

Framework of Sarawak's Carbon Governance under the Environment (Reduction of Greenhouse Gases Emission) Ordinance 2023

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ABSTRACT

Sarawak is the first state in Malaysia having law to lower greenhouse gas (GHG) emissions which is the Environment (Reduction of Greenhouse Gases Emission) Ordinance 2023. This shows a big change in how climate is governed by the level of subnational jurisdiction which is setting up a legally binding system that consists of carbon market mechanisms, regulatory control, and economic tools.

This paper examines the principles characteristic and structure of Sarawak's carbon governance frameworks as set out in the Ordinance. This paper discusses by applying a conceptual and doctrinal framework regarding the regulation of GHG emissions through mandatory registration and emissions reporting, the development of emission thresholds, and the application of compliance measures which consist of carbon capture and storage, carbon levies, abatement obligations. This also consists of the processes for issuing and verifying credits, activities that can earn credits, the duties of the Carbon Credit Units Register, and safeguards against double counting.

This paper also examines to keep strong regulatory oversight, the Ordinance can make it straightforward for people to be involved voluntarily in carbon markets. Sarawak used an integrated model as an approach to carbon governance that includes its constitutional power over, natural resources, land, forest by using both market-based mechanisms and command and control regulation.

This paper proposes that Ordinance represent an important development in environmental and climate law in Malaysia by providing a legal and institutional framework that can give impact to future carbon governance structures at state level and federal level.

Keywords: Carbon Governance, Greenhouse Gas Regulation, Sarawak Ordinance 2023.

INTRODUCTION

The governance of climate change is now practicing the legally binding regulatory frameworks which include the regulation of carbon dioxide and other greenhouse gases (GHGs). The gases are currently viewed as reportable, measurable, and legally controlled regulatory objects rather than solely as environmental harms. The modern climate governance relies on traditional environmental regulation and economic tools such as emission trading system, carbon credits, and carbon pricing (Newell et al., 2014; Stern, 2007).

According to the United Nations Framework Convention on Climate Change [UNFCCC] (2015), the international level, Paris Agreement provides a framework that motivates countries to implement initiatives locally to reduce GHG emissions in accordance with their own national goals. Setzer and Higham (2021) stated that commonly, climate obligations are dealt with at the national level, however local governments have become increasingly significant as regulatory bodies, particularly in regions where the constitution allows local governments power to manage natural resources and environmental. Karisma (2025) highlighted the necessity for improved legal resilience within Malaysia's climate framework, by stating that comprehensive climate legislation and enforceable goals are vital for incorporating adaptation and mitigation initiatives into national governance and legal systems.

However, Sarawak has taken a different way by having the Environment (Reduction of Greenhouse Gases Emission) Ordinance 2023 (Sarawak's Ordinance 2023) which is a legally binding system for managing carbon credits, GHG emissions, and other carbon related economic tools. The Sarawak Ordinance 2023 mentions that the power to regulate this law was based on Sarawak's constitutional power over water, forest, land and environmental issues as residual subjects and it is a way to align with Sarawak's objective to achieve net-zero carbon emissions by 2050 (Sarawak Government, 2023).

The Ordinance 2023 covers good scope of a carbon governance framework which consists of state established emissions reporting, compulsory emissions reporting, the issuance of carbon credit, obligations for carbon capture and storage, the implementation of carbon tax and carbon trading (Sarawak Government, 2023). According to Averchenkova, Frankhauser, and Finnegan (2021) mentioned that the mixed approach is part of a bigger pattern around the world to combine market-based tools and command and control regulation to achieve goals of emissions reduction.

This paper conducts a doctrinal and conceptual analysis of Sarawak's carbon governance framework as referred to the Environment (Reduction of Greenhouse Gases Emission) Ordinance 2023. Next, it examines the regulatory mechanism, scope and structure of the Sarawak's Ordinance 2023 by focusing on carbon trading, carbon credit framework, the use of carbon levies, and regulation of GHG emissions. This paper also highlights Sarawak's Ordinance 2023 importance within the broader development of climate and environmental law in Malaysia.

