

Chapter 5

General Discussion

5.1 Introduction

China and Malaysia environmental policies on land have its own strengths and importance. This section is about the implementation and limitations of both countries' environmental policies on land which will be evaluated and discussed.

5.2 Overview of China's Environmental Policy on Land

The key component of China's economy policy is environmental policy on land. Ever since China practiced opening up economy, its policy of land has been reformed and improved significantly. In 1986, China started to pursue the construction field in market economy. As a result, there is a drastic development of economy construction especially in the city.

As it is known, China is practicing centralized legislative power. All legal legislative power is in the Chinese National People's Congress authority except Hong Kong and Macao which are under Special Administrative Region. So, People's Congress can only make the law and regulations. By this, the chaotic situation of doing things in their own

way especially land management of every province and area can be prevented. It is favorable to the smooth implementation for development of country's large-scale construction project (Fig. 5.1).

National People's Congress can decide or modify policies, and it also monitors implementation of policies. The State Council is the executive department of the highest organ of state power on policies. Otherwise, National Construction Committee carries out the state and industrial policies, regulations, and technical standards. It also guides the technology of national development. National Planning Bureau has the role of planning and designing the specific content and implementary measures of policies.

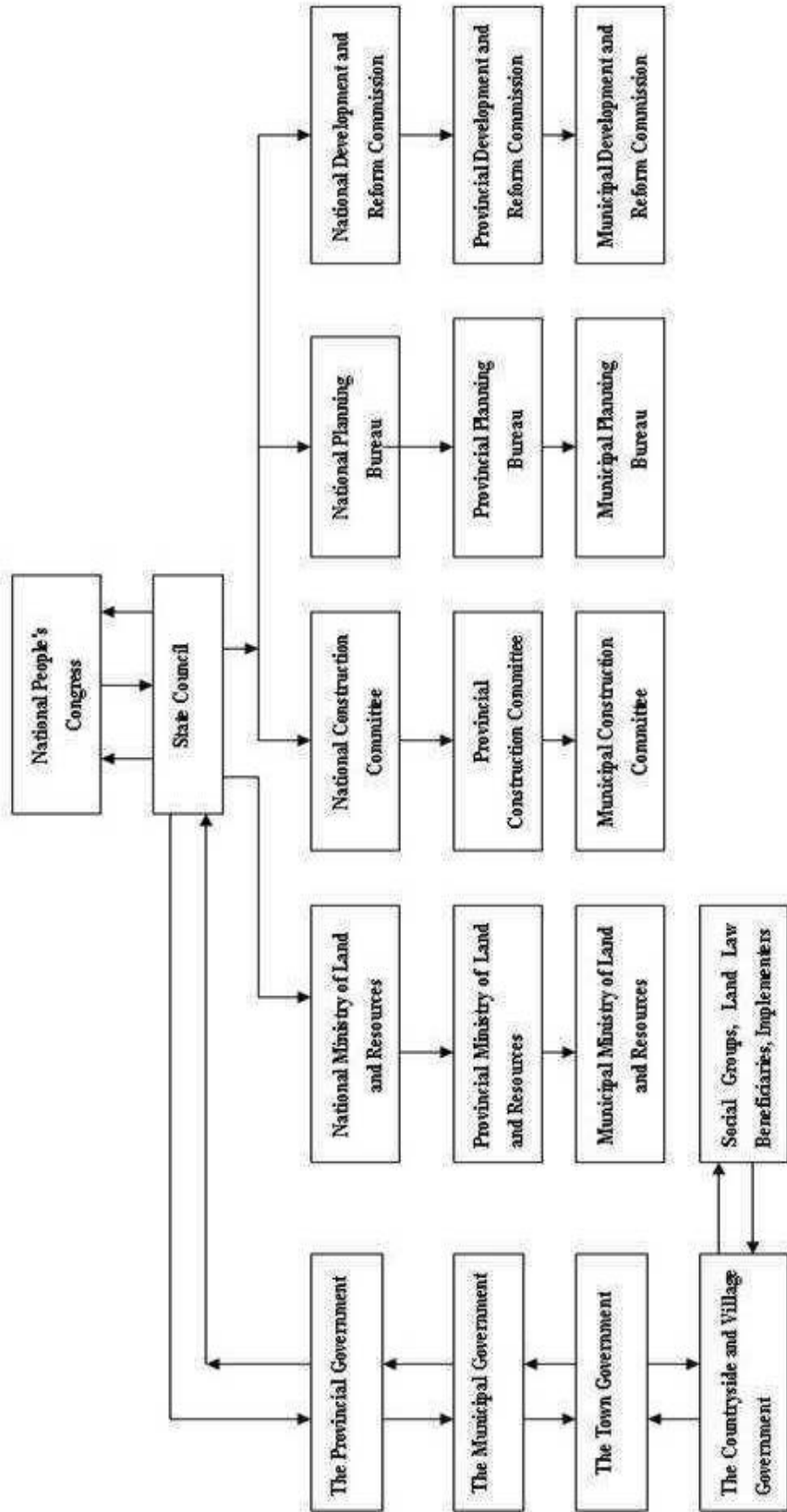


Fig 5.1 The Legislative Process of Environmental Policy in China

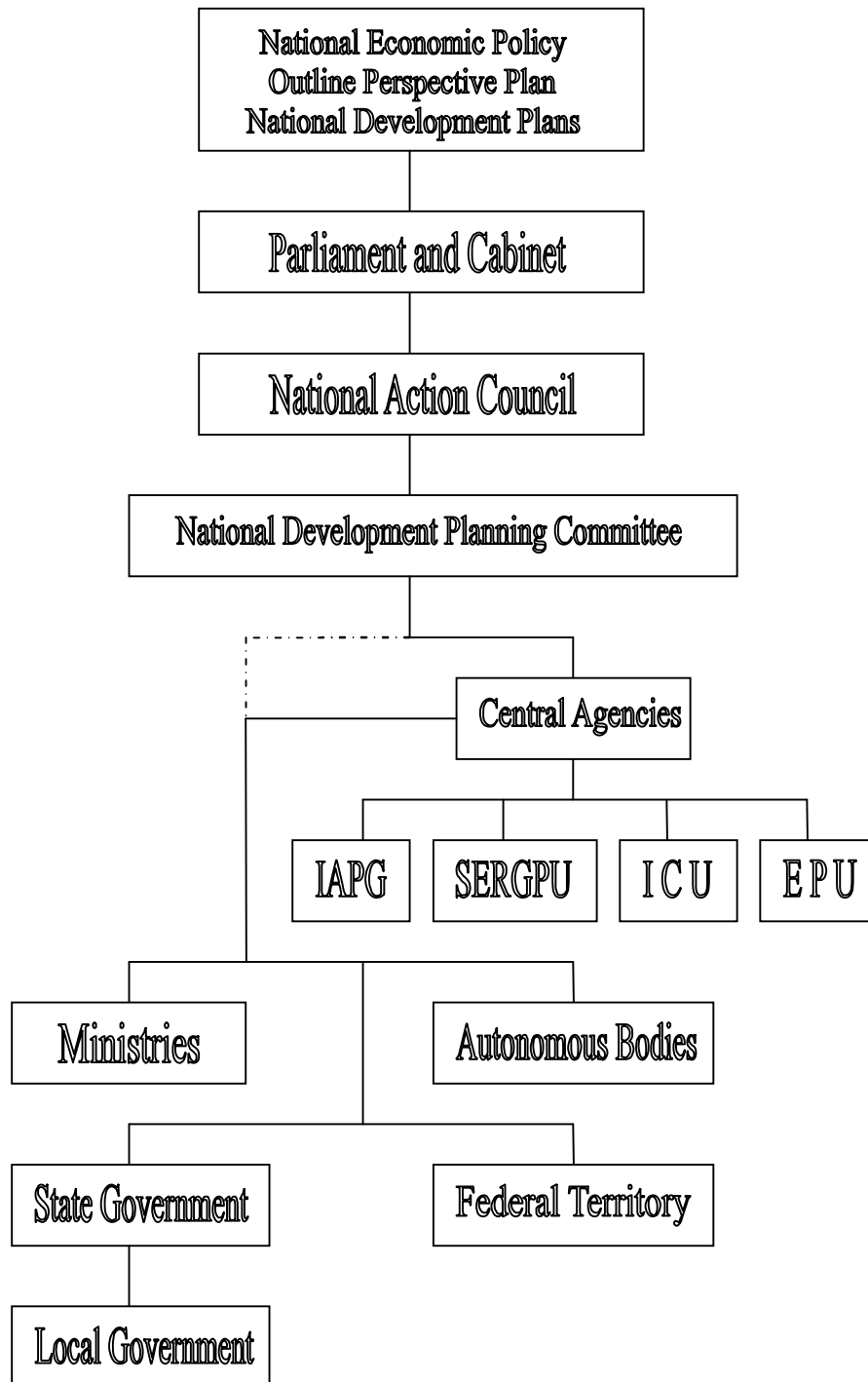
However, China is still in the stage of developing nation. Existing environmental policy is still not perfect and unsatisfactory level. As to compare to Malaysia's policy limitations and implementation, China's policy is totally disappointed.

