



THE FUTURE OF COASTAL MANAGEMENT PROGRAMME IN MALAYSIA: MAKING THE COAST VISIBLE TO PLANNERS

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Abstract

The concept of coastal management which is regarded as an effective management tool has been widely used globally for more than 40 years. It works across sectoral, disciplinary and institutional boundaries to manage coastal resources. In many coastal nations, it is highly regarded as an essential approach in formulating coastal strategies and objectives towards a sustainable coastal development. However, the coastal management strategies are currently not extensively incorporated in the institutional framework of Malaysian land use planning system. This situation leads to this study in which it looks into the scenario of the planning practice and coastal management from the perspective of public town planners. For data collection, questionnaire survey was conducted throughout 40 coastal Local Planning Authorities in Peninsular Malaysia. The results revealed a few pertinent points: the level of awareness on the concept of coastal management is rather low; very few Local Planning Authorities have their coastal management plans and programmes or any activities associated with coastal management; and no expertise and lack of man powers were identified as the main reasons for not involving in coastal management. These findings relatively indicate that the acceptance of Malaysian planners was rather unsatisfactory. It is clearly evident that lacking of awareness led to disintegrated approach between town planning and coastal management.

Keywords: coastal management, land use planning, planning practice, planners, Malaysia.

INTRODUCTION

Going to the coasts will definitely create a pleasant feeling as generally it offers a good combination of the sea, sand and sun. The features of coast are undeniably diverse from inland areas or offshore areas. Its marvellous bountiful

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richness has not only inspired human, but also sustained our survival on the earth. As such, the author would like to take a positive look at the future of coastal management (CM) programme in a town planning (TP) context. The notion of CM has been accepted greatly in many parts of the worlds, covering developed nations and developing nations, following the success of Earth Summit meeting held in Rio de Janeiro in 1992 (Asmawi, 2010). In the context of Malaysia, the concept of CM can be considered quite new and not many practitioners are aware of its existence in the true meaning. Its implementation is very close to the practice of town planning system. However, it is doubtful whether the Malaysian planners realise the potential of TP to be integrated in the CM practice. In Malaysia, research on coastal and estuarine areas is still new and fragmented between various disciplines, like coastal geomorphology, coastal engineering and marine biology, which according to Abdul Salam (1998), it is oriented to be institutionally or individually efforts. Thus, this research studies and examines the TP system practised by the Malaysian Government with respect to the application of development plans and development control in managing coastal areas. This paper however does not offer a wide ranging discussion of the issues and problems encountered in managing coastal areas in terms of resources and management techniques as the focus is given to the discipline of TP in facilitating the coastal management programmes.

OBJECTIVES

This study aims to show that the TP system has potential to operate as a tool of CM in Peninsular Malaysia. This paper attempts to discuss the level of acceptance of Malaysian planners towards the concept of CM in relation to the scope of TP. Hence, the outline objectives for this study are:

- a. To study and examine the existing CM programmes in Peninsular Malaysia;
- b. To examine the content and practice of the present Malaysian TP system; and
- c. To analyse the relationship between TP and CM.

CONTEXT OF STUDY

The context of this study starts with the development of CM, which is greatly considered as a useful medium for managing coastal areas in many countries. The development of CM is accepted in many countries, especially with the impetus gained following the Earth Summit meeting in Rio de Janeiro in 1992. So far, there is no legal framework for establishing CM in Malaysia. In the local context, Abdullah (1999) and Basiron (1998) state that CM in Malaysia has traditionally been carried out on a sectoral basis with a top-down approach to dealing with the matter. Though this has many limitations such as conflicts of interest, overlaps and duplication, Abdullah (1999) suggests that the sectoral-based approach has worked relatively well during the past decade. Its drawbacks signal a number of improvements required for developing a better system of managing the coastal areas efficiently.

