

Exploring the Roles of Environmental Non-Governmental Organisations in the Context of Malaysian Climate Change Governance



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<https://doi.org/10.18280/ijstdp.170216>

ABSTRACT

Received: 28 September 2021

Accepted: 14 February 2022

Keywords:

climate change governance, ENGOs, non-governmental organisations, stakeholders' participation

As non-state actors, environmental non-governmental organisations (ENGOs) are able to influence the governance process in many cases. Although the ENGOs role in climate change governance has been extensively studied over the last two decades, there is a dearth of research relating to Malaysian ENGOs. Accordingly, this study was conducted to compensate for this gap in the literature, and it employs a qualitative approach via analysis of relevant documents and in-depth interviews with eleven ENGO informants operating in Malaysia at national, sub-national and local levels. The informants were selected through purposive sampling, and the interview data were analysed using thematic analysis. The informants described the ENGO roles in climate change governance at national, sub-national, and local levels, and their roles were described in the context of the following six key themes: political, informational, educational, complementary, observational, and innovational. Similar to earlier perspectives, the results of the present study revealed that the government generally accepts the ENGOs' role to facilitate climate change governance. This article provides insight into the ENGO's role in assisting the government in governing climate change in Malaysia.

1. INTRODUCTION

Climate change is one of the main issues in global governance that have garnered considerable attention from countries worldwide as it has been projected to have an adverse impact on human civilisation. According to the Emissions Gap Report 2020, the global trend shows a pattern of temperature rise of more than 3°C, despite a slight reduction in carbon dioxide emissions due to the Coronavirus (COVID-19) pandemic. The crisis is alarming as the temperature has risen significantly above the 2°C Paris Agreement target [1]. In Malaysia, the effects of climate change are observed from sea level rise, surface temperatures, heavy rainfall and extreme weather events. The condition poses potential effects on biodiversity, forestry, agriculture, human health, energy, water resources, and coastal and marine resources [2, 3].

In response to the adverse effects of climate change, there has been an urgent call for “good” climate change governance with effective mitigation and adaptation policies. Although climate change governance has been largely associated with developed countries, it is no longer an option for developing states, including newly industrialised and low-income nations, to forego climate change mitigation and adaptation policies [4]. All governments, then, are responsible for transforming public opinion and perception in order to maintain societal support for the national climate policy [4].

Mayntz [5] defines governance as the collective rule of societal groups through cooperation between civil society and other stakeholders to achieve a sovereign governmental decision. The definition provides the viewpoint that

governance involves cooperation between state and non-state actors in the political decision-making process. In the context of climate change, Fröhlich and Knieling [6] emphasised that the governance approach necessitates the collaboration of versatile actors. They argued that participatory governance could increase the perceived legitimacy of the climate policies and enhance implementation by way of collaboration with civil society, private, and public sectors.

Another approach in governing climate change is through multi-level governance, as described by Jänicke [7]. Decision-making related to climate change occurs at three levels of governance. Global, national, and local levels of governance involving multi-actor participation are crucial in dealing with the complex impact of climate change on social and economic activities. At the global level, climate change governance is based on the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. On the domestic level, the governance framework is based on the national climate change policies that shape the strategies and approaches that address issues at the national and local levels by state and non-state actors such as civil society and businesses. Although Jänicke [7] viewed climate change governance from a structural perspective, he acknowledged the vital role of non-government stakeholders at all governance levels. In this respect, the element of stakeholder participation in climate change governance is considered optimal for engendering quality mitigation and adaptation policy process.

Climate change governance is a global environmental and societal challenge [6]. Many policies have been formulated at

the national level as initiatives to combat climate change following the goals set out in various global climate agreements that they have ratified, particularly Montreal Protocol 1987, United Nations Framework Convention on Climate Change (UNFCCC) 1992, Kyoto Protocol 2005 and Paris Agreement 2015. Nevertheless, the implementation of a climate change programme depends on effective governance at the national policy level [8]. As a developing country, Malaysia has taken part in the global initiative under the Paris Agreement 2015 to reduce greenhouse gases by 45 per cent by 2030 [9]. Before the Malaysian government ratified the Paris Agreement in 2016, the government had introduced the National Climate Change Policy 2009, which outlined precautionary actions via mitigation and adaptation strategies. The policy adopts the principle of stakeholder participation (e.g., ENGOs) in assisting the government with raising public awareness and implementing policy. Undoubtedly, climate change governance requires the participation of various stakeholders, such as non-governmental organisations (NGOs), to successfully address climate change issues domestically. NGOs that focus on environmental issues or environmental NGOs (ENGOs) contribute significantly to climate change governance. As a non-state actor, an ENGO works independently and can influence the governance process.