Legal and Constitutional Basis of the Environment (Reduction of Greenhouse Gases Emission) Ordinance 2023

Constitutional Basis for Sarawak's Legislative Competence over Carbon Governance

The reason why Sarawak can pass the Ordinance 2023 is because the Federal Constitution provides the separation of legislative power between Federation and States. In Malaysia, federal system allows states to exercise autonomous legislative power for topics expressly delegated to them and residual matters not in the Federal List or Concurrent List (Federal Constitution).

Even though the Federal List does not specifically mention environmental protection, the Federal Government has legislative authority over industry, international agreements, trade and external affairs which environmental governance in practice operates by way of integration of federal legislation and state-level regulatory control, particularly when environmental issues affect natural resources and land (Harding, 2012). Therefore, this constitutional system permits local environmental regulation under state authority.

Environmental issues may be viewed as state residual power where it is not explicitly designated to the Federal or Concurrent Lists. States retain residual legislative power unless federal law displaces it which was already accepted by Judicial and academic criticism (Harding, 2012; Shad Saleem Faruqi, 2018). The Ordinance 2023 mentions the jurisdiction of Sarawak is over waterways, land, forests, and environmental matters inside the borders. Hence, the Ordinance 2023 does not breach federal legislative supremacy because there is no federal law mentioning carbon credit, carbon trading and carbon emissions (Karisma, 2025).

The Ordinance 2023 carefully exercises constitutional autonomy and regulates Sarawak's carbon credits, greenhouse gas emissions, and carbon levies which only applies to Sarawak's territory and entities (Sarawak Government, 2023). However, the Ordinance 2023 address a larger structural flaw in climate governance system in Malaysia. According to Karisma (2025), Malaysia's climate response has become dispersed and relies on non-binding policy frameworks due to the lack of a national Climate Change Act. At state level, the Ordinance 2023 legalises climate commitments and makes mitigation objectives enforceable.

From a doctrinal perspective, the Ordinance 2023 shows how the state governments can promote climate governance in federal systems with separate legislative authority. The comparisons show that legally required state climate frameworks can improve institutional accountability, policy continuity, and regulatory ability, particularly when national legislation is delayed or insufficient (Karisma, 2025).

In summary, the Ordinance 2023 is constitutionally based on Sarawak's legislative competence over water, land and forests which fall under Malaysia's residual environmental regulations when the absence of conflicting carbon market federal carbon emissions laws. Sarawak's Ordinance 2023 emphasises state authority and position of Sarawak as a state government leader in Malaysia related to climate and carbon law.

Analytical lens of Federalism, inconsistency, and future federal override risk.

This study uses a doctrinal and conceptual framework to describe Sarawak's carbon governance architecture and assess its constitutionality under federal system of Malaysia. Article 74 and the Ninth Schedule of the Federal Constitution divide legislative power between the Federation and the States, and federal law prevails when validly enacted and inconsistent with State law. Climate governance and carbon markets are overlapping regulatory fields that can be framed through multiple constitutional heads of power (such as trade and commerce, taxation, external affairs, and natural resources governance), increasing the likelihood of overlap and conflict rather than neat compartmentalisation.

This research applies three doctrinal conflict tests to Sarawak's Carbon Credit Units regime to operationalize this approach. First, it uses the division of powers inquiry to determine if a prospective federal statute's subject matter falls under federal, state, or overlapping Ninth Schedule jurisdiction. Second, it examines whether the federal scheme where if the constitutional would render any aspect of Ordinance 2023 inoperative under Article 75. Third, it recognizes Sarawak-state safeguards, including Article 161E and the Malaysia Agreement and IGC constitutional settlement, which shape the legal and political legitimacy of centralizing reforms affecting Sarawak's special interests.

Malaysia has publicly stated that a National Climate Change Bill will provide a legal framework for climate action and market-based financing mechanisms, and fiscal announcements anticipate a carbon tax aligned with that framework (National Disaster Management Agency [NADMA], 2025). Thus, the major concern is whether and how Sarawak's Carbon Credit Units design can remain legally coherent, administratively practical, and market credible if a later federal statute establishes a nationwide carbon market architecture.

Overview of the Environment (Reduction of Greenhouse Gases Emission) Ordinance 2023

The Ordinance 2023 provides a comprehensive carbon governance framework which intended to regulate greenhouse gas emissions from State economic cooperation alongside promoting carbon credit issuance, emissions reduction, carbon market and participation and carbon capture and storage, by using a combination of regulatory architecture with market-based procedures and mandated regulations (Sarawak Government, 2023).

