

# Information systems and technology for regional planning in Malaysia

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**Information Systems And Technology For  
Regional Planning In Malaysia**

**By**

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## EXPERT GROUP MEETING

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MALAYSIA

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## Information Systems and Technology for Regional planning in Malaysia

### Executive Summary

The advent of the 1970s saw numerous changes and innovations being made in development planning policies and strategies in Malaysia. Among these was the adoption of the regional planning approach which came about with the introduction of the New Economic Policy.

The adoption of the regional development strategy, among others, indicates government's emphasis on achieving a balanced growth and development among regions of the country and among various sections of the population as the problem of socio-economic disparities became more pronounced towards the end of the 1960s. It was specifically aimed at accelerating the development of the lagging states so that they are not left behind in terms of socio-economic development compared to the more developed states.

In order to provide a mechanism to implement the regional development strategy, Regional Development Authorities (RDAs) and other state level development planning agencies such as the State Development Office (SDO) and the State Economic Planning Unit (SEPU) began to be established to undertake the tasks of development planning and implementation for lagging regions in specific states.

In keeping with current trend and in view of the need to constantly monitor the development planning activities of the development agencies at the subnational level, central agencies began to adopt computerized information systems and technology. Thus SETIA - an integrated information system involving central agencies- was established.

To-day we find that all central agencies have computerized information systems. However, the subnational or state level agencies particularly the RDAs are ill-equipped in this respect. This study finds that majority of the RDAs only use single unit PCs to deal with data and information required for planning and operational purposes.

In the absense of computerization, the management of data and information, as demonstrated by the experience of the focal agency - South Kelantan Development Authority (KESEDAR) - is beset with various problems which have adverse effects on development planning and implementation process. The study, therefore, recommends that the RDAs as well as other agencies involved in regional planning at the subnational level, most of which appear to have already started using PCs, accelerate their computerization process and look into the possibility of establishing an integrated information network for greater efficiency and success in the performance of their planning tasks.



## INFORMATION SYSTEMS AND TECHNOLOGY FOR REGIONAL PLANNING IN MALAYSIA

Nik Ibrahim Nik Mahmood 1

### INTRODUCTION

#### Purpose, focus and organization of the study

Most government departments and agencies in Malaysia are equipped with computerized information systems for their daily operation. A considerable number of agencies involved in development planning and implementation, however, are still ill-equipped in this respect.

The purpose of this study is to describe the prevailing state of the usage of information systems and technology in regional development planning in Malaysia with special focus on the situation, and related issues and problems existing in a specific regional development agency — South Kelantan Development Authority (KESEDAR). There are several reasons why the study is mainly focussed on KESEDAR. Firstly, KESEDAR being one of the seven regional development authorities (RDAs) currently in existence in the country is considered a sufficient sample of all the seven RDAs, for, although each RDA is unique in terms of the characteristics of its area of operation (that is, the Region), all RDAs are more or less similar in respect of the general purpose for which they are established (that is, to develop sub-national regions), and in terms of their legal bases (that is, each of them is established in accordance with an Act of Parliament), and their general organizational set-up. Secondly, KESEDAR has been established under circumstances which are rather peculiar compared to the other RDAs, and its mode of establishment has had specific effects, both favourable and adverse, on its performance. Thirdly, the region (the South Kelantan region) is the most backward region in the least developed State — Kelantan. Fourthly, KESEDAR is the regional development authority with which the author is most familiar. It is hoped that the recommendations of this study would be useful for improving KESEDAR and making it a more dynamic and effective RDA so that the development of the South Kelantan Region, in particular, and the State of Kelantan as a whole could be further accelerated and brought at par with the other more developed States in Malaysia.

This study is divided into twelve main sections. After a brief description of the political and government set-up at the federal and state levels in the following paragraphs of this introductory section, the study describes in detail and assesses the development planning process and practice in Malaysia; in

this context, a great emphasis is given to pointing out the major factors which have contributed to socio-economic disparities among races and among regions in the country and, hence, the adoption of the regional development approach and the creation of the RDAs to achieve the regional development objectives. This is followed by a section on KESEDAR as the focal regional development agency for the study. The subsequent sections deal with major problems and issues related to KESEDAR, in particular and other agencies, in general, but focussing mainly on the need for improvements in information systems and technology. The study concludes with recommendations related to KESEDAR, in particular, and other development agencies in general.

### Political and government set-up

In order to facilitate a better understanding of the process and functioning of development planning in Malaysia as a whole, it is important to give a brief description of its political and government set-up.

Malaysia is a federation of thirteen states with a total land area of 329,745 square kilometers and a multi racial population comprising three major races - Malay, Chinese, and Indian - totalling about 15 million. The nation is ruled by a constitutional monarch. It practises a democratic parliamentary system of government in which the supreme policy-making body is the Cabinet of Ministers headed by the Prime Minister. Each of the component states is headed by a state ruler either hereditary, as in the case of nine of the eleven states in peninsular Malaysia, or appointed, as in the case of the Borneo states of Sabah and Sarawak as well as the other two states in the peninsula.

Each of the states is divided into districts which are further divided into smaller political subdivisions. Administratively the district is headed by a District Officer who is responsible to the State Secretary who is the administrative head of the state. Politically the State is headed by the Chief Minister who presides over the State Executive Committee of elected representatives. The members of the State Executive Committee together with other elected representatives of the various constituencies of the state form the State Legislative Assembly. The political structure differs somewhat between States in peninsular Malaysia, on the one hand, and Sabah and Sarawak, on the other, in the sense that Sabah and Sarawak each has its own State Cabinet.



## DESCRIPTION AND ASSESSMENT OF THE REGIONAL PLANNING PROCESS AND PRACTICE

### The genesis of National Development Planning

Malaysia adopted the regional planning approach only quite recently, that is, with the introduction of the New Economic Policy in the early 1970's, almost two decades after its first five-year development plan was launched in 1956. The adoption of the regional approach is one of the changes in national policies and strategies made towards resolving the problem of socio-economic disparities among regions and among communities of the population, which had become more and more pronounced towards the end of the 1960's. Before delving into regional planning proper, it would be enlightening to explain briefly the background of development planning in the country as a whole.

The genesis of development planning in Malaysia (Malaya before 1963) is partly accounted for by the desire of the government for rapid economic growth when the country was on the threshold of political independence, and partly by the country's association with the World Bank during colonial time. The World Bank, through arrangement with the British colonial government, sent its Economic Mission to Malaya in 1954 to assist in the preparation of Malaya's first five-year plan which came to be adopted in 1956. By that year, the prospect that independence was imminent was a significant contribution to the realization by nationalist leaders of the need for planning; for, national planning constitutes not only an efficient tool for allocating scarce resources, but also a symbol of self-control. With independence achieved in 1957, the maintenance of law and order alone would no longer suffice to meet national aspirations; the goal of government must change from "custody" to "development" or from "a dominance of order goals to a dominance of output or cultural goals".<sup>2</sup>

From 1956 onwards, the launching of a new Development Plan every five years has become a matter of routine in Malaysia with each succeeding plan being relatively more sophisticated and comprehensive than the previous one. At this writing the country is half way into its 7th Five-Year Plan.<sup>3</sup> In the early years after independence, the planning process was centered in one solitary planning agency namely the Economic Planning Unit (EPU) which was established in 1959 under the Prime Minister's Department. On the foundation of this solitary agency an elaborate National Planning System (NPS) has evolved over the years through a constant process of refinement and updating in accordance with changing national needs and circumstances.



### The structure and functioning of the National Planning System (NPS)

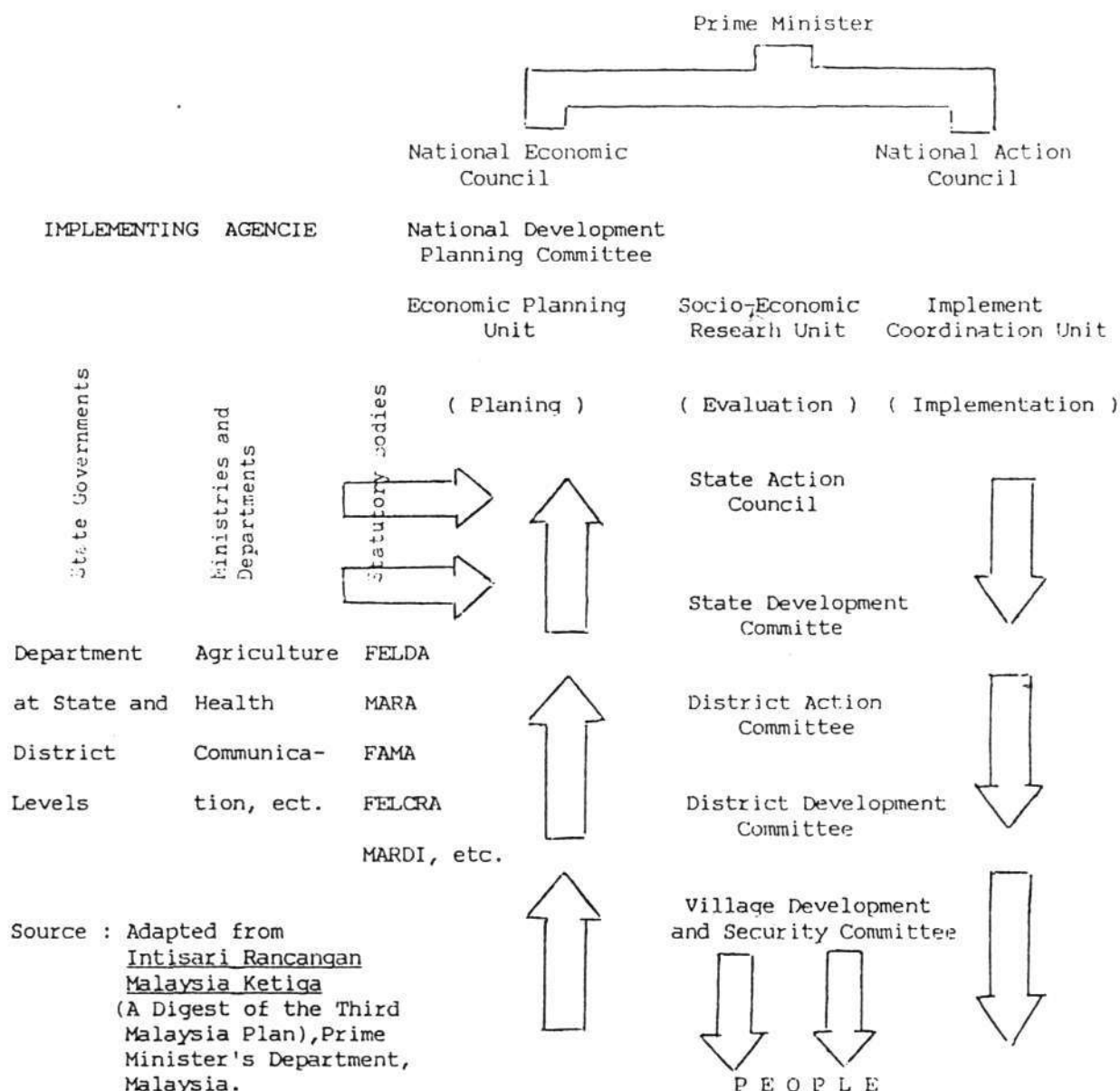
Generally the NPS may be described as a clustering of political and administrative structures institutionalized for the specific purpose of dealing with the process of development action. It is essentially an outgrowth of the general political and administrative institutions and organizations of the Federation. As depicted in Figure I, the NPS has an elaborate structure permeating the various levels from the federal right down to the state, district and village levels.

As indicated in the chart, political leaders play an important role in the NPS. At the federal level, the Prime Minister is chairman of the two ministerial level councils i.e. the National Economic Council (NEC) and the National Action Council (NAC) of which members comprise certain Cabinet Ministers; some of them are members of both councils. The broad function of these councils is to provide political leadership and direction for the successful performance of the various related tasks by civil servants and the implementing agencies, and to make relevant recommendations to the Cabinet on specific issues. Regular meetings of the NAC are held with selected agencies of the government for intensive reviews of their progress and problems. By this arrangement, political leaders are also involved in the planning stage, that is, through the NEC which reviews proposals submitted by various ministries and departments, through the EPU and the National Development Planning Committee (NDPC), before they are submitted to the Cabinet for final decision; the NDPC comprises the administrative heads of all major economic development ministries. At the state level the State Action Council which is chaired by the Chief Minister provides policy guidance in the overall performance of development tasks.

The brunt of the planning tasks at the federal level is undertaken by central agencies, namely the EPU, the Socio-Economic Research Unit (SERU), the Implementation Coordination Unit (ICU), the Public Services Department (PSD), and the Malaysian Administrative Modernization and Manpower Planning Unit (MAMPU) in the Prime Minister's Department, the Treasury and Bank Negara (the National Bank) as well as the planning cells of various ministries. The EPU, however, is generally responsible for the planning function. It also coordinates the presentation of issues and policies for the consideration of the NDPC and the NEC, serving as secretariat to both.

At the state level, the State Economic Planning Units (SEPUs) and the State Development Offices are responsible for formulating state development strategies and coordinating the preparation of state development programmes and projects. The activities of the SEPUs and of the State Development Offices are, in a number of cases, supplemented by specially created Regional Development Authorities and also by the district as well as

FIGURE I: THE NATIONAL PLANNING SYSTEM



**GLOSSARY:**

FELDA = Federal Land Development Authority  
 MARA = Majlis Amanah Rakyat ( People's Trust Council)  
 FAMA = Federal Agricultural Marketing Authority  
 FELCRA = Federal Land Consolidation and Rehabilitation Authority  
 MARDI = Malaysian Agricultural Research and Development Institute



village committees, although the latter are more concerned with security matters. The SEPUs, which furnish the mechanism of creating a consciousness of the planning needs of the States, have been established in accordance with the policy of decentralization of the planning function, which began to be implemented since early 1970s. The creation of this unit in each State has enabled the State to plan its requirements more effectively but consistent with national objectives.