As one of the key stakeholders in climate change governance, the ENGO can participate in various governance activities. Beginning from the negotiation process, ENGOs play an active role in formulating, implementing, and monitoring climate change policies. Primarily, ENGOs have a vital role in climate policy advocacy regardless of their sociopolitical orientation. As indicated by Liu et al. [10], although the Chinese government restricts civic space, NGOs could still advocate for policy change in addressing climate change. Also, Fröhlich and Knieling [6] have shown that ENGOs could contribute to effective climate change policy implementation through their advocacy works for climate actions. Besides climate advocacy, ENGOs in Ghana give the government climate data important for decision making on climate adaptation policies [11].

ENGOs can act as information brokers whereby they become an intermediary between society and the government. This can be observed when Greenpeace promotes climate action to policymakers on behalf of society [12]. ENGOs can deliver information from the government to society. Indonesian ENGOs, for example, have helped the government deliver information about the REDD+ programme to local communities in Kalimantan [13].

ENGOs have supplemented governmental function in building climate awareness among the public. Most ENGOs believe they play a crucial role in increasing public awareness of climate change issues [14]. Apart from that, ENGOs can also attain public legitimacy on governmental political decisions. This can be seen in the case of China, whereby active participation in governance activities has contributed toward enhancing public support and acceptance of the climate change policies [15].

Besides working with the government to increase public awareness, ENGOs deliver services through their partnership with the government. Pandey [16] mentioned that NGOs have a partnership with stakeholders, especially the government, in order to assist the institutions in the service delivery of climate mitigation and adaptation. The government may partner with ENGOs when implementing climate policies.

The aforementioned studies outline the critical role of

ENGOs in the context of climate change governance. As governance involves various activities at different policy-making stages, ENGOs are presumed to serve as crucial non-state actors and ensure viable climate policy at the domestic level. In addition to playing a significant role in governing climate change through activities that influence policy, ENGOs engage in climate advocacy, information exchange, and service delivery.

Malaysian ENGOs have been playing a significant role in enhancing environmental consciousness among the public while also safeguarding the environment and promoting sustainable development [17]. To be sure, they play a notable role in environmental governance, yet their role in climate change governance is still ill-defined. Some scholars have studied Malaysian ENGO as the subject, but they focused on their roles in environmental integrity [18], environmental communication [19], water issues [20] and how they influence public policy [21]. However, there is a dearth of discussion on the role of ENGOs in climate change governance in Malaysia. Furthermore, in Malaysia, climate change governance is largely based on a top-down approach [22], where most climate-related policy decisions are made by policymakers, thus restricting ENGOs to function effectively in the governance system. In such circumstances, there is a need to explore how ENGOs can play their roles in order to understand their value in climate change governance. Therefore, this article presents a qualitative study on ENGOs' current roles in climate change governance in Malaysia. The study seeks to address the question "How can ENGOs contribute to climate change governance in Malaysia?". It attempts to provide insights that could guide ENGOs and the government in improving climate change governance.

2. METHODOLOGY

The study's main objective is to explore the roles of ENGOs in Malaysian climate change governance using a qualitative research method. A qualitative approach was employed because it can provide rich and detailed perspectives on understudied phenomena [23]. For this study, the data sources for empirical analysis on the roles of ENGO in climate change governance consists of written documents and in-depth interviews. The relevant documents examined in this study are in the form of reports and articles from ENGOs and the national government.

A semi-structured in-depth interview was also utilised to gather data because the flexible structure of the interview guide allows the researcher to explore the informants' perspectives deeply [24]. Using a purposive sampling technique, only ENGOs focusing on environmental issues and their officers (e.g., president, director, secretary, and treasurer) were selected for the study. Eleven informants were interviewed from the ten selected ENGOs (Table 1) that operate at national, sub-national and local levels in Malaysia. Data were collected through face-to-face and online interviews from September 2020 to March 2021. Interviews took approximately one to 2.5 hours to complete. The interviews were conducted during the period where COVID-19 adversely hit the world since the end of 2019. Due to the restricted movement to curb the pandemic outbreak, the researchers were able to conduct only two face-to-face physical interviews, and the rest were virtual interviews.

