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Environmental Governance in Malaysia: Stakeholder Involvement of Government, Industry, and Public

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ABSTRACT
This article explores into Malaysia's environmental governance landscape, examining the intricate relationships between the government, industry, and the public in the pursuit of environmental sustainability. Qualitative analysis of legal documents and insights from an experienced Department of Environment (DOE) official reveal the pivotal role of the Malaysian government in shaping and enforcing environmental policies through a qualitative analysis of legal documents and insights from an experienced Department of Environment (DOE) official. The DOE, which reports to the Ministry of Natural Resources, Environment, and Climate Change, is in charge of these efforts, with authority over the Environmental Quality Act of 1974 and the ability to delegate responsibilities. The importance of collaborative decision-making in environmental governance is highlighted by collaboration within the Environmental Quality Council (EQC). Malaysian industries are subject to stringent regulations outlined in Environmental Quality Act of 1974, which cover a wide range of industries including manufacturing, agriculture, and automotive, as well as licensing, pollution control, and environmental impact assessments. Citizens, professionals, and non-governmental organizations (NGOs) all play important roles in environmental protection. Finally, Malaysia's environmental governance is dependent on dynamic collaboration among the government, industry, and society, demonstrating a steadfast commitment to safeguarding the nation's natural environment and progressing toward a more environmentally conscious and sustainable future.

Key words : *environmental governance, good governance, environmental stakeholder, policy documents, environmental safety*

1.0 Introduction

Human habitat development encompasses both human and environmental habitats. According to Jamaluddin (2008), there is a strong and direct relationship between human habitat and its surrounding environment (Rahman H.A. 2016). Environmental protection is widely acknowledged to be critical to human life quality. In general, the quality of the surrounding environment, including air, water, traffic, and noise, influences an individual's quality of life while residing in a particular area (Rahman H.A. 2016).

In pursuing their civilization's sustainability agenda, humans face four critical challenges: rapid development, population growth, global harmony, and the environment. As a result, the

changing physical environment caused by various societal activities has drawn researchers' attention to these issues. The importance of balancing development and environmental needs through sustainable governance is becoming increasingly apparent in global society (Rahman H.A. 2016).

Natural resources and the environment are public goods that benefit everyone by providing clean air, a favorable climate, and stable biodiversity. These public goods transcend borders, jurisdictions, communities, and the global economy. Effective environmental management at the global, national, and local levels is required to address transboundary environmental threats. Mohd Anuar (2014).

The legal, institutional, and societal frameworks that guide the management of natural resources and ecological systems are all part of effective environmental governance. It ensures long-term development while protecting the environment. According to academics, well-structured governance mechanisms can help with resource conservation, pollution control, and long-term economic growth.

Environmental issues have become increasingly pressing on a global scale, prompting nations to develop comprehensive strategies to address them. Malaysia, as a rapidly developing country, faces unique environmental challenges that demand effective governance. The purpose of this article is to analyze Malaysia's environmental governance landscape and investigate how the government, industry, and public interact in the process. Stakeholders play a critical role in shaping environmental policies, practices, and outcomes.

2.0 Literature Review

The concept of environmental safety has been formulated in a variety of ways, representing alternative paradigms for dealing with the increasingly interdependent threats to deteriorating environmental quality following the Cold War (Dabelko & Dabelko 1995). With the emergence of this concept, new debates about the nature of threats, appropriate references to the concept of security, and the meaning of security itself have emerged. In this new era, environmental safety has become one of the most prominent topics in the field of security studies (Flyod R. 2008).

The fundamental concept of environmental safety, according to Broda-Bahm (1999), represents efforts to draw attention to environmental degradation issues by explicitly linking them with the concept of national security. Lester Brown identified new threats as resource depletion, soil erosion, land degradation, deforestation, and climate change in 1986. These threats jeopardize not only national economic and political security, but also global economic stability. Environmental damage risks are equivalent to security threats as defined by the security concept.

Malaysia, a developing and environmentally rich country, faces numerous challenges as a result of changing times and socioeconomic demands, such as urbanization, corruption, natural resource exploitation, increased motor vehicles, and more. These issues' consequences are deeply concerning, with visible environmental deterioration. Furthermore, environmental problems have a significant impact on human health (Mohammad 2011a; Afrizal & Embong 2013).

Air pollution, particularly from vehicle and factory emissions, open burning, and haze, is one of the current environmental threats in Malaysia. Pollutant-laden air pollution has a negative impact on health. Water pollution is also caused by toxic waste disposal from factories and improper waste disposal, as well as agrochemical pollution, deforestation, acid rain, soil pollution, degradation, global warming, landslides, and other factors (Mohammad 2011a).