5.3 Overview of Malaysia's Environmental Policy on Land

Malaysia is more focusing on macro adjustments and control when comes to environmental land policy. It makes social economic target easily achievable by utilization of land policy and land plans where various administration and implementation are taking into account (McAuslan. 1982).

In Malaysia, environmental policy on land worked aligns with the strategically planning of national economic development. Hence, integration of land policy and industrial policy can be done. A comprehensive framework of relevant authority's role is layout. It shows how one party can influenced economics and society development, country's direction and connection between land utilization management and macroeconomic management. It also reflects the continuous rapid growth of economic and society (Fig. 5.2).

Fig. 5.2 The National Development Planning Framework (Gurjit, 1994)



Note:

I APG: Inter Agency Planning Group

SERGPU: Social Economic Research and General Planning Unit

ICU: Implementation Coordination Unit

EPU: Economic Planning Unit

Compared with fig.5.1 and fig.5.2, Malaysia has a clear and direct relational tree of planning departments. It ensures that the policies can be implemented effectively and smoothly. In addition, China has complex process and departments restrict each other. Formulation and implementation of policies are ineffective. However, these departments have a role of mutual monitoring to ensure policies implementation.

5.4 The Implementation and Limitation of China's Environmental Policy on Land

5.4.1 Restriction of Chinese Environmental Policy on land towards to Industrial activities

At present, the charging levy system is undervalued the cost of internal pollution and social environmental hazards that occurred. It leads to a failure for legalization of industrial sewage and also as active controller for land contamination. It's also impossible to practice integration economy policy system which could encourage and stimulate the whole society's awareness to prevent and control pollution as well as improve land environment. Sewage treatment industry is not a virtuous circle that has profit and environmental internal cost. In addition, the environmental protection industry has not absorbed all aspects of social capital yet. Therefore, the mentality of China people is that this type of investment is none of their business or not profitable. It should be bear by the government or pollution expert enterprises. As a result, most

companies prefer to pay sewage charges rather than manage the land contamination.

The seriousness of sewage pollution on land is out of control from regulations. Due to that, the shortage of sewage treatment has limited the application of environmental policy on land.