The informants were asked about their activities,

involvement and roles in climate change governance at all levels (local, state and national). Probing questions were posed to informants to elicit elaborations on their answers. The interviews were recorded with the informants' consent and then transcribed. Each informant was assigned a code to preserve confidentiality. The interview data were then

analysed using thematic analysis with the application of Atlas.ti software for the coding process. The process of thematic analysis involves familiarising with data, identifying codes and themes, refining and finalising themes, and reporting the results [25], which explain the roles played by ENGOs in the Malaysian climate change governance.

Table 1. Description of ENGOs involved in the study

Code of ENGO	Brief Description
ENGO1	It is one of the most notable local ENGOs founded in 1940 with a large membership. The focus is on natural heritage and biodiversity management, protection, and conservation.
ENGO2	The local ENGO was founded in 1974 with a small membership. The focus is on sustainable living, urban environmental concerns, and climate change.
ENGO3	The international ENGO was founded in 1991, focusing on the environmental integrity and protection of human rights in Borneo.
ENGO4	It is a local youth ENGO founded in 2015. It focuses on climate advocacy and movement among the youths at local, regional, and global levels.
ENGO5	It is a local, Sabah-based NGO that was founded in 2005. It focuses on environmental protection and public awareness of the wetlands.
ENGO6	It is an international NGO that was originated in Taiwan and was established in Malaysia in 1995. The focus is on humanity and environmental protection through charitable works.
ENGO7	It is a local ENGO that was founded in 1985 and has been advocating for sustainable development in Malaysia. It focuses on climate change initiatives, namely transportation, sustainable energy, and agriculture.
ENGO8	It is a well-known international ENGO that was established in Malaysia in 1972. It focuses on environmental conservation for humans and wildlife.
ENGO9	It is a local youth-led ENGO that was founded in 2019 as a climate justice movement in Malaysia. It focuses on democratic, inclusive and representative climate actions.
ENGO10	It is a local consumer-based NGO that was founded in 1969 as one of the pioneers in the environmental movement. It focuses on consumerism, environmental protection, and sustainability.

3. FINDINGS

Data analyses revealed the roles played by ENGOs in climate change governance in Malaysia. Six broad themes (Figure 1) emerged from the analysis and are described as follows.

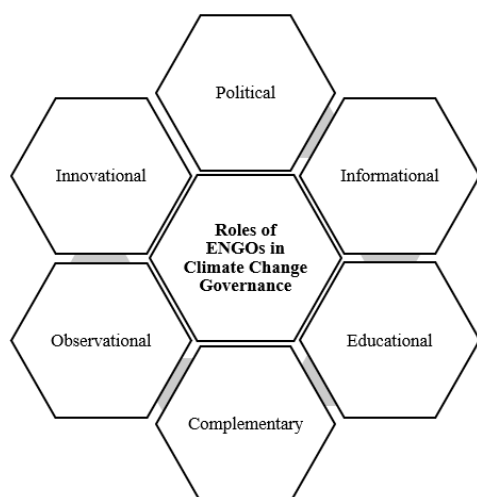


Figure 1. Themes on the roles of ENGOs in climate change governance

3.1 Political role

The data gathered from informant interviews reveal that ENGOs play a vital role in the political activities that lead to climate policy. So, ENGOs influence the policy-making process on climate change. In this vein, almost all informants reported that they aim to influence climate change policy, and

they view their policy advocacy and collective efforts as impactful. The political role involves the activities of ENGOs in influencing the policy-making process on climate change. From the interviews, almost all informants reported that they aim to influence the policies related to climate change. They view all of their voluntary collective efforts as policy advocacy works. ENGO7 apprised that they advocate for climate change issues, and ENGO1 and ENGO6 informed that they advocate for more effective climate mitigation strategies and actions. ENGO3 advocate for indigenous rights in Borneo rainforests, particularly in Sarawak and ENGO4 advocate for youth inclusion in the climate change policy process.

ENGO7 noted that ENGOs try to influence climate change policy and lobby for improvements via individual and collective actions. Individual action may involve pointing out issues related to policy implementation and proposing ways for the government to fix such problems. Collective action, by contrast, involves voicing concerns through the ENGO coalition, namely, the Malaysian Climate Change Group (MCCG). They will compile their views, opinions, and perspectives and comprehensively convey their message(s) at formal meetings with the government. Another route toward climate advocacy, as explained by ENGO3, occurs through active discussion with communities in meetings and the media.

