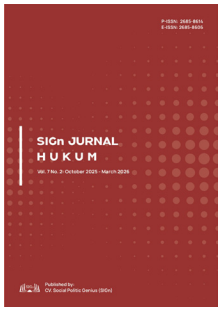


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Article Title

## The Paradox of Jakarta's Carbon Tax Policy: A Legal-Administrative Analysis of Non-Implementable Policy and International Compliance

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**ABSTRACT**

*DKI Jakarta's climate mitigation efforts require reformulating the Motor Vehicle Fuel Tax (MVF Tax) from a "selling value" basis to an "emission" basis. However, this initiative is hindered by an acute policy paradox. The Decree of the Governor of DKI Jakarta Number 542 of 2025 grants incentives (tax discounts), which are philosophically and juridically misaligned with the disincentive mandate of Law Number 32 of 2009. This juridical-normative legal research analyzes this fundamental discrepancy using statute and conceptual approaches. The data analysis technique is operationalized through norm conflict analysis, compliance analysis, and juridical-conceptual analysis (risk mitigation). This research yields several findings. First, the de jure authority for reformulation (changing the MVF Tax basis) is normatively available by prioritizing the mandate of Law Number 32 of 2009. However, second, this policy is de facto non-implementable as long as the contradictory Decree of the Governor of DKI Jakarta Number 542 of 2025 remains in effect. Third, compliance with Article 6 of the Paris Agreement is conditional, demanding the absolute integration of regional mitigation actions into the SRN-PPI to avoid double counting. Fourth, implementation risk mitigation (regressive impact and fiscal leakage (fuel leakage)) juridically demands an imperative revenue allocation (revenue recycling) or earmarking design and inter-regional fiscal coordination. In conclusion, the MVF Tax reformulation is not merely a technical change. This policy constitutes a prerequisite requiring the revocation of paradoxical internal policies, the integration of accountability into SRN-PPI, and an equitable earmarking design. These steps are necessary to ensure legal certainty and effective climate mitigation.*

*Keywords:* *Administrative Authority; Climate Change Mitigation; International Compliance; MVF Tax; Policy Paradox.*

## INTRODUCTION

The climate crisis has been identified as the most pressing challenge facing the global community in the 21st century (Rummukainen, 2013; Yuni, 2020). The failure to implement effective mitigation threatens the sustainability of fundamental human rights. Furthermore, this situation gives rise to complex inter-generational climate justice issues (Sembiring, 2023). As a juridical response, the ratification of the Paris Agreement through Law Number 16 of 2016 binds Indonesia to the Nationally Determined Contribution (NDC) commitment. This commitment aims to reduce Greenhouse Gas (GHG) emissions. In the dense urban context of the DKI Jakarta Province, the transportation sector is the dominant contributor to emissions (Kurniasih & Dewi, 2023). This sector is dominated by private vehicles (Permana & Sampurna, 2025) and logistics (Raffinet & Purnomo, 2022), thereby requiring measurable, effective policy interventions.

Theoretically, the most efficient policy intervention to address external diseconomies, such as carbon emissions, is through price instruments, or Pigouvian Taxes (Aisyah et al., 2020). This concept asserts that the polluter must pay the social costs of their activities (Poterba, 1991). In Indonesia, the legal mandate to apply this instrument is inherently mandatory. Law Number 32 of 2009[1] explicitly obliges

[1]Law Number 32 of 2009, as amended by Article 22 of Government Regulation in Lieu of Law Number 2 of 2022.

the Central Government and Regional Governments to develop and implement environmental economic instruments. These instruments serve as a disincentive against environmentally degrading behavior. Consequently, Law Number 32 of 2009 provides the primary philosophical and juridical foundation for transforming conventional fiscal policies into instruments based on ecological impact.

Law Number 32 of 2009 mandates the reformulation of existing fiscal instruments. The dominance of the Command and Control (CAC) approach in Indonesian environmental law is criticized as rigid and inefficient (Wibisana, 2019). The shift toward economic instruments (such as carbon taxes) is viewed as smart regulation that can encourage compliance more flexibly. In the context of regional fiscal affairs, the most relevant instrument to be reformulated is the Motor Vehicle Fuel Tax (MVF Tax). This instrument constitutes one of the main pillars of Regional Own-Source Revenue (*Pendapatan Asli Daerah* or PAD) for the Provincial Government of DKI Jakarta (Permana & Sampurna, 2025). However, the existing MVF Tax possesses fundamental juridical weaknesses when examined from an environmental law perspective. This gives rise to the initial juridical issue.

