5

MALAYSIA’S ENVIRONMENTAL POLICY ON LAND WITH REFERENCE TO TAIWAN’S NEW SOUTHBOUND POLICY

Emile Kok-Kheng Yeoh and Zhang Yemo

Introduction

Environmental policy aims to manage human activities so as to prevent, reduce or mitigate the harmful effects on nature and natural resources, and to ensure that man-made changes to the environment do not have any harmful effects on human beings (McCormick 2001, 21). Environmental policy includes two key terms: environment and policy. Environment refers to a broad concept of three major dimensions: the ecological (ecosystem) dimension, the social (quality of life) dimension, and the economic (resource management) dimension (Bühl and Bartlett 1991, 9). According to the Concise Oxford Dictionary, policy can be defined as a “course of action or principle adopted or proposed by a government, party, business or individual”. Environmental policy therefore focuses on the problems posed by human influence on the environment, which are traced back to humankind (negatively) influencing human values such as human health or the “clean and green” environment.

Environmental issues are usually covered by environmental policies including (but not limited to) air and water pollution, waste management, ecosystem management, biodiversity protection, and the protection of natural resources, wildlife and endangered species.

Environmental policy on land contributes to a country’s social stability, regional economic, environmental protection, and the development of urban planning. Environmental policy on land is particularly prominent in the environmental policy.

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 such as land policy, land financial policy, and land taxes policy (Zhao 2005, 67-69).

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

Taiwan’s President Tsai Ing-wen recently said in her opening address at the International Symposium on Sustainability Science in Taipei on 22 October 2017 that the country is fully committed to contributing to regional and global sustainable development through forward-looking policymaking and project implementation, and the country is working with the U.S. under the International Environmental Partnership to share expertise with partners including those in the Asia-Pacific region on capacity-building and the provision of resources, talent and technologies (Taiwan Today 23 October 2017).

The Federation of Malaysia is one of the major New Southbound partner countries. Located between the Pacific and Indian Oceans, Malaysia is spread over 329,750 km² in Southeast Asia, and has an overall population of approximately 27 million. It is divided into East and West Malaysia. It has 4,192 kilometers of coastline and a tropical rainforest climate. The temperature of the mountainous areas in mainland is 22-28°C, and the coastal plains have an average temperature of 25-30°C. It has environmental issues related to pollution caused by agriculture, industry and domestic activities.

**Table 1: New Southbound countries’ population**

<table>
<thead>
<tr>
<th>Country</th>
<th>Population</th>
<th>Country</th>
<th>Population</th>
<th>Country</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>1,309,710,000</td>
<td>Pakistan</td>
<td>193,000,000</td>
<td>Cambodia</td>
<td>15,780,000</td>
</tr>
<tr>
<td>Australia</td>
<td>24,360,000</td>
<td>Bangladesh</td>
<td>161,510,000</td>
<td>Laos</td>
<td>7,160,000</td>
</tr>
<tr>
<td>Indonesia</td>
<td>258,800,000</td>
<td>Vietnam</td>
<td>92,640,000</td>
<td>Brunei</td>
<td>420,000</td>
</tr>
<tr>
<td>Thailand</td>
<td>68,980,000</td>
<td>New Zealand</td>
<td>4,710,000</td>
<td>Bhutan</td>
<td>790,000</td>
</tr>
<tr>
<td>Philippines</td>
<td>104,200,000</td>
<td>Sri Lanka</td>
<td>21,250,000</td>
<td>Taiwan</td>
<td>23,550,000</td>
</tr>
<tr>
<td>Malaysia</td>
<td>31,720,000</td>
<td>Myanmar</td>
<td>52,250,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>5,590,000</td>
<td>Nepal</td>
<td>28,830,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ecological degradation is the chief environmental problem of developing countries. To the ecological cost of the world, developing countries generally practice division of labor in trade, and in the production of natural resources. Developing countries’ ecology has been seriously depredated by consumption reliance and the high intensity use of natural resources over a long period of time. This is demonstrated in the surprising pace at which these natural resources have been degraded. Soil erosion, desertification and stony desertification are becoming more prominent issues as a result. Ecological security faces severe challenge every day.

The target of environmental protection is the living and natural environment. The living and natural environment is defined as “the main part of the natural and artificial factors which can influence human survival and development”. It includes atmosphere, water, ocean, land, mineral deposits, forests, grasslands, wildlife, nature reserves, scenic spots, cities and villages, and so on. The living and natural environment covers all things with the ability to influence human survival and development. Because of the wide purview of the living and natural environment, the cooperation of many different departments is necessary to any environmental protection undertaking.

While sustainable development has been a priority in the agendas of many governments in Southeast Asia, these countries still face the following common environmental problems: land/soil deterioration and deforestation; water pollution; air pollution, global warming and ozone depletion; urban and Industrial wastes; population pressure (Huong 1999). The resource management and environmental policies introduced by the Southeast Asian governments fall into the following categories: pricing policy or fee for using environmental resources, management of resources by governmental regulation, green tax and clean technologies, acknowledging the importance of community involvement, regional cooperation and support from developed countries (Huong 1999). As President Tsai Ing-wen recently said in her opening address at the International Symposium on Sustainability Science in Taipei on 22 October 2017, energy reform is a top policy priority of Taiwan, and the government is making headway in its plan for renewables to account for 20 percent of the country’s energy portfolio in eight years (Taiwan Today 23 October 2017). Such policy convergence between Taiwan and the Southeast Asian countries has much room for cooperation in the sustainable development in the region.

Malaysia’s land planning system and environmental policies are implemented within a broader framework overseen by the government. Malaysia's implementation of its environmental planning system is crucial to its economic development. These policies and systems promote regional development and environmental protection.
Malaysia’s environmental land policy consists of many successive legal documents. Although the Constitution stipulates that state land is a Treasury issue, the different Malaysian states have the right to develop their own policies so long as all the policies are consistent.

**Overview of Malaysia’s Environmental Land Policy on Agricultural, Industrial and Domestic Activities**

In order to correct the imbalance of economic and social activities as well as protect the environment, Malaysia has established environmental policy and land planning systems to oversee the overall environmental development, planning and promotion of regional development.

Malaysia’s National Environmental Policy aims to develop continuously on economic, social and cultural fronts by enhancing the quality of people’s lives through sustainable development that is environmentally sound (Anand 1983).

**The Background of Malaysia’s Environmental Policy on Land**

Malaysia’s government is aware of the national importance of environmental land protection. Under the New Economic Policy (NEP) and the subsequent National Development Policy (NDP), an overall framework for national development was provided. One of the important elements in National development is land. Therefore, Malaysia has to rely on land policies and a clear planning framework to achieve its national development policies and strategies.

**Task of Malaysia’s Environmental Policy**

Malaysia’s growth is undoubtedly due to its natural resources. As Malaysia moves towards attaining developed-nation status, Vision 2020 envisages that the land in the country will remain productive and fertile; that its natural diversity will continue to be rice; that the air will be clean and clear; that its water will stay unspoiled; and that its land ecosystem will be balanced. These resources are not only the sources of wealth creation; they are also symbols of national pride. They are the essential support systems for Malaysia’s uniquely diverse culture, and are manifestations of the country’s natural heritage.

When exercising its sovereign right over natural resources, the country will develop them as it sees fit. However, Malaysia’s Department of Environment (DOE 2002) recognizes that indiscriminate resource utilization, over-consumption and
other unsustainable development practices will erode the foundation of national success and could jeopardize the country’s continued progress.

**Function of Malaysia’s Environmental Policy**

Malaysia’s National Environment Policy statement sets out the necessary principles and strategies to ensure that the environment remains productive, both ecologically and economically. The nation’s natural resource accounting system would be designed and implemented to ensure a balanced perspective on the roles played by the environment and natural resources in relation to overall development plans and strategies.

Factors taken into considerations include integration between policies, programs, plans and project formulation. To successful implement these policies, a comprehensive assessment process on social, ecological and health effects are considered. Public participation plays an equally important role in ecological protection. Both state and public participation in environmental protection will result in a healthy balance between humans and nature.

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

Urbanization development has brought many problems such as squatters, traffic jams, land increment and pollution. These problems are due to the imbalance between Federation and state government policies. The authorities in each Malaysian state sometimes ignore the importance of using land and its resources with care. Some even refuse to accept the Federal government’s decision on land utilization for corporate planning. As a result, the state authorities persist in doing things their own way. This causes the national land utilization policy to only exist in name, and prevents the realization of the national development plan.

**Current Environmental Policy on Land in Malaysia - National Policy on the Environment, 2002**

The 2002 National Policy on the Environment seeks to protect and conserves the environment and natural resources in order to meet the needs and aspirations of the country’s population, particularly with regard to the productive capacity of resources such as land, forests, biodiversity and water. There are three objectives that are to be achieved. The first objective is a clean, safe, healthy and productive environment for present and future generations. The second is conservation of the country’s unique
and diverse cultural heritage. The last objective is for all sectors of society to effectively participate in the preservation of natural heritage. When these objectives come to fruition, Malaysians will enjoy sustainable lifestyles, as well as sustainable patterns of consumption and production. Land-use planning and implementation would be based on a comprehensive assessment of critical parameters such as land suitability, the need for soil conservation, land capabilities and carrying capacities, taking into consideration the current and future needs of the community.