In Peninsular Malaysia, the Federal Constitution 1957 apparently indicates that the TP system falls under the Concurrent List (List III), meaning it involves Federal, State and Local powers (Government of Malaysia, 1999). Therefore, the involvement of all these levels of government in the TP system is necessary when dealing with planning and managing the coastal areas. Asmawi (2010) suggests that TP could be employed as a tool that has great influence on CM in Malaysia. Though the international perspective indicates that TP should be seen as one sector in CM, the situation in Malaysia does not reflect this opinion. Perhaps it reflects that Malaysian planners have not thought a great deal about CM. In Malaysia, coastal management and TP have been set up in a sectoral basis and there is a lack of appropriate communication, co-operation, co-ordination and collaboration. The existing poor relationship between the TP system and the coastal management approach demonstrates the need for a study on this matter. A comprehensive investigation of the relationship between the TP system and coastal management is necessary. This is to show that the relationship could be more effective, and that an appropriate relationship could contribute to the better implementation of CM.

A brief observation indicates that CM concentrates on environmental resource elements and is poorly integrated with TP. Some writers (e.g., Allmendinger, Barker & Stead, 2002; Halliday, 1986; Kay and Alder, 2005; Taussik, 1998, 2001, 2004) include the TP system aspect in their studies in coastal management. In Malaysia, very few studies have been undertaken to show the links between the planning system and coastal resource management in a local context (see e.g., Abdul Salam, 1998; Mokhtar & Aziz, 2003; Usuluddin, 1999).

The Malaysian context echoes the international picture, though at a slower pace. Evidence of environmental degradation, with reference to serious coastal erosion problems in the early 1980s, triggered some initial action on coastal management. Due to those problems, the Government launched the National Coastal Erosion Study (1984-1985) under the Environment and Natural Resources Division of the Economic Planning Unit (EPU) in the office of the Prime Minister (Basiron, 1998; Loi, 1993 in Cicin-Sain & Knecht, 1998). Consequently, two important institutions related to coastal management were established in 1987: the Coastal Engineering Technical Centre (CETC) and the National Coastal Erosion Control Council (NCECC). Another major national-level coastal area management effort involved the Environmental Impact Assessment prescribed by the Environmental Quality Act 1974 (Act 127). At the national level, coastal management activities are co-ordinated on a project or programme basis by the Office of the Prime Minister's Environment and Natural Resources Division.

More major efforts at the local level are aimed at integrated coastal zone management (Basiron, 1998). In 1992, the first Coastal Resources Management Plan for South Johore (CRMPSJ) was prepared with support from various agencies: the Association of South East Asian Nations (ASEAN); the United States Agency for International Development (USAID); the Coastal Resources Management Project of the Ministry of Science, Technology and Environment; the Implementation Co-ordination Unit of the Office of the Prime Minister; and the Department of Fisheries (Ministry of Science, Technology and the Environment, 1992). There are three pilot projects for CM initiatives being undertaken in Sabah, Sarawak and Penang in 1999 to formulate an CM strategy at the respective State level (Jakobsen, Hartstein, Frachisse and Golingi, 2007). According to Basiron (1998), the main aim of the projects is to have all states in Malaysia replicate the effort and then produce their respective CM programmes. The progress in CM in these states represents the Malaysian commitment to Chapter 17 of Agenda 21. These actions should provide the basis for developing further workable frameworks for coastal zone management plans in Malaysia (Basiron, 1998). The recent project for the coastal management initiative at the local level is the Port Klang CM programme (2001). However, the success of these coastal management plans still has to be evaluated. In 2011, the Town and Country Planning Department (Federal) conducts a study on Physical Plan for National Coastal Zones (*Rancangan Fizikal Zon Persisiran Pantai Negara*), a comprehensive study on coastal environment in relation to planning aspect. This is a positive effort considering that the nation's coastline is facing various challenges due to the climate change effects globally. More importantly, it is

expected that the report is applicable to become as a workable mechanism in coastal management. Although there are difficulties in implementing Chapter 17 of Agenda 21 in the local context (Chong, L.S., 2001), Malaysia has accepted the challenge of this agenda as evidenced by taking early steps in launching programmes on coastal management and establishing government-related agencies under various ministries (Harakunarak, 2001). The Agenda provides a good framework to distil valuable lessons that could pave the way for the wise use of coastal resources through sustainable coastal management in Malaysia.