This issue is identified as the first normative gap, namely the conflict between two legal regimes. On the one hand, the Provincial Government of DKI Jakarta collects MVF Tax pursuant to its fiscal decentralization authority under Law Number 1 of 2022 and DKI Jakarta Provincial Regulation Number 1 of 2024. The legal issue is that Law Number 1 of 2022 restricts the basis for the imposition of the MVF Tax solely to the "selling value" of the fuel. Conversely, Law Number 32 of 2009 imperatively mandates the application of environmental economic instruments that are ideally based on "emission content." Consequently, the current MVF Tax fails to serve as an ecological disincentive instrument (a Pigouvian Tax). The MVF Tax purely functions as a budgetary instrument. This raises a central question: how can the fiscal authority under Law Number 1 of 2022 be harmonized with the ecological mandate under Law Number 32 of 2009?

This gap becomes increasingly fundamental when confronted with current administrative practices in DKI Jakarta. These practices constitute a second gap, a crucial policy paradox. On the one hand, the urgency of mitigation and the mandate of Law Number 32 of 2009 require the introduction of disincentives (increasing pollution costs) through reformulating the MVF Tax. However, the de facto policy of the Provincial Government of DKI Jakarta, as outlined in the Decree of the Governor of DKI Jakarta Number 542 of 2025, moves in a diametrically opposite direction. This policy actively grants an MVF Tax reduction (discount), which philosophically and legally functions as an incentive for fossil fuel consumption. This contradictory policy not only blunts the effectiveness of mitigation but also creates legal uncertainty about the direction of regional environmental fiscal policy (Solahudin, 2025).

This juridical issue is complicated by the international law dimension. This creates a third gap, namely the compliance gap. The reformulation of MVF Tax at the regional (provincial) level as a local mitigation action must be accountable within the NDC framework in accordance with Law Number 16 of 2016. Article 6 of the Paris Agreement regulates cooperation and carbon accounting mechanisms that demand transparency, accuracy, and the avoidance of double counting (Motta, 2019). Without integration into the National Registry System for Climate Change Control (*Sistem Registri Nasional Pengendalian Perubahan Iklim* or SRN-PPI), regional-level emission reduction efforts risk being unaccounted for in the national carbon balance (Kurniawan et al., 2025; Sihotang, 2025). As a result, the validity of its contribution to the NDC becomes questionable.

Although several previous studies have examined the general challenges of carbon tax implementation in Indonesia (Tjoanto & Tambunan, 2022) or compared it with other countries (Barus & Wijaya, 2021), a significant literature gap remains. To date, no juridical-administrative study has specifically analyzed these three problem knots in an integrated manner. The three knots are: (1) the norm conflict between the economic instrument mandate of Law Number 32 of 2009 and the MVF Tax authority in Law Number 1 of 2022; (2) the policy paradox between the disincentive plan versus the Decree of the Governor of DKI Jakarta Number 542 of 2025 (incentive); and (3) the compliance analysis of regional mitigation actions against the international accounting mechanisms of Article 6 of the Paris Agreement and SRN-PPI.

In addition to the literature gap, there is also a risk gap that demands in-depth mitigation analysis. The implementation of a carbon tax, which is theoretically regressive (Poterba, 1991), has the potential to burden vulnerable groups and threaten intra-generational justice (Prihatiningtyas et al., 2023). Furthermore, practical risks, such as potential carbon or fuel leakage into the Jabodetabek buffer zone (Akkaya & Bakkal, 2020; Firdausy et al., 2025), may undermine policy effectiveness. These risks must be anticipated with appropriate juridical coordination strategies. Justice and effectiveness are the two main risks this policy design must address.