The significance of addressing environmental issues was first discussed at the 1972 United Nations Conference on the Human Environment in Stockholm. Following that, in 1992, the United

Nations Conference on Sustainable Development emphasized the importance of effective environmental protection involving various stakeholders to address environmental issues. To strike a balance between economic development and environmental preservation, the concept of sustainable development was introduced (Mohd Anuar 2014).

2.1 Sustainable Development

The term "sustainable" is associated with the transition to green or green development, according to Ahmad AR & Musa K (2016). Sustainability entails ensuring that current actions do not jeopardize future generations' ability to meet their needs (Razman, M.R., and Mokhtar M. 2016; Ahmad AR & Musa K 2016; McDonough et al 2002; Starke 1990; Harmelen et al 2005). Sustainable development is defined as development that meets current needs without jeopardizing future generations' ability to meet their own (Jamaludin Md Jahi 2001). According to Razman, M.R., and Mokhtar (2016), sustainable development is a modern strategy for addressing environmental issues for societal well-being in terms of ecology, human habitat, and the enjoyed environment (Sands 2003). Shriberg (2002) offers a broader definition of sustainability that includes economic, ecological, and social sustainability.

Sustainable development actions based on Agenda 21 principles explicitly state that "Human beings are the center that needs to be focused on for sustainable development." It is thus critical to comprehend how humans as subjects can become agents of change in transforming the physical environment into an essential factor. Overall, environmental sustainability would be impossible to achieve without the support of society (Rahman H.A. 2016). Sustainable development can balance development by focusing on environmental development (Abdul Samad 2005), in which society is satisfied on an environmental level while accepting the concept of development from an economic and social standpoint (Baker 1997).

Sustainable development principles are an essential part of the development process and should not be overlooked. Sustainable development also requires that multiple sectors and stakeholders share responsibility for decision outcomes that affect the environment and natural resources (Sani S. 2000). According to Harmelen et al. (2005), four fundamental principles relevant to sustainable development are specifically elaborated on:

1. The need to preserve natural resources for future generations is referred to as the intergenerational equity principle.
2. Sustainable Use Principle: Using natural resources in a'sustainable,' 'gentle,' 'rational,' 'wise,' or 'appropriate' manner.
3. The principle of intra-generational equity states that the use of natural resources by one nation should not jeopardize the needs of other nations.
4. Environmental considerations must be incorporated into economic development plans, programs, and projects, and development needs must be considered when implementing environmental objectives.

These core principles suggest that TPE can be used to implement sustainable policies, ultimately increasing the influence of science and decreasing the influence of legal systems in environmental policies (Ali M. 2013).

2.2 Environmental Governance Stakeholders

Government: Through legislation, regulation, and enforcement, the Malaysian government plays a critical role in shaping environmental policies. The country's commitment to sustainability is reflected in the fact that various ministries and agencies are in charge of various aspects of environmental management.

Industry: Although industries contribute significantly to environmental degradation, they also play an important role in mitigation and sustainability efforts. CSR initiatives, technological innovation, and adherence to environmental standards all demonstrate the industry's evolving role.

Public: Growing awareness and advocacy have fueled civil society's involvement in environmental governance. Non-governmental organizations (NGOs) and community-led initiatives have an impact on policy, raise awareness, and hold stakeholders accountable.

The complex interaction between these stakeholders frequently involves conflicts of interest. Industry seeks profit while minimizing environmental costs, the government strikes a balance between economic growth and environmental protection, and public expects sustainable practices. Divergent interests can result in issues such as regulatory gaps, insufficient enforcement, and insufficient public engagement.

2.3 Environmental Governance in Malaysia

Environmental governance in Malaysia is guided by the National Environmental Policy based on three main pillars which are sustainable development, economic, social and cultural progress as well as improving the quality of life and the environment. In general, this policy is a guide to federal and state government agencies, the industrial sector, local communities and various other stakeholders to jointly ensure that the environment is clean, safe, healthy and productive (KASA 2002).

The Department of Environment (DOE), Ministry of Natural Resources, Environment and Climate Change is a leading driving force in environmental governance in Malaysia. This department is responsible for ensuring sustainable development in the process of national progress and the environment is always clean, healthy and safe for the well-being of the people. DOE also plays a role as a disseminator of information, skills and thoughtful ideas for the development of the community's mind towards continuous appreciation of the natural environment. This includes encouraging the concept of self-compliance by the industry and the public.