Scope and Application of the Ordinance

Ordinance 2023 contains both voluntary and actions compulsory pertaining to Sarawak's greenhouse gas emissions. As referred to Section 3 of the Ordinance 2023 which covers the issue and administration of carbon credit units, carbon capture and storage projects, scheduled economic sectors, voluntary reduction or abatement actions, and energy transition strategies. Significantly, the Ordinance 2023's balancing regulatory role within the larger environmental governance framework is reinforced by the fact that compliance with it does not release any individual or organisation from duties imposed under other environmental or climate-related legislation already in effect in Sarawak (Sarawak Government, 2023).

In addition, Ordinance 2023 specifically mentions that it must be read alongside the subsidiary laws which is the Land (Carbon Storage) Rules 2022 and the Forests (Forest Carbon activity) Rules 2022. To prevent regulatory fragmentation, this statutory connection provides consistency between the larger carbon governance framework, forest-based carbon activities and carbon storage.

Scheduled Economic Sectors

The key component of Sarawak's carbon governance structure is the identification of scheduled economic sectors subject to compulsory regulation. First Schedule of the Ordinance 2023 covers oil and gas and energy sectors consisting of petroleum exploration, production, processing, electricity generation, and transmission.

Next, it also allows the Sarawak State Government to broaden regulated sectors by Gazette announcement and also adapting the regulatory framework to economic and environmental changes (Sarawak Government, 2023).

Ordinance 2023 focuses on high-emission activities while allowing for future additional sectors by using a sector-based regulatory approach. This concept integrates environmental objectives with economic realisms via progressive regulation.

Institutional and Administrative Structure

A multi-tiered institutional framework controls and implements the Ordinance 2023, where the Minister in charge of environmental sustainability sets strategies and policies on carbon credit issuance, emission reduction, energy transition, and decarbonisation which subjected to Majlis Mesyuarat Kerajaan Negeri's approval (Sarawak Government, 2023). The Controller and Natural Resources and Environment Board are in charge of receiving and evaluating carbon emission reports, looking into violations, registering the regulated enterprises, and enforcing emission thresholds. The office of the Registrar for Carbon Credit Units was created under the Ordinance 2023 which in charge of liaising with Carbon Standard Administrators and international carbon registries, guaranteeing transparency, avoiding double counting, and keeping the Carbon Credit Units Register up to date.

Hybrid Regulatory Design

Ordinance 2023 combines market-based and command and control mechanisms, where the regulatory structure depends on enforcement, emissions reporting, mandatory registration, and state-determined emissions thresholds. Other than that, the Ordinance 2023 also permits voluntary carbon market, Carbon Credit Units, voluntary emissions reduction, carbon capture and storage, and a carbon fee as an alternative compliance measure (Sarawak Government, 2023).

This holistic structure allows regulated businesses to offset regulatory responsibilities with Carbon Credit Units, reduce emissions, pay a carbon levy, or trap and store carbon. In addition, by combining market mechanisms and regulatory control into a one statutory framework and the Ordinance 2023 encourage regulatory stability while permitting compliance strategies flexibility, reflecting a pragmatic approach to state greenhouse gas regulation as refer to Part II until V in the Ordinance 2023 (Sarawak Government, 2023).

Regulation of Greenhouse Gass (GHG) Emissions

Ordinance 2023 directly regulates Sarawak's commercial greenhouse gas emission by referring to Part II of the Ordinance 2023 which consists of registration, emissions reporting, emission levels and enforcement compliance. This structure permits regulated businesses to comply with the regulatory requirements through flexible compliance choice and command and control mechanisms (Sarawak Government, 2023).

Registration and Emission Reporting

All people and business engaged in scheduled economic sectors are required under Ordinance 2023 to be registered. Failure to register within the stipulated period is considered as criminal offence under Section 5 of the Ordinance 2023 (Sarawak Government, 2023). Therefore, Sarawak's emissions regulatory system started with registration and permits systematic supervision. Next, Section 6 of the Ordinance 2023 requires business entities to submit Carbon Emission Reports which include quantification of greenhouse gas emissions in the same form as carbon dioxide terms and follow internationally acknowledged accounting and reporting standards such as the Greenhouse Gas Protocol and other approved methods by Controller. Other than that, the Controller can request authorised external auditors to verify reporting obligations, in order to establish a measurement, reporting, and verification mechanism to support emission regulatory integrity (Sarawak Government, 2023).