It was learned from the analysis that policy-influencing activities were performed in various ways. For instance, ENGO5 mentioned that they would include climate change issues in the dialogue with the government on wetland conservation. ENGO2, ENGO7, and ENGO8 said that they influence climate policies via diplomacy tactics such as lobbying, assisting the government in solving problems, drafting plans, policies, and laws, and sharing feedback about the policies with stakeholders. Nevertheless, they also stressed that confrontation is a necessary part of the process.

There were some negative comments relating to the diplomacy and confrontation involved with policy-influencing activities between ENGOs and the government. As observed by ENGO9, diplomacy in the context of climate change advocacy is less effective for policy change in Malaysia. Consequently, they take direct action such as climate strikes in order to get the government's attention or to encourage the government to prioritise climate change on the national agenda. Meanwhile, ENGO3, sensing that the government is not very open to criticism, expressed misgiving about confrontation. They believe that criticism could result in their ouster, and they would be unable to influence policy. Thus, they communicate to the government indirectly through the media.

In short, some ENGOs were established as advocacy groups and aimed for improved policy. They advocate both individually and collectively for better climate policies by way of diplomacy. However, they may opt to use radical tactics to influence the government's actions and fight for climate justice. These tactics may involve confrontation and direct action.

3.2 Informational role

Most informants agreed that the other primary role of ENGOs in the context of climate change governance is informational. It involves activities that produce and provide information on climate change to stakeholders such as the government, corporations, other NGOs and society. As most informants highlighted, the provision of information on climate change to stakeholders, especially government and society, is a crucial role performed by the ENGOs. They stated that they provide information openly to the public through various materials such as leaflets, books, and newspaper articles. In one case, ENGO7 had provided documentaries on climate change that they shared with the other NGOs during seminars or conferences. However, the documentaries were not broadcast on a national television channel for public consumption. Therefore, they opted to use social media, such as Facebook and Youtube, and their websites to disseminate information on climate change, including the key outcomes of the meetings held by the governing body for UNFCCC that they attended, i.e. Conference of the Parties. As reported in Malaysia's Second National Communication to the UNFCCC [26], an ENGO held monthly climate change seminars to inform the public about the outcomes of international negotiations. The ENGO organised the seminars in collaboration with the Ministry of Natural Resources and Environment and foreign embassies.

Despite having information at hand, ENGO5 mentioned that they would first verify the information with other agencies before disseminating it to the public to ensure that the information is reliable. Besides, ENGO9 noted that most climate change information is written in English with scientific terminologies. As a consequence, some ENGOs simplified climate information for public consumption in a common vernacular with infographic illustrations.

An informant from ENGO2 also noted that they provide information to stakeholders because they assume that they are the source of information on the ground. ENGO8 and ENGO9 noted that since they work closely with the communities, they know the reality and opinions at the grassroots level. Although ENGO4, ENGO7, and ENGO8 stated that they only represent affected demographics such as communities, corporations, and youth (vs. the general public), they could still bring public

opinion about specific climate-related issues to the government as input for the purpose of decision making.

Five out of the ten ENGOs interviewed were involved in research activities with other organisations, including other NGOs and public universities, to generate new knowledge to benefit the government. For instance, an ENGO may collaborate with a public university in conducting a socio-ecological survey among indigenous people. In another case, an ENGO may conduct field research to produce scientific data independently with grants from an agency such as the government or corporation. As an example, Malaysia's Third Communication and Second Biennial Update Report to the UNFCCC [27] stated that an ENGO collaborated with other agencies under the Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF) to conduct research on the effects of climate change on marine biodiversity. ENGO also collaborated with the University of Malaysia Sabah (UMS) in 2013 and 2014 to conduct research on climate change vulnerability in Semporna, Sabah.

According to ENGO5, there is also the situation wherein other agencies request data from ENGOs. For instance, an agency can request data on the number of recycled items received by the ENGO at the recycling centre. Such data helps to measure the effectiveness of recycling programmes run by the government or a voluntary organisation. Another useful source of information for the government during project development is the Environmental Impact Assessment (EIA) report. ENGO1 mentioned that they studied the potential environmental impact at the proposed project area and voluntarily made the report. They submitted the report to the agency in question in order to impart their suggestions on minimising environmental impact in the area.