3.0 Methodology

To understand the roles and interconnections of government, industry, and public in environmental governance, this study employs a qualitative analysis of policy papers. The implementation of environmental governance in Malaysia requires legislative provisions to achieve the National Environmental Policy. Legal provisions are in the form of Acts, Rules, Regulations and Orders. These documents are the main source of reference for an organization in planning their activities.

Furthermore an interview also being conducted with an official from the DOE who has almost 30 years of experience in various departments within the DOE and is directly involved in the implementation of environmental governance in Malaysia as a research respondent.

3.1 Acts

The Environmental Quality Act 1974 (AKAS 1974) and its amendments, Amendment 2007 and Amendment 2012 is an act related to removing, preventing, controlling pollution and repairing the

environment, and matters related to it. This Act 127 is divided into eight parts and contains as many as 75 sections which cover matters such as Administration, Licence, Prohibition and Control of Pollution, Control of Scheduled Waste, Appeals and Appeals Board, Cess Payment and Environmental and Miscellaneous Funds.

3.2 Rules

Legislation is also enforced through the rules set by the Malaysian Government. The methods involved in environmental governance in Malaysia are:

1. Kaedah-Kaedah Kualiti Alam Sekeliling (Mengkompaun Kesalahan-Kesalahan) 1978,
2. Kaedah-Kaedah Kualiti Alam Sekeliling (Mengkompaun Kesalahan-Kesalahan) (Pindaan) 1999
3. Kaedah-Kaedah Kualiti Alam Sekeliling (Mengkompaun Kesalahan-Kesalahan) (Pembakaran Terbuka) 2000.

The Kaedah-Kaedah Kualiti Alam Sekeliling (Mengkompaun Kesalahan-Kesalahan) 1978 and its amendment in 1999 describes the amount, payment method and also the form required to compound offenders by officers who have been authorized to compound. The Kaedah-Kaedah Kualiti Alam Sekeliling (Mengkompaun Kesalahan-Kesalahan) (Pembakaran Terbuka) 2000 describes any open burning offense under section 29A or 29B of the Environmental Quality Act 1974.

3.3 Regulations

Through Section 51 (Regulations) of AKAS 1971, the minister after consultation with the Environmental Quality Council can set regulations in addition to AKAS 1971. The relevant regulations in environmental governance in Malaysia are as follows:

1. Peraturan Kualiti Alam Sekeliling (Peraturan Kumbuhan) 2009.
2. Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005 dan pindaannya 2007.
3. Peraturan Kualiti Alam Sekeliling (Bunyi Bising Kenderaan Motor) 1987.
4. Peraturan Kualiti Alam Sekeliling (Efluen Perindustrian) 2009.
5. Peraturan Kualiti Alam Sekeliling (Kawalan Kandungan Petrol dan Diesel) 2007.
6. Peraturan Kualiti Alam Sekeliling (Kepekatan Plumbum dalam Gasolin Motor) 1985.
7. Peraturan Kualiti Alam Sekeliling (Pelepasan daripada Enjin Diesel) 1996 dan pindaannya 2000.
8. Peraturan Kualiti Alam Sekeliling (Pelepasan daripada Enjin Petrol) 1996.
9. Peraturan Kualiti Alam Sekeliling (Pelepasan daripada Motosikal) 2003.
10. Peraturan Kualiti Alam Sekeliling (Pencemaran daripada Stesen Pemindahan Sisa Pepejal dan Kambus Tanah) 2009.
11. Peraturan Kualiti Alam Sekeliling (Lembaga Rayuan) 2003.
12. Peraturan Kualiti Alam Sekeliling (Pelesenan) 1977.
13. Peraturan Kualiti Alam Sekeliling (Pengurusan Halon) 1999.
14. Peraturan Kualiti Alam Sekeliling (Pengurusan Refrigeran) 1999.
15. Peraturan Kualiti Alam Sekeliling (Premis yang Ditetapkan) (Getah Asli Mentah) 1978.
16. Peraturan Kualiti Alam Sekeliling (Premis yang Ditetapkan) (Kemudahan Pengolahan dan Pelupusan Buangan Terjadual) 1989 dan pindaannya 2006.
17. Peraturan Kualiti Alam Sekeliling (Premis yang Ditetapkan) (Minyak Kelapa Sawit Mentah) 1977 dan pindaannya 1982.

18. Peraturan Kualiti Alam Sekeliling (Udara Bersih) 1978 dan pindaannya 2000.
19. Peraturan Kualiti Alam Sekeliling (Udara Bersih) 2014.