Focusing on the Malaysian scenario, the conceptual idea of TP as a tool in CM applies to Malaysia. However, the interaction between these two activities is limited. The establishment of the TP system in Peninsular Malaysia dates back 30 years, whereas the CM system only started 14 years ago which makes it quite new in the national development agenda. The differences in their setting up put them apart. The legal backup of TP (i.e. Town and Country Planning Act 1976, Act 172) places it in a strong position while CM has no statutory basis. CM needs support for its operation and for implementation. If CM is to succeed, it demands serious attention to resolve these planning and development issues as well as issues related to other sectors. Since TP has a more established status in Malaysia, it could be the key to the successful implementation of the development related aspects of CM, like coastal settlement development and tourism. Town planner is one of the key stakeholders in planning and managing coastal areas that could contribute to a sustainable coastal management. In line with that, this paper tries to assist by investigating how town planners *via* the TP system can contribute best to CM in the Malaysian context.

LITERATURE REVIEW ON TOWN PLANNING AND COASTAL MANAGEMENT

Many parts of the coast around the world are considered risk areas because significant coastal erosion, pollution, flooding, hurricane and tsunami events occur frequently in many coastal nations. Coastal hazards are created where natural processes interact with, and threaten, human environments (Klee, 1999). This situation requires good management of coastal areas. Jones and Westmacott (1993), the Department of the Environment (1995) and Haslett (2008) suggest that the dominant elements of CM are the coastal resources and coastal system itself, and human intervention in terms of skillful planning and management within the coastal zone. The United Nations (1982) also recognises

that the principle of CM is to understand the interrelationships between the many parts of the natural system.

Many scholars in TP field agree that TP relates with a government activity that regulates the development and physical use of land in the public interest (see Blowers, 2000; Gubbay, 2003; Southgate, 2003). As stated by Dumashie (2001) and Rydin (1998a, 1998b), there are two principal instruments underlie the TP framework, i.e. development plan system and development control decisions. Development plans are considered the 'heart' of the forward planning framework, and development control, which is the implementation mechanism (Bishop, Tewdwr-Jones & Wilkinson, 2000). Most forward planning systems generally involve these two elements of TP practice.

A major instrument of CM is the coastal management plan or programme (Stojanovic, 2002). This provides an important context for local authorities and other relevant organisations involved in CM in producing development strategies. CM has some objectives that can only be achieved by curtailing development. Only TP has the power that lies in a statutory regime. The legislation back-up of TP practice sets a powerful system. Therefore, CM must be able to create a communication and collaboration partnership efforts with TP. At a local level, the TP system can make a contribution to CM by using its development plan and development control systems. Coastal policies could be widely incorporated into development plans and development control decisions made based on development plans.

Compared to many other sources in the literatures (e.g., Pido & Chua, 1992), Vallega's classification of coastal users covers many important users (Table 1). This covers a comprehensive list of activities on the coast, demonstrating that effective management tools are needed to control all the activities without them falling into conflict with each other. The list consists of various coastal users, indicating the importance of an integration process to accommodate the complexity of the coast.

Table 1: Generic coastal users in literatures

Sorensen and McCreary (1990)	Pido and Chua (1992)	Vallega (1992)
1. Fisheries	1. Agriculture	1. Seaports
2. Natural area protection systems	2. Fisheries and aquaculture	2. Shipping, carriers
3. Water supply	3. Infrastructure	3. Shipping, routes
4. Recreation development	4. Mining	4. Shipping, navigation aids
5. Tourism development	5. Ports and harbours	5. Sea pipelines
6. Port development	6. Industry	6. Cables
		7. Air transportation

7. Energy development	7. Tourism	8. Biological resources
8. Oil and toxic spill contingency planning	8. Urban development	9. Hydrocarbons
9. Industrial siting	9. Forestry	10. Metalliferous renewable sources
10. Agricultural development	10. Shipping	11. Renewable energy sources
11. Mariculture development		12. Defence
		13. Recreation
		14. Waterfront man-made structures
		15. Waste disposal
		16. Research
		17. Archaeology
		18. Environmental protection and preservation

Source: Based on Vallega, 1999

The classification by Sorensen and McCreary (1990) was set up to show the issues (such as coastal erosion) and economic prospects (such as recreation and development) which, at that time, were perceived by the contemporary decision-makers as important. As a result, most of the categories are in the economic sector. Pido and Chua (1992) also include common sectors associated with the coasts and natural resources. Vallega (1992) shows a wider scope of sectors, including: resources (biological and energy resources); the economic sector (e.g., seaports and air transportation); man-made structures; and environmental protection.

