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Green Tax Policy in Malaysia: Are We Comparable to the Rest of the World?

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Abstract

It has been feared for a long time that human activity is causing severe destructions to the earth, resulting in global warming, ecosystems threats, air and water pollution, hazardous waste, ozone depletion and rain forest destruction. Such threats are felt in every part of the world, and Malaysia is no exception. Hence, the aim of this paper is to review current practice of green conservation in Malaysia based on Malaysian tax laws and other enforcement agencies. In this respect, the functions of the Inland Revenue Board Malaysia (IRBM), Malaysian Investment Development Authority (MIDA) and Department of Environment (DOE) are reviewed. Furthermore, as a lesson to the country, environmental policy in other major economies countries are comparably reviewed, together with the presentation of overall ranking of green tax index. Before concluding section, a comparison of Malaysian practice is made against the practices in other countries.

Keywords: Green Tax, Environmental Policy, Malaysian tax laws, Major countries

1. INTRODUCTION

It has been feared for a long time that human activity is causing severe destructions to the earth, resulting in global warming, ecosystems threats, air and water pollution, hazardous waste, ozone depletion and rain forest destruction. Such threats are felt in every part of the world, and Malaysia is no exception. In order to curb such an environmental abuse and its associated risks, academicians, policymakers and the public at large in Denmark, Sweden, Germany, the United Kingdom, the United States and Australia have collaboratively promoted various measures of taxation in their effort to tackle and remedy the issue of the environmental degradation in their countries (Fullerton, Leicester & Smith, 2008). These reforms, among others, have enforced the carbon taxes, border taxes and greenhouse gas emission trading for the polluters in addition to the introduction of various incentives for non-polluters. Thus, it is not a surprise for both the United Kingdom and Australian tax laws to have been declared as examples of the most comprehensive environmental taxation framework in the world (Hong, 2010). However, this is not the case in Malaysia where the policies emphasised dwell much on achieving sustainability from a science point of view (Hong, 2010) rather than via tax laws.

Undeniably, the Malaysian tax laws have incorporated a number of tax incentives to encourage industries to be more environmental friendly. The incentives include double deduction, pioneer status, research expenditure accelerated capital allowances and special deduction for environmental-related equipments. While this single-sided law should be good at benefiting the non-polluters, indeed, it does not address the issue of environmental abuse caused by the polluters. At this juncture, there is a need for a new environmental taxation framework which is more comprehensive to cope with this issue. For that purpose, experiences from other countries which are considered early implementer of such reforms are explored, noting the infant stage of the environmental tax reform in Malaysia.

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2. GREEN TAX IN OTHER COUNTRIES

In United Kingdom, Clean Air Acts was introduced in the 50's. In 1974, Control of Pollution Act was introduced concerning to the prevention and control of water pollution. Later, in 1989, British Environmental Law was introduced in response to the case of Commission vs Denmark that is in relation to national rules on waste management. In 1990, Environmental Protection Act was introduced in relation to waste management and control of emissions into the environment. The Climate Change Act 2008 was introduced to ensure that the carbon level in United Kingdom for the year 2050 is at least 80% lower than the 1990 baseline. This is as agreed for all six Kyoto greenhouse gases toward avoiding dangerous climate change. In 1996, Landfill Tax and Special Waste Regulations were introduced.

In Australia, Environment Protection and Biodiversity Conservation Act 1999 was introduced in relation to eight (8) national environmental matter, that is to protect the world heritage properties, national heritage places, wetlands of international importance, migratory species protected under international agreements, listed threatened species and ecological communities, commonwealth marine areas, the Great Barrier Reef Marine Park, and nuclear actions. There are a large number of legislative instruments and regulatory bodies that govern environmental regulation in Australia. Australia has a federal legal system with environmental matters primarily regulated at a state and territory level. The regime varies between each state and territory. The Commonwealth government also regulates specific matters on a national level in addition to regulation by the relevant state or territory government. Recent developments in Australia include an increasing focus on reducing the duplication of assessment and approval processes between the different levels of government and energy and climate change policy. The key environmental legislation for each state and territory are as follows:

