Chapter 2

Literature Review

2.1 Introduction

In today's world, environmental issue is an essential topic to be discussed daily. Therefore every country should enforce an effective policy in curbing this matter. This chapter will review the important themes, concepts, variable and significant findings in order to facilitate the development of a theoretical framework and the hypotheses used in this study.

2.2 Overview of Environmental Policy on Land

A country's policies and economic mission will change within a certain period of time. The areas of changes are the criteria of act development, usage of regulation, governing, protecting and management in land resources. It is important to have land adjustment measures on various contradictious which include land policy, land financial policy and land taxes policy (Zhao, 2005).

The concept of environmental land policy does not only include ownership, occupancy and used. It is also including pollution control, environmental protection, operating management and development of land.

2.3 The Background of China's Environmental policy on Land Related to Agricultural, Industrial and Domestic Activities

Environmental protection program is defined as a planning system which is approved by the national or local people's government and administrative service division. There are four plans in this planning system in the same year:

- Urban monitored plan of environmental quality

  This plan contains urban air, water and land quality monitoring.

- Disposal of pollutants controls and pollution control plan

  This plan controls pollutant emission through the monitoring targets of pollutant emission.

- Ecological protection plan

  The aim of this plan is to control erosion through protecting ecological system.

- Other environmental protection plan in accordance with policies

  Cities can formulate their own protection policies according to special environmental conditions

2.3.1 Chinese Current Environmental Policies on Land

China's current environmental protection policy can be divided into eight basic legal systems:

- *The 'three-simultaneity' system* (published in 1979): It is defined as an installation process to prevent and to control pollution which comes from a construction project. So, the system must be well designed, built and commissioned together with the principal part of the project (Li, 2007).

The construction project should be put into production or used formally. Waste can be cleaned off after passing the inspection from the departments of environmental protection only.

As an example, the construction projects are confirmed and developed through environmental impact assessment (EIA). It also must be in accordance with the "three-simultaneity". The objective of the process above is to implement environmental protection measures in preventing the construction projects from generating new environmental problems and ecological damages during its progression.

ii *Pollution discharge levy system* (published in 1981): It is also known as national environmental administration tool. According to the stipulations of law which include discharging collection of fee and management, etc., a hefty penalty will be imposed to the person whom simply discharges pollutant (Ying, 2006).

From 1989 to 2009, China has achieved a great success by implementation of this system. The first 10 years review showed that disposal of industrial waste was stable and have slight decline in statistic. Meanwhile illegal discharging from enterprises has decreased by 20%. Overall is 38% reduction (China Environmental Year Report, 2009).

After 20 years of practice, it is proven that the pollution discharge levy system plays a very important role in promoting industrial pollution control, environmental protection, stringent environmental monitoring and law enforcement.

iii *Environmental impact assessment system* (published in 2002): It is classified as laws stipulation whereby contractors should forecast the pollution that may caused to surrounding area before a new project construction begins. They should report their finding to the respective environmental protection bureau (Ministry of Chinese Environmental Protection, 2005).

For example on EIA implementation, China's Old Summer Palace which is also known as Gardens of Perfect Brightness, originally is called the Imperial Gardens whereby it layout 8 kilometers northwest of Imperial City walls in Beijing. It was built in the 18th and 19th Century during Qing Dynasty. It functioned as the Emperors' residential place and administration in handling government affairs. However it was destroyed by the Western Power Allied Forces in 1900. Nowadays, this palace is considered as historical areas.

In 2007, Chinese environmentalists have carried out an anti-seepage project of the Old Summer Palace via EIA. Public participation and ecological impact assessment played an important role in this project. After 2 years of restoration work, the Old Summer Palace still maintained its original condition. It is a successful assessment in EIA perspective.

In environmental protection work, pollution controlling is only a remedial behavior. The real protection is prevention and environmental impact assessment is the most effective tool.

iv *Sewage permit system* (published in 2000): It serves as a protection and improvement of environmental quality which carried overall control on disposal of pollutants. After being examined and approved, the environmental protection department provides a pollution discharge permit to all the enterprises which followed the discharge guidelines.

