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**PLANNING FOR RURAL SERVICE CENTRES
IN WEST MALAYSIA**

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Submitted as part of
the requirements for
the Degree of Master
of Philosophy

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and Regional Planning
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To - Rose, Asyraf and Mimi.....

S Y N O P S I S

In 1985, it was estimated that 4.25 million people in Malaysia lived in 6,000 scattered traditional villages. These villages when compared with other types of rural settlement receive very minimum level of developmental planning input and therefore suffer from many physical and socio-economic problems.

In the Mid-Term Review of the Fourth Malaysia Plan, the Malaysian Government initiated a new direction of rural development for the country. This is in conjunction with the Prime Minister's suggestion that the present "conventional" approach of rural development should be replaced with an "Integrated Rural Development (IRD) approach". The strategies outlined in this new direction of rural development are to diversify the rural economy; to restructure the land holdings; and to rearticulate the existing traditional villages so as to enable the establishment of "rural growth centres". This is to ensure that the ultimate goal of rural development i.e. "to improve the economic and social wellbeing of the rural population and to redress the economic imbalance between urban and rural area" stated in the Development Plan could be realized.

Within the new framework of rural development approach, this study attempts to design a suitable means to restructure the existing traditional villages so as to enable the establishment of rural growth centres and ultimately to implement the other two strategies mentioned above.

Based on some theoretical justifications of the growth centre concept and lessons derived from the case studies of key settlement policy in the United Kingdom, growth area policy in Tanzania, and India, the writer come forward with the notion of "service centres". The writer has also outlined the planning process by which the "service centres" could be implemented. Four "design models" which are called "expanded-village", "new-village", "small town-based", and "population-transfer" have also been put forward to illustrate the framework of the "service centres".

This new concept and design models of rural centre then have been tested in the District of Johor Bharu, one of the rural areas in the Johor State. Assesment which has been made shows that this new concept of rural centres will bring about a lot of physical and socio-economic benefits to the rural people particularly to those who are living in the traditional villages. The implementation of this new concept of rural centres will be faced with only one big problem, vis inadequate of administration and legal set-up to excute the plans. If suggestions outlined in this study are adopted, the proposed concept could be implemented successfully and the overall rural development objective could be realized.

A C K N O W L E D G M E N T S

In the course of research and writing this dissertation, I have received assistance and cooperation from many individuals and institutions. I take this opportunity to express my gratitude for all the help which have been accorded me.

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I would like also to thank Dr. Green of University of Strathclyde, who was most generous with his time and advice on several aspects of this dissertation, and Mr. Fadhil Abd. Rahman of University of Technology, Malaysia who provided me with valuable encouragement and materials for this study.

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PART 1.

BACKGROUND

CHAPTER ONE

INTRODUCTION

1.1. Background.

In West Malaysia, three different types of rural settlements exist in the rural areas. These are planned rural settlements; "Chinese New Villages", mining and estate settlements; and traditional villages. In 1985, about 7.6 millions (58.9%) of the national population were rural. Out of this figure, 4.25 millions lived in about 6,000 number of traditional villages. These villages when compared with the other two types of rural settlements (planned rural settlements; and Chinese New Villages, mining and estate settlements) suffer from many physical and socio-economic deficiencies. They have lack public amenities, lack reliable water supplies, electricity and sanitary methods of waste disposal. Along with these, the problems of unemployment, and underemployment are very obvious. Traditional villages also contribute the highest number of people who live in poverty i.e. about 78%. These problems occurred due to low level of investment made in the rural areas, low level of agricultural productivity which farmers engaged, lack of marketing facilities, fragmented land

holdings, and the utilisation of traditional methods of production.

In the Mid Term Review of the Fourth Malaysia Plan, 1981 - 1985, the Malaysian Government initiated a new direction of economic development for the country particularly with regard to the development of the rural areas. This is in conjunction with the Prime Minister's direction which stressed that;

"A move should be made in the rural development programme from the conventional to an Integrated Rural Development (IRD) approach, where complementary efforts are needed not only to provide basic facilities and services, but also to restructure the existing land holdings, to diversify the rural economy, and to restructure the traditional villages so as to enable the establishment of rural growth centres".
(The Prime Minister's Circular, July 10th, 1984)

It is believed that this new approach will ultimately help to increase the quality and the productivity of farmers, to increase the farmers income, to make the provision of facilities and services more economic and also to reduce the subsidies role and erase the "subsidy mentality" of the farming community.

From the Prime Minister's suggestion, it is clear that traditional villages are the target areas for the future developmental planning in the country. The "idea" to rearticulate the traditional villages so as

to enable the establishment of growth centres, as one of the strategies in the new direction of rural development is actually not a new phenomenon. It has already been accepted by many scholars that one of the major elements of Integrated Rural Development (IRD) is a spatial strategy for the establishment of growth centres for the purpose of stimulating overall rural development. Such centres if supplemented by relevant social and economic policies, will increase and diversify opportunities for productive employment largely through the development of linkages between agricultural and non-agricultural activities in the rural hinterland. Misra, 1985 for instance bemoans that;

"One of the major missing elements in the Integrated Rural Development (IRD) is space. Emphasis continues to be laid on sectoral programmes and projects leaving rural space unarticulated and delinked from the national urban-industrial space."

This idea has also been supported by Waterson (1974), and Mollet (1984). They agreed that the distance - economic activities, decision making, economic growth, facilities and services - between rural and urban is indeed great and it can only be reduced by the emergence of "rurban communities" which are socially close to villages but economically and organizationally more like the urban centres. These centres would act as ready markets for rural products

nearer to the villages, as centres of distribution of inputs and as centres of demonstration effects of consumer goods.

1.2. Purpose of the study.

Based on the new direction of the rural development programme, a suitable approach for restructuring the traditional villages so as to enable the establishment of rural centres should be found. This is necessary to ensure that other objectives vis diversification of the rural economy, and restructuring of land holdings can be implemented efficiently. This study attempts to design such a suitable approach. Analysis will be made to discover whether or not the "growth centre" concept is suitable to be used as a tool to achieve the above objective. The "growth centre" concept was originally envisaged as a tool to describe and explain the anatomy of economic development in abstract economic space. However, in the course of time, the scope has been broadened and reoriented to include the normative issue of policy intervention and planning. The concept is now viewed as a general theory of development in a simultaneous sectoral - temporal - spatial setting (Paelink, quoted by Hermansen, In Kuklinski, 1972) .

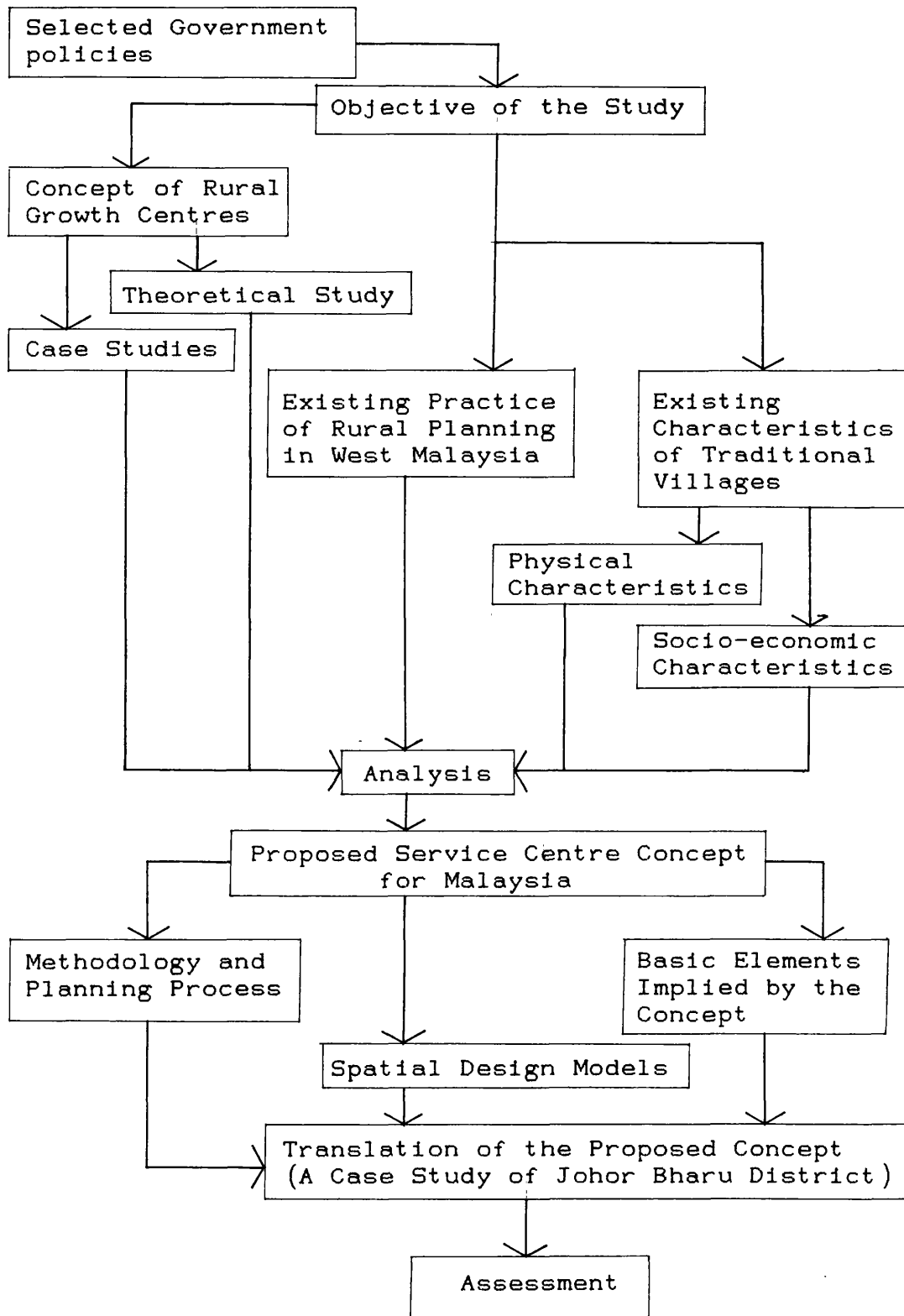
1.3. Methodology.

1.3.1. Study flow-chart

This study has been carried out through five stages; namely, background study, theoretical study, study of existing conditions, proposals, and assessment. The overall structure of the study is shown in Figure 1.1.

1.3.2. Source of Information.

Considering the extensive nature and the scope of the study, several research methods and instruments have been used. Both library research and field study have been conducted. Library research consists mainly on content analysis of reports, and related literatures on rural settlement planning, rural development and agricultural development. Field study has been undertaken at two locations, namely Kuala Lumpur and in the study area (Johor Bharu District). Study in Kuala Lumpur mainly of discussions with relevant planners and administrators at the Central Agencies. The main aim of this discussion is mainly to discover the role of central agencies in formulating and implementing policies and strategies for rural and agricultural development.

FIGURE 1.1. Study Flow Chart

Field study in and related to the study area consists of discussions with planners and administrators at state, district, and village levels. The main aim of the field study is to discover information on; the existing population in the study area; the distribution of villages; distribution of services and facilities; the existing and the proposed road networks; the proposed government projects which might influence the development of the study area; the development constraints and potentials of the study area; and factors which might be considered in the development of rural centres.

1.4. Organization of the Study.

This study is divided roughly into four parts. The introductory section consists of the first three chapters, and will cover the purpose, methodology and organization of this study (Chapter 1), the existing practice of rural development and planning in Malaysia (Chapter 2) and the characteristics of traditional villages in West Malaysia (Chapter 3). Section two consists of Chapter 4. This chapter will discuss the theoretical basis of the "growth centre" concept and its suitability to be applied to the rural areas. It will also analyse the application of this concept in three different countries; namely, United Kingdom,

Tanzania and India. This chapter is ended with several questions about the relevance of the growth centre concept to be used as a tool to solve the rural problems.

The main section consists of three chapters. Chapter 5 will propose a suitable concept of rural growth centres which is called "service centres" to rearticulate the traditional villages in Malaysia. This is a modified form of growth centre strategy and will include the element of "population resettlement". The basic elements of the recommended concept will also be outlined in this chapter. Chapter 6 will propose the operational design of the proposed strategy. The main aspect outlined in this chapter is the methodology and planning approach by which the proposed concept of rural service centres could be applied in the whole country. Based on the suggested concept, several design models which should be used as a general guidelines in establishing rural service centres will also be proposed in this chapter. Chapter 7 will describe the translation of the proposed concept and design models into the study area. The study area in this reasearch is the District of Johor Bharu which is located in the Johor State. This chapter will describe amongst others, the existing characteristics of the study area; the process of

selecting villages to be service centres; and outline the elements of the proposed service centres for the study area.

The final section consists of two chapters. Chapter 8 will discuss the feasibility of the proposed service centre concept and design models to be applied in Malaysia. Several criteria will be used in assessing this newly designed approach in achieving the national rural development objectives and finally, Chapter 9 will outline the summary of the study and will suggest an area for further researches.

CHAPTER TWO

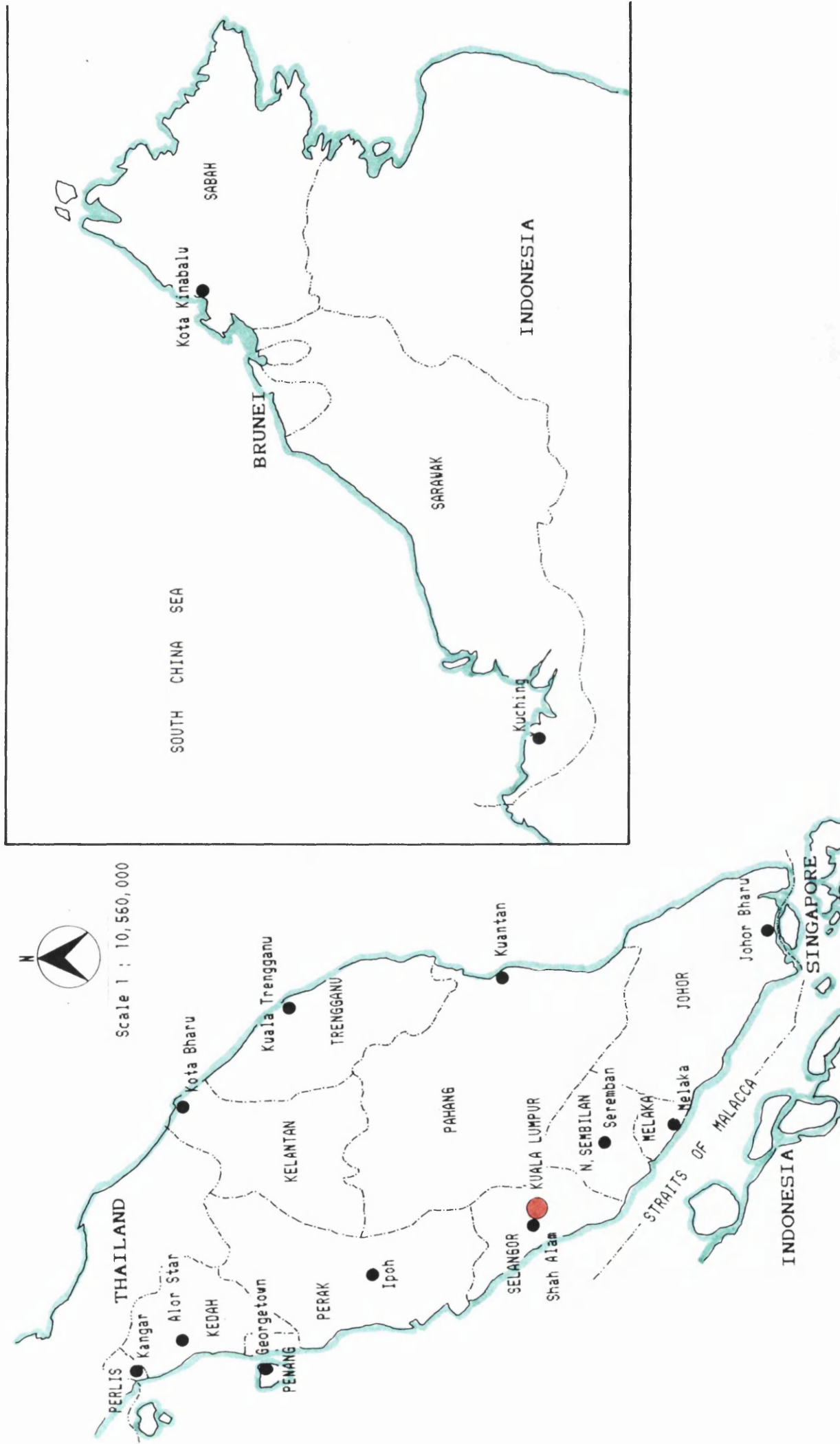
RURAL DEVELOPMENT AND PLANNING IN MALAYSIA.

2.1. The Malaysian Setting.

Malaysia which was formed in 1963 consists of two major physical parts: the Peninsular part known as West Malaysia, consisting of eleven states and one federal territory (Kuala Lumpur), and Bornean part, consisting of two large states of Sabah and Sarawak (Figure 2.1). In terms of administration, Malaysia is unique constitutionally because its constitution has many special provisions. Two states Sabah and Sarawak, have different powers from the rest. The constitution also provides for special protection and status for a number of ethnic groups, namely; the Malays and other Indigenous groups in the context of their cultures, special rights, and religion; and, the Chinese and Indians in the context of their citizenship. All these are necessary caveats in order to achieve the workable framework on which a functioning and united Malaysian nation can be built.

Malaysia has an area of about 330, 665 square kilometres, and its population in 1985 was estimated at 15,791,100.

FIGURE 2.1. MALAYSIA: STATES AND CAPITAL CITIES



About 82.5 of the population live in West Malaysia, 9.8 per cent live in Sabah, and 7.7 per cent in Sarawak. The ethnic composition of the population includes Malays and other Indigenous 60.0 percent; Chinese 30.9 percent; Indian 8.3 percent; and Others 0.8 percent. Malaysia's population is generally very young. The dependency ratio in 1985 was 65.3%, and it implies a substantial demand for the basic necessities of life, as well as education, health, housing, and employment (Malaysia, 1986). In 1985, almost 62.6 percent of the population were living in the rural areas. In West Malaysia, the figure was at 58.9 percent whilst in Sabah and Sarawak was 77.4 percent and 80.8 percent respectively.

To a large extent, Malaysia's economic resembles that of other countries in Southeast Asia, especially Indonesia, the Phillipines, and Thailand. It has the same typical problems of heavy dependence on a limited number of exports which are primary products, notably rubber, tin, oilpalm and timber. The economic development of Malaysia has been relatively rapid. Between 1980 - 1985, it was estimated that the Gross Domestic Product (GDP) in real terms grew at an average of 5.8 percent per annum (Malaysia, 1986). Apart from Singapore and Brunei, Malaysia's income per head is the highest in Southeast Asia, which was at

M\$4,609 in 1985. Despite the rapid growth of national economy, Malaysia has not had an equal share in the economic progress. The gaps - socio economic, economic growth, decision making and others - between the rural and urban areas are indeed great. As a result, rural population suffer from many socio-economic deficiencies. Incidence of poverty in rural areas for instance is very significant if compared with in urban areas (Table 2.1).

After independence, the government faced with the problems of consolidating the nation with a multiracial society characterised by the socio-economic and cultural differences. The multi-racial nature of Malaysian society makes for complex socio-political dynamics which have many strengths as well as weaknesses. Everything, political or economic in Malaysia is dominated, and must be dominated, by consideration of "racial arithmetics" (Milne and Diane 1978). Consequently, most of its national policies, development plans and activities are tempered with ethnic considerations. In 1969, Malaysia faced an outburst of racial riot. This incident has indelibly changed the shape of Malaysian planning.

TABLE 2.1. West Malaysia:
Incidence of Poverty by Rural - Urban
Strata, 1984

Stratum	Total H/Holds	Total Poor HH	Incidence of poverty
<u>Rural</u>	<u>1,629,400</u>	<u>402,000</u>	<u>24.7%</u>
a. Rubber smallholders	155,200	67,300	43.4%
b. <u>Padi</u> farmers	116,600	67,300	57.7%
c. Estate Workers	81,300	16,000	19.7%
d. Fishermen	34,300	9,500	27.7%
e. Coconut smallholders	14,200	6,600	46.9%
f. Other agriculture ¹	464,200	158,800	34.2%
g. Other industries ²	763,600	76,500	10.0%
<u>Urban</u>	<u>991,700</u>	<u>81,300</u>	<u>8.2%</u>
a. Agriculture	37,500	8,900	23.8%
b. Mining	7,800	300	3.4%
c. Manufacturing	132,300	11,300	8.5%
d. Construction	86,600	5,300	6.1%
e. Transport & Utilities	73,900	2,700	3.6%
f. Trade & Services	472,700	21,900	4.6%
g. Others	180,900	30,900	17.1%

Note: ¹Includes other agricultural farmers such as oilpalm smallholders, pepper smallholders, pineapple and tobacco farmers and livestock and poultry farmers.

²Includes households engaged in mining, construction, manufacturing, transport and utilities, and trade and services.

Source: Malaysia (1986), Fifth Malaysia Plan.

The instrument of change which would affect all future planning in Malaysia is the New Economic Policy (NEP), which was introduced in 1971 under the Second Malaysia Plan. The plan incorporates a two-pronged objectives i.e. to reduce and eventually eradicate poverty irrespective of race, and to restructure the Malaysian society so as to reduce and eventually eliminate the identification of race with economic function. (Malaysia, 1971).

2.2. Administration and Planning Framework.

Malaysia operates a federal system of government with a constitutional monarchy. In general terms the Federal Government alone is responsible for matters set out in what is known as "federal list", which includes defence, transport, and education. Similarly the State Governments are responsible within their area for matters set out in the "state list", which includes land and religion. Local government and town planning are the concurrent responsibility of both the Federal Government and the states. At the national level, the Five Year Development Plans indicate the overall targets, objectives and strategies within the framework of 20 years Outlined Perspective Plan (OPP). The plans are detailed in terms of their sectoral and project components at the state and local level.

The division of responsibilities has significant implications for the way in which the policies and proposals set out in the national development plans are pursued at the state level, e.g. land is a state matter under the Constitution and it is not usual for state interest in the sale and/or development of land to run counter to objectives and policies established at federal level. Similarly, for concurrent responsibilities, whilst the Federal Government may pass legislation which aims to unify policy and implementation, the states are free to decide whether or not to adopt such legislation.

According to Bruton (1982);

"a hierarchy of levels of planning is needed to provide the framework necessary for the formulation of generalised policies; the translation of generalised policies into more specific policies or programmes in the forms of more individual but inter-related projects".

In essence, each level of planning forms a strategic function for the level below and conversely is constrained by the strategic planning of the level above. In Malaysia, the top level in the hierarchy of the planning system is functioning well (Bruton, 1982). National Economic policy (NEP) and Outline Perspective Plan (OPP), give a clear statements of the social and economic change that is sought. The national development plans provide more specific

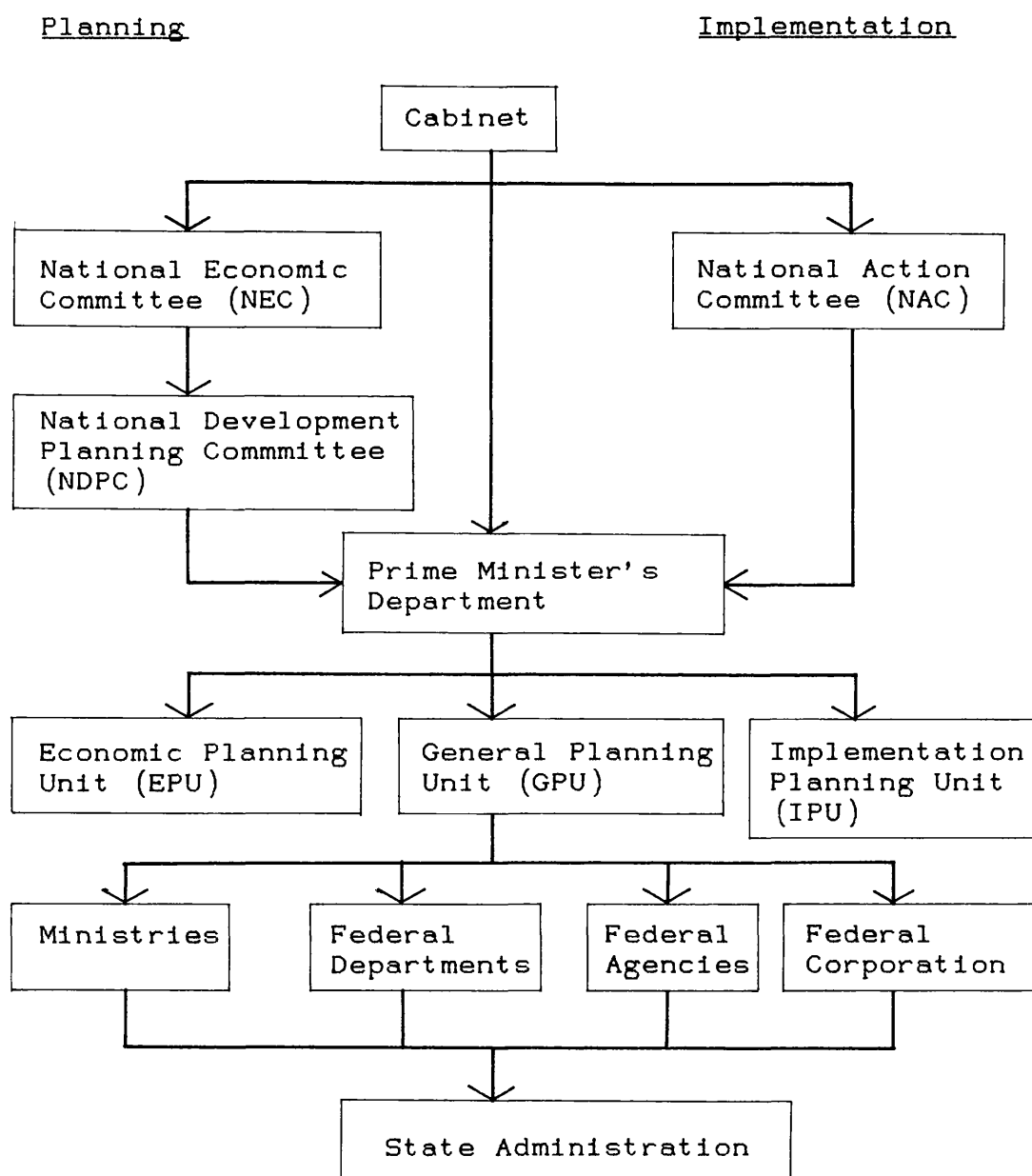
sectoral objectives and establish the policies needed to achieve this change. The NEP and OPP constraint the policies of the national development plans. The national plans in turn constraint the plan produced lower down in the hierarchy such as by allocating resources and outlining the regional and urban strategy to be adopted in achieving the policies.

The agencies involved in the preparation of the national plans in Malaysia are many and varied (Soenarno, and Owen, 1980). At the highest level, the broad socio-economic strategy is formulated by parliament and the cabinet. In addition, the National Action Council (NAC), which is chaired by the Prime Minister, undertakes an economic and social evaluation of plans, policies, programmes and projects put forward by Ministries and Departments. The National Development Planning Committee (NDPC) is the main agency guiding the production of the five year national development plans (the Malaysia Plans). This body reviews and coordinates policies and proposals put forward by a range of central and state agencies to achieve the social and economic change aimed for at the highest level. Along with these, several main central agencies and government departments also involve in the preparation of national plans. Overall, the main agencies involved in the preparation

of national development plans is shown in Figure 2.2. At the state level, inputs to the production of the national development plans are made from relevant ministries and departments. In particular, the State Economic Development Corporations (SEDCs) make significant inputs to the plan making process. Thus, the planning system for producing the national development in Malaysia involves a combination of the "top downwards" and "bottom upwards" approaches with NDPC and NAC evaluating and coordinating proposals and policies advocated by different ministries, departments, and agencies (the bottom) within the policy framework established by national plans (Bruton, 1982).

At the next level in the planning system hierarchy, the situation according to Awang (1984) is less clear. Prior to the introduction of Town and Country Planning Act 1976, a series of ad-hoc socio-economic and physical strategies were produced for parts of the country e.g. Penang Master Plan (Nathan, 1970); and Klang Valley Regional and Development Study (Shanckland Cox and Partners, 1974). These plans translate the socio-economic objectives of the Federal Government and the sectoral plan into a socio-economic and physical development strategy for the regions covered.

FIGURE 2.2. Existing Administrative Machinery for Planning and Implementation at Federal Level



However, these studies have a range of weaknesses. First, they are ad-hoc and have no statutory basis. Thus only limited and unconnected part of the country have been covered by such studies. Secondly, no authority is made directly responsible for implementing proposals put forward in such studies. Thirdly, no resources allocation mechanism is firmly established. Fourthly, no satisfactory mechanism existed until 1976 for linking the regional strategy to the local detailed land-use planning. In the same time, physical planning was also carried out in piecemeal under the provisions of the Town Board Enactments (CAP 137 Part IX). This enactment empowers local authorities to produce a general town plan for the whole or part of its area and prescribes the content of this general town plan which was, and still is, a zoning plan and site development plan showing in "master plan" format what the area will look like at some future dates. The general town plans produced under this Enactment were incapable of making a significant contribution to the achievement of social and economic change sought through NEP, OPP and the national development plans.

In 1976, the Federal Government introduced two major pieces of legislations - the Local Government Act (Act 171), and Town and Country Planning Act (Act

172). However, both are enabling acts, i.e. the states can adopt all or parts of the acts for all or parts of their area, if they wish. The main purpose of the Act 171 is to consolidate the whole, or at least the greater part of the peninsular be covered by "municipalities" or "district councils". The Act gives an extensive powers to new local authority units to provide services at a local level; to acquire lands for public interest; and to develop industrial estates, housing estates and others. By the end of 1978, the former 374 local government territories have been restructured and amalgamated into a total of 75 District councils, 15 Municipal Councils, and the Federal Territory of Kuala Lumpur. The most common criteria used for the gazetting an operational areas include; accessibility, level of development and the need of the area to be serviced, capacity of the local authority to provide the services and potential future growth and development. Except for the State of Penang, the new local government in other states have been confined to urban, semi-urban, and adjoining areas. The results have been curious and awkward corridors, often with "islands" of rural district areas. In 1981, it was estimated that about 83.4 percent of the total peninsular areas (109,552 sq.km) mainly rural were neither covered by Municipal Councils nor District Councils (Table 2.2.).

TABLE 2.2. New Local Authority Units
by State and Size at August, 1981

State	Area in sq. km. of State	No. L. A. Units	Area covered by L. A	Area not Covered
Federal Territory	243.4	1	243.4	0
Johor	18,984.7	14	2,174.3	16,810.4
Kedah	9,479.4	11	9,479.4	0
Kelantan	14,892.5	11	3,232.4	11,660.1
Melaka	1,657.6	3	1,657.6	0
N. Sembilan	6,643.3	8	950.5	5,692.8
Pahang	35,931.1	1	324.0	35,607.1
Perak	20,668.2	15	1,621.3	19,046.9
Perlis	802.9	1	103.6	699.3
Penang	1,030.3	2	1,030.3	0
Selangor	7,957.8	11	385.9	7,571.9
Trengganu	13,020.7	6	554.3	12,466.4
TOTAL	131,312.5	84	21,760.3	109,552.2

Note: L. A. - Local Government Authority.

Source: Bruton, M. J., (1982), pp. 325-327.