Based on the exposition of the normative gap, policy gap, compliance gap, literature gap, and risk gap above, this research has an urgent need to fill these gaps. Therefore, this research contains three specific objectives. *First*, to analyze the limits of administrative authority (State Administrative Law) of the Provincial Government of DKI Jakarta in reformulating MVF Tax from being based on "selling value" (Law Number 1 of 2022) to being based on "emissions" (Law Number 32 of 2009), including analyzing the juridical implications of the Decree of the Governor of DKI Jakarta Number 542 of 2025. *Second*, to formulate a legal alignment model for regional mitigation actions, national carbon accountability mechanisms (SRN-PPI), and international mechanisms (Article 6 of the Paris Agreement). *Third*, to analyze

juridical and administrative mitigation strategies to overcome implementation risks, particularly the design of revenue recycling for environmental justice and inter-regional coordination mechanisms to prevent fuel leakage. This research is expected to provide academic benefits by addressing a literature gap in the analysis of fiscal-environmental-international norm conflicts. In practice, the results of this research can serve as a juridical-normative policy recommendation for the Regional Government in revising DKI Jakarta Provincial Regulation Number 1 of 2024, as well as for the Central Government in refining the SRN-PPI.

## METHOD

This research constitutes juridical-normative legal research (doctrinal legal research). This type of research was selected because the study focuses on analyzing and resolving prescriptive legal issues (Qamar & Rezah, 2020). The issues involve analyzing the normative conflict among various statutory regulations and examining the policy paradox within the framework of positive law (*ius constitutum*). To dissect the complexity of the issue, this research applies a multi-faceted approach. The primary approach is the statute approach. This approach is essential for systematically examining the hierarchy and substance of various legal instruments. The central focus of the analysis is directed at relevant primary legal materials, including: Law Number 1 of 2022; Law Number 32 of 2009; Law Number 16 of 2016; DKI Jakarta Provincial Regulation Number 1 of 2024; and the Decree of the Governor of DKI Jakarta Number 542 of 2025. This approach is reinforced by the conceptual approach to understand the legal doctrines, theories, and concepts underlying these norms, such as the Pigouvian Tax concept, fiscal decentralization, environmental justice, and legal certainty. All primary legal materials are supported by comprehensive secondary materials, comprising academic journal articles, research reports, and books, collected through documentary study and library research (Sampara & Husen, 2016).

All collected legal materials were subsequently analyzed using a qualitative-prescriptive analysis technique focusing on legal interpretation, synthesis, and argumentation (Irwansyah, 2020). Specifically, this analysis technique is systematically operationalized to address the three research objectives formulated in the introduction. *First*, to address the research objective regarding the limits of administrative authority and the juridical implications of the policy paradox, norm conflict analysis is employed using the systematic interpretation method. This technique is used to dissect the discrepancy between the economic instrument mandate in Law Number 32 of 2009 (emission-based) and the MVF Tax authority in Law Number 1 of 2022 (selling-value-based). *Second*, to address the research objective regarding international harmonization, compliance analysis is utilized. This technique explicitly maps the compatibility of the MVF Tax reformulation design with carbon

accountability obligations under Law Number 16 of 2016, particularly Article 6 of the Paris Agreement, and the necessity of its integration with the SRN-PPI technical instrument. *Third*, to address the research objective regarding the implementation of risk mitigation strategies, a juridical-conceptual analysis is applied. This technique guides the discussion between normative findings and relevant academic literature or the state of the art to formulate prescriptive policy recommendations on social regressivity risks and regional fuel leakage.

## RESULTS AND DISCUSSION

### A. Fiscal Authority Discrepancy and Ecological Mandate: Norm Conflict Analysis between Law Number 1 of 2022 and Law Number 32 of 2009

The effort to reformulate the Motor Vehicle Fuel Tax (MVF Tax) in DKI Jakarta Province into a carbon tax instrument places the Regional Government at the epicenter of the intersection of two legal regimes, or a dual regime. These two regimes are philosophically distinct: the fiscal law regime and the environmental law regime. The central issue to be analyzed is not whether the Provincial Government of DKI Jakarta has the authority to collect taxes. The primary issue is the extent of the region's authority to transform an instrument historically purely budgetary into one regulatory for ecological purposes. It necessitates the systematic application of norm conflict analysis to dissect the discrepancy between the foundation of fiscal authority as regulated in Law Number 1 of 2022 and the mandate to apply ecological instruments as obliged by Law Number 32 of 2009.

The formal (*de jure*) authority of the Provincial Government of DKI Jakarta to collect MVF Tax originates from the principle of fiscal decentralization (Kresnandra, 2016). This principle is manifested in Law Number 1 of 2022. This Law clearly grants the provincial government local taxing power. Article 4 section (1) point d of Law Number 1 of 2022 explicitly establishes MVF Tax as one type of tax collected by the province. This authority is subsequently executed technically by the Provincial Government of DKI Jakarta through its derivative legal instrument, namely Article 2 section (1) point d of DKI Jakarta Provincial Regulation Number 1 of 2024.