5.4.2 Recommendations of Chinese Environmental Policy on Land Pollution caused by Agricultural Activities

5.4.2.1 Reassessment of China's Grain Self-Sufficiency Requirements

In the mission of achieving balance ratio between food security or supply and environment quality, it is suggested to lower down the target for grain self-sufficiency by 90% or 95%. By doing such, the pressures on environment can be reduced. In recent forecast report on grain production, import and exports activities in the year 2020, China will only exports 50 million tones of grains especially feed grains. Such quantity is only representing 2.6% of world grain production and less than 22% of world trade. According to FAO, in 2004, world trade of grain was recorded at 230 million tones (Zhang, 2007).

5.4.2.2 Change the Regional Structure of Grain Production

In the perspective of environment, China should do a re-evaluation on its current development strategies for distribution of commercial grain production. This analysis must be very methodical because there is difficulty for environmental trade-off between reducing non-point pollution from intensively managed land of Eastern China with increasing soil erosion from fragility soils Western and Central China.

5.4.2.3 Promote Farmers Associations

In many countries, farmers associations play an important role in the aspects of economy and environment. However, China has restricted the forming. In Japan, the government has introduced the award of honorary title of eco-farmer as part of its program to sustain agriculture development. It is also to encourage farmers to protect environment.

5.4.2.4 Raise Environmental Awareness throughout China

Despite rankings, officials whom in charge of issues related to agriculture and environment, he or she should study the meaning and scientific method of recent development in ecological sound farming. They should be equipped with relevant national laws and regulations. Usage of various channels of communication is essential.

Newspaper, radio, TV and internet are most powerful tools to distribute information about agricultural, ecological and environmental sound development. The purpose is to get public's participation and ecological awareness.

Environmental protection is relying on the whole people. To improve the public's environmental awareness is the first condition for the development of environmental planning (Li, 2009).

By doing so, adjustments in policy for sustainable agricultural development are required especially in taxation, credit availability, market access and many more. It also encourages investment from Chinese and international enterprises in greater enthusiasm and participation of rural collectives, small farmers and foreign businessman (Liu, 2008).

5.5 The Implementation and Limitation of Malaysia's Environmental Policy on Land

5.5.1 Restriction of Malaysian Environmental Policy on Land towards to Industrial Activities

Malaysia environmental policy is more focused on water and air pollution. The waste of water and air which comes from industry will pollute the land. When the sewage flows through the land, it will cause the biological death of soil. The land condition will goes bad and unfertile. Adding the waste of gas to air, population of flora and fauna will reduce and makes the surrounding environment get worsens. At the end, land will become disused and waste of resources. Current's environmental and land legal policy has looped hold on this aspect.

5.5.2 Limitation of Malaysia's Environmental Policy on Agricultural Pollution

Malaysia is a federalism country whereby each State's authority is independent and decentralization does exist. Malaysia's land legislation is more complete compared to China. Despite unified '*National Land Code*', every State has its own land rules too. There are some strategies that identified by national development plan is meant for that particular State to proceed the land policies on agriculture. However, due to lacking of

unified agricultural land management and idea, land policy between government of all levels and respective department is incompatible. In addition, issues regarding on land is the affairs of that individual state. So, complexity on land policy and land management occurred. It also influences the integration among all land policies and caused the economic development plan to be retarded.

Management problems involving sustainable development and resources are not described thoroughly in agriculture land policies which caused from various legislative files. But environmental problem has been strongly emphasized in national development plan. This situation occurred because the respective State doesn't consider the problem of resources and sustainable development as a whole problem when implementing land policies. Therefore it is essential to combine the importance idea of land with sustainable development and resource of unifying management conscientiously.

Many of the chemicals used in pesticides are persistent soil contaminants, whose impact may endure for decades and adversely affect soil conservation.

The use of pesticides decreases the general biodiversity in the soil. Not using the chemicals results in higher soil quality, with the additional effect that more organic matter in the soil allows for higher water retention. This helps increase yields for farms in drought years, when organic farms have had yields 20-40% higher than their conventional counterparts. A smaller content of organic matter in the soil increases the

amount of pesticide that will leave the area of application, because organic matter binds to and helps break down pesticides.