Emission thresholds and Compliance Mechanism

Ordinance 2023 controls emissions through carbon emission thresholds. Section 8 provides that where a

registered business entity's carbon emission report shows its emission level has exceeded the carbon emission threshold determined by the Majlis Mesyuarat Kerajaan Negeri (by notification in the Gazette), the Controller may direct the entity to submit a plan which verified by an accredited external auditor for reduction or abatement of carbon emission to the threshold within a specified period. If the plan is approved but, when implemented, fails to reduce the GHG emission level to the threshold, the entity shall be required to capture and store the greenhouse gases in accordance with this Ordinance or other written law on GHG capture and storage. Where the entity is unable or unwilling to reduce its GHG emission level to the threshold, it becomes liable to payment of a carbon levy under section 24 (Part IV). (Sarawak Government, 2023).

Voluntary Reduction and Carbon Capture

Voluntary emissions reduction is permitted under Ordinance 2023. Section 9 provides that a facility not listed in the scheduled economic sectors may take measures to mitigate, reduce, abate, or capture and store greenhouse gases to reduce carbon emission for the purpose of applying for issuance of Carbon Credit Units under Part III. Such voluntary efforts are still subject to prior notification (in the prescribed form), reporting, and verification requirements to ensure regulatory oversight despite voluntary participation. (Sarawak Government, 2023).

Control of Flaring and Venting

Section 10 of the Ordinance 2023 limits flaring and venting of petroleum or greenhouse gases without Controller approval which targets high emissions behaviours and this clause concerns oil and gas. Ordinance 2023's emissions control requirements are significant, where the Controller can issue stop order, enforce, and sue for non-compliance. In short, Part II of the Ordinance 2023 establishes a legally binding emissions regulating framework with enforceable thresholds, mandatory reporting, targeted controls, and graduated compliance (Sarawak Government, 2023). This legislative framework supports Sarawak's carbon governance regime and the carbon levy systems, carbon trading, and carbon credit.

Carbon Credit Framework under the Environment (Reduction of Greenhouse Gases Emission) Ordinance 2023

Ordinance 2023 also governs Carbon Credit Unit formation, issuance, administration, and trade under Part III of the Ordinance 2023 which indicates certified emissions reductions tradable units, incorporating market-based processes into Sarawak's carbon governance scheme (Sarawak Government, 2023).

Eligible Activities for Carbon Credit Units

Ordinance 2023 sets out the eligible activities or projects for Carbon Credit Units in section 11. The approved categories include carbon capture and use of captured CO₂, permanent storage of CO₂ at approved storage sites, direct capture or removal of CO₂ from the atmosphere, forest carbon activities under the Forests (Forest Carbon Activity) Rules 2022, and projects reducing energy consumption or using low carbon solutions (including solar or wind energy and measures to improve energy performance ratings). These activities and projects must also comply with applicable Carbon Standard Rules and have their carbon reduction/emissions levels verified under Voluntary Carbon Markets standards or by another Carbon Standard Administrator. (Sarawak Government, 2023).

Issue, Validation, Verification

Ordinance 2023 requires strict assessment and certification of Carbon Credit Units, where the application of the carbon credit must be submitted to a Carbon Standard Administrator appointed by State. The domestic or international administrators certify emissions reduction are under voluntary or compliant carbon standards. According to Carbon Standard Rules, emissions reductions or removals can be only given by the Carbon Credit Units once they are validated. Units are provided based on proven emissions reductions in tonnes of carbon dioxide equivalent (Sarawak Government, 2023). The project proponent covers all validation and verification costs, ensuring the carbon credit system's integrity and prohibiting speculative credits.

Carbon Credit Units Register and Administration

Ordinance 2023 creates a Carbon Credit Units Register as mentioned in Part V which is Registrar to prevent double counting and maintain transparency such as tracks all Sarawak Carbon Credit Units issued, owned, transferred, cancelled, and retired. The Registrar also engages with other carbon registers and Carbon Standard Administrators to guarantee local and international market consistency. Other than that, Ordinance 2023 also allows Carbon Credit Units to be retired permanently for offsetting emissions or paying carbon levy obligations where the retired units cannot be reused or transferred, protecting the carbon accounting system's credibility (Sarawak Government, 2023).