The Act 172 makes the local authorities as the local planning authorities. Under this Act, the state is responsible for the general policy in respect of the planning of the development and use of all lands within the state. At the same time, the local authority is required amongst other things to prepare development plan (structure plans and local plans) and control the use of lands and all buildings within the local authority area. The structure plan would appear to have been established as the strategic planning vehicle which translates national socio-economic and physical objectives into a physical development strategy for the state or part of the state; and provide more detailed local land-use plans to guide the agencies concerned with implementation. It is important to note that the situation in Malaysia contrasts with that in Scotland where the authorities responsible for the production of structure plans in Scotland are required by law to produce socio-economic strategy for their areas before commencing work on the structure plans. In Malaysia, the preparation of structure plans take place without the benefit or clear guidance as to the nature of the socio-economic change being sought at state level.

The sporadic coverage of local government and the gradual adoption of Town and Country Planning Act, 1976 (Table 2.3.) have created two different processes of planning between rural areas covered by local government system and areas outwith the local government areas. Although there are some deficiencies in the present strategic planning system at the local level, villages or rural settlements located within the local government areas are in a better position. In many cases, the people in these villages receive a well planned socio-economic and physical development. In contrasts, all villages and rural settlements located outwith the local government boundry are administered by different District and Land Offices. These offices which are controlled by the state authority do not have planning powers to regulate, plan and control development in their areas. In these areas, most development programmes are carried out directly by the federal and state agencies from the top level. Though the District Offices theoretically should coordinate these programmes, in practice, because of the absence of planning powers and planning instruments, they could not perform their roles efficiently. In these areas, difficulty also exists in creating a uniform policies for the promotion of development.

TABLE 2.3. Planning Powers Conferred upon Local Authorities by Type.

Types of L. A.	Powers Stipulated in the Act			
	All Parts	Parts I-III	Part I, II or III	TCP not Adopted

Municipal Councils	8	6	1	0
District Councils	10	23	5	30

Note : Part I of the Act contains definition of terms used, Part II outlines the general planning policy and institution set-up. Part III contains guidelines for structure plan and local plans. Among the remaining parts, only part VII needs mentioning. It empowers a Local Authority to declare any area covered in a development plan as a development area.

Source : Federal Department of Town and Country Planning

It is important to note here that in the local government areas, the federal government has powers through the National Council for Local Government (NCLG) which was established in 1963 to formulate any national policies for the promotion of development and control of local governments throughout the country. However, powers are not available for the Federal Government to control and coordinate District Offices because these offices are under the jurisdiction of state authority. It is obvious therefore, that the planning of rural areas in Malaysia is very piecemeal. Two different planning systems which exist in the rural areas have made the inter-related nature of rural and urban problems are not appreciated. Accordingly the impact of the development efforts is not fully realized.

2.3. The Existing Practice of Planning in the Rural Areas.

Rural development and planning in West Malaysia has been carried out in piecemeal. Many development programmes have been pursued without the benefit or clear guidance as to the nature of the socio-economic change being sought at state level. This is for two main reasons; first, they are carried out directly by the federal agencies from the top level based on the

sectoral objectives stated in the national plans; and secondly, there are no socio-economic strategies formulated at the state level to be used as a guideline.

During the first and second Five Year Development Plans (1956 - 1960/1960 - 1965), rural development and planning had been basically confined to the provision of basic facilities with an aim to upgrade the physical and socio-economic condition of the rural population. However, the result had not been very successful. Hence, in the First Malaysia Plan (1966 - 1970), a new approach of rural development and planning was adopted mainly to increase productivity in the agricultural sectors for achieving the self-sufficiency in food production. Since the Second Malaysia Plan (1971 - 1975), rural development programmes have been further modified to include the New Economic Policy (NEP) of eradication of poverty and restructuring of society. Although the strategies have incorporated economic, social and physical aspects, their implementation were, and still are being carried out in peacemeal and emphasized more on sectoral approach rather than integrated one. As a result, the gap between the urban and rural sector continues to widen.

Physical planning and socio-economic development in the rural areas retrospectively have been carried out separately. In terms of socio-economics development, many agencies and departments have been established by the federal government to work in the rural areas. These agencies can be divided into two groups; namely "innovation", and "organization" agencies. The main function of these agencies is to help farmers to increase their production. The former works by inventing a new agricultural technology such as producing a new method of maintenance or production, and introducing a high quality of seeds; and the latter works by providing incentives, training, and marketing facilities to the farmers. Department of Agricultural, Malaysia Agricultural Research Development Institute (MARDI), Palm Oil Research Institute (PORIM), Rubber Research Institute (RRI), are some examples of "innovation" agencies; and Agricultural Bank, Farmers' Organization, Federal Land Development Authority (FELDA), Federal Land Consolidation and Rehabilitation Authority (FELCRA), Federal Agricultural Marketing Authority (FAMA), and National Padi Authority (LPN) are some of "organization" agencies. Although substantial successes have been achieved in terms of total agricultural product, there was, and still is no corresponding increase in the total income of a large

section of the rural communities. A large number of farmers are still living under poverty line (earn less than M\$250.00). Again the main weakness of these approaches lies on the ad-hoc nature of the development programmes implemented.

Physical planning in the rural areas is carried out separately from socio-economic development programmes. It is mainly carried out by the government planning department. In many circumstances, physical planning is only carried out at the initial stage of the settlement schemes development, i.e. through the preparation of layout plan. The type of rural settlements and the related bodies responsible for their physical planning are summarized in Table 2.4. As can be seen, rural physical planning has been too fragmented and in a piecemeal manner. Some of these authorities use non-planners to prepare the layout plans. In order to create a better rural environment, physical planning in future should be carried out simultaneously with socio-economic development. A single authority should be established to perform this function.

TABLE 2.4. West Malaysia: Types of Rural Settlements and the Agencies Involved in Physical Planning

Types of Rural Settlement	Agencies Responsible with Physical Planning
1. Planned Rural Settlements	
a. FELDA	Federal Town and Country Planning
b. FELCRA	FELCRA and State Planning Department
c. Villages within IADP project	State Planning Department
d. Villages within Regional Authority	Regional Development Authority
e. <u>Orang Asli</u> Settlements	<u>Jabatan Hal Ehwal Orang Asli</u>
2. "Chinese New Villages"	Ministry of Local Government
3. Mining Settlements	State Planning Department
4. Estate Settlements	Ministry of Labour

Note : All of these settlements are discussed in Chapter 3.0
 FELDA - Federal Land Development Authority landschemes
 FELCRA - Federal Land Consolidation and Rehabilitation Authority landschemes
 IADP - Integrated Agricultural Development Project

Source : Federal Department of Town and Country Planning

2.4. Conclusion.

There has been very little involvement in rural planning as a formal governmental process in the country in the past. Although an institutional structure exists in the form of Ministry of Agriculture, Ministry of National and Rural development, Ministry of Land and Regional Development and Ministry of Housing and Local Government which could support systematic public approaches to problem solving and preparation for the future, a system is yet to evolve to examine rural resources and constraints, and their relationship with economic activities, socio-economic organization as well as spatial organization. There is no comprehensive overview of how the total human ecological spatial system is functioning or not functioning as an inter-related whole.

Development programmes have been too sectoral, and only focussed on one or two facets of development issues rather than approaching the rural development frontier in a more comprehensive manner. Such an approach beside being uncoordinated has the disadvantage of achieving its objective at the expense of, or even deterioration of other sectors. Since rural development is a strategy designed to improve

the economic and social life of the rural poor, it must therefore be clearly designed not only to increase production, but also to raise the welfare of the rural people. This could be done through the modernization of the rural society by transforming it from traditional isolation to eventual integration with the national economy development. Thus, it is clear that the objectives of rural development extend beyond any particular sectors. These objectives should encompass improved productivity, increased employment as well as provision of acceptable level of housing, health, education, and other facilities.

Thus, the piecemeal nature of the past and existing practice of rural development and planning should be discontinued. This practice should be replaced with a single strategy capable of providing the opportunity to bring the various rural development oriented government departments or agencies together, so that the rural development policies and objectives can be single purposely carried out. To overcome conflicting policies and to avoid the implementation of uncoordinated programmes, there is an urgent need for a single authority to provide a strategy for policies and actions in the rural areas. This should also include a coordinated programme of major projects to be carried out by government

department/agencies and the promotion of the establishment of rural centres to provide a locationally efficient site for the siting of projects and services generation.

CHAPTER THREE

THE EXISTING CHARACTERISTICS OF TRADITIONAL VILLAGES

3.1. Introduction.

This chapter attempts to discuss the existing physical and socio-economic characteristics of the traditional villages. This is necessary so that the general problems occurred in these villages could be highlighted and a suitable policies to solve them could be formulated. This chapter consists of two parts. The first part will discuss the various types of rural settlements in West Malaysia and compare the different levels of planning input provided for them; and the second part will highlight the physical and socio-economic characteristics of the traditional villages.

3.2. The Types of Rural Settlements

According to the Department of Statistics, (Malaysia, 1982), rural settlements are "those settlements which have a total population of less than 10,000 people and majority of their population involve in agricultural sectors as their main economic activity". The population of West Malaysia in 1985 was

12.97 millions. Approximately 7.6 million (58.9%) were living in the rural areas. Out of this figure, about 84 per cent or 6.38 million were living in rural settlements with population less than 1,000 people while the remaining 16 per cent or 1.22 million were in rural settlements with population between 1,000 to 10,000 people. Rural settlements in Peninsular Malaysia can be broadly grouped into three categories; namely, planned rural settlements; new villages, mining and estate settlements; and traditional villages (Table 3.1).

3.2.1. Planned Rural Settlement.

(1) Federal Land Development Authority Landschemes.

Federal Land Development Authority (FELDA) landschemes constitute the first and largest group of planned rural settlements in the country. The rationale of FELDA settlement planning is to create a semi-urban living environment within the rural setting based on large scale agriculture. The basic concept of FELDA settlements is geared towards self containment settlement (See appendix A for a more information on the development concept of FELDA land settlement schemes).

TALBE 3.1. West Malaysia : The Types of Rural Settlements, 1985

Types of	No. of population
<hr/>	
1. Planned Settlements	
a. FELDA landschemes	338,140
b. FELCRA landschemes	68,823
c. Other landschemes	490,304
d. <u>Orang Asli</u> landschemes	24,508
2. "Chinese New Villages"	1,119,467
3. Mining settlements ¹	344,160
4. Estates ¹	386,800
5. Traditional Villages	
a. Fising villages	213,700
b. Agriculture-based	3,885,798

Note : 1. Figures stated are from 1980 census.

Source: 1. FELDA Headquarters
 2. Federal Department of Town and Country Planning
 3. FELCRA Headquarters
 4. Malaysia (1986), Fifth Malaysia Plan.

However, it is admitted that FELDA settlements have failed to function as rural growth centres. The main weakness lies with the lack of consideration for functional linkages between FELDA landschemes located in close proximity to one another and also nearby non-FELDA settlements. It is worthwhile to emphasize that the awareness of the importance of this functional linkages is useful in determining the combined potential for growth of these settlements and it also helps to minimize duplication of facilities provided and unnecessary competition.

(2) Federal Land Consolidation and

Rehabilitation Authority landschemes.

Federal Land Consolidation and Rehabilitation Authority (FELCRA) landschemes can be categorized into: land rehabilitations; land consolidations; youth landschemes; and the in-situ projects. Except for the in-situ projects, the other three categories are implemented in the same manner as FELDA landschemes. In-situ projects involve much less expenditure because they involve an element of self help where the settlers themselves undertake the work of land clearance, construction of houses and laying of water pipes. There are two main weaknesses of the in-situ projects; first, because of the projects work on a small size of settlements, most of them fail to

provide sufficient amenities and services to the settlers and secondly, fail to introduce diversification to the traditional agricultural economy. The other types of FELCRA landschemes faced the same problems as FELDA's i.e. fail to emerge as a viable and self-sustaining rural growth centres.

(3) Other Planned Settlements.

Besides of FELDA and FELCRA, other public agencies responsible for developing planned rural settlements include Rubber Industry and Smallholders Development Authority (RISDA) (31,463 hectares), and the Regional Development Authorities (RDA) (55,848 hectares). RISDA undertakes block new planting schemes to supplement incomes of smallholders of 4.1 hectares and below and RDA develop landschemes as the same manners as FELDA but on a regional scale.

Another group of planned rural settlements is villages located in the "Integrated Agricultural Development Project" (IADP) areas. These villages receive sufficient level of infrastructure, agricultural inputs, and extension services which were provided through an integrated package. However, the full impact of this approach could not be realised generally because of the uneconomic size of land holdings.

(4) The Orang Asli (Aborigines) Regroupment Schemes

The fourth group of planned rural settlements is settlements planned under the Orang Asli Regroupment Schemes. The main aim of these schemes is to offer protection to the Orang Asli community against the communist elements and to upgrade the socio-economic conditions of the Orang Asli community to that of the other communities in Malaysia. The basic concept of the regroupment schemes is to bring together the many scattered, small aboriginal settlements to come within a smaller area so that basic public services can be provided at a reasonable cost. In the schemes, community facilities are provided and a more viable economic base is created to improve the economic conditions of the aborigines.

3.2.2. "Chinese New Villages", estate and mining settlements.

(1) "Chinese New Villages"

The "Chinese New Villages" were established as a result of the government's effort to cut off 1.2 million rural dwellers from contact with the communists during the Emergency Period (1948 - 1960). In the past, majority of the "Chinese New Villages" were little more than closely packed semi-planned shanty towns, with small houses or large communal

dwellings made of wood, with roof of atap thatch, lalang or zinc, and with bare laterite roads and uncovered drains, all fenced in with barbed wire. The standard "Chinese New Villages" posses such amenities as a police post, dispensary, school and community hall (Ray Nyce, 1973). In 1954, the total population of the "Chinese New Villages" was approximately 572,917. This figure had increased to 1,018,804 people in 1970 and at present it is estimated that the total "Chinese New Villages" population is about 1.29 million. At present, many "Chinese New Villages" have already achieved a self-sufficient level of town. They have an adequate basic amenities and infrastructure, and large employment opportunities and most of their population involve in a reliable economic sector i.e. commercial activity.

(2) Estate and Mining Settlement

According to the 1980 census, about 386,800 people are living in the estate settlements and about 344,160 people living in rural mining settlements. In general, the estate settlements are isolated deep in the interior part of the country surrounded by wide hectares of rubber or oilpalm trees with red untarred roads. The minimum standard housing was provided by estate management along with some basic amenities such as tap waters, school, electricity and health

services. However, in small estates where the degree of unionization are low, the estate managements provided inadequate and low level of housing and social facilities.

3.2.3. Traditional Villages.

(1) Fishing villages

In 1980, there were 383 fishing villages located along the coastline which support an estimated of 213,700 people. (Ministry of Agriculture, 1983; and MTR, 4MP, 1985). In terms of spatial distribution, the fishing villages are widely dispersed. A total of 224 fishing villages (63.7%) are located along the east coast while the other 139 villages (36.3%) are along the west coast. So far, many efforts have been made to upgrade the socio-economic conditions of the fishing communities. However, no comprehensive planning has been taken to develop the spatial aspect of these settlements. Planning and development efforts were more on a piecemeal basis. Comprehensive planning should be done for these settlements and it has to include the provision of fishing facilities and other related industries. One of the objectives of the recently formulated National Agricultural Policy (NAP) is to generate employment opportunities in the fishing sector by expanding and modernizing fish production

and creating secondary industries. The government will also take some steps to reduce the number of fishermen population down to about 40 per cent of the present figure in order to keep in balance with the fishery resources available. Surplus fishermen will be streamed into other economic sectors such as agriculture, manufacturing and construction.

(2) Agriculture Based Villages.

In 1985, about 55.9 per cent of the total rural population in West Malaysia were living in about 6,000 traditional villages. Most of these people involved in agriculture and other economic activities related to agriculture. The villages have long existed through natural growth and many are scattered in nature without definite boundries. The distribution of these villages are along the main transportation networks such as highways, rivers, and railways, probably to obtain a greater accessibility. The scattered nature of these settlements brings about difficulty in organizing and providing basic amenities, social facilities and services to these villages. Various efforts have been made to improve the living standards of the people in these agricultural based villages and this includes in-situ development, subsidy inputs and provision of agriculture support services mainly to increase the productivity of the people but less has

been done in terms of planning and development of the settlement pattern.

Discussion on the types of rural settlements shows that there are three different levels of planning inputs being provided for the rural areas. First, "minimum planning" input provided for traditional villages; secondly, "partial planning" input provided for those villages received IADP projects, "Chinese New Villages", mining, and estate settlements; and thirdly, "full planning" input which is provided for planned rural settlements. Traditional villages (both of agricultural-based and fishing villages) receive very little form of development planning. In many cases, planning was done in an ad-hoc basis. As a result, population of these villages suffer from many social and economic problems, such as do not have an adequate access to public amenities, involve in low agricultural sectors, and living in bad housing condition (This aspect will be discussed in the next section). It is clear now that the target area for rural development planning in the future is traditional villages. Development planning efforts should from now be focussed on these villages so as to make them become established like planned settlements. As suggested by the Prime Minister, a better approach therefore is to establish rural centres, equipped with

all necessary facilities and economic activities so as to urbanized the population living in these settlements.

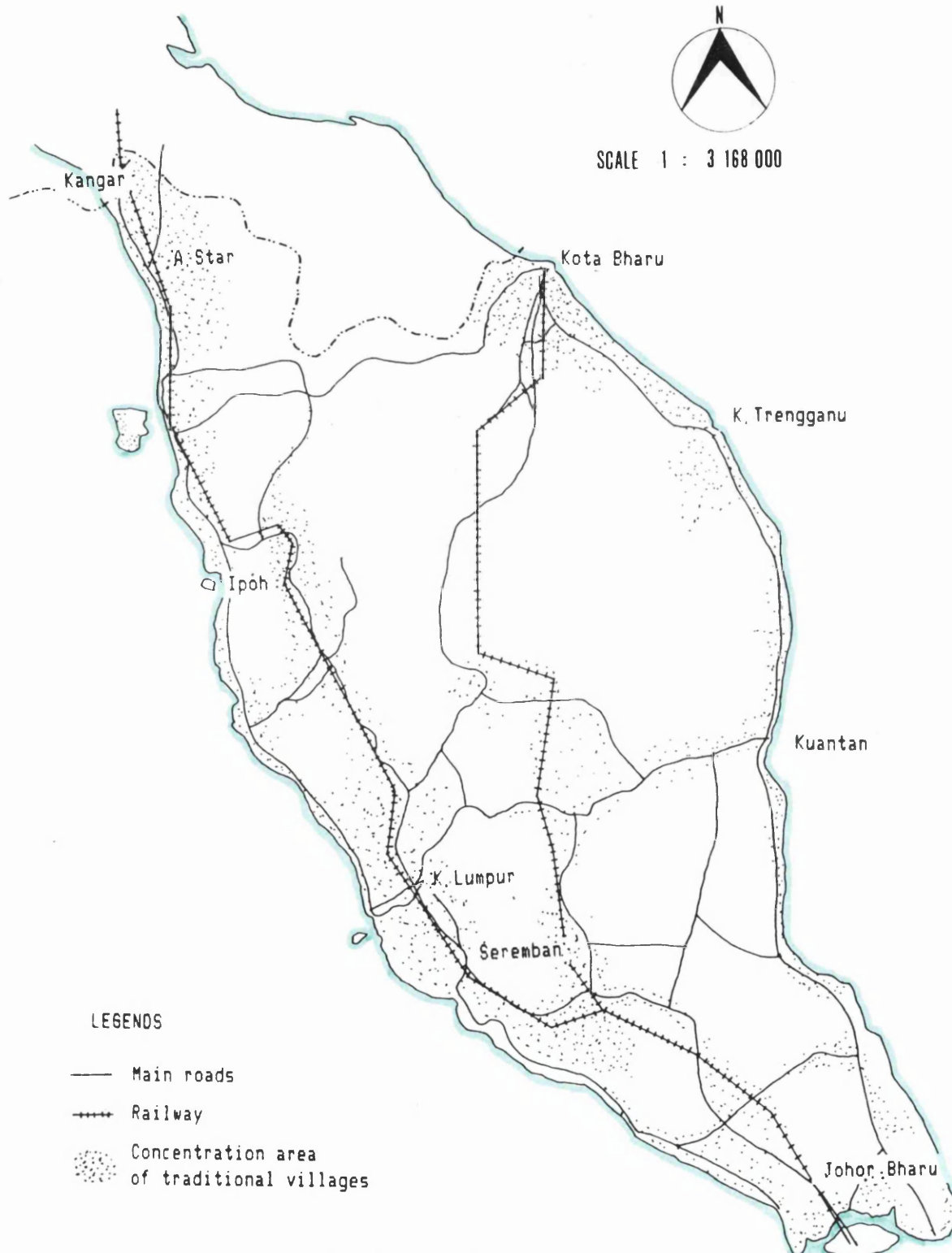
3.3. Characteristics of Traditional Villages.

3.3.1. Physical Characteristics.

These traditional villages approximately 6,000 in number are mostly traditional or spontaneous settlements established by people who live there or by their ancestors.

(1) Location.

Figure 3.1 shows the distribution of the traditional villages in West Malaysia. These villages are scattered either along transportation routes or along river banks. Occasionally, they are also found in cluster or in rows in the middle of a large tract of agricultural lands. As a result of such scattering pattern of distribution, the cost of providing infrastructure and social services has been very high. Such scattering distribution coupled with their hinterland location away from towns and cities, have further hampered their accessibility to information, goods, even services available in the urban areas.

FIGURE 3.1. WEST MALAYSIA:CONCENTRATION AREA OF TRADITIONAL VILLAGES

Source: Federal Department of Town and Country Planning

(Rural planning division)

Roads leading to those villages are usually unpaved and are not well maintained. Bad roads have discouraged travelling for either marketing or social purposes. Use of motorised vehicles is restricted to only certain good roads and thus walking or cycling have become the common mode of rural travel either between dwelling and fields or between dwellings and other areas. Therefore, valuable time and energy are wasted in the course of doing this form of travelling.

(2) Shelter and Infrastructure Services.

In many cases, the dwellings and other buildings in the traditional villages (like animal sheds, latrines etc.) are clustered together and surrounded by farmlands. In villages connected to the other areas by roads, the houses and other structures are often located along the road, with varied spacing between adjacent structures. Another pattern is that of dispersed structures, in which most of the dwellings and even the structures for community use are widely scattered. Both the dispersed and clustered patterns do not have definite boundaries and therefore to plan these areas can sometimes become very difficult.

The most common types of built structures in the traditional villages are dwellings, animal sheds, latrines, a primary school, small retail shops or

stalls, a place of worship and occasionally a health facility (rural clinic). The houses vary in type and quality even in the same village from flimsy one roof atap huts made by occupants to substantial dwellings with four or five rooms, made largely with purchased, manufactured building materials. The dominant tenure pattern in these villages is owner occupancy. Ownership may mean more than that the occupant built the house, sometimes without receiving any formal title to the land or building plan for the house. Renting of houses or even portions of houses is not a common occurrence in the village. According to 1980 census in the whole of West Malaysia, owner occupation houses in rural areas constitutes 73 per cent of the total number of dwellings as compared to only 13 per cent occupied by tenants and another 14 per cent by other form of arrangements.

Many dwellings, and even entire villages, lack reliable water supply, electricity and sanitary methods of waste disposal. Most dwellings also do not have an indoor water tap; the distance from the dwelling to the nearest water source varies from a few metres to several kilometres. The quality of water available in the village varies, but it is usually untreated and not really safe. Wells are sometimes not properly constructed, and water can easily

contaminated. In most traditional villages, human waste is disposed of in latrines, fields or irrigation ditches. Rubbish is either disposed of through dumping or burning. Energy sources for lighting come from kerosine, candles, and electricity. In few villages where electricity is provided, it is generally used for lighting and for operating water pumps, but not for cooking and other domestic uses. Electricity is brought to some villages by the government rural electrification programmes. However many households in the villages cannot afford to have the power lines and fixtures installed. The 1985 census shows that in states where the majority of their population living in the rural areas, (Such as Kelantan, Kedah, Pahang and Perlis) almost 60 per cent of the households in the rural areas have not been provided with electricity.

In terms of shopping facilities, many traditional villages have at least a retail shop or a stall selling a few types of food and other common household goods. Many villagers shopping on a daily basis and generally they cannot afford a large cash outlays at one time; they also lack of refrigeration and other storage facilities. On a rare occasions, when they can afford to purchase clothes or cooking utensils, the villagers usually travel to a nearby towns. The most

common communal facilities available in villages are primary schools, surau or other religious places and community halls. In case where villages can support a primary school, the quality of education provided is not as good as in the urban areas. This is because many schools in these villages lack of books and other teaching equipment. In some villages, although the cost of education is supported by the government, many families cannot afford to give up the little income which a child can earn by working instead of going to school.

3.3.2. Socio-economic Characteristics.

The typical traditional villages are usually characterized by a large proportions of the population involve in agricultural-based activities. It makes this sector as one of the largest labour employing sectors. Occasionally, there are also people who are self employed in retail activity, small-scale cottage industry and in crafts such as masonry and carpentry. As a result of such pattern of diversified occupational involvement, poverty among the rural population is very prevalence. In 1984, the incidence of poverty among rural population was 24.7 per cent as compared to only 8.2 per cent in the urban areas (Malaysia, 1986).

(1) Employment and income.

Traditional villages contribute the highest number of people who live in poverty. The groups identified to be poor are rubber small holders, oil palm small holders, coconut small holders, padi farmers, and other agricultural workers (Quazi, 1982). They constitute 78 per cent of the poverty groups in the country. While the great majority of the people in these villages are very poor, there are others who have substantial incomes, these extremes can be found within a single settlements. Perhaps the poorest are the landless who work as casual worker. The incidence of unemployment and underemployment is also prevalent in the traditional villages. Underemployment is usually because of the seasonal nature of agricultural production and the involvement of rural dwellers in activities such as house repairs, community repair works and others.

(2) Rural-urban migration.

Due to many socio-economic defeciencies in the rural areas, there has been a high rate of migration from rural to urban areas. Although this migration could reduces the problems of unemployment and underemployment directly to the rural areas, and sometimes generates income to the rural population through remittances from migrants, it has created a

huge problems both to the rural and urban areas. Massive in-flux of the poor and untrained rural people to the urban areas has created squatter problems in urban areas and thereby exerted new demands on public housing, job opportunities, social services, and amenities. On the other hand, a loss of many potential labour forces is experienced in the rural areas where the result is a massive acreage of rural agricultural lands were left undeveloped. Abandoned lands in the traditional villages was estimated to be 890,000 hectares in 1983 (Berita Harian, February 16th. 1983).

(3) Social aspects.

Because of the proportion of children attending school is lower in villages than in urban areas, and due to the rural-urban migrants generally are the better educated of the rural people, the average level of literacy among the rural people is low. Literacy and education levels tend to be even lower for women than for men. Literacy should be promoted in the rural areas in order to enable the rural people to plan for their community's development, to manage rural institutions, to deal with formal credit institutions, to market crops, and to raise healthy children.

3.4. Conclusion.

Having discussed the existing types of rural settlements in Malaysia, it can be concluded that the target area for development planning in the future is "traditional villages" which totalling about 6,000 and supported an estimates of 4.25 million people or 55.9 per cent of the total rural population in the country. The population of these villages suffer from many physical and socio-economic problems and receive very minimum level of development planning input. The utopia¹ for the rural areas of Malaysia in the next decade is that "all people living in the traditional villages should have a better access to social and economic facilities. They should also have an access to a high productivity of employment, either in agricultural sectors or non-agricultural sectors. (e.g. industrial works, commercial, construction and others)." A better approach to meet this utopia therefore should be that of initiating development of rural centres so as to urbanize the rural population. This is concordant with the Prime Minister's suggestion of the new direction of rural development planning as mentioned in the introductory chapter.

1. This utopia is determined based on the objectives and goals being sought in all rural development programmes/projects carried out in the country.

PART 2.

THEORETICAL BACKGROUND AND CASE STUDIES

CHAPTER FOUR

THE APPLICATION OF THE "GROWTH CENTRE" CONCEPT IN THE RURAL AREAS

4.1. Introduction.

One of major missing elements in "Integrated Rural Development (IRD)" is space. Emphasis continues to be laid on sectoral programmes and projects, leaving rural space unarticulated and delinked from the national urban-industrial space. Many productive, infrastructural and social facilities have been located discretely without taking advantage of the interdependencies among them. Development of rural growth centres is felt necessary to fill this gap. Such centres are needed for acting as ready markets for rural products nearer to the villages and as centres of distribution of inputs and as centres of "demonstration effects" of consumer goods. According to Misra (1985):

"the distance - social and economic - between village and the town is indeed great and it can be reduced only by the emergence of 'rurban communities' which are socially close to villages but economically and organizationally more like the urban centre. Institutional infrastructure necessary for socio-economic development cannot be provided in each village because it is not a viable unit for most of these functions. Nor could it be too far away. Hence, the need for centres and manageable

areal units of responsibilities, small enough for any technical experts to reach the nuclear communities frequently, yet large enough for professional talents to be fully employed.

Studies in many countries have come to the same conclusion. Findley (1979) states that:

"rural development projects have suffered because of lack of rural marketing and services facilities in Malawi, Nigeria, Ethiopia, Nicaragua, Bolivia, Taiwan, Thailand, Philippines, Malaysia and other several countries".

Another study by Lele (1975) also shows that inadequate marketing and storage facilities have retarded rural development programmes in several African Countries

The concept of "rural growth centres" emerged from a study on growth poles under the auspices of the United Nations Research Institute for Social Development (UNRISD), Geneva during the late sixties. Some analysts have questioned the utility of the growth centre concept on the ground that it does not generate any spill-over effects. Some even doubt the possibility of creating centres in regions which are not prepared to benefit from the type investment made there (Higgins, In Lo., and Saleh, 1978). Some others have come forward with the attractive notion of polarization reversal, suggesting that no developing countries should attempt to equalize spatial

development because no matter what it does, the omnipotent invisible hand would reverse the process. However, both of these views have weak empirical foundation. This is because, according to Misra (1985), no developing country has so far implemented this strategy on a wide scale basis.

The concept of rural growth centres does not imply creation of new settlements. What it really implies is the rearticulation of the rural settlement pattern in favour of those centres which have the greatest potential of developing into services or growth centres during the next two decades or so.

4.2. Origin of The Growth Centre Concept.

The concept of "pôle de croissance" (growth pole) together with similar concepts such as growth centre, growth area, growth point, core-region, regional centre etc. attracted increasing attention in the search for tools to solve the problems of imbalance in inter-regional development both in the developed and in the less developed countries. Although these concepts have different terms, they have one common characteristic. However, some authors distinguish between growth poles and growth centres in terms of scale as representing "national" and "local" growth

areas respectively (Darwent, 1969). Some authors use the two terms interchangeably referring to the same thing, and some authors used growth poles in terms of industrial or sectoral activities and growth centres in terms of urban concentration where these activities are localized.

The notion of growth pole concept was originally proposed by Perròux (1955), a French political economist, who describes it in relation to non-spatial abstract economic space. He further describes economic space as consisting of centres, poles or foci from which centrifugal forces emanate and to which centripetal forces are attracted. The growth pole concept as promulgated by Perròux may be summarised in the following manner:

- a. There is a set of growth poles from which centrifugal forces emanate and to which centripetal forces are attracted. Each pole has its own influence field which is set in the fields of other poles.
- b. Each pole has leading industries which are innovative and growth generating. They belong to a fast growing sector, are technologically advanced and relatively large.
- c. The poles generate development in their environment abstract and spatial through forward and backward linkages among the industries.

Boudeville (1966) further developed and placed this concept in regional framework of economy. Perhaps Friedmann (1966) is the first man to formulate a systematic and comprehensive spatial model of the growth centre concept. He used core-periphery analysis in the study of Venezuelan regional development policy. His assumptions are that development originates in a small number of urban centres which are termed cores. Economic growth takes place in a matrix of urban regions or cores around which are socio-economic depressed areas, lagging behind in levels of economic activity and development called the periphery. The periphery is dependent on the core and its development is largely determined by institutions in the core. Thus, he concluded that activation of the core causes growth impulses and economic advancement to the lower order central places and ultimately diffusion of developmental activities to the most traditional peripheries. The role of core-periphery concept has been subject to criticism in the initial economic development because in a dualistic society, the development and modernization of rural areas will not be successfully done without a well integrated physical infrastructure development in the node. Friedmann (1972) argued that development occurs through a discontinuous but a cumulative process of innovations. Innovations diffuse from cores to

peripheries and lead to modernization of the peripheral areas. The rate of diffusion process is a function of the potential interaction between core and periphery.