To be sure, the aforementioned activities indicates that ENGOs play an informational role in climate change governance. They not only provide information about climate change to stakeholders but also give data-driven input for policymakers based on information they obtain from research and grassroots-level activities.

3.3 Educational role

In the context of climate change governance, the educational role of the ENGO consists of two main activities: They include increasing climate awareness and organising training in order to increase stakeholders' knowledge about climate change. Most of the ENGOs stated that enhancing awareness and knowledge about climate change to the public is one of the most significant roles of ENGOs. For example, ENGO3 has undertaken several activities that aimed to increase indigenous people's awareness about their land rights and the impact of the hydroelectric dam in Baram on their livelihood and, more generally, on climate change. In addition, ENGO2 has promoted an Ecological Footprint Analysis as an initiative to create public awareness about the resources consumed and waste generated by each person. Besides, ENGO9 noted that ENGOs also build public awareness about the roles that ENGOs play in addressing climate change. In particular, when ENGOs publicise their climate actions, it indirectly impacts public awareness about climate change.

Another method to enhance awareness about and knowledge of climate change among the stakeholders is through ENGO-organised training. Most ENGOs provide educational training for the public through seminars, workshops, courses, conferences, and open discussions.

ENGOS' initiatives on public awareness through seminars and campaigns were also highlighted in Malaysia's Third National Communication and Second Biennial Update to the UNFCCC [27]. For example, an ENGO held its annual climate change dialogue, emphasising adaptation, mitigation, and UNFCCC negotiations. In 2015 and 2016, the ENGO held 13 seminars and 24 exhibitions on its renewable energy and efficiency roadshow, educating 290 attendees and 1,750 visitors about climate action. Additionally, numerous ENGOS co-organised an interfaith dialogue on climate change in 2015, which drew over 100 participants.

Beyond the general public, ENGOS also educate school children, university students, and various enterprises. For example, volunteers from ENGO6 educate school children and enterprises about recycling in order to reduce the waste that contributes to climate change. Also, ENGO4 aimed to improve juvenile knowledge about climate change; to this end, they collaborated with public universities to provide short courses to interested youth. Furthermore, ENGO9 focused on capacity building training for both juveniles and indigenous people. Although the informants did not mention providing formal training to public administrators, ENGO4 and ENGO10 did share climate change knowledge with public administrators during the course of informal conversations while attending conferences or organising programmes together.

While providing training is considered one of ENGOS' main activities, some ENGOS lack the capacity to perform such a function. As revealed by ENGO3, they have to collaborate with other ENGOS to educate the indigenous people about ethics, their land rights, and they have to train the technicians to collect data on wildlife and hunting activities. Apart from collaborating with other ENGOS, they also partnered with government agencies in educating the public about climate change. For instance, the MCCG partnered with the Malaysian Meteorological Services to prepare an educational information sheet for the general public. A series of public awareness programmes on energy efficiency and renewable energy was also launched in the late 1990s by an ENGO in collaboration with the Ministry of Energy, Communications, and Multimedia and Ministry of Education (Malaysia's Initial National Communication to the United Nations Framework Convention on Climate Change, 2000). Besides, Malaysia's Second National Communication to the UNFCCC [26] stated that the ENGO had launched a three-and-a-half-year public awareness campaign titled 'Mobilising Malaysians on Climate Change' from 2001 to 2004. The ENGO also produced a Climate Change Action Plan as part of the project, which was forwarded to the government.

In brief, ENGOS play an educational role in climate change governance to increase public awareness and knowledge on climate change. They took the initiative to run various programmes to educate the public. They also cooperated with other institutions, including the government, corporations, schools and other ENGOS, to educate stakeholders on climate change.

3.4 Complementary role

The interviews revealed two sub-themes under the complementary role, namely, partnering with stakeholders and performing climate actions. The complementary role refers to activities performed by ENGOS in collaboration with stakeholders, such as the government, other NGOs, corporations, and communities, to complement the work of the

government. The informants have noted that ENGOS could facilitate the government with increasing public awareness about climate change. Although the government is the leading organisation responsible for creating public awareness about climate change, ENGO1 and ENGO5 stressed that they also help the government spread the information on the causes and impacts of climate change and climate actions for mitigation. Apart from that, ENGOS collaborated with government agencies on public awareness campaigns such as peatland rehabilitation and fire prevention seminars, which were jointly organised by an ENGO and a state government, the Selangor State Forestry Department [27].

