ASEAN quovadis on climate change issues

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Abstract. Southeast Asia is a region highly vulnerable to climate change based on various indicators, making climate change a crucial issue that must be addressed by ASEAN countries. However, ASEAN faces persistent structural and political challenges in responding to this issue. This study analyzes the barriers that hinder ASEAN's effectiveness in climate change governance. Using a qualitative case study approach with literature review and the conceptual framework of regionalism versus national interest, this research identifies three main challenges. First, anthropogenic practices embedded in daily behavior that accelerate environmental degradation. Second, competition among ASEAN countries to achieve developed nation status often sidelines climate commitments in favor of rapid economic growth. Third, ASEAN's decision-making principles of consultation and consensus limit the organization's ability to adopt binding and transformative climate policies. If ASEAN manages to address these three challenges, it has the potential to become effective in tackling climate change, but failure to do so will intensify climate threats and increase losses for member states. Currently, this study concludes with scepticism or even pessimism toward ASEAN's capacity to resolve climate change due to national interest dominance. The findings contribute to reinforcing urgency and awareness for ASEAN regional authorities to act more decisively.

1 Introduction

The Association of Southeast Asian Nations, more commonly known by its acronym ASEAN, is a regional organisation in Southeast Asia that currently consists of 11 permanent members, namely Indonesia, Malaysia, Singapore, the Philippines, Thailand, Brunei Darussalam, Vietnam, Cambodia, Laos, Myanmar, and Timor Leste. In 2005, ASEAN agreed on a common motto, 'One Vision, One Identity and One Caring and Sharing Community'. This motto aims to remind member states of their shared identity and collective journey, strengthen awareness of ASEAN's future direction, and serve as a reference for discourse that enriches the organisation's intellectual life. It also ensures that implementation remains inclusive and allows citizens to directly experience the relevance and benefits of the ASEAN Community in daily life. It is clear from this motto that ASEAN always emphasises the concepts of unity, togetherness and cooperation.

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These values exist because ASEAN countries share fundamental similarities, particularly in terms of geography and environmental conditions. Such shared environmental characteristics inherently shape a common exposure to climate risks, making climate change not only a regional policy concern but a lived and unavoidable reality for ASEAN societies. Southeast Asia is a maritime region, with ten of the eleven ASEAN countries having coastlines, and Indonesia and the Philippines even ranked among the world's largest archipelagic countries. The waters of Southeast Asia also include strategic sea lanes connecting the Indian Ocean and the Pacific Ocean, and most countries in Southeast Asia play a role as maritime actors serving as flag states, port states, or countries with significant shipping activities [1]. This maritime character directly correlates with climate vulnerability, as rising sea levels, increasing ocean temperatures, and extreme weather patterns threaten coastal settlements, fisheries, and regional environment security.

In addition to their maritime presence, most countries in Southeast Asia also have extensive forests. In 2020, forests in ASEAN member countries covered approximately 193 million hectares, with Indonesia accounting for nearly half of the total, followed by Myanmar, Malaysia, Thailand, and Vietnam. These natural forests can generally be categorised into several main types: wet tropical forests—found mainly in Indonesia, Malaysia and the Philippines; dry tropical forests—which are scattered across Cambodia, Thailand, Laos, Vietnam, and eastern Indonesia; as well as mountain forests, peat swamp forests, mangrove forests, kerangas, and karst, which are important for ecology and play a vital role in supporting global biodiversity and carbon storage [2]. Given this ecological composition, ASEAN's territory functions not only as a centre of biodiversity but also as a critical carbon sink, making deforestation, forest degradation, and land conversion directly tied to regional climate risks.

The majority of ASEAN countries also still consider the agricultural sector to be one of the main pillars of their economies. This economic dependence on agriculture inherently places ASEAN in a position of high climate sensitivity, as agricultural productivity in the region relies heavily on seasonal stability, rainfall patterns, and temperature regulation. Southeast Asia has a number of agricultural areas that are among the most productive in the world, playing an important role in providing nutrition for around 700 million people while also being a source of livelihood for more than 100 million farmers [3]. As climate change accelerates, these agricultural strengths simultaneously become points of vulnerability: extreme droughts, shifting monsoon cycles, declining soil quality, and increased flooding directly threaten food security and rural income structures.