Since recent years, the process of planning normally starts with the issuance of circulars by the EPU to all agencies concerned including the States and the Districts, well before the scheduled date for plan implementation requesting them to submit their proposals based on specific instructions. In the States, the process of negotiation for the inclusion of projects in the national plan begins at the district level with the involvement of district administrators, technical committees, and politicians. District proposals which have been vetted and integrated are scrutinized concurrently with state departmental proposals by the State Planning Committee with the SEPU as the secretariat. Proposals by federal departments in the State, however, are directly scrutinized by ministerial planning committees. The various proposals are then submitted to the EPU for further scrutiny and upward transmission.

At the central level, plan initiation normally involves the participation of the central agencies mentioned earlier as well as other Federal Ministries and Departments, State Governments, and Statutory Authorities concerned with their respective areas. These various agencies work through the Inter-Agency Planning Groups (IAPGs) under the direction of the NDPC and the NEC. The IAPGs are basically groups or committees made up of representatives of various Ministries, Departments, and Agencies loosely formed and called to meet and discuss development proposals for inclusion in the Five-Year Plan under the chairmanship of the EPU. Recommendations of the IAPGs are examined by special committees comprising a number of Cabinet Ministers headed by the Prime Minister or his Deputy before being considered by the NEC and submitted to the Cabinet for final decisions. The final product is then presented in the Parliament for legitimation.

This mode of plan preparation may perhaps be called the "mixed system", a combination of top-down and bottom-up approaches. It is evident, however, that during the heydays of the EPU in the late 1950s and early 1960s, the approach had been only top-down. The EPU then formulated policies based on macro-economic quantitative models for the national economy, whereas in the bottom-up approach currently adopted the EPU compiles and reviews investment proposals from government agencies and statutory bodies before submitting them to the NDPC.

As for coordination and implementation, they are the direct responsibilities of the various executive Ministries, Departments and Agencies at the federal and state levels. The



ICU, which is responsible to the NAC, is responsible for overall coordination and monitoring of plan implementation. Arrangements at the state and district levels follow closely the pattern at the federal level. Coordination and monitoring at all levels are based on the "Operation Room" technique.

Evaluation is generally the responsibility of SERU but it also involves other central agencies especially the EPU and the ICU. It is this function that forms the basis of the "Mid-Term Review" produced and published by the Government in connection with each five-year plan half way into the corresponding plan period. For the Fifth Malaysia Plan which is being implemented, however, only an internal review will be done and there will be no published "Mid-Term Review" document.

The importance of the evaluation function for the success of the whole process of development action needs no emphasis as its main objective is to discover past shortcomings for present and future improvements. Needless to say, an efficient and appropriate information system is highly essential to ensure the success of this process. Of late, the evaluation function has, apparently, not been properly performed by most agencies concerned. Instead of determining the general effectiveness of programmes and projects, which is the first preliminary step for deciding whether existing projects and programmes should be continued, revised or discarded, the common practice during the Third Malaysia Plan period, for instance, was an attempt by agencies to replicate them on a more extensive basis. This is, presumably, one of the major factors contributing to the poor performance at the level of some States, especially those which lack trained personnel.

Although structurally and processually the planning mechanism is extended to the States and the Districts, its operation cannot be said to be satisfactory as far as the States are concerned. One of the major factors contributing to this state of affairs is the lack of an efficient information system. However, the main reasons are attributable to the basic constitution and functioning of the federal system itself. Firstly, since the main source of development allocations rests with the Federal government and since the decisions of the NDPC are almost invariably immutable and binding, States are obliged to abide by federal decisions. In other words one could say that the degree of autonomy in decision-making of the State, as the focal organization, is very limited not only because of the concentration of input organizational resources in the Federal government but also because the Federal government, in this context, constitutes a powerful normative reference organization which, by virtue of its command of the resources, could impose its decisions on the State.

Secondly, the inclusion of plan proposals from the States into the national plan is determined largely by the central agencies, in particular by the EPU and the Treasury; these agencies, especially the Treasury, are often perceived by



other agencies, including those of the States, as being too powerful and over concerned with slashing the budget just for its own sake. Based on our own knowledge and working experience, however, we would say that although there is, indeed, a tendency on the part of the EPU and the Treasury to succumb to self-inflation by virtue of their prestige and controlling power vested in them - the EPU, power to more or less determine inclusion of projects and programs in the national plan, and the Treasury, power of financial control - the perception that these central agencies are inclined to slash the budget for its own sake may not be correct because their recommendations to the NEC and the Cabinet have often been accepted without complaints. Nevertheless, the fact still remains that, due to the way the NPS is structured, there tends to be a preponderance of decision-making power on development matters in the central agencies such as the EPU and the Treasury.

Thirdly, in certain aspects of the planning process such as in infrastructural projects, state participation in decision-making is minimal, if not totally excluded, because they are administratively centralized at the Ministries.

The adoption of the regional development planning approach and other significant changes in the process and content of development policies and objectives

The prime objective of those responsible for initiating development planning was originally to encourage industrialization and expansion of public facilities and infrastructure for the country as a whole. The movement in that direction, however, was rather slow in the initial years because the then elected government was apparently more interested in rural development, and for good reasons too. In the first place, the rural sector was the domain of the Malays - the majority populace of the country; thus it was natural for the nationalist leaders to voice their demand and support for rural development which was actually development for the bulk of the population whom the leaders represented and on whom they would have to depend for political mandate. The government was, therefore, deeply committed to rural development as evident from the institutional development that had taken place; starting with the establishment of the Rural and Industrial Development Authority (RIDA) in 1950, the institutional development culminated in the establishment of the Ministry of Rural Development in 1959. Prior to this, in 1956, the Federal Land Development Authority (FELDA) had been established when RIDA was found to be inadequate.

As we noted earlier, the regional development approach came to be adopted in Malaysia only since early 1970s when socio-economic disparities among sections of the population and among regions of the country began to threaten racial harmony and social stability. The problem of disparities might have existed



long before the British rule but British colonial policy had apparently exacerbated it by concentrating economic activities and administration in only certain regions of the country and by adopting a laissez faire attitude towards investment and immigration.

The British colonial government had resorted to indirect rule where indigenous rulers were retained in their hereditary positions. They also encouraged the Malay educated elite to enter government services, keeping the premier service - the Malayan Civil Service (MCS) - an exclusive preserve of British Officers. The British also brought in Chinese immigrants to work in the tin mines and, Indian immigrants, the rubber plantations, to exploit the natural resources and extract raw materials for the benefit of the metropolis, Britain. British colonial policy ultimately resulted in Malay political dominance and non-Malay economic dominance in the Malaysian society.

When Malaya attained political independence, therefore, the national government was faced not only with the problem of an open economy subject to fluctuations of world market, but also the problem of a multi-racial society characterized by socio-economic and political disparities. Compounding these problems was the problem of regional disparities or imbalance which, apart from British economic and administrative policies, is also attributable to geographical or natural factors such as poor locations of some of the States relative to established economic and service centers, and their relatively poor resource endowments, or lack of their exploitation.

The disparity problem may also be attributed to certain weaknesses and shortcomings in the planning system and process after independence. With independence the policymaking system inherited from the British began to be changed and modified. However, systematic and rational evaluation and redesign of the system especially for the purpose of national development did not begin to be undertaken until the 1970s. In the first decade or so after independence, policymaking seemed to have been rather conservative and based on the piecemeal approach. This is probably partly due to the overwhelming variety and nature of the problems confronting the newly independent nation and the constraints to efforts to resolve them such as the problem of security, socio-cultural diversity, the fermenting of political forces, and the lack of trained manpower and financial resources. Moreover, the policymaking system was in the transition process having been inherited from the British colonial government whose main concern had been system maintenance rather than development and whose mode of decision-making had been highly centralized. Under such circumstances, the policymaking system could not be said to have been geared either structurally or processually to deal effectively with the various socio-economic problems confronting the young nation.



A careful study of the First Malaysia Plan 1966-1970 reveals that the existence of the disparity problem had been recognized even before the occurrence of the May 13th, 1969 incident which has been associated with it. It was stated that, among others, the objectives of the Plan were,

To promote the integration of the peoples and States of Malaysia by embarking upon a development plan explicitly designed to promote the welfare of all ..... To increase the well-being of Malaysia's rural inhabitants and other low-income groups....4

The above statement is evidence of the awareness of the existence of both ethnic and regional disparities. The awareness of regional disparities was also reflected in another statement,

The states of Malaysia differ widely in human and natural resources and are at different stages of economic and social development. These differences exist not only between Malaya and the Borneo States but also within Malaya and between Sabah and Sarawak. 5

Based on the statements quoted above, therefore, it may be concluded that the disparity problem had indeed been recognized even before the occurrence of the May 13th incident, and the fact that such an unfortunate incident could have occurred might be due to the failure on the part of the planners to perceive the problem as an urgent one until after the incident which triggered a number of changes in development planning policies and practice; these changes will be discussed in a later section of this report.

The existence of the disparity problem is also attributable to the nature and functioning of the federal system itself. Generally speaking, successful outcomes of the process of development action \_ i.e. the formulation and legitimation of policy decisions, their implementation, and the evaluation of formulation and implementation, requires sufficient resources (financial, human, and material including information), adequate and well-organized administrative structures and channels of communication, and commitment of those involved in the process.

In Malaysia, the context in which the process of development action operates has certain peculiar characteristics; firstly, the Federal government is the main source and provider of financial resources; secondly, major policy decisions are made at the federal level; and thirdly, development implementation at the state level is largely the responsibility of the State government. Moreover, there is also the heterogeneity in governmental administration between the former unfederated Malay States like Kelantan (the other States are Kedah\Perlis, and Trengganu) and the Federal government.



Under such circumstances, it is not unlikely that where a State's political relations with the Federal government is adverse, that is to say, where a State government is based on a party which is not a component party of the federal coalition, that State's development performance would suffer. A case in point is Kelantan which has constantly registered an extremely low per capita GDP throughout the years since independence; Table I shows that Kelantan's per capita GDP of \$564 in 1971 is the lowest amongst states; it is \$51 lower than the second lowest (i.e. the per capita GDP of Trengganu), and \$1589 lower than the highest (i.e. the per capita GDP of Federal Territory\Selangor). In 1980 Kelantan's per capita GDP of \$842 is also the lowest amongst states; it is \$259 lower than the second lowest (i.e. the

TABLE I: SUMMARY OF PER CAPITA GDP GROWTH  
BY STATE, 1971-1980

State	Per capita GDP		Average annual growth rate(%) 1971 - 1980
	1971	1980	
Federal Territory\Selangor	2,153	3,176	4.4
Pulau Pinang	1,035	2,357	9.6
Sabah	1,303	1,847	4.0
Negeri Sembilan	1,145	1,817	5.3
Johor	1,084	1,726	5.3
Perak	1,167	1,583	3.5
Pahang	1,170	1,486	2.7
Melaka	877	1,469	5.9
Sarawak	915	1,382	4.7
Trengganu	615	1,316	8.8
Kedah\Perlis	728	1,101	4.7
Kelantan	564	842	4.6
MALAYSIA	1,172	1,836	5.1

Source: Fourth Malaysia Plan 1981-85(Malaysia: The National Printing Department, 1981), p.102.

per capita GDP of Kedah\Perlis) and \$2334 lower than the highest (i.e. the per capita GDP of Federal Territory\Selangor). In terms of percentage of the national average, Kelantan's per capita GDP in 1971 is 48.12%, and in 1980, only 45.9%.

Although Kelantan's backwardness in general may be attributed to a number of interrelated factors such as historical neglect, unfavourable geographical location, lack of exploitation of natural resources, and its predominantly rural characteristics, its poor development performance since independence is attributable to its political difference with the Federal government, for the State was under the opposition Pan Malayan Islamic Party (PMIP) rule since independence until 1978 when the National Front that is in power at the federal level gained control of the State. Thus, for about two decades Kelantan had been left out of the main stream of development.

#### Significant changes and innovations in the policy-making and planning system

The significant changes in development planning which were made since early 1970s include those in respect of the organization and structures of the policymaking system and reflect, among other things, government's realization of the dire consequences which could befall the nation from the neglect or failure to carefully address the disparity problem. Among the key innovations was the creation of new development planning institutions such as the State Development Offices, the SEPUs, and the Regional Development Authorities (RDAs) at the regional or state level, and the Malaysian Administrative Modernization and Manpower Planning Unit (MAMPU) at the federal level. The state level institutions, which began to be established in early 1970s, constitute a means to decentralize the planning function and to enable the States to have a greater participation in national development planning activities. MAMPU, which was established in 1977, has the broad function to modernize and upgrade government planning and administrative machinery at both the federal and the state levels.

The creation of the RDAs was significant in terms of government's emphasis in efforts to reduce socio-economic disparities amongst sub-national regions.

Another key innovation was the development of the National Integrated Data System (NIDAS) which was aimed at, among other things, facilitating the country's development planning incorporate the spatial dimension more explicitly in what were previously largely economic sectoral consideration, and adopt regional development concepts as a tool in the comprehensive planning of projects.<sup>6</sup> The NIDAS project conducted by University Sains Malaysia in the State of Penang and the districts of Kuala Muda, Kedah, and Krian in Perak during 1976-79, was undertaken to demonstrate the technical and economic feasibility of



constructing an integrated data system which could be the prototype of a national integrated data system for administrative planning and monitoring purposes. The NIDAS project then involved three major tasks, namely, data file development and the building of operational data systems, geocoding and the development of a geographical information system, and the development of application programmes using the data bases.

Although NIDAS in name did not progress and continue to exist, the study serves as a basis for the nation's advancement into the realm of computerization and integrated data and information systems. With the extension of the use of the computer to an increasing number of agencies and Ministries at the federal level triggered by the NIDAS study, tremendous improvements have been made in information gathering, communicating, analysis, and storage and retrieval. However, as the system is still based on manual operation at the state level, adequate, accurate, and timely information for policymaking and planning purposes still constitute a major problem.