Palm oil and rubber are among Malaysia's main exports. Almost all of the pesticide sprayers at the plantations where these are grown are women because they command lower wages than men. At present, there are about 30,000 women pesticide sprayers in the country, and health experts say many of them are working without much protection from the harmful chemicals that they handle on the job.

As this, there are gaps between Regulations and implementations. Because of hot weather, workers are unwilling to take mask and heavy protection coat. Pesticides from sprayers are breathed in by workers. It is much harmful to workers' health. *The Occupational Safety and Health Act (OSHA), Malaysia 1994* requires that a safety and health committee be formed if there are more than 40 sprayers in a plantation. But some employers did not obey *OSHA 1994*. A good policy is useless if no one followed. The limitations of policies are normally not only themselves, but also the implementation.

5.5.3 The Shortcomings of Malaysian Environment Policy on Domestic Pollution

‘A major consideration in the effective implementation of land policy and land use planning is the fact that land is a State matter. It is interesting to note that whilst there exist various pieces of land legislation applicable to the country as a whole, each State eventually decides what is best for itself. In some instances this can be seen as an obstacle to national development and uniformity of policy implementation.’ (Gurjit, 1994).

The progression of urbanization brings the pressure for domestic land utilization. The consequences are unauthorized work on the land, congestion and land pollution. This development also causes conflict between land owner and land squatter. It is a prevail behavior for both parties to fight over the urban land just because they want to earn high incomes by their own. The incomes can be derived in the form of profit sharing or tax. Furthermore with development of urban real estate, the poor urban citizens have to relocate to other places (Mudalige, et al., 2007).

There is a strong bond between environment protection and urbanization. Land urbanization is an important property tax income to the state. The state’s government has maximized the usage of land such as plantation of profitable crops. Hence, they do things in their own ways and refused to adapt to the overall land utilization plan that

Federal government decided. Such act has cause a doubtful trust on the function of country's land utilization law. Consequently, this will abandon the objective of national development plan too.

Domestic land policy can't stop the development of urbanization. But it can assign the land rationally and manage the contradiction of domestic land urbanization. In addition, it should reduce domestic land pollution and propose ways to control it.

5.6 A Comparison on Environmental Policy Legislation between China and Malaysia

5.6.1 Improvements in Environmental Policy Legislation of China Recommendations

5.6.1.1 Tighter Controls on the Discharge of Organic Waste.

Any changes on China's legislation should consider the ongoing and future structural development in agricultural sector which involve reallocation from intensive land activities (eg: grain) to labor intensive activities (livestock or horticulture). Currently, intensive growth in livestock production is on trend. So, improvement in livestock waste management is becoming a key action for both point and non-point source pollution control.

In order to achieve double winnings in environmental improvement and high quality and high yield agriculture, a series of actions are requisite. Therefore, government should found legally enforceable environmental protection requirement for livestock production. These requirements should taking into account of the livestock carrying capacity on land, waste storage and disposal need.

5.6.1.2 Promotion of the Recycling of Rural Organic Manure

The increments of soil fertility can helps to control land erosion. This is an important element in environmental prevention land policy and many tolls will be applied on land protection.

Environmental protection strategies should require a comprehensive development on utilization plans which involved bio-fuel production in reducing the impact caused by straw burning and organic fertilizer collection.

Recycling program on organic manure needs to be introduced at regional or local farm scale. This will require policies and regulations on commercial organic fertilizer production and use. Below are the legislative changes that can be included:

- Encourage development of enhanced techniques for organic fertilizer production.
- Ensure quality standards for commercial organic fertilizers is consistent

- Reduction of nutrient loss during warehousing and transportation
- Greater efforts to raise the proportion of agricultural wastes used as organic fertilizer.

Regulations need to be introduced and implemented. It is to have a better control on the application rates and timing of organic fertilizer use (including the ratio between organic manure and inorganic fertilizer) which accordingly to climate, soil and crop condition.