Advanced land survey techniques are important to the environmental protection of land. Resource mapping techniques and geographical information systems indicating environmentally sensitive areas such as steep or hilly land, forests and wetlands are used wherever appropriate. Special attention is given to minimizing land degradation such as soil erosion and degradation from mining activities. Preventive measurement will be taken to protect and conserve elements of national historical, social and cultural heritage, including outstanding natural features and landscapes (DOE 2002).

**Current Environmental Policy on Land in Malaysia - National Biodiversity Policy, 1998**

The goal of the 1988 National Biodiversity Policy is to maintain and strengthen environmental stability of the functioning of ecosystems. It is concerned with environmental stability, ecosystem services, ecosystem functions’ benefits to humans, improving air and water quality, maintaining hydrological conditions, soil generation, protecting soil and water, nutrients recycling, energy supply, carbon sequestration and oxygen release. The various living organisms in ecosystems help to stabilize the environment, sustain ecological services, and provide basic amenities and recreational opportunities for humankind such as sustainable environments, materials, water and productive soils.

**Malaysian Environmental 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).

There was a Third National Agricultural Policy (NAP3) in 1998–2010. This policy was made to ensure that the agricultural development sector plays a strategic role in national development, especially in the maintenance and strengthening of new challenges. NAP3 also focused on improving productivity and competitiveness,
deepening relations with other sectors, expanding new frontier areas, and protecting and utilizing natural resources on a sustainable basis. It sought to create an enabling environment to promote and support measures capable of contributing to the growth of the agricultural sector. Although NAP3 has lapse, existing policies and strategies continue to emphasize sustained agricultural productivity and market growth.

Before there can be extensive growth in the agricultural sector, the nation must address the challenge of efficiently and optimally utilizing existing resources for improved competitiveness.

Due to limited resources and rapid changes in global trading and investment in environment, it is necessary to enhance development in the agricultural to reach levels of global competitiveness. In addition, the country has to increase the competitiveness of its food production if it is to meet the demand required by a growing population in the future. New strategic directions and policy priorities are needed to meet these challenges, and improve the economic contribution and growth of the agricultural sector.

NAP3 also focused on sustainable development. In pursuing agricultural and forestry development, sustainable management and utilization of resources were used as reference. Rules, regulations and incentives were used to strengthen and encourage environment-friendly agricultural and forestry practices. It also helped to minimize the negative impact to environment. In addition, research and application of appropriate technologies and innovations were emphasized (Third National Agricultural Policy 1998).

Pesticides are widely used in agricultural activities. Persistent organic pollutants (POPs) are organic compounds with a very long half-life in the environment and subjected to slow the physical, chemical and biological degradation. They can travel through the ecosystem for long distances in a local and global scale.

In Malaysia, the Pesticides Act of 1974 was formulated to ensure the registration of pesticides prior to their sale in Malaysia. The active substances in the pesticides must be evaluated according to environmental, health and efficacy assessment specifications. Registration of pesticides must be updated every three years, and new scientific knowledge and/or strengthened standards may result in a refusal, i.e. deregistration. The Malaysian Pesticide Board has monitored four deregistered POPs pesticides so far. The Board has developed an embedded policy that looks into some important standards for pesticides before they are determined to be ready for registration. Of these, the most important are the environmental fate of the pesticide and its toxicological aspects. The Board actively evaluates and
monitors the persistency, mobility, bioaccumulation and leaching capacity of the pesticides.

Pesticides failing to meet any of these standards are immediately banned from registration in the country. The Pesticide Boards of each Malaysian state are encouraged to incorporate the above policies, as these standards are considered to be suitable for monitoring any new persistent organic pollutants entering the country. This is because all four features tested under the environmental fate protocol are undeniably the most prominent feature of POPs pesticides. Through this embedded policy, there is a degree of assurance that new persistent organic pollutants will be hard-pressed to penetrate the country in any sector.

On the other hand, ratification of the Prior Informed Consent (PIC) Treaty on 24 February 2004 made the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade legally binding. The Convention provides a warning procedure in the international trade of hazardous pesticides and other chemicals. There are currently 73 signatories and 59 parties. Indonesia is one of the signatories. Pesticide Action Network Indonesia is urging the Malaysian government and parliament to ratify the PIC Convention so that it becomes national law. Malaysia has ratified the convention and is urging the inclusion paraquat in the PIC list.

The main crops in Malaysia are oil palm, rubber and rice. Oil palm plantations constitute a major sector. Pesticides are commonly used in these plantations. The amount of glyphosate used is the most frequently used pesticide, accounting for 41% or 15 million liters per year. The average annual consumption of paraquat is 700 million liters; the amount of glufosinate-ammonium and metsulfuron are at 100 million liters each. Insecticides and fungicides such as Bt Bacillus thuringiensis, a kind of pesticide) and methamidophos are used in small amounts (Ismail et al. 2010).

**Malaysian Environmental Policy on Industrial Activities**

Industries are encouraged to develop policies that lower environmental impact of their operations or products. An integrated approach in prevention and control on pollution can be carried out in four areas:

First of all, a proper combination of corrective and preventive measures is needed. Effective prevention measures can prevent pollution and reduce unnecessary costs. Secondly, the main sources of emissions into air, land and water must be controlled. Environmental pollution is very contagious. The best way to alleviate that is by reducing the sources of pollutants. Thirdly, promote cleaner production technology as a practical method of reducing pollution. When
advanced and effective technology is applied to environmental protection, pollution can be quickly reduced. Finally, the “polluter pays” principle and other appropriate techno-economic incentives and disincentives should be implemented. Human activities have both positive and negative effects on environmental issues. Hence, it is important to raise people’s awareness of environmental issues. Rewarding people when they impact the environment positively, and punishing them when they harm the environment are useful methods of educating the public on environmental protection issues. The “polluter pays” principle is not only a beneficial human environmental protection idea; it is also conducive to environmental remediation.

Industries, especially large companies, are encouraged to have self-discipline and to practice self-prevention in matters of environmental protection. This is important because large companies have the financial means to ensure that their factories and industries use clean technology to prevent and control pollution. Through the establishment and implementation of the environment management systems (EMS), major business and industry players are encouraged to partner with small and medium-scale enterprises (SMEs) so as to facilitate dialogue on the ways in which they respectively reduce their environmental impact (DOE 2002).

**Malaysian Environmental Policy on Domestic Activities**

Malaysia can be said to be quite successful in domestic land use. The government has invested in the clean-up of the palm oil industry. It has also worked with the domestic public transportation system to progressively eliminate lead from gasoline. The most recent government effort in environmental protection is the rationalization of waste management.

As the land resources in Malaysia are central to economic growth and will continue to remain thus in the medium-term, domestic pollution must be managed. This will ensure that the productivity of industries related to the use of land resources does not deteriorate. Economic instruments have also been shown to have considerable potential in providing a balanced approach to domestic environmental management in a cost-effective manner (Kennedy 1999).

**Environmental Legislations in Malaysia - National Land Code (NLC), 1965**

All of the government’s environmental and development-related policymaking mechanisms should focus on simplification and harmonization. This will lead to
effective and efficient implementation, monitoring and feedback.

As human activities do affect the land, rational allocation and usage of land is the key to land conservation. The National Land Code (NLC) of 1965 has detailed provisions vis-à-vis land ownership, distribution, usage, and so on. This law provides a good external environment for the Malaysian government to protect the land. Meanwhile, NLC also provides a reliable basis for the present government to formulate policies on land protection.

NLC was first basic tenet of Malaysian Land Law, and it has been in effect since 1 January 1966. Following the institution of NLC, the eleven states in Peninsular Malaysia have implemented a unified land-tenure system. Penang and Malacca land-tenure system 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 land type classification is based on the land’s surrounding environment. The land management department distributes the land without damaging the environment. The laws originating from NLC are helpful to the development of environmental policy on land.

Environmental Legislations in Malaysia -
Environmental Quality Act, 1974

Since the early 1920s, Malaysia has enacted legislation related to the environment. Examples of such legislation include the Water Enactment Act of 1920, Mining Act of 1920, Forest Enactment Act of 1920, etc. However, the limited scope of earlier legislations means that they cannot efficiently deal with complex and emerging environmental issues. The government then remedied this through the Environmental Quality Act (EQA) of 1974. Under EQA, appropriate legislation and organizations vis-à-vis the environment were established.

EQA aims to prevent, reduce and control pollution, and to improve the environment or for other related purposes. Pollution, as defined in EQA, includes direct or indirect changes in the environment, or any part of it. The government seeks to manage pollution through regulations issued by the Department of Environment to licensees. Licensees must make sure that any waste they release into the atmosphere does not exceed the acceptable requirement stated in EQA. The types of waste released by licensees include noise pollution, or any tangible or intangible substance that can pollute or result in the pollution of the soil or the surface of the land.
Legislation and standards related to environmental issues would be reviewed regularly and revised whenever necessary. This will ensure the continued effectiveness of the legislation and the coordination of laws. By so doing, an effective enforcement could be implemented.