State and territory	Environmental legislation
Australian Capital Territory	The Environmental Protection Act 1997
Northern Territory	The Waste Management and Pollution Control Act 1998 Environmental Assessment Act 1982
New South Wales	The Protection of the Environment Operations Act 1997
Queensland	The Environmental Protection Act 1994
South Australia	The Environment Protection Act 1993
Tasmania	The Environmental Management and Pollution Control Act 1994
Victoria	The Environment Protection Act 1970
Western Australia	The Environmental Protection Act 1986

Source: Environmental law and practice in Australia: overview (Philip Sealey and James Shepherd, 2018)

In Japan, Japanese government has introduced a new tax to curb carbon emissions in 2012. Chinese government also has resource taxes on six minerals including iron and tin ore. The objective of China's policy is to conserve domestic mineral resources and the environment.

3. CURRENT PRACTICE OF GREEN ENFORCEMENT IN MALAYSIA

The review of current practice of green policy in Malaysia are based on the Malaysian tax law and agencies, that is The Malaysian Investment Development Authority (MIDA), Inland Revenue Board Malaysia (IRBM) and Department of Environment (DOE)

3.1 Malaysian Environmental Law

Malaysia has introduced Environmental Quality Act 1974 that is the main environmental act in Malaysia. The Act is in relation to prevention, abatement and control the pollution while enhancement the quality of environment. Later, other regulations were introduced to complement the Environmental Quality Act, that is Environmental Quality (Crude Palm-Oil) Regulations 1977; Environmental Quality (Licensing) Regulation 1977; Environmental Quality (Control of Lead Concentration in Motor Gasoline) Regulation 1985 and Environmental Quality (Sewage) Regulation 2009. The Environmental Quality (Sewage) Regulation apply to any premises which discharge sewage onto or into any soil, or into any inland waters. Among others, the regulation requires the operation of the sewage treatment system to be supervised by competent persons. The owner is also required to operate and maintain the systems in accordance with sound engineering practice.

Malaysia has introduced National Green Technology Policy in 2009 that is based on four primary pillars, which are energy, environment, economy and social perspective. One of the main aims of the policy is to provide a conducive environment for Green Technology development. This includes the introduction and implementation of innovative economic instruments, as well as the establishment of effective fiscal and financial mechanisms to support the growth of green industries.

3.2 Malaysian Investment Development Authority (MIDA)

The Malaysian Investment Development Authority (MIDA), which was incorporated under the Malaysian Industrial Development Authority Act 1967, is the government's agency for the promotion of the manufacturing and services sectors in Malaysia. MIDA assists companies which intend to invest in the manufacturing and services sectors, as well as facilitates the implementation of their projects. The wide range of services provided by MIDA include providing information on the opportunities for investments, as well as facilitating companies which are looking for joint venture partners. One of MIDA's role is the one stop processing centre for the application of tax incentives. Malaysia offers a wide range of tax incentives for manufacturing projects under the Promotion of Investments Act 1986 and the Income Tax Act 1967. The main incentives are the Pioneer Status, Investment Tax Allowance, Reinvestment Allowance, Incentives for High Technology Industries and Incentives for Strategic Projects and Incentives for the Setting-up of International/ Regional Service-based Operations.