5.6.1.3 Prevention of Pesticides Pollution

There is a need for improvement and expansion on existing pesticide residue measurement and quality control of agricultural products needs. The purpose is to ensure consumer and environmental safety is prioritize.

Many alternatives are available to reduce the effects pesticides have on the environment. There are a variety of alternative pesticides such as manually removing weeds and pests from plants, applying heat, covering weeds with plastic, and placing traps and lures to catch or move pests. Pests can be prevented by removing pest breeding sites, maintaining healthy soils which breed healthy plants that are resistant to pests, planting native species that are naturally more resistant to native pests, and use biocontrol agents such as birds and other pest eating organisms. Eliminating pesticides will not produce

lower yields. In fact, organic agriculture produces the same yields as conventional agriculture and requires lower inputs. It allows for healthier soils which allows for healthier plants. Eliminating pesticides will diminish any risk of unintended effects on biota.

More recently, some of the organophosphate pesticides were banned or not approved for use on vegetables. These pesticides include methamidophos and monocrotophos that had been registered for use in vegetables but after review by the Pesticide Board have been banned based on their residue or toxicology problems. There are also those whose registrations have been rejected by the Pesticide Board as being too toxic, e.g parathion-methyl. Concurrently, Farmers were advised not to use unregistered pesticides since doing so violates the *Food Act 1984*. The use of triazophos on vegetables has been voluntarily withdrawn by the parent company because of residue problems. The *Pesticide Act 1974* and the *Food Act 1985* were the guiding principles for the registration, production, management and application of pesticides in Malaysia. Pesticides introduced recently are more specific in their use and this may help minimize some of the problems caused previously.

In U. S., many of the chemicals responsible for contaminating the food supply have been banned. However, other countries continue to manufacture and use those chemicals, and their residues are carried across the globe by air, water currents and precipitation. 'United States consumers have a right to know that chemicals banned in

this country year ago continue to contaminate their food,' said Kristin Schafer of Pesticide Action Network (Kristin, 2002).

'While in Canada, Pesticide exposure can occur through means other than food intake, but research shows that reducing pesticide intake via food has an immediate observable effect on body-burden levels of pesticides. So, when in the produce aisle, pick organic when you can, and when you can't, try to avoid foods with high pesticide residues and substitute those with low pesticide residues. The next section explains how to do that.'(Jennifer, 2008)

In order to achieve pesticide security, national laws and regulations need to be strengthened and improvements on the authority and functions of environmental protection department. There is a need for supports from development and implementation of a monitoring plan for pesticide pollution. In addition, an effective control on whole process of pesticide production, application, storage and transportation is needed too.

5.6.1.4 Monitoring the Farmland Quality and Environmental Capacity

China should have a standard guideline for its national environmental capacity. These standards should focus on reducing nitrate and pesticide residues. Plus, re-adjust existing relevant standards and criteria which include national soil quality analysis,

environment quality and agricultural product safety such as NY/T 395-2000, NY/T 396-2000, NY/T 397-2000 and NY/T 398-2000. Moreover these standards can be used to do survey on nationwide farmland environmental quality, identify and manage high risk areas for non-point pollution.

5.6.2 Legislation of Malaysian Environmental Policy on Land

5.6.2.1 More Complete Form of Land Legislates.

Government restricted the land's utilization and management for land resource by policy instead of men's power. According to the requirements for land resource of socio-economic development, the corresponding policies and regulation are issued instantly. And the complete and systematic land policies will be shape up progressively.

The whole processes are described as below:

1. To ensure policy is in legislation form. Land policy and planning are made to have authorities of that policy.
2. To establish a special legal organizations. It is meant for urban development authority and economic development company of the state. Meaning, it supports the urban area development and offer more industrial and commercial development opportunities.

5.6.2.2 Courses of Making in Malaysia.

In Malaysia, due to the coordination of formulation national economic development plan or land policies, expert's review and citizen's participation in any aspects are emphasized. They also mobilize social forces to collect information extensively. The opinions from every department and areas are solicited accordingly in planning process. When common understanding is reached, the plan only will be executed. And much attention is given to the acceptability of territory planning (Fig. 5.3 and 5.4).