Occasionally, periodic inspection will be done to the respective units. It is to ensure that they defer to the pollution discharge permit (Ministry of Chinese Environmental Protection, 2005).

In order to control polluters, the implementation of sewage permit system guidelines should align with pollutant discharge standards, total amount of emissions control, licensee sewage and principles of sewage disposal permit. To have more effective results, polluters should be honest when filling up the application for disposal sewage permit. It is because accuracy is needed for future revolution in this system. All entities are prohibited from discharging if it is without the pollutant discharge permit or in violation of the terms of the permit.

v *The deadline management system* (published in 2000)*:* It is an enterprising treatment and prevention over serious pollution problems that required immediate elimination or control within a certain period of time (Ministry of Chinese Environmental Protection, 2005).

Generally, the duration period of treatment is fixed by agencies which it relies on specific circumstances of sources, governance and other factors that determine the degree of difficulty. The higher degree of difficulty caused the longer duration period. The maximum duration shall not exceed 3 years.

vi *Centralized control of pollution and hazardous waste administration system* (published in 2003)*:* The purpose is to reduce the total emission of pollutant, to improve the efficiency of pollutant handling and to reduce the toxic of the hazardous waste. In order to deal with the pollution, an environmental management system is adopted through central heating. Solid waste is also a centralized deal which related to engineering measure (Ministry of Chinese Environmental Protection, 2005).

During government decentralization time, China has spent a great amount of money and material resources on pollution issues. However, the results are not significant because of difficulties in controlling pollution and insufficient analysis on environment benefits. Therefore, China is now implementing centralized control on wastewater, waste gas, hazardous solid waste and noise. Centralized control is to establish a stable pollution control center which can collect all kinds of pollution information to a unified processing, identify problems and propose solutions to problems.

Vii *The Pollutant emission control system* (published in 1998): The purpose is to reduce environment impacts based on the amount of pollutant been disposed. Its main approach is to restrict the released of pollutant under certain period of time and space (Ministry of Chinese Environmental Protection, 2005).

This system is a success because the environmental protection department can control the emission of pollutants accordingly to the environmental capacity (such as city, valley, district and trade center) or as an overall control base figure.

Viii *Environmental monitoring system* (published in 1988)*:* It helps to understand and monitor environmental work that will be carried out. Environmental monitoring includes physical method, chemical (chemical methods, including the gravimetric method, spectral breadth method, etc.) and biological (monitoring the effects of environmental change on organisms and biological communities) (Ministry of Chinese Environmental Protection, 2005). The monitoring is conducted by governmental environmentalists.

2.3.2 Chinese Environmental Policy on Land related to Agriculture Pollution

Since 1960, China's consumption of synthetic fertilizers has been increasing tremendously in order to feed its huge population. However, the increment has stopped during 1990's. China is now the largest producer and consumer of synthetic pesticides in the world (Chinese Agricultural Department, 2004).

The excessive inputs of synthetic fertilizers and irrigation water will cause changes of soil structure and quality. It also affects both biological and physic-chemical damage to soils which lead to acidification, secondary salinization and reduction of microbial

activity. These damages may lower the crop yields and indirectly forced farmers to apply even more fertilizers as substitute of soil productivity. In such, it caused a great intense to non-point pollution and the cycle of environmental degradation. Non-point pollution is water pollution affecting nature water body from diffuse sources such as polluted runoff from agricultural draining areas into a river, or wind-borne debris blowing out to sea. Non-point pollution can be contrasted with point pollution, whereby discharges will “meet” with nature water body at a single location, such as discharges from a chemical factory, urban runoff from a storm drainage roadway or from ships at sea (Zhao, 2000).