4.3. The Application of The Growth Centre Concept in the Rural Areas.

This part is aimed at casting light on the application of the growth centre concept to the problems of rural areas. References are made on the practice in the United Kingdom (U.K) as one of the developed countries, and to Tanzania and India as two of the less developed countries.

4.3.1. Application of The Growth Centre Concept in the rural areas of U.K.

The growth centre concept together with other related theories such as central place theory, economic threshold and others have been widely applied in planning and development of rural areas in Britain for a number of years. This application is made in the implementation of key settlement policy. It takes the form of selecting rural settlements where comprehensive growth of housing, services and employment will be encouraged so as to serve the

surrounding hinterland. The policy assumes that the focussing of services, facilities, and employment in one selected settlement will satisfy the needs of the surrounding villages and hamlets and that in the long term such concentration is more economic than dispersion of facilities. This policy shares the same justification as those for growth centres which is that the efficiency of concentrating stimulates economic spread effect besides satisfying the concepts of threshold and range of goods (Cloke, 1979).

Key settlements are found in various forms. Some are essentially service centres, some are associated largely with public investment in facilities such as education, health, and council housing schemes and others are associated with all types of residential development. Along with function as a means of providing rural dwellers with essential services and facilities, key settlements in some regions (particularly in the Highland Region of Scotland, and remote rural areas in England) function as possible growth points for industry and other forms of employment. Even though the details of the key settlement policy differ from region to region, the concepts remain the same. It has been most favoured by regions with problems linked with high level of rurality where the planning objectives are;

- a. the concentration of residential and employment growth into selected centres in order that the optimum economic pattern of polarized services and infrastructure provision may be effected; and,
- b. the use of these centralized facilities to improve or stabilize the opportunities for residents of hinterland settlements.

Central place theory has been extensively used in the selection of rural key settlements. Bracey (1962), for example notes that the distance separating one central village from the next is usually five to six miles, with the non-key villages scattered around each key village. However, besides the distance criterion, in most of the regions, 5,000 inhabitants and a required set of basic facilities have customarily been taken as necessary in order for a place to be considered as a key settlement.

Accordingly, despite many rural regions continuing to adhere to the key settlement formula, the term "key settlement" has in many cases been discarded in favour of less provocative terminology (Cloke, 1983). Has the growth area policy (key settlements) succeeded in Britain? An assesment made by Cloke (1979), (1980), and (1983) can be used for generalizing the effectiveness of this policy. Its effectiveness can be

measured in terms of two point of views, vis; economic and social.

(1) Economic point of view.

The benefits derived from the implementation of key settlement policy are as follows:

- a. The priority given to key settlements in terms of facilities provision has ensured that at least the majority of rural residents enjoy improved standards of water, electricity and sewage disposal facilities which they might expect if living in the town.
- b. The concentrated effort of house-building and setting up of industrial estate facilities in key settlements has ensured that rural people have an opportunity to live and work within the rural milieu, so that depopulation of rural areas is stemmed to some extent.
- c. The provision of health services and other public services together with certain private sector retail and service outlets have created some degree of economic viability within the rural settlement pattern.

Despite those positive effects, there have also been several failings to be recorded against the key settlement policy. They are summarized as follows:

- a. Coordination between planners and several bodies

involved in the provision of services and infrastructure was not very efficient. The result is the planned development of key settlement has sometimes been delayed or even completely halted.

b. It has been found to be almost impossible to decline some development in non key settlements which have existing infrastructural capacity especially where an impetus for growth has been established under previous policies. This failure to restrict development in non key-settlements shows a fundamental difficulty with a policy of planned concentration.

c. Difficulties have been experienced in attracting entrepreneurs to small rural centres due to lack of suitable skilled workers and an inefficient of transportation system.

As a conclusion, it can be concluded that from the overall economic perspective, key settlement policy has been reasonably successful in the concentration of residential and employment growth so that services and facilities may be provided economically. However, in terms of development spread effect i.e. the role of key settlement towards improving or stabilizing the opportunities for residents of hinterland settlements have been shown to be negligible.

(2) Social point of view.

In theory, it has been argued that concentration of development would create social benefits to the surrounding villages. However, experience from key settlement in the U.K shows that this phenomenon has not occurred. Key settlements only bring social benefits to those people living in the selected centres themselves whilst rural dwellers in the hinterland are disadvantaged. McLoughlin (1976) describes:

"..... a situation where an increasing number of people, particularly the non mobile, are faced with the choice of either moving to the key settlements or staying behind to suffer increasing social deprivation".

Along with that, MacGregor (1972) also points out that:

"the concentration of facilities and services in the key settlements without concern for hinterland transport links has merely exacerbated the plight of non-mobile population in small villages".

In terms of employment opportunities, it is found that inadequacies persist in the rural areas. This is because the provision of employment in rural areas has only centred on setting up industrial estates in key-settlements and reluctant to allow small-scale businesses or industries in the non key-settlements. In terms of services, key settlement policies have

allowed the continued decline in level of services provided in non-key settlements. With inadequate public transport linkages between key settlements and hinterlands, the benefits from centralized services investments are only accessible to the residents of smaller centres through the ownership of private transport. The overall situation in small villages is dominated by the reduction of retail, educational and welfare services and in many cases the key settlement framework policy has done little or nothing to redress the balance of services provision.

Many studies suggest that the major reason for the failure is because the policy of concentration did not give much attention to how people in the hinterland settlements would move to use the services and facilities provided in the selected centres. Study by Cloke (1979) indicates that key settlement policy was not associated with a transportation policy aiming at the connection of the hinterlands with the key settlements. To make key settlement policy more effective, the following steps should be taken;

- a. concentrating facilities, employment and services in key settlements should be accompanied by the provision of an efficient transportation system so as to enable people living in non key-settlements to derive benefits from such policy;

"most of their farming would be done by groups of people who live as a community and work as a community. They would live together in a village, farm together, market together and undertake the provision of local services and small local requirements as a community".

In many circumstances, the "communal living" put forward by this concept would enable education, health and water to be made available much more economical than to widely scattered households. Communal production would also enable the villages to be developed much more rapidly and for the good of a larger number. Under this concept families pooled their labours on the communal farms and individuals were paid on the basis of dividing crop produced according to days work. Individuals were given credit for one day's work whether one worked a few hours or a full day' (Collier, et.al., 1986).

This concept evolved from the efforts of small group of peasants in Tanga and Ruvuma during the early 1960's (Nyerere, 1976). The original concept was that the village would be an organization trying to raise the standard of living by hard and disciplined communal work. Farming would be large scale and workers would be strictly supervised and disciplined. The instruments used by the government were exhortation and the selective allocation social infrastructure projects. By 1973, around 10 - 15 per

cent of the rural population had chosen to locate itself in such villages.

The first attempts to apply the growth centre concept in Tanzania was between 1967 and 1969. During these years, three physical plans were established, viè: Dar-es-Salaam Master Plan; Dar-es-Salaam Sub Regional Survey and Plan; and Handeni District Plan. All of these plans have made use of the growth centre concept though not announced as such, and modified naturally to incorporate the concept of ujamaanization and to meet local conditions and actual government policies. Among these plans, Handeni District Plan dealt more with the rural problems, whilst the other two plans dealt with urban-metropolitan region. The main objectives of the Handeni plan were:

- a. a polarized settlement pattern, wherein larger sized settlements will be located with regard to areas of production, communication, water resources etc. so that services facilities will be sufficient to cover the needs not only of their inhabitants, but also of smaller settlements or scattered population around them.
- b. better utilization of resources and a sustained economic development, with agriculture as its base.
- c. provision of adequate infrastructure like water

supply, roads, communication etc. so that all settlements, centres of economic activity and areas of production will be well served.

d. Optimal utilization of land according to soil fertility, water resources, climate, rainfall, settlements, and infrastructure.

The settlement pattern proposed in this plan is based on the assumption that 50 percent of the estimated population will live voluntarily in concentrated settlements of varying size but of not less than 500 people while the remaining population will live in scattered groups of villages of less than 500 people. The plan accepted five grade hierarchy as shown in Table 4.1. The application of the central place theory in this plan may be considered as equivalent to the use of the growth centre concept on condition that complementary services and industries will become a multiplier factor in creating external economies.

Has the growth area policy adopted by the Tanzanian government succeeded? To answer this question, several studies made by Due, (1980), Collier, et al., (1986) and Martha, (1980) are used.

TABLE 4.1. Case Study of Tanzania:
Functional Hierarchy of Rural Centres
in Handeni District Physical Plan

Hierarchy	Population	Function
Minor Village	200 - 500	Nursery school Cooperative centre Market/Shops Mobile Dispensary Community Centre Multi-purpose open space
Minor Rural Centre	500 - 1,000	Services as (1) Lower primary school Religious building Dispensary
Major Rural Centre	1,000-2000	Services as (2) Upper primary school Store house Public buildings Cottage industries Rural Industries Poultry farms
Minor District Town	2,000-5,000	Services as (3) Hospital, Post office Administration office Tractor station, Petrol station, Car services and Dairy
Major District Town	5,000-10,000	Services as (4) Secondary school, Library, Museum, Sport stadium, Bus depot, Water purification and Sewage disposal plants

Source : Collier, et. al. (1986)

It is important to note that this study attempts to look at the achievement of the growth centre concept applied in Tanzania. So, it is not fair to judge its achievement by assessing the ujamaa concept as an indicator. The ujamaa concept according to many writers such as Freyhold (1979), Lofchie (1978) and Putterman (1981) has failed to achieve some of the government objectives stated in the Arusha Declaration.

The failure of the ujamaa concept does not mean that the growth centre concept adopted by the Tanzanian government also failed. Study carried out by Martha, (1980) indicates that the growth area policy incorporated with the ujamaa concept has brought some benefits to the rural population. The concept has proved successful in raising the standard of living of the village population by exposing them to social facilities that would otherwise not have been available to them. Of the 8,320 villages in the country, 6,000 villages (72.2%) have village cooperative shops, 2,500 villages (30.0%) have dispensary, 7,600 villages (91.3%) have primary schools and 3,100 villages (37.3%) have clean water supply (Martha, 1980). One of the general failures of this policy is that the pace of village formation induced by preferential access to social facilities to

be too slow. This is because government could not afford to provide on a national scale a level of social facilities sufficient to induce the entire rural population to establish villages (Collier, et. al. 1986). As more villages were formed, and the budgetary cost of service rose, the inducements had to be curtailed, so the pace of voluntary village formation slowed. It is important to note that the achievement of this kind of policy is dependent on the willingness of the rural population to leave their villages and the availability of resources to provide enough services and facilities.

4.3.3. Application of the Growth Centres Concept in the Rural Areas of India.

In Indian planning, the word "growth centre" has been so frequently and loosely used that it has become devoid of any specific meaning (Sinha, In Mandal, and Peters, 1982). Accordingly, every step in the direction of developmental planning which has been based on some centres, big or small, administrative or industrial, has been identified as a growth centre (Sinha, In Mandal, and Peters, 1982). The first step was taken in 1952 with the launching of the 5,200 Community Development Blocks with an accent on local government (panchayat raj), cooperatives and

agricultural development. The village formed the smallest unit of development and was to be provided with wells, proper drainage, agricultural extension services, improved housing, primary education and improved road system. Next was the "mandi" unit (market centre) capturing 15 to 25 villages. Each "mandi" unit was assisted by a village level worker. Supplementary to this were the health services, family planning, small scale and cottage industries, marketing and other related programmes. Four to five "mandi" centres framed a development block containing about 100 villages. Each block was allocated extension specialists in agriculture, animal husbandry, social education and others. The headquarters of the Community Development Block was thought to be a rural-cum-urban township. They were designed to function as nodes through which an all embracing and spatially dispersed rural development programmes could be carried out.

The Community Development Programme did not come up to expectation even though the principles underlying it were basically sound. There were several factors responsible for its failure. The important ones are:

a. the development blocks were constituted haphazardly, and the location of block headquarters was often determined by "irrational criteria" so that

their effectiveness in diffusing information was severely curtailed.

b. the services provided at the block level were inadequate in quantity as well as quality to meet the needs of the component villages.

c. the social caste structure of village society restricted the benefit from passing down the caste-cum-landownership hierarchy to the poorer sections of the population which formed the majority.

d. the village panchayat (government) could not take any initiative in the formulation and implementation of village and block development programmes.

e. the benefits from the cooperatives accrued to the powerful and affluent minority.

f. the programme was as a whole largely oriented towards welfare rather than development.

Another attempt to adopt the concept of growth centres in India was made in the late sixties. When applied to India, it outlined two levels of growth foci for rural scale, which are called central village and service centre. These in turn would relate to successively larger urban centres; i.e. growth point which will serve about 50,000 - 100,000 population, growth centre which will serve between 100,000 - 500,000 people and growth pole which will serve more than 500,000 people (Misra, 1974).

(1) Central villages.

Central villages will form the service and marketing nucleus for about 6,000 people living in about six villages. The central villages will be served by an all-weather, preferably black-topped road, and will be a planned rural settlements offering marketing, recreational, and social services for the community. Each central village will have a standard primary school, a sub-post office, a cooperative and others

(2) Service centres.

Service centres will possess the basic infrastructure for the diffusion of innovations and for small-scale processing and manufacturing activities. Each will serve a population of about 30,000 living in the rural areas apart from its own population of about 5,000. The service centres will be "rurban" communities, exhibiting urban amenities on a minute scale in rural settings. The four types of facilities which these centres ought to have are marketing facilities, services, processing activities and recreational facilities. Detail of these facilities is shown in Table 4.2.

TABLE 4.2. Case Study of India
Functions Perform by Service Centres

Functions	Examples
Marketing	Grocery merchandise stores Repair facilities (for bicycle, agricultural implements etc. Market yard with permanent sheds
Services	Primary and middle schools Sub-post office, Cooperative bank/schedule bank, Agricultural extension services, Community centre with audio-visual and mass communication facilities
Processing Activities	Rice mills, Flour mills, Fruit canning, Other agricultural processing
Recreationa Facilities	A park for children A cinema house Facilities for folk songs, drama, dance and other related activities

Source : Misra, R. P., (1974).

4.4. The Suitability of the Growth Centre Concept
to the Rural Areas:
Theoretical Justification Vs Pragmatic Basis.

Having discussed the case studies of rural growth centres in the United Kingdom (U.K), in Tanzania and India, this section attempts to analyse the suitability of growth centre concept to be applied in the rural areas.

4.4.1. Economics of Infrastructure
and Service Provision.

The growth centre concept often cited by planners in defence of selective settlement policy. Hermansen (1967), points out that:

"a growth centre policy claims to assure the maximum utilization of investment, and improvement in the range of services likely to be available to people, the application of external economies, the diversification of economic activities and the capability to withstand cyclical downwings in the national economy".

It is also believed that the notions of rationalizing the provision of infrastructure and services so as to take advantages of economies of scale is an integral part of the growth centre concept (Cloke, 1979).

According to him:

"the building of one big school at an accessible place within a growth area is more economical than several smaller and

dispersed schools in terms of capital, and running and maintenance costs. Likewise, building one big shopping centre may be more economically viable than several small retail outlets with scattered clientele".

These conclusions are supported by the North Walsham Area Study (Norfolk C.C., 1976) which undertook to test the hypothesis that the concentration of new housing development in or around existing centres provide the greatest overall benefit at the net cost of the community. This hypothesis has been proved right in terms of the capital and running costs and revenue (Cloke, 1979). However, in practice several problems arise:

a. Concentration of facilities may be viable from the economic point of view but does not imply its social viability. In rural areas, it is difficult to find a compromise between economic threshold (the number of minimum population required to support a services) and social threshold (range of goods). There is an agreement on the idea that concentration of economic services is the most efficient way of service provision from the economic point of view. Does this mean that social services like health, education and others are also better to be concentrated? If it does, it may be acceptable in cities and large towns, not in the remote rural area where the range of goods might become unbearable in case of extreme concentration.

b. Concentration of facilities and services at a

selective areas may be possible if a settlement is newly created from scratch. According to Cloke (1979), existing settlements especially in rural areas represent large investments. Enough space for concentration may not be available at an accessible place. There may be also a problems of land ownership. This is also the case in Tanzania where there is a big problem in finding a suitable site for concentration since most lands are dry and have bad soil.

c. All facilities do not have the same threshold. Each of them has its own threshold and range of good. It is difficult to find out compromise thresholds and range measurements for all facilities and services. Therefore, the economic efficiency of one of the concentrated facilities may be approached at the expenses of the efficiency of others.

In rural areas, concentration of services and facilities can be economically viable but customarily at the expense of social welfare. Therefore a suitable modification should be recognized to overcome this weakness if this approach is to be adopted.

4.4.2. Economies of agglomeration.

It has been accepted in the growth centre concept that agglomeration does not only create external

economies, but it also creates internal and transfer economies of scale. The former is represented by the expansion of output internally, while the latter exists due to linkage with and proximity to buyers and suppliers. However, in practice, polarization mechanisms of growth centres may work better in urban areas than in rural areas especially those in the developing countries because of the general lack of factors of production in rural areas to attract industries and firms. Empirical investigation suggests that agglomeration economies promoting sustained industrial growth are not attained without a threshold population at least 25,000 and that a fully functional growth centres needs a population of 250,000 before achieving self sustained growth.

In Tanzania, even though there are some industries in the rural centres, most of them are small scale and could not be able to attract other industries. Therefore it can be argued that rural centres may not be able to attract industries and to form them in a centralized context. This casts some doubt on the efficacious of the growth centre policy in the rural areas.

4.4.3. Spread Effect of Development to the Periphery.

The third mechanism attributed theoretically to the growth centre is the ability of concentrated industries and services to spread development to the peripheries. This mechanism is called the "trickling down" effect by Hirschman (1958) and "spreading mechanism" by Myrdal (1975). In theory growth centres attract factors of production from its hinterland through the polarization or backwash effects and spread the development and prosperity centrifugally to its hinterlands.

In practice, the polarization mechanism of growth area is not so effective in rural areas, where industries are likely to be branches of firms in larger growth centres or industries in a small scale basis. Doubts are also casted by several authors and researchers on the ability of small centres especially in rural areas to exert centrifugal forces. The works of Lucey and Kaldor (1969) in Ireland, and Moseley (1973b) in East Anglia, indicate that the spread effect of development to the periphery is only applicable to the rural scale in a very limited circumstances. Studies carried out by Moseley in East Anglia and Bertrand (1970) in Brittany indicate that small growth centres with population of between 5,000

to 15,000 have a clear impact on the development surface through their employment opportunities. Based on these arguments, there is no reason why small scale growth centres cannot spread small scale benefits to their periphery especially if they are of sufficient size to attract firms which are willing to use local suppliers and local labours. This begs the question as to whether if growth centres do not have clearly demonstrated spread effect mechanism, then are they a suitable tool for rural development?

4.4.4. Growth Centre and Depopulation.

In theory, if the backwash mechanism and trickle down mechanism of growth area work effectively in the rural areas, then the rural push factors of migration will be reduced and rural areas would be able to retain their population to a great extent.

In practice, the ability of growth centres to stem depopulation is generally quite weak since the most effective rural push factor is the unavailability of jobs. It has been mentioned earlier that the ability of rural growth centres to attract industries so as to generate job opportunities is in doubt. Nevertheless, the experience of key settlements in the U.K. and ujamaa villages in Tanzania shows that the

remainder of the pull and push factors causing migration can be dealt with to a certain extent by the increased provision of a range of goods and services and an adequate physical infrastructure.

4.5. Conclusion.

So far discussion in this chapter centred around the suitability of the growth centre concept to be applied for the development of rural growth centres. Based on the both of theoretical studies and case studies, several issues can be raised.

- a The meaning of the growth centre concept is still debatable. Does it mean a functional pole or a geographical pole or a combination of both?
- b. What is the optimum size of growth centre for the rural areas? Can the same size of growth centre be successfully planned and developed in all situations?
- c. Is there a dynamic model of growth centres applicable to all situations?

It is obvious that the answers to all of the above questions are largely questionable. This is the reason why the growth centre concept has not yet acquired the status of theory. The next chapter attempts to outline a suitable rural centres concept for Malaysia. The concept will be formulated based on the theoretical

justifications of the growth centre concept and case studies which have been discussed in this chapter.

PART 3.

PROPOSALS

CHAPTER FIVE

PROPOSED RURAL CENTRE CONCEPT FOR MALAYSIA

5.1. The Suitability of the Growth Centre. Concept to the Rural Areas

Having discussed the theoretical justifications and the pragmatic basis of the growth centre concept, it can be concluded that growth centres in the rural areas will have several deficiencies to perform the full functions of the growth centre concept. Even though the concept does not specify the optimum size of growth centres, many studies suggest that the size of centres in the rural areas will not sufficient to perform theoretical functions of the growth centre concept (Table 5.1, and Table 5.2). Comparing the two tables, it can be seen that agglomeration of economies promoting industrial growth (an important element of the concept) are not attained without a threshold population of at least 25,000 and that a fully functional growth centre needs a population of 250,000 before achieving self sustained growth.

TABLE 5.1. Tabulation of Suggested Maximum Sizes
for a Rural Settlement

1,000	Everson and Fitzgerald (1969)	Village
1,500	Stirling (In Green, 1971)	
2,500	Everson and Fitzgerald (1969)	Country town
	U.S. Bureau of Census (1966)	
5,000	Green (1971)	Village
5,000 -7,000	Best and Rogers (1973)	
8,000	Thorburn (1966)	
10,000	Town Map threshold	
15,000	Green (1971)	Country town

Source: Cloke, P.J. (1979)

TABLE 5.2. Tabulation of Suggested Minimum Size
for Growth Centre Attributes

250,000	Berry (1970)	Self-sustaining growth
	Shackleford (1970)	
	Fox (1966)	
200,000	Moseley (1974)	Migration interception
70,000	Economic Assoc. Ltd (1966)	Self-sustaining growth
50,000	Misra (1972)	Investment spread
30,000	Allen and Hermansen (1968)	Employment linkage
25,000	Lewis and Prescott (1972)	Development spread
	Berry and Neils (1969)	
	Moseley (1974)	
15,000	Carol	Infrastructure provision
13,000	Moseley (1974)	Employment linkage
5,000	Green and Ayton (1967)	Service provision
3,000	Moseley (1974)	Service provision.

Source: Cloke, P.J., (1979)

A few case studies carried out concerning the role of small towns and large villages as growth centres suggest that settlements with population less than 5,000 cannot perform a full range of growth centre attributes. These settlements according to Moseley (1974) are only sufficient to act as service centres. In view of both theoretical and empirical evidence, the general conclusion is that the growth centre concept is impractical to be applied for providing "a full range of growth centre attributes" in the rural areas. The main reason is because small scale growth centres (rural centres) cannot bring about industrial agglomeration economies and linkages.

However, it is important to question whether this full range of regional-scale attributes are needed in a centre in order to cope with rural scale problems. Are these kind of centres necessary at the rural scale? Experience in the U.K. shows that these small centres are necessary for providing services and facilities to the rural dwellers which otherwise could not be made available if people live in scattered villages. In rural India, study shows that rural communities need some towns, which can cater to the needs of commercial agriculture, towns for which infrastructure and facilities can be economically provided, which can act as innovative and growth

promoting centres, and can act as meeting places where social functions can be performed efficiently. This is also the case in Tanzania and in other developing countries including Malaysia. Therefore, it is important to conclude that even though there is lack of theoretical justification for small-scale growth centres, it does not necessarily mean that growth centre themes should not be implemented in rural areas. There certainly is a case for applying the growth centre concept to the smaller rural scale, providing that the expectations of results from the policy does not exceed the small-scale answer that small-scale growth centres are able to produce. Growth centres in rural areas are widely used, for instance in the Appalachian Region of the United States (Ryan, 1970) and in Ireland (O'Riagain, 1971).

5.2. Some Lessons From the Case Studies.

5.2.1. Lessons to be learnt.

This part outlines some lessons from the case studies in order to avoid problems that may arise with proposed rural centres in Malaysia.

(1) Lessons derived from key settlements of the U.K.

a. Most industries in the rural areas are only

branches of factories in cities and larger centres. So the benefits or spread effect will take place up the settlement hierarchy rather than down to the periphery.

b. Concentration of facilities, employment, and services in selected centres without simultaneous provision for efficient transportation service made people living in non-selected centres disadvantaged by such policy.

c. Inadequate public transport linkages between key settlements and the hinterlands has allowed the continued decline in level of services and facilities in the hinterlands.

d. In some regions, due to lack of coordination and collaboration between planners and several servicing bodies involved, the result in the planned development of key settlements has been delayed or even completely halted.

e. Land ownership may form an obstacle in the application of such concentration policy. This may require compensation from the government which will increase the initial economic burdens of this policy.

(2) Lessons derived from growth area policy in Tanzania.

a. Resettlement of all scattered rural population into a viable size of villages and provided with all

necessary facilities would be more practical rather than selecting a few centres to serve the surrounding scattered population.

b. Cooperative land holding is one of the alternative of land holdings which could be used as a strategy to restructure the problems of fragmented land holdings, and landlessness.

c. The government failure in providing on a national scale a level of social facilities sufficient to induce the formation of villages has made the progress of rural development slow.

(3) Lessons derived from growth area policy in India.

a. Haphazard grouping of villages to form "development blocks" has curtailed the effectiveness of the "development blocks" in diffusing information or acting as service centres.

b. Inadequacy of services and facilities provided at the "block" level in terms of both quantity and quality has been one of the factors contributing to the failure of the development blocks to act as rural centres.

c. Rural communities need some towns which can cater to the needs of commercial agriculture. The development of "nodes" (centres) where agricultural inputs could be made available to the farmers and agricultural output could pass easily to the wider

markets, would swift the development of agriculture.

d. Industry is only one of several important roles that centres have to play. In the socio-economic context, centres have to perform as service centres; as innovative and growth promoting centres; and as social interaction points too.

5.2.2. Recommendations.

Based on the above lessons, it is suggested that rural growth centres proposed for Malaysia should take into account the following:

a. Spread of development effect from centres can be brought about to the hinterlands either by mobilizing services for use by the hinterlands or by mobilizing the people enabling them to use the centralised facilities. However, both of these approaches require large amount of funds to provide adequate road networks, transportation services, or to establish mobile services to the hinterlands. A better approach therefore is to relocate all people living in the scattered villages into a few selected centres.

b. A suitable arrangement of land holding should be recognized to overcome the existing problems of fragmented land holdings and landlessness. It is suggested that cooperative land holding as practised in Tanzania be adopted after several modifications to

meet the existing pattern of land holdings.

c. In case of difficulties in relocating population into the selected centres, adequate linkages and transportation services have to be provided so that the scattered population could be able to use the centralised facilities.

d. Due to difficulties in attracting industries from outside, it would be more appropriate to promote local entrepreneurial talents in the rural centres. Along with creating job opportunities, encouragement of local entrepreneurs would also promote the use of local raw materials and other resources.

e. Thorough consideration of development potentials and constraints should be made prior to the establishment of rural centres. This is to ensure that selected centres could perform as; service centres, innovative and growth promoting centres, employment centres, commercial agriculture centres, and also as social interaction points efficiently.

f. Proposed rural centres should be provided with adequate services and facilities in terms of both quality and quantity with respect to their position in the hierarchy.

g. If a comprehensive form of rural planning is to be achieved, there is an obvious needs for a high degree of coordination and collaboration between planning agencies and various servicing bodies such as Public

Works Department, Agriculture Department, Community Development Division and other development agencies.

5.3. Proposed Rural Centres:

The Existing Functional Urban Hierarchy.

The focus of this chapter is on the preparation of rural growth centres strategy. This requires a framework of analysis which can illuminate the inter-relationship between the proposed rural growth centres and the main forces of the existing urban areas which are shaping their environment. It can be argued that rural growth centres are also seen as an integral part of the functional hierarchy. Through analysis of the existing functional urban hierarchy, the relationship between rural growth centres and other urban areas which complement their functions could be established. As a result the so-called "spread effect" of development from the higher level of the urban hierarchy could permeate the rural periphery.

Various studies suggest that several conflicts came to light in the attempt to establish the urban hierarchy in Malaysia. This is for the following three reasons; first, some administrative towns (state or district capital) which are supposedly assigned higher level in the hierarchy in terms of administrative

basis have been overshadowed by the commercial towns which have a larger population and much more active and varied commercial services; secondly, some towns are related to different regions for different functions, e.g. Muar in Johor state links to Melaka in Melaka State in commercial activities but administratively links with Johor Bharu in the Johor State; and thirdly, some towns bypass their subregional centre or their state capital to link directly to the federal capital, e.g. Klang and Kajang in Selangor State bypass Shah Alam their state capital to link directly to Kuala Lumpur (federal capital). However, several studies came to the same suggestion. There are six levels of urban hierarchy in Malaysia and in terms of commercial functions, they are classified as; national centre, regional centre; sub-regional centre; major local centre, minor local centre and service centre (Figure 5.1). The functions of these centres according to their hierarchy in terms of administration and commerce are shown in Table 5.3 and 5.4.

Using this hierarchy, it is suggested that the proposed rural growth centres will be the lowest level in the hierarchy which are called "service centres" in terms of the commercial functions.

FIGURE 5.1 West Malaysia:
Existing Functional Urban Hierarchy

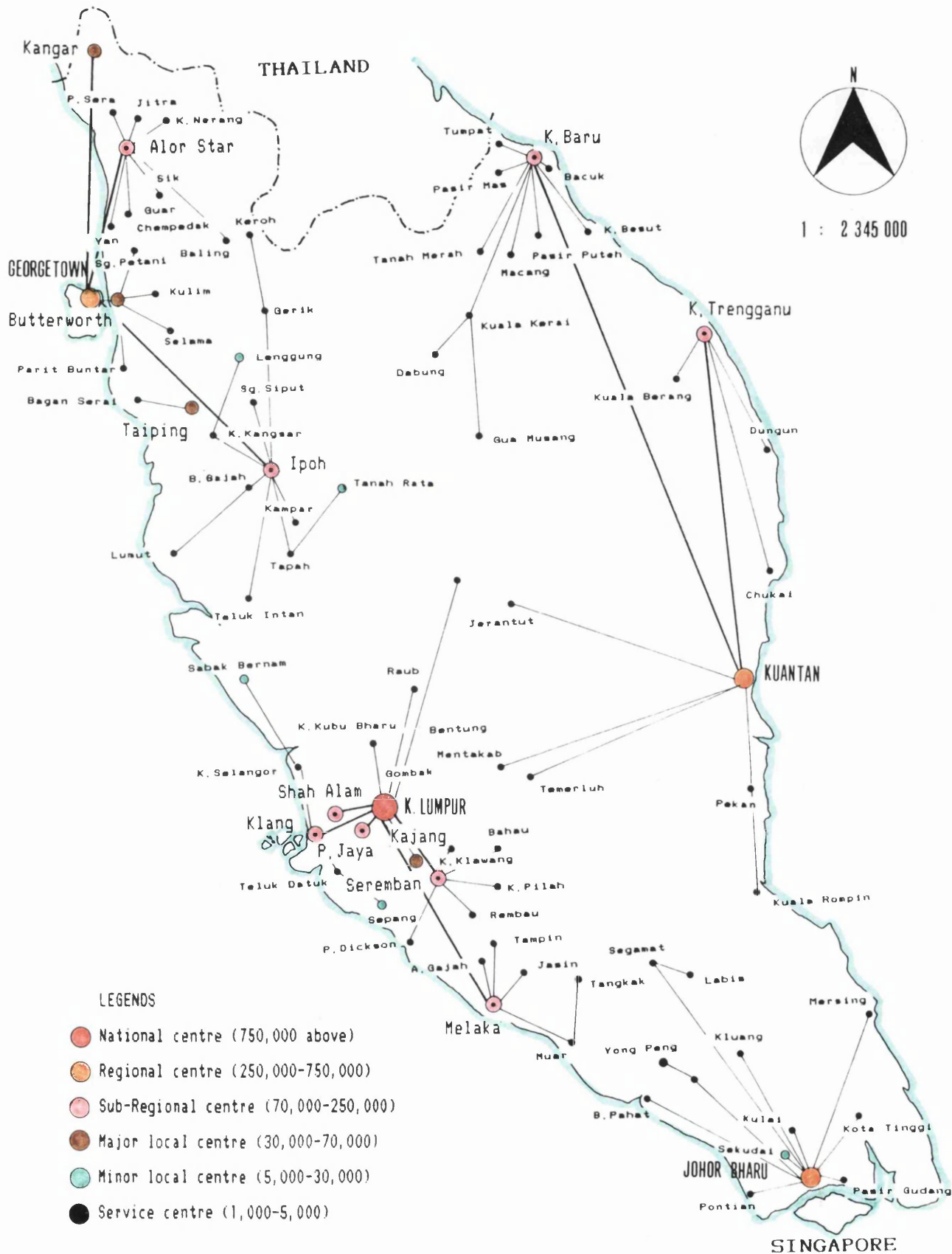


TABLE 5.3. West Malaysia:
Urban Hierarchy According to Administrative
Functions.