Fig. 5.3 The Planning Process – Structure Plan (Gurjit, 1994)

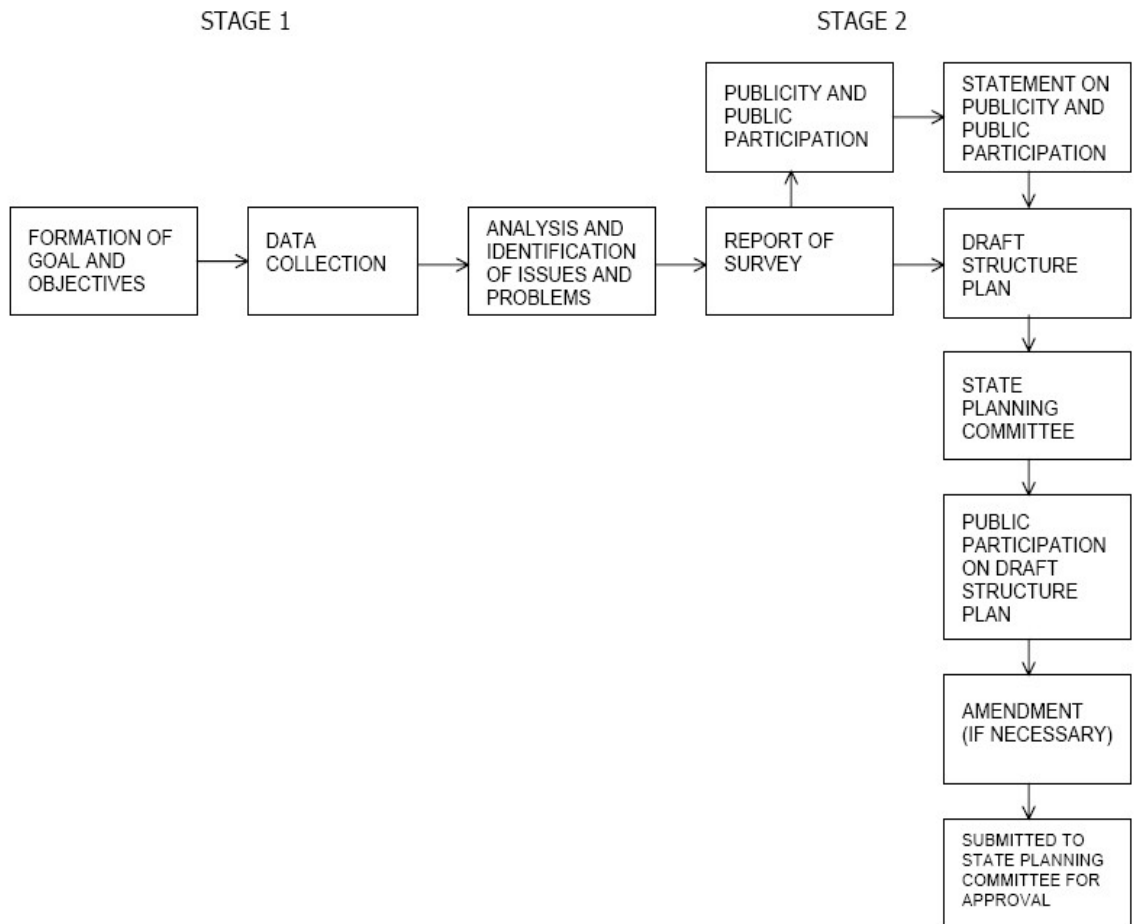
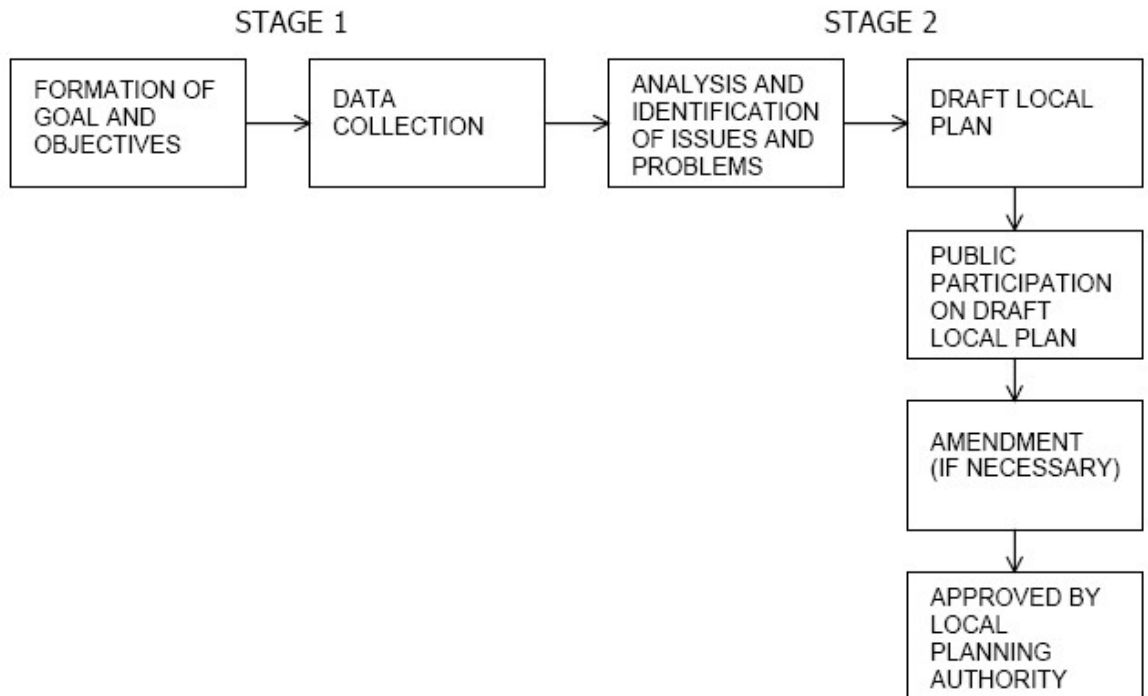