Mechanisms have also been built into the NPS and the government policymaking system as a whole during the 1970s whereby society has more representativeness in the policy process than before. There is, for example, the Consultative Committee comprising members of the NDPC and representatives of the private sector, which has been established to serve as a forum for continuing interaction between the government and the private sector on development matters. Private sector representatives are also invited for dialogue with the Finance Minister on fiscal and budgetary matters before each year's national budget is finalized and presented to Parliament for legitimation.

Thus since early 1970s, the public policymaking system in Malaysia has rapidly become more differentiated and sophisticated than before, at the same time according those outside the bureaucratic circle wider participation in policy discussion and exchange of views with decision-makers. All in all it is fair to say that the policymaking system as it exists after the May 13th, 1969 incident is far more conducive to providing policymakers and development planners with a broader and clearer perspective of the various social problems.

What is most important in the context of this study is the creation of the RDAs for the implementation of the regional development strategy.

#### Objective of the regional development approach

The importance and emphasis given to the disparity problem after the May 13th 1969 incident and the serious efforts made to resolve it culminated in the introduction of the New Economic Policy (NEP) in the Second Malaysia Plan 1971-1975. The overriding objective of the NEP was national unity. This was to be achieved through the eradication of poverty irrespective of



race and the restructuring of society so that race is not identified with occupation and geographical location.

The regional development strategy is part and parcel of the NEP. The strategy has two basic objectives: first to develop more fully the resources of the regions in the country, and second to bring about a more equitable distribution, among the regions, of the benefits from economic growth.<sup>7</sup> The strategy, simply, is to accelerate the rate of growth of the less developed regions relative to those which are more developed so that the disparities in the standard of living between the regions are narrowed.<sup>8</sup>

#### The Regional Development Authorities (RDAs)

The Regional Development Authorities (RDAs) are development agencies established for the purpose of achieving the regional development objective, in particular, and the national development goal, in general. For development resource allocation and budgetary purposes, the creation of RDAs is a means to legitimize the channelling of extra federal funds to accelerate the development of less developed states. Under the usual federal budgeting system, each of the component states of the Federation receives various annual grants such as capitation grant and road maintenance grants based on certain formulae such as population size and road mileage pertaining to the state. With the creation of the RDAs, certain states which are less developed than others, or which have limited revenue bases become legitimate recipients of additional federal funds channelled through the respective RDAs.

Each RDA has been established under a separate Act of Parliament. Currently there are seven RDAs all of which are under the Ministry of Land and Regional Development. The longest existing RDA is the South East Pahang Development Authority (DARA) which was established on 14th September, 1971 under the Lembaga Kemajuan Pahang Tenggara, Act (No.68\1972). It was followed by the South East Johore Development Authority (KEJORA) on June 1st, 1972 under the Lembaga Kemajuan Johor Tenggara, Act (No.75\1972), the Central Trengganu Development Authority (KETENGAH) on April 6th, 1973 under the Lembaga Kemajuan Trengganu Tengah, Act (No. 104\1973), the South Kelantan Development Authority (KESEDAR) on May 1st, 1978 under the Lembaga Kemajuan Kelantan, Act (No.203\1978), the Kedah Regional Development Authority (KEDA) on May 28th, 1981 under the Lembaga Kemajuan Wilayah Kedah, Act (No.249\81), the Pulau Pinang Regional Development Authority (PERDA) on June 1st, 1983 under the Lembaga Kemajuan Wilayah Pulau Pinang, Act (No. 262\1983), and the JENGKA Regional Development Authority on August 1st, 1983 under the Lembaga Kemajuan Wilayah Jengka, Act No. 285\1983). JENGKA had, in fact, been in existence much earlier as Jengka Development Corporation under the government of the State of Pahang Darulmakmur but was taken over by the Federal government as an RDA with the consent of the State.

It is not within the scope of this study to discuss in detail about every one of the seven RDAs; what is important to note is that each of them has been established under different circumstances, operates within the boundaries of different States, that is, in a specific "area of operation" — except for DARA and JENGKA which operate in one and the same State of Pahang, although each with a different area of operation. The location of the areas of operation of the various RDAs is reflected in FIGURE II. It is also important to point out that since the regions differ from one another in terms of their socio-economic characteristics, the development programmes and projects and the modus operandus of one RDA also differ from those of another.

## THE SOUTH KELANTAN DEVELOPMENT AUTHORITY (KESEDAR)

### Functions and Responsibility

South Kelantan Development Authority (KESEDAR) was established in accordance with Act 203/1978 which received the royal assent on 28th February, 1978. The establishment of KESEDAR was officially announced on 5th March, 1978 by the then Prime Minister of Malaysia at Kampong Gajah, in the District of Tanah Merah, Kelantan.

Act 203 South Kelantan Development Authority entrusts KESEDAR with the following functions:

1. To promote, stimulate, facilitate and undertake economic and social development in the South Kelantan Region;
2. To promote, stimulate, facilitate and undertake residential, agricultural, industrial and commercial development in the South Kelantan Region; and
3. To control and coordinate the performance of the aforesaid activities in the South Kelantan Region.

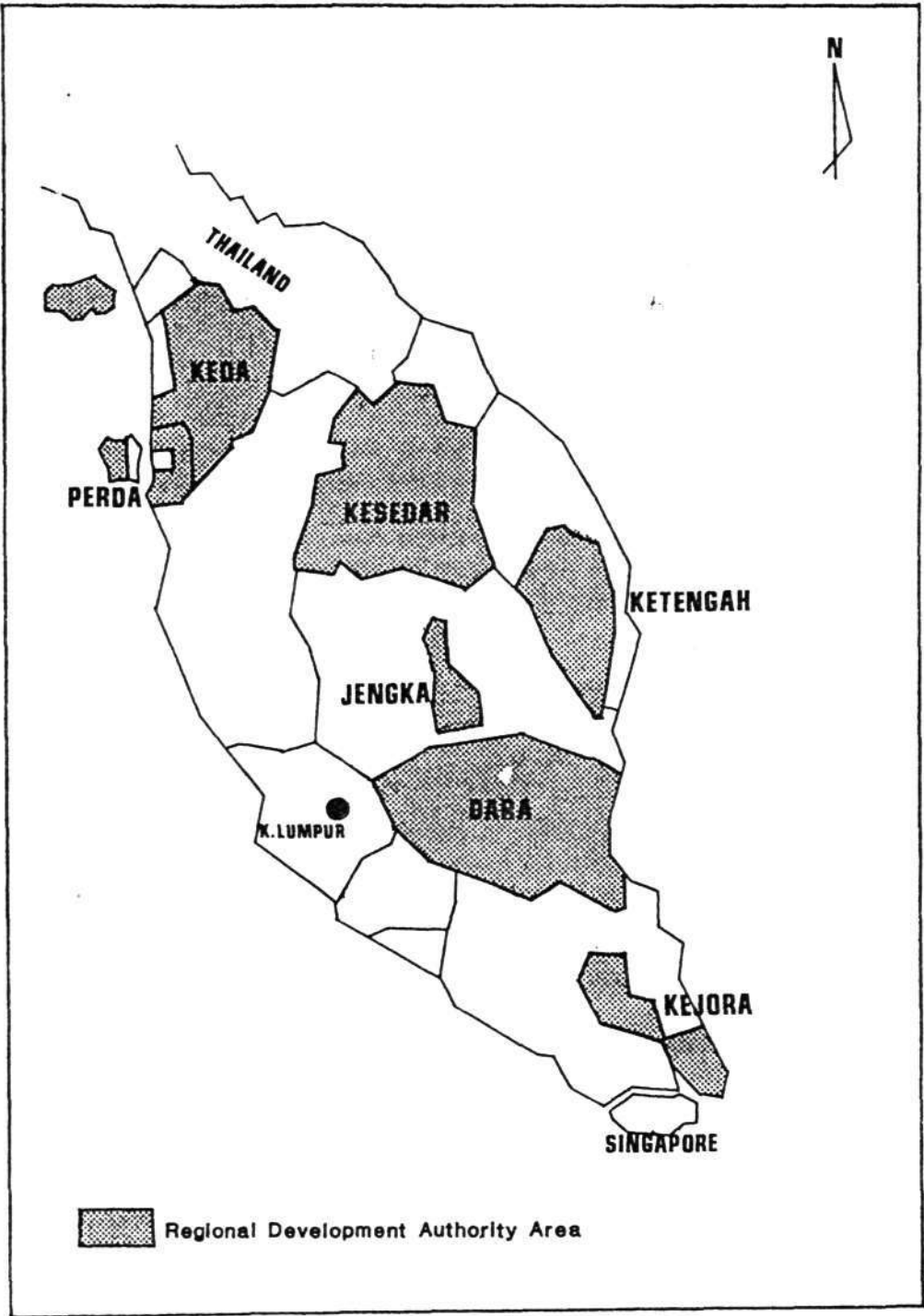
KESEDAR's responsibility under the Act is to develop the South Kelantan Region in a planned, controlled and integrated approach in order, amongst other things, to encourage the migration of people from the relatively densely populated north to the sparsely populated southern part of the State which is richly endowed with natural resources. The development of the Region must ensure maximum benefits to the people.

### Goal and Objectives

KESEDAR's goal is to improve the quality of life and raise the standard of living of the Kelantan people, particularly



FIGURE II: AREAS OF OPERATION OF REGIONAL DEVELOPMENT AUTHORITIES



those in the South Kelantan Region in line with the NEP which is aimed at eradicating poverty and restructuring society.

KESEDAR's objectives may be stated as follows:

1. To increase opportunities for more productive activities in agriculture, manufacturing, forestry, services, and trade and industry;

2. To create employment opportunities in order to reduce unemployment and achieve maximum labour and manpower utilization for the whole State of Kelantan. It has been projected that 20,852 job opportunities will be created in agriculture, construction, trade, services, and industries;

3. To effect orderly migratory movement of population from the north to the southern region of Kelantan;

4. To implement and coordinate electricity and water supply projects so that at least 80% of the population in the South Kelantan Region enjoy such facilities by 1990;

5. To upgrade existing population centers into townships and to develop a new town in the South Kelantan Region. Two existing population centers that will be given special attention are Gua Musang and Jeli;

6. To implement the construction of roads, the upgrading of existing village roads, and the construction of bridges in order to establish a more adequate surface communication network; and

7. To upgrade the standard of at least 14 existing villages in the South Kelantan Region by providing basic facilities and resettling the villagers.

#### KESEDAR's Development Strategies

Towards achieving its goal of raising the standard of living of the people of Kelantan, KESEDAR has formulated the following strategies:

1. In order to increase Bumiputra involvement and participation in commercial and industrial activities, KESEDAR will identify commercial and industrial opportunities which can be taken up by Bumiputra entrepreneurs;

2. In order to improve the quality of life of the people in the South Kelantan Region, KESEDAR will continuously strive to provide more comfortable living accommodations, adequate infrastructure facilities, clean water supply and electricity, and educational, health, and social amenities such as mosques, community halls and playgrounds;



3. Under the programme for redevelopment and relocation of traditional villages, KESEDAR will give emphasis to two important aspects: the provision of basic facilities, and the creation of economic activities through centralized agriculture management and the creation of village industries; and

4. In line with the Nation's Privatization Policy, KESEDAR will assist and facilitate the private sector in undertaking housing projects in growth-centers within the South Kelantan Region.

#### Organizational set-up of KESEDAR

Organizationally, the South Kelantan Development Authority (KESEDAR) consists of two levels; at the higher level, the Board of Directors which actually constitutes "the Authority", appointed by the Minister (currently, the Minister of Land and Regional Development), and at the lower level, the executive staff with the General Manager as Chief Executive. The General Manager is appointed by the Authority with the consent of the Minister.

The Board of Directors consists of a Chairman, a Deputy Chairman, three representatives of the Federal Government, and three representatives of the State Government. The General Manager attends the meeting of the Board of Directors ex-officio, with no voting power. Under the KESEDAR Act, the Authority may also appoint one (or more) Deputy General Manager with the consent of the Minister. Currently, the General Manager has two Deputies.