Trading and Regulatory Oversight

Under Ordinance 2023, Carbon Credit Units can be traded in voluntary carbon market or emission trading programs which approved by Registrar. Next, Ordinance 2023 also permits market participation but keeps states in charge. However, the State Government may levy Carbon Credit Unit transactions and ban some trading activities which include external credit trading, as needed. In addition, the Registrar must receive all Carbon Credit Unit transactions to ensure oversight by regulatory (Sarawak Government, 2023). Sarawak integrates economic incentives within a controlled legal framework, resulting in market access and statutory control.

Therefore, Ordinance 2023's carbon credit framework recognizes and monetises emissions reductions in an organised, transparent, and legally enforced manner. Sarawak's integrated carbon governance model which involved statute-based validation, registration, and trading processes for a carbon credit regime that balances market participation and regulatory integrity.

Global tradability and Interoperability of Sarawak Carbon Credit Units (CCUs)

The ordinance 2023 makes CCUs marketable instruments in Sarawak's governance architecture, but global tradability depends on whether they are recognized in certain carbon market infrastructures. In practice, carbon markets are divided into voluntary carbon markets (VCMs), where acceptance is mediated by private standards, registries, and integrity benchmarks, and compliance markets, where public regulators determine eligibility and limit instruments and protocols (European Commission, n.d.; California Air Resources Board, n.d.).

As quasi-gate keepers for corporate procurement and financial participation, integrity criteria increasingly determine international demand from a VCM standpoint. In its Core Carbon Principles (CCPs), the integrity Council for the Voluntary Carbon Market (ICVCM) sets baseline expectations for additionality, quantification, permanence, governance, transparency, and safeguards, which increasingly influence which credits buyers accept. On the demand side, the Voluntary Carbon Markets Integrity Initiative (VCMI) Claims Code of Practice clarifies how credits can be used in corporate climate claims, affecting credit purchasers' reputational risk and disclosure credibility (Voluntary Carbon Markets Integrity Initiative [VCMI], 2023). Sarawak CCUs' global marketability will be increased by functional alignment with integrity and claims designs that affect VCM buyer behaviour, which is not just domestic recognition (Integrity Council for the Voluntary Carbon Market [ICVCM], n.d.; VCMI, 2023).

Compliance- market eligibility is different from VCM interoperability. Statute, regulation, and registry regulations establish the "unit" accepted for compliance in closed or semi-closed compliance systems. The EU ETS reduces the significance of overseas credits as compliance instruments and focuses on EU permits in the Union Registry architecture (European Commission, n.d.). California's cap-and-trade system allows offsets within quantitative limits and under programme-specific eligibility, verification, and issuance rules, showing that offsets are jurisdiction-specific compliance tools rather than globally fungible instruments (California Air Resources Board, n.d.). Without a legislative recognized pathway or formal linking arrangement, Sarawak CCUs are unlikely to be acceptable directly in large compliance markets.

The Paris Agreement's cooperative mechanism under Article 6 is crucial to cross-border carbon market stability. Art. 6 allows international cooperation involving mitigation outcome transfers, but it is underpinned by authorisation and accounting mechanisms to prevent double counting, including adjustments when

mitigation outcomes are used towards another jurisdiction’s climate target. This implies that Sarawak CCUs may be better suited for voluntary use (subject to recognized standards registry interoperability, and integrity benchmarking) than for use for internationally transferred mitigation outcomes, especially where another jurisdiction wants to count them towards its target, which would require host authorization and robust accounting alignment.

Sectoral compliance frameworks incorporate a realistic global acceptability test. The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) applies regulator-defined eligibility requirements through lists of eligibility requirements through lists of eligible emissions unit programmes, methodologies, and registries, showing that “international use value” depends on formal eligibility determinations rather than domestic market availability (International Civil Aviation Organization [ICAO], 2025). Sarawak’s institutional design is particularly the Registrar’s mission to monitor registration, connect with external registries, and resolve double counting risks which enables this. However, the Ordinance 2023 could benefit from clearer articulation of the pathway through which Sarawak CCUs could be issued under internationally recognized programs or assessed against widely used integrity benchmarks, which are decisive mechanisms for making CCUs practically tradable outside Sarawak.