Order	Level	Example
1	Federal	Parliament, Federal Agencies, Public Agencies (HQ), General hospital, University, National stadium, Art and gallery, Zoo, Museum, Airport, Seaport, Railway, Coach/Taxi station, Stock exchange, Commercial banks.
2	Regional	State Secreteriat, Federal/Public Agencies, Ministry branch offices, State general hospital, Special medical centre, University branch campus, College, Polytechnic, Outdoor stadium, Sports complex, Airport, Seaport, Main railway/coach or taxi station, Bank or merchant bank at state level.
3	Sub-Regional	
4	District	District office, Municipal Council, federal or Public Agencies branch office, District health centre, Vocational/Technical school, Shopping complex, Zoo, Park, Railway/coach or taxi stand, Bank branch.
5	Sub-District	District Council, Penghulu's office Polyclinic, Community hall, Coach or taxi collection point. Bank branch
6	Local	Headman's office. Clinic, Mid-wife clinic, Primary school, Secondary school, Kindergarden, Playfield, children playground, bus stand,

Note: 1. Distribution of centres is shown in Figure 5.1.
 2. In terms of administration, second and third order towns have the same functions.

TABLE 5.4. West Malaysia
Urban Hierarchy in Terms of Commercial
Importance.

Order	Commercial level	Examples
1	National centre	Permanent wet market, hypermarket, superstore, full-range of convenience and daily goods. full range of services (finance, insurance, realty), full range of personal services.
2	Regional centres	Permanent wet market, supermarket, general stores, specialist shops, range of convenience goods and services.
3	Sub-Regional centres	
4	Major Local centres	Permanent market, mini market, shops providing a range of convenience and periodical goods, services
5	Minor Local centres	
6	Service centres	Weekly market/bazaar, general stores selling daily goods, a small range of convenience goods, repair facilities (motorcycles, bicycles, cars), tailor, barber shops.

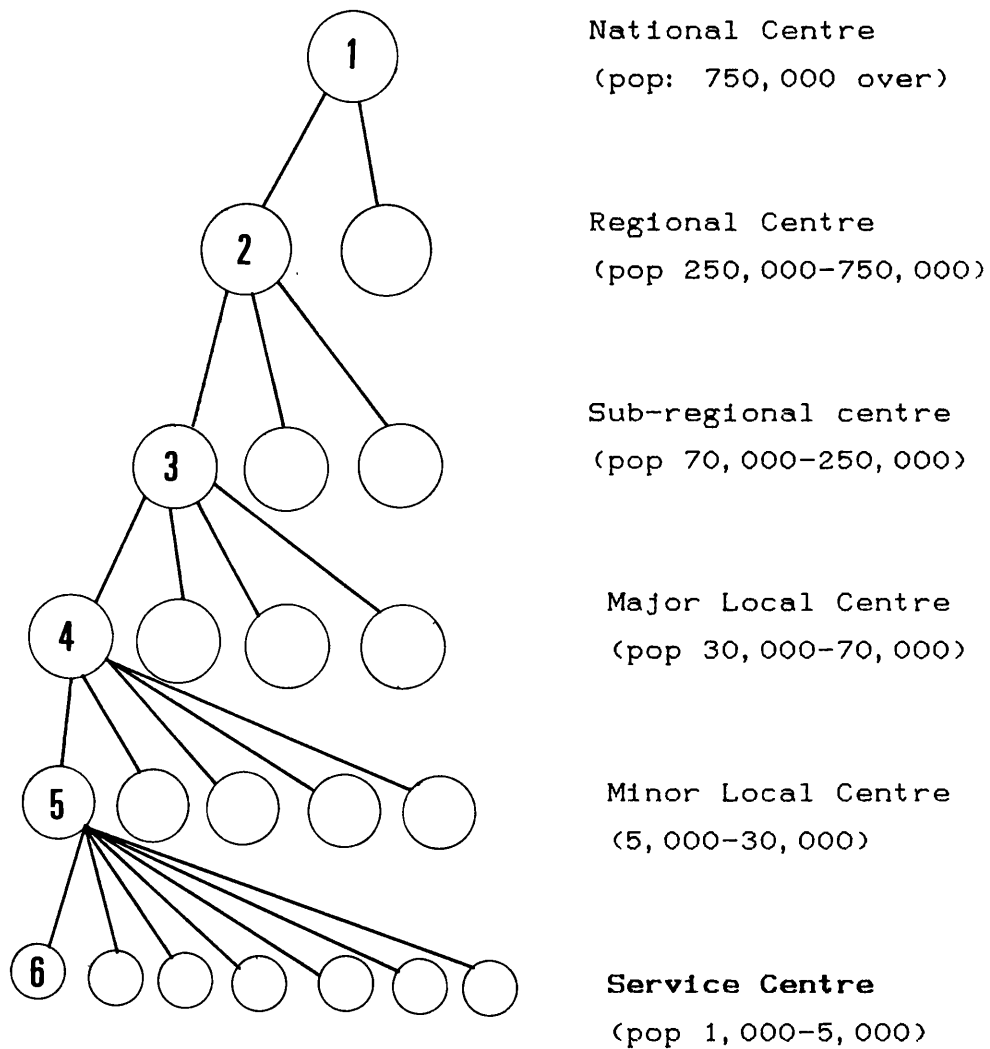
Source : 1. Federal Department of Town and Country Planning
 2. Awang, A., (1982)

These proposed centres together with the existing service centres will perform a smaller range of functions that mainly cater to local production needs. A step above is minor local centres where in addition to providing higher urban services and functions, it will also be major employment centres for the processing and distribution of intermediate products of the lower order centres - service centres (Figure 5.2). By regrouping all scattered villages to perform as service centres in the local level of the hierarchy, we hope to bring the rural periphery into the mainstream of economic development. Thus, the polarisation effects from the remaining peripheral areas will be directed towards the new service centres and on the other hand the so-called spread effects from the higher urban levels in the hierarchy will permeate the rural periphery.

5.4. Service Centre Concept

This part will discuss the concept in which the service centres outlined above could be established. The approach underlying the proposed service centre concept is based on lessons derived from the case studies of the U.K., Tanzania, and India and also after considering the limitation of rural growth centre attributes.

FIGURE 5.2. The Position of the Proposed Service Centre in the Existing Urban Hierarchy

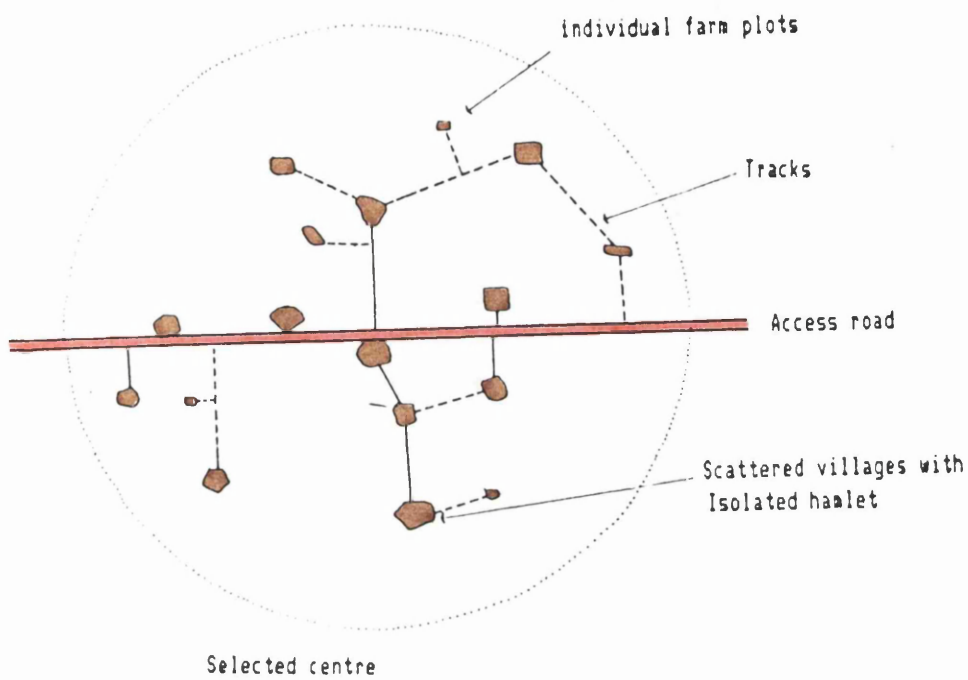


Source : Modified from Awang, A (1982)
Department of Town and Country Planning

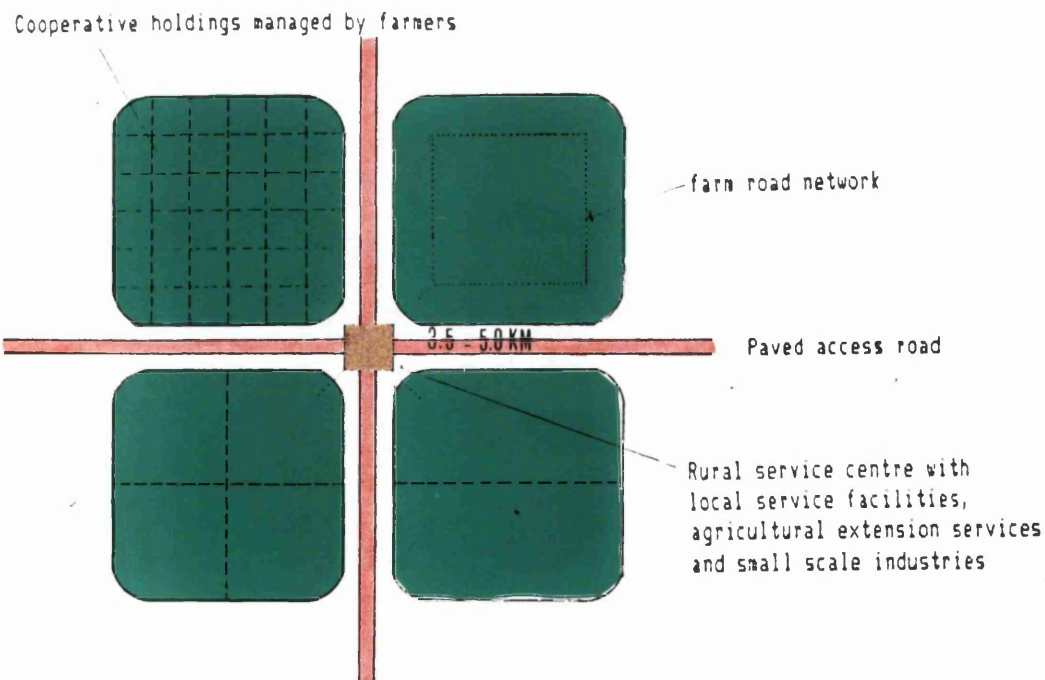
The main idea behind this concept is that "a limited number of villages are selected for expansion as focal points for the concentration of public and/or private resources in which for the first twenty years, they can serve the surrounding vilages and hamlets. At the same time, the population of the surrounding villages will be entirely relocated in those selected centres and leave their lands for cooperative agriculture. Therefore, after twenty years, all population of the traditional villages will be provided with all facilities and services and organizationally will be urbanized (Figure 5.3.)".

The rationale behind this concept is to concentrate rural population into a few centres in order to achieve a critical threshold to support town and infrastructural services. In the translocation process, vacated small-holdings could be consolidated into cooperative or estate holding fully owned by farmers thus providing opportunities for increased productivity with concomitant increase in incomes. This policy is seen as an effective strategy in trying to improve living standard in terms of physical, economic and socio-cultural development of the population in the existing traditional villages in the whole country.

FIGURE 5.3. PROPOSED SERVICE CENTRES:
THE EXISTING AND EVENTUAL SCENERIO



EXISTING SCENERIO



PROPOSED SCENERIO

5.5. Elements to be Considered in Selecting Rural Service Centres.

The overriding objective of this concept is that coordinated investments in infrastructure and productive activities should be concentrated in a small number of areas identified as having the potential for economic growth and having self-sustaining threshold. This concept which involves consolidation of farms would bring traditional village culture into closer contact with urban values. The proposed concept would also involve the whole process of modernization; vis, commercialization; mechanization; increased literacy; improved health services; and increased non-agricultural employment opportunities for the young people. Establishment of rural service centres is positively the most organized system for urbanizing rural areas. In terms of overall rural development, consolidation of farm holdings into cooperative basis would enable households to participate in non-agriculture activities and still maintain a proportionate share returns from the holding. Mechanization process of farm also indicates a growing need for non-agricultural employment to be established at rural service centres in order to check further rural-urban migration in the future.

Besides economic factors tend to argue for concentration of population, costs of providing job opportunities, and service facilities are also the key factors in this proposed concept. Some important elements have to be considered in setting up service centres based on the proposed concept. These are as the follows:

(1) Spatial pattern and growth potential

Study of spatial pattern of existing rural settlements is very important prior to selecting any rural service centres. Areas having sufficiently dense settlement pattern with prominent nuclei are good choice for proposing establishment of service centres. However, if settlements are scattered and small, and are located near to existing thriving small towns, then creation of new service centres is not justified. This is because a lot of funds for investment would have to be injected into new centres. The choice should be to agglomerate rural settlements to the existing small towns but with proper comprehensive planning.

It is felt that radius of influence of service centres should range between 3.5km. to 5.0km. or distance between centres should be between 7.0km. to 10.0km. so that sufficiently large population

catchment for services such as school, shops, rural clinic etc can be ensured.² By these spatial distances, service centres will serve an area of about 78.50 sq. km. With the proposal of such policy, it is hoped that a new wave of urban centres would evolve within the next 20 years. What is different about these centres is they would also function as focal agricultural centres for the consolidated farms in the surrounding. In the long term, there would be great transformation in the spatial pattern of urban centres in the country. More urban centres would be created throughout the country and in the same time the number of traditional villages would gradually diminish. The service centres would initially function as centres of facilities and services, but with time goes on, they could grow to the rank of locality towns based on their locational advantages.

2. In Tanzania, an access of rural settlements to the most necessary facilities is 5.0km (Piðro, 1972); In India, settlements have an access 5.0km to most amenities (Sinha, 1982); Commuting distance within district which a majority of population engaged in farming is between 5.0km - 10.0km. (Friedmann and Douglas, In Lo, and Salih, 1978); About 86% of farmers in Kampung Parit Panjang worked within 3.5km. of place of stay (University of Science Malaysia)

(2) Population threshold.

Rural service centres could be established only where there are substantial service thresholds. Centres with population of a few hundreds cannot individually support sizeable school, rural clinic or even a shop or market. Based on the empirical studies which have been carried out by several writers and case studies discussed in Chapter 4.0., and after taking into account the standard norms of about 4,000 population catchment for the provision of rural clinic and minimum of 2,500 population for the provision of primary school (Department of Town and Country Planning, Malaysia), it is recommended that new service centres should have a population concentration of between 2,500 - 5,000. However, the optimum population threshold for new service centres to attain some degree of economic viability is 5,000. Empirical studies discussed earlier also indicate that such thresholds are necessary to support some form of rural industries.

(3) Range of functions

In terms of range of services and facilities, it is suggested that the proposed rural service centres should perform as local centres in the overall hierarchy of the urban system in the country. Thus the planning standard which is currently being used as a

guideline in the development of the existing local centres should be tied-up to make it suitable to be used as a guideline for the establishment of rural service centres.

Only services or functions of low threshold need be present such as full primary school, a rural clinic, retail activity, agricultural extension service, veterinary service, community hall and others (detail of the suggested range of functions will be further discussed in Chapter 6.0). This is to ensure that the cost of services is at a level the farmer can afford.

(4) Accessibility and efficient linkages.

The proposed service centres should be easily accessible. They should be selected based on their locational proximity to the existing main line of communication such as roads, railways, or to any proposed government sponsored highway projects. Accessibility of rural service centres will stimulate the spin-off effects of efficient linkages to other parts of the country so as to promote trades and marketing of local goods. Case studies of key-settlements in the U.K., growth area policy in Tanzania, and development blocks in India show that the element of accessibility is one of the most

important criteria considered in the selection of growth areas.

(5) Element of centrality,

Service centres should also be centrally located within an extensive agricultural area of consolidated farm holdings so that it is justified to function as centres from which people can easily commute daily from the centre to the farms. To create a better centrality of centres, several elements of centrality such as full primary school, rural clinic, retail activity, postal service; and other government services have to be used as one of the selection criteria.

5.6. Conclusion.

Overall, this chapter concludes that "service centres" will be the most appropriate strategy to be used as a tool to rearticulate the existing traditional villages and ultimately to solve the rural problems in Malaysia. This concept is proposed based on the theoretical justifications of the "growth centre concept" and modified to involve the element of "resettlement". It takes into account some lessons from the key settlement policy practised in the U.K.; the concept of Ujamaa village and growth area policy

in Tanzania; and development blocks and proposed service centres in India. The next chapter will further elaborate the operational design of this concept. It will explain inter-alia; the planning process and methodology of applying this concept, design models for the establishment of rural service centres, necessary elements implied by the concept, and the design implication.

CHAPTER SIX

OPERATIONAL DESIGN OF THE PROPOSED SERVICE CENTRE CONCEPT

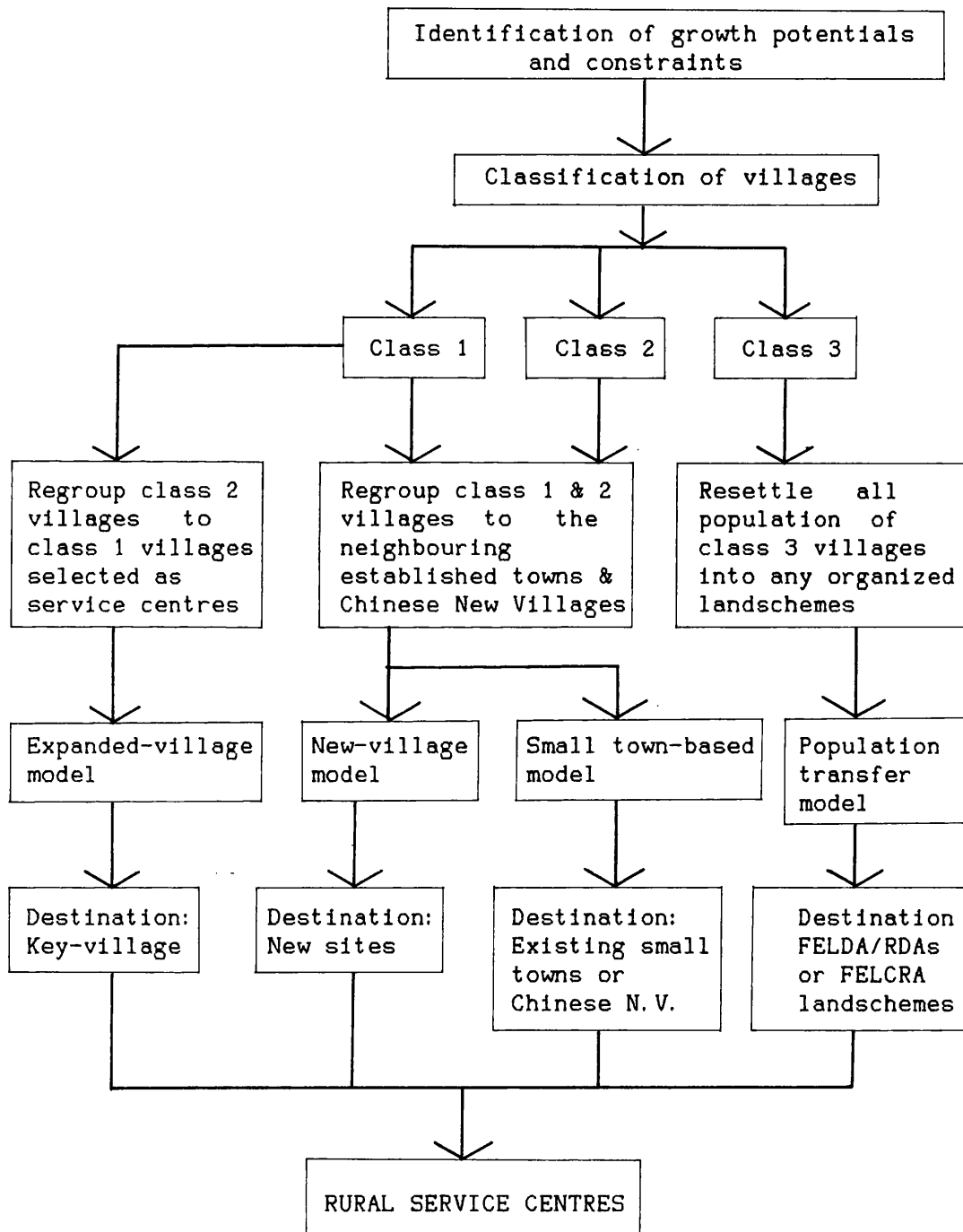
6.1. Introduction.

This chapter will discuss amongst other things; the methodology and planning approach by which the proposed service centres based on the growth centre concept and resettlement as proposed in the Chapter 5.0 could be applied in the rural areas of Malaysia; four types of spatial design models of service centres based on the proposed concept; necessary elements implied by the proposed concept and design models; and the design implications.

6.2. Methodology and Planning Approach.

The planning and establishment of rural service centres is proposed to be carried out through three stages (Figure 6.1). In summary, they are: -

- a. appraisal stage;
- b. classification of villages according to their potentials and constraints to be selected as service centres; and,

FIGURE 6.1. Process of Suggested Planning Approach

c. identification of service centres and regrouping of villages.

6.2.1. Appraisal Stage.

The purpose of the appraisal stage is to analyse the existing rural settlements pattern and to identify development constraints and potentials that exist on the ground. These could be done by field survey and sieve map technique. Factors restricting development of any traditional villages to be selected as rural service centres have been discussed in the Chapter 5.0. They are summarized as follows;

- a. The presence of steep land or other physical constraints which could restrict development.
- b. Flood prone areas with drainage restriction.
- c. The presence of any government policies which could restrict further development such as afforestation policy, green belt policy, national park and conservation policy; and,
- d. Isolated or remote location of village.

A suitable approach should be found in developing service centres for a group of villages having any one or some of these constraints. On the other hand, significant factors which could be considered as development potentials for traditional villages to be

selected as rural service centres are as follows;

- a. Traditional villages that are substantially larger in size and has a higher population density.
- b. Villages that have accessibility to main lines of communication.
- c. Villages that have already had any investment of facilities and services, (such as primary school, health service, shops, public utilities etc.).
- d. Their location in relation to urban centres providing employment, secondary school, shops, specialized facilities and other higher urban services.
- e. Their location in relation to other villages which rely on them for services.
- f. Factors which are likely to change or create change; e.g. villages that are in a close proximity to government sponsored projects such as proposed road or highways through rural area will create new pattern of accessibility for potential growth centres.
- g. Change in agricultural system such as proposal for consolidation of farm holdings would benefit centrally located and accessible villages as potential service centres.

6.2.2. Classification of Villages.

The next stage of the suggested planning approach (Figure 6.1) is classification of villages according to their development potentials and constraints. In this stage, it is suggested that villages to be categorised into the following three classes.

(1) Class 1 villages

These are nucleated villages that are well established and have been provided with all basic infrastructure and facilities such as full primary school, rural clinic, mosque, and shops. The villages should also have a good accessibility from the surrounding settlements. In many circumstances these villages should have a "natural " characteristics for further expansion or growth.

(2) Class 2 villages

These are villages that are relatively smaller in size, located further inland, having limited infrastructure facilities and do not have established services such as primary school, rural clinic, mosque and others as present in class 1 village. Overall, class 2 villages are chiefly peripheral villages functioning as catchment areas to all services of class 1 village.

(3) Class 3 villages.

These are isolated and scattered villages which are backward in many circumstances. All villages which have a very limited facilities and services, not easily accessible, very small in size, having problem of fragmented land holdings; lack of proper drainage system and having low productivity of agriculture are suggested to be categorized into this class. Along with these, villages which have one or several development constraints as listed in paragraph 6.2.1. are also suggested to be categorized under class 3 villages.

Overall, the summary of the factors to be considered in the classification of villages is shown in Table 6.1.

6.2.3. Identification of Service Centres and Regrouping of Villages.

This stage consists of two strategies vis strategy proposal for identification of rural service centres, and, regrouping of villages into the identified service centres. Under the first strategy, it is suggested that all class 1 villages due to their established services and facilities, to be selected as service centres.

TABLE 6.1. Classification of Villages:
Factors Suggested to be Considered

Population

- Class 1 : Stable villages which population more than 1,000 people.
- Class 2 : Small villages with population range between 500 - 700 people.
- Class 3 : Small and scattered villages with population less than 500 people.
-

Public amenities

- Class 1 : Sufficient provision of public amenities.
- Class 2 : Limited public amenities (Villages functioning as catchment areas to services of class 1 villages).
- Class 3 : Lack of public amenities and do not have a good access to services offered by class 1 or 2 villages.
-

Communication

- Class 1 : a. Adjacent to main transportation and communication system.
 b. Near to government sponsored projects such as industrial project/highway etc.
 or having government agricultural programme.
- Class 2 : Less accessible to the main communication and transportation system.
- Class 3 : Isolated and having poor communication and transportation system.
-

(Continued on page 116)

Economic Base

Class 1 : a. Villages with growing rural industrial sectors.
b. Potential fishing villages for diversification of economy.

Class 2 : Agricultural based villages.

Class 3 : Agricultural - based villages.

Location of village

Class 1 : a. Villages located outwith 5.0 km. radius from the existing small towns and Chinese New Villages.
b. Fishing villages having fine sandy beaches and suitable for tourist industry.

Class 2 : Located adjacent to class 1 villages or in the vicinity of 5.0 km. radius from small towns or "Chinese New Villages".

Class 3 : Located near to afforestation areas or areas have been designed for other purposes such as conservation, national park, mining, dam etc.

Physical Constraints

Class 1 : a. Do not have any physical constraints
b. Enough land for further expansion.

Class 2 : a. The presence of physical constraints such as steep hill, swampy areas etc.
b. Villages located in the flood prone area.

Class 3 : Villages having more than one physical constraints as mentioned in chapter 5.0.

Under the second strategy i.e. regrouping of villages into the identified service centres, two factors are suggested to be taken into consideration. First, villages which are located adjacent with each others and sharing the same basic services such as school, shops, mosque, and others should be regrouped together; and second, villages are proposed to be regrouped within the same parliamentary and state electional boundry in order to avoid separation of the existing number of potential voters. This is crucial to be considered, so that the proposal would be accepted by politicians.

§

Identification of service centres and regrouping of villages as outlined under the proposed concept (as discussed in Chapter 5.0.) would involve resettlement of rural population. The following are two types of population resettlement to be incorporated with the proposed service centre schemes:-

- a. Resettlement of population who are living in a cluster of class 2 and class 3 villages into the selected rural service centres. This type of resettlement would promote consolidation of farm holdings and vacated settlement lands for cooperative farming.
- b. Relocation of population from isolated and scattered class 3 villages into agricultural land

development schemes such as FELDA, FELCRA or any Regional Development Authorities (RDA) landschemes. However, population of these villages would also have a choice to move to the selected service centre scheme for other occupations, besides of farming such as industrial works, services, business and other secondary and tertiary sectors.

6.3. Proposed Spatial Design Models of Rural Service Centres.

This part will discuss the apex of the proposed strategy. Based on the rationale of the proposed service centre concept (see paragraph 5.4.), four spatial design models of rural service centres are suggested. Each model illustrates the way in which rural service centres could be selected from a cluster of villages and also explains the stages where population of the surrounding scattered villages could be resettled into these centres. The four models suggested are "expanded-village" model, "new-village" model, "small town-based" model, and "population-transfer" model.

6.3.1. "Expanded-Village" Model.

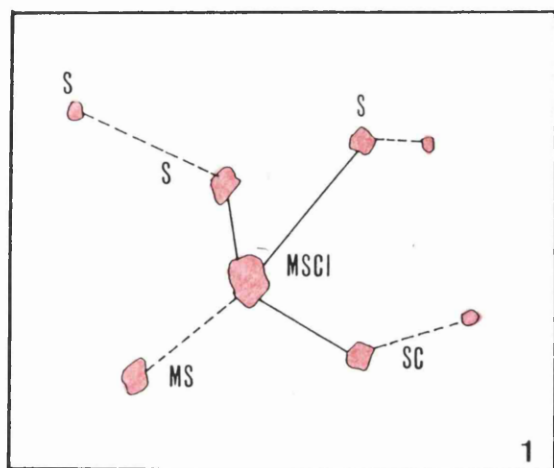
This model means a selection of class 1 villages among a cluster of rural settlements for development into a rural service centre, where into which the population of the surrounding class 2 and class 3 villages could be resettled. All vacated lands will be consolidated for cooperative farming. Figure 6.2. illustrates the conceptual design and the elaboration of structural change of this "expanded-village" model.

6.3.2. "New-Village" Model.

This model recommends the development of a completely new service centres on new sites where into which the population of the surrounding class 2 and 3 villages could be resettled. This model can only be adopted if the following factors exist:

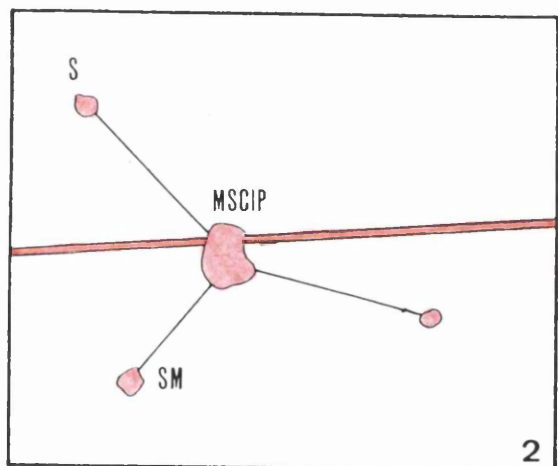
- a. There are physical constraints which might infavoured the growth of the existing villages as service centre such as steep hill, river, flood prone tendency etc.
- b. Settlements are small and scattered.
- c. There are lack of infrastructure and services.
- d. There are some undeveloped government lands available in the adjacent area which could be used for developing service centres and agriculture.

