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Indigenous engagement challenges and carbon mitigation activities in Malaysian forest policy

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Malaysia's commitment to achieving net-zero emissions by 2050 hinges on its ability to protect its abundant carbon sinks, notably its natural forests. However, several challenges impede effective forest protection, including the undervaluation of forested land, the absence of regulatory safeguards against land use changes, and the insufficient protection of land rights of indigenous communities. This paper examines these challenges and their implications for Malaysia's net-zero emissions goal. It argues that remedial action is necessary, including the development of carbon credit mechanisms that recognize indigenous communities as integral stakeholders and the implementation of regulatory reforms to address the undervaluation of forested land and to strengthen the protection of land rights of indigenous communities.

KEYWORDS

forest policy, Malaysia, indigenous peoples, climate change, carbon mitigation activities

Introduction

Malaysia has committed to reaching net-zero emissions by 2050 ([Twelfth Malaysia Plan, 2021–2025](#)), and it is well-positioned to achieve this goal due to several natural advantages. One key advantage is the presence of abundant carbon sinks, particularly the natural forests. These forests play a crucial role by sequestering approximately three-quarters of the country's total carbon dioxide emissions. Currently, Malaysia boasts a total forested area of 18.27 million hectares, with 10.92 million hectares designated as Permanent Reserve Forests and 3.31 million hectares as fully protected areas ([Ministry of Environment and Water, 2020](#)). This strategic advantage enhances Malaysia's prospects for attaining net-zero emissions by 2050.

However, various challenges impede effective forest protection in Malaysia. The undervaluation of forested land in economic terms, compared to alternative land use options, stems from the disparity between the actual economic value of these forests and the financial returns they generate ([Ng et al., 2022](#)). Additional concerns include the absence of regulatory safeguards against land use changes and inadequate protection of land rights for indigenous communities ([Diansyah et al., 2021](#)). Acknowledging the importance of incorporating indigenous people in forest management, despite their current lack of formal recognition in Malaysia, is imperative.

This article examines the current state of forest policy in Malaysia, focussing on major obstacles hindering effective forest conservation. It scrutinises issues related to land

undervaluation, the absence of regulatory mechanisms for carbon pricing and credits, and regulatory challenges regarding the protection of indigenous people's land rights. The conclusion emphasises the need for remedial action, including addressing regulatory impediments to forest protection and reinforcing land rights for indigenous communities. Crucially, it underscores the necessity for carbon credit mechanisms that recognise indigenous communities as integral stakeholders in forest carbon mitigation activities.

Literature review

The literature encompasses a range of innovative approaches to address conservation concerns. Joshi advocates for the implementation of adaptable and creative compensation schemes for conservation that can effectively accommodate the unique needs of local and regional contexts (Joshi, 2023). Koh et al. (2023) propose strengthening legislation related to permanent forest designation and land conversion, enlisting civil society's support to enhance knowledge, and promoting carbon credit production as a sustainable alternative land use, all aimed at achieving Malaysia's forest cover goals.

Ng et al. (2022) advocate for comprehensive changes in political leadership and institutional structures to address deforestation and promote sustainable economies. Diansyah et al. (2021) provide valuable insights into the enduring relationship between local communities and their natural environment. Their research suggests that the forest-based lifestyles of these communities can be viewed as small-scale disturbances within the forest ecosystem. Importantly, these disturbances are posited as necessary contributors to the maintenance of ecosystem resilience. This perspective sheds light on the intricate dynamics of human-ecosystem interactions and their role in promoting sustainability (Abas et al., 2022).

These studies collectively provide a comprehensive overview of the key issues, challenges, and potential solutions related to climate change mitigation and protection of forests in Malaysia. Further, a critical issue in forest conservation, as evidenced by several studies including those conducted in Malaysia, concerns to the pivotal role of indigenous people in forest management (Abas et al., 2022). Unfortunately, the formal recognition and exploration of the significance of indigenous involvement remain deficient (Abas et al., 2022). Concurrently, indigenous communities, whose reliance on forests is substantial, face external socio-economic pressures due to their customary exclusion from forest management and carbon activities (Diansyah et al., 2021). This exclusion leads to a dearth of considerations in addressing the multifaceted impacts of socio-economic and ecological changes on Malaysia's forests, particularly affecting indigenous forest-dependent communities (Koh et al., 2023).