Although it grants authority, Law Number 1 of 2022 does not confer absolute authority. Conversely, this Law is intentionally designed to provide fiscal legal certainty by establishing technical collection parameters that are limitative. Herein lies the first layer of the juridical conflict. Article 25 of Law Number 1 of 2022 stipulates that, "*the basis for the imposition of MVF Tax is the selling value of the Motor Vehicle Fuel before the imposition of value-added tax*." This provision was subsequently adopted identically (copy-paste) into Article 23 of DKI Jakarta

Provincial Regulation Number 1 of 2024. Furthermore, Article 26 section (1) of Law Number 1 of 2022, which was adopted by Article 24 section (1) of DKI Jakarta Provincial Regulation Number 1 of 2024, limits the MVF Tax rate to "*a maximum of 10% (ten percent)*." If examined solely through grammatical interpretation, this fiscal regime (Law Number 1 of 2022) bases the MVF Tax on "selling value" (Rupiah per liter). This regime does not lock it on the generated externalities (emission content).

On the other hand, the Provincial Government of DKI Jakarta is also bound by the environmental law regime set out in Law Number 32 of 2009. Fundamentally different from Law Number 1 of 2022, which is budget-oriented, Law Number 32 of 2009 is revenue-oriented. Article 42 section (1) of Law Number 32 of 2009 imperatively—using the phrase "shall"—states:

> *"In the context of preserving environmental functions, the Government and regional governments shall develop and implement environmental economic instruments."*

This mandate is not a discretionary option for the Regional Government. This mandate constitutes a binding legal obligation. The imperative obligation in Law Number 32 of 2009 is grounded in sharp academic criticism of traditional environmental regulatory approaches. The Command and Control (CAC) approach, which has been dominant in Indonesian environmental law, has proven rigid, economically inefficient, and costly to supervise (Wibisana, 2019). Therefore, the shift toward economic instruments (such as carbon taxes or cap-and-trade) is viewed as a form of evolution toward smart regulation. This regulation aims not only to be punitive but also to provide market-based incentives that enable environmental compliance more flexibly, effectively, and efficiently.

These economic instruments are clarified in Article 43 section (3) point b of Law Number 32 of 2009. This article specifically mentions "*the application of environmental taxes, levies, and subsidies*" as a form of disincentive (or incentive). This environmental tax is the juridical manifestation of the Polluter Pays Principle. This principle is a fundamental concept in international and national environmental law aimed at internalizing external diseconomies caused by economic activities into production costs (Aisyah et al., 2020). In the context of transport emissions, the most appropriate instrument to internalize the social costs of pollution is the Pigouvian Tax (Poterba, 1991). Based on this conceptual analysis, the MVF Tax currently collected by the DKI Provincial Government (based on "selling value" according to Law Number 1 of 2022) clearly fails to qualify as an environmental economic instrument (Pigouvian Tax) as mandated by Law Number 32 of 2009. This failure occurs because higher fuel prices (e.g., Pertamax Turbo) do not necessarily correlate with higher emissions; indeed, the opposite is often true.

This discrepancy creates a tangible norm conflict between two laws of equal standing. Article 25 of Law Number 1 of 2022 limits the basis of MVF Tax imposition to "selling value," while Article 42 and Article 43 of Law Number 32 of 2009 oblige the Regional Government to apply environmental taxes (which are ideally based on "emission content"). To resolve this conflict, a systematic interpretation technique is required, not merely a textual one. Law Number 32 of 2009 can be positioned as a special general law (*lex specialis generalis*) that provides a philosophical mandate, purpose (*telos*), and ecological obligations. This mandate is even rooted in the state's constitutional obligation to guarantee the right to a good and healthy environment, as provided for in Article 28H section (1) of the 1945 Constitution. On the other hand, Law Number 1 of 2022 is a general law (*lex generalis*) that regulates the administrative-fiscal mechanism of regional tax collection. Thus, the authority of the DKI Provincial Government to reformulate the MVF Tax can be legally justified by the argument that the constitutional mandate and the imperative mandate of Law Number 32 of 2009 must be prioritized.