Fig. 5.4 The Planning Process – Local Plan (Gurjit, 1994)



The structure plan of Fig.5.3 shows the process of drafting, investigation, feasibility analysis, testing out, examine and submission. This reflects the level of masses participation in the formulation of policies and procedures fully.

The local planning process of Fig.5.4 is simpler than structure plan. However, it also focuses on public participation and has roles of implementation and restriction. It is an important component of national policy, too.

5.7 A Comparison between Malaysia and China on Policy Implementation

Malaysia has a coherent, sound and reasonable policy system which restricts and manages problems in many aspects, especially in the plantation of palm trees and rubber. Meanwhile, multi-sections cooperation protects the implementation of the policies. However, due to the lack of policies contents and difficulty of climate and region, the policies have the problem in the process of implementation. For example, Malaysia's temperature is too high for plantation workers to wear protection clothes, and they can't work long time exposing under the sun. Otherwise, because of limitation of Malaysian territory, most of land is used as construction and domestic. As so, mainly farmland is located on the mountains, for instance, Cameron Highlands. This fact will cause land erosion and degradation. At the same time, the government should enhance the supervision of the employees to fulfill the policy and the protection awareness of

employees.

The Chinese environment policies are numerous, the affected areas are broad. After historical baptism, they are much sounder. It is consistent with China's national conditions. However, due to the huge population, lax supervision, poor quality of pesticides and outdated equipment, the environment was damaging day by day seriously. In addition, policies can not be fully performed which was caused by lack of professional training in Chinese enterprises, lack of professional knowledge on most employees and lack of standard inspection on productions' quality.