FIGURE 6.2. EXPANDED-VILLAGE MODEL



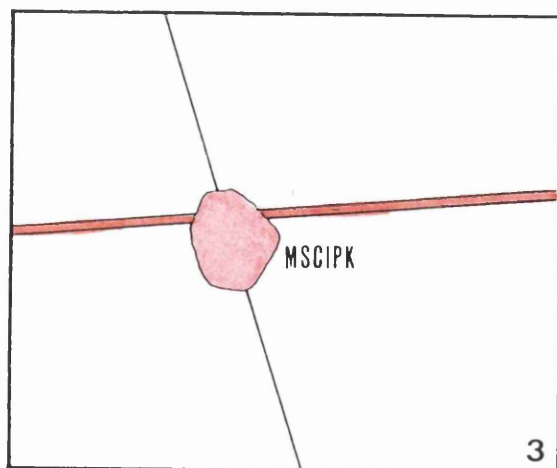
BEFORE

- a. A dense settlement pattern of class 1 and class 2 villages.
- b. Most basic facilities are concentrated in class 1 village.



PROCESS

- a. Class 1 village is selected for further growth as service centre.
- b. Small class 2 villages in the vicinity of 3.5-5.0km radius are vacated and their population be resettled in the selected centre.



STRUCTURAL CHANGE

- a. All existing fragmented land holding are consolidated and be managed on a cooperative basis
- b. Mechanization of agriculture process.

LEGENDS

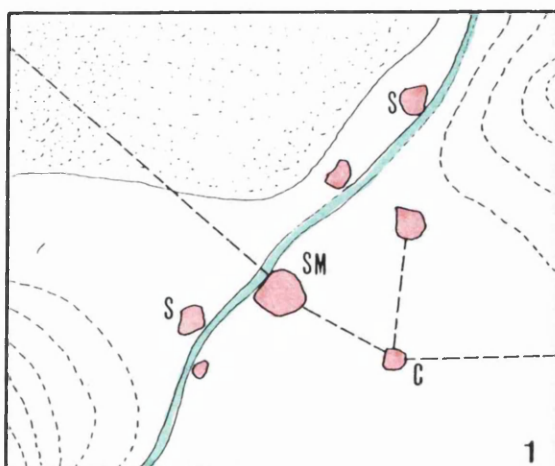
P; Primary school	I; Industry
S; Shop	C; Clinic
M; Mosque/others	K; Market

"New-village" model proposed regrouping and resettlement of population by stages to new rural settlements (service centres) which will be developed on the government land. All vacated settlement lands and agricultural lands, together with the acquired state land will be consolidated and managed on a cooperative basis. (Figure 6.3).

6.3.3. "Small Town-Based" Model.

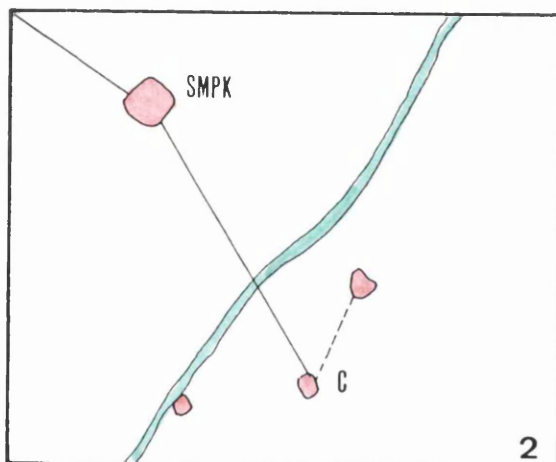
This model proposes further expansion of the existing thriving small towns and established "Chinese New Villages to perform as service centres where into which the surrounding population of class 1, 2, and 3 villages could be resettled. The rationale behind this model is that it is not economic to develop a new centres for the existing rural settlements which are in the vicinity of 3.5 to 5.0 km. radius from the existing small towns and established "Chinese New Villages". Therefore through this model it is suggested that surrounding rural settlements and their population should be contracted and be relocated as an annex to the existing small towns or "Chinese New Villages". Because of the existing towns and "Chinese New Villages have already had basic facilities, substantial development cost could be saved if this model is adopted.

FIGURE 6.3. NEW-VILLAGE MODEL



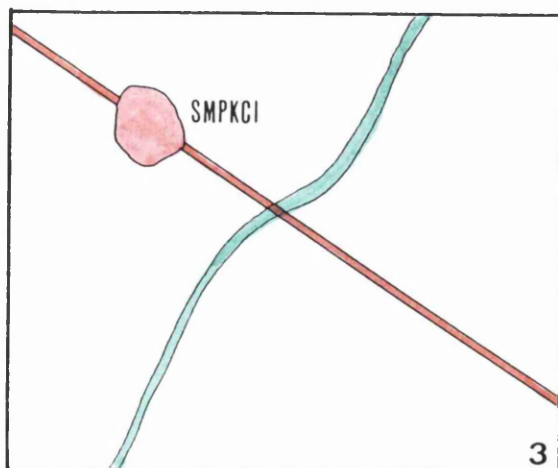
BEFORE

- a. A group of class 2 villages.
- b. Lack of infrastructure and other facilities.
- c. Some fragmented land holdings.
- d. Villages are located in flood prone area or other physical constraints
- e. Adjacent to government land.



PROCESS

- a. Establish new service centre on a new site.
- b. All villages in the vicinity of 3.5-5.0km radius are vacated and their population be resettled into the new established centre.



STRUCTURAL CHANGE

- a. All existing fragmented land holdings, idle lands and state lands are consolidated to be managed on a cooperative basis.
- b. Mechanization of agriculture process.

LEGENDS

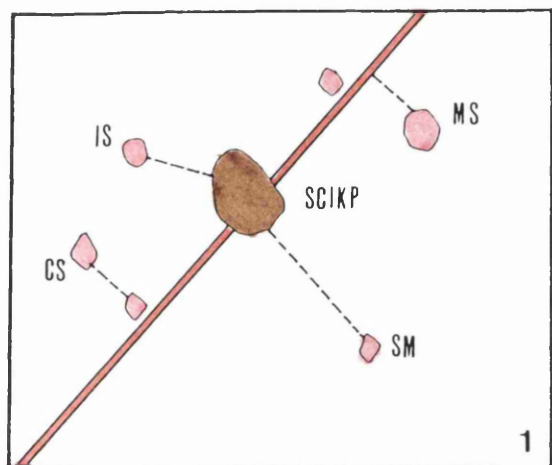
P: Primary school	I: Industry
M: Mosque/others	C: Clinic
S: Shops	K: Market

However, to make this model works, a comprehensive planning is essential to incorporate an additional facilities, services, and other sectoral services into the existing small towns and the "Chinese New Villages" (Figure 6.4).

6.3.4. "Population-Transfer" Model.

This model is different from the first three models discussed above. This "population-transfer" model suggests an actual migration out of population into any organized land development schemes which will be carried out in the country. It is suggested that population of a very small and scattered class 3 villages, which are located at physically disadvantaged areas to be resettled into any organized agricultural land development schemes carried out by FELDA, FELCRA, or Regional Development Authorities (RDA's). The rationale behind this model is that the population are earning very low income and in order to upgrade their standard of living, it would be better to resettle them into any land development schemes which will provide them with an economic size of land holding and modern technique of agricultural production (Figure 6.5).

FIGURE 6. 4. SMALL TOWN BASED MODEL



BEFORE

- a. A group of class 1 and 2 villages located between 3.5-5.0km from a small town or Chinese New Village which has an adequate basic elements.

PROCESS

- a. All class 1 and class 2 villages are vacated and their population be resettled at the peripheral area of the town or Chinese New Village.
- b. Comprehensive planning is necessary to determine the expansion of boundry.

STRUCTURAL CHANGE

- a. All vacated lands are consolidated for cooperative farming.
- b. Mechanization of agricultural process.

LEGENDS

S: Shops	I: Industry
C: Clinic	M: Mosque/others
K: Market	P: Primary school

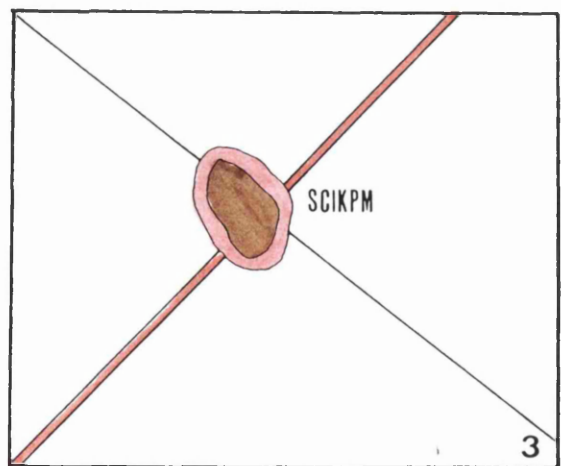
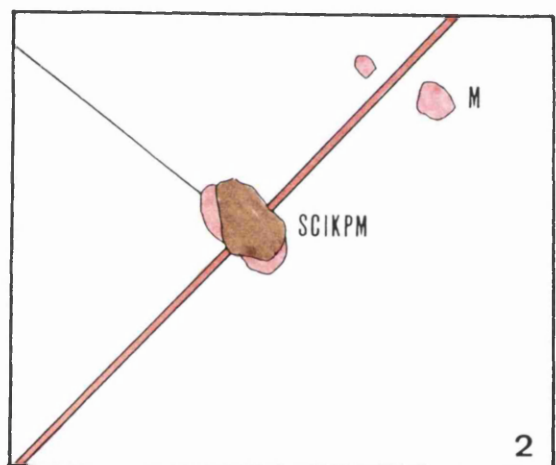
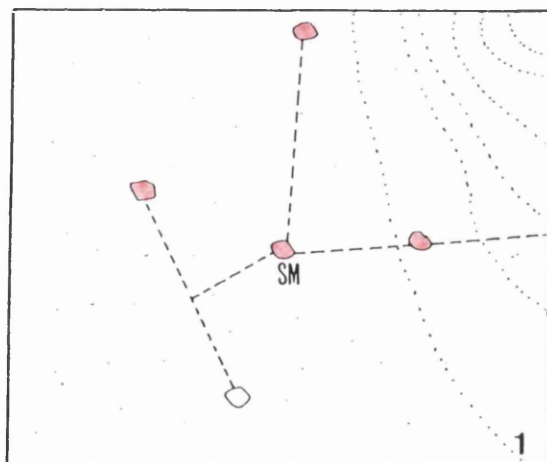
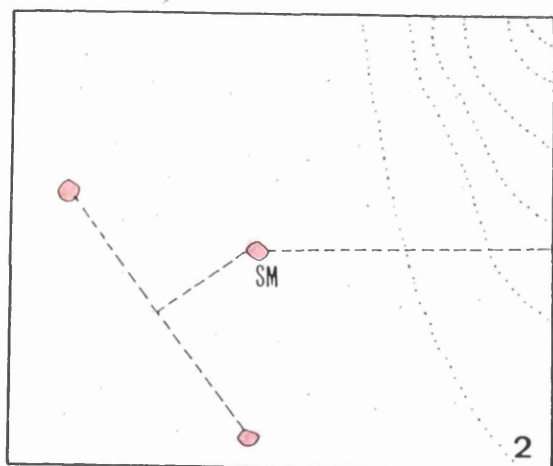


FIGURE 6. 5. POPULATION-TRANSFER MODEL



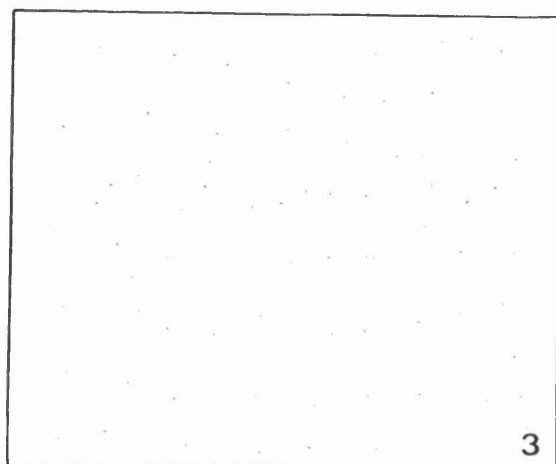
BEFORE

- a. Very scattered class 3 villages located at a physically disadvantaged area.
- b. Difficult access to most public amenities.



PROCESS

All population in these villages are proposed to be resettled into a new frontier agricultural land development scheme such as FELDA, FELCRA and RDAs.



STRUCTURAL CHANGE

Vacated agricultural lands and building sites are proposed to be conserved or afforestation.

LEGENDS

- S: Shops
- M: Mosque

6.4. Elements of Rural Service Centres.

6.4.1. Basic Planning elements.

The main important elements of the proposed service centres have been mentioned in Chapter 5.0. They are summarized as follows: -

- a. Service centres should have a population concentration of between 2,500 - 5,000. However, the optimum population threshold to attain some degree of economic viability is 5,000.
- b. It is suggested that only services or functions of low thresholds need to be provided for rural service centres. This is to ensure that the costs of providing services at a level the farmer can afford (Table 6.2).
- c. The radius of influence of service centres should range between 3.5 km. to 5.0 km. so that sufficiently large population catchment for services can be ensured.
- d. Service centres should be easily accessible. They should have a good communication and transportation linkages with the both larger towns and farming areas.

TABLE 6.2. Service Centres:
Proposed Range of functions.

Elements	Examples
Education	Full primary schools, kindergardens, playgroup
Health	Rural health centre, mid-wife clinic.
Sports	Sports and playground.
Recreation	Open space, a park for children, a cinema house (at selected centres).
Culture	Community hall (<u>balai raya</u>) with all audio-visual and mass communication facilities
Administrative	Local government branch.
Security	Police post/police sub-station (sargeant's rank).
Commerce	Weekly markets/bazaar, grocery and general merchandise, repair facilities, tailor, barber shops, restaurants.
Finance	Credit facilities.
Agriculture	Extension service/demonstration plots, cooperative production and supply outlets, small storage facilities.
Industry	Primary processing and packing facilities, small scale agro-based industries, handicraft industry (these activities will be based on local agricultural products and potential, thus will vary from centre to centre.
Transport	Local bus halt, taxi collection point, petrol station.
Communication	Postal agencies and public phones.

e. Service centres should also be centrally located within an agricultural area of consolidated farm holding so that it is justified to function as centres from which people can easily commute daily from the centre to the farm.

6.4.2. Land consolidation.

Basically, two probable methods of land consolidation could be introduced simultaneously with the proposed rural service centre schemes. Both of them propose a cooperative method of agriculture: -

a. consolidation of farm holdings in which all small and fragmented holdings are consolidated and managed on a cooperative basis. The holding is communally owned and based on proportionate share basis. This means some of the households who before the consolidation process owned a larger piece of land would obtain a higher proportion of share in the consolidated holding, and thus would receive higher property income. However, all participants whether they are land owner farmers or landless farmers would obtain an equitable work income (Figure 6.6).

b. The second method is a modification of the first. Similar with the first method, it also introduces consolidation of farm holdings, to be managed on a cooperative basis. In addition to the existing land

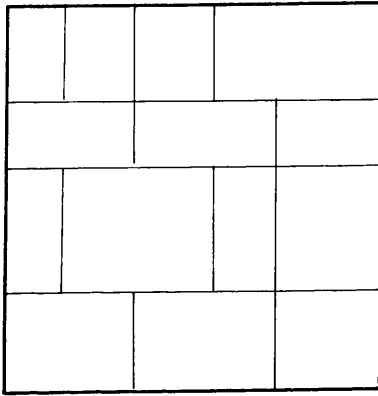
holdings, sometimes large tract of idle lands and state lands are also available in the villages for consolidation. Under this method, each household is suggested to own the same economic size of land holding, but on a "floating basis". To promote similar size holding for all farmers, some kind of monetary compensation may have to be given to land owners who before consolidation took place owned larger land than the proposed economic size (Figure 6.7).

Both methods of land consolidation need a great participation of farm owners. Each household would obtain land property income based on the proportionate share of the farm land as well as work income for the number of household members who have worked in the farm on cooperative basis.

In case where some households want to switch their work from farming to other kinds of job in the centre (i.e. no longer participate in agricultural activities), the following alternatives are suggested: -

a. the ownership of land on proportionate share basis of those non-farming households be retained and the households concerned would continue to receive a share return for the use of their land. Such owners have the option to sell their share to the cooperative.

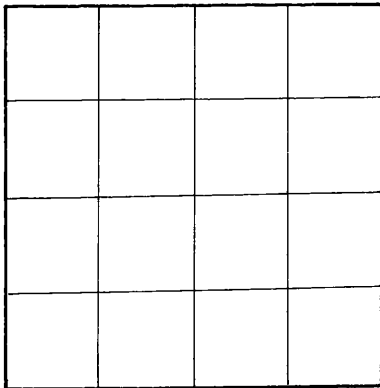
FIGURE 6.6. Proposed Consolidation of Land Holdings
Method One: Share Basis



Varying size of
sub-holdings

- a. Cooperative farming system
- b. Land - property share basis
e.g. own 1 acre out of 100
acres of cooperative farm -
1% of property income.
- c. Labour - work income
- d. Incur management cost
- e. Total income = property income
+ work income - management cost

FIGURE 6.7. Proposed Consolidation of Land Holdings
Method Two: Similar Economic Sub-holdings



Similar size of sub-holdings

- a. Cooperative farming system
- b. Land - similar economic size
of sub-holdings. e.g. 50 house-
holds with 200 ha. farm land
means each household own
4 ha. in a "floating basis" and
would receive 2% of property
income.
- c. Labour - work income
- d. Incur management costs
- e. Total income = property income
+ work income - management cost

b. the proportionate share of holding of those non-farming land owners be absorbed by the cooperative through compensation and then be "redistributed" on a "floating" basis to other participating farmers so as to increase their share in the holding.

In general, these are only two basic methods of land consolidation. Many variations could be derived from them. A further detail study on this aspect should be carried out by relevant bodies.

6.4.3. Economic Activities.

Through consolidation of farm holdings and subsequent introduction of mechanization to the farms, there would be a declining number of farm employments in traditional villages. Therefore, there is a need to provide secondary and tertiary jobs to meet the demand of those who have been pushed out by the mechanization process. Non-agricultural job opportunities can be created through the establishment of rural industries, construction sector, and commercial activity.

Based on the lessons derived from the case studies (discussed in Chapter 4.0), manufacturing in the service centres should be confined to small scale and labour intensive industries which might utilize the

easily available labours and raw materials of the area as inputs. It is suggested that rural service centres should concentrate on: agro-based industry, processing industry, cottage industry, and food production industry.

It is worthwhile to emphasize that industrial activities as mentioned above would create an additional value to local products through various stages of industrial process. Therefore household income could be improved as compared to the sale of the unprocessed raw product. Judging from the economic point of view, rural centres have a great potentials to be developed as centres of agro-based industries. This is because lands, labour and raw material at such centres are comparatively cheaper than those at the large towns or cities.

Once implementation of a proposed service centres set-up pace, substantial employment could also be created through the growth of construction sector. Based on experience from the land development scheme, construction industry will be one of the most important sectors as housing programmes would account for between 65 to 75 percent of its total output. Besides of housing, construction of integrated community facilities such as school, clinic, shops,

administrative buildings etc. would also creates substantial employment opportunities. Through this schemes, it is possible that a pool of skilled construction labours could be attained to embark on extensive construction towards transforming the rural service centres into an urbanized centres in the long run.

Along with manufacturing and construction sectors, commercial sector will also gather pace. As purchasing power of the population increases, chances of demand for higher order goods are greater. Besides concentration of population means a larger service threshold, this would also encourage sale of more diversified goods and encourage the growth of various types of service workshops. All these three major economic activities will have spin-off effects for establishment of tertiary sectors such as marketing, sales, banking, insurance, and subsequently lead to local and national trade.

6.5. Design Implication

The new concept and models for spatial development in the rural areas outlined in this chapter seems to be the one that West Malaysia should adopt in the immediate future to speed up economic development of

the rural areas especially traditional villages. This strategy however cannot be used in vacuum. It calls for certain fundamental changes especially in processes, policies and administration. The proposed concept and models, if they are to be practical of value must be preceded by some changes in various aspects of planning, administrations and development. Planning system in Malaysia should from now be regarded as a social process as well as an economic exercise for decision making. Efforts should be made to strengthen and widen its coverage so that it could dominate all lands in the country.

Since the concept and models are designed to promote the rural development (spatially and interpersonally), the roles they can play will depend largely on the administration and institutional reforms made. The first reform that is needed is a revamping of the development services, which could be effected partly by recruiting technical hands and partly by inculcating a sense of commitment and administrative discipline among government servants. The second reform which would make an important contribution to improve the situation is the creation of voluntary organizations at rural levels. The existing system of Jawatankuasa Kerja dan Keselamatan Kampung (Village's Committee of Work and Security)

which have been practiced in many villages should be revised and introduced in all service centres.

Besides, the administration preconditions for the success of the proposed concept is a need for decentralization of planning and development administration. The process of local government formation in the rural areas should therefore be swifted. Each local government authority has to have planning committee and under it a technical unit to undertake plan formulation and execution. There is also clear need for better coordination among the various official agencies especially between planning and the servicing agencies. It is believed that if new arrangement for decentralized planning and administration are introduced at different levels of centres, better coordination for the task of socio-economic development can be secured.

To make the proposed concept become reality, several definite steps have to be carried out. At the state level, state planning authority should carry out a thorough study to identify areas suitable for service centres. Planning process and methodology outlined in this chapter could be used as a guideline in a such study (Chapter 7.0. will give a useful framework how the planning process and methodology outlined in this

chapter is used in identifying service centres for the rural areas).

In the same time, all state authorities should extend the existing coverage of local government areas so that all lands in the country be covered by local government authority. This will create an appropriate body to design and execute the proposed service centres. The local government authorities concerned have to formulate structure plans for their areas and indicate the areas suitable for the development of service centres so that local plan could be prepared. In the local plans, details design of the schemes, the types of projects to be carried out and the relevance bodies to be involved have to be listed. The local plans would be a strategic planning vehicles at the local level to coordinate the development programmes to be carried out at service centres.

Local authorities should play a vital role in the implementation of these schemes. At the initial stage, these authorities either working independently or working together with Public Works Department (PWD) have to provide road networks and other infrastructures, and build low-cost houses in the proposed centres. These are the most important elements which could attract other developments come

into the centres. Unless all of these steps are taken, massive investments may result only in massive waste.

6.6. Conclusion

As discussed in Chapter 2.0., at present, various agencies have attempted different ways of rural development, but largely on sectoral programmes. A practical approach therefore is by adopting "Integrated Rural Development (IRD)" approach which among other things includes the development of rural centres which can act as growth points to serve the whole rural hinterlands.

Chapter 5.0. has proposed service centre concept, a policy formulated based on the theoretical justifications of the growth centre concept and modified to include the element of population resettlement to rearticulate the traditional villages in Malaysia.

This chapter has outlined the method by which the proposed concept could be planned and translated on the ground. Besides, several design models illustrating the growth processes of service centres have also been suggested to complement the concept.

However, to make these proposals become reality, certain fundamental changes have to be done.

- a. Efforts should be made to strengthen and widen the scope and coverage of the existing planning system;
- b. The existing development services have to be revamped;
- c. Planning and development administration have to be decentralized to local levels; and,
- d. Coordination and collaboration between development agencies have to be upgraded.

Having discussed the operational design of the service centre concept, next chapter will attempt to test the proposed concept and design models into the District of Johor Bharu, one of rural districts in the Johor State. By testing the proposed concept, methodology, and design models, their practicality could be identified.

CHAPTER SEVEN

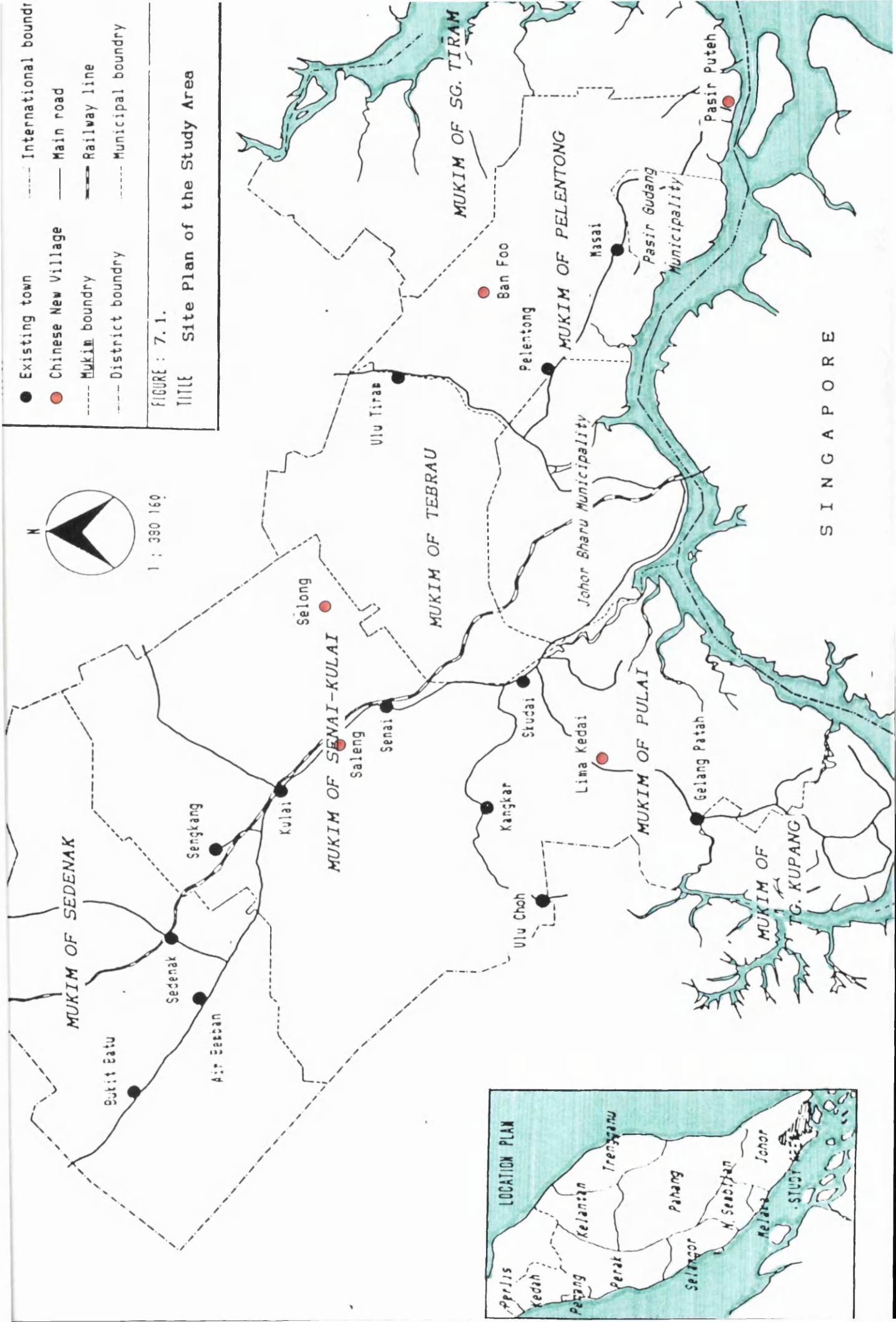
TRANSLATION OF THE PROPOSED RURAL SERVICE CENTRE CONCEPT AND DESIGN MODELS

7.1. Introduction.

In the preceding chapters, it has been demonstrated that the applicability of the "growth centre" concept to the rural areas is still questionable (discussed in Chapter 4.0 and 5.0.). To suit the development needs of the traditional societies and economics like Malaysia, centres which are called "service centres" based on the "growth centre" concept and "resettlement" capable of urbanizing the rural areas (traditional villages) have been suggested. In this chapter, an attempt is made to apply this new concept of rural centres to the District of Johor Bharu, one of the rural areas in the State of Johor.

7.2. Background to the Study Area

The District of Johor Bharu which consists of seven mukims (sub-districts) lies in the southern part of the State of Johor (Figure 7.1).



It has an area of about 739.45 sq.km. extending for 48 km. in a north-south direction and for 56 km. in an east-west direction. The presence of Johor Bharu both as the capital town for the state and as the regional centre for the southern region in the district has made the district as the most developed area in the state. In 1985 the district had a total population of about 650,000 persons, of which 62.8 percent were concentrated in Johor Bharu and other towns. The remaining population i.e. about 241,800 was sparsely distributed over 647.5 sq.km. of rural areas containing of 115 traditional villages, five "Chinese New Villages", seven estate settlements, and seven planned settlement schemes of FELDA, FELCRA, and RISDA (These types of rural settlements have been discussed in Chapter 3.0). The distribution of these settlements is shown in Figure 7.2.

7.3. Traditional Villages.

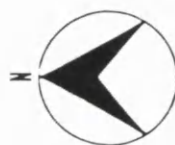
The distribution of the traditional villages in the district is shown in Figure 7.2. and their names are listed in Appendix B. Out of this number, 39 villages are located within the boundry of Johor Bharu Municipal Council and Pasir Gudang Municipal Authority.

LEGENDS

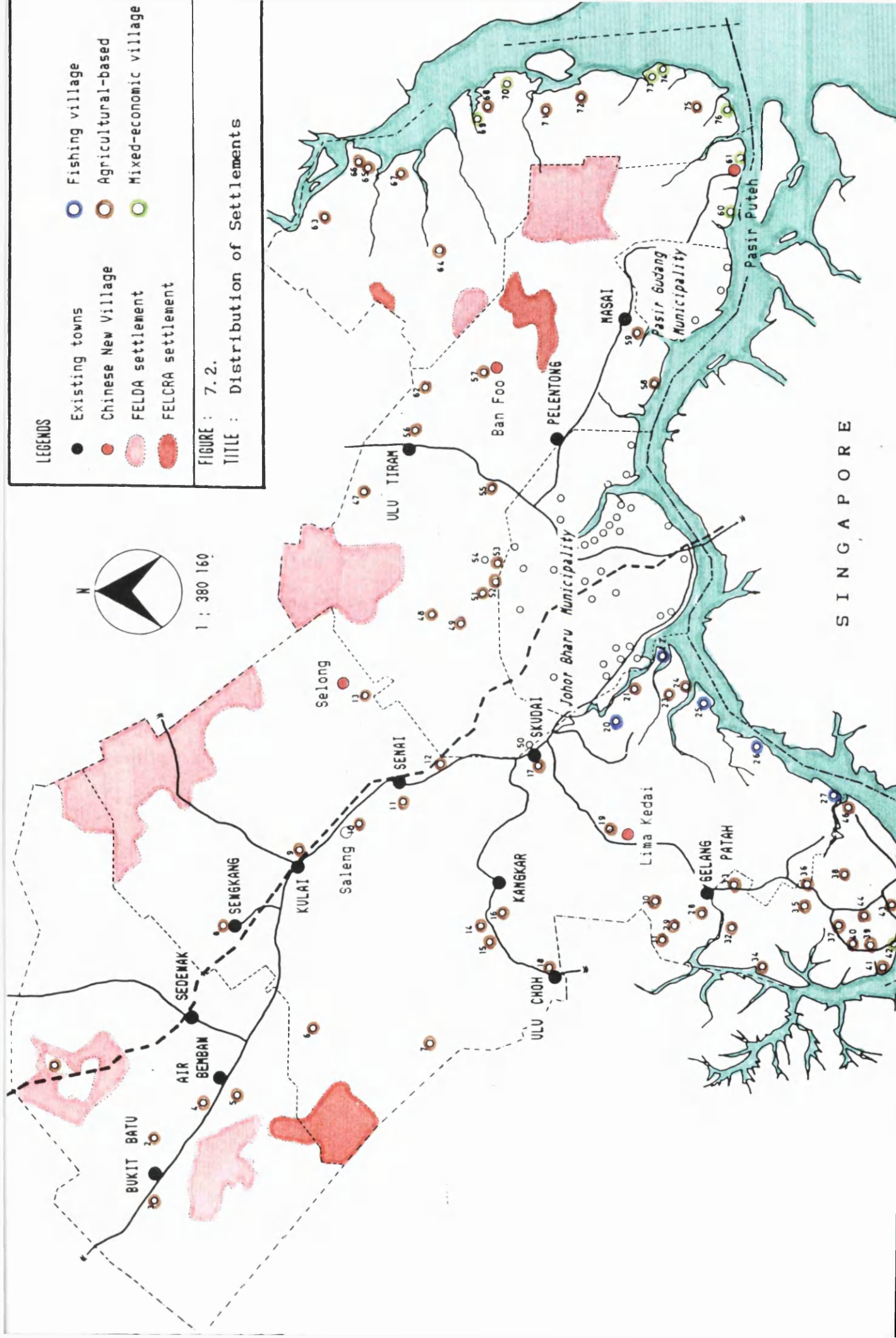
- Existing towns
- Chinese New Village
- FELDA settlement
- FELCRA settlement
- Fishing village
- Agricultural-based
- Mixed-economic village

FIGURE : 7.2.