Acknowledging and addressing the overlooked role of indigenous communities is imperative for developing holistic strategies that consider the intricate connections between social, economic, and ecological aspects in the context of Malaysia's forests. The subsequent section undertakes an examination of the present status of Malaysian forest policy, providing a foundational context for the subsequent analysis of issues pertaining to

forest conservation, management, and the involvement of indigenous communities.

Current forest policies

Malaysia's regulatory framework spans 13 states and three federal territories across the Malay Peninsula and the Island of Borneo. With over 55% of Malaysia's land area still forested, rural communities residing in and around forests continue to rely significantly on forest resources. The legal landscape governing forests in Malaysia reflects a historical continuum from ancient traditions and colonial edicts to modern statutes grounded in parliamentary democracy (Koh et al., 2023). There have been a number of recent developments which can be seen as progressive reforms of the forest regulatory framework in Malaysia.

The Malaysian Forestry Policy explicitly recognises the vital role of forests in climate change mitigation, particularly their function as carbon sinks (Ministry of Energy and Natural Resources, 2022). Several policy instruments, such as the REDD + financing scheme and Ecological Fiscal Transfers for Biodiversity Conservation (EFT), are being developed to enhance the forestry sector's contribution to climate action (Sankar and Chuan, 2021; Lim, 2022). EFT involves the transfer of public revenue between different levels of government, such as from the federal to state level, depending on the size of the territory and various environmental indicators and were introduced to encourage the protection of forests and other Protected Areas (PA) by state governments.

There were also developments of carbon credit projects in Malaysia but they have encountered challenges including the substantial reliance of states on natural resources and land for a significant portion of their revenues (World Bank Bank Negara and Malaysia, 2022). A persistent issue within the forestry sector is the absence of an equitable revenue-sharing mechanism between federal and state governments, posing a challenge to incentivise states for the conservation and rehabilitation of their forests (Koh et al., 2023). Existing mechanisms, such as Payments for Ecosystem Services (PES) and Ecological Fiscal Transfers (EFTs), as indicated by several studies, have proven inadequate in replacing income generated from exploitative activities like logging, land sales, mining, or rent-seeking practices such as plantations, notably palm oil (World Bank Bank Negara and Malaysia, 2022; Joshi, 2023).

Concurrently, several state governments in Malaysia are implementing measures to reinforce conservation and carbon initiatives. The state of Sarawak also recently enacted legislation to drive forest carbon activities, focussing on projects aimed at diminishing greenhouse gas emissions by preserving or restoring forests (The Sarawak Government Gazette, 2022). These activities can generate carbon credits that are tradable units representing the removal of carbon dioxide from the atmosphere. The Sarawak government declared that it is committed to developing a sustainable forest sector that benefits both the environment and the people of Sarawak (Sarawak Government, 2020).

In a broader context, the occurrence of carbon credit projects in Malaysia is notably limited; however, there exists considerable potential for the advancement of more efficient carbon mitigation

and sequestration practices within the country (Malaysian Investment Development Authority, 2023). The Sarawak carbon activities initiative, in particular, holds promise as an exemplary case study that could serve as an instructive model for other Malaysian states to gather insights from and potentially incorporate into their future endeavours.

Indigenous peoples and forest

Malaysia's National Determined Contributions (NDC) prioritise the preservation of forest cover with an emphasis on sustainable forest management (Ministry of Energy, Science, Technology, and Environment and Climate Change, 2018). Indeed, the Malaysian forest holds immense significance both at the national and global levels. The Malaysian population includes various groups whose livelihoods rely on the forest (Ng et al., 2022). Among these forest-dependent communities, indigenous people (Orang Asal) represent a particularly prominent group (Protection of New Plant Varieties Act, 2004). However, it is remarkable that the existing national definition of sustainable forest management falls short in adequately acknowledging the land rights of the Orang Asal communities (Guillao et al., 2022). The Malaysian NDC document highlights its collaborative development process involving multiple stakeholders reflecting a participatory approach (Ministry of Energy, Science, Technology, and Environment and Climate Change, 2018). While local communities and indigenous people were engaged in this process, the NDC fails to explicitly underscore the crucial role of Orang Asal in climate change mitigation and natural resource management (Ministry of Energy, Science, Technology, and Environment and Climate Change, 2018).