Apart from various incentives available, this study will focus mainly on the tax incentives on Green Technology (GT). GT is defined as the development and application of products, equipment and systems used to conserve the natural environment and resources, which minimises and reduces the negative impact of human activities. GT is one of the drivers for future economy that would contribute to the overall green growth and sustainable development. In line with Malaysia's aim to become an inclusive and sustainable advanced nation by 2020, under the National Green Technology Policy, the cross-sectoral GT focuses on four sectors namely energy, building, waste management and transportation. Under the provision of Budget 2014, Green Investment Tax Allowance (ITA) for the purchase of green technology assets and Income Tax Exemption (ITE) on the use of green technology services and system were introduced to further strengthen the development of green technology. Projects which qualify for this incentive are renewable energy, energy efficiency, integrated waste management and green building or green data centre. In addition, eligible services activities include system integration of renewable energy, energy services, services related to green building or green data centre, green certification of products, equipment & building and green township. Tax incentives for green industries comprise of (1) incentives for qualifying activities and (2) incentives for establishment of Waste Eco Parks (WEPs). The aim of green technology incentive for qualifying activities is to strengthen the development of green technology. The incentives is given in the form of investment tax allowance for the purchase of green technology assets and income tax exemption for the use of green technology services and system. GT incentives for qualifying activities divided into three (3), that is tax incentive for GT (1) Project, (2) Services and (3) Assets.

The qualifying activities for GT projects or services being extended to include projects such as green building, green data centre, waste management, as well as services relating to electric vehicle, green certification and verification, green township. Tax incentive for GT project provide Investment Tax Allowance (ITA) of 100% of qualifying capital expenditure incurred on a green technology project from the year of assessment 2013 until the year of assessment 2020. The allowance can be offset against 70% of statutory income in the year of assessment. Unutilised allowances can be carried forward until they are fully absorbed. Green technology project related to renewable energy, energy efficiency, green building, green data centre, and waste management can qualify for this tax incentive. Tax incentive for GT services offer income tax exemption of 100% of statutory income from the year of assessment 2013 until the year of assessment 2020. GT services related to renewable energy, energy efficiency, electric vehicle (EV), green building, green data centre, green certification and verification, and green township can qualify for this tax incentive.

Tax incentive for purchase of GT assets provide ITA of 100% of qualifying capital expenditure incurred on green technology asset from the year of assessment 2013 until the year of assessment 2020. The allowance can be offset against 70% of statutory income in the year of assessment. Unutilised allowances can be carried forward until they are fully absorbed. GT assets are listed in MyHijau Directory (www.greendirectory.my), that is the list of assets which have been certified by the Malaysia Green Technology Corporation (MGTC) as MyHijau and approved by the Ministry of Finance (MoF). The other tax incentives available is the incentives for establishment of Waste Eco Parks (WEPs). WEP aims is to promote waste recycling, recovery and treatment activities by the industries and provides a sustainable solution to waste management problem. This will encourage investments in facilities and infrastructure towards holistic waste management activities. In order to promote the activities, there are incentives available for (1) WEP Developer, (2) WEP Manager and (3) WEP Operator (companies operating in the WEP).

Tax incentives for WEP Developer (Companies) is income tax exemption of 70% on statutory business income derived from rental of building, fees received from the usage of waste collection and separation facility and fees received from waste water treatment facility located in the WEP. Tax incentives for WEP Manager (Companies) is income tax exemption of 70% on statutory business income derived from service activities relating to management, maintenance, supervision and marketing of the WEP. Tax incentives for WEP Operator (Companies) is income tax exemption of 100% on statutory business income for a period of five (5) years, derived from the qualifying activities that is waste treatment, waste recovery and waste recycling undertaken in the WEP.

The ITA of 100% qualifying capital expenditure incurred (within 5 years) can be offset against 70% of statutory business income.

3.3 Inland Revenue Board Malaysia (IRBM)

Malaysia offers a wide range of tax incentives ranging from tax exemptions and allowances based on capital expenditure to enhance tax deductions. For incentives by way of allowances, any unutilised allowances can generally be carried forward until fully utilised. These tax incentives are generally available for tax resident companies. In relation to tax incentives for green environment, Malaysia focus on three (3) green area that is (1) renewable energy and fuels, (2) material resources and waste, and (3) pollution and ecosystems.