THE CURRENT INSTITUTIONAL ARRANGEMENTS FOR TP AND CM IN PENINSULAR MALAYSIA

The current interaction between TP and CM in Peninsular Malaysia with reference to socio-economic and physical planning at three levels of administration involved: Federal; State; and Local. Traditionally, a top-down approach has been applied with the significant driving force being the Federal Government. At the Federal level, the preparation of national documents like the National Coastal Zone Policy (NCZP), the National Physical Plan (NPP) and Physical Plan for National Coastal Zones are undertaken by Federal agencies, namely, the Economic Planning Unit (EPU) and the Federal Town and Country Planning Department (TCPD) respectively. Any development documents produced at the Federal level, which come under the sector of socio-economic and physical planning, interact with TP and CM. These two activities should have two-way interaction since they would need to reinforce policy, implement policy and set the context for policy, as well as exchanging information.

At present, there is no overall CM plan at the State level in Peninsular Malaysia, except for Penang. Unlike TP, which requires a Structure Plan to be prepared for every state in Peninsular Malaysia, CM does not have a State CM to reinforce the coastal management strategies and objectives. This is a missing link between Federal and Local levels in the CM system. However, many related technical agencies, such as the Department of Environment (DOE), the Department of Irrigation and Drainage (DID) and the Department of Forestry (DOF), have two-way interactions with the state Structure Plans by supplying information and getting feedback.

At the Local level, only three CM programmes have been established in Peninsular Malaysia; Port Klang; Kuantan; and South Johore. These initiatives are not led by LPAs even though they are the bodies that have powers to control any development on land. For example, the Selangor Waters Management Authority (SWMA) leads the Port Klang CM programme with major assistance from Klang Municipal Council and Kuala Langat District Council. At this level, currently, the practice shows that both CM and TP interact with the technical agencies at State level.

METHODOLOGICAL APPROACH

This research employs descriptive and argumentative analysis to explain the relationship between the two activities. Generally, the methods employed for this study consist of the content analysis from the document search and questionnaire survey (Figure 1).

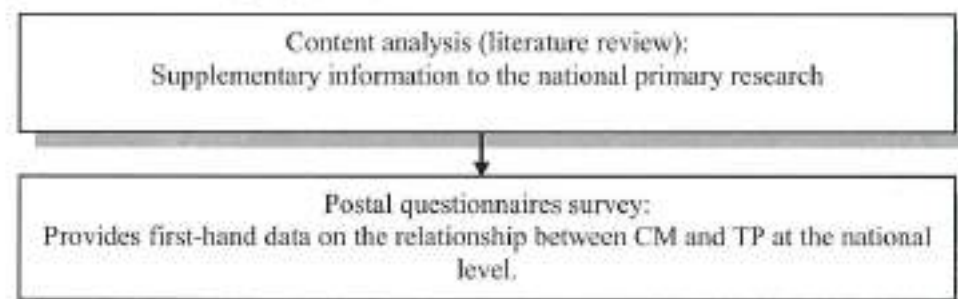


Figure 1: The sequence of methods used in the national study

Study Area

Malaysia, a country of Southeast Asia, is composed of two non-contiguous regions – Peninsular Malaysia (West Malaysia) and East Malaysia - separated by some 400 miles (650 kilometres) of the South China Sea. The latter, comprising the states of Sarawak and Sabah, is located along the northern and western edge of the island of Borneo. The study area, i.e. Peninsular Malaysia, as the name suggests, is bounded by the sea, except in the north where it is attached to mainland Asia *via* the Isthmus of Kra with Thailand. It is bordered on the north by Thailand, on the south by Singapore, on the west by the Strait of Malacca, and on the east by the South China Sea (Figure 2). Peninsular Malaysia comprises the Federal Territory of Kuala Lumpur and 11 states (Perlis, Kedah, Penang, Perak, Selangor, Negeri Sembilan, Malacca, Johore, Pahang, Terengganu and Kelantan) with a total area of 50,810 square miles (131,598 square kilometres). Formerly, known as the Federation of Malaya (1948-63), it contains the bulk of Malaysia's population.