Malaysian law encompasses various provisions safeguarding the customary rights of forest-dependent communities. These provisions can be found in the Federal Constitution and numerous federal and state laws, which offer distinct definitions of customary rights in the Malaysian context. Nevertheless, in practice, disputes often arise concerning the precise boundaries of native customary land (Lim, 2011). One particularly contentious issue is the acknowledgment of rights concerning communal forests (National Human Rights Commission of Malaysia [SUHAKAM], 2023). The National Inquiry into the Land Rights of Indigenous Peoples published by the Human Rights Commission of Malaysia (SUHAKAM) in 2013 stated, the violations of the indigenous customary land rights in the country is a systemic issue and the lack of their tenure security must be addressed (National Human Rights Commission of Malaysia [SUHAKAM], 2023).

State governments have actively countered native attempts to assert property rights over the often expansive areas of higher forest surrounding their villages (National Human Rights Commission of Malaysia [SUHAKAM], 2023). This conflict has intensified due to the expansion of logging, plantation activities, and dam construction in these regions (National Human Rights Commission of Malaysia [SUHAKAM], 2023). However, some state governments, particularly in Sabah and Sarawak, have begun to recognise native customary rights, but the recognition of native land rights remains limited (Chua, 2020). A notable development is the recognition by the judiciary of property rights established under

customary law (Chua, 2020). This recognition has been reinforced through several landmark legal cases, which have progressively enhanced the security of native land, particularly forest land (Chua, 2020). However, forest-dependent communities still encounter obstacles in asserting and defending their rights (Bayrak and Marafa, 2016).

It can be argued that the indigenous populations of Sarawak lack legitimate claims to their territorial domain and communal forest reserves. This assertion finds precedent in the pivotal TR Sandah case (TR Sandah ak Tabau v Director of Forest and Sarawak, 2019) in which a legal determination was made that went against the native claimants. The case centred on the legal principles governing the enforceability of Iban land customs within the State of Sarawak. Recent legal developments, exemplified by the TR Ramba Bungkong v Asco Green Sdn Bhd case, serve to reinforce this perspective. In this case, it was decided that the Iban community's assertion of a 3,500-hectare land claim lacked legal validity, as it did not possess the "force of law" (Borneo Post, 2021). Some commentators express concern over this development, contending that it implies a governmental ability to acquire NCR land by simply issuing a lease, even a provisional lease, resulting in the extinguishment of indigenous land rights (Borneo Post, 2021).

Claimants asserting traditional indigenous rights in Sarawak and facing similar challenges may therefore apply to the Federal Court to retest the legal viability of indigenous territorial domain and community primary forests. Alternatively, indigenous communities have the option to pursue statutory acknowledgment of their respective territories or customary equivalents under the 2018 amendment to the Sarawak Land Code (1958), which provides recognition and safeguarding of these rights through the issuance of a native communal title. Nonetheless, it is noteworthy that any such claim is subject to an upper statutory limit of 1,000 hectares, as stipulated in section 6A (2) of the Sarawak Land Code. This limitation may be notably less than the historically occupied, inhabited, used, or enjoyed area by the indigenous community. The predominant conservative assessment expressed in the rulings of these key cases suggests that the resolution of this issue presently appears to be beyond the purview of the judiciary. Instead, it is deemed to fall within the domain of the federal parliament.

Despite official claims that Malaysia has made commendable progress toward achieving the Sustainable Development Goals (SDGs), a closer examination reveals disparities when disaggregating data (Malaysian Insight, 2021). While the national poverty rate stood at 5.6% in 2019 (Department of Statistics Malaysia, 2020), the Orang Asli community experienced an alarming poverty rate of 89.4% (IWGIA, 2022). This stark contrast underscores the systemic marginalisation of Malaysia's Orang Asli (IWGIA, 2022). The complex demographic and political landscape of Malaysia adds a layer of challenge to the prospective reform of laws pertaining to forest-dependent communities (Lim, 2011). Consequently, Malaysia serves as an illustrative case highlighting the inadequacies in both the formulation and execution of forest regulations, ultimately falling short in protection the livelihoods and rights of indigenous populations.

Notwithstanding the Orang Asli residing in forest ecosystems for generations, they continue as one of the economically marginalised groups in the country. Numerous studies underscore the insightful forest-related knowledge held by indigenous populations and their sustained reliance on forest resources

(Kardooni et al., 2014; Keat et al., 2018). Consequently, there is a growing call for the integration of the Orang Asli as essential stakeholders in forest conservation and management initiatives (Kamal and Lim, 2019).