Table 1. Contribution of Agriculture to South East Asia Countries

	Value of Agricultural Production (Billion US$)		As share of GDP (%)		Share of employment in Agriculture, Fishery, and Forestry (%)	
Country	**2021**	**2022**	**2021**	**2022**	**2021**	**2022**
South East Asia	303.01	317.31				
Brunei Darussalam	0.16	0.17	1.3	1.1	1.4	1.5
Cambodia	13.08	14.69	22.8	22.2	49.2	33.1
Indonesia	124.77	138.63	13.3	12.4	28.3	28.6
Lao PDR	4.81	3.59	16.0	17.8	45.4	57.5
Malaysia	28.51	30.99	9.6	8.9	10.3	10.0
Myanmar	N.A.	N.A.	22.7	22.6	48.2	48.9
Philippines	33.62	31.24	10.1	9.5	24.2	23.1

Singapore	0.12	0.15	0.0	0.0	-	-
Thailand	44.50	45.62	8.7	8.8	31.9	30.4
Vietnam	52.78	51.63	12.6	11.9	29.1	27.5

Source: Lucher and Teng, 2025 [3].

Referring to Table 1, it is very apparent to see how nature plays a significant role in the national economy in terms of income and employment for most ASEAN countries. This is also consistent with the fact that most ASEAN countries are still dominated by rural areas. As of 2023, countries such as Cambodia, Myanmar, India, Laos, Vietnam, and the Philippines have more than half of their populations living in rural areas, with Cambodia showing the highest figure at 74.43% of the population [4]. Thus, nature still plays a very significant role in the lives of the majority of ASEAN communities. Therefore, in the context of the global climate crisis, Southeast Asia, especially ASEAN countries, can be categorised as one of the regions most vulnerable to the impacts of climate change. This issue shapes the trajectory of economic development and social well-being, and, if neglected, may even endanger human existence.

As stated in the Asian Development Bank (ADB) review, various climate scenarios at the regional level show that sectors with high sensitivity to climate change will be significantly affected. These include sectors such as water resources, agricultural production, forestry, and coastal and marine resources. The ASEAN region itself is considered one of the most vulnerable to climate change due to its unique economic, demographic, social and geographical characteristics.

Considering the importance of climate change issues in the lives of ASEAN communities, it is only natural that ASEAN should have a clear vision and steps in addressing climate issues, because climate change issues in the region will only be effectively addressed through commitment and cooperation among ASEAN member states. Therefore, responses to climate change must not be confined to a narrow perspective, as every sector holds a distinct responsibility and contribution in mitigating its impacts. However, in practice, there are still challenges that hinder the effectiveness of climate change management in ASEAN. First, the challenges that are the focus of this study are analyzed in three stages, namely at the local, national, and regional levels.

Furthermore, there is a discourse between regionalism and national interests. On the issue of climate change, regional organisations must play an important role in fostering commitment, consensus, solutions and joint action among countries in a region, which means promoting climate change as an important political agenda in the region. However, what if regional policies conflict with the national interests of countries in the region on the issue of climate change, such as countries that are still pursuing economic growth, often neglecting the issue of climate change and maintaining or even continuing to explore fossil fuels for the economic interests of the country? In this case, the regional political agenda will clash with the national interests of the country.

Where is ASEAN headed in terms of climate change? What will be the Quo Vadis of ASEAN in terms of climate change? Thus, ASEAN's role and effectiveness in climate change issues depend on how it responds to the two challenges above.

2 Research Method

This study follows the qualitative case study research design outlined by Creswell & Poth (2016). According to Creswell & Poth [5], the case study approach is used to explore a phenomenon in depth in a real-life context and to explore an issue or problem within specific boundaries (Bounded System), such as individuals, groups, organisations, or programmes, by collecting data from various sources. This research first started with careful observation of a unique and specific case study, namely how the ASEAN organisation deals with the issue of climate change, which also means that this research uses inductive research logic, starting from a specific case. Second, it collected and organised data through literature studies from various sources, including scientific journal articles, reliable news reports, and official documents from ASEAN and ASEAN member countries. After organising the data, the researcher will describe and continue with the analysis using the concepts of regionalism and national interests.