2.3.3 Chinese Environmental Policy on Land related to Industry Pollution

In the past 20 years, China has achieved economic development and industrialization status. Despite being a solid foundation in improving China’s economy, it also increased the risk of environmental pollution specifically land pollution. In this situation, industrial pollution and land pollution are co-related due to rapid economic growth in development and high-consumption. The Chinese government has always ensured the industrial pollution prevention and control is set as priority in land protection matter. During 1980s, under "Ninth Five-Year Plan" operation, China has enforced a series of policies and measures on this issue. As a result, they achieved a great success in curbing industrial pollution.

It also serves as support tool for land management policy. However, in today's 21st Century, industrial pollution prevention and control is facing many new challenges. They need new policies, mechanisms and innovative approaches in all aspects urgently (Wang, 2000).

2.3.4 Chinese Environmental Policy on Land related to Domestic Activities

Under this aspect, China has the pharmaceutical pollution prevention technique policy of domestic waste disposal.

The content of this policy is made according to the People's Republic of China Solid Waste Pollution Prevention Law and relevant state laws and regulations. This policy aims to guide the domestic waste disposal and the development of technology of prevention and pollution control, to improve the domestic waste disposal level and to promote the sustainable development of society, economy and environment. It is said that domestic waste is the solid waste which generated in urban daily life activities stipulated in by laws and the administrative statutes. The existence of domestic waste in the city will caused environmental pollution especially the land pollution (Ministry of Chinese Environmental Protection, 2000). Chinese solid waste treatment is landfill. Heavy metals of solid waste leaching are limited intensively as Table 2.1 shown below:

Table 2.1 Limits for the concentration of pollutants leaching solution of Solid waste landfill in China *(Ministry of Chinese Environmental Protection, 1997)*

NO.	Pollutants	Concentration limit(mg/L)
1	Hg	0.05
2	Cu	40
3	Zn	100
4	Pb	0.25
5	Ge	0.15
6	Bo	0.02
7	Ba	25
8	Ni	0.5
9	Sn	0.3
10	Total Chromium	4.5
11	Hexavalent Chrome	1.5
12	Se	0.1

MSW of landfill can discharge water pollutants which caused water pollution. There are 14 Indicators, such as color, BOD, COD etc. Emission concentration limits are used to restrict the amount of discharge in landfill. The limited values are shown in Table 2.2:

Table 2.2 MSW landfill emissions limits for the concentration of water pollutants *(Ministry of Chinese Environmental Protection, 1997)*

No.	Regulated pollutants	emission concentration limits	Location of pollutant emission monitoring
1	Color (dilution factor)	40	Conventional sewage treatment facility outfall
2	COD_{Cr} (mg/L)	100	Conventional sewage treatment facility outfall
3	BOD_5 (mg/L)	30	Conventional sewage treatment facility outfall
4	suspended substance (mg/L)	30	Conventional sewage treatment facility outfall
5	total nitrogen (mg/L)	40	Conventional sewage treatment facility outfall
6	Ammonia nitrogen (mg/L)	25	Conventional sewage treatment facility outfall
7	total phosphorus (mg/L)	3	Conventional sewage treatment facility outfall
8	Number of fecal coliform (mg/L)	10000	Conventional sewage treatment facility outfall
9	Total Hg (mg/L)	0.001	Conventional sewage treatment facility outfall
10	Total Cadmium (mg/L)	0.01	Conventional sewage treatment facility outfall
11	Total chromium (mg/L)	0.1	Conventional sewage treatment facility outfall
12	hexavalent chrome (mg/L)	0.05	Conventional sewage treatment facility outfall
13	Total arsenic (mg/L)	0.1	Conventional sewage treatment facility outfall
14	Total Lead (mg/L)	0.1	Conventional sewage treatment facility outfall

In solid waste pollution, *Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste* was in forced in 1995 and been revised in December of 2004. Under the regulation of this law, solid waste which caused by industry and domestic activities are focused. In addition, hazardous waste on

environmental pollution and prevention was also formulated. As for pesticide management, the regulations on agricultural chemical registration were issued. The purpose of these regulations are to ensure the implemental regulations, pesticide examines, approved method and safe regulation for use of pesticide in succession (Ministry of Chinese Environmental Protection, 2008).