Carbon activities and indigenous peoples

The global significance of indigenous territories, comprising a minimum of 36% of the world's intact forests and recognised for their contribution to nature conservation, contrasts with the persistent challenges faced by indigenous peoples in Malaysia in asserting their rights to ancestral lands (Abraham and Ng, 2021). Additionally, their pivotal role in forest conservation and management is consistently undervalued (Fa et al., 2020). Extensive literature affirms that community forest management represents a mutually beneficial solution for achieving both environmental and societal objectives (Mohd et al., 2021).

Hence, comprehensive participation of all landholders in forest carbon initiatives emerges as a viable strategy for sustaining forests. Malaysia necessitates legislative refinement concerning permanent forests and their conversion to alternative lands, underscoring a specific focus on promoting carbon credit production, thereby requiring the engagement of all landholders (Diansyah et al., 2022). These measures align with Malaysia's aspirations to preserve and safeguard forest cover. Fundamentally, the conservation of a forest depends on its perceived combined value to its owner exceeding the value of deforested land (Koh et al., 2023). An important issue that requires attention is the lack of regulatory barriers to land use change in Malaysian states (Choy, 2014). When assessing a land use change, profit-driven landowners are primarily motivated by the potential return generated by different land use options. If the present value of agricultural land surpasses that of forest land, these landowners are financially incentivised to convert forested areas into cropland (Razali et al., 2018). Therefore, one of the major current problems is the inadequate reflection of the overall economic value of forest land in the financial income of the landowner. This is primarily due to the market's failure to fully account for the positive externalities associated with forest land (Razali et al., 2018). Enhancing the value of standing forests can be achieved through payment for ecosystem services and carbon credit production.

As previously indicated, in May 2022, the Sarawak government implemented policy instruments aimed at facilitating the generation of carbon credits or offsets through forest carbon sequestration (Ling, 2022). The government asserts that active involvement in forest carbon activities and the creation of carbon credits require the establishment of supportive services, including project developers and auditors, thereby enhancing accessibility to forest carbon credit production for all stakeholders, including owners of ancestral forested land. In alignment with this initiative and in an endeavour to attract major corporations, Sarawak representatives held discussions with top officials from Shell in London (Malaymail, 2023).

However, this focus on large-scale businesses raises concerns about neglecting the indigenous communities residing on the land designated for potential participation in carbon activities.

Notably, the legislation pertaining to forest carbon activities appears tailored to accommodate professional carbon trading

entities and intermediaries, rather than being explicitly inclusive of local indigenous communities (The Sarawak Government Gazette, 2022). The language employed in the legislation, coupled with pronouncements from Sarawak government officials, strongly suggests a likelihood that only sophisticated corporations would meet the criteria for obtaining licences to engage in carbon activities (The Sarawak Government Gazette, 2022).

This scenario gives rise to the argument that indigenous communities, for whom participation in forest carbon activities could serve as a promising mechanism for the conservation of their forested land and subsequent enhancement of their livelihoods, may find themselves excluded due to the intricate structures inherent in the forest activities framework and attitude of the Sarawak government. Such exclusion of indigenous communities would perpetuate the ongoing trend observed in Malaysian states of marginalising these communities and impeding their capacity to ameliorate their social and economic circumstances.

Nonetheless, instances of effective involvement of indigenous communities in analogous carbon mechanisms are evident in neighbouring countries. For example, the Australian government implemented the Carbon Farming Initiative as a system addressing emissions from the agricultural and land sectors. Enacted through the Carbon Credits (Carbon Farming Initiative) Act 2011, this initiative is conceived as a carbon offsets programme with the primary objective of generating economic benefits for farmers, forest growers, and landholders (Australian Government, 2023). The Carbon Farming Initiative, implemented alongside carbon pricing, continued to operate following the repeal of carbon pricing in 2014 (Guglyuvatyy and Stoianoff, 2016). Farmers and landholders (including indigenous Australians) have the opportunity to produce credits, which can be subsequently traded to businesses seeking to offset their carbon emissions. Specifically, the initiative allows landholders to accrue credits through activities such as reforestation and revegetation, savannah fire management, native forest protection, forest management, and other related projects.