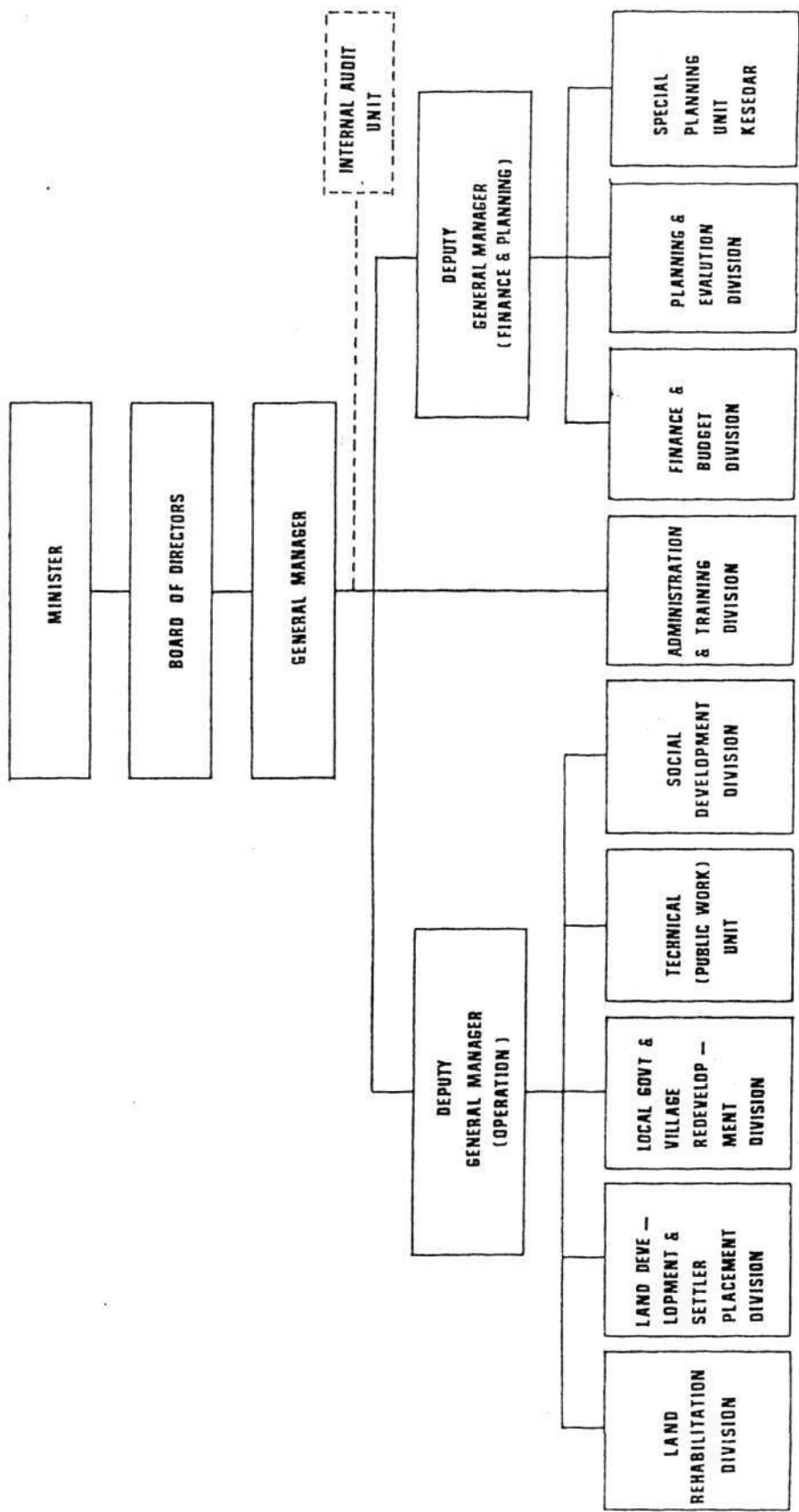
At the lower echelon of the executive level, the personnel are divided according to specialized Divisions and Units. Each Division is headed by a Manager appointed by the Chairman of the Board; the organizational structure is reflected in Figure III.

#### The South Kelantan Region

A region for regional development may be defined in various ways. The most important criterion in this context, however, is that the regional framework conceptualized and physically defined should facilitate the achievement of the objectives spelled out for regional planning and regional development of the region in particular and the country as a whole.

When the regional development planning approach was first adopted, Malaysia was delineated into six regions, "as framework for analysis, both inter and intraregionally", namely Northern, Central, Eastern, Southern, Sabah, and Sarawak. 9 Each

FIGURE III: ORGANIZATION CHART OF KESEDAR (1988)





of these regions consists of an entire state or a group of neighbouring states. The group of states making up a region, also referred to as a multistate or suprastate region, is based on more or less uniform stage of development and have similar resources and economic activities. Hence, the Northern Region comprises the states of Perlis, Kedah, Pulau Pinang and Perak; the Central Region consists of the Federal Territory of Kuala Lumpur, Selangor, Negeri Sembilan and Melaka, and the Eastern Region is made up of the States of Pahang, Trengganu and Kelantan. On the other hand, the single-state regions of Johore, Sabah, and Sarawak, are based on the criteria of their large physical size, location, and unique socio-economic characteristics. The six regions are as shown in Figure IV.

With the establishment of the RDAs, however, the earlier regional framework has become less significant for subregional development planning, for each RDA is assigned a specific region or "area of operation" within the geographical boundaries of the State concerned.

The South Kelantan Region, as shown in Figure V, is located in the southern part of the State of Kelantan, bordering Thailand in the north, and the States of Perak in the west, Pahang in the south, and Trengganu in the east. It covers an area of approximately 1.24 million hectares which is about 83.0% of the entire land area of the Kelantan State. It comprises the districts of Kuala Krai (294,089 hectares), Gua Musang (810,986 hectares), Jeli (128,130 hectares), and part of Tanah Merah (3,826 hectares). According to the 1980 census, the population of the South Kelantan Region accounts for about 16% of the total population of Kelantan. In terms of population distribution, the Region has a density of 12 persons per sq. km. as against a density of 60 persons per sq. km. of the State.

The Region is mountainous and nearly 50% of the area has slopes of 25 degrees and above and only about 10% with slopes of less than 15 degrees. The Malaysia Geological Survey Department has identified a number of areas within the Region which contain deposits of gold, manganese, copper, zinc, lead, iron and tin.

#### KESEDAR's development programmes and projects

To achieve its development objective, KESEDAR has formulated six programmes namely Land Development and Settlement Schemes, Urban Development, Development of Traditional Villages, Land Rehabilitation, Infrastructure Development, and Investment.

#### Land Development and Settlement Schemes

This is a major programme introduced by KESEDAR. It is based on the Ala-Kelantan KESEDAR concept where settlers are brought in right from the early stages of farm development. Under this concept, only the major works are contracted out while other



FIGURE IV: THE SIX REGIONS AS FRAMEWORK FOR ANALYSIS

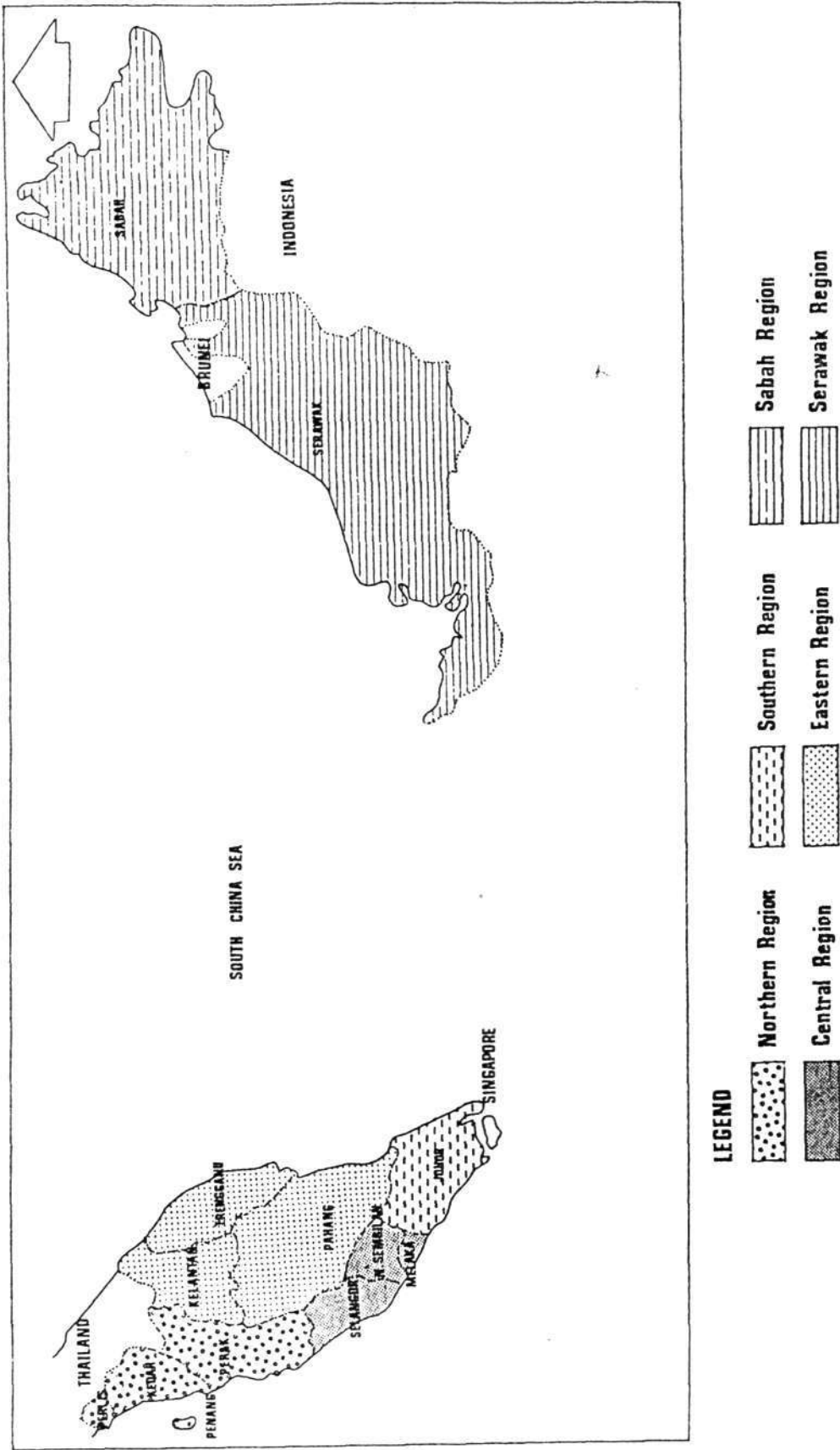
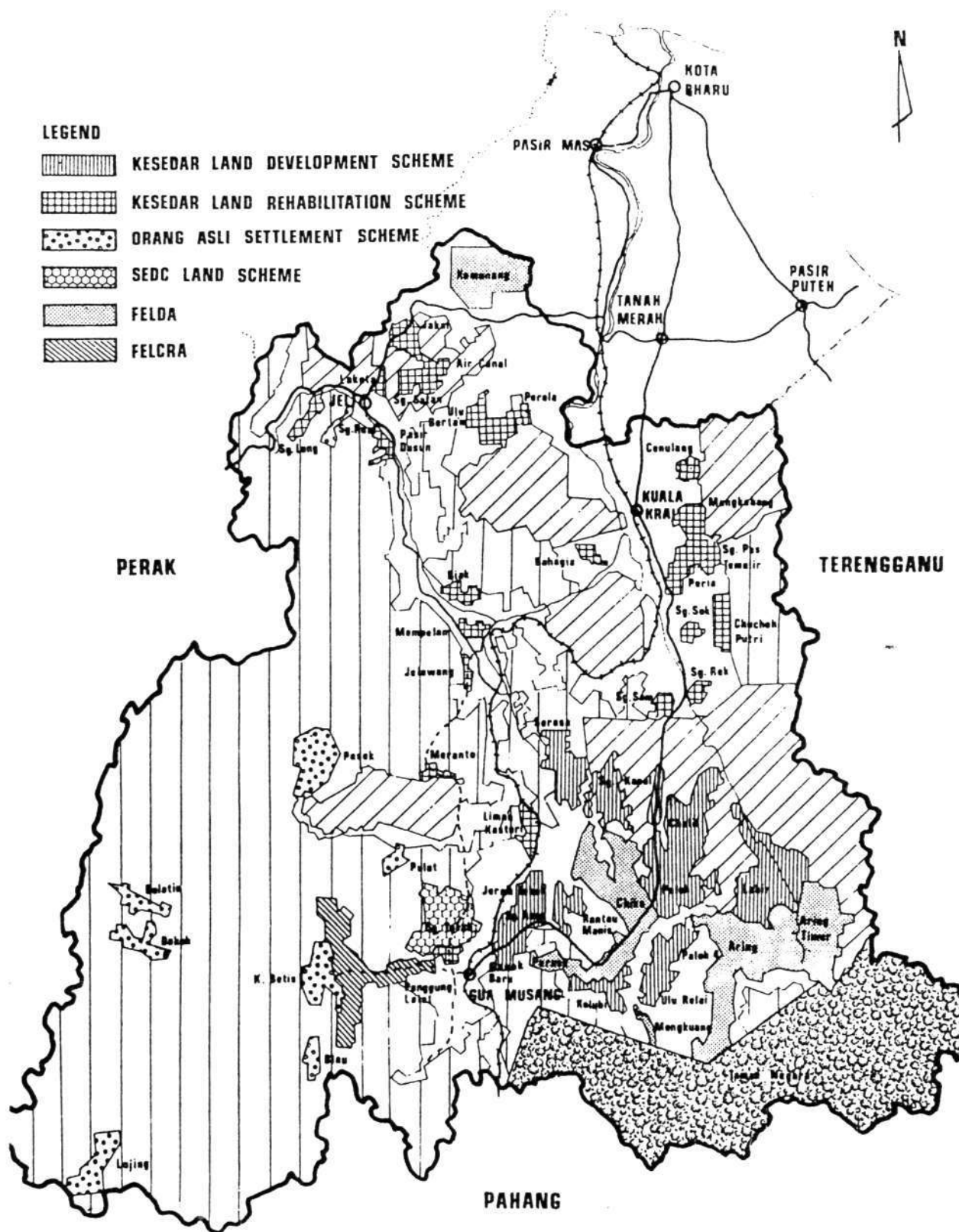


FIGURE V: THE SOUTH KELANTAN REGION





works are undertaken by the settlers themselves. The main crops are rubber and oil palm.

In essence, this concept is a marriage between that of the Federal Land Development Authority (FELDA) and the State Land Development Board of Kelantan (SLDB). From FELDA its modern management style and scientific approach to agronomic practices are taken while the total involvement and self-reliance aspect of the settlers are derived from the SLDB. Hence, in the implementation of this programme, the principal objective is to create opportunities for the landless to become settlers and farm the land and derive maximum benefits, as against the provision of wants such as of those who want land just for the sake of owning it.