In addition to working with the government to create public awareness, ENGOS were also partnering with the government to implement climate mitigation and adaptation projects. ENGO6 stated that ENGOS have a role in collaborating with the government to work on climate change policy strategies. For instance, ENGO2 mentioned that some ENGOS collaborate with federal and state governments to work on specific areas, such as peatland conservation and management projects.

Moreover, ENGO10 partnered with the state government for a cycling campaign programme that promoted the use of bicycles as a means of transportation. As stated in Malaysia's Third National Communication and Second Biennial Update to the UNFCCC [27], such campaigns had effectively exposed cycling benefits to around 13,500 people. In addition, they have organised various programmes such as the 'no plastic bag programme' with the local government. Apropos climate adaptation, ENGO9 mentioned that they work with the Department of Orang Asli Development (JAKOA) to provide food and basic needs assistance for the indigenous people affected by floods and the COVID-19 pandemic.

ENGOS have also partnered with the government to organise conferences such as the 11th International Greentech and Eco Products Exhibition and Conference Malaysia (IGEM2020). ENGO2 stated that the Ministry of Environment and Water (MEWA) invited the MCCG to become a conference partner. As an active coalition in climate change advocacy, the MCCG agreed to organise the Climate Action Forum in the IGEM2020. As for them, it was a good initiative by the government as they could voice their concerns about climate change at the forum.

Besides the government being a key partner, ENGOS also partnered with local and international NGOs and corporations. Most informants revealed that they collaborate with NGO networks at national, regional, and international levels in order to organise various campaigns and programmes for climate actions. In terms of affiliating with corporate organisations, ENGO7 and ENGO8 mentioned that their organisations had worked with corporate organisations on climate change and sustainability projects. However, ENGO7 noted that there was little chance to partner with local corporate organisations as they were not interested in the climate change projects proposed by ENGOS.

Under the sub-theme of complementing the government's role in performing climate actions, ENGO6 indicated that they feel responsible for implementing climate mitigation and adaptation strategies as outlined in the National Policy on Climate Change 2009. Although the informants stated that implementing climate policy is the government's responsibility, they believe that ENGOS could complement these actions through their voluntary activities such as recycling. For example, the ENGO10 campaign on reducing

household consumption to decrease waste and the ENGO5 wetland conservation activities to help mitigate climate change represents the foregoing notion of a complementary relationship. Noting that everyone should implement climate action, they voluntarily perform them at their households and at their own cost to inspire others to follow suit. For example, ENGO7 performs climate actions for others to follow, such as using solar as renewable energy and using public transportation to reduce greenhouse gas emissions. Despite the Malaysian government's want of an adaptation and resilience framework, ENGO9 promoted adaptation measures for vulnerable groups, primarily the indigenous demographic, who were affected by floods and droughts. ENGO9 worked conjointly with the JAKOA to provide basic needs and disaster response training to the Orang Asli during the COVID-19 pandemic. They assume that the training will help them face climate change and other stressors in the future.

In a complementary role, ENGOs work on a volunteer basis with other stakeholders in climate change governance to address climate change. For example, the government has asked ENGOs to assist them in attaining national carbon emissions reduction targets. They also complement the government in providing services to the public during extreme events.

3.5 Observational role

The term observational role is used to refer to government monitoring activities in addressing climate change issues. Based on this monitoring, ENGOs provide feedback to the government to improve climate actions and policy implementation. As an example, ENGO4 will inform the government on public concerns about climate change it obtains from surveys and will urge the government to take further action to address these concerns. Similarly, ENGO7 and ENGO10 reported that they observe climate change policy implementation and inform the government about problems on the ground to improve execution and policy. ENGO8 reported that they evaluate the government's performance based on climate-change targets set in the Nationally Determined Contribution (NDC) to the Paris Agreement. Conversely, ENGO7 reported that they were unable to monitor all government activities due to a lack of resources.

In summary, ENGOs observe and evaluate the government performance in implementing climate change policy to achieve NDC targets. They give feedback to the government and urge the government to address the issues. However, they can only perform their monitoring activities within the limits of their capacity.