In practice, the legal bridge for harmonizing these two laws is Article 26 of Law Number 1 of 2022. The authority of the DKI Provincial Government can be justified as long as the reformulation remains within the corridor established by Law Number 1 of 2022. The argument is: Law Number 1 of 2022 grants authority over the tax object (MVF Tax) and the upper limit of the rate (maximum 10%). As long as the reformulation only changes the imposition basis (from "selling value" to "emission content") and the final rate does not exceed 10% of the selling value, the Regional Government cannot be considered to have exceeded its authority (*ultra vires*). The Regional Government is not introducing a new tax. The Regional Government is merely refining the existing tax imposition basis to align with the constitutional mandate and obligations under Law Number 32 of 2009.

The administrative legal implications of this analysis are very clear. Reformulating the MVF Tax to shift its function from purely budgetary to regulatory is legally possible, yet it demands careful steps. The step involves revising Article 23 and Article 24 of DKI Jakarta Provincial Regulation Number 1 of 2024. This revision of the Provincial Regulation must be preceded by a comprehensive Academic Draft. This Academic Draft must not merely be technocratic. It must explicitly present systematic interpretive arguments that harmonize the mandate of Law Number 32 of 2009 with the limitations outlined in Law Number 1 of 2022. Without a solid legal foundation, the resulting Provincial Regulation will be highly vulnerable to judicial review at the Supreme Court. The Provincial Regulation may be deemed to violate the administrative limitations set out in Law Number 1 of 2022, thereby creating new legal uncertainty (Solahudin, 2025).

## B. Regional Fiscal Policy Paradox: Juridical Implications of the Decree of the Governor of DKI Jakarta Number 542 of 2025 on the Decarbonization Agenda

The analysis in Sub-Chapter A has successfully demonstrated that the *de jure* authority discrepancy between Law Number 1 of 2022 and Law Number 32 of 2009 is resolvable. This resolution can be achieved through systematic interpretation that prioritizes the constitutional ecological mandate. Thus, the reformulation of DKI Jakarta Provincial Regulation Number 1 of 2024 is normatively possible. However, administrative legal analysis must not cease at the realm of ideal law (*das sollen*). The analysis must shift to the realm of currently prevailing positive law (*das sein*). At this implementation level, the most fundamental juridical obstacle is found. This obstacle is no longer a norm conflict between statutory regulations, but rather an acute policy paradox internal to the DKI Jakarta Provincial Government administration.

This paradox manifests in a tangible policy antithesis. While academic and technocratic discourse (as elaborated in Sub-Chapter A) progressively reformulates MVF Tax as a disincentive (a higher tax) to fulfill the ecological mandate of Law Number 32 of 2009, the *de facto* policy currently implemented by the Provincial Government of DKI Jakarta moves in the diametrically opposite direction. This *de facto* policy amounts to providing incentives (lower taxes) for fossil fuel consumption.

The legal instrument formally institutionalizing this paradox is the Decree of the Governor of DKI Jakarta Number 542 of 2025. Ironically, this legal instrument, which is an administrative decision (*beschikking*), also utilizes Law Number 1 of 2022 and DKI Jakarta Provincial Regulation Number 1 of 2024 as its legal basis (the "In view of" consideration). However, these two instruments are the very same instruments currently proposed for reform. The legal reasoning (the "Considering") used to issue this Governor's Decree is for "*regional inflation control and efforts to maintain economic stability*."

Although the *ratio legis* of inflation control possesses short-term economic validity, the FIRST Dictum letter a in the Decree of the Governor of DKI Jakarta Number 542 of 2025 explicitly establishes "*granting an MVF Tax reduction of 50% (fifty percent) of the principal tax... for private vehicles*." Critically, this policy cannot merely be assessed as "not progressive." Instead, this policy must be declared as counterproductive to the decarbonization agenda. This policy directly sabotages (undermining) the imperative mandate in Article 42 and Article 43 section (3) of Law Number 32 of 2009. The mandate obliges the Regional Government to apply economic instruments as disincentives to reduce activities with negative environmental impacts.

The juridical implications of this policy are very serious. By granting a 50% discount on fossil fuel consumption, the Provincial Government of DKI Jakarta effectively subsidizes carbon emissions from the transportation sector. In contrast, the transportation sector is the largest contributor to emissions in Jakarta (Raffinet & Purnomo, 2022; Kurniasih & Dewi, 2023). This policy places the Provincial Government of DKI Jakarta in a position of administrative default (wanprestasi). This position signifies the failure of a state administrative body (the Governor) to fulfill a legal obligation clearly established by higher statutory regulations (Law Number 32 of 2009).