Presently, approximately 700 carbon farming projects are in progress across Australia, collectively contributing to a reduction of approximately 60 million tonnes of CO₂ (ASPI, 2021). Indigenous people in Australia are actively involved in carbon farming, with the indigenous carbon industry valued at \$53 million per year (Indigenous Land and Sea Corporation, 2022). Currently, there exist 39 indigenous-owned and operated carbon projects distributed across Australia, collectively spanning 18 million hectares of land (Indigenous Land and Sea Corporation, 2022). These initiatives play a crucial role in abating 1.2 million tonnes of carbon emissions annually, constituting about 7% of Australia's aggregate carbon credit units (Indigenous Land and Sea Corporation, 2022). The engagement of indigenous organisations in the carbon industry has been reported to enhance their capacity for caring for country, preserving culture, and fostering community development (Indigenous Land and Sea Corporation, 2022).

Policy recommendations

Paradoxically, despite their cultural and material proximity to forests, the indigenous people of Malaysia often find themselves

disregarded in practical forest management. Prevailing trends in forest management and development initiatives tend to neglect, and in certain instances, displace Orang Asli communities, rather than addressing the specific requirements of forest-dependent communities and recognising the multifaceted value of forests beyond economic considerations (Diansyah et al., 2022). In order to foster improved forest conservation and management characterised by enhanced equity and inclusivity, it is imperative to integrate indigenous communities into both existing and prospective carbon mitigation mechanisms.

The incompatibilities in the approaches to forest policy among Malaysian states, coupled with insufficient support from the federal government, have resulted in discernible challenges in forest protection. Moreover, there exists a substantial issue concerning the neglect of indigenous people's land rights, perpetuating a tradition of exclusion and marginalisation from forest carbon activities, consequently exacerbating poverty within this demographic. These issues, overlooked by both state and federal authorities, represent a series of obstacles that must be surmounted for the progression of sustainable development.

Essential measures for both federal and state governments encompass the parliamentary recognition of the unrestricted land rights of indigenous people, eliminating the constraints imposed by the current upper statutory limit in the Sarawak Land Code (1958). Moreover, regulatory acknowledgment and the integration of indigenous communities within the established framework governing Sarawak's forest carbon activities are essential components of these measures.

The inclusion of the Orang Asli community within the legislative framework governing current forest activities in Sarawak is imperative. This measure would afford the Orang Asli the opportunity to generate carbon credits, subsequently facilitating their trade with businesses aiming to offset their carbon emissions. Drawing from the Australian example, a model similar to the establishment of the Indigenous Land and Sea Corporation could be adopted. This corporation would serve as a representative entity for smaller Orang Asli communities, providing them a platform for engagement in carbon-related activities. Consequently, the Orang Asli would be empowered to accumulate credits through activities such as native forest protection, forest management, and other pertinent projects. Such an approach aligns with the broader objective of integrating indigenous communities into sustainable environmental practices.

Additionally, the introduction of a carbon credit mechanism akin to the Sarawak scheme at the federal level is recommended, alongside the ideal incorporation of a carbon pricing system in Malaysia, whether in the form of a carbon tax or carbon trading. This would incentivise businesses to procure carbon credits generated through forest carbon activities, thereby supporting indigenous communities and advancing forest protection. This strategy is considered essential for navigating the inherent complexities associated with social-ecological transformations within the context of Malaysia's forests, thereby driving Malaysia toward sustainable development goal and the realisation of its net-zero emissions target by 2050.

Conclusion

The current forest policies in Malaysia, while recognising the importance of forests in climate change mitigation, face challenges such as the lack of regulatory barriers to land use change and the insufficient reflection of the economic value of forest land. The emergence of carbon credit projects, particularly in Sarawak, is a promising initiative. However, concerns arise regarding the potential exclusion of indigenous communities from these projects, emphasising the need for a more inclusive approach. The legislative framework for forest carbon activities appears tailored to accommodate large corporations, potentially sidelining indigenous participation. The integration of indigenous communities into forest conservation and carbon initiatives is deemed crucial for achieving both environmental and societal objectives.

Specific essential measures for governments include the parliamentary recognition of unrestricted land rights for indigenous people, regulatory acknowledgment, and integration within existing frameworks. Additionally, it is imperative to introduce a federal-level carbon credit mechanism and carbon pricing system to incentivise businesses and support indigenous communities. In essence, the outlined challenges underscore the imperative for a more holistic, inclusive, and consistent approach to forest policy in Malaysia. Addressing the complex interplay between economic, social, and ecological factors, and recognising the pivotal role of indigenous communities, is essential for steering Malaysia toward sustainable development and meeting its ambitious net-zero emissions target by 2050.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

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