Hence, Malaysia has a comprehensive environmental legislation. Malaysia is scientific and cautious in coordinating the relationship between environmental policies and people’s behaviors.

**Malaysia’s Environmental Policy on Land Related to Agricultural Activities**

The agricultural sector still plays a very important role in Malaysia’s development, and a lot of prominence has been placed on it.

Cameron Highlands is one of the famous tourism places in Pahang, as vegetables and tea are planted there. However, those plantations pose a danger to the fragile environment. Large-scale farming has caused thousands of acres of forests to be ploughed, indirectly destroying the habitat of thousands or even millions of wildlife. Due to this, wildlife has to migrate in order to escape the dangers of human activities. This causes an imbalance in their ecosystem whereby some areas are too densely populated with predators and others suffer from lack of food sources.

Malaysia has abundant natural resources in fields such as agriculture, forestry and minerals. In agriculture, Malaysia is a major exporter of natural rubber and palm oil, which, together with sawn logs and sawn timber, cocoa, pepper, pineapples and tobacco, dominate the development of the industry. Palm oil is also a major producer of foreign exchange. In Malaysia, a few public and private organizations such as the Federal Land Development Authority (FELDA) and Sime Darby are managing the palm oil activities.

FELDA is the world’s largest plantation operator, with 811,140 hectares (2,004,400 acres) of oil palms across Peninsular Malaysia, Sarawak and Sabah. It operates plantations and oil mills in Indonesia as well. Although FELDA is mainly preoccupied with the alleviation of rural poverty through resettlement, it is reportedly holds a minority stake in some major Malaysian banks.

Sime Darby is Malaysia’s leading multinational conglomerate in five core sectors: plantation, real estate, industrial, automotive, and energy and utilities. It also has a growing position in healthcare. Plantations are the largest source of income for Sime Darby. In 2009, about 70% of the conglomerate’s profits came from this area. The company owns palm oil and rubber plantations in Malaysia and in the Indonesian islands of Sumatra, Kalimantan and Sulawesi, with a land bank of over
633,000 hectares, including 300,000 hectares in Indonesia (Hidayat 2009). It is one of the world’s largest plantation companies.

As the world’s largest producer and exporter of palm oil, Malaysia is a pioneer palm biofuel producer. Since 1982, Malaysia began a comprehensive palm oil biofuel plan, and has successfully established the use of palm methyl esters and the blend of processed palm oil (5%) with petroleum diesel (95%) as a suitable fuel for the transportation and industrial sectors.

Palm oil is mainly used as renewable biofuel. This usage would help to reduce the use of fossil fuels, and indirectly reduce emissions of carbon dioxide and other greenhouse gases into the atmosphere.

On the other hand, rubber was the main crop in the Malaysian plantation industry for more than eight decades. In 1989, the total area of oil palm (1,591,536 ha.) surpassed that of rubber (1,551,000 ha.). By 2005, rubber plantations made up only 23.45% (1.250 million ha.) of the plantation industry’s total area of 5,305,765 ha. In contrast, palm oil plantations had a total area of 4 million hectares (75.50%) in 2005.

As there are now fewer rubber plantations than palm oil plantations, the Malaysian government set up the Rubber Industry Smallholders Development Authority (RISDA). RISDA was established to develop new policies and strategies protecting smallholders in the industry. It also guides the rubber smallholder sector towards progressive socio-economic development. RISDA strives to increase the strength and stability of the nation’s natural rubber industry by cooperating with other agencies to modernize and expand the rubber smallholder sector. Most notably, RISDA and other agencies have researched the ways in which rubber plantation smallholders can improve their access to agricultural loans, and processing and marketing methods. Modernization of the smallholder rubber industry is central to RISDA’s raison d’être. It is active in encouraging smallholders to take advantage of modern practices to improve rubber production quality as well as to earn higher returns.

Furthermore, large areas are being deforested. Forest degradation is getting to be a serious problem. The Malaysian government plans to attenuate this by enriching some 312.30 square kilometers (120.5 square miles) of land with rattan under natural forest conditions and in rubber plantations as an intercrop. In order to further enrich forest resources, rapidly growing timber species such as meranti tembaga, merawan and sesenduk have also been planted. In the meantime, the government also encourages the cultivation of high-value trees such as teak, pulp and other trees. Rubber, which used to be the mainstay of Malaysia’s economy, has been largely replaced by oil palm as Malaysia’s major agricultural export.
The Malaysian government supervises programs that control land pollution. Departments cooperate to ensure the smooth implementation of regulations and supervision. The Ministry of Agriculture and Agro-based Industry, Ministry of Natural Resource and Environment and Ministry of Plantation Industries and Commodities are responsible for issues related to the environmental protection of land in Malaysia.

The Ministry of Agriculture and Agro-based Industry has three departments dealing with such issues: Malaysian Agricultural Research and Development Institute, Federal Agricultural Marketing Authority, and Muda Agricultural Development Authority. The Ministry of Agriculture and Agro-based Industry also manages the Urban Development Authority (UDA). These departments aim to transform the agricultural and agro-based industry into a modern, dynamic and competitive sector, to position Malaysia as a major world food exporter, and to develop the agriculture sector as the country’s engine of growth.

In the Ministry of Natural Resource & Environment, there are five departments that are the Malaysian Centre for Geospatial Data Infrastructure, Department of Director General of Lands and Mines, Department of Environment, Minerals and Geosciences Department Malaysia, and Forest Research Institute Malaysia in charge of environmental protection of land. These departments are responsible for the well-balanced management of natural resources and environment. It is only through the good management of the environment and natural resources that sustainable development can be achieved. Sustainable development is also central to the efficient and effective service delivery of natural resources and environment management. These departments also establish training as well as research and development (R&D), which serves as an innovative catalyst for the exploration of natural resources management and environmental protection. These departments work together to ensure that Malaysia has a clean, safe, healthy, productive and pollution-free environment.

In the Ministry of Plantation Industries and Commodities, there are four departments in charge of environmental protection of land: the Forestry Department of Malaysia, Minerals and Geosciences Department, Malaysian Rubber Board, and Malaysian Palm Oil Board. RISDA belongs to the rubber plantation section managed by the Malaysian Rubber Board. The work of Sime Darby and FELDA is supervised by the Malaysian Palm Oil Board under the oil palm plantation section. These departments are responsible for ensuring the international competitiveness of Malaysia in the commodity-based industries, their continued contribution to national development, and maximizing the contribution of the commodity-based industries to foreign exchange earnings, national income and GDP (see Table 2). They aim to make Malaysia a center of excellence for R&D by using technology and services to improve
the efficiency, productivity, quality and sustainability of the country’s primary industries (see Figure 1).

Table 2: New Southbound countries’ Gross Domestic Product (USD)

<table>
<thead>
<tr>
<th>Country</th>
<th>Gross Domestic Product (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>2.251.0 billion</td>
</tr>
<tr>
<td>Australia</td>
<td>1.256.6 billion</td>
</tr>
<tr>
<td>Indonesia</td>
<td>941.0 billion</td>
</tr>
<tr>
<td>Thailand</td>
<td>390.6 billion</td>
</tr>
<tr>
<td>Philippines</td>
<td>311.7 billion</td>
</tr>
<tr>
<td>Malaysia</td>
<td>302.7 billion</td>
</tr>
<tr>
<td>Singapore</td>
<td>296.6 billion</td>
</tr>
<tr>
<td>Pakistan</td>
<td>271.1 billion</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>226.8 billion</td>
</tr>
<tr>
<td>Vietnam</td>
<td>200.5 billion</td>
</tr>
<tr>
<td>New Zealand</td>
<td>179.4 billion</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>82.2 billion</td>
</tr>
<tr>
<td>Myanmar</td>
<td>68.3 billion</td>
</tr>
<tr>
<td>Nepal</td>
<td>21.2 billion</td>
</tr>
<tr>
<td>Cambodia</td>
<td>18.2 billion</td>
</tr>
<tr>
<td>Laos</td>
<td>13.8 billion</td>
</tr>
<tr>
<td>Brunei</td>
<td>10.5 billion</td>
</tr>
<tr>
<td>Bhutan</td>
<td>2.1 billion</td>
</tr>
<tr>
<td>Taiwan</td>
<td>519.1 billion</td>
</tr>
</tbody>
</table>


Figure 1: Roles of Stakeholders related to Environmental Land Protection in Malaysia
The use of pesticides in agriculture is the main culprit of environmental degradation. Most of these pesticides contain non-biological ingredients that can cause abnormal changes to any wildlife exposed to them. The chemicals can also negatively affect humans through the food chain. Pesticides aim to kill the insects attacking crops. But when we eat the animals that consume the affected insects, we will be poisoned by these pesticides as well.

Pesticides can also deplete or contaminate the natural minerals in soil, making the land useless and poisonous. When land has been stripped of its natural minerals, it will be unproductive for years because it will take a long time to recover its nutrients and normal pH level. When pesticides flow into rivers, streams and the sea, they cause pollution. This means the sea will end up being polluted by pesticides used on land as well.