Comparator market architecture /	What it accepts (gatekeeping rule)	What Sarawak CCUs already have	What you should flag as missing / uncertain
VCM integrity layer (ICVCM CCP)	Quality benchmark increasingly used by buyers/market infrastructure	MRV, validation/verification, registry oversight, anti-double counting logic	Whether CCUs are issued under CCP-assessed programmes/ methodologies; whether methodologies meet CCP expectations
Corporate claims layer (VCMi)	Rules for credible claims using credits	CCU retirement/traceability supports claims	Need explicit positioning on claim types permitted (offsetting vs contribution) and disclosure expectations
CORSIA (sectoral compliance)	Eligibility lists of programmes/registries	Registry role and verification structure provides partial alignment	No automatic eligibility: pathway depends on recognised programmes/registries and CORSIA determinations
EU ETS (jurisdictional ETS)	Primarily EU allowances; international credits constrained/exchange-limited	Not designed as an EU ETS compliance unit	CCUs are unlikely to be directly usable for EU ETS compliance without policy-level linkage
California cap-and-trade / WCI logic	Offsets allowed only within quantitative limits and programme rules	Compliance design exists domestically (thresholds/levy/credits)	No recognition mechanism; offsets are jurisdiction-specific with protocol constraints

Table 1: Benchmarking the International Tradability of Sarawak Carbon Credit Units (CCUs)

Carbon Levy as an Economic Instrument

Carbon levy is a key economic tool for greenhouse gas regulation in Sarawak under Ordinance 2023 which is under Part IV, imposes a financial penalty on registered commercial entities whose reported emissions exceed the authorised carbon emission criteria and refuse to lower emissions. Levy enforces compliance and incentivises conformity within the regulatory framework (Sarawak Government, 2023).

Basis and Assessment of the Carbon Levy

A carbon levy is imposed where the carbon emission at a facility of a registered business entity, as recorded in its carbon emission report submitted under section 6, exceeds the carbon emission threshold determined under section 8, and the entity is unable or unwilling to mitigate, abate or reduce the emission level to that threshold (section 24). The carbon levy is assessed using the formula $A \times B$, where A is the carbon dioxide equivalent of the total amount of greenhouse gas emission recorded in the carbon emission report (rounded up to the nearest metric tonne) and B is the carbon levy rate determined by Majlis Mesyuarat Kerajaan Negeri by notification in the Gazette. The Controller issues a notice of assessment (section 25), and an aggrieved party may appeal against the assessment under section 26 to a Tribunal constituted by rules made under section 57; however, the assessed amount remains payable pending the appeal. (Sarawak Government, 2023).

Relationship between Emission Thresholds and the Levy

The carbon levy has levels of compliance where the entities that exceed the emissions threshold must submit and implement a validated emissions reduction or abatement plan. If approved and followed, the levy responsibility may be delayed throughout implementation. Levy liability applies only if emissions stay over the threshold or the entity does not reduce them (Sarawak Government, 2023). This structure makes the carbon levy a last resort for compliance by prioritising emissions reduction and carbon capture over financial penalties. Ordinance 2023 supports its environmental goals while deterring non-compliance economically.

Use of Carbon Credit Units and enforcement

Registered businesses can offset carbon levy obligations with Carbon Credit Units in their Carbon Register Accounts as permitted by Ordinance 2023. If enough Carbon Credit Units are available, levy payment can be made by retiring them, this shows that this technique links the carbon levy to the carbon credit system and rewards verifiable emissions reduction. Ordinance 2023 also imposes financial penalties, cancels Carbon Credit Units, and recovers unpaid levy duties as State civil debts. All carbon fees and penalties go into the State Consolidated Fund, confirming their public status (Sarawak Government, 2023).

Therefore, Ordinance 2023's carbon levy is an important economic tool in Sarawak's carbon governance framework where levy promotes flexibility and integrated greenhouse control by connecting emissions thresholds, carbon credits and financial penalties in one statutory scheme.

Potential Legal Disputes arising from a Forthcoming Federal Climate or Carbon Market Legislation.

Future federal law establishing a national climate or carbon market architecture threatens Sarawak's carbon governance, which is not inconsistencies. Article 75 of the Federal Constitution allows the federal law to supersede the State law to the extent of contradiction. Thus, a federal climate statute may be structured to occupy the field through nationally uniform definitions of carbon credits, national registries, and compliance obligations. Which could lead to legal conflict in Sarawak.