Renewable energy and fuels. In calendar year 2013 to 2020, companies purchased and used green technology assets will be qualify for investment tax allowance of 100 percent of qualifying capital expenditures. The allowance can be offset against 70 percent of statutory income. Green technology assets are defined as green technology products, equipment, or system used to conserve the natural environment and resources that minimize and reduce the negative impact of human activities. Furthermore, companies undertaking generation of energy from renewable resources are eligible for pioneer status incentives, which provide income tax exemption of 100 percent of statutory income for 10 years. Other than that, certain locally and nonlocals produced machinery and equipment purchased for the generation of energy using biomass are exempt from import duty and sales tax.

Material resources and waste. Companies providing energy conservation services are eligible for various incentives including pioneer status and investment tax allowance. Income tax exemption orders on Waste Eco Parks (WEP) incentives were issued on 15 August 2017. Income Tax (Exemption) (No 4) Order 2017 is for investment tax allowance for WEP operator; Income Tax (Exemption) (No 5) Order 2017 is for income tax exemption for WEP operator; Income Tax (Exemption) (No 6) Order 2017 is for income tax exemption for WEP manager; and Income Tax (Exemption) (No 7) Order 2017 is for income tax exemption for WEP developer.

Pollution and ecosystems. Companies that undertake forest plantation projects are eligible for pioneer status and investment tax allowance incentives under the Promotion of Investment Acts of 1986. Also, companies that undertake forest plantation projects can apply for incentives, such as tax deduction.

3.4 Department of Environment (DOE)

Department of Environment (DOE) of Malaysia was established in 1975. The responsibilities of DOE is the prevention, control and abatement of pollution in the country through the enforcement of the Environmental Quality Act of 1974 and its subsidiary legislation. The agency is guided by the vision to conserve the uniqueness, diversity and quality of the environment with the objective of maintaining health, prosperity, security and well-being for present and future generations. It defines its mission as promoting, ensuring and sustaining sound environmental management in the process of nation building. The DOE is the federal authority in Malaysia that also monitors air and water quality and noise, manages toxic and hazardous wastes.

Beside the Act (Environmental Quality Act 1974), the regulations for DOE to be responsible for the implementation of the resolutions decided by the conventions of the international environment such as Vienna Convention for the protection of the Ozone Layer 1985, Montreal Protocol on Substances That Deplete the Ozone Layer, 1987, the Basel Convention on the Transboundary Movement of Hazardous Waste and Their Disposal Act 1989 and other areas while the success of programs of bilateral cooperation and multilateral cooperation between Indonesia, Singapore and other ASEAN countries on environmental management.

The core services implemented by the DOE is divided to headquarters divisions, states and branches. The main function of the Enforcement Division Headquarters is to develop strategy and direction of the enforcement action and compliance targets for stationary sources premises and mobile sources; to manage and handle cases of environmental pollution complaints; to manage and analyze data related to enforcement action; to plan, develop and implement an audit program investigating officers to the DOE and to plan, develop and implement the compliance audit program the subject premises under the Environmental Quality Act 1974 (EQA).

The primary function of the Air Division Headquarters is to ensure that air quality is kept clean and preserved for the people. The main function of the Water and Marine Division Headquarters is to monitor the enforcement program and control of marine pollution oil spill; regulate and monitor water quality monitoring program, groundwater and marine monitoring data management and reporting; implement and monitor river research and prevention programs inland water pollution control (including stationary sources and causes of non-permanent), and manage the affairs of the foreign relations of the preservation of the marine environment. The main function of the Hazardous Substances Division Headquarters is planning and implementing management strategies substance / hazardous waste; formulate regulations, guidelines, and Standard Operations Procedure (SOP) of

wastes / hazardous substances and contaminated soil; implement and comply with the International Convention on the material / hazardous waste; regulating the treatment and disposal license wastes; coordinate operations management actions illegal disposal of wastes; planning and implementation of contaminated land management and plan, manage and control the EHS.