Furthermore, this policy paradox creates significant legal uncertainty (Solahudin, 2025). For investors in the clean energy or public transportation sectors, this contradictory policy sends mixed signals regarding the seriousness of regional decarbonization commitments. Moreover, this policy potentially violates the General Principles of Good Administration. Specifically, the Principle of Legal Certainty (because the norm at the Governor's Decree level is not aligned with the mandate at the Law level) and the Principle of Openness (because this policy silently annuls climate commitments that have been publicly declared).

The challenges of implementing a carbon tax in Indonesia are indeed not trivial. These challenges include concerns regarding economic impact and industrial resistance (Tjoanto & Tambunan, 2022). However, selecting MVF Tax as an inflation stabilization instrument demonstrates acute policy incoherence. Whereas, MVF Tax constitutes one of the largest sources of PAD (Permana & Sampurna, 2025). The Provincial Government of DKI Jakarta appears to be sacrificing its only potential ecological disincentive instrument for short-term non-ecological objectives. It confirms that environmental considerations within the framework of Law Number 32 of 2009 remain subordinate to conventional economic considerations.

The findings regarding this paradox possess fundamental implications for the entire research. The discovery of the Decree of the Governor of DKI Jakarta Number 542 of 2025 proves that the main obstacle to MVF Tax reformulation in DKI Jakarta today is not merely juridical-normative (norm conflict in Sub-Chapter A). The main obstacle is a tangible, active, and currently prevailing (*de facto*) administrative-policy obstacle. Therefore, the analytical conclusion is firm. Any proposal to reformulate DKI Jakarta Provincial Regulation Number 1 of 2024 to change the tax basis to an emissions-based one is non-implementable. It cannot be executed if it is not preceded by juridical-administrative steps to evaluate and revoke the Decree of the Governor of DKI Jakarta Number 542 of 2025. Without resolving this internal contradiction first, the fiscal decarbonization agenda will be rendered moot.

## C. Accountability of Regional Mitigation Actions and International Compliance: The Urgency of Integrating MVF Tax Reformulation into the National Registry System (SRN-PPI)

The analysis of the Motor Vehicle Fuel Tax (MVF Tax) reformulation cannot end at the level of state administrative law and regional autonomy. This is as discussed in Sub-Chapters A and B. As a policy instrument explicitly designed for climate change mitigation purposes (Rummukainen, 2013), this reformulation is inherently bound to a binding international legal regime. The ratification of the Paris Agreement through Law Number 16 of 2016 has transformed Indonesia's political commitments (under the NDC) into positive legal obligations. This obligation is based on the principle of *pacta sunt servanda*. The direct juridical consequence of this ratification is that every domestic mitigation action, including those initiated by regional governments, must be accountable. This action must also align with the Enhanced Transparency Framework (Mehling & Tvinnereim, 2018). Therefore, local mitigation actions resulting from the MVF Tax reformulation in DKI Jakarta (a Provincial Regulation) must be subject to a compliance analysis against national and international accountability mechanisms.

This international compliance obligation centers on one fundamental principle that constitutes the core of Article 6 of the Paris Agreement: carbon accounting integrity. Article 6 section (2) of the Paris Agreement explicitly mandates that every cooperation (including the transfer of mitigation outcomes) must "*ensure environmental integrity and transparency*..." Furthermore, this cooperation "shall apply robust accounting to ensure, inter alia, the avoidance of double counting." This crucial principle is further detailed by Motta (2019) as the core of market and non-market mechanisms within the Paris Agreement. In the Indonesian context, this means that a mitigation action at the regional level (such as the MVF Tax reformulation by the DKI Provincial Government) is not automatically recognized as a contribution to achieving the national NDC target. Without a verified accounting system, emission reductions occurring in Jakarta risk being unaccounted for in the national carbon balance.

A risk worse than mere unaccounting is double-counting. It can occur, for instance, when the same emission reduction is claimed by two different entities. The emission is claimed by the Provincial Government of DKI Jakarta as a result of its MVF Tax policy, and simultaneously claimed by the private sector (e.g., transportation companies). The private sector might receive incentives from tax revenue recycling or participate in the voluntary carbon market. Such double-counting will undermine Indonesia's NDC claims in the eyes of the international community. It also undermines the policy's effectiveness. Therefore, a robust

juridical-technical mechanism to ensure a single source of truth for emission data becomes a non-negotiable prerequisite.