In this case, researchers analysed the discourse between the concepts of regionalism and national interests. Regionalism can be understood as policies, ideas, and practices of institutionalised cooperation between countries (and non-state actors) within a geographically defined region. Some experts, such as Gerry van Klinken [6], explain that we are now entering a period of climate destruction, not just climate change, which means we are already in a crisis situation. For this reason, regionalism in the climate crisis is an important study in this research.

The discourse that will emerge is that regionalism is filled with countries with their own distinctive behaviours, namely policies driven by the national interests of each country. In this case, the realist perspective is appropriate to explain that each country prioritises its own national interests as a benchmark for policy [7]. Consequently, there is potential for tension between national orientations and broader regional agendas, raising questions about the possibility of a clash between ASEAN's regional commitment to climate change and the national interests of ASEAN member states in prioritising economic growth, which often neglects climate change issues.

3 Result and Discussion

3.1. The Challenges from Local Anthropocentrism

In examining the challenges that ASEAN faces in the future in addressing climate change issues, it is important to start by looking at the smallest scale first, namely the local level. As mentioned above, the majority of ASEAN communities still live in direct contact with nature, whether through agriculture, fishing, or other means. Therefore, one of the important points of this issue is that it is the community that will feel the effects or impacts of climate change the most.

With most of the people in the ASEAN region still heavily dependent on ways of life and livelihoods that are close to nature, anthropocentric local dynamics also play a key role in the challenges of addressing climate change issues in ASEAN. In the context of agrarian countries, which include most ASEAN countries, practices such as slash-and-burn deforestation to clear land for agriculture and soil degradation due to intensive use of chemical fertilisers are still common [8]. These practices are driven by economic motives, primarily the conversion of forest land into agricultural land for commodity crops such as oil palm, rubber, or rice, which also furthers the use of chemical fertilisers that have a long-term negative impact on the environment.

In addition to being viewed from an agricultural perspective, most ASEAN countries, which are also maritime nations, present their own challenges. The heavy reliance on the sea and marine resources also has ecological impacts that should not be overlooked. Overfishing and destructive practices such as large-scale fishing using fish bombs pose a real threat not only to fish stocks, but also to coral reefs, mangroves and the marine ecosystem as a whole. Not to mention the problem of plastic waste produced by ASEAN countries, much of which is illegally dumped into the sea, which is also an issue that needs to be addressed urgently [9].

In addition, structural challenges in the transport sector in many member countries further worsen the environmental impact. The issue of proper mass public transport remains a challenge for many ASEAN countries. Therefore, in order to meet their mobility needs, most ASEAN communities have to rely on personal vehicles. This dependence also directly contributes to the large proportion of fossil fuel use, which at the same time drives an increase in greenhouse gas emissions and air pollution. Thus, these issues, which occur at the local or community level, pose a particular challenge to the effectiveness of ASEAN in addressing climate change issues. This challenge stems fundamentally from a failure in the underlying structure, which originates from the national policy choices of each country that still facilitate the exploitation of nature for economic gain.

3.2. The Challenges from National Interests of ASEAN Countries

Moving to the national level, it can currently be seen that the national interests of ASEAN countries are essentially competitive in character. This competitiveness highlights how each ASEAN government prioritises economic growth in its national policies. As a result, other issues such as climate change often fail to take centre stage, but are instead viewed as potential obstacles to economic expansion and ongoing industrial processes. So far, environmental policies in ASEAN tend to be reactive and have not become a foundation for development that is on the same level as economic interests.

In addition, a number of ASEAN governments have shown reluctance to promote a clean energy transition. According to Shi [10], this can be proven by looking at two factors. First, the fact that ASEAN countries, such as Indonesia, actually have the institutional capacity through state-owned utility companies to direct the use of new brick power plants with higher efficiency while pursuing cleaner coal use. However, the fact that this has not happened shows that the government is not willing to do so.