3.4 Order

The relevant orders in environmental governance in Malaysia are as follows:

1. Perintah Kualiti Alam Sekeliling (Aktiviti yang Diisytiharkan Pembakaran Terbuka) 2003.
2. Perintah Kualiti Alam Sekeliling (Aktivti yang Ditetapkan) (Penilaian Kesan Kepada Alam Sekeliling) 2015.
3. Perintah Kualiti Alam Sekeliling (Larangan Penggunaan Klorofluorokarbon dan Lain-Lain Gas Sebagai Propelan dan Ejen Pengembang) 1993.
4. Perintah Kualiti Alam Sekeliling (Pembawa yang Ditetapkan) Buangan Terjadual) 2005.
5. Perintah Kualiti Alam Sekeliling (Premis yang Ditetapkan) (Kemudahan Pengolahan dan Pelupusan Buangan Terjadual) 1989 dan pindaannya 2006.
6. Perintah Kualiti Alam Sekeliling (Pewakilan Kuasa) (Dibatalkan) 1999.
7. Perintah Kualiti Alam Sekeliling (Perwakilan Kuasa) 2005.
8. Perintah Kualiti Alam Sekeliling (Perwakilan Kuasa) (Kawalan Pencemaran Marin) 1993 dan 1994.
9. Perintah Kualiti Alam Sekeliling (Pengurusan Halon) 2000.
10. Perintah Kualiti Alam Sekeliling (Penyiasatan Pembakaran Terbuka) 2000.
11. Perintah Kualiti Alam Sekeliling (Perbadanan Putrajaya) 2002.
12. Perintah Kualiti Alam Sekeliling (Premis yang Ditetapkan) (Getah Asli Mentah) 1978 dan pindaannya 1978.
13. Perintah Kualiti Alam Sekeliling (Premis yang Ditetapkan) (Minyak Kelapa Sawit Mentah) 1977.

4.0 Result and Discussion

The involvement and cooperation of various stakeholders in the implementation of environmental governance in Malaysia is important to achieve the National Environmental Policy. Based on the legal documents that have been studied, in general, stakeholders can be divided into three categories, namely:

1. The Malaysian Government
2. Industry
3. Publics/Community parties involving the public and non-governmental organizations (NGOs).

The government is the main party that has legal authority to regulate environmental governance as well as pollution production and interdependence and relationships with the industry and public.

4.1 Role and Involvement of the Government

The government is an authority and plays an important role in regulating environmental governance through legislation. The Director General of Environment who heads the Department of Environment (JAS) under the Ministry of Natural Resources, Environment and Climate Change is responsible for administering, coordinating and implementing the matters stated in the Environmental Quality Act 1974 (AKAS 1974).

The Director General of the Environment may also delegate his powers, duties and responsibilities under the AKAS 1974 relating to the issuance of licences, investigation of offenses

and enforcement to any Government Department, public officer, local authority or committee appointed by the Chief Director of Environment.

The joint involvement of the government, industry and public in AKAS 1974 is through the Environmental Quality Council (EQC) which consists of representatives of ministries or government departments, industry experts, academics and associations that have extensive knowledge and have an interest in matters related to the surrounding nature such as Sahabat Alam Malaysia and the World Wildlife Fund. The Environmental Quality Council functions to advise the Minister on matters related to AKAS 1971 and any advice referred by the Minister.

4.2 Role and Involvement of the Industries

AKAS 1974 is a Malaysian law that prohibits the manufacturing of effluents and hazardous chemicals, as well as planned waste, open burning, and other industrial operations. The raw natural rubber industry, crude palm oil industry, automotive industry, chemical industry, petrochemical and power plants, food industry and vitamin production, pulp and paper industry, textile industry, fermentation industry and distillery, oil and gas industry, as well as metal and non-metal industries, are all regulated by AKAS 1974.

The government requires the industry to follow a variety of environmental standards and practices, such as licensing, installation of effluent pollution control systems, approval of construction plans, pollution control actions, testing, and environmental audits.

AKAS 1974 also includes provisions such as the authority to impose conditions on licenses, planning requirements and approvals, restrictions on air pollution, the authority to require owners or residents to take certain actions to reduce pollution, the obligation of owners or residents to maintain and operate equipment, and the obligation of owners or residents to report on the environmental effects before carrying out certain activities.This law also includes orders requiring the completion of an Environmental Impact Assessment (EIA) to guarantee better environmental protection.