3.6 Innovational role

The term innovational role is used to refer to ENGO activities that engender strategies and tools for climate actions. Several innovations for promoting climate action were identified under this theme. The informant from ENGO8 shared that they innovate strategies by creating competition among cities and business networks to encourage climate actions among those stakeholders. There is evidence in Malaysia's UNFCCC Biennial Update Report [28] that the ENGO organised a competition among municipalities and city councils to encourage renewable energy and climate actions. Two local governments who competed were recognised for their commitment to urban sustainability. Besides, they also

innovate tools to measure carbon emission for corporate organisations.

Moreover, ENGO2 claimed that they innovate for climate action by promoting Local Agenda 21 in 1997 to encourage sustainable development at the local level in Malaysia. Other ENGOs, such as ENGO1 and ENGO6, indicated that they innovate recycling products through their communities' recycling activities. For ENGO6, which has headquarters in Taiwan, the informant reported that they have an unlimited capacity to innovate recycled products with high-end technology performed at their headquarters. At the headquarters, the organisation managed to innovate recycled bottles, blankets, and construction materials, such as interlocking blocks, from recycled plastics and papers. They are interested in bringing high-end recycling technology to the country through entrepreneurial investment in Taiwan.

Apart from innovating strategies and tools for climate actions, ENGOs also innovate climate advocacy strategies. As explained by ENGO9, their ENGO worked in conjunction with other NGOs to innovate stakeholder networking, including communities, farmers, students, think tanks and human rights groups, in order to mobilise them into a climate movement in Malaysia. They called the network the Climate Emergency Coalition, which was initiated to pressure the government to declare a climate emergency and take a firm stance in addressing urgent climate issues. The ENGO4 informant believes that their innovation is their strategies to facilitate the consultation process at the international level. The informant added that they innovate original strategies to facilitate and moderate representatives from different organisations as they prepare to make policy recommendations during national dialogues. Most of the time, they managed to develop the policy recommendation within a short period during the dialogue session.

In summary, ENGOs have contributed to climate change governance through their innovation of various strategies and tools. Their innovation of strategies for climate actions and advocacy have helped promote sustainability and mobilise the climate movement in Malaysia. Meanwhile, their innovative products could help to reduce waste and generate income from recycled products.

4. DISCUSSION

The study was designed to explore the roles of ENGOs in climate change governance. The results of the study indicate that ENGOs have specific strengths and are relevant in climate change governance. Their creativity and entrepreneurial character make them distinct from the government. Thus, an emerging domestic climate change governance would benefit from greater ENGO participation in national policy processes.

Based on the perception of the ENGOs, the results imply that ENGOs in Malaysia possess six potential roles in domestic climate change governance. The primary role of ENGOs is political as they aim to influence climate-related policy. Consistent with the work by Liu et al. [10], this study found that ENGOs engaged in climate change policy advocacy despite the limited potential of direct involvement. The possible explanation for this may relate to the degree of openness of the government to accept criticism from the ENGOs, as noted by the informants. Since the government seems unreceptive to the ENGOs more often, the critical ones will likely be excluded from the policy process. This situation

has led to an indirect form of advocacy through the media and/or peaceful demonstrations. The study also showed that although there was poor visibility of ENGOS in the formal process of policy formulation, they were active in lobbying the policymakers. This converges with Szarka's [29] study, which also found that the ENGOS in France, Germany, and the U.K. prefer to work on climate advocacy through policy lobbying.

ENGOS are also crucial for an informational role as they are actively involved in the information movement among stakeholders. Prior studies have noted the importance of NGOs in providing information to both the government and the public [12, 13]. They work closely with the grassroots, thus enabling them to have authentic information that will be useful for the government in designing policy. They also distribute information about climate-related policies to the general public from various formal sources such as the federal government and international organisations. In order to ensure the essence of information is captured by the public, they translate the information into the national language using simple words. Additionally, it is worth noting that ENGOS have the capacity to generate new information from their research. Even though conducting research is a supplementary activity, their unbiased research findings are valuable for policy development. These results are in accord with a recent study by Musah-Surugu et al. [11], which showed that ENGOS engage in climate services activities, including, as mentioned, research. Therefore, this study converges the notion that the NGO role is emerging in the climate information services, as highlighted by Jones et al. [30].