Although small amounts of pesticide are harmless to humans and wildlife preying on insects, they should not be used at all. To understand this, you must see the trickle-down effects of its use. When pesticides are initially used in small amounts in agriculture, they will eliminate unwanted pests and increase crop yield. However, the pests will eventually develop resistance to the small amounts of pesticides used. When this happens, the farmers will not be able to get rid of them. The farmers will then increase the amount of pesticide used on their crops. Again, the pests are killed. But the pests again develop immunity to this increased amount of pesticide. The farmers then have to resort to stronger pesticides. The cycle continues until the farmers end up using very poisonous pesticides to kill the insects attacking their crops. Since the pesticides used are by now very toxic, they can make the animals preying on the insects ill; they can make the humans who eat these animals ill; they can make the humans eating or using these crops ill.

To minimize the instances of this happening, Felda Agricultural Services Sdn. Bhd. has collaborated with Malaysian Palm Oil Board (MPOB) to develop a technology to mass produce a bio-pesticide product, Metarhizium anisopliae. This widely distributed soil-inhabiting fungus kills a major oil palm pest, the coconut rhinoceros beetle (Oryctes rhinoceros). This collaboration culminated in the setting up of the Metarhizium Technology Centre (METEC) at Tun Razak Agricultural Services Centre (PPPTTR) in 2005. METEC produces a powdered Metarhizium formulation called ORY-FX used to control the coconut rhinoceros beetle population in oil palm replanting areas.

The oil palm industry follows a long life cycle of 25-30 years, which means that the land needs to be cleared once only during this period. In contrast, intensive agriculture undertaken for annual oilseed crops leads to detrimental consequences for the environment such as soil erosion and land degradation. This is because of the
use of pesticides and the overuse of fertilizers.

In Malaysia, some organizations and companies are also responsible for the environmental issues on land. Some of them obey the environmental policy on land or the *Pesticide Act of 1974*. Table 3 shows the organizations and the companies tasked with the environmental policy on land and environmental system issues.

### Table 3: Organizations and Companies Tasked with the Environmental Land Policy and Environmental System Issues

<table>
<thead>
<tr>
<th>Implementation</th>
<th>FELDA</th>
<th>Sime Darby</th>
<th>RSID</th>
<th>UDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy on Land</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>The usage of Pesticide</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Environmental system issues</td>
<td>the use of pesticides to plant palm in accordance with <em>Pesticide Act, 1974 &amp; OSERA, 1994</em></td>
<td>the use of pesticides to plant palm in accordance with <em>Pesticide Act, 1974 &amp; OSERA, 1994</em></td>
<td>the use of pesticides to plant rubber in accordance with <em>Pesticide Act, 1974 &amp; OSERA, 1994</em></td>
<td>UDA is a governmental agency in Malaysia. It serves to launch and oversee urban development projects related to business, industry, and housing. It is also tasked with developing urban infrastructure.</td>
</tr>
</tbody>
</table>

Legal or illegal logging also degrades the natural state of land in Malaysia. Additionally, Malaysia has become a dumping site for millions of tons of waste disposed weekly by households due to the human population boom.

The Malaysian government is aware of the seriousness of this situation, and it is dedicated to curbing these negative practices through environmental land policies.

### Malaysia’s Environmental Policy on Industrial Pollution

In 1996, the sewage discharge, textiles, and metal finishing sectors announced their dedication to cleaner production methods. Industrial pollution of land occurs due to inadequate effluent treatment, increased production without commensurate measures in boosting treatment plant capacity, and slow response to plant upset. Four palm oil mills and four rubber factories were temporarily suspended for multiple violations of licensing conditions (Hashim 2000).

Industrial non-prescribed premises are also more likely to pollute the environment. For instance, the metal finishing and leather industries have yet to
comply with the *Environmental Quality (Sewage and Industrial Effluents) Regulations of 1979*. Moreover, the Attorney General’s Chambers are still vetting the draft regulations for the specific control of effluence released by companies into the environment. Occasionally, other industries fail to comply with the Environmental Quality Regulations. Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Suspended solids (SHEAR STRENGTH), and Oil and Grease are some of industries guilty of non-compliance.

The overall industrial compliance with the *Environmental Quality (Clean Air) Regulations of 1978* was generally at a satisfactory level, although smell and fugitive emissions remain problematic. To banish harmful smells in the air with a 100% success rate is an impossible mission (Molina-Azorin et al. 2008).

Harmful smells can come from various sources such as gas or smoke emission from industrial productions, and carbon monoxide generated by buses or cars. The relationship between industrial activities and land pollution is most commonly manifested in the stinky smell coming from waste that has been thrown away by factories. These waste products are not only smelly; they may also generate poisonous gas into the atmosphere. If the weather is too hot, they may start fires. These negative side-effects are detrimental for the environment and all living creatures.

**Malaysia’s Environmental Policy on Land-related Domestic Pollution**

The Malaysian Department of Environment (DOE) has adopted a three-pronged strategy in handling environment problems, especially land management. There are three types of strategies: short-term, medium-term, and long-term. Short-term strategies focus on the implementation of existing legislation to control discharges and emission pollution from the main sources. Medium-term strategies emphasize the incorporation of an environmental component into the development planning process. Long-term strategy ensures the development of the physical environment and improving the quality of life through extensive planning.

DOE is the main agency controlling environmental issues. It practices problem solving approaches. However, DOE has recently adopted more systematic and holistic approaches which encompass monitoring enforcement, development and planning. Monitoring is done on a regular basis of six months in order to collect and compile the necessary environmental for assessment. This assessment is the prerequisite for any action. Critically affected areas are prioritized for retreatment
actions specifically targeting the major source of pollutions.

Currently, Kuala Lumpur produces 3,500 tonnes of domestic and industrial waste per day. This could fill up the Petronas Twin Towers up to a height of 11m. Meanwhile, waste generated by an average household is approximately 0.8kg to 1.3kg per day (Sooria Gadhi Rao 2009). If one were to compute all the quantities of wastes that have been thrown by these three parties (domestic, industry and household), they would be able to completely fill both towers in 40 days. In addition, these wastes will decay in landfills and produce a toxic poisonous emission called leachate that will pollute rivers and oceans. The nitric oxide and methane emissions into the greenhouse environment will be 21 times more potent than carbon dioxide, if this level of waste production continues.

The government has introduced vermicomposting as a means of resolving this dreadful scenario. In this process, worms are used to decompose the waste. As this happens, a richer end product called vermicompost fertilizer is produced. This vermicompost fertilizer offers an effective stand-alone protection against plant diseases, which can help reduce the use of pesticides on crops. It also helps to expand the landfills' lifespan, and is an eco-friendly and back-to-nature practice. Kuala Lumpur was chosen to be the first test runner of this new approach due to its high population (Sooria Gadhi Rao 2009).

If vermicomposting proves successful in Kuala Lumpur, the DOE will call for the national implementation of this scheme so that residential areas, schools, business complexes, hotels, factories and hypermarkets all over Malaysia can practice it.

The DOE officers we interviewed suggested some ways of improving Malaysia’s environmental policy on land. It short, DOE is responsible for environmental impact assessment (EIA) as well as environmental protection. The DOE is located in Putrajaya, Malaysia. Normally, the National Policy on Environment is responsible for environmental policy on land. In 2002, a National Policy on Environmental combining the three elements of sustainable development (economic, social and cultural development and environmental protection) was formulated and adopted. The policy aims to continue economic, social and cultural progress, and to improve the quality of Malaysian life through environmental-friendly and sustainable development. To meet the country’s rapid economic development and the aspirations of the country to improve the quality of life, the National Policy on Environmental is an important guide for all stakeholders to ensure cleanliness, safety, health and productivity of environment.

Malaysia is well known for its outstanding achievement in water and air management. Presently, the government oversees all environmental policies on land. Policies and laws on land protection are essential to the environmental protection of
land. To devise such policies for land, the government studied previous policies and regulations related to water and air management, and were guided by them. Research on field land management has also been carried out to ensure land pollution control, land-use planning, and land protection and ownership.

History of Environment-related Acts in Malaysia

Everything in existence has a reason, so do legislative processes. When people cannot solve new problems, corresponding laws are promulgated. In 1920, Malaysians fell ill from drinking and using the country’s polluted river and seawater. As a result, the Malaysian Water Act of 1920 was the first environment-related act published. This law governed water protection of rivers and streams, and ensured that water used for consumption and agriculture was safe. The Poison Act of 1952 regulated the sale of non-medicinal poisons and pesticides so as to limit the amount of poisons released into the environment. The Pesticide Act of 1974 went further than the Poison Act because it detailed the protection of farmland from poisonous substances. The Pesticide Act was to become the basis for future environmental policy on land. The Malaysian Food Act of 1983 ensured that food and water are safe for consumption. Before 1994, many workers were endangered by their natural and manmade occupational environments. To protect plantation workers, workers in the heavy industries, workers in factories, as well as workers in the construction industry, the Occupational Safety and Health Act (OSHA), Malaysia 1994 was published. To remedy the serious damage on Malaysian environment and biodiversity in 1998-2002, protect the bio-ecosystem and preserve the habitats of plants and animals, the National Biodiversity Policy and National Policy on the Environment were introduced. Table 4 outlines the comprehensive nature of Malaysia’s environmental policies on land.

