level of investment, estimated at RM23 billion, is required for the PSDP during the 10th and 11th Malaysia Plans; and an additional of RM11.6 billion in the 12MP and 13MP. About 23% of these investments are expected to come from the public sector, while the rest would be from the private sector.

Table 8.2: Planning Framework for Perlis

	2010	2020	2030
Population	231,541	265,000	317,000
Employment	80,500	95,900	125,000
Total Labour Force	83,300	99,200	129,400
Urbanisation Rate	51.4%	63%	75%
GDP Growth	-	6%	8%
GDP / Capita (RM)	12,275	19,000	36,000
GDP (RM million)	2,946	5,000	11,400
Investment	RM268 million (2005-2010)	RM23 billion (10MP - 11MP)	RM11.5 billion (12MP-13MP)

Source: Perlis Strategic Development Plan Report, 2012 and estimates (repeated Table 2.6)

8.5 KEY CHALLENGES

Any development plan would have challenges and unintended outcomes. It is important to identify these challenges and impacts; five key ones are presented here:

1. Public sector funding and private sector investments. The level of investments and public funding has a large bearing on the success of the PSDP. With respect to public sector funding, the rolling plan of the Malaysia Plans sets the time period for applying for such funds. The financial planning process for public sector (or government) funding needs to start two (2) years ahead. So there will be a delay to the public sector funding unless the government decides that priority should be given to this development strategy.

2. South Thailand is an important part of the regional strategy for Perlis, since it is part of the supply chain of raw materials and products, markets for goods and a source of labour, as well as linkages for tourism. Currently, south Thailand faces a major security threat (bombings in Hat Yai, Yala) and it has also been hit by flash floods (also Hat Yai). Hence South Thailand poses some risks to the regional strategy. If Perlis were to link closely with south Thailand, such risks will have to be considered. Potential investors must have confidence that this supply chain would not be disrupted, slowed or otherwise undermined. Thus, the regional strategy needs to be formulated carefully to ensure that there are contingency plans to mitigate such risks.
3. The capacity of SMEs to take full advantage of the PSDP implementation is a key issue. The average SME in Perlis is a micro entity, and it serves mainly households and is not part of the core industrial capacity. A fresh approach to improving the capacity of SMEs needs to be initiated, building upon Malaysia's successful experience in this area.
4. The population forecast indicates a slowing of outmigration. The general experience of migration is that there will be both in-migration and out-migration patterns. Under the PSDP there will more than 15,000 direct jobs created. An important part of the human capital strategy for PSDP will be to retain highly trained graduates from institutions of higher learning in Perlis. New job creation will help to some extent. Thus Perlis needs to cater for these highly trained persons in its social structure, as they will contribute to Perlis' economy and development.
5. Inflation should be expected due to the economic strategy, and this could introduce socio-economic problems for the Perlis economy. Perlis is a small state and its economy is quite small (less than RM3 billion). The current rate of investments per year averages less than RM30 million. If RM34.5 billion is invested over 20 years under the PSDP, this means an average of RM1.7 billion annually. That would surely trigger inflationary effects in the state. How could such impacts be minimised? Planning and scheduling the investment plan would be one strategy – it must be spread out over time to avoid bunching within short periods of time. Investments can be clustered (e.g. through the flagships) so as to ensure that they have a greater chance of success. UPEN Perlis State Government agencies need to jointly develop strategies to reduce inflationary impacts and mitigate negative impacts so that the people can fully enjoy the anticipated development benefits.

8.6 CONCLUSION

The end-goal of this plan is to transform Perlis into a poverty-free, urbanised, high-income State by 2030.

Exhaustive studies have identified the State's key economic problems and helped formulate detailed plans, policies and projects to overcome them. Perlis has a small agriculture-dominated land area, economy and population, with a poverty rate of about 6%. Agriculture is characterised by limited farm-size, technology, capital, and market links. The plan

proposes to consolidate smallholdings, utilise professional management, and foster private sector market linkages. The strategy in agriculture calls for a focus on the padi sector, and the promotion of fruit clusters and mushroom cultivation technology. Five fishery projects are proposed, in addition to a feasibility study to assess the potential for livestock breeding.

Manufacturing currently comprises only ten per cent of the economy, and is dominated by SME's, as are trade and services. The proposed strategy is to harness the cluster concept, move upstream, and step up food production to harness synergies with the agricultural sector. Twelve projects are proposed for manufacturing.