Herein lies the critical compliance gap in the current policy design. An analysis of existing fiscal instruments, including Law Number 1 of 2022 and DKI Jakarta Provincial Regulation Number 1 of 2024, indicates that both focus solely on revenue collection and administrative mechanisms. Both are completely absent from, or do not include, any clauses regulating Monitoring, Reporting, and Verification (MRV) mechanisms. In contrast, a standardized MRV mechanism is required to measure the ecological impact (GHG emission reduction) of the tax collection. This MRV weakness constitutes a very serious implementation challenge. This challenge exists not only in the context of fulfilling the mandate of Law Number 32 of 2009 but also in fulfilling the Paris Agreement commitments (Kurniawan et al., 2025).

To bridge this fundamental compliance gap, Indonesia has developed a technical-juridical instrument, the National Registry System for Climate Change Control (SRN-PPI). In accordance with its implementing regulations, SRN-PPI serves as the single gateway for registering, validating, and verifying all mitigation actions and resources in Indonesia (Sihotang, 2025). SRN-PPI is the national legal mechanism to meet the accountability requirements under Article 6 of the Paris Agreement. This system is designed to ensure that every ton of successfully reduced emissions is calculated accurately, transparently, and counted only once. Thus, this system provides valid data for national NDC reporting.

Therefore, the absolute condition (*sine qua non*) for the MVF Tax reformulation in DKI Jakarta to be declared internationally valid and effectively contribute to the NDC is the necessity of juridical and technical integration into SRN-PPI. This is the core of the "legal alignment model" proposed by this research. The revision of DKI Jakarta Provincial Regulation Number 1 of 2024 is insufficient if it merely changes the tax imposition basis (as discussed in Sub-Chapter A). The revision must contain imperative clauses that explicitly: (1) oblige the related Regional Apparatus (e.g., the Environmental Agency and Regional Revenue Agency) to conduct MRV on emission reductions achieved from the implementation of emission-based MVF Tax; and (2) oblige the MRV results to be registered, reported, and verified periodically through the SRN-PPI platform.

Without mandatory integration under the Provincial Regulation, the Provincial Government of DKI Jakarta might fulfill two functions. These functions are collecting revenue (the budgetary function) or even changing local behavior (the regulatory function). However, the regional government will fail in the third, equally important function: international accountability. This failure will render the MVF Tax reformulation an ecologically "blind" policy at the global level. This

policy will be unaccounted for and will not contribute to legally binding national commitments under Law Number 16 of 2016.

Furthermore, integration into SRN-PPI is not merely a matter of fulfilling an administrative burden. Rather, this integration is a strategic step to unlock potential economic co-benefits. According to Sihotang (2025), validated and verified mitigation action data within SRN-PPI constitute the legal basis for the issuance of the Greenhouse Gas Emission Reduction Certificate (SPE-GRK). This SPE-GRK is a carbon unit that can subsequently be transacted on the national carbon exchange (IDX Carbon). This opens the door to a highly attractive hybrid scheme. The emission-based MVF Tax functions as a disincentive (tax/price instrument). The collected funds (revenue recycling) are then used to finance decarbonization projects (e.g., electric bus transition). These projects, after being verified by SRN-PPI, can generate SPE-GRK, which can be sold on IDX Carbon. It will create new economic incentives. Thus, the SRN-PPI integrated MVF Tax reformulation not only addresses administrative law challenges (Law Number 1 of 2022 and Law Number 32 of 2009) and the policy paradox (Sub-Chapter B), but also serves as an essential bridge to ensure the compliance of regional mitigation actions with the international transparency architecture.

## D. Mitigating Regressive Impact: Revenue Allocation Design (Revenue Recycling) as an Environmental Justice Imperative

The analysis must shift to the most fundamental policy implementation risk, namely the socio-economic impact. This step is taken after establishing that the Motor Vehicle Fuel Tax (MVF Tax) reformulation is juridically-administratively feasible (Sub-Chapter A), de facto hindered (Sub-Chapter B), and internationally mandatorily integrated (Sub-Chapter C). Environmental fiscal instruments, such as carbon taxes, are never socially neutral. Although theoretically highly efficient for correcting external diseconomies (Aisyah et al., 2020), this instrument is inherently regressive (Poterba, 1991).