Characterisation conflict which is a question whether carbon land or forest attribute or nationally regulated financial commodity?

Sarawak CCU approach is centered on land-based mitigation and resource governance. The Ninth Schedule give states legislative authority over land and forestry governance, supporting Sarawak's regulatory claim over project authorisation and land-linked carbon activities (Federal Constitution, Ninth Schedule; WWF Malaysia, 2014). A future federal statute might classify carbon credits as trade, commerce, or financial regulation tools,

shifting regulatory power to the federal level. This raises a classic federalism question whether carbon credit can be a land or forest management product or a marketable commodity subject to national market integrity regulations. Doctrinal vulnerability occurs when the federal legislation mandates the national register, unit definitions, or trading rules, turning Sarawak's units into a parallel (and potentially conflicting) instrument.

Conflict between national registry or unit definition and Sarawak CCUs

If a federal statute established a few matters such as first, a single national carbon registry, second is mandatory unit nomenclature and third is national issuance and retirement rules, and where Sarawak CCU system may be challenged as inconsistent, especially if CCUs are marketed outside the State or used for compliance or national accounting. Even if Sarawak's scheme is reasonable and institutionally resilient and Article 75 of the Federal Constitution would disapply incompatible aspects of it. If Federal Law attempts to centralise claims integrity such as prohibiting sub-national units from being used in national reporting unless issued through a federal authorized methodology, it would conflict with Sarawak's autonomous issuance architecture.

Fiscal conflict between Federal Carbon Tax and Compliance

Federal declarations indicate a carbon tax as part of a National Climate Change Bill and carbon market strategy (Ernst & Young, 2025; Argus Media, 2025). Sarawak's levy/credit regime could conflict with a federal carbon tax or ETS-style compliance system if it imposes parallel price responsibilities on the same emissions sources. Multiple charges are not unlawful, but they can cause practical and legal strain, especially when regulated firms claim State regulations hinder or duplicate federal compliance plans. Sarawak's levy/CCU requirements may be complementary such as an additional environmental charge within the State's competence or inconsistent since they undercut the federal mechanism's uniformity.

External Affairs and Article 6 of the Paris Agreement Positioning where National Control over International Transfer.

Sarawak intervention may increase if Sarawak CCUs are involved in overseas transfers or Malaysian accounting claims. International climate cooperation mechanisms such as Article 6 of the Paris Agreement are implemented nationally and require consistent authorisation and accounting to avoid double counting. Thus, a future federal act might grant exclusive power over internationally transferred mitigation outcomes and registry interoperability connected to national reporting. Instead of eliminating Sarawak's domestic scheme, this could limit the export or recognition of Sarawak issued CCUs for international claims, effectively reclassifying them as "domestic only" unless authorised by the national government.

Borneo-State Safeguards and Legitimacy Constrains on Centralization

Even when Parliament legislates within federal competence, reforms that materially affect Sarawak's special interests can trigger constitutional and political legitimacy constraints. Article 161E protects Sabah and Sarawak's constitutional position, and the Malaysia Agreement or IGC Settlement is often invoked to support East Malaysia autonomy (Federal Constitution; United Kingdom of Great Britain and Northern Ireland and Federation of Malaya, North Borneo, Sarawak, Singapore, 1963; Malaya, North Borneo, Sarawak, and United Kingdom, 1963). These instruments do not provide blanket immunity from federal legislation, but they support the idea that a durable national climate stature should be designed through cooperative federalism to recognise Sarawak's institutions, enable equivalence arrangements, and avoid abrupt displacement of sub-national market architectures.

The doctrinal and conceptual framework supports a more critical conclusion where Sarawak's CCU regime is legally intelligible within State-linked governance of land and natural resources, but it's a medium-term stability depends on firstly, on how a future federal climate statute characterises and structures carbon markets, secondly, whether a national registry or definition model is exclusive, and thirdly, whether Sarawak can secure recognition through harmonization or equivalence.

Significance of Sarawak's Carbon Governance Model

Ordinance 2023 advances Malaysia's subnational climate governance which it is important because it is the first comprehensive state carbon legislation that incorporates regulatory control, economic instruments, and carbon market processes into a unified and legally enforceable framework (Sarawak Government, 2023).