Land Management Law of China was promulgated in 1986 and was revised twice in 1988 and 1998. The provisions act that land management and supervision work will be in charged by the competent administrative departments at all levels of government. It categorized the land into five areas which are land ownership, right of use, land use planning, farmland protection and construction sites. It also emphasized the supervision and management requirements on the usage and protection measures of land resources.

In order to establish a national role model in environmental protection, a quantitative assessment of city environmental treatment system is held with the purpose to protect the environment.

2.3.5 Legislation of Chinese Environmental Policy on Land

China has now developed one of the most dynamic environmental law frameworks in Asia. Its environmental legislation consists of 21 laws, 50 administrative rules and 660 local laws and regulations. Besides the official legislation, there are still numerous

numbers of ‘de facto rules’, such as pollution charging consultations, environmental monitoring and etc. Although it is informal rules, at certain time these rules are more effective. This means that is lacking in self-enforcement and self-control on environmental laws and regulations between government and companies. However legislation between central government and provinces are not formed yet.

Since reform and opening, China's environmental policies were successful in controlling the environmental issues in period of rapid economic development. China's technology level has a rapid progress. This provides a good foundation and conditions to solve the environmental problems.

2.4 Overview of Malaysia’s Environmental Policy on Land Related to Agricultural, Industrial and Domestic Activities

In order to correct the imbalance of economic, social activities and environmental protection, Malaysia has established an environmental policies and land planning systems. Both played an important role on the overall environmental development planning and also as regional development promotion.

The National Environment Policy aims to have continuous growth on economic, social and cultural. It also aims at enhancing the quality of people’s life through environmentally sound and sustainable development approach (Anand, 1983).

2.4.1 The Background of Malaysia's Environmental Policy on Land

Malaysia's government realized the importance of environmental land protection on national development aspect. Under the new economic policy and national development policy, an overall framework for national development is provided. One of the important elements in National development is land. To achieve success, Malaysia have to rely on land policy and planning framework as it will helps to achieve national development policies and strategies.

2.4.1.1 Task of Malaysia's Environmental Policy

The nation's growth has unquestionably drawn from nature and its natural resources. As Malaysia moves towards attaining developed-nation status, Vision 2020 envisages that the land should remain productive and fertile, rich in natural diversity, the air is clear and clean, the water unpolluted and the balance of land eco-system. These resources even played greater roles such as sources of wealth creation, essential support systems for the uniquely diverse Malaysian culture, manifestations of natural heritage and also symbols of national pride.

In exercising its sovereign right over natural resources, Malaysia will develop and utilize it sustainably. Malaysia realized that indiscriminate resources utilization, over-consumption and other unsustainable development practices will erode the bases of

success of the nation and could jeopardize its continued progress (DOE, 2002).

2.4.1.2 Function of Malaysia's Environmental Policy

This policy statement sets out the necessity principles and strategies to ensure that the environment remains productive, both ecologically and economically. Nation's natural resource accounting system will be designed and implemented to ensure a balanced perspective on the role of environment and natural resources in relation to overall development plans and strategies.

Factors that will take into considerations will be integration between policies, programs, plans and project formulation. To implement it, a comprehensive assessment process on social, ecological and health effects are considered. Public participation plays an important role in ecological protection. Thereby, there will be a healthy balance between human and nature.

In areas where intensive or extensive use of resources such as land, water and the marine environment is proposed, development planning shall be on a regional basis rather than on a project basis. Both economic development and environmental protection objectives will be taking into consideration (DOE, 2002).

Urbanization development has brought many problems. For example squatters, traffic jams, land increment and pollution. These problems are due to the imbalance between Federation and state's governments. Most States' authorities ignored the importance of taking care on land use. They refused to accept the Federal's decision on land utilization for corporate planning. As a result, the State authorities do things on their own way instead. It is ashamed action because the national land utilization policy is existence by its name only. Thus, the definite goal of national development plan cannot be realized.