4.3 Role and Involvement of the Publics

In Malaysia, the public, along with companies, plays an important role in environmental governance. While the primary focus of the Environmental Quality Act 1974 (AKAS 1974) is on regulating industrial activities, several rules that apply to both the public and industry indirectly include the public. Ordinary citizens, workers, employers (residents or owners of cars or premises), professionals such as certified engineers, competent individuals, and non-governmental organizations (NGOs) such as SUHAKAM and Sahabat Alam Malaysia are all included in the term "public" in this sense.

The public is considered as an entity that deserves environmental protection in a broader sense, as evidenced by the legislative framework. The Environmental Quality Act of 1974, for example, requires the appointment of a Director General of Environmental Quality who is responsible for teaching and informing the public about environmental protection.

Furthermore, legislation within AKAS 1974 broaden the scope of public involvement to circumstances involving industrial disasters, disease outbreaks, or environmental or public health threats. This means that inhabitants or owners of buildings and vehicles are not restricted to industrial enterprises, but also include anyone in charge of specific areas.

Various regulations clearly describe the public's duties and obligations in implementing environmental governance. These include submitting information to authorities, participating in

environmental compliance training programs, and granting access and support to authorized officers during inspections. In addition, qualified professionals, such as professional engineers, are involved in the design, construction, and certification of pollution control systems.

The participation of authority personalities and knowledgeable personnel in the oversight of pollution control systems is critical for guaranteeing compliance with environmental requirements. The Department of Environment (DOE) recognizes these persons for their contributions to environmental standards.

Non-governmental organizations (NGOs) and other non-governmental organizations (NGOs) play an important role in environmental governance. When their actions involve the environment, they must seek for licenses. They must, however, follow environmental rules and risk legal consequences if they violate them.

Finally, Malaysia's environmental governance structure actively engages the public, including people, experts, and non-governmental organizations (NGOs). Their involvement includes different facets of environmental protection, monitoring, and enforcement, all of which contribute to the preservation of the country's natural surroundings. This broad participation illustrates the country's commitment to environmental sustainability and the public's critical role in accomplishing these goals.

4.4 Distribution Of Stakeholders Based On A Qualitative Study

The distribution of stakeholders based on a qualitative study of legal documents and interviews is shown in Table 1. It emphasizes that the government has a substantial role in environmental governance in Malaysia, with 1484 counts, followed by industry, 642 counts and the public, 159 scounts. This distribution highlights Malaysia's Environmental Quality Act's overwhelming focus on regulating industry to prevent pollution from their operations, with comparably little attention on the role of the community in environmental governance.

Table 1. Distribution of the number of stakeholders from the qualitative review on the study of legal documents and interviews.

Stakeholders	**Total**
Government	1484
Industry	642
Public	159

5.0 Conclusion

This study dives into Malaysia's varied environmental governance landscape, examining the complex relationships between government, industry, and public in the goal of environmental sustainability. The research technique combines a qualitative review of policy papers with insights from an interview with an experienced official from Malaysia's Department of Environment (DOE), who is actively involved in environmental governance.

The government of Malaysia plays a critical role in developing and implementing environmental stewardship. The DOE, which is part of the Ministry of Natural Resources, Environment and Climate Change, is in the forefront of these efforts, with authority over the administration and coordination of the Environmental Quality Act of 1974. The government has the authority to assign duties such as licensing, investigations, and enforcement to numerous groups. Collaboration within the Environmental Quality Council (EQC), which is made up of

government agencies, industry professionals, academia, and environmental organizations, emphasizes the importance of collaborative decision-making and cooperation in environmental governance.

Malaysian industries, a crucial stakeholder in environmental governance, are subject to severe rules outlined in the AKAS 1974. These regulations apply to a wide range of industries, including manufacturing, agricultural, automotive, and others. Industries must adhere to stringent environmental regulations, which include licensing requirements, pollution mitigation methods, and detailed environmental impact studies. The legal framework permits authorities to set licensing requirements, monitor pollution control efforts, and require environmental impact studies, ultimately strengthening environmental protection measures.

Public such as citizens, professionals, and non-governmental organizations (NGOs) are all involved in Malaysia's environmental governance. While the primary focus is on controlling industrial activity, some rules touch the public indirectly. Environmental legislation stresses public education and awareness.

In summation, Malaysia's environmental governance framework thrives on the dynamic collaboration among government, industry, and society, exemplifying a resolute commitment to environmental sustainability. This intricate interplay assures the safeguarding of the nation's natural environment, charting a course toward a more eco-conscious and sustainable future.

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