TITLE : Distribution of Settlements



1 : 380 160



Villages located within the boundry of municipal areas are not considered in this study because development policies and proposals for these villages have been formulated in the Structure Plan of Johor Bharu which was approved in 1985. Therefore this study will only concentrate on 76 traditional villages which are located outwith the municipal areas.

The latest information on population of the villages in the study area is from Housing and Population Survey, 1980. From that census it is found that the villages of the district were distributed in the size classes shown in Table 7.1. Even though there are 25 villages which did not have population figure, it can be generalised that most of the villages are small in size, having less than 700 population. The table shows that only eight percent of the total villages in the district have population more than 1,000 people. The sparseness of the population in general raises real problems in spatial development. Added to this is the paucity of means of communication - roads - in which the study area is particularly deficient.

TABLE 7.1. District of Johor Bharu:
Sizes Distribution of Villages

Size class (ranges)	No. of Villages	%
less 200	7	13.8
200-499	14	27.4
500-699	8	15.7
700-999	14	27.4
more than 1,000	8	15.7
<u>Total</u>	<u>51</u>	<u>100.0</u>

Source : District and Land Office, Johor Bharu

7.3.1. Distribution of Traditional Villages.

Generally, the distribution of traditional villages in the district is scattered. The geographical pattern of the traditional villages can be divided into two types; the first is linear pattern where the villages are located along the communication routes and the second is scattered pattern. The linear pattern of settlements is very significant along main routes of Kuala Lumpur - Johor Bharu, Ulu Choh - Skudai, and Tanjung Kupang - Johor Bharu; whilst the latter are those villages located in the interior parts of the district especially those villages located in the Mukim of Pulai. Again, besides of the sparseness of the population, the scattered distribution of villages has also raised difficulties in spatial development.

7.3.2. The Economic Base of the Traditional Villages.

The economic base of the villages can be broadly categorized into three types; agricultural-based villages, fishing villages, and mixed economic-based villages. The distribution of villages according to mukim and economic base is shown in Table 7.2.

TABLE 7.2. District of Johor Bharu
Economic Base of Villages
According to Mukim

<u>Mukim</u>	Agriculture	Fishing	Mixed-economic
Sedenak	5		
Senai-Kulai	10		
Pulai	11	5	
Tg. Kupang	13	1	1
Tebrau	9		
Pelentong	5		2
Sungai Tiram	9		5
<u>Total</u>	<u>62</u>	<u>6</u>	<u>8</u>

Source : District and Land Office, Johor Bharu

(1) Distribution of agricultural-based villages.

There are 62 traditional agricultural-based villages. The distribution of these villages is shown in Figure 7.2. Economic activities carried out in these villages are rubber, oil palm, and cocoa. Coconut plantations are also available but only in villages located in mukims near to the coastal area.

(2) Distribution of fishing villages.

There are six fishing villages available in the district and most of them are located along the coastal line in the eastern part of the study area. (Figure 7.2.).

(3) Distribution of mixed-economic based villages.

The mixed economic-based villages are villages where majority of their population depend on both fishing and cultivation as major employment and source of income. There are eight mixed economic-based villages in the district and majority of them are located in the Mukim of Sungai Tiram. (Figure 7.2.).

None of the villages in the district possesses any large or medium scale industries. In the few villages which reported some industrial employment, such employment is mainly in services and processing industries like manufacturing of readymade garments,

shoes and footwears; repair of bicycles, motor vehicles and electrical appliance; food processing; and others. Clearly, an industry mix of this type is unlikely to radiate growth impulses to the surrounding areas. Thus, the existing developments in the villages do not provide any strong clues to the growth potential of these villages. Therefore, identification of villages suitable to be selected as service centres could be worked out indirectly using evidence about the resource base and other criteria that have been set in the earlier chapter.

7.4. Development Constraints and Potentials

7.4.1. Constraint Factors.

(1) The villages located in the Mukim of Sungai Tiram do not have a good road system to link them to the major towns. Most roads in this mukim are untarred and only suitable for light vehicles. This condition has restricted the communication and the flow of goods and information between villages in this mukim and other parts of the district and the State. As a result, though many villages in this mukim have some potential for tourist industry, during the rainy season, when the communication becomes worse, they fail to attract tourists into the area.

(2) The problem of water pollution caused by industrial effluent at the river estuary in the Mukim of Pulau has reduced the potential of the area for fishing and inhibits the fishermen in the area carrying out fish farming. Villages mostly suffered from this problem are Kampung Teluk Serdang, Kampung Bakar Batu and Kampung Tanjung Dange. In the Mukim of Sungai Tiram, farmers of the traditional villages especially those who are living in villages along the coastal line face with a problems of bad soil. Most lands in this mukim are not suitable for cultivation.

(3) The traditional villages which are located between Sengkang and Skudai experience seasonal flood problem from River Skudai. Other villages particularly those which are located along the rivers in the district also experience the same problem (Figure 7.3).

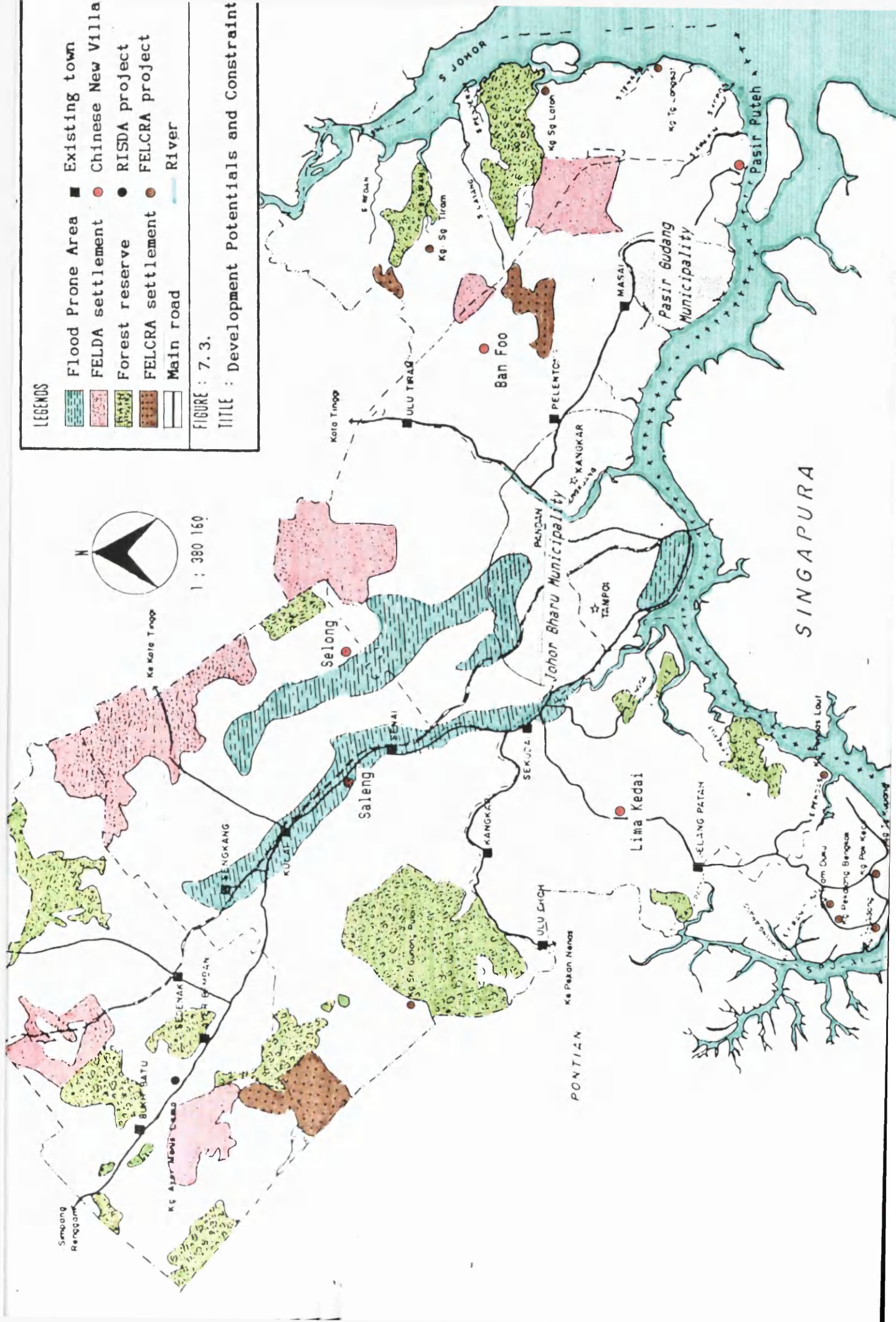
(4) Public amenities are mainly concentrated in the municipal area and other towns in the northern and western part of the district. The scattered nature of the traditional villages together with the uneconomic size of population thresholds have made the provision of such amenities to the villages become difficult and expensive.

LEGENDS

- Flood Prone Area ■
- FELDA settlement ●
- Forest reserve ●
- FELCRA settlement ●
- Main road —
- Existing town ■
- Chinese New Villa ●
- RISDA project ●
- FELCRA project ●
- River —

FIGURE : 7.3.

TITLE : Development Potentials and Constraint



7.4.2. Potential Factors.

(1) Development in this district particularly at the northern and western part has grown rapidly. Accessibility and roads system in those areas, though some of them are untarred could assist the spread effect of development from higher level of towns to permeate into the periphery. More investments into those areas could further increase the development growth.

(2) Most fishing villages in the Mukim of Pulau have fine sandy beaches and potential to be developed as resort areas. Hence, tourist industry should be given more attention in this mukim. With some investments such as by establishing more facilities like "handicraft centre", swimming area, camping area, entertainment site and others, these areas will be able to attract not only tourists from local areas, but also from national and international markets.

(3) Kampung Sungai Dange in the Mukim of Pulau has a wide area of mangrove swamp. This area is suitable to be developed as an area for prawn and sea-mussels rearing. Besides, several rivers in this mukim also have a suitable "sand" to be used in making bricks.

Establishment of brick industry therefore will be appropriate in villages located along such rivers.

(4) Presently, some government projects which are carried out by FELCRA and RISDA are being implemented in eleven villages (Figure 7.3). These projects should be taken into consideration in the selection of service centres. Besides of providing employment opportunities to the rural people, these projects have also provided a better communication system linking the villages with other parts of the district.

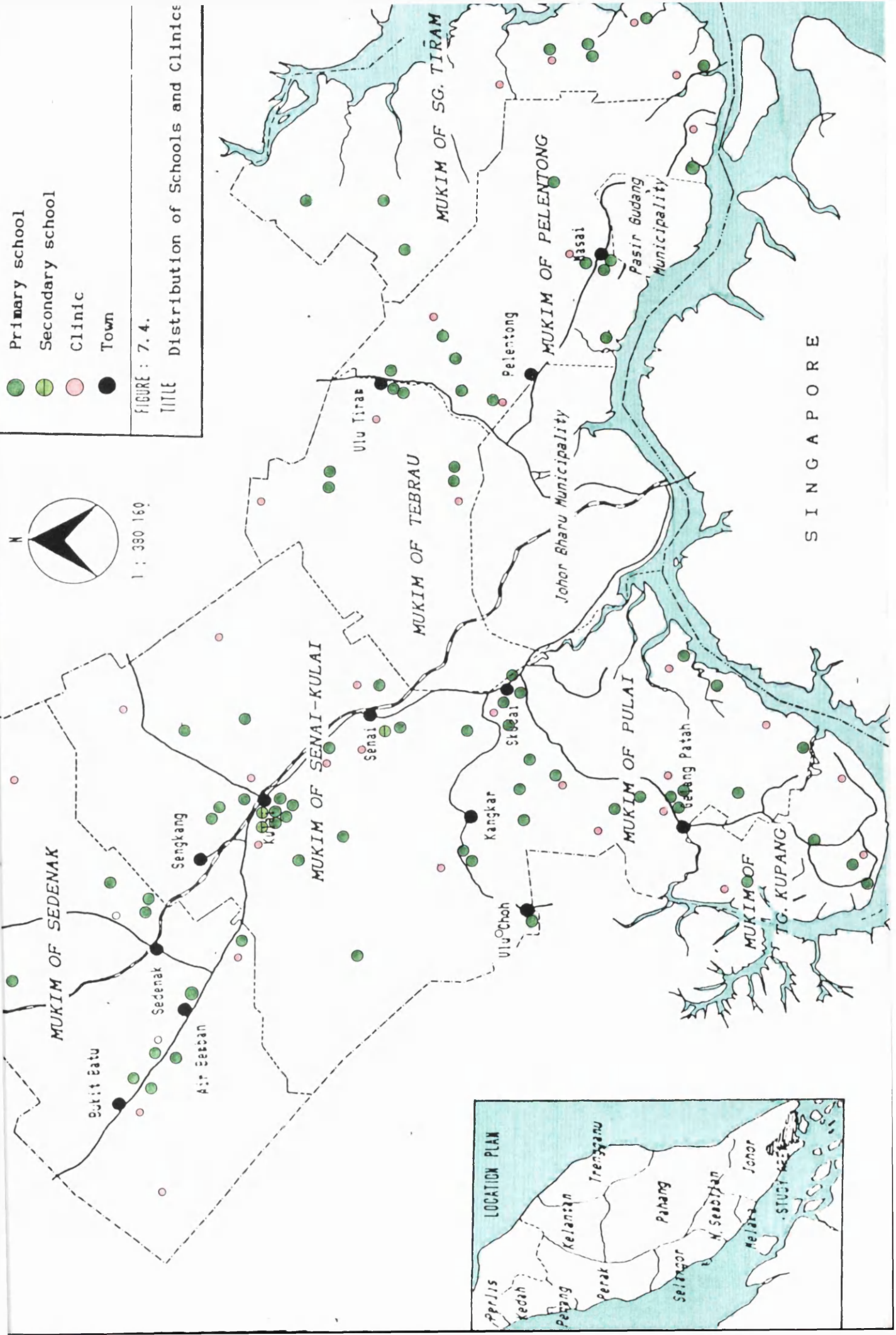
(5) There are some government lands available in the district in the form of forest reserves. These lands would enable the development of new service centres and also could be used for cooperative farming if necessary (Figure 7.3).

(6) Presently, there are 71 primary schools and 35 clinics (not included those in the Johor Bharu Municipal Council) widely distributed throughout the district. The availability of these elements could easily assist the process of identifying villages suitable to be selected as service centres in the district (Figure 7.4).

- Primary school
- Secondary school
- Clinic
- Town

FIGURE : 7.4.

TITLE Distribution of Schools and Clinics



SINGAPORE



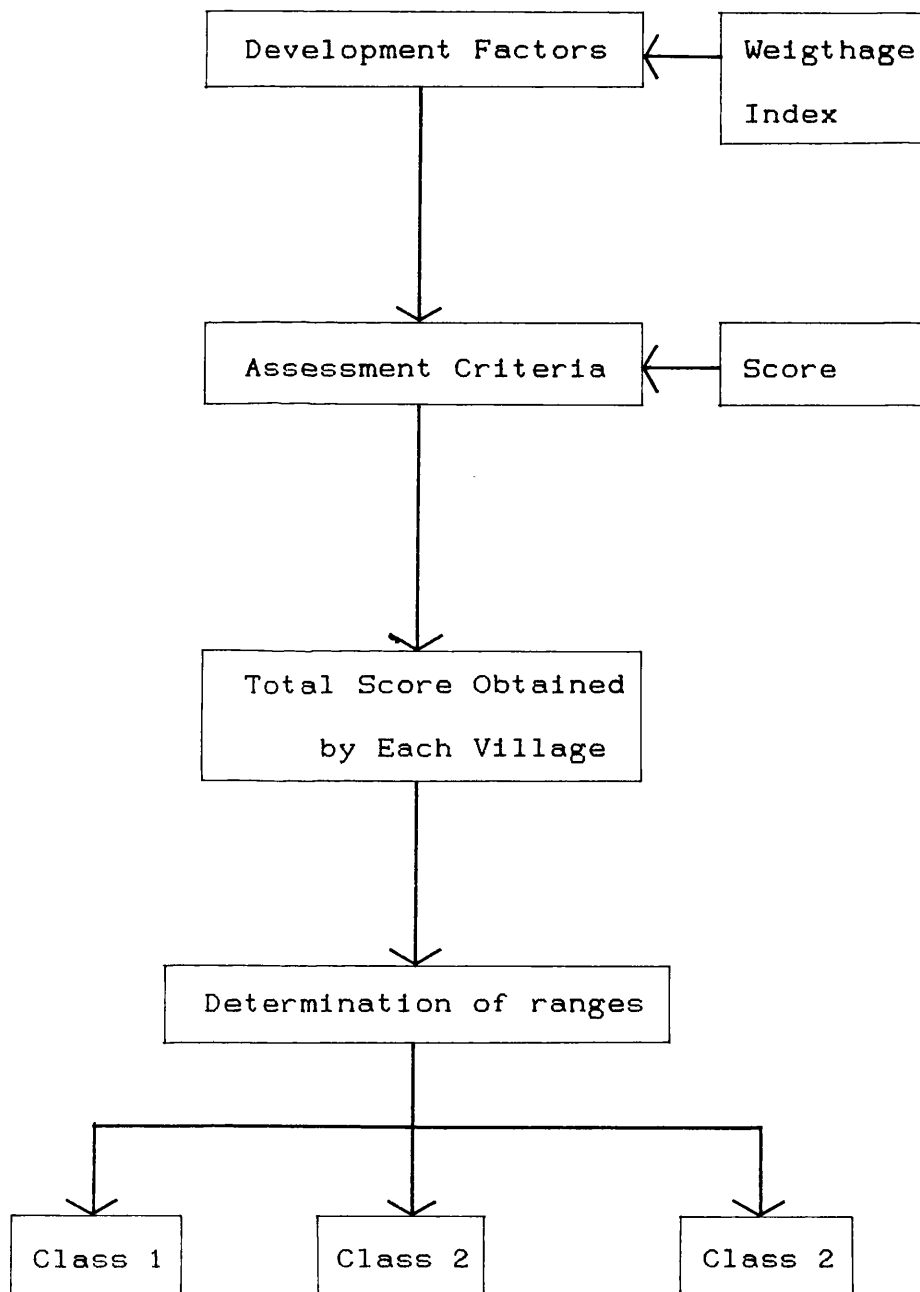
7.5. Classification of villages.

As proposed in the Chapter 6.0., the first step of the planning process in establishing rural service centres is classification of villages into three classes according to their constraints and potentials. In this case study, classification of villages will be done by using "potential-village analysis", a method which is modified from the "potential surface analysis", where the main aim is to assess the extent in which each village has the potentials to be developed. The process of "potential village analysis" is shown in Figure 7.5.

In this analysis, three factors of development will be used as the indicators; they are:

- a. The availability of two main public amenities i.e. school and health service which will be measured in terms of distance;
- b. The proximity of villages to the main communication line which will also be measured in terms of distance, and the presence of any government projects in the villages; and,

FIGURE 7.5. The Process of "Potential Village Analysis"



c. The availability of land for expansion and the tendency to flood problems. This means villages having physical constraints (such as steep hill, swampy areas, rivers, established built-up areas or face seasonal flood problems) which will need a threshold cost for further expansion will be considered as less suitable to become service centres.

The population factor, which should be the most important criterion in this analysis could not be used in this case study due to insufficient of data. However, consideration given to public amenities (school and rural clinic) indirectly will represent the population factor. This is because the location of these amenities depends on the population threshold of a particular village.

In this analysis, weighting system is used. Each development factor is given certain weightage value according to its relative importance for the selection of service centres (Details of this analysis is discussed in Appendix C). Through this method of analysis, the total score obtained by each village is shown by Table 7.3. Accordingly, by using the output from this analysis, the classification of the villages in the study area is shown by Figure 7.6.

TABLE 7.3. Classification of Villages in the District:
Score Obtained by Each Village

No.	Public School	Amenities Health	Communication		Constraints		Total Score
	(5) ¹	(5) ¹	Main road (3) ¹	Govt. project (3) ¹	Land (4) ¹	Flood (4) ¹	
1	1(5)	-1(-5)	-1(-3)	0(0)	-1(-4)	1(4)	1
2	1(5)	0(0)	1(3)	0(0)	1(4)	1(4)	16
3	1(5)	1(5)	1(3)	0(0)	1(4)	1(4)	21
4	1(5)	1(5)	1(3)	1(3)	1(4)	1(4)	24
5	1(5)	0(0)	1(3)	0(0)	1(4)	1(4)	16
6	0(0)	0(0)	0(0)	0(0)	1(4)	1(4)	8
7	-1(-5)	-1(-5)	-1(-3)	1(3)	1(4)	1(4)	-2
8	0(0)	-1(-5)	1(3)	0(0)	1(4)	-1(-4)	-2
9	0(0)	-1(-5)	1(3)	0(0)	-1(-4)	-1(-4)	0
10	1(5)	1(5)	1(3)	0(0)	-1(-4)	-1(-4)	5
11	1(5)	1(5)	1(3)	0(0)	1(4)	-1(-4)	13
12	1(5)	1(5)	1(3)	0(0)	-1(-4)	1(4)	13
13	1(5)	-1(-5)	1(3)	0(0)	-1(-4)	-1(-4)	-5
14	0(0)	0(0)	-1(-3)	0(0)	1(4)	-1(-4)	-3
15	1(5)	1(5)	1(3)	0(0)	1(4)	1(4)	21
16	1(5)	1(5)	1(3)	0(0)	1(4)	1(4)	21
17	1(5)	0(0)	1(3)	0(0)	1(4)	1(4)	16
18	1(5)	1(5)	1(3)	0(0)	-1(-4)	1(4)	13
19	-1(-5)	0(0)	1(3)	0(0)	-1(-4)	1(4)	-2
20	-1(-5)	0(0)	1(3)	0(0)	1(4)	1(4)	6
21	0(0)	-1(-5)	1(3)	0(0)	-1(-4)	1(4)	-2
22	1(5)	-1(-5)	0(0)	0(0)	-1(-4)	-1(-4)	-8
23	0(0)	-1(-5)	-1(-3)	0(0)	-1(-4)	1(4)	-8
24	-1(-5)	0(0)	-1(-3)	0(0)	-1(-4)	1(4)	-4
25	-1(-5)	0(0)	-1(-3)	0(0)	1(4)	1(4)	0
26	1(5)	1(5)	-1(-3)	0(0)	-1(-4)	1(4)	7
27	1(5)	0(0)	-1(-3)	1(3)	1(4)	1(4)	13
28	1(5)	0(0)	0(0)	0(0)	1(4)	1(4)	13
29	0(0)	0(0)	1(3)	0(0)	-1(-4)	1(4)	3
30	-1(-5)	0(0)	-1(-3)	0(0)	1(4)	1(4)	0
31	0(0)	1(5)	-1(-3)	0(0)	-1(-4)	1(4)	2
32	-1(-5)	-1(-5)	-1(-3)	0(0)	1(4)	1(4)	-5
33	-1(-5)	0(0)	0(0)	0(0)	1(4)	1(4)	3
34	0(0)	0(0)	1(3)	0(0)	1(4)	1(4)	11
35	1(5)	1(5)	-1(-3)	0(0)	1(4)	1(4)	15
36	0(0)	-1(-5)	0(0)	0(0)	1(4)	1(4)	3

(Continued on page 158)

37	0(0)	-1(-5)	1(3)	1(3)	-1(-4)	1(4)	1
38	0(0)	0(0)	-1(-3)	0(0)	1(4)	1(4)	5
39	1(5)	0(0)	1(3)	1(3)	-1(-4)	1(4)	11
40	0(0)	0(0)	1(3)	1(3)	-1(-4)	1(4)	6
41	0(0)	0(0)	0(0)	0(0)	-1(-4)	-1(-4)	-8
42	1(5)	1(5)	1(3)	1(3)	-1(-4)	-1(-4)	8
43	0(0)	1(5)	1(3)	1(3)	-1(-4)	-1(-4)	3
44	1(5)	1(5)	1(3)	0(0)	-1(-4)	-1(-4)	5
45	-1(-5)	0(0)	1(3)	1(3)	-1(-4)	1(4)	1
46	-1(-5)	0(0)	-1(-3)	0(0)	1(4)	1(4)	0
47	0(0)	0(0)	-1(-3)	0(0)	1(4)	1(4)	5
48	-1(-5)	-1(-5)	-1(-3)	0(0)	-1(-4)	-1(-4)	-21
49	-1(-5)	0(0)	-1(-3)	0(0)	-1(-4)	-1(-4)	-16
50	1(5)	1(5)	1(3)	0(0)	1(4)	1(4)	21
51	-1(-5)	0(0)	-1(-3)	0(0)	-1(-4)	1(4)	-8
52	0(0)	0(0)	-1(-3)	0(0)	-1(-4)	1(4)	-3
53	0(0)	1(5)	-1(-3)	0(0)	-1(-4)	1(4)	2
54	0(0)	1(5)	-1(-3)	0(0)	-1(-4)	1(4)	2
55	0(0)	0(0)	1(3)	0(0)	1(4)	1(4)	11
56	1(5)	0(0)	1(3)	0(0)	-1(-4)	1(4)	8
57	0(0)	0(0)	-1(-3)	0(0)	-1(-4)	1(4)	-3
58	1(5)	-1(-5)	-1(-3)	0(0)	-1(-4)	1(4)	-3
59	1(5)	0(0)	1(3)	0(0)	-1(-4)	1(4)	8
60	0(0)	1(5)	0(0)	0(0)	-1(-4)	-1(-4)	-3
61	-1(-5)	-1(-5)	0(0)	0(0)	-1(-4)	-1(-4)	-18
62	-1(-5)	-1(-5)	-1(-3)	0(0)	1(4)	1(4)	-5
63	-1(-5)	-1(-5)	-1(-3)	0(0)	-1(-4)	1(4)	-13
64	1(5)	-1(-5)	-1(-3)	1(3)	1(4)	1(4)	8
65	-1(-5)	-1(-5)	-1(-3)	0(0)	-1(-4)	1(4)	-13
66	-1(-5)	-1(-5)	-1(-3)	0(0)	-1(-4)	1(4)	-13
67	-1(-5)	-1(-5)	-1(-3)	0(0)	1(4)	1(4)	-5
68	-1(-5)	-1(-5)	-1(-3)	0(0)	-1(-4)	1(40)	-13
69	-1(-5)	-1(-5)	-1(-3)	0(0)	-1(-4)	1(4)	-13
70	-1(-5)	0(0)	-1(-3)	0(0)	1(4)	1(4)	0
71	1(5)	1(5)	-1(-3)	1(3)	1(4)	1(4)	18
72	1(5)	1(5)	-1(-3)	0(0)	1(4)	1(4)	15
73	1(5)	1(5)	-1(-3)	0(0)	-1(-4)	1(4)	7
74	1(5)	1(5)	-1(-3)	1(3)	-1(-4)	1(4)	11
75	0(0)	1(5)	-1(-3)	0(0)	1(4)	1(4)	10
76	1(5)	0(0)	-1(-3)	0(0)	-1(-4)	1(4)	2

Note:¹Weightage valueScore between -21 to -6 = Village is classified as Class 3Score between -6 to +9 = Village is classified as Class 2Score between +9 to +24 = Village is classified as Class 1

Detail of this analysis is explained in Appendix C.

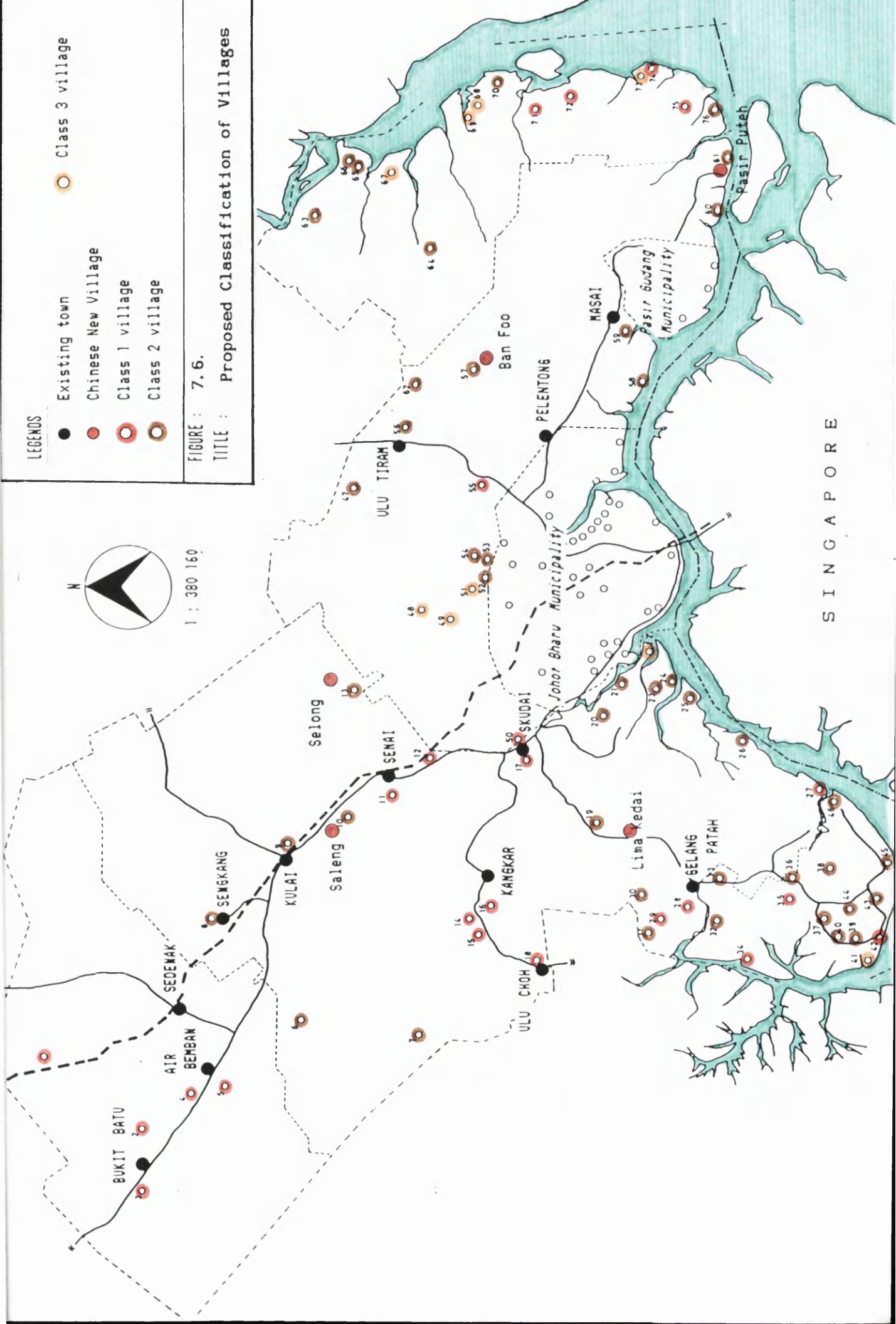
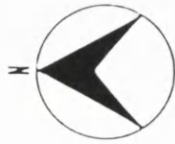
LEGENDS

- Existing town
- Chinese New Village
- Class 1 village
- Class 2 village
- Class 3 village

FIGURE : 7.6.