2.4.2 Current Environmental Policy on Land in Malaysia

2.4.2.1 *The 'National Policy on the Environment' in 2002*

This policy is functioning as protection and conserves the environment and natural resources in order to meet the needs and aspirations of the country's population, particularly with regard to productive capacity of resources such as land, forests, biodiversity and water. There are three objectives that to be achieved: First of all is a clean, safe, healthy and productive environment for present and future generations, secondly is conservation of the country's unique and diversity cultural and lastly natural heritage with effective participation by all sectors of society. This background provides sustainable lifestyles and patterns of consumption and production. Land-use planning and implementation shall be based on a comprehensive assessment of critical parameters such as land suitability, the need for soil conservation, land capabilities and

carrying capacities, taking consideration of the current and future needs of the community.

Advanced technique plays an important role in environmental protection on land. Resource mapping technique and geographical information systems which further illustrate environmentally sensitive areas such as steep or hilly land, forests and wetlands. They are used wherever is appropriate. Special attentions are given to minimizing land degradation such as soil erosion and degradation due to mining activities. Preventive measurement will be taken to protect and conserve elements of the national historical, social and cultural heritage, including outstanding natural features and landscapes (DOE, 2002).

2.4.2.2 *Malaysia's National Biodiversity Policy in 1998*

The objective of this policy is to maintain and improve environmental stability for proper functioning of ecological systems. On Environmental Stability, ecological services, functions beneficial to humanity derived from ecosystems, include improvement of air and water quality, maintenance of hydrological regimes, soil generation, soil and water protection, recycling of nutrients, energy supply, carbon sequestration and oxygen release. The variety of biological organisms in ecosystems helps to stabilize the environment, thus maintaining ecological services and providing human societies with a wide range of essential and basic amenities such as habitable

environments, materials, water supply and productive soils in a sustainable manner, and aesthetic and recreational opportunities.

2.4.3 Malaysian Environmental Policy on Land Related to Agriculture, Industry and Domestic Activities

2.4.3.1 Malaysian Environment Policy on Agricultural activities

Agricultural practices and technologies in minimizing the usage of pesticides and inorganic fertilizers are encouraged. Integration between pest management practices, organic farming, environment- friendly agriculture and aquaculture methods are promoted (DOE, 2002).

In the aspect of Malaysia's agriculture, there is a *Third National Agricultural Policy (1998 – 2010)* (NAP3). This policy has been formulated to ensure that the capability of agricultural development sector plays its strategic role in national development especially in sustaining and enhancing the new and emerging challenges. By the end, NAP3 is focusing on new approaches that to be taken in increasing productivity and competitiveness, deepen linkages with other sectors, venture into new frontier areas as well as conserve and utilize natural resources on a sustainable basis. It also aims to be a conduciveness environment in enabling and supporting measures that can help to promote growth in agricultural sector. Existing policies and strategies are emphasized

on continuous agricultural productivity and market growth.

Extensive growth on the agricultural sector requires the nation to address the challenge of efficient and optimal utilization of existing resources in order to further improve competitiveness.

Due to limited resources and rapid changes in global trading and investment on environment, it is necessary to have enhanced development in agricultural sector in order to meet global competitiveness. In addition, the concern over the demands and supplies of food required the nation to increase its competitive capabilities in food production. All these challenges required new strategic approaches and policy thrust in order to enhance the economic contribution and growth of the agricultural sector.

The policy also focuses on sustainable development. In pursuing agricultural and forestry development, sustainable management and utilization of resources are used as reference. Rules, regulations and incentives are used to strengthen, to encourage environment-friendly agricultural and forestry practices. It also helps to minimize the negative impact to environment. In addition, research and application of appropriate technologies and innovations are emphasized too *(Third National Agricultural Policy, 1998)*.