Other than public services, the trade and services sector is dominated by SME's, mainly in education and tourism, and these are likely to grow in tandem with economic expansion. Among the PSDP proposals, the Padang Besar ICD is promising, while the Special Economic Zone (including industrial zone), wholesale and retail complex and boat building are also significant. A hypermarket is recommended in Perlis to plug spending leakages and foster Perlis-based supply chains.

Tourism has not been a growth area although Perlis is at the major confluence of major tourist routes. To invigorate tourism, private sector partnerships, a more defined marketing strategy and promotion, and improved links to the tourist nodes of Langkawi and Penang are proposed. Ten projects, including eco-projects in line with Perlis' green image, are presented for tourism.

Education is a growing sector but most students from Perlis-based institutions leave the State after graduation in search of jobs. While out-migration can be reversed with growth and job-creation, the plan also seeks to create synergy between educational institutions and the economy by creating an education hub characterised by industry-relevant education and training, R&D, and entrepreneurship development. It is proposed that in addition to the agro-technology faculty of a university, the State provides incentives to draw a reputable foreign university branch campus to the State. The foreign institution can serve students from the region.

Cities attract talent, and their centralised and convenient amenities draw families, making them magnets for future economic growth. In tune with this global trend, the plan proposes that Kangar, Kuala Perlis, Padang Besar and Arau be developed into major urban nodes. This strategy will urbanise 75% of Perlis' population by 2030. In addition to a clutch of projects such as the Perlis River Promenade and Kuala Perlis Maritime Terminal which will transform the urban landscape, several other projects are recommended to overcome flooding, manage solid and sewage waste and improve roads and public transport in the State.

Economic and spatial growth is merely a means to an end, namely an improvement in human welfare. In this sense the plan directly tackles key social challenges, including overcoming poverty, boosting agricultural output, stimulating the SME sector, and injecting competitiveness among Bumiputera entrepreneurs. In addition to creating 45,000 direct and indirect jobs, the plans, policies, and projects in the PSDP will directly assist a total of 17,000 people comprising a third of the population – 1,300 households will obtain direct assistance, 2,000 low-cost homes will be built, 6,000 mostly Bumiputera SME's will benefit from credit and marketing support, while 8,000 padi farmers - particularly the poor - will obtain assistance through irrigation, estate-style management, and technology. Flood alleviation measures will benefit all.

The outcome of the PSDP will be higher economic growth and a better quality of life that will enable Perlis to catch up with the rest of the country.

APPENDIX FOR INCENTIVES

Existing incentives for Perlis (From MIDA and for investor investing in Koridor Utara)

1. Agriculture

Current Incentives
• PS - 100% tax exemption, 5 years • ITA - 100% qualifying capital expenditure (CAPEX), 5 years <u>Integrated Agricultural Projects</u> • Additional 5 years for ITA - manufacturing and processing expenses • Reinvestment allowance (RA) - 60% on capital expenditure for 15 years, offset against 100% of statutory income • Reinvestment in resource-based industries - another round of PS or ITA • Accelerated capital allowance (ACA) - after RA (20% first year, 40% thereafter) • Agriculture allowance - Claim on capital allowances • Approved projects - 60% allowance on CAPEX • Increased exports - 10% on the value of increased exports • Provision of cold chain facilities & services - PS or ITA • Modernise chicken rearing - RA, 15 years
Incentives for investors investing in Koridor Utara
• 100% income tax exemption on statutory income for 10 years, starting from the first year of profitability, or ITA of 100% on qualifying capital expenditure for 5 years • Tax-exempt dividends can be declared from income that is tax exempted • Import duty and sales tax exemption on raw materials, components and machinery, as long as such goods are not locally produced. • Stamp duty exemption on land acquisitions and mortgage transactions. • Investments in subsidiaries (approved companies) by individuals and holding companies are eligible for tax deduction.