Next, Sarawak's strategy focuses on statutory duties rather than legislative commitments, which is a strength. Malaysia climate governance has relied on policy texts, sectoral initiatives, and administrative guidelines with insufficient legal enforcement. Malaysia's legal readiness for climate mitigation and adaptation is hampered by the lack of binding climate legislation (Karisma, 2025). The Ordinance 2023 fills a governance need by enforcing climate goals through obligatory reporting, emission thresholds, compliance methods, and fines (Sarawak Government, 2023).

Its unified regulatory structure makes Ordinance 2023 notable where Sarawak follows current climate regulatory trends by mixing command-and-control systems with market-based tools consisting of carbon credits, carbon trading, and carbon levies. This combination gives regulated entities compliance flexibility while maintaining enforcement authorities and strong state surveillance, to improving regulatory coherence and effectiveness (Sarawak Government, 2023).

Sarawak's carbon governance framework demonstrates the way federal subnational governments can use constitutional powers to regulate climate change without comprehensive national legislation. Sarawak also has established itself as a constitutional regulatory innovator by embedding Ordinance 2023 in the state authority over residual environmental matters, forest and land. Polycentric and subnational climate governance scholarship suggests regulatory leadership could develop beneath the national level (Karisma, 2025).

Malaysia's climate law direction is also affected by Ordinance 2023 where the Federation is bound by the international climate obligations. However, Sarawak's framework shows how subnational legislation may assist in reduction of national climate change such as in forestry, resource extraction, and land use. Karisma (2025) emphasis that coherent and binding legal frameworks are needed to strengthen Malaysia's legal willingness for climate action and not policy instruments.

Sarawak's carbon governance model is a groundbreaking state initiative and a legal robust and integrated climate regulation approach where it shows how market mechanisms, institutional design, and enforceable law can improve greenhouse gas governance within a federal constitutional framework (Sarawak Government, 2023).

CONCLUSION

Malaysia's climate and environmental law reached a milestone with the Ordinance 2023 where Sarawak has moved beyond policy-based climate commitments to enforceable statutory governance by regulating carbon credits, carbon levies, carbon trading, and greenhouse gas emissions. Ordinance 2023 balances environmental goals with economic flexibility by combining market-based mechanisms and regulatory control. Next, Sarawak's carbon governance framework's constitutional foundation, key regulatory mechanisms and structural design were examined in this paper where the analysis demonstrates that Sarawak's legislative competence over residual environmental matters, forests, and land supports Ordinance 2023, which operates within Federal system in Malaysia. Other than that, Ordinance 2023 regulates greenhouse gases enforceable and coherent manner via graduated compliance measures, emission thresholds, mandatory emissions reporting, and economic instruments.

Malaysia's climate law path is affected by the Ordinance 2023 where it shows how subnational legislation can advance emissions reduction and carbon governance without having a comprehensive national climate law. Latest research shows that Malaysia's legal readiness for climate mitigation requires binding legal frameworks, not policy instruments. Sarawak's approach shows how subnational legal readiness can be developed.

Despite the Ordinance 2023's internal coherence and institutional safeguards, Sarawak's CCU regime's longevity depends on federal legislation. Parliament can legislate within valid heads of power in Malaysia, and if a federal law is inconsistent with a state law, the federal law prevails as stated in Article 75 (Federal

Constitution). A future federal climate law that centralises carbon credit definitions, registry architecture, or compliance mechanisms could create jurisdictional friction by reclassifying carbon units as nationally regulated commodities and requiring a uniform national framework as mentioned in Article 74 and Ninth Schedule (Federal Constitution). Since the government plans to introduce a National Climate Change Bill and align carbon pricing instruments with federal policy architecture, this risk is not speculative. Therefore, Sarawak's CCU framework should be assessed for its legality and ability to operate under a cooperative federalism model which includes equivalence arrangements, registry interoperability, and explicit accounting safeguards to reduce double counting and the likelihood of being rendered inoperative under Article 75 of the Federal Constitution.

Finally, Sarawak's carbon governance model is a legally sound and institutionally integrated climate change response, and it is a key reference for Malaysia's legislative and policy developments as it transitions to a low-carbon economic within a federal constitutional framework.

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