The study also found that ENGOS were involved in educating stakeholders at various societal levels. The purpose of educating them is to enhance knowledge of and awareness about climate change. ENGOS do not only convey information to stakeholders, but they also partner with other establishments to provide training at learning institutions, companies, and in community settings. In the context of learning institutions, the result of this study converges with Kieu and Singer's [31] findings that NGOs are considered non-formal educators who are teaching sustainability education. It suggests that climate change is not mainstreamed into the formal education system. Nevertheless, NGOs can assist in teaching students about climate change. Perhaps climate change must be mainstreamed into Malaysia's formal education system, as has been recommended by Pereira et al. [32].

Another role of ENGOS in climate change governance is complementary with regard to policy implementation. In this study, ENGOS were found to be partnered with stakeholders, consistent with Bauer and Steurer's [33] study, which found that NGOs are among the key partners in multi-level governance of climate adaptation in Canada and England. In addition, a study by Dressler et al. [34] showed a similar result wherein NGOs partnered with both the local government and international organisations to implement a programme under a grassroots project called Community Development through Reducing Emissions from Deforestation and Forest Degradation (REDD) or CoDe REDD in Palawan Island, the Philippines. It indicates that the government partnered with ENGOS to organise climate action programmes and deliver services to the community. Besides, ENGOS were also shown to have taken voluntary action to perform various strategies of climate mitigation and to foster public support for climate actions. Here, this role is in line with Nasiritousi et al. [14], who found that ENGOS were perceived to have a relatively higher potential to perform climate actions relative to other

non-profit NGOs, including research-based NGOs, trade unions, and indigenous groups.

In this study, ENGOS were also found to play a significant observational role in the context of climate change governance. The result showed that ENGOS observed the government implementation of climate-related policies and acted as a public watchdog within their organisational capacity. Some ENGOS lack the needed experts to analyse the government's and industries' actions that worsen climate change. ENGOS could broaden their observational role via collaboration with other stakeholders, as mentioned by Mittag [35], who suggested that ENGOS could partner with experts to function effectively as a watchdog.

The most interesting finding was the growing innovational role of ENGOS in addressing climate change. The result of the study indicates that they employed their creativity to yield new advocacy strategies, tools, and recyclable products. A study by Al-Saidi [36] showed that large international ENGOS had generated innovative new strategies to promote sustainable development. The result of this study, however, proved that local ENGOS have also been potentially innovative in inventing new strategies for climate actions and advocacy. It shows that the coverage level and size of ENGOS in this study are not likely related to their innovation capability to tackle climate change. Nevertheless, human and financial resources may determine the degree to which they can exercise their innovation activities [37]. Thus, it illustrates that ENGOS' innovation activities may be constrained by its organisational resources rather than structure, even though they have the competence to innovate new ideas.

5. CONCLUSIONS

ENGOS are politically neutral actors who perform their activities independently from the government. This study investigated the emerging role of ENGOS in domestic climate change governance in developing countries. ENGOS in developing countries such as Malaysia employ both direct and indirect strategies to participate in governance activities.

Although the ENGOS play a pivotal role in putting pressure on the government to engender desirable policy change, it is important that they do not undermine their potential to contribute to this objective. Based on the findings, the study suggests that ENGOS should focus on organisational capacity-building to enhance their potential as a governance actor in addressing climate change. Through organisational capacity building, ENGOS will have the ability to equip their organisations with adequate strategies and resources required to play significant roles in climate change governance.

Their participation could massively contribute to the effective governance of climate change. However, the degree to which an ENGOS can effectively participate depends upon the government's reception towards them, and although some government officials welcome their participation, others are less susceptible to their criticism, recommendations, and general influence. So, their ability to participate in the governance process occurs only to the degree authorities allow it to. The findings point to the need for the government's support in engaging with the ENGOS to promote good climate change governance. The government should consider institutionalising ENGOS in the governance system to avert the problem of unreceptive attitudes among public officials towards the ENGOS.

In the case where a government is less open to ENGO participation, ENGOs adopt indirect and non-confrontational strategies that take place outside of the political arena. Nevertheless, there is an inherent potential for the antagonism in the ENGO-government relationship, which could impede participatory and multi-stakeholder governance. Hence, the nature of the partnership among multiple stakeholders, especially between the government and the ENGO, is crucial for bringing about participation and inclusiveness in climate change governance.

ACKNOWLEDGMENT

We are deeply grateful to all participants of this study, who kindly shared their knowledge, experiences, practices and time with the researchers.

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