2. Tourism

Current Incentives
• PS - 70% tax exemption, 5 years • ITA - 60% qualifying capital expenditure, incurred within 5 years and can be off-set against 70% of statutory income

3. Manufacturing and Processing

Current Incentives
• PS - 70% tax exemption, 5 years • ITA - 60% qualifying capital expenditure, incurred within 5 years and can be off-set against 70% of statutory income Halal Industry (Halmas Certification) (i.) Halal Industry Players • 100 % income tax exemption on CAPEX, 10 years or income tax exemption on export sales, 5 years • Exemption on import duty and sales tax on raw materials used to develop and produce Halal promoted products • Double deduction on expenses to obtain international quality standards (ii.) Halal Park Operator • Full income tax exemption for 10 years or 100% income tax exemption on CAPEX, 5 years • Exemption from import duty and sales tax on equipment, components and machinery (iii.) Halal Logistics Operator • Full income tax exemption for 5 years or 100% income tax exemption on CAPEX, 5 years • Exemption from import duty and sales tax on equipment, components and machinery
Incentives for investors investing in Koridor Utara
Income Tax Exemption • 100% income tax exemption for 10 years starting from the 1st year of profitability or **Investment Tax Allowance** • 100% investment tax allowance for 5 years • Double deduction on export promotion expenses and expenditure incurred for R&D services from 3rd parties

4. Free Trade Zone

Current Incentives
Free of customs exports duty • Criteria: >80% of products are for export; raw materials/ components are mainly imported • Duty free import- Raw materials, component parts, machinery and equipment required directly in the manufacturing process • Exemption from Custom Duty Free Industrial Zone: • For companies with entire production of not less than 80% of their products meant for export; and/or their raw materials/ components are mainly imported. • Duty free import of raw materials, component parts, machinery & equipment required directly in the manufacturing process Licensed Manufacturing Warehouses: • Duty free exports

Current Incentives
• If goods are allowed to be sold in the domestic market (Principal Customs Areas – PCA), the following import duties apply: (i.) For consumer & intermediate goods, where such goods are also produced in the PCA, import duties equivalent to the AFTA Common Effective Preferential Tariff (CEPT) rates will be imposed. (ii.) For the consumer & intermediate goods, where such goods are also produced in the PCA but have local content of > 51%, an import duty of 5% ad valorem or equivalent excise duty rate (for products subject to excise duty), whichever is the higher, will be imposed. (iii.) For consumer & intermediate goods which are not produced in the PCA, an import duty of 3% ad valorem will be imposed. (iv.) For intermediate goods such as raw materials/components, machinery & equipment for the manufacturing sector, manufacturers in the PCA can apply for full import duty exemption.

5. Education & Employment

Current Incentives
• ITA - 100% qualifying CAPEX, 10 years • Special Industrial Building Allowance – claims on building expenditure of 10%, 10 years Educational equipment ○ Exemption on import duty ○ Exemption on sale tax ○ Exemption on excise duty • Royalty payments - Exemption for non-resident franchised programmes • Single deduction - unemployed graduate training, non-employee training, pre-employment training • Double deduction - Approved training for manufacturing and non-manufacturing companies
Incentives for investors investing in Koridor Utara
Research and Development • 100% income tax exemption for 10 years starting from the 1st year of profitability or 100% investment tax allowance for 5 years • 20% tax rebate for the next 10 years • Double deductions on export promotion expenses and expenditure incurred for R&D services from 3rd parties • Import duty and sales tax exemption on imports of raw materials, components, tools and machinery

6. Urban Development & Logistics

Current Incentives
• Tax exemption - 85%, 5 years (if of national & strategic importance, then 100%, 10 years) • ITA - 80%, 5 years (if of national & strategic importance, then 100%, 5 years) • Exemption on import duty, sales tax, and excise duty

Sources: MIDA, 2011; NCIA (http://www.koridorutara.com.my/site/?__f=catmain&catname=infrastructure&catsub=&aliascat=&tracking=&relatedpages=1&q=investors/investment/incentives)