Second, by looking at energy efficiency efforts. Although it is generally agreed that improving energy efficiency is beneficial and feasible, this has not yet been implemented in many countries. Some ASEAN members may also feel too weak to integrate with other countries. This is the case with Cambodia, for example, which may feel vulnerable, given that this could disrupt its national development efforts. This vulnerability also reflects the challenges faced by other countries, particularly less developed countries or countries with different systems of government, such as Myanmar and Vietnam, which may be unwilling to be assimilated into the ASEAN identity. This collective hesitation helps explain why regional energy policy priorities tend to be oriented towards domestic interests. Empirically, it has been proven that the development of biofuels in ASEAN countries is driven by several factors, primarily their concerns about energy security and socio-economic development, rather than climate change mitigation.

This competitive motive is reflected in the 'race for development' that is taking place among ASEAN countries. In practice, this desire for development often comes at the expense of environmental interests. As a result, industrial processes themselves often involve practices that do not take environmental interests into account. These range from the disposal of factory waste into rivers, large-scale land conversion, to the exploitation of natural resources to support industrial needs. These sectors contribute to environmental degradation while strengthening the region's dependence on an exploitation-oriented development model, a pattern that has long been criticised as undermining the effectiveness of climate change policies in the region.

Although commitments to environmental issues have increased, and ASEAN itself has entered a phase of digital transformation through the ASEAN Industry 4.0 agenda, the gap between economic ambitions and environmental commitments remains quite apparent. Several countries have indeed adopted industrialisation strategies that emphasise automation, high technology, and digitalisation; however, the integration of sustainability principles into these agendas remains uneven. Although there are initiatives to promote environmentally friendly technologies, their implementation has not yet reached the sectors that contribute most to environmental damage. Thus, there is a paradox: the region is striving to enter an innovation- and high-tech-based economy, but it still relies on carbon-intensive and ecologically inefficient industrial activities.

3.3. Can ASEAN Offer a Useful Model?

In essence, climate change is a global issue that demands a comprehensive response to human safety. This means that the consequences of climate change are now being felt across all continents, albeit with varying intensity. This universality highlights that no country can isolate itself from the risks of climate change, which is therefore constructed as a global problem whose causes and effects transcend territorial boundaries. The logic of collective responsibility naturally arises from this condition because the benefits of mitigation are non-exclusive and non-rivalrous; each country benefits from the actions of other countries without reducing its own benefits. For example, although greenhouse gas emissions from each country appear small when viewed separately, the accumulation from all countries is significant globally. Furthermore, the costs of addressing climate change far exceed the costs of prevention, reinforcing the case for cooperation to minimise global losses at the lowest collective cost.

However, global cooperation is only significant if it is realised in regional commitments. Recognising this, the UNFCCC (United Nations Framework Convention on Climate Change) as an international framework for addressing climate change emphasises the role of regional organisations in implementing climate goals and encouraging citizen participation. The aim is for regional governance structures to become important intermediaries in translating universal commitments into concrete practices at the local level. In this case, the concept of regional citizenship serves as a normative bridge between global and national responsibilities. Regional citizenship does not seek to replace national citizenship, but rather to complement it by building a sense of belonging, participation and shared responsibility through regional institutions. Through regional mechanisms, both states and individuals can collectively engage in addressing cross-border challenges such as climate change. Regional citizenship allows the values of sustainability, resilience, and inclusivity promoted at the global level to be adapted to the socio-political realities of a region. Thus, it becomes an arena of intermediate governance, where global norms acquire practical meaning, and citizens can see themselves not only as nationals, but also as part of a broader regional community [11]. This multilevel understanding of identity and membership strengthens regional cooperation and legitimises the role of organisations such as ASEAN as mediators in achieving global climate goals. Thus, the response to climate change issues should not be narrow, but multi-sectoral and comprehensive at various levels, including local, national, regional and international.