Figure 2: The study area of Peninsular Malaysia

The total coastline in Peninsular Malaysia is 1970 kilometres (Abdullah, 1992; Economic Planning Unit, 1985). Physiographically, the coastline of Peninsular Malaysia is of varied character and configuration (Abdullah, 1992). Abdullah states that the 860 kilometres long east coast of Peninsular Malaysia consists of straight sandy beaches in the north whilst the southern half comprises a series of large and small hook, or spiral, shaped bays. In contrast, the west coast, which measures 1,110 kilometres long, is made up of low elevation coastal plains of marine clay and river alluvium with mangrove swamps constituting 640 kilometres of its coastline (Syed Abdullah, 1992). Malaysia's coastal areas are endowed with valuable marine ecosystems and valuable resources. It provides economic opportunities and resources of developable land. But, at the same time, Abdul Salam (1998) states that coastal areas face many critical problems associated with wastewater discharge, erosion and coastal pollution. This situation has created a dilemma as how to plan and manage the coastal areas in a sustainable manner whilst, simultaneously, encouraging economic development in Malaysia. Since there is no specific overall national legislation, administrative or planning system for Malaysian coastal areas, and no single coastal development authority, this suggests that immediate action on coastal planning and management is crucial and timely.

Questionnaire Survey

Government officials of Planning Unit at Local Planning Authority (LPA) were selected as the respondents to supply required information. Only LPA that have coastal areas were involved in the survey. Coastal LPAs are defined as the superior local authorities that administer one particular coastal district. The survey covered all 40 coastal LPAs in Peninsular Malaysia. The response rate was 65% and this could be considered as sufficient to provide a broader picture of the level of acceptance of planners towards the concept of CM (Figure 3). The formulation of the questionnaire form was based on the aspects of coastal management concept.

Table 2: Rationale for the questions in the survey

Topic of question	Rationale
1. Background details	To determine the level of confidence that could be placed on the answers and to show the pattern of expertise involved in CM programmes
2. Awareness of the concept of CM	To see whether Malaysian town planners are aware of the concept of CM.
3. Availability of CM plan for that coastal LPA	To identify the level of commitment of coastal LPAs to developing CM initiatives by producing CM plans
4. Availability of any other programme on coastal	To identify whether any other programme on

management	coastal management had been established
5. Reasons for lack of programme on CM	To discover the obstacles stopping LPAs from having CM programmes.
6. Intention to set up a coastal group	To identify the intentions of LPAs in coastal management

Data Analysis

The questionnaires apply the closed-ended questions with various choices. Respondents were asked to answer to a series of questions without prioritising their responses. In order to establish the most important issues, analysis involved applying the Likert Scale. This technique is commonly used to measure attitudes, knowledge, perceptions, values, and behaviour changes. Responses were coded into numerical forms to produce ordinal data that is based on a scale representing a range. It is one of the most standardised and acceptable response techniques in the field of social sciences. Thus, this has allowed the author to make the analysis based on the priority of items, as shown in the analysis tables. The following steps were used in applying the Likert Scale to the qualitative types of the questions designed in the study:

- Respondents were requested to evaluate the extent of their agreement with a series of attitude statements;
- Each degree of response was given a numerical value or score. For example, very important (3), moderately important (2), of little importance (1), or not important (0);
- The numerical values of the scores for a set of questions were summed to arrive at a total score where the highest total score is associated with the most important item; and
- The resulting summed scores permit inferences to be made about the selection of a specific group of people or specific issue.

RESULTS AND DISCUSSION

Background of respondents

The respondents to the national study were all personnel of coastal LPAs. Figure 3 shows the breakdown of their backgrounds. Half of the respondents were professional town planners. This is followed by assistant town planners (29%) and planning technician (21%) respectively. The pattern of respondent different roles indicates the validity of data in analysing the acceptance of CM among the planning officers in Peninsular Malaysia.



Figure 3: Roles of respondents in the national study

The national questionnaire covered 40 coastal LPAs. The state of Selangor provided the largest number of responding coastal LPAs. There was one response from at least one LPA in each of the 11 states, indicating that the overall coastline of Peninsular Malaysia was covered. Figure 4 shows the coastal LPAs involved in the national survey. The distribution of responses was quite evenly spread between the west and east coasts of Peninsular Malaysia. Thus, this means that the following analysis represents the whole study area of Peninsular Malaysia.