### Urban Development

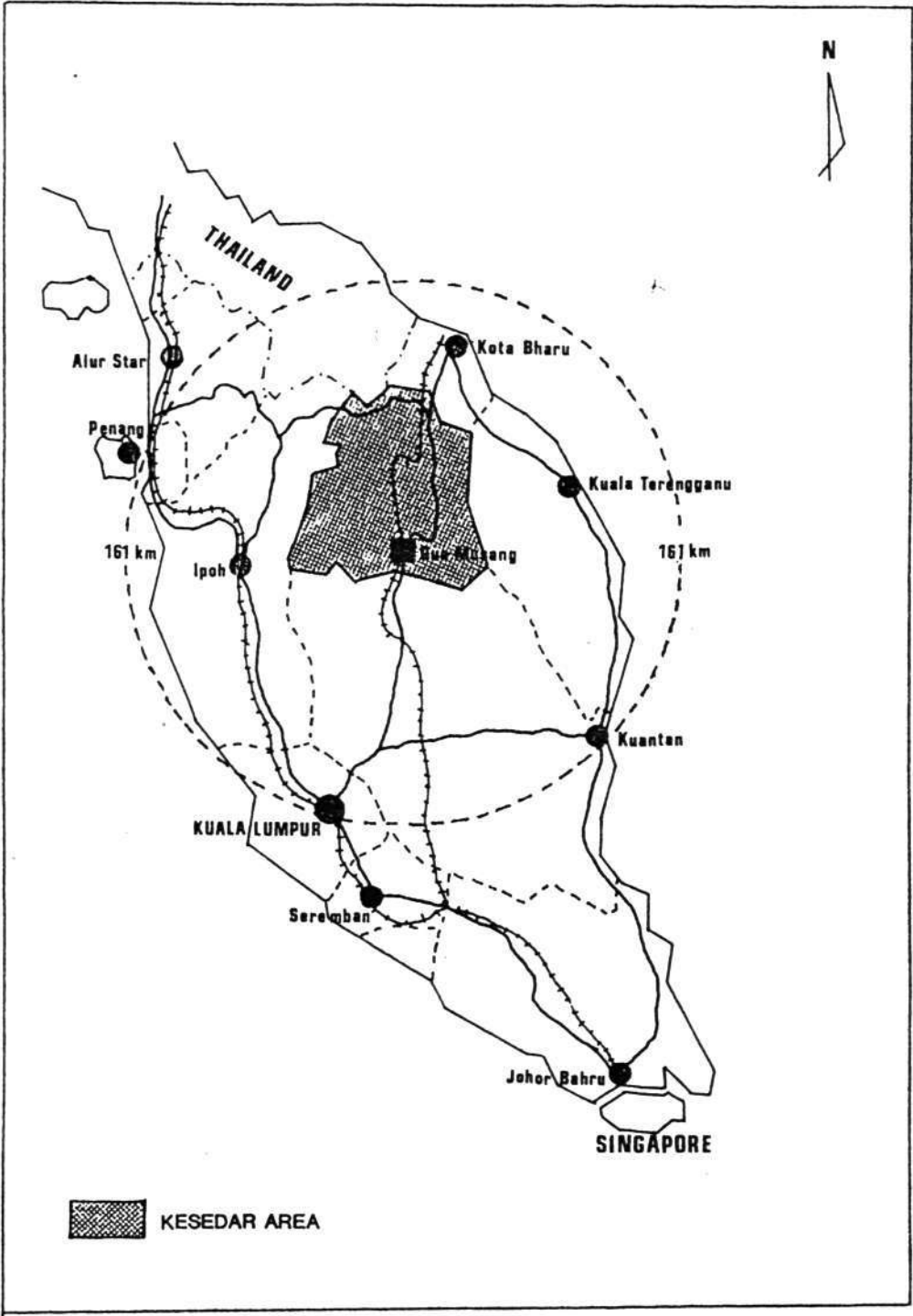
The South Kelantan Region is an area with existing population centers. KESEDAR's efforts are, therefore, to improve and raise the standard of living of the people in the region. However, as the region is generally sparsely populated, and as the northern part of the State outside the region has a relatively dense population, migration of population from the north into the South Kelantan Region is also to be encouraged.

In order to attract inter-regional migration, the planning for this development programme emphasizes the creation of economic activities in the South Kelantan Region as well as the upgrading and expansion of selected existing towns including the provision of urban facilities and amenities; in this programme, KESEDAR is also in the process of developing one new town.

Gua Musang, an existing settlement, has been designated as the Regional Growth Center and it is where KESEDAR headquarters is located. The reasons why Gua Musang has been chosen to be the regional center are as follows:

1. It is ideally located with close proximity to all the major towns in Peninsular Malaysia, as reflected in the location map in FIGURE VI;
2. It is located at the crossroads of the major arteries of Malaysia namely the Kuala Krai-Gua Musang highway, the Gua Musang-Kuala Lipis road, and the Gua Musang-Jeli (via Dabong) road which, at the time of this writing, is under construction; and
3. It has a rich hinterland suited for agriculture and for the development of agro-based, forest-based and resource-based industries.

FIGURE VI: LOCATION MAP OF GUA MUSANG





### Development of Traditional Villages

There are about 200 traditional villages in the South Kelantan Region. Right from the beginning, KESEDAR realizes the common woe of national development whereby these villages are often left out from the main stream of development. Not wanting this to happen in her region, KESEDAR started this programme right from the second year after its establishment. The objective of the programme is to raise the standard of living of the people and to provide basic facilities and amenities such as roads, schools, health clinics, electricity and water supply. Initially, four groups of villages are being developed.

It should be noted that the development is not confined to the provision of basic facilities and amenities alone but also includes income-raising projects based on the economic viability and potentials of the villages concerned.

### Land Rehabilitation Programme

The absorption of the 24 land schemes previously under the Kelantan State Land Development Scheme into KESEDAR in June, 1983 has increased the functions and responsibility of KESEDAR. This programme entails the rehabilitation and replanting of a total of 31,344 hectares of poorly developed and not so well maintained rubber plantations and orchards in the 24 land development schemes.

This programme represents the most challenging programme by KESEDAR. This is so, because more than 50% of the original 7,200 settlers refused to acknowledge the role and function of KESEDAR. This has resulted in more emphasis being given to social development activities.

### Infrastructure Development

The main activity of KESEDAR under this programme is the construction of roads and bridges, water supply systems, and to a lesser extent, the carrying out of supplementary activities to those of other agencies which are responsible for the construction of health facilities, schools and electrification projects.

### Investment Programme

The Kelantan State Economic Development Corporation (SEDC) was given the responsibility of promoting and developing the investment sector for the whole State.

KESEDAR's role in this programme is to identify areas suitable for industrial estates for the SEDC to develop. In order to help promote these areas KESEDAR provides infrastructures such as roads and other facilities.



Major problems faced by KESEDAR in fulfilling its role as a Regional Development Authority

In the history of Kelantan's development planning, the year 1978 is a watershed, for it marks the beginning of the State's coming into the main stream of development after the National Front gained control of the State from the PMIP in that year. Under the PMIP rule for the previous 18 years, Kelantan had been more or less, in a state of lull in terms of socio-economic development. The then new (National Front) government, therefore, had to make up for the time lost under the PMIP in order to convince the populace that development was meant for the whole population and all the States of the Federation barring obstacles from the opposition party in power.

Thus, KESEDAR had to be established in a hurry and to start operating immediately. The sense of urgency is reflected in, and has adversely affected several aspects of the organization and functioning of the Authority. There was no time for KESEDAR to have a master plan and, instead, has to make do with an indicative plan. A considerable number of personnel had been recruited into KESEDAR without proper qualification. Shortcomings such as these tend to deprive the Authority of the vigour and resilience so essential for the efficient and smooth undertaking of socio-economic development in so vast a region that has been entrusted to KESEDAR.

KESEDAR's approach to land development — the Alakelantan KESEDAR concept defined earlier — also reflects the deep concern of the government to satisfy the people's hunger for land in the shortest time possible. Thus, instead of making the selected settlers wait for a period of three to four years before entering the land schemes as is the practice in FELDA land schemes, KESEDAR land development scheme settlers were required to advance to the frontier almost as soon as the land area for each scheme has been delineated. As fate would have it, however, this approach has turned out to be a positive one and has been announced by no less than the Prime Minister himself to be worthy of emulation. The fact is that by undertaking the preliminary works such as the felling of trees and the clearing of jungle, as well as the building of settler huts themselves, the settlers are exposed to the testing hardships right from the beginning, and passing the test constitutes an indication that the settlers will permanently remain in the schemes. Moreover, a major portion of the development allocation goes direct to the settlers in the form of wages rather than to the contractors or "middlemen".

Generally, however, as a result of its hurried establishment, KESEDAR is still wanting in a number of aspects of its existence and these must be rectified or improved in order to enable it to play its role more effectively and efficiently; the lack of a good information system for planning, implementing, and evaluating its development programmes and projects is an example.



## DATA AND INFORMATION REQUIREMENTS

### Data and information requirements for development planning

Development planning may be described as a continuous spiralling process which involves the planning, implementation, and evaluation of programmes and projects for improving the standard of living and the quality of life of the people.<sup>10</sup> In going through the process, we not only need to know where we are going but also where we are, and even where we have been.

Information about the past is important and useful as a guide and lesson for stepping out into the future. Equally important is information pertaining to the present; planners and policymakers have to take stock of the prevailing situation and circumstances, and of the resources available including material and manpower, for making decisions, setting targets, and projecting what may be achieved through the mobilization of those resources. They also need information to determine whether the result of the implementation of programmes and projects in the plan would achieve the stated objective(s). In the ex post evaluation stage, adequate and accurate information is essential to generate reports, be they for necessary actions in making modifications and adjustments to current programmes and projects or to serve as guide for future planning.

Thus, all development planning agencies require data and information to facilitate them in undertaking their planning activities. The type of data and information required depends on the type of planning activities being carried out. What is important, however, is that the data and information must be adequate, accurate, and timely. Excess information may overwhelm and confuse the planner and result in a waste of time and money. Inadequate and inaccurate information is bound to lead to wrong assumptions and conclusions, and thus distort plans. The use of outdated information will result in out-of-date and irrelevant plans.

### Data and information requirements in KESEDAR

As stated earlier, the South Kelantan Region which is entrusted to KESEDAR is about 1.24 million hectares. The development of this vast region involves numerous agencies including KESEDAR which is given the responsibility as a coordinator. Apart from coordinating the development activities of other agencies, KESEDAR also plans and implements its own development programmes and projects which are funded by the Federal government. A major task that KESEDAR has to perform in playing its role for the development of the region is the preparation of quarterly and annual reports on the progress of all development projects within the region, which are required to

be presented to KESEDAR Board of Directors for approval and subsequently submitted to the Federal government through the Ministry. The performance of this task naturally entails gathering and analysing of a tremendous amount of data and information from various sources.

Similarly, a tremendous amount of data and information are required for the preparation of KESEDAR's annual development and operating budget documents, as well as for its day-to-day management and administration of personnel and material resources. For the day-to-day management and administrative function, the need for well-organized and computerized data and information systems is rather great because KESEDAR has a fairly large number of personnel (about 750 at the time of writing, with about 200 more posts still vacant), not to mention the almost 10,000 settler families, and the large numbers of various kinds of material resources which have to be managed and accounted for at KESEDAR's headquarters in Gua Musang as well as at its regional and scheme offices in the various districts.

In more specific terms, the data and information required by KESEDAR for the performance of its development planning tasks as well as its day-to-day management and administrative activities may be categorized as follows:-

1. Data and information for project management;
2. Data and information for personnel management;
3. Data and information for financial management and accounting;
4. Data and information for inventories and management of stores;
5. Data and information on settlers;
6. Data and information for the management and maintenance of vehicles;
7. Data and information on land; and
8. Data and information for miscellaneous uses.

#### DATA AND INFORMATION GAPS

The problem faced by KESEDAR related to data and information requirements is not purely a problem of lack of, or absence of data and information. More than just a problem of information gaps, it is also, in many cases and very often, a problem of delay in getting them, as well as the lack of capacity, skill, and knowledge to organize the gathering, analysis, and presentation of data and information in the manner and form suitable for use for various purposes such as planning,



evaluation, reporting, accounting, and providing information for the general public. Such shortcomings arise because of two major factors; firstly, data and information required by KESEDAR are gathered from several sources \_ from surveys and researches carried out by its own staff, from the Department of Statistics which is specialized in conducting surveys and researches for the purpose of providing data and information to government departments and agencies, as well as to the general public, and from specific agencies involved in the development of the region. Secondly, the storage, retrieval, and analysis of data and information are still done in the traditional way or manually due to the absence of computerization, and the lack of its corollary requirements i.e. specially trained information systems personnel. As such, report-writing and coordination tasks undertaken by KESEDAR, as well as its routine planning and evaluation activities are often deficient in both substance or contents, and timeliness.

In actual fact, existing sources of information available to KESEDAR for planning and coordination purposes could be said to be sufficient, although not quite adequate. This is evident from the following lists of collections most of which are already in KESEDAR's possession:-

Study reports on the State of Kelantan

- i) Kelantan Regional Planning and Development Study by Robert R.Nathan, 1973.
- ii) Kelantan Urban Development and Industrial Priority Study by Cansult, 1977.
- iii) Kelantan River Basin Study by Enex, 1977.
- iv) Feasibility Study: Kuala Krai - Gua Musang - Kuala Lipis Highway Project by Enex in collaboration with Esams (Malaysia) , 1977.
- v) Towards an Indicative Strategy for South Kelantan by Rekarancang Sdn. Bhd., Project and Development Planners, 1978.
- vi) Detailed Reconnaissance Soil Study by Lim Jit Sai and A.H. Basit, Yew Hwee Hwang, 1980.
- vii) Natural Resource Study Pergau Galas Region by Anzdec Ltd., Agricultural and Forestry Consultant, 1980.
- viii) Gua Musang Structure Plan by Unit Perancang Khas, KESEDAR ,1980.
- ix) Indicative Strategy for South Kelantan: Town Hierarchy Study by Werner Hewberer, Urban Regional Planner, Unit Perancang Khas, KESEDAR, 1981.

- x) Land Use and Forest Management Strategy for Southern Kelantan by Halcrow - ULG Limited, Buvdevop Park, Swindow. Wilts, England, 1981.
- xi) Regional Transportation Study for South Kelantan by Mohsin A. Muttaqui, Unit Perancang Khas, KESEDAR, 1981.