Pesticide is widely used in agricultural activities. Persistent organic pollutants (POPs) are organic compounds that have long half-life in the environment and undergo slow physical, chemical, and biological degradation. They are able to pass through ecosystems and can travel great distances, both locally and globally.

In Malaysia, *Pesticides Act, 1974* was designed in order to ensure the registration of pesticides before these are marketed in Malaysia. The active substances in the pesticides have to be evaluated according to an environmental assessment, health assessment and efficacy specifications. A pesticide registration has to be renewed every three years and new scientific knowledge and/or strengthened criteria can result in a refusal, i.e. deregistration. At present, the Malaysian Pesticide Board is conducting a monitoring process of the four POPs pesticides that were deregistered. As for the registration of new pesticides, the Board has an embedded policy that looks into some important criteria such as the environmental fate of the pesticide and toxicological aspects of it. Under the criteria of environmental fate, aspects such as the persistency, mobility, bioaccumulation and leaching capacity of the pesticides are assessed and monitored. A pesticide that shows any of these criteria is immediately barred from registration for use in the country. The Pesticide Boards should be applauded for their sensitivity and vigilance in incorporating policies as above because these criteria are deemed suitable to monitor any new POPs entering the country as well. This is because all four characteristics tested under the environmental fate protocol are undeniably the most prominent characteristics of POPs pesticides. Through this embedded policy, there is

some level of assurance that it will be difficult for newer POPs to penetrate into the country for use in any sector.

On the other hand, ratification of PIC (Prior Informed Consent) Treaty on 24th February 2004, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (known as the PIC treaty) became legally binding. The Convention provides a warning procedure in the international trade of hazardous pesticides and other chemicals. At present, it has 73 signatories and 59 parties. Indonesia is among the signatories. PAN (Pesticide Action Network) Indonesia is urging the government and parliament to ratify the PIC Convention so that it becomes national law. Malaysia has ratified the convention and is being urged to include paraquat in the PIC list.

Under the issue of agriculture, Malaysia's main crops are oil palm, rubber and rice. Since the oil palm is the main plantation, herbicide becomes the mostly used pesticide in Malaysia. The amount of glyphosate is in the first place which 41% of the agent with a capacity of 15 million liters annually. The average annual amount of paraquat is 700 million liters; the amount of glufosinate-ammonium and metsulfuron both reach at 100 million liters. Insecticides and fungicides are in less usage, which are mainly B.t. (Bacillus thuringiensis, a kind of pesticide) and methamidophos (Ismail et al., 2010)

2.4.3.2 Malaysian Environment Policy caused by Industrial Activities

Industries are encouraged to develop policies that have lower impacts to environment due to its own operations or products. An integrated approach in prevention and control on pollution is categorized into four areas:

First of all is appropriate application of combination on corrective prevention and precautionary measures. As wise man said 'prevention is better than cure'. So an effective prevention measures can avoid pollution and reduced unnecessary costs that may occurred. Secondly, is to control the major sources of emissions into air, land and water. Environmental pollution is very contagious. The best way to defeat is to cut the source of pollutants. Thirdly, is to adopt practical practice in reducing pollution and promoting cleaner production technology. It is because advanced, suitable and effective technology is very important as it can eliminate pollution quickly. Lastly are implementation of Polluter-Pays-Principle and other appropriate techno-economic incentives and disincentives. Determination of a success or failure in environmental issues are depends on human activities. So to increase people's awareness, rewards and penalties are useful tools. Polluter-Pays-Principle does not only benefits for the human's environmental protection idea, but also for the environmental remediation.

Industries are encouraged to have self-regulation and self-serve in preventing and controlling pollution especially among the big firms. It's because they are capable in adopting clean technologies and able to finance it. One of the initiatives is the establishment and implementation of environment management systems (EMS) will be promoted at industry level. Major players in business and industry are encouraged to establish partnership schemes with small and medium-scale enterprises (SMEs) in order to help facilitating the exchange of experience in EMS (DOE, 2002).