Figure 4: Coastal LPAs involved in the questionnaire survey

Awareness of the concept of CM

Currently, Malaysia as a whole has not developed a national coastal management programme. As one of the stakeholders in the coastal management initiative, planners were asked to see the level of the awareness of the coastal management concept (Figure 5). This question is limited at local level; over half (58%) of the respondents considered they were poorly aware. A further 17% did not know about the relevance of CM in their daily planning work commitments. This is not surprising given the limited national achievement on CM and the fact that respondents were town planners who mainly concentrate on terrestrial issues, particularly related with land matters. The result indicates that planners did not really realise that their works eventually contribute significantly towards the achievement of coastal strategies.

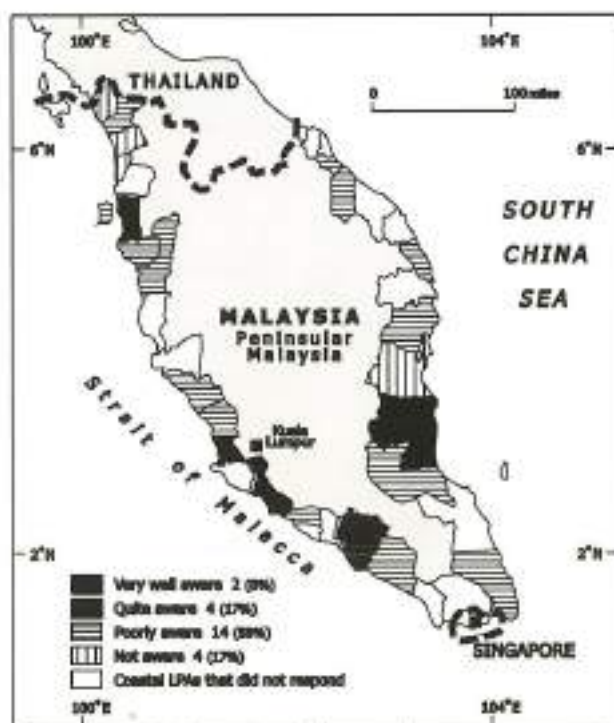


Figure 5: Level of awareness of the coastal management concept

Availability of CM plans and programmes

The previous question leads on to the subject of the availability of CM plans and programmes. As expected, few, 13% responding authorities had any CM

plan (Figure 6). It was reported that these plans were prepared because there were some substantial conflicts between economic development, environment and tourism in those LPAs areas (i.e., Klang Municipal Council, Seberang Perai Municipal Council and Pekan District Council). These areas have widespread development located within their coastal stretch in which the collaboration between TP and CM should be regarded as highly recommended. The plans, however, were merely on voluntary efforts and did not have statutory status. This situation consequently leads to the issue of lacking of implementation works on the ground. Similarly, only four responding authorities (17%) had a CM programme as shown in Figure 7. The LPA are Klang Municipal Council (declaration on Port Klang Coastal Strategy), Muar Municipal Council (a programme integrating the coastal and river management sectors of its development plans), Sepang Municipal Council (coastal development of Bagan Lalang area) and Kuala Selangor District Council (conservation of mangrove forest reserve). This demonstrates that the nature of programmes was basically focused on the environmental management resources, targeting on specific coastal issue. Currently, no comprehensive CM programmes were undertaken in an integrated approach between the agencies involved in TP and CM.