TITLE : Proposed Classification of Villages

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7.6. Identification of Service Centres.

Having categorized the villages into three classes, the next step in the planning process is the identification of service centres. As proposed in the Chapter 5.0., the suggested rural centre concept to be adopted for Malaysia is "a limited number of villages are selected for expansion as focal points, in which for the first twenty years, they can serve the surrounding villages; and at the same time the population of the surrounding villages will entirely be resettled into those centres and leave their lands for cooperative farming". Based on this concept, four spatial design models of service centres have been proposed (Chapter 6.0). In summary they are:

- a. "Expanded-village" model which means "a selection of class 1 villages for development of service centres where into which the population of the surrounding class 2 and class 3 villages could be resettled".
- b. "New-village" model which means "a development of new settlements on new sites to perform as service centres where into which the population of the surrounding class 2 and class 3 villages could be resettled".
- c. "Small town-based" model which means "further expansion of the existing small towns and "Chinese New Villages" to perform as service centres where into

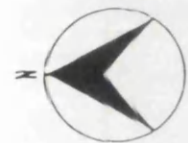
which the population of the surrounding class 1, class 2, and class 3 villages could be resettled".

d. "Population-transfer" model which means "total migration out of population from the existing class 3 villages into any organized land development schemes carried out by FELDA, FELCRA or RDAs".

7.6.1. Adoption of "Expanded-village" Model

This model is most appropriate in the areas where class 1 and class 2 villages are available. (Figure 7.7). Though, it was suggested in the Chapter 6.0 that selection of service centres should be confined to only class 1 villages, this case study has also selected class 2 villages to become service centres. This is for the following three main reasons;

- a. Class 1 villages which are located near to the towns (less than 3.5 km) are suggested to be developed as small urban centres or as areas influenced by the development programmes of those centres;
- b. There is not sufficient information for many villages, particularly in terms of population size for the purpose of more accurate classification; and
- c. Some class 2 villages have had government project such as FELCRA or RISDA project. Therefore these villages are suitable to be selected as service centres so as to enable the projects to be continued.



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Selected service centre

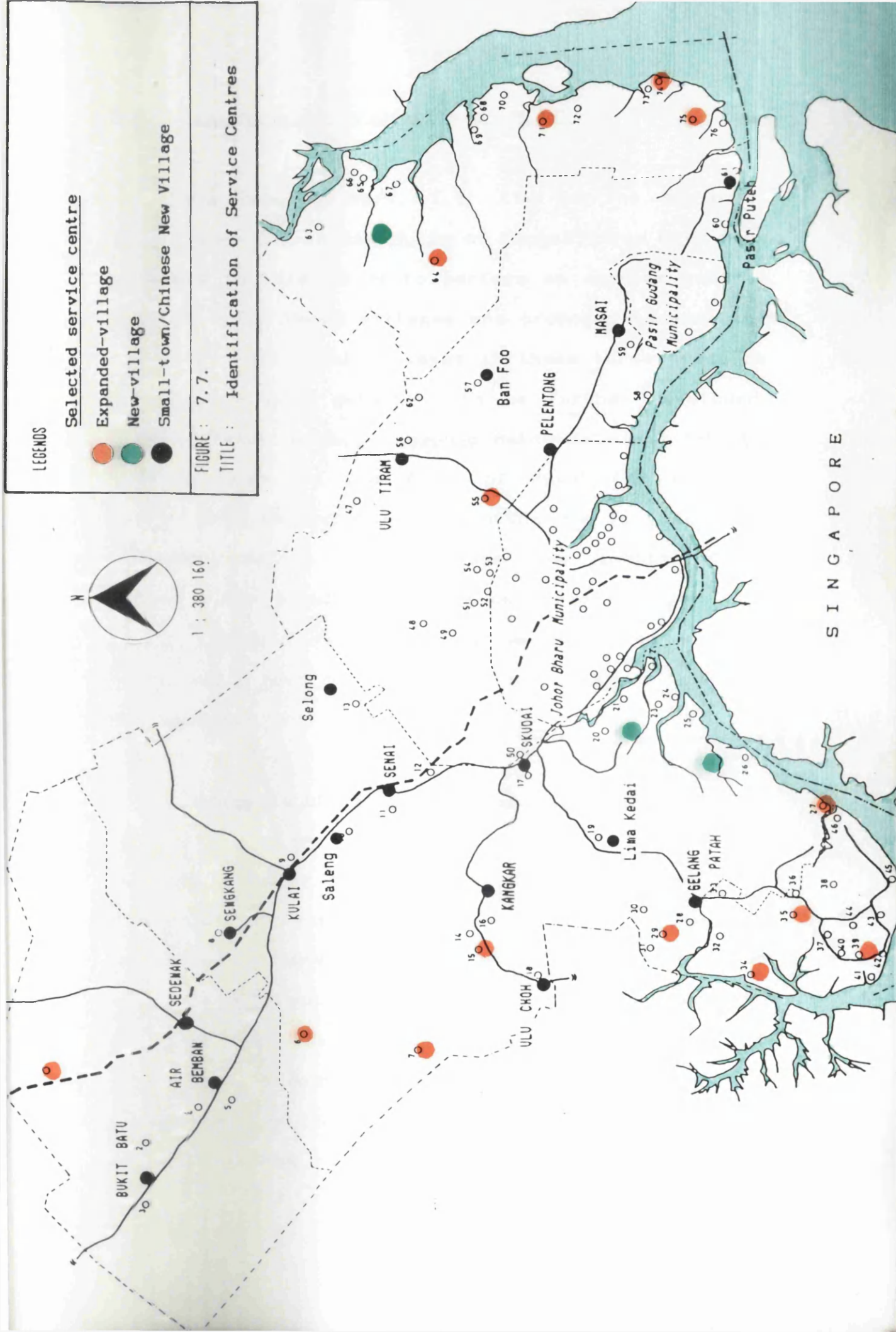
Expanded-village

New-village

Small-town/Chinese New Village

FIGURE : 7.7.

TITLE : Identification of Service Centres



7.6.2. Adoption of "New-village" Model

Three new villages, i.e. two in the Mukim of Pulai, and one in the Mukim of Sungai Tiram have been proposed in this study to perform as service centres (Figure 7.7). These villages are proposed because the existing traditional villages in those three areas do not have a good potential to be further developed. Kampung Telok Serdang, Kampung Bakar Batu and Kampung Tanjung Dange in the Mukim of Pulai for instance suffer from environmental pollution due to industrial effluent. So, a new site has been identified to resettle the population in those three villages. All of the three "new-village" sites identified in this study are a part of the government lands available in the district.

7.6.3. Adoption of "Small town-based" Model

All existing towns and established "Chinese New Villages" in the district are considered in the selection of service centres under "small-town based model" conditions. This is because existing towns and "Chinese New Villages" have already had large population threshold and sufficient services and facilities. In this study, it is suggested that all villages in the vicinity of 5.0 km. from the existing

town centres and "Chinese New Villages" should be comprehensively planned together with those towns and "Chinese New Villages. All population of these villages are suggested to be relocated as annexes to those towns and "Chinese New Villages" and leave their lands for cooperative farming (Figure 7.7).

7.6.4. Adoption of "Population-transfer" Model

Sufficient information particularly on population, land tenures, economic activities and other socio-economic indicators are necessary in order to decide any villages suitable for the adoption of this model. Since sufficient data were not obtained in this study, strong justification could not be made to select the villages needed for the adoption of this model. However, "potential village analysis" which was based on three development factors shows that there are two villages suitable for the adoption of this model. These are Kampung Sinaran Baru and Kampung Maju Jaya, both in the Mukim of Tebrau. These villages have low population size, 364 and 164 respectively; having limited access to education and health services; far from communication routes; and suffer from seasonal flood problems.

7.7. Regrouping of Villages.

The total regrouping of villages as service centres is shown by Figure 7.8. and the villages involved are listed in Appendix D. From the total of 76 traditional villages in the District (not included villages in the municipal boundry), 21 villages are proposed to be involved for regrouping under "expanded-village" model. These villages will be regrouped into nine key villages which have been selected as service centres.

A total of 11 villages are involved in the areas considered under "new-village" model. Three new sites have been identified as suitable to be developed for service centres for these areas where into which the population of the above villages could be resettled.

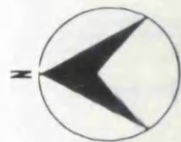
A total of 24 villages are involved in the areas considered under the "small town-based" model. Out of this number, 18 will be regrouped to the eight existing small towns and the other six to the five established "Chinese New Villages". Through this model, villages are suggested to be developed comprehensively with the expansion and the development of those towns and "Chinese New Villages".

LEGENDS

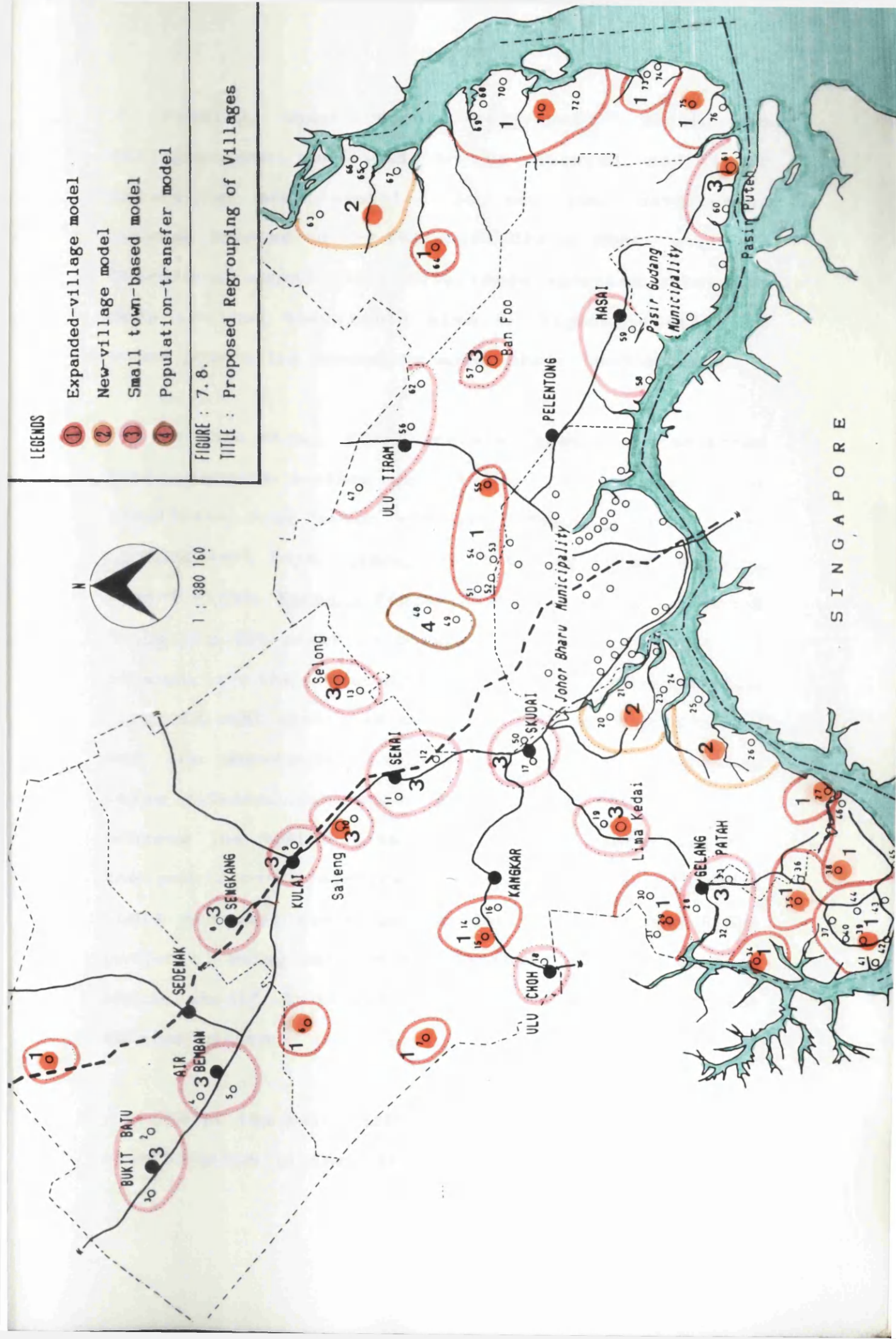
- ① Expanded-village model
- ② New-village model
- ③ Small town-based model
- ④ Population-transfer model

FIGURE : 7.8.

TITLE : Proposed Regrouping of Villages



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SINGAPORE

Finally, under "population-transfer" model, two villages are suggested to be vacated and their population are resettled in any land development schemes carried out by FELDA, FELCRA or RDAs. Therefore, consultation with these agencies should be made so that they could give a higher priority to those population needed to enter their land schemes.

In this study there are six cases where selected rural service centres do not require relocation of population from other villages. Kampung Murni Jaya, Kampung Seri Paya, Kampung Seri Gunung Pulai, Kampung Sungai Tiram, Kampung Pendas Laut, and Kampung Simpang Arang are the cases in point. This situation happened because of the following three major reasons; the first is that distances between these selected centres and the surrounding villages are great; secondly, these selected centres have a greater potential to achieve the viable size of population threshold for the provision of services and amenities; and thirdly, there are some government projects (FELCRA and RISDA projects) being carried out in these selected centres which should be taken advantaged as catalyst for further growth.

One of the main factors which has been taken into consideration in the selection of villages as service

centres and regrouping of villages is the boundry of election areas. As far as possible, rural service centres and regrouping of villages should within the same parliamentary as well as state election boundry. This is one of the most important political aspects (in Malaysia) which should be borne in mind so as to avoid the possibility of political conflict in terms of "balance of races" when these proposals are going to be implemented. In this proposal all villages are regrouped within the existing election boundry (see Appendix D).

7.8. Economic-Base.

Total villages selected as service centres under "expanded-village" model is 14. The present economic base of 12 of the villages is agricultural. Most likely, this economic base will be retained but efforts should be made to make the agricultural activity more productive. The development of agricultural-product processing industries in these centres should be further expanded. This should include processing of palm-oil, and integrated industries which will produce finished products such as margarine and cooking oil. The other two villages selected under this model, i.e. Kampung Pendas Laut, and Kampung Tanjung Langsat are respectively fishing

village and mixed-economic base village. In future, it is suggested that efforts should be made to diversify the rural economy of these villages. Besides fishing, the population of these proposed centres are suggested to carry out sea-mussels rearing and prawn rearing. Since these selected villages are located on the coastal line and have fine sandy beaches, they are suitable to be developed as tourist centres. The seafood industry might be the best economic activity to be introduced in these centres. Along with these, facilities such as boating and fishing should also be provided in these centres so that they could attract tourists from both of local as well as international markets.

Similar with those population resettled under "expanded-village" model, the population which will be resettled under "new-village" model and "small town-based" model are also suggested to continue their past involvement in the agricultural sector but this time in a cooperative basis (this method of agricultural has been explained in Chapter 6.0). However, those who before the schemes took place involved in the commercial sector such as traders, shopkeepers and other business operators, they could continue their business if they wish. Allocation of sites and premises in the service centres should be

made for these groups of people to enable them to continue their activities. In case where the proposed service centres involved resettlement of population who previously engaged with fishing activity, an employment structural change should be made. In line with the government policy to reduce the number of fishermen in the country up to 40 percent (Malaysia, 1986), efforts should be made to encourage fishermen to switch their job to agricultural sectors. This could be done for examples by granting loans, providing agricultural input subsidies, and training.

Under "population-transfer" model conditions, all population whether or not before the schemes took place, they involved in agricultural sector, when resettled in the land development schemes such as FELDA, FELCRA, or RDA's, they will directly involve in export crops agriculture such as rubber and oil palm. However, traders, shopkeepers or any business operators who wish to continue their activity, instead of entering into the land settlement scheme, they could move into the nearest service centre schemes which are proposed under the first three models above.

7.9. Implementation Bodies and Administration

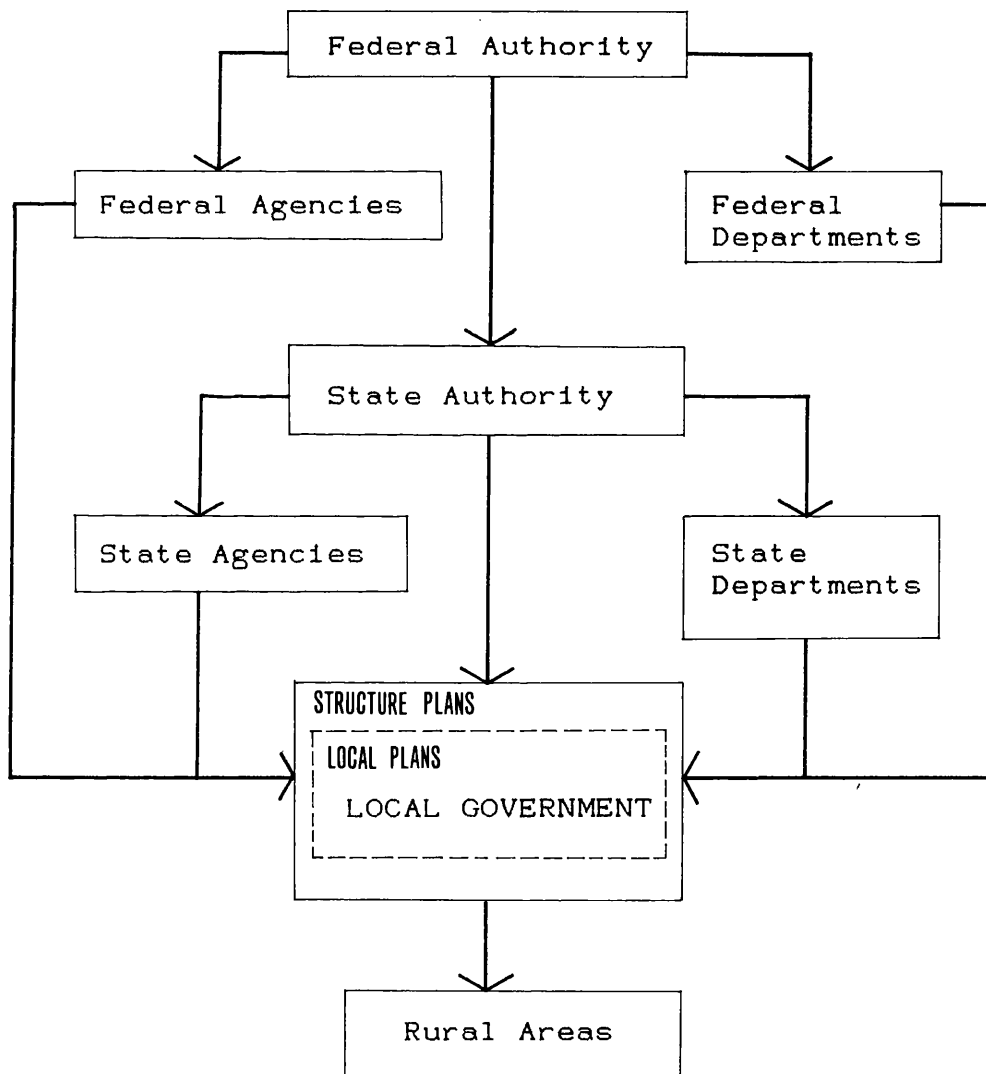
To make the development of rural service centres become reality, coordination and collaboration between various implementation agencies are necessary. In terms of implementation, all government bodies which currently involved in the rural development programmes such as Department of Agriculture, Rubber Industry and Smallholders Development Authority (RISDA), Food and Agricultural Marketing Agencies (FAMA), Public Works Department (PWD), and others should take part in this new schemes.

As suggested in Chapter 2, there is an urgent need to establish a single authority to manage the development process and control the implementation of government strategies in the rural areas. Since the establishment of a new single authority means more resources will be needed, it is suggested that these responsibilities are given to the existing local authorities concerned. This means, all proposed service centres should be gazetted as local authority areas. In this case study, the administration of all proposed service centres is suggested to be handled by the Johor Bharu Tengah District Council which presently is only operating in urban and semi-urban areas. This authority therefore in terms of

administration and implementation should coordinate all development activities carried out by federal and state agencies by using development plans (Figure 7.9). This can be done by using powers provided under the Act 172 (Town and Country Planning Act, 1976), which amongst other things empowers the local authority to prepare structure plans and several types of local plans such as district plans and agricultural plans. In terms of services, local authority should carry out its responsibilities as stated by the Act 171 (Local Government Act, 1976) which inter-alia includes the provision of facilities and services, cleansing services, landscaping, provision of transportation services, maintenance of roads, street lighting and others.

At more local level, it is proposed that village committee should be established by farmers. Farmers should elect several representatives to become members of this committee. The role of this committee among others is to assist the implementation of development projects as well as to channel farmers' view of the related projects to the authority more efficiently.

FIGURE 7.9. Proposed Administration of Development Projects in the Rural Areas



PART 4.

ASSESSMENT AND SUMMARY

CHAPTER EIGHT

THE FEASIBILITY OF THE PROPOSED SERVICE CENTRE CONCEPT

8.1. Introduction

This chapter attempts to assess the feasibility of the proposed service centre concept to be used as a tool in restructuring the traditional villages in Malaysia. To identify the strengths and the weaknesses of this concept, comparison with the key settlement policy practiced in the United Kingdom (U.K.) and growth area policy in Tanzania or India will be made where possible. The main questions to be answered in this assesment are;

- a. What benefits can be derived from this concept?
- b. Can the proposed concept and spatial models outlined in this study be implemented?
- c. Are the rural people willing to accept this concept?
- d. Can service centre schemes based on this concept interact with other established towns to survive?

Answers to all of these questions will determine whether or not the proposed concept can achieve the overall objective of rural development as stated in the Fifth Malaysia Plan (1986 - 1990)vis "to improve

the economic and social wellbeing of the rural population and to redress the economic imbalance between the urban and rural area".

8.2. The Benefits Derived from the Proposed Concept

8.2.1. Social Perspective

Study of the key settlement policies in the U.K. shows that the policies have only brought about social benefits to those who are living in the selected centres, whilst the population particularly the non-mobile living in the surrounding areas suffer increasing social deprivation because developments in their villages were restricted for the benefit of the key villages (McLoughlin, 1976). On the other hand, growth area policy incorporated within the ujamaa concept which includes "villagization" in Tanzania has at least increased the social welfare of majority of the rural Tanzanians (Martha, 1980). This is because all rural people in Tanzania are to be resettled to form ujamaa villages. So, only those who persisted to stay in the scattered villages would suffer from the concentration policy.

Under the new concept of rural centre outlined in this study, perhaps for the first ten years, there will be some rural people who will be disadvantaged by this policy, but after twenty years when all rural people have been resettled and the schemes have been fully adopted, no one will socially suffer from such policy. The feasibility of the proposed service centre concept in terms of social perspective can be seen through three main aspects, namely: housing; transportation; and services and facilities.

(1) Housing

So far, the development of public housing schemes in the rural areas of Malaysia is not popular. The general practice is private housing where farmers themselves build their houses without any formal title to the land or building plan for the houses. As a result, the houses vary in types and quality, even in the same village from flimsy one roof atap huts made by the occupants to substantial dwelling with four or five rooms made from purchased manufactured building materials. There is also no physical plan to incorporate housing schemes in the rural areas.

The suggested service centre schemes are expected to attract housing schemes of the central or state government and this necessitates a physical planning

of the selected centres thus enhancing the quality of the environment.

(2) Transportation

The lack of public transport is very significant in many parts of the rural areas in Malaysia. Due to lack of all weather road networks in most traditional villages and all backward areas and an insufficient public transport system, the accessibility to the towns and major cities remains the big problem for most of the rural dwellers. There is also a low level of private car and motorcycles ownership in the villages. The 1985 census shows that the ownership of motor vehicles (cars and motorcycles) in the rural areas was 185 per 1,000 population. This figure was much lower when compared to 648 per 1,000 people for urban dwellers and 248 per 1,000 people for the national average (Malaysia, 1986). The low level of motor vehicles ownership, lack of transportation facilities and road networks together with the wide gap between villages and cities has diminished the accessibility of rural people to the services required for the enhancement of standard of living.

Since one of the objectives of the service centre schemes is to provide access or to close the gap between villages and cities, there will be rural

transport levels available to link the centres with the higher order centres and a dense network of farm roads to link the centres with the consolidated farm lands. Resettlement of population into a few selected centres will make the provision of links between centres become more economic because less investment will be needed for development of roads. This means a higher number of roads could be developed among these centres. It is important to note that the higher the ratio between the number of roads to the number of centres, the faster the development could be spread among the centres.

(3) Services and facilities.

Provision of services and facilities is one of the most important reasons for the establishment of service centres. Presently, the provision of services and facilities cannot be economically made because most villages are scattered in nature. It is important to note that no country however rich is willing to provide services and facilities regardless of location and resources available (Markous, 1986). Lessons from the case study on the key settlement policies in the U.K. shows that services and facilities cannot be brought about into the hinterland areas unless backed by an adequate transportation systems. This shows that concentration of services and facilities without

concern for hinterland transport links may exacerbate the plight of non-mobile population in the small villages.

It is important to note that another objective of concentration policies is to provide a higher quality of facilities and services to the rural people, but to make it successful, it requires an adequate transportation networks. In many circumstances, the cost needed for developing roads are indeed great and outwith the reach of many government of the developing countries. In the proposed schemes, since all rural people will be entirely resettled in the selected centres as "villagization" programmes practised in Tanzania, less development cost will be required. All people whether or not have private transport will have an equal accessibility to all services and facilities because they live within the same threshold area. Thus, no one will suffer from this schemes. The existing retailers in small villages will also not suffer from such schemes because they can continue their business in the centre where they have been resettled. To ensure that all rural people will join the resettlement programme, some encouragement measures should be incorporated in these schemes (this aspect will be discussed later).

8.2.2. Agricultural Development

For most of the developing countries, the objective of agricultural development is "to increase the growth of agricultural output" (Mollet, 1984). Judging from the elements of the suggested concept which inter-alia include the consolidation of the existing fragmented holding of farmlands and mechanization of agricultural activity, the problem of landlessness, abandoned land and low productivity of output will be overcome. This will contribute to the achievement of the agricultural development objective. It has to be mentioned that the mechanization of agricultural activity inevitably would create labour surplus in the rural area. However in these proposed schemes, this problem could be eliminated by swiftening the growth of secondary and tertiary sectors e.g. industrial sector, business and services so that all labours pushed out by the mechanization process could be absorbed.

The objective of agricultural development could also be achieved through the provision of marketing facilities which has been suggested as one of the elements of this concept. As mentioned earlier, the gap - population, economic activity, income growth, decision making and other - between village and city

in the developing countries is very wide. A modern agriculture presupposes the existence of markets where produce can be sold and where agricultural inputs can be bought; and these centres must be accessible to farmers because their occupation limits their mobility.

Most developing countries lack a national hierarchy of marketing and distribution centres. Rural population who are usually not within commuting distance of a major city have to depend on inadequate marketing and other poor facilities. Because the village market is too small, the scale of farm operations tends to be too small to make the adoption of modern techniques practicable. Moreover, monopoly conditions by "middle-man" in the villages keep produce prices low, thereby reducing farmers' initiative to adopt improved techniques. All of these phenomena reduce farmers' initiatives to increase production. Therefore, by establishing service centres which include the provision of marketing facilities, the marketing problem can be overcome and the result is that farmers could increase their production.

8.2.3. Economic Activities and Employments

The contribution of the proposed concept to the economic activity and employment has been mentioned in chapter 6.0 (see paragraph 6.4.3.). Besides the agricultural sector, the proposed schemes will also be able to generate non-agricultural activities and employment opportunities. This is discussed under three main headings.

(1) Industrial sector.

Industrial sector as one of the major elements of rural development has been accepted by many scholars, however quite a few countries attempted this programme. To attract large industries to the rural centres is not an easy task. Several failings have been recorded in the key settlement policies of the U.K. and one of a good example is the closure of major plants at Invergordon in Scotland. This is also the case in other countries particularly developing world. Since to attract investors to the rural centres is a difficult task, efforts should be focussed to encourage the growth of local entrepreneurs.

These proposed schemes urge the government to give incentives such as granting loans or subsidies to local entrepreneurs to set up more organized small-

scale industrial sectors so as to enable them to link with large sectors. The availability of raw materials, cheap labour and land in the rural areas, if supported by government incentives will not only initiate local entrepreneurs to set up industries, but would also create additional value to local product through various stages of industrial process which then will increase household income when compared with the sale of unprocessed raw product.

(2) Construction sector.

Experience from the land development schemes which indicates that a housing programme would accounts for between 65 - 75 percent of total output shows that the construction industry will be one of the important sectors in the proposed service centre schemes. Besides housing, construction and management of integrated community facilities would also create substantial employment opportunities. Through these schemes, a pool of skilled construction labours would gradually be attained to embark on extensive construction towards transforming the rural service centres into an urbanized centres in the long run.

(3) Commercial sector.

The proposed schemes would also promote the growth of commercial sector. As the purchasing power of the

population increased due to the expansion of agricultural production, chances of demand for higher order goods are greater. Besides, concentration of population would also create larger service thresholds which then encourage sale of more diversified goods and the growth of various types of shops, business and other personal service activities in the centres.

8.2.4. Development Cost

The feasibility of the proposed schemes might be assessed against the cost of development and maintenance. It has to be mentioned that one of the reasons for suggesting these schemes is because the economic viability of providing services and facilities could not be achieved if the settlements are scattered. This is based on the fact that "no government however rich is ready to provide services and opportunities for all scattered population and settlements regardless of location and resources" (Markous, 1986). Accordingly, the proposed schemes of service centres in this study put forward an economic provision of facilities as compared with provision to scattered population.

In the proposed "expanded-village model", selection of class 1 villages which have already had

basic facilities could make the development less expensive. This is also the case for "small town-based" model which is based on the fact that "it is not economic to develop rural centres for existing villages located near to the small towns or Chinese New Villages". In the "new-village" model, although large amount of money and other resources will be needed initially, the annual maintenance cost required will be less. For the "population-transfer" model, a total migration out of population from very small and dispersed class 3 villages to a new FELDA, FELCRA or RDAs land schemes would economically better rather to develop rural centres for them. This is because a large investment will be required both at the initial stage and the maintenance stages.

8.3. Can the Proposed Schemes be Implemented?

8.3.1. Administrative Perspective

One of the ineffectiveness of the key settlement policy practised in the U.K. is due to lack of coordination and collaboration between implementation agencies (Cloke, 1979). This is also the case in the Community Development Programme practised in the rural India (Misra. 1974). To make the service centre schemes effective, a good collaboration and

coordination between planners and servicing bodies is required. The early period of planning the proposed service centres may be dogged by inexperience and misunderstanding of various aspects of planned rural environments. With greater experience and expertise rural planners will begin to come to terms with the coordination of various planning tasks into one overall strategy.

An early priority for ensuring an adequate level of service provision should be the prevention of growing problems connected with housing, employment, and transportation in the rural areas. Unless this problem is solved a concerted efforts to achieve the multi-role objective of rural planning could not be made. The problems of economic growth, employment opportunities and transport facilities, housing, and social services provision have to be considered along with one another to ensure equal development.

8.3.2. Legal Perspective

The implementation of the service centre schemes would face some legal problems. As discussed in the Chapter 2.0., most rural areas in West Malaysia have not been designated under local government authority (District Council or Municipal Council). Designation of local government boundries has so far been

restricted only to urban and semi-urban areas. There are still a lot of "islands" of land which are neglected and neither covered by District Council nor Municipal Council. This situation makes the implementation of service centre schemes rather difficult because all planning powers as provided by the Town and Country Planning Act, 1976 (Act 172) are not available. All lands which are not designated under local government area are administered by the District and Land Offices which do not have planning powers or resources to carry out planning.