4. STUDIES ON GREEN TAX OR POLICY IN MALAYSIA

The studies of environmental tax is loosely addressed in Malaysia. The issues of environmental is most considered by developing a tools in control the mechanism. Malaysia has no carbon tax or other green tax policy in combating environmental problems in Malaysia. Malaysia system is more on the incentives offered and penalties imposed to the industries and nations. Study by Loganathan, Shahbaz and Taha (2014), explores how carbon taxation and economic growth affect environment hazards in Malaysia using time series data over the period 1974-2010. They found that, the carbon taxation policy is ineffective to control CO₂ emissions. They then proposed that, to enhance the awareness concerning pollution issues, governments should rely on alternative instruments that may give benefit to the taxpayers and reduce pollution. Ibrahiem, Lariyah, Mohamad and Noor (2011) also found that Green Technology Tool is important to help to minimize environmental pollution in Malaysia. Their study focusing on the knowledge based of expert system in protecting the environment and preserve good quality of water adjacent to the construction sites in Malaysia.

Meanwhile, Nurul Latiffah, Azman, Saiful Iskandar, & Mohd Saiful, (2018) reported from their analyses that, the values of air pollution index (API) in Malaysia is greater than 100 meaning that the air pollution index is unhealthy. Some locations show the worst air quality with API registering at unhealthy, very unhealthy and hazardous levels. During the haze episodes, some locations were detected at emergency level with API value greater than 500. They proposed the government to take actions to reduce the worst of air quality. They conclude that, during a haze period where the highest API is recorded, the Malaysian government has taken necessary actions to diminish haze occurrence by restricting laws regarding open burning. Besides that, cloud seeding also has been implemented by the government to ensure API at healthy levels. They suggested that, industrial activities, which are a contributors to API level, also need attention. Enforcing regulations by the government regarding industrial activities can help API value at the healthy level.

5. GREEN TAX INDEX

KPMG (Klynveld Peat Marwick Goerdeler) International has created the Green Tax Index to increase awareness of the green tax landscape worldwide and encourage companies to explore the opportunities of green tax incentives and reduce their exposure to green tax penalties. The index is reported for 21 countries which also summarize of various incentives or penalties. It is identified that 200 individual tax incentives and penalties are related to corporate sustainability. At least 30 of these individual tax incentives and penalties have been introduced since January 2011. KPMG Green Tax Index offers an overview of the green tax landscape around the world particularly to 21 major (economies) countries around the world. This may be useful to government, particularly those in early stages of formulating green tax policy. KPMG has analysed tax system in nine (9) range of green policy that is carbon and climate change, renewable energy and fuels, green vehicles, green buildings, water, material resources and waste, pollution and ecosystems, innovation and food. For example, the index shows that Colombia, in 2015, established an action plan with strategies, including incentives, to achieve reduced environmental impacts, improving quality of life and access to clean and renewable energy sources. Chile established a carbon tax in 2014, as part of its government's Tax Reform initiative. In addition, in 2016, Chile implemented a green tax on all new vehicles sold. Mexico, which in 2013 had little focus on environmental protection, has recently addressed the issue. In 2016, Mexico passed the General Law for Environmental Protection, which imposes penalties on entities that create environmental damage. Also, in 2016, Argentina, focusing on the development of clean energy, in particular solar and wind power, as well as long-standing tax policies to ensure the success of renewables. The plan allows tax incentives for businesses that develop clean energy projects.

In 2013, KPMG member firms have analysed the tax system in 21 major economies countries to determine the number and range of incentives and penalties that influence corporate activities in relation to green policy. The principles used to create this index including the ease or complexity of the incentive claim process, long or short-term, availability of incentives and flexibility to transfer or carry forward tax benefits. The following Table 1 shows the green tax index in major countries. The first column shows the overall country rankings based on the set index. While, the following two (2) column show the country ranking based on tax incentives and tax penalties index respectively.