Table 4: Time-frame of the History of Environment-related Acts in Malaysia

<table>
<thead>
<tr>
<th>Year of Promulgation</th>
<th>Policy or Law</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>Water Act</td>
<td>An Act to provide for the control of rivers and streams.</td>
</tr>
<tr>
<td>Year</td>
<td>Law/Policy</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1974</td>
<td>Pesticide Act</td>
<td>Under the Pesticides (Pest Control Operator) Rules of 2004, a person carrying out pest control on his own premises or engaged in the business of applying pesticide to the property of another for hire must at any time possess the relevant license issued by the Pesticides Board of Malaysia.</td>
</tr>
<tr>
<td>1983</td>
<td>Food Act</td>
<td>This Act addresses food safety. However, the effectiveness of this Act is debatable. This is because many facilities such as farms, restaurants, and nonprofit food establishments where food is prepared for or served directly to the consumer are exempt from the requirements of the bill.</td>
</tr>
<tr>
<td>1994</td>
<td>Occupational Safety and Health Act (OSHA)</td>
<td>This act makes “further provision for securing that safety, health and welfare of persons at work, for protecting others against risks to safety or health in connection with the activities of persons at work, to establish the National Council for Occupational Safety and Health and for matters connected therewith.”</td>
</tr>
<tr>
<td>1998</td>
<td>National Biodiversity Policy</td>
<td>The principal aim of the National Forest Policy of 1998 is to ensure environmental stability and the maintenance of ecological balance including atmospheric equilibrium, which is vital for sustenance of all life forms, human, animal and plant.</td>
</tr>
<tr>
<td>2002</td>
<td>National Policy on the Environment</td>
<td>To achieve a clean, safe, healthy and productive environment for present and future generations; and to achieve sustainable lifestyle and patterns of consumption and production.</td>
</tr>
</tbody>
</table>

**Overview of Malaysia’s Environmental Policy on Land**

Malaysia is more focused on macro adjustments and control vis-à-vis environmental land policy. It makes social economic targets easily achievable by utilizing land policy and land plans where various administrations and implementations are taken into account (McAuslan 1982).

In Malaysia, environmental policy on land works in alignment with the strategic planning of national economic development. Hence, it is possible to integrate land policy and industrial policy.

The National Development Planning Framework, a comprehensive framework of the relevant authority’s role, has been laid out. It shows how one party can influence economic and social development, the country’s direction and connection between land utilization management and macroeconomic management. It also reflects the continuous rapid growth of economy and society. As can be seen in Figures 2a and 2b, Malaysia has a clear and direct relational tree of planning departments. It ensures that the policies can be implemented effectively and smoothly.
Figure 2: National Development Planning Framework (a)

Notes
IAPG = Inter Agency Planning Group
SERGPU = Social Economic Research and General Planning Unit
ICU = Implementation Coordination Unit
EPU = Economic Planning Unit

(b)

VISION 2020

LEVEL 1: NATIONAL PLANNING

5-YEAR MALAYSIA PLAN \rightarrow NATIONAL PHYSICAL PLAN \rightarrow SECTORAL POLICIES/PLANS

LEVEL 2: REGIONAL / STATE PLANNING

REGIONAL / STATE DEVELOPMENT PLAN \rightarrow REGIONAL / STRUCTURE PLAN \rightarrow SECTORAL POLICIES/PLANS

LEVEL 3: LOCAL PLANNING

LOCAL PLAN \rightarrow SPECIAL AREA PLAN

Source: NPP-2, 2010, p. 1-1, Figure 1.1.
Implementation and Limitation of Malaysia’s Environmental Policy on Land

Restriction of Malaysian Environmental Policy on Land Related to Industrial Activities

Malaysia environmental policy is more focused on water and air pollution.\(^1\) Industrial waste released into water and air will pollute the land as well. When polluting sewage flows through the land, it will cause the biological death of soil. The land will become infertile. Polluting emissions in the air will cause the population of flora and fauna to decline, and deteriorate the condition of the surrounding environment. When the land is infertile and too polluted, it will be disused. This is a waste of resources. Current environmental and land legal policies can improve by looking into these issues.

Limitation of Malaysia’s Environmental Policy on Agricultural Pollution

Malaysia is a federation whereby each state’s authority is independent to certain extents, and decentralization does exist. However, Malaysia’s land legislation is more unified than China’s for example. Despite the unified “National Land Code”, every State has its own land rules too. The National Development Plan has identified some strategies for certain states to proceed with their land policies on agriculture. However, due to the lack of unified agricultural land management and ideas, land policies between the governments of all levels and respective departments are incompatible. In addition, issues regarding land are the affairs of that individual state. This further complicates land policy and land management. It also influences the integration of all land policies and impedes the economic development plan.

Management problems involving sustainable development and resources are not described thoroughly in agriculture land policies stemming from various pieces of legislation. However, the National Development Plan has strongly emphasized the environmental problem. This situation occurs because the respective state does not consider the environmentally sound use of resources and sustainable development

\(^1\)While researching this study, the researchers encountered insufficient amounts of accurate data on Malaysia’s environmental land protection policy, particularly on pollution caused by industrial activities. Because the media, government and common perception perpetuates the (true) idea that water and air pollution are caused by the industrial activities, people sometimes do not realize that the degree of land pollution has a great and direct impact on air and water quality as well.
as parts of the same problem when implementing land policies. Therefore, the idea of “land” must be conscientiously combined with sustainable development and resource management.

Many of the chemicals used in pesticides are persistent soil pollutants, the effects of which can last for decades. The use of pesticides reduces the general biodiversity in the soil. When these chemicals are not used, the soil quality will improve as it will have more organic matter. The presence of more soil organic matter allows for higher water retention, which helps to increase the productivity of farms in dry years when organic farms produced 20-40% more yields than conventional ones. When there is a small amount of organic matter in the soil, it will bind and break down any pesticide present.

Palm oil and rubber are two of Malaysia’s major export products. Palm oil and rubber plantations generally hire women to apply pesticides because they can be paid less than men. We will call these women “pesticide sprayers”. There are currently 30,000 female pesticide sprayers in the country, and health experts say many of them have very little protection against the harmful chemicals that they handle at work.

Thus, there are gaps between regulations and implementations. Because of Malaysia’s hot weather, workers are unwilling to wear masks and heavy protection coats. Workers then inhale the pesticides from the sprayers. This is very harmful to workers’ health. The Occupational Safety and Health Act (OSHA) of 1994 requires that a safety and health committee be formed if there are more than 40 sprayers in a plantation. But some employers do not obey OSHA 1994. A good policy is useless if no one follows it. The limitations of policies are normally not only found in themselves, but also in their implementation.

**Shortcomings of the Malaysian Environment Policy on Domestic Pollution**

Gurjit Singh (1994) notes: “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 exists 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.”

The progression of urbanization puts pressure on domestic land utilization. The consequences are unauthorized work on the land, congestion and land pollution. This development also causes conflicts between land owners and land squatters.
Both parties will then fight over the urban land because they want to earn high incomes on their own. The incomes take the form of profit sharing or tax. Furthermore, the development of urban real estate means that poor urban citizens have to relocate to other places (Jayasinghe-Mudalige et al. 2007).

**Table 5: New Southbound countries’ Gross Domestic Product per capita (USD)**

<table>
<thead>
<tr>
<th>Country</th>
<th>Gross Domestic Product per capita (USD)</th>
<th>Country</th>
<th>Gross Domestic Product per capita (USD)</th>
<th>Country</th>
<th>Gross Domestic Product per capita (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>1,719</td>
<td>Pakistan</td>
<td>1,428</td>
<td>Cambodia</td>
<td>1,228</td>
</tr>
<tr>
<td>Australia</td>
<td>51,593</td>
<td>Bangladesh</td>
<td>1,404</td>
<td>Laos</td>
<td>1,921</td>
</tr>
<tr>
<td>Indonesia</td>
<td>3,636</td>
<td>Vietnam</td>
<td>2,164</td>
<td>Brunei</td>
<td>24,713</td>
</tr>
<tr>
<td>Thailand</td>
<td>5,662</td>
<td>New Zealand</td>
<td>38,066</td>
<td>Bhutan</td>
<td>2,635</td>
</tr>
<tr>
<td>Philippines</td>
<td>2,991</td>
<td>Sri Lanka</td>
<td>3,870</td>
<td>Taiwan</td>
<td><strong>22,044</strong></td>
</tr>
<tr>
<td>Malaysia</td>
<td><strong>9,546</strong></td>
<td>Myanmar</td>
<td>1,307</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>53,053</td>
<td>Nepal</td>
<td>734</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Environmental protection and urbanization are tightly bound together. Land urbanization contributes an important form of property tax income to the state. State governments have maximized the usage of land such as plantation of profitable crops. Hence, they do things their own ways, and can refuse to adapt to the overall land utilization plan formulated by the federal government. Such behavior on the part of the individual state governments has resulted in a distrust of the country’s land utilization law. This can ultimately lead to the abandonment of the National Development Plan’s objectives too.