On the other hand, difficulties of implementing service centre schemes would also occur in many areas eventhough designated under local government areas. This is because many local government authority especially District Councils which cover semi-urban and village areas do not adopt or fully adopt the Act 172. As a result these authorities do not have planning powers to implement the schemes. Thus in order to implement the proposed schemes, to carry out development control, and to maintain the facilities and services so as to promote growth in the schemes, all inhabited lands in the country should be designated either under District Council or Municipal Council. These authorities then should adopt all parts of the Town and Country Planning Act, 1976 and other

related acts so as to enable them to carry out and manage the development of service centre.

8.3.3. Political Perspective

Another factor which may contribute to sub-optimal service centre concept is political interest. Political interest is important to be considered in planning because both of them have a strong relationship. Fay, (1975), bemoans the facts that;

Planning policy and politics have been viewed as separate entities in which politicians decide on the end result of planning activities and planners select the required techniques to achieve those ends."

Back to the key settlement policies, Cloke (1979) mentions;

"Another factor that contributed to sub-optimum key settlement policy performance in many counties was the initial procedure for selecting key centres. There is strong evidence to suggest that some early key settlements were chosen not on the basis of their suitability for planning but rather because influential personages happened to live there and were anxious that their villages should continue to receive local authority investments".

The problem of political interest in any development in Malaysia is very obvious. The Malaysian society is heterogeneous and it has large constituencies of Malays as well as other Indigeneous, the Chinese, Indians and others. This makes for very complex socio-

political dynamics. It is also important to note that everything, political or economic is dominated by what Miln and Diane (1978), have described as racial arithmetics i.e. balance between the races. Consequently, these proposed schemes which include resettlement of population are tempered with ethnic considerations.

One of the political aspects considered in these proposed schemes is the perpetuation of the number of potential voters in the existing parliamentary and state election boundry. Resettlement of rural people into the selected centres has been suggested within the same election boundry. Therefore the segregation of potential voters in the existing boundry could be avoided. This is a good example to show that the proposed concept of rural centres will be accepted by the politicians and therefore it could be implemented succesfully.

8.4. The Acceptance by Rural People

Human behaviour is a complex of rational and irrational decisions. It is difficult to predict its outcome in a society which gives freedom of choice. Moreover, certain activities - cultural, social, economy- are already in existence, eventhough located

at places which cannot function as service centres of the type outlined here. Will it then be necessary to duplicate or uproot such activities by providing them at the selected places? Are these people willing to leave their villages which have been in being for several centuries? The willingness of the local people to accept change and development will determine the success or failure of the proposed schemes. The willingness of people basically depends on how much participation they will undertake in the development process. There is therefore the need for adequate consultation with the local people from the early stage of planning process (decision making) until the implementation of projects and the monitoring stages.

Rousseau (quoted by Thomson, 1966) when writing on "the will" of the people states that;

"the general will in action is sovereignty and since the general will emanate from the community as a whole, sovereignty must reside in the community as a whole. Sovereignty cannot be surrendered or delegated to any person or group of people."

Such a fundamentalist form of democratic theory suggests that planners should seek legitimacy for their planning directly from the people. The Village Resettlement Programme in Opanda, Nigeria is a good example to prove this theory. The result of this programme was very impressive because the people

themselves are involved in the three area of planning process; vis, decision making; development planning; and implementation of the programmes. Another example to show that the willingness of the people to accept the development based on the consultation offered to them is from study on "Gypsies" in England and Wales. It is found that the provision of permanent and temporary sites for Gypsies so as to increase their standard of living failed because their opinion had not been taken into account (Adam, 1975).

Accordingly, to make these schemes to be accepted, everyone's say has to be represented. It is important to mention that the more participation opportunity offered to the local people on the programme, the more willing the people will be to accept the development. There are many indications that the rural people in Malaysia need a well planned rural settlement. This is evidenced from the successes of many land development and resettlement schemes which have been carried out by FELDA, FELCRA, RDA's and others. More than three millions rural people have involved in these programmes. Therefore, an inspiration should be derived from these programmes to introduce the service centre schemes outlined in this study.

8.5. The Potential to Compete With Other Established Centres.

Can the suggested schemes of service centre be promoted in the rural areas in view of the fact that the existing centres may attract the potentials available in these suggested centres? Experience from the key settlement policies practised in the U.K. indicates that they failed to attract industries because lack of resources. Even, when resources were available, they still could not afford to induce investors because they were classified as low-grade industrial areas by most entrepreneurs.

The youth drifted from the rural areas to the cities because of lack of employment opportunities and facilities. As a result, the agricultural sector was neglected and rural economy dramatically decreased. An essential prerequisite to this problem therefore must be comprehensive plans for the development of rural employment and amenities through the establishment of centres such outlined in this study. These centres should in some fashion (in the minds of rural people) compete as places in which to live with the glamour of the established towns. Besides, the agricultural sector must be given much attention, it has to be revitalised in order to reactivate the rural economy

and to call the young people back to their original areas. It is obvious that unless there is considerable development in these proposed centres to attract growth and to provide employment as well as services, the rural-urban migration will remain unchanged.

The fear envisaged about the inability of these new "centres" to stand the pressure of the major cities in terms of attracting growth in Malaysia arises from the fact that there has been a trend of polarised development in favour of the urban areas. This polarisation mainly due the fact that most of the private investments anywhere in Malaysia are dominated by foreign investors especially from Japan, Great Britain, United States, and other European Countries. The government has since early seventies introduced various incentives such as "locational incentives", "pioneer status incentives" and "labour incentives" with the main aim to attract investors from abroad. The problem is that these foreign investors do not go to the rural areas rather they capitalise on major cities where infrastructure, cheap labours and other agglomeration economies are already in existence.

This study does not intend to urge the government to redistribute or decentralize industrial development from cities to the service centres. It has already

known that "capital-intensive" industries set up by foreigners are not the appropriate answer to boost the rural economy or to increase job opportunities in the rural areas. However, rural areas need some sort of incentives though not similar with those being given to foreigners, at least in the form of grants or subsidies to initiate local entrepreneurs to set up a more organized cottage or small scale industries.

The absence of "capital-intensive" industries in the service centres does not mean that the future of these centres will be bleak. As mentioned earlier, industry is not the main element that the centres have to play. These centres are important because of several other factors. Discussion in this part shows that the proposed schemes have potential to survive and interact with the existing towns. The existing hierarchical urban functions which have been taken into account in this study will guarantee that the existing towns big or small will act as complementary to the functions of the proposed centres rather to destroy them.

8.6. Conclusion

The assesment made in this chapter suggests that the proposed schemes of service centre will bring

about a lot of benefits - social, economic, physical - to the traditional village population in Malaysia. Thus, it is not too optimistic to conclude that these schemes are capable of achieving the objective of rural development stated in the Fifth Malaysia Plan. The implementation of these proposed schemes will be faced with only one main problem vis inadequate legal set-up to execute the plans. If this problem is overcome these schemes will be implemented successfully. Besides, to make these schemes more effective, collaboration and coordination between planning agencies and servicing bodies is required. To make the rural people accept and become involve in the schemes, their opinion should be taken into consideration. They have to be persuaded to get involve from the beginning of the schemes i.e. decision making until the monitoring process.

CHAPTER NINE

SUMMARY AND CONCLUSION

9.1. Summary

Development of rural growth centres has been advocated by many scholars as a suitable means to solve the problems of the rural areas. Within the new framework of "Integrated Rural Development" (IRD), the Malaysian government attempts to implement the following three fold strategies, via; to diversify the rural economy; to restructure the land holdings; and to rearticulate the existing traditional villages so as to enable the establishment of rural growth centres. This study attempts to design a suitable approach in which the above three strategies can be implemented. Analysis will be made to discover the suitability of the growth centre concept to be used as a tool to achieve the above objective.

Rural development and planning in Malaysia has been carried out in peacemeal. It has been exacerbated by the establishment of various agencies to work on the same areas and left other problems untouched. Physical planning has also been done in peacemeal. Different types of rural settlements have been planned

by different authorities. It can be said that up to date, there has been very little involvement in rural planning as a formal governmental process. A system is yet to evolve to examine rural resources and constraints and their relationship with economic activities, socio-economic organization and spatial articulation. All past and present rural development and planning tend to be selective in the sense, it focus on one or two facets of development issues rather than approaching in a more comprehensive manners. This practice should be replaced with a single strategy capable of providing the opportunity to bring the various rural development oriented government departments or agencies together. Therefore, there is an urgent need for a single authority which inter-alia can provide development policies and strategies for the rural areas and also can coordinate various programmes carried out by different organizations in the rural areas. Besides, there is also a need for the establishment of centres to provide locationally efficient sites for the siting of projects and services generation.

In West Malaysia, three different types of settlements present in the rural areas. These are; planned rural settlements; "Chinese New Villages", mining and estate settlements; and traditional

villages. However, not all of these settlements need to be restructured. Planned rural settlements, "Chinese New Villages", mining and estate settlements which so far have received adequate planning inputs should from now on be given less attention. These settlements in terms of physical environment, social and economic organization are in a better position than those of traditional villages. Therefore, the target area for economic diversification, land restructure and spatial rearticulation is traditional villages. These villages retrospectively received very minimum planning inputs and suffered from various physical and socio-economic problems.

The growth centre concept together with similar concepts such as growth pole, growth area, growth point, core-region and others attracted increasing attention in the search for tools to solve the problems of imbalance in inter-regional development. Many studies suggest that theoretically; economic growth takes place in a matrix urban regions or cores around which are socio-economic depressed areas, lagging behind in levels of economic activity and development called periphery. The periphery is dependent on the core and its development is largely determined by institution in the core. Activation of the core causes growth impulses and economic

advancement and ultimately diffusion of developmental activities to the most traditional peripheries. The rate of diffusion process is a function of the potential interaction between core and periphery which depends on physical infrastructure development in the core. However, the suitability of this concept to the rural areas is questionable. In theory the growth centre concept seems to be applicable to rural areas, but in practice it is more appropriate to the urban environment where the thresholds and range of functions can be most readily satisfied. For rural areas, the application of this concept should be considered and weighted in the place concern.

The application of the growth centre concept in three different countries vis the U.K., Tanzania and India shows that some improvement have been achieved in their rural areas. In these countries, the concept applied has exposed majority of their rural population with basic services and facilities which otherwise could not be provided. However, the benefit derived from the application of this concept is more significant in Tanzania because the concept is applied together with the ujamaa programmes which involve the resettlement of rural people. In the U.K. due to lack of transportation policy to back up the concept, social welfare of the people who are living in the

hinterlands was exacerbated. In India, the concept which has been applied in the Community Development Programme did not well function because; the centres were constituted haphazardly; inadequate of services and facilities in terms of quality and quantity provided in the centres; and the social structure of the village which restricted the benefit from passing down to the poorer. Besides the above mentioned benefits and failures, several problems are also recorded in implementing the concept. In the U.K. for instance, problems occurred because of lack of coordination between planners and servicing bodies, incapability to attract investors to the centres and difficulties to decline some development in non key-settlements. In India implementation problems was because of an inefficient of management skills and in Tanzania, it was largely because of lack of finance and other resources for the government to speed up the formation of villages. If all of these constraints are overcome, the application of the growth centre concept in the rural areas would give an optimum benefits to the rural population.

This study has revealed that the limitations of the growth centre concept in the rural areas are because of difficulty to attain an optimum population threshold so as to enable the centres to perform a

full range of growth centre attributes. The general conclusion is that "growth centre" concept is impractical to be applied for providing a full range of growth centre functions in the rural areas. However, it does not necessarily mean that growth centre themes should not be introduced in the rural areas. There certainly a case for applying this concept providing that the expectations of results from the policy does not exceed the small-scale answers which the small-scale growth centres are able to produce.

This study has proposed service centre concept which is based on the growth centre strategy and modified to include the element of resettlement for restructuring the traditional villages in Malaysia. The approach underlying this concept is that "a limited number of villages are selected for expansion in which for the first 20 years, they can serve the surrounding villages and at the same time, the population of the surrounding villages will be entirely relocated into those selected centres and leave their farmlands and building sites for cooperative farming".

This study has also outlined the process in which the above proposed concept could be planned. It is

suggested that the concept be translated through three stages; namely, appraisal stage; classification of villages; and, selection of centres and regrouping of villages. Besides planning process, four design models which each of them illustrates the different way of rural centres could be established have also been put forward. These are "expanded-village" model, "new-village" model, "small town-based" model, and "population transfer" model. The adoption of these models is dependent on the nature of development constraints and potentials present in the villages.

These models then have been translated in the District of Johor Bharu, in the Johor State. By using these models, 33 service centres have been proposed to be established in order to restructure the existing traditional villages in the district. The assesment made has shown that the proposed concept and models outlined in this study will bring about a lot of social, physical and economic benefits to the traditional village population. The implementation of the proposed concept will face only with one main problem vis inadequate of legal set up to execute the plans. If this problem is solved, the concept could be implemented successfully.

9.2. Lessons for Developing Countries

9.2.1. The Importance of Centres in the Rural Areas

Several studies show that rural centres are necessary for rural people. These centres have to function as service centres to meet the general as well as the specialized medical, educational and day to day needs of rural people; to provide employment to those who are pushed out of agriculture; to function as social interaction points; and to enable the diffusion of information and provision of extension services more efficiently.

For most developing countries, rural centres are also important to cater the need of commercial agriculture. A modern agriculture presupposes the existence of market where produce can be sold and where agricultural inputs can be bought. Presently, most farmers in these countries have to depend on the inadequate marketing and other poor facilities. Their market area are too small and oppressed by "middle-man". All of these phenomena keep rural areas poor and underdeveloped, and impede development. Even when development begins in urban areas, the impact seldom spreads beyond the immediate area around the primate city, and a large part of the country remain outside

the growth area. Where several urban centres exist, the absence of appropriate level of centres in the rural areas may impede the integration of rural areas into the regional and national economies. Studies made by several writers in several different countries show that these phenomena are very significant.

Therefore, the establishment of an appropriate level of centres in the rural areas is necessary to solve the above problems. Such centres beside could bridge the wide gap - economic activity, income growth, decision making and others - which usually exist between rural area and the city, could also permeate the development from the higher level of urban hierarchy to the rural hinterlands.

9.2.2. The Applicability of the Growth Centre

Concept to the Rural Areas.

Having discussed the theoretical formulation and the application of the growth centre concept, it is found that this concept is much more suitable to be applied to the urban areas. The application of this concept to the rural areas is curtailed by several limitations. The most important one is difficult to achieve an optimum population size so as to enable the centre to perform the theoretical function of the

concept. Many studies suggest that agglomeration of economies promoting industrial growth are not attained without a threshold population of at least 25,000 people. This suggestion is supported by many writers such as O'Neil (1971) who examined the distribution of manufacturing industry in Ireland between 1926 - 1966 and found that;

"there are a clear tendency for industry to become more spatially concentrated with the passage of time, with a smaller proportion to be found in the smaller towns.....; and a positive correlation between urban size and the ability of a town to attract new firms"

Besides, Keeble and Houser in their study between 1960 - 1967 within a region exceeding 80 km. (50 miles) from Greater London also come to the same conclusion. They found that;

"Spatial variations in manufacturing change in the study region whether measured by employment or floorspace indices have been directly influenced by variation in aggregate and specific labour availability and in existing levels of industrial activity and specialization".

These studies suggest that the rate of industrial growth correlated directly and significantly with the size of population which produce labour supply.

In the rural areas of developing countries, such optimum sizes of population impossibly to be achieved. Most people live in scattered villages vary from 200 - 700 families. Therefore, the application of the growth

centre concept to obtain full range of growth centre attributes in the rural areas is negligible.

9.2.3. Suggested Concept and Design Models for Rural Areas in the Developing Countries.

Rural service centres based on the growth centre concept combined with resettlement programme as outlined in this study would be an appropriate concept for the rural areas of some developing countries. Along with reducing development cost, this concept would also provide several benefits in terms of social, economic and physical to the rural people. This is because, this concept has many innovative qualities;

- a. it involves the transformation of the rural countryside by introducing elements of modernization and urbanism to selected centres;
- b. it is an attempty at physical and social synthesis of the best qualities of urban places and rural communities;
- c. it involves the establishment of new socio-economic and administrative entities that dynamically self-sufficient; and,
- c. it involves the consolidation of fragmented land holdings to be managed on a cooperative basis so as to

enable the mechanization of agricultural process and to make the production more economic.

This concept would enable the establishment of centres which will act as so called agropolis or "city in the fields", which would be based on the agricultural production of hinterlands. But as the centres progress, their economic base will change from agricultural production to agricultural processing, agro-based industries and eventually to diversified industries. These centres represent an innovative experiment in planned and controlled rural modernization and urbanization.

If this concept is adopted, four design models outlined in this study viê "expanded-village", "new-village", "small-town based", and "population-transfer" models would be suitable to be adopted. These models are suitable for some developing countries which have an experience in land development and resettlement schemes such as Indonesia, Brazil, and several other Latin American Countries. Inspiration could be derived from this experience. However, other countries which face with limited resources but did not have any experience in land development schemes could also apply this concept.

The first three models outlined in this study for example are applicable to all situations of developing countries.

9.3. Recommendation for Future research

So far, this study has put forward some answers for the following questions:

- a. How does the Malaysian government administratively carry out rural development planning, does it effective?
- b. What factors and conditions have necessitated rural development planning in West Malaysia?
- c. Are rural settlements in West Malaysia receiving the same level of developmental planning input?
- d. Who are the target group for rural development planning in West Malaysia in the future?
- d. What are the limitations and strengths of the growth centre concept in overcoming the rural problems, and does it fit with the situational conditions of the developing countries?
- e. What lessons could be derived from other countries' experiences in establishing rural centres?
- f. What is the suitable concept can be relied on to rearticulate the traditional villages in Malaysia?
- g. What recommendations can be derived from this study?

Finally, it should be useful to set out a number of topics upon which useful research might be undertaken. The following hypotheses or issues are suggested to be examined in depth by future research;

- a. The constraints, process, and socio-economic advantages of cooperative land holding.
- b. The role of cottage and small-scale industries in generating growth for rural areas.
- c. The needs for better administration for the development of rural areas in West Malaysia.
- d. The effectiveness of rural development planning will significantly be increased if there is only a single authority responsible for it.
- e. The need for socio-economic policies at state level to strengthen the strategic planning vehicle at the lower level.

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APPENDICES

APPENDIX A
FELDA LAND SETTLEMENT SCHEME CONCEPT

Federal Land Development Authority (FELDA) was established in 1956 to overcome the growing concern for rural poverty which aggregated by the problems of rural landlessness and also outmigration to urban centres. The main objective of FELDA landscheme is to "to promote and assist the investigation, formulation and carrying out of projects for development and settlement of lands." The FELDA model of land development is based on a package deal approach or integrated development which includes the clearing and planting of jungle areas; the provision of agricultural credit, processing and marketing services, social and public amenities; and, extension of services geared to develop modern and progressive rural community. Generally, each FELDA settlement scheme is provided with a total of 1,000 - 2,000 hectares of agricultural land for cultivation either oilpalm, rubber or cocoa. Housing and basic social facilities (shops, mosque, community hall, primary school, rural clinic and recreational facilities) are located at the village centre itself which caters for about 400 - 500 families. Basically, the main components of FELDA landscheme are:-

- a. House lots : 0.1 hectare/household
- b. Agricultural lot : 4 hectares/household
- c. Village centre : 100 - 400 hectares/scheme

In the residential area, dwelling units are grouped together and located about 0.5 - 1.0 km. from the centre. Agricultural area forms a large portion of the total FELDA landscheme. This area is located within the radius of 5.0 km from the residential plots and village centre .

APPENDIX B
VILLAGES LOCATED IN THE DISTRICT OF JOHOR BHARU

No. in Fig. 7. 2.	Name of village	<u>Mukim</u>	population
1.	Kg. Murni Jaya	Sedenak	1,526
2.	Kg. Pisang	Sedenak	522
3.	Kg. Melayu Bukit Batu	Sedenak	632
4.	Kg. Air Manis Lama	Sedenak	989
5.	Kg. Air Bemban	Sedenak	na
6.	Kg. Seri Paya	Senai-Kulai	1,352
7.	Kg. Seri Gunung Pulai	Senai Kulai	1,398
8.	Kg. Sengkang	Senai Kulai	na
9.	Kg. Pertanian	Senai Kulai	297
10.	Kg. Saleng	Senai Kulai	545
11.	Kg. Senai	Senai Kulai	512
12.	Kg. Jaya Sepakat	Senai Kulai	356
13.	Kg. Serdang	Senai Kulai	na
14.	Kg. Melayu Ulu Choh	Senai Kulai	na
15.	Kg. Bahagia Ulu Choh	Senai Kulai	654
16.	Kg. Kangkar Pulai	Pulai	195
17.	Kg. Melayu Skudai	Pulai	447
18.	Kg. Ulu Choh	Pulai	254
19.	Kg. Melayu Lima Kedai	Pulai	758
20.	Kg. Telok Serdang	Pulai	332
21.	Kg. Bakar Batu	Pulai	na
22.	Kg. Tanjung Dange	Pulai	na
23.	Kg. Sungai Dange	Pulai	898
24.	Kg. Sungai Temun	Pulai	na
25.	Kg. Sungai Melayu	Pulai	765
26.	Kg. Tebing Runtuh	Pulai	na
27.	Kg. Pendas Laut	Pulai	850
28.	Kg. Melayu Gelang Patah	Pulai	na
29.	Kg. Jelutung	Pulai	882
30.	Kg. Pulai	Pulai	328
31.	Kg. Ulu Pulai	Pulai	na
32.	Kg. Banta	Tg. Kupang	176
33.	Kg. Bharu	Tg. Kupang	188
34.	Kg. Simpang Arang	Tg. Kupang	1,383
35.	Kg. Duku Kiri	Tg. Kupang	1,112
36.	Kg. Bukit Kuching	Tg. Kupang	897

37.	Kg. Tiram Duku	Tg. Kupang	434
38.	Kg. Paya Mengkuang	Tg. Kupang	na
39.	Kg. Bengkok	Tg. Kupang	566
40.	Kg. Pekajang	Tg. Kupang	166
41.	Kg. Tg. Pelepas	Tg. Kupang	172
42.	Kg. Tg. Adang	Tg. Kupang	403
43.	Kg. Pok Kechil	Tg. Kupang	441
44.	Kg. Pok Besar	Tg. Kupang	na
45.	Kg. Tanjung Kupang	Tg. Kupang	329
46.	Kg. Ladang	Tg. Kupang	na

47.	Kg. Oren Ulu Tiram	Tebrau	427
48.	Kg. Sinaran Baru	Tebrau	367
49.	Kg. Maju Jaya	Tebrau	164
50.	Kg. Skudai Laut	Tebrau	na
51.	Kg. Kangkar Kechil	Tebaru	na
52.	Kg. Kangkar Tebrau	Tebrau	185
53.	Kg. Pasir	Tebrau	na
54.	Kg. Tengah Tebrau	Tebrau	na
55.	Kg. Penggawa Timur	Tebrau	4,800

56.	Kg. Ulu Tiram	Pelentong	788
57.	Kg. Baru Ban Foo	Pelentong	775
58.	Kg. Teluk Jawa	Pelentong	na
59.	Kg. Sg. Rinting	Pelentong	453
60.	Kg. Pasir Puteh	Pelentong	na
61.	Kg. Kabong	Pelentong	578
62.	Kg. Ulu Plentong	Pelentong	757

63.	Kg. Tengah	Sungai Tiram	na
64.	Kg. Sg. Tiram	Sungai Tiram	1,356
65.	Kg. Paya	Sungai Tiram	836
66.	Kg. Air Puteh	Sungai Tiram	na
67.	Kg. Sg. Redan	Sungai Tiram	754
68.	Kg. Penduan	Sungai Tiram	532
69.	Kg. kok Seng	Sungai Tiram	na
70.	Kg. Penduan Baru	Sungai Tiram	448
71.	Kg. Sg. Lato	Sungai Tiram	na
72.	Kg. Kong Kong Laut	Sungai Tiram	na
73.	Kg. Sungai Tinggi	Sungai Tiram	768
74.	Kg. Tg. Langsat	Sungai Tiram	825
75.	Kg. Jonglak	Sungai Tiram	1,354
76.	Kg. Perigi Acheh	Sungai Tiram	na

Note: 1. The distribution of villages is shown in Figure 7.2.
 2. na - information is not available

Source: 1. Federal Town and Country Planning Department
 2. Johor Bharu Municipal Council, Johor Bharu, Johor.
 3. Johor Bharu Tengah District and Land Office.

APPENDIX C

CLASSIFICATION OF VILLAGES: POTENTIAL VILLAGE ANALYSIS

1.0. Development Factors

Development factors used in this analysis are;

- a. the availability of public amenities (education and health services),
- b. communication, and
- c. physical constraints.

2.0. Weightage Index

Weightage index is a numerical value given to development factor according to its relative importance in the selection of service centre. In this study, weightage index given to each development factor is as follows:

- a. Public Amenities : 5
- b. Communication : 3
- c. Physical Constraints : 4

3.0. Assessment Criteria

Since the development factor is very general or broad, assessment criteria are used. Assessment criteria are "condition" formulated to quantify the development factors. In this analysis, "condition" or assessment criteria formulated for each development factor are as follows:

Factor 1: Public Amenities

"The proximity of villages to major public amenities i.e. school and health services".

Factor 2 : Communication

"The proximity of villages to the main road networks, and to the government sponsored projects such as RISDA projects, FELCRA projects and others".

Factor 3: Physical Constraints

"The physical constraints/potentials for further development".

4.0. Score

Score is a numerical value given to each village based on the extent in which it could fulfill the assesment criteria formulated above. Based on the assesment criteria which have been formulated for each development factor, score is given according to the following guidelines:

Factor 1: Public Amenities

- a. Villages located less than 1 km from school and health services will be given score value of 1.
- b. Villages located between 1km - 3km. from school and health services will be given score value of 0.
- c. Villages located more than 3km from school and health services will be given score value of -1.

Factor 2: Communication and Government Project

(1) Communication

- a. Villages located less than 1 km from main road will be given score value of 1.
- b. Villages located between 1km - 3km from main road will be given score value of 0.
- c. Villages located more than 3km from main road will be given score value of -1.

(2) Government Project

- a. Villages which have any government projects will be given score value of 1.
- b. Villages which do not have government projects will be given score value of 0.

Factor 3: Physical Constraints

(1) Land for expansion.

- a. Villages which have limited land for expansion will be given score value of -1
- b. Villages which have enough land for expansion will be given score value of 1.

(2) Physical Constraints.

- a. Villages which have physical constraints such as flood prone area, steep hill, swampy area and others will be given score value of -1.
- b. Villages which are free from any physical constraints will be given score value of 1.

5.0. Method of Classification

Classification of villages is made based on the range of total score obtained by each village. Since villages will be classified into three, three ranges of total score are formulated. The ranges are formulated based on the lowest score $(-21)^1$ and the highest score $(+21)^2$. They are as follows:

- a. Score between -21 to -6 : Class 3 village
- b. Score between -6 to +9 : Class 2 village
- c. Score between +9 to +21 : Class 1 Village

¹The lowest score (-21) is score which will be given to the most unsuitable village to be selected as service centre.

²The highest score $(+21)$ is score which will be given to the most suitable village to be selected as service centre.

APPENDIX D
PROPOSED SERVICE CENTRES AND REGROUPING OF VILLAGES

Selected Villages	Villages to be regrouped
<u>Expanded-Village</u>	
Kg, Murni Jaya (1) (P127/N26)	-
Kg, Seri Paya (6) (P127/N26)	-
Kg, Seri Gunung Pulai (7) (P131/N34)	-
Kg, Bahagia Ulu Choh (15) (P131/N34)	Kg, Melayu Ulu Choh (14) (P131/N34) Kg, Kangkar Pulai (16) (P131/N34)
Kg, Pendas Laut (27) (P131/N34)	-
Kg, Simpang Arang (34) (P131/N34)	-
Kg, Duku Kiri (35) (P131/N34)	Kg, Bukit Kuching (36) (P131/N34)
Kg, Paya Mengkuang (38) (P131/N34)	Kg, Tg, Kupang (46) (P129/N29) Kg, Ladang (45) (P131/N34)
Kg, Bengkok (39) (P131/N34)	Kg, Tiram Duku (37) (P131/N34) Kg, Pekajang (40) (P131/N34) Kg, Tg, Pelepas (41) (P131/N34) Kg, Pok Kechil (43) (P131/N34) Kg, Pok Besar (44) (P131/N34)
Kg, Penggawa Timur (55) (P129/N29)	Kg, Kangkar Kechil (51) (P129/N29) Kg, Kangkar Tebrau (52) (P129/N29) Kg, Pasir (53) (P129/N29) Kg, Tengah (54) (P129/N29)
Kg, Sg, Tiram (64) (P129/N29)	-
Kg, Sg, Lato (71) (P129/N30)	Kg, Penduan (68) (P129/N30) Kg, Kok Seng (69) (P129/N30) Kg, Penduan Baru (70) (P129/N30) Kg, Kong Kong Laut (72) (P129/N30)
Kg, Tg, Langsat (74) (P129/N30)	Kg, Sg, Tinggi (73) (P129/N30)
Kg, Jonglak (75) (P129/N30)	Kg, Perigi Acheh (76) (P129/N30)

New-Villages

New Village 1	Kg, Sg, Melayu (25) (P131/N34) Kg, Tebing Runtuh (26) (P131/N34)
New Village 2	Kg, Teluk Serdang (20) (P131/N34) Kg, Bakar Batu (21) (P131/N34) Kg, Tg, Dange (22) (P131/N34) Kg, Sg, Temun (24) (P131/N34) Kg, Sg, Dange (23) (P131/N34)
New Village 3	Kg, Tengah (63) (P129/N29) Kg, Paya (65) (P129/N29) Kg, Air Puteh (66) (P129/N29) Kg, Sg, Redan (67) (P129/N29)

Small Townsa. Towns

Bukit Batu (P127/N26)	Kg, Pisang (2) (P127/N26) Kg, Melayu (3) (P127/N26)
Ayer Bemban (P127/N26)	Kg, Air Manis Lama (4) (P127/N26) Kg, Air Bemban (5) (P127/N26)
Sengkang (P127/N26)	Kg, Sengkang (8) (P127/N26)
Kulai (P127/N26)	Kg, Pertanian (9) (P127/N26)
Senai (P127/N25)	Kg, Senai (11) (P127/N25) Kg, Jaya Sepakat (12) (P127/N25)
Skudai (P127/N25)	Kg, Melayu Skudai (17) (P127/N25) Kg, Skudai Laut (50) (P127/N25)
Ulu Tiram (P129/N29)	Kg, Oren (47) (P129/N29) Kg, Ulu Tiram (56) (P129/N29) Kg, Ulu Pelentong (62) (P129/N29)
Masai (P129/N29)	Kg, Teluk Jawa (58) (P129/N29) Kg, Sg, Rinting (59) (P129/N29)
Ulu Choh (P131/N34)	Kg, Ulu choh (18) (P131/N34)
Gelang Patah (P131/N34)	Kg, Melayu G, Patah (28) (P131/N34) Kg, Banta (32) (P131/N34) Kg, Bharu (33) (P131/N34)

"Chinese New Village"

Saleng N.V. (P127/N25)	Kg. Saleng (10) (P127/N25)
Selong N.V. (P127/N25)	Kg. serdang (13) (P127/N25)
Lima Kedai N.V. (P131/N34)	Kg. Melayu (19) (P131/N34)
Ban Foo N.V. (P129/N29)	Kg. Baru (57) (P129/N29)
Pasir Puteh N.V. (P129/N30)	Kg. Pasir Puteh (60) (P129/N30)
	Kg. Kabong (61) (P129/N30)

Note: () Number as referred in Figure 7,8.

Parliamentary Electional Area:

P127 - Senai

P129 - Tebrau

P131 - Pulai

State Electional Area:

N25 - Kulai

N26 - Bandar Tenggara

N29 - Tiram

N30 - Pasir Gudang

N34 - Gelang Patah