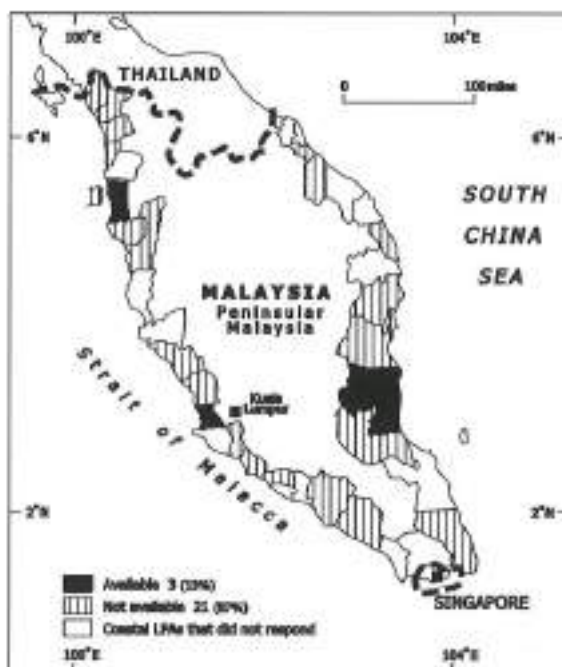


Figure 6: Availability of CM plans



Figure 7: Availability of CM programmes

Availability of any other programmes on CM

LPAs can be involved in CM indirectly through coastal groups. This could allow CM objectives to be delivered through TP practice. However, generally throughout the country, there is little commitment to coastal groups. Only Alor Gajah Municipal Council and Penang Municipal Council (8%) said that they have coastal groups (Figure 8). The main tasks of these groups are clearing up the coastal areas or maintenance of the facilities provided at the beach for public use. These groups were formed by the department for planning and development control. The low response on having coastal groups is the main concern of this study where it reflects the priority is not given to the CM work as part of the TP works. Meanwhile, four other LPAs (Port Dickson Municipal Council, Marang District Council, Kubang Pasu District Council and Yan District Council) intended to set up coastal groups. A specific question was asked about the reasons for setting up coastal groups as shown in Table 3. Generally, the result demonstrates that concern for public safety seems to be the most important reason for setting up coastal groups, followed by (in priority order):

- a. Increased environmental pollution (Score of 9);
- b. Economic benefit from coasts (Score of 9);
- c. Loss of habitat (Score of 8); and
- d. Increasing onshore development (Score of 8).

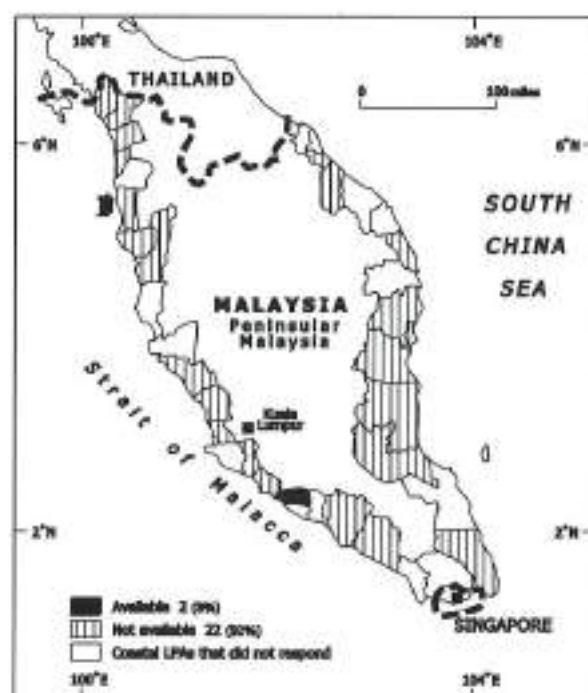


Figure 8: Availability of coastal group

Table 3: Reasons identified for setting up coastal groups

Reasons	Very significant (Score of 3)		Moderate significance (Score of 2)		Minor significance (Score of 1)		Not relevant (Score of 0)		Total	
	No. (%)	Score	No. (%)	Score	No. (%)	Score	No. (%)	Score	N (%)	Score
	1. Concern about the protection of public safety within coastal areas	3 (75)	9	1 (25)	2	0 (0)	0	0 (0)	0	4 (100)
2. Increasing environmental pollution	2 (50)	6	1 (25)	2	1 (25)	1	0 (0)	0	4 (100)	9
3. Economic benefit from coasts	1 (25)	3	3 (75)	6	0 (0)	0	0 (0)	0	4 (100)	9