While domestic land policy cannot stop the development of urbanization, 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.

**Legislation of Malaysian Environmental Policy on Land**

Instead of using brute force, the government uses policy to restrict the utilization and management of land resources. According to the requirements for land resources
for socio-economic development, the corresponding policies and regulation are issued instantly. Consequently, the complete and systematic land policies will be shaped up progressively. The whole process is described below:

1. To ensure that policy is in legislation. Land policy and planning must be formulated and conducted by authorities related to that policy.
2. To establish special legal organizations. The urban development authority and economic development authority of each Malaysian state can better support urban area development and offer more industrial and commercial development opportunities if they form special legal organizations that will handle such issues exclusively.

**The Course of Policymaking in Malaysia**

Expert reviews and citizen participation occur in many aspects of Malaysian policymaking. This is due to the coordination amongst the parties involved in the National Economic Development Plan or land policies. They also mobilize social forces to collect information extensively. The opinions from all departments and areas are solicited in the planning process. The plan will only be executed when consensus is reached. Indeed, much attention has been given to the acceptability of territory planning (see Figure 3 and Figure 4).

**Figure 3: The Planning Process – Structure Plan**

Figure 3 illustrates the structural plan process of drafting, investigation, feasibility analyses, testing, examination and submission. This reflects the full participation of the masses in the formulation of policies and procedures.

The local planning process in Figure 4 is simpler than the structural plan process. However, it also focuses on public participation, and has roles for implementation and restriction. It is an important component of national policy too.

Malaysia has a coherent, sound and reasonable policy system that restricts and manages problems in many aspects, especially in the oil palm and rubber plantations. Meanwhile, multi-section cooperation protects the implementation of the policies. However, due to the lack of policy contents as well as the difficulty posed by climate and region, policies do face problems in the process of implementation. For example, Malaysia’s temperature is too high for plantation workers to wear protection clothes, and they cannot work for extended periods under the sun. Also, because there is limited land in Malaysia, most of it is used for construction and domestic purposes. As such, farmland (such as Cameron Highlands) is mainly located in the mountains. This will cause land erosion and degradation. At the same time, the government should enhance the supervision of the employees to fulfill the policy and ensure that employees are protected.

Malaysia’s environmental policy legislation is relatively complete. However, it lacks a unified environmental policy system. This means that many environmental policies cannot function effectively. Even if there is a unified policy, the conflict between environment and land utilization will remain. Therefore, combining the land policies of the central and local authorities will ease the environmental contradiction as well as coordinate land utilization and administration behaviors. In
so doing, the comprehensive and rational management of land and its resources can be advanced.

Even though Taiwan is not a member of the United Nations (UN), it launched its first Voluntary National Review (VNR) at a forum in New York on 15 September 2017. Its VNR explained how the country is working to achieve the UN’s sustainable development goals (SDGs). The review covered Taiwan’s implementation of critical policies as part of its aim to promote the UN’s 17 SDGs and 169 targets set out in the 2030 Agenda for Sustainable Development; the VNR stressed that Taiwan is on a par with major developed countries in the five major areas of poverty, hunger, health, education, and gender equality (Focus Taiwan 16 September 2017). In another statement, Taiwan’s Ministry of Foreign Affairs stated that the country has also actively built up global partnerships in the fields of agriculture, public health, education, environmental protection, and information and communications technology, so much so that it is able to assist other countries with their development as well (Focus Taiwan 16 September 2017).

The examination and analysis of Malaysia’s environmental policies on land as presented in this paper as well as the problems and challenges faced by the country in their implementation have been shared with Taiwan under the framework of the latter’s New Southbound Policy. In so doing, Malaysia became one of the major Association of Southeast Asian Nation (ASEAN) countries to explore areas of cooperation in environmental policies and sustainable development. By sharing its experiences with Taiwan, Malaysia emphasizes its close in trade, investment and societal relationship with the country. Taiwan’s achievements in promoting the 17 SDGs and 169 targets outlined in the UN’s 2030 Agenda for Sustainable Development, as highlighted in the VNR presented in September 2017, also shows that Malaysia has much to learn from Taiwan’s successful promotion of environmental awareness and sustainable development goals.

References


Department of Environment (DOE), Malaysia. n.d. Available online at http://www.
Malaysia's Environmental Policy on Land


Southeast Asia may not appear to have much in common, as it is composed of many disparate countries, peoples, cultures, languages, histories and governments. Look deeper, however, and one will see that their central concerns of political stability, the wellbeing of their residents, maintaining good diplomatic ties with each other, and sustained economic development are the same. The papers presented at the International Conference on Southeast Asian studies organized and held by Wenzao Ursuline University of Languages’ Center for Southeast Asia Languages Teaching (CSEALT) in Taiwan on 27-28 October 2017 emphasized these common points of interest. Through the theme “Borders, Boundaries and Beyond,” various academics at the conference sought to delve into all these issues in specific Southeast Asian countries. A selection of these presentations is compiled in this volume. Collectively, they form 10 chapters highlighting the different Southeast Asian countries’ respective commitment to the wellbeing of the diverse communities of the region.
Southeast Asia
BEYOND BORDERS
AND BOUNDARIES
Wenzao Ursuline University of Languages was founded by the sisters of the Roman Union of the Order of St. Ursula in 1966. It was named in honor of Wenzao Lo, the first Chinese Bishop. Wenzao is known for its commitment to excellence in foreign languages teaching and research. At the beginning of its establishment, admission was only open to female students. Wenzao first opened its doors to male students in 1980. In 1999, Wenzao Ursuline Junior College of Modern Languages was officially restructured to become Wenzao Ursuline College of Languages and renamed to Wenzao Ursuline University of Languages in 2013. The University began to teach a more diverse group of students since then. In response, two-year and four-year college programs, post-graduate study and extension education were added.

Master of Arts in Southeast Asian Studies (MSEAS) program features dual specialties and interdisciplinary curriculum design. It emphasizes both languages and professional academic specialties simultaneously. Postgraduate students are provided with the most diverse foreign language course option in Taiwan, dynamic learning resources, international faculty, and an interdisciplinary academic environment. The program is co-designed by the College of English and International Studies and the College of European and Asian Languages.
Southeast Asia
BEYOND BORDERS AND BOUNDARIES

EDITED BY
SAMUEL C.Y.KU and HERLIN CHIEN

Wenzao University Press
First published in Taiwan in 2018 by Wenzao University Press

Email: sl00@mail.wzu.edu.tw

Cover design: Philip Cheng-fei Tsai

All rights reserved. No part of this publication may be reproduced, stored in retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of Wenzao University Press.

© 2018 Wenzao University Press

The responsibility for facts and opinions in this publication rests exclusively with the authors and their interpretations do not necessarily reflect the views or the policy of the publisher or its supporters.

Southeast Asia: Beyond Borders and Boundaries / edited by Samuel C.Y. Ku and Herlin Chien

1. Southeast Asia
1. Ku, C. Y. Samuel
II. Chien, Herlin

CONTENTS

Southeast Asia: Beyond Borders and Boundaries

Introduction
HO Khai Leong

01. Globalization’s Reversal and Regional Surge: With Notes on the Maritime Silk Road and Malaysia
William CASE

02. Chinese Female Migrant Peddlers in Sibu, East Malaysia
CHIN Yee Whab

03. The Paradox of Living in the Border: The Case of Indonesia’s Sebatik Islands
Batiq WARDHANI and Vinusirio DUGIS

SOON Theam Bee

05. Malaysia’s Environmental Policy on Land with Reference to Taiwan’s New Southbound Policy
Emile Kok-Keng YEOH and ZHANG Yemo
| VI |
|-----------------|----------------|
| **Contents**    |                 |
| 06. Singapore’s Newspaper Diplomacy: *Liawhe Zaohe* in China | 115 |
|Yang-kit CHAN    |                 |
| 07. Border Economic Zones linking China with Myanmar, Laos People’s Democratic Republic and Vietnam | 128 |
|John WALSH       |                 |
| 08. Labor Migration from the Philippines: Has the Country Had Enough? | 143 |
|Jorge V. TIGNO   |                 |
| 09. ASEAN’s Response to Communicable Diseases: Nature, International Cooperation and Main Challenges | 159 |
|Vincent ROLLET   |                 |
| 10. Vietnam’s Regional Alignments and a Fragmented ASEAN: Strategic and Security Implications | 187 |
|NGUYEN Thanh Trung|                 |
| Contributors and Editors | 206 |
INTRODUCTION
Ho Khai Leong

Southeast Asia may not appear to have much in common, as it is composed of many disparate countries, peoples, cultures, languages, histories and governments. Look deeper, however, and one will see that their central concerns of political stability, the wellbeing of their residents, maintaining good diplomatic ties with each other, and sustained economic development are the same. The papers presented at the International Conference on Southeast Asian studies organized and held by Wenzao Ursuline University of Foreign Languages’ Center for Southeast Asia Languages Teaching (CSEALT) in Taiwan on 27-28 October 2017 emphasized these common points of interest. Through the theme “Borders, Boundaries and Beyond,” various academics at the conference sought to delve into all these issues in specific Southeast Asian countries. A selection of these presentations is compiled in this volume. Collectively, they form 10 chapters highlighting the different Southeast Asian country’s respective commitment to the wellbeing of the diverse communities of the region.