GLOSSARY OF ACRONYMS

10th MP	Tenth Malaysia Plan
1MH Corporation	1Malaysia Housing Corporation
AAGR	average annual growth rate
ACA	Accelerated Capital Allowance
AFTA	ASEAN Free Trade Area
AIM	*Amanah Ikhtiar Malaysia*
AIZ	Aquaculture Industrial Zone
AROR	average room occupancy rate
ASEAN	Association of Southeast Asian Nations
AUCMS	Allianze University College of Medical Sciences
BAU	business as usual
BCIC	Bumiputera Commercial and Industrial Community
BRT	Bus Rapid Transit
CAPEX	capital expenditures
CCM	Chemical Company of Malaysia
CIQ	Customs, Immigration and Quarantine
COLGIS	College of Law, Government and International Studies
CPPC	Collection, Processing and Packaging Centre
DDI	Domestic Direct Investments
DE	development expenditure
DFI	Development Financing Initiative
DOS	Department of Statistics
E&E	Electrical & Electronics
EBN	Edible Bird's Nests
ECERDC	East Coast Economic Region Development Council
EDO	Entrepreneur Development Organisation
EPP	Entry Point Project
EPU	Economic Planning Unit
ESA	environmental sensitive areas
ETP	Economic Transformation Programme
FDI	Foreign Direct Investments
FELDA	Federal Land and Development Authority
FITs	Free Independent Travellers
FIZ	Free Industrial Zone
FRIM	Forest Research Institute Malaysia
FTA	Free Trade Area
GDP	gross domestic product
GLC	Government Linked-Company
GLIC	Government-Linked Investment Company
GMSB	Gas Malaysia Sdn Bhd
GMSR	Greater Mekong Sub-Region
GNI	Gross National Income
HALMAS	Halal Malaysia
HDC	Halal Development Corporation
HSBB	High Speed Broadband
ICD	Inland Clearance Depot
ICT	Information and Communications Technology
IDO	Industry Development Organisation
IHL	Institutions of Higher Learning
IMT-GT	Indonesia, Malaysia, Thailand Growth Triangle
IPC	Integrated Processing Centre
IPP	Independent Power Plant
ITA	investment tax allowance
ITT	Integrated Transportation Terminal
JAKIM	*Jabatan Kemajuan Islam Malaysia*
JPS	*Jabatan Pengairan dan Saliran*
JPSPN	*Jabatan Pengurusan Sisa Pepejal Negara*
KDA	key development areas
KMSC	Kangar Maya Smart City
Koridor Utara	Northern Corridor Economic Region
KPIs	key performance indicators
KTM	*Keretapi Tanah Melayu*
LFPR	labour force participation rate
LKIM	*Lembaga Kemajuan Ikan Malaysia*
MADA	Muda Agricultural Development Authority

MARA	*Majlis Amanah Rakyat*
MARDI	Malaysian Agricultural Research and Development Institute
MDEC	Multimedia Development Corporation
MICE	Meetings, Incentives, Conferences, and Exhibitions
MIDA	Malaysian Investment Development Authority
MITI	Ministry of International Trade and Industry
ML	manufacturing licence
MLD	million litres per day
MMBH	Malaysia Mega Biodiversity Hub
MOF	Ministry of Finance
MoHR	Ministry of Human Resources
MOTOUR	Ministry of Tourism
MP	Malaysia Plan
MRL	Malay Reserve Land
MSC	Multimedia Super Corridor
MSME	Micro, Small and Medium Enterprises
MT	metric tonne
NCIA	Northern Corridor Implementation Authority
NGO	Non-government organisation
NKEAs	National Key Economic Areas
NKRAs	National Key Result Areas
OPEX	operating expenditures
p.a.	per annum
PCA	principal customs areas
PE	population equivalent
PEMANDU	Performance Management & Delivery Unit
PERSEL	Perlis Second Link
PGU	Petronas Gas Utilisation
PLI	Poverty Line Income
PPP	Public-Private Partnership
PR1MA	1Malaysia Housing Programme Corporation
PS	pioneer status
PSDP	Perlis Strategic Development Plan
PTG	*Pejabat Tanah dan Galian*
QC	Quality Control
R&D	Research and Development
RA	reinvestment allowance
RKK	Special Area Plan (*Rancangan Kawasan Khas*)
RPIC	Rubber Processing Industrial Cluster
RTC	Rural Transformation Centre
RTMPK	*Rancangan Tempatan Majlis Perbandaran Kangar*
SCORE	SME Competitiveness Rating for Enhancement
SEDC	State Economic Development Corporation
SEZ	Special Economic Zone
SFO	State Financial Office
SME	Small and Medium Enterprises
SOP	Standard Operating Procedures
STP	sewerage treatment plants
SWOT	Strengths, Weaknesses, Opportunities and Threats
TERAJU	Bumiputera Agenda Coordinating Unit (*Unit Peneraju Agenda Bumiputera*)
TEU	Twenty-foot equivalent unit
THB	Thai Baht
TNB	*Tenaga Nasional Berhad*
UiTM	*Universiti Teknologi Mara*
UniMAP	*Universiti Malaysia Perlis*
UPEN	*Unit Perancang Ekonomi Negeri*
UUM	*Universiti Utara Malaysia*
WTO	World Trade Organization