#### Town\ Village Settlement

- i) Pelan Struktur Bandar Baru Chiku (Structure Plan of Chiku New Town) by Unit Perancang Khas, KESEDAR, March, 1984.
- ii) Pelan Pembangunan Gua Musang (Gua Musang Development Plan), March, 1984.
- iii) Indicative Strategy for South Kelantan, Town Hierchy Study, March, 1984.
- iv) Pelan Struktur Bandar Baru Jeli Tahun 2000 (Jeli New Town Structure Plan Year 2000), January, 1982.
- v) Kajian Pembangunan Kawasan Dewan Undangan Negeri, Manik Urai (Development Study of State Legislative Area of Manik Urai), July, 1983.
- vi) KESEDAR, Laporan Indicative Regional Plan, KESEDAR, July, 1984.
- vii) Laporan Pemulihan Kampong-kampong Tradisional KESEDAR, (KESEDAR Traditional Villages Rehabilitation Report), USM-KESEDAR 1983.

#### Agriculture

- i) Programme for the Rehabilitation and Upgrading of Dusun Lots in KESEDAR Area - Project Identification Brief, KESEDAR-UPEN, 15th June, 1986.
- ii) Introduction of Sheep Under Rubber (Project Identification Brief), KESEDAR-UPEN, 21st June, 1986.
- iii) Rehabilitation and Development of Fish Ponds in KESEDAR Area (Project Identification Brief), KESEDAR-UPEN, 21st June, 1986.
- iv) The Kelantan River Basin Study, Tonkin and Taylor, Consulting Engineers of ENEX of New Zealand, 1977.
- v) Golok River Basin - A Socio-economic Study, Socio-Economic Research Unit, Prime Minister's Department, Kelantan, December, 1984.



- vi) Laporan Penyiasatan Kajibumi: A Geological Investigation on the Lime Stone Hills Near Dabong, Ulu Kelantan, Kelantan, by Chu Ling Heng, 1976.
- vii) Development Possibilities For Plantation Crops in Kelantan, UPEN-UNDP, April, 1987.

#### Geological<sub>11</sub>

- i) A Preliminary Assessment of the Mineral Potential in the proposed Kuala Yong Dam Reservoir Area, Upper Sg. Pergau, Kelantan, by Teoh Lay Hock, Abdul Halim bin Hamzah, and Lee Ah Kow, PJK, March, 1987.
- ii) Kajian Potensi Batukapur Kawasan Gua Musang (Study on the Potentials of the Limestone Area of Gua Musang), Kelantan, by Abdullah Sani b. Hashim, December, 1987.
- iii) Penyiasatan Air Tanah Di Kampong Bukit Bunga, Tanah Merah, Kelantan, (Investigation on Underground Water at Kampong Bukit Bunga, Tanah Merah, Kelantan), by Mohd. Nazam Awang, 1985.
- iv) Summary of the Industrial Mineral Resources of Kelantan, by P.C. Aw, 20th September, 1984.
- v) Notes on the Mineral Resources of Kelantan, by P.C. Aw, 1984.
- vi) Gold Mineralization & Prospects in Kelantan, Peninsular Malaysia, by Teoh Lay Hock, Lee Ah Kow, PJK, and Foo Khong Yee, 1987.
- v) Limestone Resources of the Sg. Terah - Gua Madu Area, Ulu Kelantan, by Y.H. Ong, February, 1982.
- vi) Test Report of Raw Materials Supplement Part of the Feasibility Study for the establishment of Integrated Cement Factory in Kelantan, Malaysia, JICA, 1981.
- vii) Cement Raw Materials in the State of Kelantan, by P.C. Aw, 1980.

#### General

- i) Kelantan Regional Development Programme Identification of Project Proposals, 18th September, 1985.

Apart from the lists given above, there are hosts of other studies and reports on development potentials of Kelantan which are available. Therefore, there is no shortage of data and information which could be used by KESEDAR for regional development planning of the South Kelantan Region. What is

lacking is appropriate computerized information systems and technology, including trained personnel, to sort out, organize, and store such data and information in forms suitable and ready to be retrieved for planning purposes.

Currently, each of the 11 divisions of KESEDAR operates on the basis of manual data and information systems which are time consuming, and, therefore, inefficient. The two PCs currently being used, are inadequate to meet the demands of modern management and the volume and variety of tasks which have to be performed. There is, therefore, a great need for KESEDAR to up-date and computerise its data and information systems according to the categorization listed earlier.

#### CHANGES OR IMPROVEMENTS FORESEEN IN REGIONAL PLANNING WITH THE INTRODUCTION OF INFORMATION SYSTEMS\INFORMATION TECHNOLOGY

##### Overall changes in regional planning for the South Kelantan Region

The adoption of the regional planning approach since the early 1970s has, to a certain extent, decentralized the planning function from planning ministries and departments at the federal level to various state level agencies which came to be established for that purpose. Thus, with the creation of the State Development Offices and the SEPUs in the various states, as well as the RDAs in the various regions of the country, the development actions of planning, evaluation and implementation have become more thorough and comprehensive, and the process of decision-making for development purposes, more enhanced.

The decentralization of the planning function also constitutes a move towards a more participative approach to planning, particularly the development planning for the regions. This move is of mutual advantage to the federal and state governments. For the state, it facilitates greater articulation of development requirements of the state as a whole as well as of specific areas within the state boundaries for budget consideration by the federal government. In this context, the newly created state level agencies, particularly the RDAs, serve as sources of information in support of state development proposals for federal budget consideration.

As stated earlier, the creation of the RDAs provides a means to legitimize the channelling of extra federal funds to accelerate the development of the less developed states; through the RDAs, rationales for state requests for extra funds are formulated and submitted to the federal government for legitimation. It is basically for this purpose that RDAs need to adopt good information systems and technology. As they exist today, the RDAs, in particular, and other state level development agencies, in general, are inadequately equipped in this respect. Thus, not only are there problems such as delay in reporting and shortcomings in implementation and evaluation, but also problems

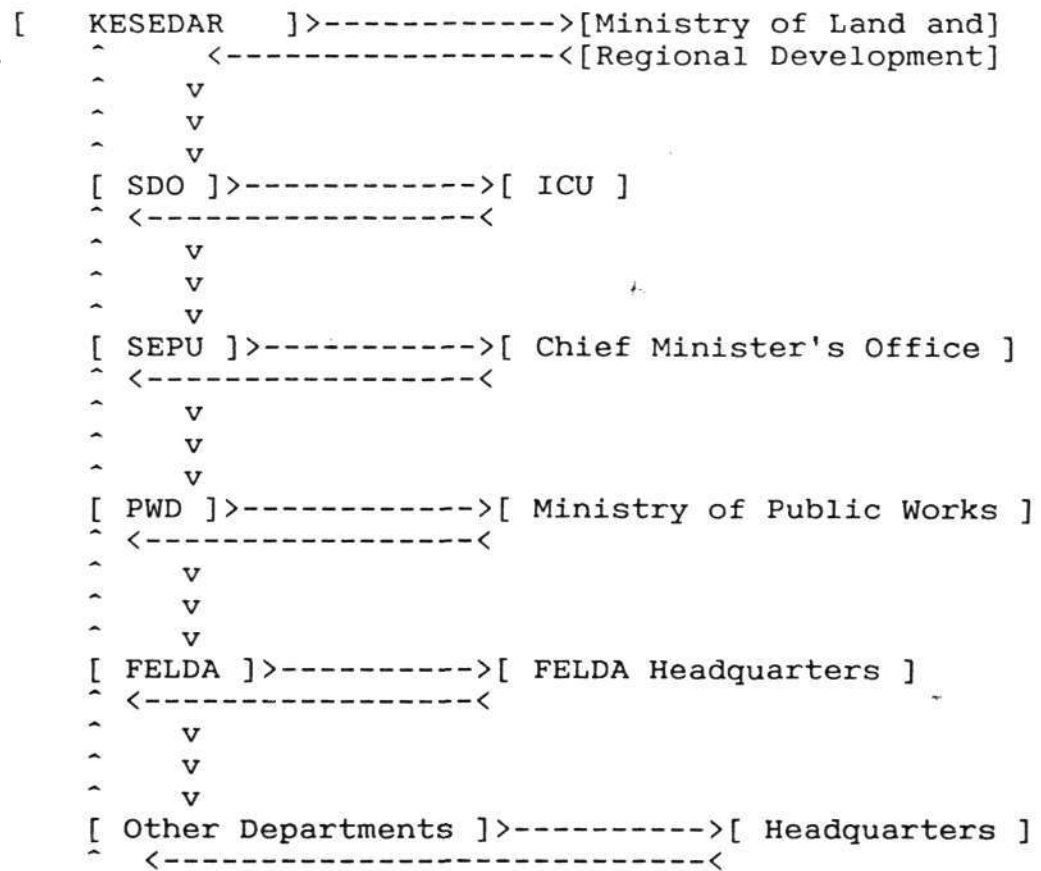


of coordination and lack of consensus among agencies on data and statistics.

The introduction of information systems and information technology for regional planning will help resolve such problems as mentioned above; specifically, the following changes or improvements are foreseen for the South Kelantan Region:

1. An integrated information network among the various state level agencies could be established where none exists before. This network could link KESEDAR with the State Development Office, the (Kelantan) SEPU, and the various agencies involved in regional development activities in the South Kelantan Region, such as FELDA, Public Works Department, and the National Electricity Board, which KESEDAR has to coordinate and report on. Basically the proposed network could be set-up on the basis of the model shown in Figure VII.
2. The establishment of the integrated information network will enable KESEDAR, as a coordinating agency, to have an easy access to information on the development activities of the other relevant agencies for monitoring and reporting purposes. This will not only reduce delay and enable KESEDAR to prepare and submit the quarterly and annual reports to the Ministry on time, but will also facilitate KESEDAR in synchronizing its own development programmes and projects with those of the other agencies avoiding contradictions and unnecessary duplications.
3. The network will also enable interagency monitoring of projects to be carried out with ease. Similarly, the headquarters or ministries at the federal level to which the respective state level agencies are responsible will be able to easily access information from other agencies in the network through their corresponding state-level agencies. In other words, the task of monitoring and coordination by, and among, all the related Ministries, departments, and agencies at both federal and state levels will be much easier.
4. Each of the ministries, departments, and agencies participating in the network will be able to establish its own data-bank for its own planning purpose and to serve other agencies thereby paving the way to greater efficiency and effectiveness in development planning for the regions and for the whole country.

FIGURE VII: THE PROPOSED INFORMATION NETWORK 12



LEGEND: SDO = State Development Office

ICU = Implementation Coordination Unit (in the Prime Minister's Department) to which the SDO is responsible

PWD = Public Works Department

FELDA = Federal Land Development Authority (an agency responsible to the Ministry of Land and Regional Development)



Changes or improvements forseen in regional  
planning process and practice in KESEDAR

Presently, due to the lack or absence of computerized information systems in departments and agencies in the region, the tasks performed by KESEDAR as coordinator, facilitator, and promoter, as well as implementor for regional development of the South Kelantan Region prove to be a heavy burden. For coordinating and reporting purposes, KESEDAR now has to depend on postal despatch or verbal communication of information from the other departments and agencies concerned.<sup>13</sup> Quarterly coordination meetings are also held at KESEDAR headquarters in Gua Musang chaired by KESEDAR's chief executive (General Manager) and attended by representatives of the various departments and agencies, to monitor the progress of project implementation and to thrash out problems.

This mode of coordination has proved to be rather uneconomical and also frequently gives rise to delays. This is mainly because most of the other agencies and departments are located in the state capital in Kota Bharu which is more than a hundred miles from Gua Musang. The delays are also due to the low level of computerization of the departments and agencies. Under such circumstances, KESEDAR has almost invariably to hurry through the process of preparing the reports at the expense of quality of reporting, or alternatively, to be late in submitting the reports to the Ministry.

It is forseen that when information systems and information technology are introduced, such existing problems will be resolved or minimised, and the quarterly coordination meetings could be held less frequently, thus saving cost and time. It is also envisaged that KESEDAR's Planning and Evaluation Section will have more time and personnel resources to gather data and information relating to development potentials and resources of the region, thus enabling KESEDAR to plan for the development of the South Kelantan Region more efficiently and on a longer-term basis. KESEDAR will then also be in a better position to woo potential private sector investors into the region by disseminating adequate and accurate information and providing assistance in setting up their factories and plants. The production and marketing of agriculture produce from KESEDAR's land schemes could also be scheduled and handled more efficiently by using the information systems and technology to gather, store, and analyse data and information relating to agricultural requirements and market trends.

PLANNING AREAS NECESSITATING THE USE OF INFORMATION SYSTEMS

In the context of development planning for the South Kelantan Region which has been entrusted to KESEDAR, there is indeed a necessity for the adoption of computerized information systems by virtue of the following reasons:

1. The region is vast and has great potentials for development;
2. The number of agencies involved in the implementation of development projects within the region, which KESEDAR has to coordinate and to report on is quite big;
3. Mineral and other natural resources are generally known to be available within the region but whether they are available in viable quantities is yet to be ascertained; detailed information must be gathered and disseminated to potential investors in order to attract them to invest in the region in line with the nation's privatization policy;
4. As pointed out earlier, KESEDAR has been entrusted with a multi-faceted role; apart from promoting, facilitating, and coordinating development activities of other agencies, KESEDAR also implements, monitors, and manages its own development programmes and projects with emphasis mainly on land development involving major crops (rubber, oil palm, and, to a minor extent, cocoa). To ensure maximum output from these agricultural activities, KESEDAR must have adequate and accurate information on soil suitability, geographical location and sizes of land areas to be developed, as well as their topographical and climatic conditions;
5. In its land schemes, KESEDAR has not only to reckon with elements of nature but also with the most difficult task in development planning and implementation, that is the changing and shaping of human attitude. To facilitate the performance of this task, a good data and information system on the background and behavioral aspects of settlers and their dependents is essential; and
6. KESEDAR has a large personnel establishment which necessitates a good personnel information system for management. KESEDAR also handles various loan accounts of nearly 10,000 settlers and the marketing of oil palm FFB and rubber from its 8 land development schemes. For these and other multifarious and voluminous record-keeping that need to be done, the ultimate answer for an efficient management and administration of regional development for the region could only be good information systems and up-to-date information technology.