2.4.3.3 Malaysian Environment Policy on Domestic Activities

In any kind of domestic land-used, Malaysia is considered success in taking up the challenge. Among the highlights are investments in domestic public transportation, the progressive elimination of lead from gasoline and the clean-up of the palm oil industry. The most recent one is rationalization of waste management.

Moreover domestic areas act as an important engine in recent economic growth and it's likely to grow even more in the medium term. Therefore, it is very crucial that policy in addressing domestic pollution problems do not unduly stifle the productivity of those areas. Economic instruments should consist of considerable potential to implement a balanced approach to domestic environmental management in a cost-effective manner (Peter, 1999).

2.4.4 Environmental Legislations in Malaysia.

All policy making mechanisms by Government in addressing out issues related to environment and development will be streamlined and coordinated for effective and efficient implementation, monitoring and feedback.

2.4.4.1 *The 'National Land Code' (NLC) in 1965*

People's activities act on the land and affect it. Rational distribution and usage of land is the key of land protection. . NLC makes the correct provisions in detail in dealing with land ownership, distribution, usage, etc. This law provides a good external environment on protecting the land for Malaysian government. At the same time, NLC provides a reliable basis on formulating policies on land protection for government too.

The first and basic law on land of Malaysia is the *National Land Code in 1965*. This law became effective from January 1, 1966. Since then, 11 states of Malaysia's Peninsular have been practiced the unified land-tenure system. Penang and Malacca state's land-tenure system had been profited from Britain's property rights and the property remises policy. The contract was the foundation of land ownership that is different from other states' residents.

For example, in NLC, Land types are divided into industrial land, agricultural land and domestic land. The method of Classification is based on the surrounding environment of land. The land management department distributes the land without damaging the environment. The law of NLC is helpful to the environmental policy on land.

2.4.4.2 *Environmental Quality Act in 1974*

Since the early 1920s Malaysia has had environmentally-related legislation that includes *Water Enactment Act* 1920, *the Mining Act* 1920*,* the *Forest Enactment Act 1920*, etc. But the legislation is very limited in scope and inadequate for handling complex and emerging environmental problems. So, a more comprehensive form of legislation and an organization to control pollution was established under EQA 1974.

EQA is an enabling piece of legislation for preventing, abating and controlling pollution, and enhancing the environment, or for other related purposes. Pollution, as declared in EQA, includes the direct or indirect alteration of any quality of the environment or any part of it. In other words, it is a positive act or act of omission.

Pollution is 'controlled' through the mechanism or regulations issued by the Department of Environment to licensees. Licensees are responsible for discharging or emitting wastes that not exceeding the acceptable conditions into the atmosphere, as well as noise pollution, polluting or causing the pollution to any soil or surface of any land.

Environmental issues related to legislation and standards will be reviewed regularly and revised whenever necessary. It is to ensure the continuing effectiveness and coordination of laws. By doing such, an effective enforcement will be implemented.

Malaysia has a more comprehensive environmental legislation. It is more scientific and cautious whereby it co-ordinates the relationship between policies and human's well behavior.

2.5 Previous Literatures

In 2006, Dr. Melinda gave her opinions in the paper of 'Environmental Policy in Central Africa' on agri-environmental policy. One of the policies is that, the pesticides should be sold in the Department of Land Environmental Management. This Regulation is favorable to supervise the quality of pesticides. It controls the land pollution caused by the abuse of pesticides effectively.

In addition, a report named 'Land Question in China' record a problem that, the white waste is unable to be degraded after landfill. It influences land quality. In view of this situation, the Chinese Government enacted a policy of *'White Waste Recycle'* in 1997. This policy regulates that, the white waste is encouraged to be sent to the recycle station to make recycled products, such as plastic bags, toys, rubbish bins…etc. In the decade of 1997-2007, the degree of land pollution caused by white waste had decreased by

19.8% (China's Environmental Protection Committee, 2008).