Table 1. Green Tax Index in Major Countries

	Major Countries	Overall Ranking	Tax Incentives Ranking	Tax Penalties Ranking
1	US	1	1	14
2	Japan	2	8	2
3	UK	3	5	3
4	France	4	16	1
5	South Korea	5	2	9
6	China	6	3	5
7	Ireland	7	9	6
8	Netherlands	8	6	9
9	Belgium	9	10	9
10	India	10	4	17
11	Spain	11	15	6
12	Canada		6	16
13	South Africa	13	12	9
14	Singapore	14	11	15
15	Finland	15	21	4
16	Germany		17	9
17	Australia	17	19	6
18	Brazil	18	12	19
19	Argentina	19	14	19
20	Mexico	20	18	19
21	Russia	21	20	17

Source: author's vision from KPMG's report, 2013

The US tops the overall ranking primarily due to its extensive program of federal tax incentives for energy efficiency, renewable energy and green buildings. Even though US top the ranking of tax incentives for green tax, the US drops to 14th in tax penalties, indicating that US green tax policy is weighted heavily in favour of incentives. US uses green tax penalties less than other western developed nations, apart from Canada. The countries impose fewer green tax penalties are mostly emerging economies such as Mexico, Brazil, Argentina and India. For overall ranking, Japan is ranked second after US, but scores higher on green tax penalties than it does on green incentives.

6. COMPARISON OF GREEN TAX INDEX IN MAJOR ECONOMIES

In 2017, KPMG member firms have analysed green tax for major economies based on five (5) green area that is carbon and climate change, renewable energy and fuels, material resources and waste, pollution and ecosystems, and innovation. Table 2 shows the analysis on the report presented in the KPMG Green Tax Index 2017. The analysis is organised by countries which provide carbon taxes, tax incentives and penalties based on five green area. Table 2 shows that, several countries have tax elements in regulating each of five (5) green area. Those countries including Chile, India, Spain, Sweden, Taiwan and United Kingdom. Chile was established carbon tax and pollution tax in 2014 as part of the 2014 tax reform legislation. In early 2016, Chile has implemented green tax for new vehicles sold and the tax is calculated based on fuel consumption efficiency, cost of vehicle and emission.

Table 2. Carbon Taxes, Tax Incentives and Penalties across Countries

		Carbon and climate change	Renewable energy and fuels	Material resources and waste	Pollution and ecosystems	Innovation
1	Argentina		√	√		
2	Australia		√	√	√	√
3	Brazil		√	√	√	√
4	Canada	√	√	√	√	√
5	Chile	√	√	√	√	√
6	Columbia		√	√	√	√
7	Czech Republic		√	√	√	√
8	Denmark	√	√	√		
9	Finland	√	√	√	√	
10	France	√	√	√	√	√
11	Germany		√	√		
12	India	√	√	√	√	√
13	Indonesia		√	√	√	
14	Ireland	√	√	√		√
15	Italy		√	√	√	√
16	Japan	√	√	√		√
17	Malaysia		√	√	√	
18	Mexico		√			
19	Netherlands	√	√	√	√	√
20	New Zealand	√	√	√	√	
21	Poland		√	√	√	
22	Portugal	√	√		√	
23	Romania		√	√	√	

24	Russia	√	√	√	√	
25	Singapore	2019	√		√	√
26	South Africa	√	√			√
27	South Korea	√	√	√		√
28	Spain	√	√	√	√	√
29	Sweden	√	√	√	√	√
30	Switzerland	√	√		√	√
31	Taiwan	√	√	√	√	√
32	Thailand	√	√	√		√
33	Ukraine	√	√	√		
34	United Arab Emirates		√			
35	United Kingdom	√		√	√	√
36	United States	√	√		√	√
37	Vietnam		√	√	√	√

Source: author's vision from KPMG's report, 2017

In contrast, it is shown that United Arab Emirates (UAE) does not use taxes as a tool in regulating environmental issues in the country. However, in 2016 the UAE has launched the nationwide campaign on eco-program for 12 months. It was an awareness campaign, community engagement and green initiatives. Other than that, in order to lower the emission level of vehicles, the UAE recently raised awareness and educated the target audience through also campaigns which encourage them to use more sustainable transportation.