The book opens with William Case’s chapter on the effects of globalization’s international reversal and its China-led surge in Southeast Asia, specifically Malaysia. Although globalization has eroded borders and boundaries, it has bred grave social inequalities alongside general economic growth in the rich world so much so that there is considerable backlash against it. In contrast, Case notes that in developing Southeast Asian countries where social inequalities are less acutely felt, China has taken the lead in driving globalization in the region by exerting its power and influence. Through an analysis of China’s selection of Malaysia as the hub of its Maritime Silk Road as well as the emphasis of new infusions and projects in Kuala Lumpur’s developmental and patronage dynamic, he observes the ways in which China-funded developmental projects in Malaysia will bring the country short-term economic benefits and long-term debt.

Chin Yee Whah continues the theme of China-Malaysia relations, albeit on a smaller scale, with special focus on the presence of female migrants from China peddl-
ing goods in the Chinese-dominant community of Sibu in Sarawak, East Malaysia. By examining the social structures of local Sibu society, the peddlers’ network, the so-called relaxed Sarawak immigration department, and the low cost of travel, he seeks to understand the peddlers’ ability to conduct business successfully across long distances.

The next chapter by Baiq Wardhani and Vinsensio Dugis remains within the geographical location of East Malaysia, as they consider on the case of Sebatik, an outlying island off the eastern coast of Borneo, which is divided between Malaysia and Indonesia by an internationally demarcated border. In considering the socio-economic development in Sebatik Island, fluid identity of its inhabitants, and the Indonesian central government’s attempts to improve the lot of its citizens while maintaining its political sovereignty and trade ties with Malaysia, they outline the paradoxical bilateral/diplomatic, national and societal conditions arising from the porous nature of the intensively interactive relationship of two nations’ citizens on the island.

While Wardhani and Dugis highlight the relatively peaceable ties between the peoples of Indonesia and Malaysia on the divided island of Sebatik, it would be erroneous to assume that relations between Malaysia’s central government in Kuala Lumpur and other nations have always been equally amicable. Soon Thean Bee calls readers’ awareness to the fact that the People’s Republic and China and Malaysia had rather fraught relations in the past due to China’s support of the Malayan Communist Party (MCP) and most ethnic Chinese in Malaysia failing to register for Malaysian citizenship up to the 1960s. He illustrates how the incumbent ruling Malaysian government of the day, desperate to secure its majority in parliament in the 1969 General Election, had sought to garner the vote of the ethnic Chinese in the country by establishing formal diplomatic relations with the People’s Republic of China.

Serving as a reminder that the welfare of a country’s population is as important as its relations with other countries, Emile Kok-Kheng Yeoh and Zhang Yemo investigate Malaysia’s environmental policy on land. With references to Taiwan’s New Southbound Policy and the development of different environmental policies in other ASEAN countries, Yeoh and Zhang look at the ways through which Malaysian environmental policies on land have prompted overall sustainable economic and regional development as well as cooperation in Southeast Asia.

Cooperation at the basic level is about reaching out to others and engaging with them in a manner that emphasizes the two parties’ commonalities. Yang-kit Chan’s chapter on the impact of Singapore’s Lianhe Zaobao newspaper in China looks at this informal interaction between Singapore and the People’s Republic of China. In tracing the history of the Chinese-language Lianhe Zaobao in Singapore where the ethnic
Introduction

Chinese form a majority of the population, and its subsequent desire to reach an audience with whom it shares a common cultural and linguistic heritage, Yang examines the ways in which this newspaper’s reports on events in China, Taiwan, Southeast Asia have managed – to some extent – shape Singapore’s diplomatic relations with the People’s Republic of China.

Closer ties and sustainable economic development are some of the hallmarks of successful diplomatic cooperation. John Walsh’s chapter on the Border Economic Zones (BEZs) linking China with Myanmar, Lao PDR and Vietnam explores into the ways in which these BEZs create sustainable economic and regional development and collaboration. He examines Myanmar, Lao PDR and Vietnam’s differing economic systems along their borders with China to better understand how they fit into China’s One Belt and Road policy. In documenting the varying types and scales of economic activities taking place in the border regions of these three countries, and analyzing their meaning and significance, he demonstrates how the region can be brought closer together through the building of physical infrastructure.

The next contribution in this compilation turns the spotlight on the Philippines’ dedication to economic emigration. Jorge V. Tino’s chapter not only outlines how labor migration from the Philippines is fostered by a well-entrenched set of public and private institutions and the glaring absence of viable alternative socio-economic opportunities, he also analyzes the extent to which the country and its government have looked upon its overseas migrants and migration as a life-saving mechanism for many Filipinos. He concludes by forwarding the argument that there is an incompatibility between the state policy orientation of the overseas employment program and its actual conduct.

Regional cooperation in Southeast Asia lies at the heart of Vincent Rollet’s piece on the regional responses to communicable diseases in Southeast Asia. He details the nature of ASEAN responses as an organization and individual member states to zoonoses, the main challenges they face, and the ways in which they seek and respond to international cooperation.

Nguyen Thanh Trung closes this volume by examining Vietnam’s regional alignments in ASEAN. Utilizing the neo-liberal perspective, he investigates Vietnam’s many reasons for joining ASEAN and other ASEAN-centric institutions from 1995 to the present. In so doing, he shows how Vietnam’s post-Cold War policy emphasizes a more proactive consolidation of ASEAN unity and centrality in the face of a rapidly rising China as it strives to serve its security interests and sovereignty claims in South China Sea. While Vietnam appears to have vested interest in strengthening ASEAN institutions’ capacity to monitor partners within and without the organization, Nyugen stresses that the country’s ability to look beyond South China
Sea issues in rallying regional support is proof of its genuine dedication to the improvement of ASEAN’s functions.

Through the different Southeast Asian nations’ common central concerns of political stability, the wellbeing of their residents, maintenance of good diplomatic ties and sustained economic development, the chapters of this compilation invite readers to reflect upon the nature of the borders and boundaries in the region. It is hoped that upon doing so, readers will able to look beyond them to see Southeast Asian countries as both individual states as well as a regionally cooperative entity.
CONTRIBUTORS

CASE, William (Ph.D. University of Texas at Austin, 1991) is Professor and Head of School of Politics, History and International Relations, University of Nottingham Malaysia Campus. He was previously Professor in the Department of Asian and International Studies and Director of Southeast Asia Research Center at City University of Hong Kong. He has held visiting positions at University of the Philippines Diliman, Ateneo de Manila University, and De La Salle University in Manila, the University of Malaya and the National University of Malaysia, the Institute of Asian Studies at Chulalongkorn University in Bangkok, and the Center for Strategic and International Studies in Jakarta. He is principally interested in questions about democratic subsidence and authoritarian revival, especially in Southeast Asia, and Malaysia on the Maritime Silk Road. Email: William.Case@Nottingham.edu.my.

Ying-kit CHAN (BA and MA in Chinese Studies, National University of Singapore, 2008) is a PhD candidate in the Department of East Asian Studies, Princeton University. He has published several articles on the politics and society of postcolonial Singapore in Asian Studies Review, Asian Survey, East Asia: An International Quarterly, New Zealand Journal of Asian Studies, and Southeast Asian Studies. Email: ykchan@princeton.edu

CHIN Yee Whah (PhD National University of Malaysia, 2002) is Professor of Economic Sociology in the School of Social Sciences, Universiti Sains Malaysia. He served as Deputy Dean of Industry and Community Networks at his present school. He was Visiting Research Fellow at the East Asian Institute, National University of Singapore, Affiliate Fellow at the International Institute for Asian Studies, Amsterdam and Visiting Research Fellow at the Asia Research Centre, Copenhagen Business School. He is the author of Culture and Chinese Entrepreneurship in Malaysia (in Malay, 2003), lead editor of Social Science and

DUGIS, Vinsensio Dugis (Ph.D. Flinders University, Australia 2006) Senior lecturer at the Department of International Relations and Head of ASEAN Studies Centre, Faculty of Social and Political Sciences, Universitas Airlangga, Surabaya, Indonesia. He served as the Deputy Dean for Development-Planning and Partnership of Faculty of Social and Political Sciences from 2007 to 2015. He is currently teaching the following courses: Introduction and Theory of International Relations; Foreign Policy Analysis, Strategy and Strategic Arrangement, Globalization and Strategy, Strategic Culture and Foreign Policy, Organization and International Business. He has written several books and among other are Australian-Indonesian Relations since 1945: The Garuda and the Kangaroo, Ashgate, 1998; Domestic Politics and Public Influence on Foreign Policy: Indonesia’s Experience under the Leadership of President Abdurrahman Wahid and Megawati Soekarnoputri, Lambert, 2017. Emails: vinsensio.dugis@fisip.unair.ac.id; vins.dugis@gmail.com