## DEGREES TO WHICH INFORMATION SYSTEMS\INFORMATION TECHNOLOGY HAS BEEN ADOPTED IN PLANNING PRACTICE

### An overview of information systems and technology currently in use nation-wide

It has been an accepted fact now that governments, at the federal and state levels, use Information Systems to improve service to the public. The most advanced in this respect is, of course, the Federal government, particularly in the office of the Prime Minister, the EPU under the Prime Minister's Department, and other Central Agencies such as the Federal Treasury and certain departments under the Federal Treasury especially those with manually unmanageable magnitude of record-keeping and accounting functions such as the department of the Accountant General, the Department of Inland Revenue, and the Customs and Excise Department.

Among the States, the most advanced in information systems usage is the State of Selangor with plans to focus on Management Information Systems (MIS) so that "red tape" is reduced and decision-makers can easily access information on every aspect of the State in order to make informed decisions on its development. In fact all state governments in Malaysia are computerized but only at operational levels. In some States, all sorts of packages and applications are implemented and run such as Low-cost Processing, Statistics, Project Monitoring, Quit Rent, Protocal, Squatters, Socio-economic, Employment, Village/District Information, and Municipal Project Monitoring.

Governments' commitment to, and acceptance of Information Systems and Information Technology is reflected in the following statement,

The use of computers and other electronic technology in the planning and implementation process will be further intensified. The use of these facilities will allow for the reduction of costs and delays through the setting up and use of common data collection, processing and dissemination centers.<sup>14</sup>

This commitment springs from the realization that in the past decades development projects had often ended with shortfalls due to poor statistical data-bases, lack of administration and inadequate feasibility studies. The control and monitoring of development projects were done by several agencies simultaneously resulting in duplication and redundant processing. Hence, the introduction of NIDAS in the early 1970s aimed at linking various government information systems into one information network.



The springboard to nation-wide computerization and integrated information systems in government departments and agencies involved in development projects was the special Cabinet Committee set up in 1981 which recommended that the government ministries and departments, with the help of the ICU, design a complete information system for the purpose of planning and implementing development projects. The Committee also proposed that all 'Central Agencies' information systems for controlling the implementation and evaluation of development projects, be integrated into a common information system so that those involved in the projects could have direct and easy access to project information.

In accordance with the recommendation and proposal of the Committee, ICU developed SETIA, an acronym for the agencies involved in the project System Economic Planning Unit, Treasury, Implementation Coordination Unit and Accountant General's Department. SETIA is an integrated information system that can be used by all government agencies for planning and implementing development projects. SETIA carries out all procedures of the Federal Government related to project creation, budget allocation, and physical as well as financial progress reporting on federally funded development projects. SETIA represents the first attempt at integration of the already existing information systems namely, the Project Planning System of the EPU, the computer-based Information System of the Treasury (SIMKOM), the Project Monitoring System (PMS) of the ICU, and the Federal Accounting System of the Accountant General's Office. Information from these respective agencies are processed and integrated at ICU to form the SETIA data-base.

The installation and use of SETIA saw an end to the gruelling and time-consuming manual procedures of information gathering and analysis which development ministries and agencies at the federal level had to follow for project creation, monitoring and evaluation. SETIA shortened and simplified the process, thus increasing efficiency in all stages of the development planning actions. However, at the sub-national levels, that is at the state and regional levels, a considerable number of agencies are still ill-equipped in terms of information systems hard-ware and trained personnel for efficient performance of their planning actions and functions. In order to fall in line with, and be able to compliment and fulfil the requirements of ministries and agencies at the federal or national level, development agencies at the sub-national levels, therefore, need to review their respective situation and state of the art, and identify and fulfil the necessary requirements.

In this context, the most important criterion for consideration is cost-effectiveness. Installation and usage of advanced information systems and technology is costly and should be based on acceptable and reasonable justifications. The agency concerned must, therefore, assess its planning process and workload and establish that there is indeed a need for advanced



information systems and technology before proceeding with installation. In this connection it is important to note that federally funded agencies including RDAs must receive approval from the Federal government before installing computerized information systems; currently, such requests must be prepared with the assistance of, and channelled through, MAMPU for consideration and decision.

#### The state of the art in RDAs

Based on a quick survey made at the time of writing, it was found that most of the RDAs were only minimally equipped with computer hardware and several RDAs did not have any personnel trained in information systems. Details of the findings of the survey are presented in Table II.

The findings indicate that KESEDAR was way behind most of the other RDAs in terms of computerization and personnel trained in information systems. Considering the fact that KESEDAR's area of operation is relatively larger than those of most of the other RDAs, and that KESEDAR's planning and record-keeping workloads are constantly increasing, there is a need to upgrade its information systems and technology.

#### The Planning Process in KESEDAR

In talking about development planning from KESEDAR's point of view, among the basic questions that may be raised are to what extent does KESEDAR as an RDA plan for its Region, and how does KESEDAR relate to other government entities - the Federal government, the State government, and their respective departments and agencies - in performing the planning function?

As provided in the Act, KESEDAR is required to play a multi-faceted role - to promote, stimulate, facilitate, control, and coordinate, as well as implement its own development programmes and projects. Development planning for the region, therefore, is not the responsibility of KESEDAR alone. Moreover, although KESEDAR's operational and development budgets are funded entirely by the Federal government, the authority on land matters, as prescribed by the federal constitution, rests with the State government. Another important factor is that the development priorities and purposes of the State may differ from those of the Federal government.

Under such circumstances, development planning for the Region becomes a complicated process. The planning task is rendered more difficult for KESEDAR by the fact that it has no Master Plan but only an Indicative Plan as a rough guide in performing its planning function.

TABLE II: FINDINGS OF THE SURVEY ON COMPUTER HARD-WARE  
AND PERSONNEL TRAINED IN INFORMATION SYSTEMS  
IN RDAs

RDA	No of PCs	Mini Mainframe(Y\N)*	Mainframe(Y\N)*
DARA	6	Y	N
KEJORA	5	Y	N
KETEHGAH	11	about to install	N
KESEDAR	2	N	N
KEDA	5	Y	N
PERDA	3	N	N
JENGKA	3	N	N

RDA	DARA	KEJORA	KETENGAH	KESEDAR	KEDA	PERDA	JENGKA
systems engineers	0	0	0	0	0	0	0
senior sys analysts	1	0	1	0	0	0	0
systems analysts	1	0	1	0	1	0	0
programmers	2	0	2	1	1	0	0

\* Y=Yes, N=No

In actual practice, development planning for the Region that is done within KESEDAR may be loosely described as a process of channelling of inputs in the form of directives and requests from various points of influence and authority for KESEDAR to coordinate, integrate, and translate into programmes and projects acceptable to all concerned especially the Federal government as represented by the relevant Ministry and central agencies, and



the State government as represented by the office of the Chief Minister and the State Economic Planning Unit (SEPU). Let us illustrate how the process works with reference to specific development programmes:

1. Development of traditional villages - the need to develop traditional villages was initially articulated by the people at the grassroots level. It was then conveyed through the politicians to the Ministry which in turn issued a directive to KESEDAR to identify and determine the villages to be developed. On the initiatives of KESEDAR, a study was undertaken of the traditional villages in the State of Kelantan. Ironically, however, the traditional villages which were ultimately given first priority for development were not those recommended in the study.
2. Social development - this programme does not exist as a separate development programme but is included in, or covers all the three programmes of (a) land development and settlement schemes, (b) development of traditional villages, and (c) land rehabilitation. The idea of instituting social development as a programme in KESEDAR originated from the Ministry which views it as an effective strategy towards achieving the objective of moulding KESEDAR settlers into a responsible, diligent, and harmonious settler community. The Ministry also feels that this programme could tackle the problem of the second generation - that is, settler dependents - related to such matters as education and employment, as well as social deviances such as drug addiction, vandalism and so forth.

In line with the Ministry's directive to institute this programme, KESEDAR established the Social Development Division headed by a manager. In undertaking the social development programme, the Social Development Division conducts various surveys from time to time in order to gather data and information to formulate and implement social development activities for the settlers. In this connection, it is important to realize that the accuracy and relevance of the data and information gathered will not only determine the appropriateness of the activities formulated but also the size of the budget to be approved by the Ministry and other central agencies for KESEDAR's social development programme.

3. Land development and settler schemes programme - this programme was instituted on the initiative of the State government. This is not surprising as the

State government is the authority on land matters. Moreover, the State government knows best about the socio-economic circumstances of its people. This programme naturally gets the budget approval of the federal government as it falls in line with the national development purpose.

As far as KESEDAR is concerned, the institution of the programme implies the need to work out the details to determine land size and location, and soil suitability for the crops to be planted of which the choice will be based on soil suitability and the concurrence of the State as well as the Federal government. The mutual agreement of the two governments relating to the choice of crops is essential particularly because the State provides the land and the Federal government bears the cost of development.

The size of the budget for the programme will depend on the details worked out by KESEDAR. Therefore, the data and information gathered and used by KESEDAR to formulate the programme would, to a considerable extent, determine the success or failure of the programme.

Based on the three examples cited above, it is clear that although KESEDAR's development programmes may originate from various decision points, the brunt of the planning task that requires adequate, accurate, and timely data and information falls on KESEDAR.

#### CHANGES LIKELY TO TAKE PLACE IN THE JOB CONTENT OF PLANNING PERSONNEL IN KESEDAR

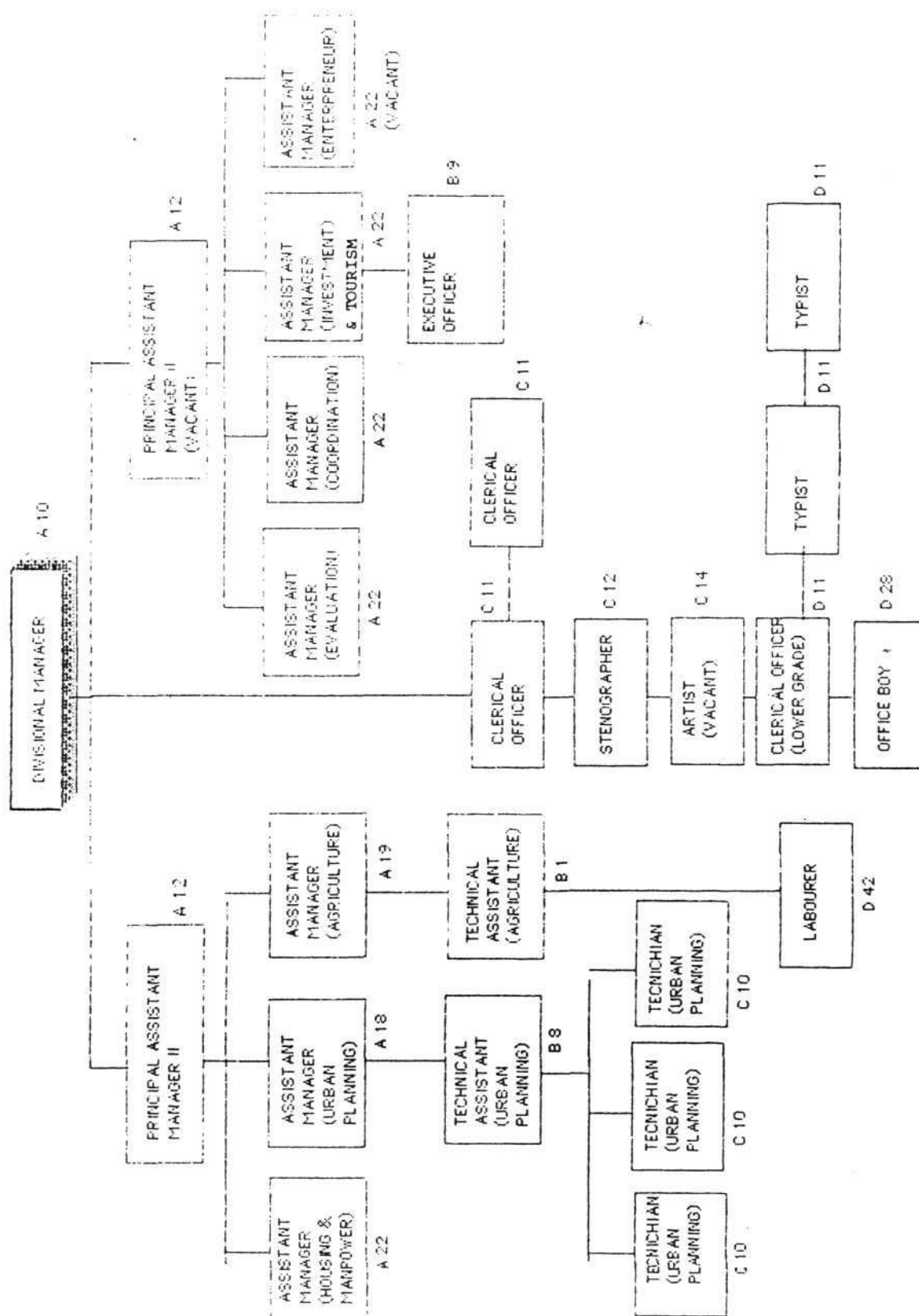
##### The present set-up of the Planning and Evaluation Division

The Planning and Evaluation Division, established right from the inception of KESEDAR, constitutes KESEDAR's planning core. Currently it has an establishment of 25 posts consisting of 10 category A posts, 3 category B posts, 8 category C posts, and 4 category D posts. Of the 10 category A posts, 3 are vacant. One vacancy also exists among the category C posts. The Division is headed by a manager on superscale "G" category A post. The organization chart of the Division is as reflected in Figure VIII.