ASEAN policies must be designed in accordance with the region's vulnerability to climate-related disasters. The region faces increasingly severe risks from sea level rise, extreme weather events and loss of fertile land, with countries such as Myanmar, the Philippines, Thailand and Vietnam among the most affected globally. Despite this high level of vulnerability, ASEAN's collective response has been insufficient to address the region's environmental vulnerabilities. The region's environmental performance lags behind that of other parts of the world, revealing a persistent gap between institutional commitments and actual implementation. This imbalance reflects what is termed the ASEAN climate and energy paradox, whereby the region's policies continue to prioritise fossil fuel expansion, maintain subsidies for non-renewable energy, and set moderate mitigation targets despite facing extreme climate vulnerability [12]. The inconsistency between risk exposure and policy orientation indicates that ASEAN's sustainability framework has not fully integrated the reality of the region's disaster vulnerability, highlighting the need for climate governance that aligns mitigation and adaptation with the region's structural vulnerabilities.

Although ASEAN has the normative potential to act as a regional actor on climate change issues, its institutional structure still limits the realization of this ambition. The organization's long tradition of consensus-based decision-making, while rooted in values of equality and mutual respect, often limits ASEAN's ability to take transformative steps. The decision-making process in ASEAN operates on the principle that all members must agree, so that the results achieved tend to reflect the lowest common denominator rather than collective ambition [13]. This structural feature becomes even more problematic when dealing with complex cross-border challenges such as climate change, where rapid coordination and strong policy commitments are urgently needed. Annual leadership changes also add to the challenge of continuity, as each member state brings different priorities and levels of political will. As a result, ASEAN climate frameworks, including the ASEAN Agreement on Transboundary Haze Pollution and the ASEAN Plan of Action for Energy Cooperation, often function more as declarative instruments than enforceable commitments. These structural weaknesses leave the region vulnerable to increasing climate risks with significant economic consequences. The increase in carbon emissions has significantly suppressed economic growth in ASEAN countries, proving that the costs of environmental neglect are already being felt. A report presented at the United Nations Climate Change Conference of the Parties (COP26) by Nanyang Technological University and the University of Glasgow projects that ASEAN's GDP could decline by more than 35% by 2050 due to the effects of climate change and increasingly intense natural disasters [14]. In addition, the agricultural sector in Southeast Asia is highly vulnerable to climate change, which impacts food security in terms of availability, access, stability, and utilization.

In examining the structural limitations of ASEAN, a comparison with the European Union provides insight into how regional climate governance can be built more effectively. Unlike ASEAN, which relies on a declarative framework and consensus-based decisions, the European Union has institutionalized climate policy through a binding legal framework such as the European Climate Law, which formulates mitigation and adaptation targets into an enforceable regulatory system. The success of this approach is evident in the environmental achievements of European countries such as Sweden, Denmark, and Finland, which consistently rank at the top as the greenest countries in the world [15]. This reality shows that regional success lies in institutional structures that enable consistent policy coordination, enforcement, and implementation. This contrast confirms that ASEAN's challenge is not only a matter of commitment, but also the absence of regulatory mechanisms that enable collectivity to work. If ASEAN wants to position itself as a relevant regional actor on climate issues, the most important lesson from the European Union is the need to shift the regional response from a consensus-based approach to governance that can be implemented, monitored, and enforced regionally.

4 Conclusion

Currently, it is important to maintain a sceptical, even pessimistic, attitude towards ASEAN's ability to address climate change issues. The complexity of this issue stems primarily from the differences in interests between the collective agenda at the regional level and the national interests of each ASEAN member country, which in many cases still prioritise short-term economic growth over commitments to environmental issues. This situation has meant that the various initiatives and frameworks promoted by ASEAN have not been able to produce effective policies or actions. As a result, even though the threats and impacts of climate change are becoming increasingly apparent and severe at the regional level, there has still been no adequate regional response.

Furthermore, ASEAN's efforts on climate change issues are still dominated by a normative approach that emphasises on principles, declarations, and rhetoric of cooperation, without strong implementation instruments to ensure that each member country carries out these commitments. This weakness is evident in the limited concrete efforts to encourage policy change at the local, national, and regional levels in ASEAN. Ultimately, as long as the structure of ASEAN cooperation continues to be based on the principles of non-interference and strict consensus, and the domestic interests of member countries are still considered more important than regional interests, ASEAN's ability to respond effectively to the climate crisis will remain limited.

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