HO Khai Leong (Ph. D. Ohio State, 1988) is Visiting Professor, Department of International Affairs, Wenzao Ursuline University. He has taught at West Virginia University, National University of Singapore, Nanyang Technological University, and Tungh Abdul Rahman University (Malaysia). He was visiting scholar at Beijing University, China. His major publications include The Politics of Policy-making in Singapore (Singapore: Oxford University Press, 2000), Performance and Crisis of Governance of Mahathir’s Administration (co-editor) (Singapore: Times Academic Press, 2001), China and Southeast Asia: Global Changes and Regional Challenges (co-editor) (Singapore: Institute of Southeast Asia Studies, 2005), Ensuring Interests: Dynamics of China-Taiwan Relations and Southeast Asia (Co-editor) (Kuala Lumpur: Institute of China Studies, 2006), and ASEAN-Korea Relations: Security, Trade, and Community Building, (Singapore: Institute of Southeast Asian Studies, 2006). Email: ho_khai_leong@hotmail.com

NGUYEN Thanh Trung (PhD, HKBU) heads the Faculty of International Relations in the University of Social Sciences and Humanities at Vietnam National University in Ho Chi Minh City, Vietnam. His research interests include Sino-Vietnamese relations, ASEAN, Southeast Asian security, the South China Sea and Vietnamese politics. He has book chapters on China-Vietnam relations after 2014 oil rig
crisis and Vietnam’s post-arbitration policy in the South China Sea published in Singapore and Taiwan. Many of his works have also been published in the Asia Maritime Transparency Initiative, The Diplomat, International Policy Digest, IAPS Dialogue and CogitAsia. Email: trungntt@hcmussh.edu.vn.

ROLLET, Vincent (Ph.D. Sciences Po Paris, 2011) is associate professor, in the Graduate Institute of European Studies (GES), Wenzao Ursuline University of Languages, Kaohsiung, Taiwan. He is also a research associate at the French Centre for Research on Contemporary China (CEFC) in Taipei, Taiwan. His research interests include foreign policy and health in Taiwan and China, regionalism and inter-regionalism between Asia and Europe, Asian and European official development assistance, and health and security. He has recently cooperated with the Asia-Europe Foundation (ASEF), the Asia Foundation as well as the United Nations University - Institute on Comparative Regional Integration Studies (UNU-CRIS) on several academic projects. Email: vincent.rollet59@gmail.com

SOON Thean Bee (Ph.D. candidate, National Taiwan University) is a lecturer in the Department of Journalism in Chinese Media, Universiti Tunku Abdul Rahamn, Malaysia. Her research covers topics in Malaysia-China relations, Malaysia foreign policy, Taiwanese nationalism, political campaign strategy, and voting behavior. Email: tssoon@yahoo.com

Jorge V. TIGNO is Professor at the Department of Political Science in the University of the Philippines-Diliman. He is also the Secretary-General of the Philippine Migration Research Network (PMRN); a Fellow at the Social Weather Stations (SWS) in the Philippines; and former president of the Philippine Political Science Association (PPSA). He has published extensively on state-civil society relations in the Philippines as well as Asian labor migration. Some of his publications include Interrogating Migration: New Questions and Emerging Trends in the Philippines (Philippine Social Science Council, 2013); State, Politics and Nationalism Beyond Borders: Changing Dynamics in Filipino Overseas Migration (Philippine Social Science Council, 2009); and the co-authored book Philippine Democracy Assessment: Free and Fair Elections and the Democratic Role of Political Parties (Ateneo de Manila University Press, 2007). Email: jvtigno@gmail.com

WALSH, John (D.Phil., University of Oxford, 1997) is Director of the Shinawatra University (SIU) Research Centre in Thailand, and Assistant Professor at the School of Management in Shinawatra University, Thailand. He is the founding editor of the SIU Journal of Management, the editor of the Journal of Shinawatra University and the chief editor of the Nepalese Journal of Management Science and Research. His research areas focus on the social and
economic development of the Greater Mekong Subregion and he wrote an undergraduate level textbook for a course on Greater Mekong Subregion Studies. He has been published widely on many subjects, including special economic zones, street vending, water management, internationalization and others. Email: jcwalsh100@hotmail.com

WARDHANI, Baiq (Ph.D. Monash University, Australia, 2006) Senior lecturer and Head of IR Master Program, at the Department of International Relations, Faculty of Social and Political Sciences, Universitas Airlangga, Surabaya, Indonesia. She served as the Head of Department of International Relations, Faculty of Social and Political Sciences, Universitas Airlangga, between 2007 and 2012. She teaches several courses: Introduction and Theory of International Relations; Cosmopolitanism, Nationalism, and Fundamentalism; Society, Culture, and Politics in South Pacific; Philanthropy and Foreign Aid. She is an Editor-in-Chief of Jurnal Global & Strategis, one out of two national accredited journals on the field of IR by the Indonesian Ministry of Higher Education since 2011. She has written several books, among others are: “Diplomacy and Ethnoscessionism in Post-Suharto Indonesia” (Lambert 2010); “Kajian Asia Pasifik” (Intrans Publishing 2015). She receives a research grant from MOFA Taiwan and a fellow researcher at the Centre of Southeast Asian Studies (CSEAS) National Chengchi University, Taipei from January to December 2018. Emails: baiq.wardhani@fisip.unair.ac.id; baiq.wardhani@gmail.com

Emile Kok-Kheng YEOH is an Associate Professor in the University of Malaya’s Department of Administrative Studies and Politics at the Faculty of Economics and Administration. He is the founding editor of the triannual academic journal Contemporary Chinese Political Economy and Strategic Relations: An International Journal (CCPS) jointly published by the Institute of China and Asia-Pacific Studies of Taiwan’s National Sun Yat-sen University and the University of Malaya’s Department of Administrative Studies and Politics. In addition to being the director of the Institute of China Studies (ICS), University of Malaya, from 13 March 2008 to 1 January 2014, he was also the founder and editor of the institute’s then SJR top-tier Scopus-indexed triannual academic journal, the International Journal of China Studies (IJCS, Vol. 1, 2010 – Vol. 5, 2014). He is currently a member of the international editorial committee of several journals in Asia and Latin America. Email: yeoohkk@um.edu.my

ZHANG Yemo is a PhD candidate at the Institute of Biological Sciences, Faculty of Science, University of Malaya, Kuala Lumpur, Malaysia. He is also currently on the staff of the Equitable Society Research Cluster UMRG Programme on public
administration and governance (2016-2018), and formerly the Malaysian Ministry of Higher Education / University of Malaya High-Impact Research (HIR) grant project “The China Model: Implications of the Contemporary Rise of China” (2013-2016) at the Department of Administrative Studies and Politics, Faculty of Economics and Administration, University of Malaya. Email: zhangyemo@siswa.um.edu.my

Editors

Herlin CHIEN (Ph.D. National Sun Yat-Sen University, 2008) is Director of Master Program in Southeast Asian Studies & Center for Southeast Asian Languages Teaching and Associate Professor at Department of International Affairs, Wenzao Ursuline University of Languages. She teaches several courses: International Development, Comparative Politics, Non-Governmental Organization and Volunteer Management. Her research interests include policy change, public value, social entrepreneurship and inclusive growth. Her recent research focuses on Public-Private Partnership in Laos. She has been visiting scholar at School of Social Ecology, University of California, Irvine and Ecole Normale Superieure de Lyon. Her selected works have been published in Lex localis - Journal of Local Self-Government, Journal of Public Policy, International NGO Journal and Hazards & Crisis in Public Policy. Email: 98036@mail.wzu.edu.tw

Samuel C. Y. KU (Ph.D. Ohio State University, 1989) is Professor at the Department of International Affairs and Vice President for International Affairs, Wenzao Ursuline University of Languages. Professor Ku used to work at National Sun Yat-sen University for 27 years from September 1989 to July 2016 and had been a visiting scholar at Center for Strategic and International Studies in Jakarta, East Asian Institute in Singapore, Ateneo de Manila University, and Chulalongkorn University. His major research interests include Southeast Asia’s political development and Taiwan’s relations with Southeast Asia. His publications are mostly in Chinese; his English articles have also appeared in international journals such as Asian Survey, Asian Perspective, Contemporary Southeast Asia, Issues and Studies, Journal of Contemporary China, Journal of Asian and African Studies. In addition, Professor Ku has published a series of books on individual Southeast Asian country in Taiwan, including Singapore, Vietnam, Malaysia, Indonesia, Thailand, Myanmar, and the Philippines. Email: vpcyku@mail.wzu.edu.tw
Southeast Asia may not appear to have much in common, as it is composed of many disparate countries, peoples, cultures, languages, histories and governments. Look deeper, however, and one will see that their central concerns of political stability, the wellbeing of their residents, maintaining good diplomatic ties with each other, and sustained economic development are the same. The papers presented at the International Conference on Southeast Asian studies organized and held by Wenzao Ursuline University of Languages' Center for Southeast Asia Languages Teaching (CSEALT) in Taiwan on 27-28 October 2017 emphasized these common points of interest. Through the theme “Borders, Boundaries and Beyond,” various academics at the conference sought to delve into all these issues in specific Southeast Asian countries. A selection of these presentations is compiled in this volume. Collectively, they form 10 chapters highlighting the different Southeast Asian countries’ respective commitment to the wellbeing of the diverse communities of the region.