Malaysia offers various incentives related to renewable energy and pollution and ecosystems. For example, to promote renewable energy, an investment tax allowance is available for 100 percent of qualifying capital expenditures for certain activities including green technology assets. In addition, companies involved with energy generation from renewable resources are eligible for pioneer status incentives or investment tax allowance. Pioneer status incentives provide 100 percent income tax exemption from statutory income for 10 years. In order to preserve pollution and ecosystems, the company that undertakes an approved forest plantation project are eligible for pioneer status and investment tax allowance incentives. Furthermore, to promote environmental preservation in material resources and waste management, the incentives are available to Waste Eco Parks (WEP) developers in the form of an income tax exemption of 70 percent on statutory income derived from rental of buildings, fees received from the usage of waste receiving and separation facilities located in WEP.

Singapore ratifies a commitment in the Paris Agreement 2016 to reduce greenhouse gas emission by 2020. In relation to this, Singapore has announced to implement carbon tax starting year 2019. Singapore also provides tax incentives for renewable energy companies, accelerated capital allowance for approved efficient pollution control equipment or devices and tax deduction on innovative-related activities.

7. CONCLUSION

Environmental issues have threatened every part of the world. To curb this problem, most of the major economies collaboratively engaged with tax reform that have enforced environmental taxes to the countries. Among others, these tax reforms have enforced carbon taxes, vehicle taxes and energy tax. However, this is not the case in Malaysia where the policies emphasised dwell much on achieving sustainability from a science point of view rather than via tax laws. Some studies suggested that carbon taxation policy is an ineffective tool to control pollution in Malaysia, but prefer the alternative instrument to reduce pollution. Other studies also believed that in protecting the Malaysian environment, the government should focus on knowledge-based expert systems to preserve the environment.

The main environmental act in Malaysia is the Environmental Quality Act 1974 to control pollution. Later, in 2009, Malaysia has introduced the National Green Technology Policy which is based on four primary pillars: energy, environment, economy and social perspective. The policy introduces and implements innovative economic instruments to support the growth of green industries. To preserve the environment, Malaysia offers a wide range of tax incentives and also imposes penalties on entities that create environmental damage. There is no tax policy involved in combating environmental issues in Malaysia, such as energy tax, carbon tax and vehicle tax. While this single-sided law should be good at benefiting the non-polluters, indeed, it does not address the issue of environmental abuse caused by the polluters. Thus, this study proposes a Malaysian government to consider a new environmental taxation policy, which is more comprehensive to cope with the environmental issues.

REFERENCES

Ibrahiem, A.R., Lariyah, M.S., Mohamad, M.D., & Noor, A.B. (2011). Knowledge based expert system to minimise environmental pollution in Malaysian construction sites. *International Journal of Energy and Environment*, 2(2), 237-246.

- Loganathan, N., Shahbaz, M. & Taha, R.(2014),The link between green taxation and economic growth on CO2 emissions: Fresh evidence from Malaysia. *Renewable & Sustainable Energy Reviews*. 38,1083-1091.
- Nurul Latiffah, A.R., Azman, A, Saiful Iskandar, K., Hafizan, J., & Mohd Saiful, S. (2018). Air Pollution Index Trend Analysis in Malaysia, 2010-15. *Pollution Journal Environmental Studies*, 27(2), 801-807.
- The KPMG Green Tax Index 2013, An Exploration of Green Tax Incentives and Penalties.
<https://assets.kpmg.com/content/dam/kpmg/pdf/2013/08/kpmg-green-tax-index-2013.pdf>
- The KPMG Green Tax Index 2017, An Exploration of Green Tax Incentives and Penalties.
<https://assets.kpmg.com/content/dam/kpmg/ae/pdf/green-tax-index.pdf>