The objective of the Division is to carry out studies, and to plan, coordinate, and evaluate KESEDAR's development projects, and to coordinate the implementation of projects of other agencies in the South Kelantan Region. Towards achieving this objective, the programme is translated into several groups of activities:-



FIGURE VIII: ORGANIZATION CHART OF THE PLANNING AND EVALUATION DIVISION, KESEDAR



I. Planning and coordination of development of population centers and urban construction

1. To research, study and plan as well as coordinate the development of population centers in South Kelantan such as Gua Musang, Jeli, Chiku, Kemubu, Dabong, and other population centers;
2. To ensure that policies and strategies relating to the development of population centers are implemented, and to evaluate the effectiveness and suitability of such policies and strategies at the implementation stage;
3. To monitor and analyse the implementation progress of physical plans of the population centers;
4. To update information and findings of studies relating to the development of population centers;
5. To analyse, coordinate, and recommend proposals for the development of population centers, change of conditions and redefinition of boundaries as well as development of land along the highway;
6. To coordinate planning for housing construction in urban areas by KESEDAR and other government agencies;
7. To coordinate construction of houses, shops and other buildings by the private sector;
8. To coordinate the sale of housing and shop-lots in major townships; and
9. To formulate policies and strategies relating to housing and shop buildings, for submission to the Management and the Board of Directors.

II. Planning and coordination of agriculture development

1. To prepare applications for the release of areas of forest reserve for development by KESEDAR;
2. To plan and coordinate the implementation of agricultural projects in the South Kelantan Region;
3. To plan for the optimum utilization of agricultural land;
4. To coordinate agricultural planning among other government agencies such as FELDA, FELCRA, SEPU,



MARDI, JHEOA, RISDA, the State Agriculture Department, Agriculture Graduates, and the private sector;

5. To coordinate feasibility studies in order to introduce new crops in the South Kelantan Region in conjunction with other relevant government agencies;
6. To coordinate the publicity of agricultural development programme for KESEDAR, and to represent KESEDAR at meetings of the State Committee for Publicity of Agricultural Development under the sponsorship of the Ministry of Agriculture;
7. To carry out soil studies on ad-hoc basis where necessary for agriculture development by KESEDAR, government agencies, and the private sector;
8. To conduct observation trials on crops other than oil palm and rubber;
9. To carry out studies for breed improvement of sheep used for biological weed control with the objective of reducing production cost in KESEDAR's land schemes; and
10. To conduct experiments on breed multiplication for the supply of sheep-breeding material to the settlers.

### III. The planning and coordination of investment, tourism, and entrepreneurial activities

1. To formulate and implement investment policies and strategies in the South Kelantan Region;
2. To identify investment problems in the South Kelantan Region, and formulate proposals for their solution;
3. To explore new opportunities for investment and tourism in the South Kelantan Region to be submitted as proposals for action by relevant state authorities, as well as ministries and departments;
4. To receive, evaluate, and comment on all applications for investments in the South Kelantan Region for submission to the Board of Directors of KESEDAR and other relevant authorities;
5. To coordinate the preparation of brochures on the South Kelantan Region in general and on specific subjects;

6. To prepare proposals and working papers on the concept of tourism in the South Kelantan Region; and
7. To identify investment problems of small-scale bumi-putra entrepreneurs in KESEDAR's land schemes and traditional villages and to formulate programmes for their solution.

#### IV. General coordination and evaluation

##### a) General coordination

1. To prepare KESEDAR's draft annual reports;
2. To register projects expected to be implemented in the next few years for ICU's information through the SETIA System. To gather information and coordinate financial and physical progress reports from the Finance Division, the Technical Unit, and other divisions for the preparation of reports for the SETIA System for submission to the ICU through the Ministry of Land and Regional Development;
3. To prepare and update information on KESEDAR for the State Operations Room on a quarterly basis as required by the State Development Office;
4. To prepare and update information on KESEDAR as and when required by the Ministry of Land and Regional Development; and
5. To gather information on, and coordinate the progress of projects which have been completed, being implemented, as well as those to be implemented in the South Kelantan Region by other agencies.

#### V. General Evaluation

1. To prepare KESEDAR's quarterly reports with an evaluative approach in accordance with the requirements of the Board of Directors for information of Board members and the Management;
2. To prepare KESEDAR's quarterly reports with an evaluative approach for submission to the Ministry of Land and Regional Development; and
3. To monitor the implementation of projects and evaluate their progress.



Forseen changes in the job content  
and training needs of the staff of the  
Planning and Evaluation Division

As can be seen from the description of activities under the planning and evaluation programme, the job content of the planning and evaluation staff comprises mainly activities which necessitate the gathering of data and information and using them for planning, evaluation, monitoring, policy formulation, and reporting purposes. With the introduction of computerized information systems and technology, no substantial changes are foreseen in the job content of the existing staff except that their activities could be better facilitated by establishing a centralized data bank and information source for the whole Planning and Evaluation Division. It would, nevertheless, be necessary to upgrade their skills in policy analysis, planning, research, and investigation to ensure optimum utilization of the information systems and technology. It will also be necessary for the Division to have additional staffs trained in systems design and programming. This is not only to serve the needs of the Planning and Evaluation Division, but also other divisions and units of KESEDAR.

Currently, the A category officers of the Planning and Evaluation Division are university graduates with first degrees, except for the Divisional Manager who has a masters degree in urban planning. All of them, therefore, could be easily oriented with the use of information systems and technology as soon as computers are installed. Similarly, the B and C category staff could be trained in-house to utilize the information systems and technology in their daily routine activities.

Changes foreseen in other divisions  
and units of KESEDAR

Although the introduction of information systems and technology in KESEDAR would be mainly to enhance the planning and evaluation capacity of the Planning and Evaluation Division, other divisions and units in KESEDAR could also be oriented to use them for planning, monitoring, and evaluation at divisional or unit level. In this connection, it would be necessary for each of the divisions and units to assign a suitable personnel to coordinate data and information inputs of the division or unit into the centralized data bank.

Divisions which have personnel located in offices at the various land schemes and village resettlement areas, such as the Land Development Division, the Land Rehabilitation Division, and the Village Rehabilitation Division, will also have to orientate their ground staffs to the use of the information systems and technology to synchronize with and suit their respective divisional requirements.



## PROBLEMS LIKELY TO ARISE WITH THE INTRODUCTION OF INFORMATION SYSTEMS AND TECHNOLOGY IN KESEDAR

### Problem of location of hardware

The introduction of information systems and technology in KESEDAR, as stated earlier, would be to serve the regional planning and evaluation function which is centered in the Planning and Evaluation Division. Nevertheless, other divisions such as the Finance Division, the Administration and Training Division, and the Technical Unit would also need to use the systems and hardware. The main question here is where to locate the computer hardware; should it be in the Planning and Evaluation Division, or in any of the other divisions, or should a separate computer unit or division be created.

To locate the hardware in any one of the divisions may give rise to problems of control and inter-divisional priority in using the computer. The establishment of a separate computer unit or division would require additional personnel which may be hard to come by. The latter, however, would not pose a major problem provided the approving authorities, particularly the ICU, the Federal Treasury, and the Public Services Department could be convinced of the need for KESEDAR to have a separate computer unit or division and, therefore, more funds and personnel.

### Problem of timely inputs and updating

Two of KESEDAR's major programmes are the Land Development Programme and the Land Rehabilitation Programme. These programmes cover outlying areas which are located at considerable distances from KESEDAR Head Office in Gua Musang. Currently, the scheme or line offices have no telecommunication links with the head office. Under such circumstances, data and information inputs into the centralized data bank at the head office will still be subject to delay. Nevertheless, the installation of computerized information systems in KESEDAR will definitely be an overall advantage for KESEDAR's operation as a regional development authority.

## MAJOR ISSUES IN THE INTEGRATION OF INFORMATION SYSTEMS/INFORMATION TECHNOLOGY INTO REGIONAL PLANNING

### The issue of concensus among agencies

The development of the South Kelantan Region involves various agencies and departments either individually or on joint basis. Data and information gathering is done by individual agencies and departments separately. This state of affairs often gives rise to the problem of concensus on statistical data to be used ; in other words, the question arises as to whose statistics



should be considered as correct, accurate and authentic relating to common subject matters. In this connection, it is interesting to point out that, sometimes even within an organization there has been found to be disagreements among different divisions or units as to the accuracy of statistical data and information gathered by the respective units or divisions on common subject matters especially if different sources are resorted to.

#### The issue of information security

Data and information for planning purposes are sometimes considered as classified material to be known only by specific parties on only "need to know basis". The integration of information systems and technology into regional planning may not be of optimum efficiency unless an information network as proposed in the earlier part of this report is established. On the other hand, such a network poses certain amount of risk on the secrecy or confidentiality of information.

#### The issue of financial requirements for the installation of computerized information systems

The integration of information systems and technology in regional planning is a costly undertaking. Substantial financial allocations are required not only for computer hardware and software, but also for training of personnel to man and service the systems.

It is estimated that a miniframe computer hardware would cost between M\$400,000.00 (US\$153,800) and M\$500,000.00 (US\$192,300). A medium-priced good quality PC costs about M\$15,000.00 (US\$5,700), and to install a simple PC network requires about M\$100,000.00 (US\$38,500). This estimate does not include costs of office space for locating the computer unit, cost of software, and expenses required for training of personnel and for maintenance. If all these costs are taken into account, the initial financial allocation required for an agency to install a computerized information system could easily amount to between M\$200,000.00 (US\$77,000) using PCs, and M\$700,000.00 (US\$269,500) using a miniframe, not including recurring costs of maintenance and system updating. Based on these rough calculations, the total initial costs for all the seven RDAs to install computerized information systems would be about M\$1.4 million (US\$539,000) using PCs, and M\$4.9 million (US\$1.9 million) using miniframe.

Undoubtedly, the introduction of information systems and technology in regional planning would require a considerably big chunk to be added to the budget; probably, however, the capital out-lay for the integration of information systems and technology in regional planning may not appear too frightening if one were to consider the out-lay as a percentage of the total budget for regional development which is M\$930.23 million (US\$357.78 million) for the Fourth Malaysia Plan, 1981-85, and M\$1,540.73 million (US\$592.59 million) for the Fifth Malaysia



Plan, 1986-90.<sup>15</sup> Moreover, the issue of costs would be far outweighed by the benefits to be derived from computerization which would certainly result in more efficient and productive regional planning for the country.

#### CONCLUSION AND RECOMMENDATION

This brief study indicates that increasing emphasis is being given to regional planning in Malaysia, particularly beginning from the 1970s. The adoption of the regional approach in development planning is deemed necessary for achieving a balanced development not only among regions of the country some of which are lagging vis-a-vis other regions, but also amongst different community groups of the population. Realizing the existence of the regional and population disparity problem, the government has made various changes and innovations in policies and strategies in development planning for the country including the adoption of the regional planning approach. It is also gratifying to note that the process of regional planning itself has become more and more sophisticated over the years with the creation of agencies such as the SEPUs, SDOs, and RDAs with specific functions and set objectives.

The study, however, has shown that agencies specially created for, and directly involved in, regional planning - i.e. the RDAs - are now only beginning to adopt computerized information systems and technology in their planning process and activities. Based on the experience of the focal agency of this study, i.e. KESEDAR, which is one of the seven specially created RDAs for regional development, the study finds that the adoption of manual information gathering, storage, and retrieval for analysis, monitoring, evaluation, and reporting purposes in the total process of regional planning has contributed to various problems such as delay in reporting, and overall inefficiency in regional planning. It is felt that these problems could be resolved or at least minimized if computerized information systems and technology are integrated in regional regional planning.

The study, therefore, recommends the following:-

- 1) that the process of computerization already started in the RDAs be accelerated, in particular KESEDAR's planning and evaluation capacity be enhanced by establishing a computer unit so that the task of planning and coordinating the regional development of the South Kelantan Region could be performed more effectively and successfully. The need to strengthen KESEDAR's planning capability should be treated as a matter of urgency in view of the fact that the South Kelantan Region is relatively more vast and backward than the respective regions of the other RDA's, and has numerous untapped resources and tremendous potentials for development;



- 2) that, in line with the first recommendation, therefore, the staffing of KESEDAR's Planning and Evaluation Division, which constitutes the nerve-center of planning for KESEDAR and the South Kelantan Region, be upgraded and oriented for optimum utilization of the computer unit so established for its planning activities;
- 3) that other agencies involved in the development of areas of operations of the respective RDAs look into the possibility of adopting computerized information systems and technology; and
- 4) that the possibility of establishing an integrated computerized information network among related agencies, i.e. agencies involved in regional planning, based on the model proposed in this study be looked into.

## FOOTNOTES

1  
The author is currently the General Manager of KESEDAR seconded from the Malaysian Administrative and Diplomatic Service since September 1st, 1986.

2  
Ness, Bureaucracy and Rural Development in Malaysia, p. 89.

3  
When Malaysia was formed in 1963, the country was half-way into its Second Five Year Plan 1961-65. The subsequent five year plans are the First Malaysia Plan 1966-70, the Second Malaysia Plan 1971-75, the Third Malaysia Plan 1976-80, the Fourth Malaysia Plan 1981-85, and the Fifth Malaysia Plan 1986-90 which is currently being implemented.

4  
First Malaysia Plan 1965-70, p. 1.

5  
Ibid.

6  
Kamal Salih and K.J. Ratnam, "The Development of a National Integrated Data System for Malaysia: a proposal for a Pilot Study", project paper, Science University, Malaysia, 1975, p.2.

7  
Mid-term Review of the Third Malaysia Plan 1976-80 (Malaysia: Government Printing Department, 1978), p. 2.

8  
Fourth Malaysia Plan 1981-85 (Malaysia: Government Printing Department, 1981), p. 99.

9  
Fifth Malaysia Plan 1986-90 (Malaysia: National Printing Department, 1986), p. 166.

10  
Saul M. Katz, Striving for the Heavenly Society: the Tactics of Development (Pennsylvania: Graduate School of Public and International Affairs, University of Pittsburgh, 1975), p. 26.

11  
All the studies listed under this topic, except for item vi), have been conducted by officers of the Geological Department, Malaysia, which has a state branch office in Kelantan.

12



Many more agencies directly involved in regional planning and development for the South Kelantan Region could be included in the information network.

13

It is gratifying to note here that towards the end of the period of writing this report, a facsimile communication network is installed which connects all RDAs to each other and to the parent Ministry.

14

Fifth Malaysia Plan 1986-90, p. 258.

15

Ibid, p. 329.

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