4. Increasing loss of habitats	2 (50)	6	0	0	2 (50)	2	0	0	4 (100)	8
5. Increasing onshore development	1 (25)	3	2 (50)	4	1 (25)	1	0	0	4 (100)	8
6. Increasing importance of fisheries activity	1 (25)	3	1 (25)	2	2 (50)	2	0	0	4 (100)	7
7. Importance of having an integrated approach	0	0	3 (75)	6	1 (25)	1	0	0	4 (100)	7
8. Commitment to Agenda 21	0	0	3 (75)	6	1 (25)	1	0	0	4 (100)	7
9. Concern about sea-level rise	1 (25)	3	0	0	2 (50)	2	1 (25)	0	4 (100)	5
10. Increasing navigational activities	0	0	2 (50)	4	1 (25)	1	1 (25)	0	4 (100)	5
11. Increasing offshore development	0	0	2 (50)	4	1 (25)	1	1 (25)	0	4 (100)	5
12. Directive from federal administration/government	0	0	2 (50)	4	1 (25)	1	1 (25)	0	4 (100)	5

Note: Total respondents answering this question 4 (Port Dickson Municipal Council, Marang District Council, Kubang Pasu District Council and Yan District Council)

Reasons for lack of programme on CM

The poor response on the awareness of CM and efforts undertaken in relation to TP and CM triggered the curiosity to the underlying reasons for that scenario. The main reason given for not being able to produce any programme on CM is that expertise in CM is not available (Table 4). Lack of manpower, combined with severe financial constraints, suggests there is a need to develop human and institutional capacity in CM at the local level because the limited expertise that exists is concentrated in universities, government organisations or independent research agencies.

Table 4: Reasons for not producing any programme on CM

Question: What do you see as the reasons that your local authority has not produced any programme on CM?										
Reasons	Very significant (Score of 3)		Moderate significance (Score of 2)		Minor significance (Score of 1)		Not relevant (Score of 0)		Total	
	No. (%)	Score	No. (%)	Score	No. (%)	Score	No. (%)	Score	No. (%)	Score
1. No expertise in coastal management	15 (75)	45	3 (15)	6	0 (0)	0	2 (10)	0	20 (100)	51
2. Lack of manpower	13 (65)	39	3 (15)	6	1 (5)	1	3 (15)	0	20 (100)	46

3. Financial constraints	12 (60)	26	6 (30)	12	0	0	2 (10)	0	20 (100)	38
4. No directive from top administration	5 (25)	15	6 (30)	12	6 (30)	6	3 (15)	0	20 (100)	33
5. Poor level of awareness of coastal issues among administrative personnel	5 (25)	15	5 (25)	10	6 (30)	6	3 (15)	0	20 (100)	31

Note: Total respondents answering this question 20.

MAKING THE COAST VISIBLE TO PLANNERS

For too long the coast has been seen as a limited environmental issues and remained invisible in mainstream policy where planners involve largely in the process. With the advent of new approaches to coastal policy and planning, if the coast to receive the attention it demands from planners, then its wider social relevance must be elaborated and widely communicated. Taking into consideration the global movement on the significance of CM, it is essential that the TP system in Malaysia must be given a coastal focus. Previous practices indicate that the coast barely receives a mention in development plan and where it does, and then it is only in relation to major elements, all with a strong environmental focus, concerning the water environment and coastal erosion. This happens when the LPAs rely heavily on coastal areas for important economic sectors such as tourism activities. The formulation of Physical Plan for National Coastal Zones (*Rancangan Fizikal Zon Persisiran Pantai Negara*) by the Federal Town and Country Planning Department has marked a tremendous milestone for the nation in engaging coastal areas in planning practice. It is hoped that with this important document, the coast will not continue to remain virtually invisible in future spatial planning and policy in this country.

CONCLUSION

In terms of the relationship between CM and TP, the analysis of this paper suggests that generally planners have little awareness of CM. The notion of CM is rarely understood by Malaysian planners. Consequently, they do not recognise the importance of TP to CM or the nature of relationship between the two activities. This reduces the ability and capability of Malaysian planners to implement coastal policy but also leaves them with an expectation that TP can

play an over extended role in CM. In addition, this paper also discovers that development planning is greatly considered as the means by which TP can implement CM strategies. It is recognised that the development plan of TP can help implement CM objectives and strategies. This is the major mechanism by which TP can contribute to CM. As such, this study suggests TP has a vital role in implementing CM, considering town planner as the main player in the overall system of CM in Peninsular Malaysia. While planning is, perhaps, uniquely placed to lead this and there are advantages in it doing so, this study also has to acknowledge the drawbacks of this. In the end, it is felt that the planning function, with greater guidance and support from the government, could provide a platform for the future success of CM in Malaysia.

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