This regressive nature arises because low-income households tend to allocate a much larger share of their disposable income to energy-intensive necessities (such as transportation and electricity) than high-income households do. In DKI Jakarta, the reformulation of MVF Tax into an emissions-based system will inevitably raise fuel prices for consumers. This increase in transportation costs will place a disproportionate burden on low- and lower-middle-income groups. These groups still rely on private vehicles (particularly motorcycles) for daily mobility (Raffinet & Purnomo, 2022). If this regressivity risk is not seriously mitigated, the policy may trigger strong public resistance. Ultimately, this policy could fail politically (Tjoanto & Tambunan, 2022).

In response to this fundamental risk, the fiscal economics literature has long identified the most effective solution. That solution is the revenue allocation mechanism (revenue recycling) (Poterba, 1991). This concept, which in financial administration practice is often referred to as earmarking, refers to the practice of not depositing revenue from environmental taxes (carbon taxes) into the regional general treasury. Instead, the revenue is "locked" or reallocated specifically for predetermined purposes.

Targeted revenue recycling design is the key to transforming policy. A technically regressive policy can be transformed into an outcome-progressive policy. There are two main objectives of this earmarking. *First*, to provide compensation (direct or indirect) to community groups most affected by price increases. *Second*, to fund further investment in the green transition (e.g., public transportation infrastructure or renewable energy). For the Provincial Government of DKI Jakarta, the application of earmarking is not merely a matter of social justice. This application also becomes a crucial instrument for obtaining the public's social license to operate, enabling the MVF Tax reformulation to be accepted and sustainable (Tjoanto & Tambunan, 2022).

The subsequent juridical issue concerns the legal standing of applying earmarking within the Indonesian national fiscal legal system. Historically, earmarking practices tended to be rejected. This practice was considered to disrupt budget flexibility and the non-appropriation principle. However, Pertiwi and Wisaksono (2024) provide a crucial constitutional analysis that, for specific policies such as carbon taxes, earmarking is precisely required. In the context of the national carbon tax, Law Number 7 of 2021 has provided a sufficient legal foundation.

Article 13 section (12) of Law Number 7 of 2021 explicitly states that "*revenue from carbon tax may be allocated for climate change control*." The use of the phrase "may be allocated" provides a facultative (optional) legal policy, allowing the government to implement earmarking. Herein lies the importance of regional administrative law analysis. Although at the national level (Law Number 7 of 2021) it is facultative, the earmarking mechanism should no longer be viewed as optional in the regional implementation context, such as DKI Jakarta. In the region, the regressive impact is felt directly by citizens, and public resistance is more easily organized. This mechanism must be adopted as a mandatory prerequisite in the Provincial Regulation to guarantee policy success.

More specifically, the most logical and effective revenue recycling design in DKI Jakarta is to allocate emission-based MVF Tax revenue directly to subsidize the public transportation sector (Permana & Sampurna, 2025). This scheme creates a

perfect virtuous cycle. The carbon tax (disincentive) makes private vehicle usage more expensive. At the same time, subsidies funded from earmarking (incentives) make public transportation (TransJakarta, MRT, LRT) cheaper and of higher quality (Kurniasih & Dewi, 2023). This provides a direct, affordable alternative for low-income commuters most affected by fuel price increases. This step simultaneously accelerates the modal shift, the ultimate goal of transportation-sector mitigation policy.

This social mitigation design through revenue recycling is ultimately the juridical manifestation of the effort to balance two justice pillars that often clash in climate policy. On the one hand, the carbon tax policy itself (although regressive) embodies intergenerational justice. This justice is the obligation of the current generation to protect ecosystem conditions for future generations (Sembiring, 2023). On the other hand, the regressive impact of the tax threatens intra-generational justice. This justice is the fair distribution of burdens among community groups within the same generation (Prihatiningtyas et al., 2023). The application of strict, transparent, and accountable earmarking, which is explicitly stipulated in the revision of DKI Jakarta Provincial Regulation Number 1 of 2024, is a necessary administrative legal mechanism. This mechanism is needed to reconcile these two pillars of justice. This ensures that efforts to protect future generations are not funded at the expense of vulnerable groups' welfare today.

## E. Fiscal Leakage (Fuel Leakage) Mitigation and CBAM Readiness: Cross-Border Jurisdictional Coordination Challenges

After dissecting internal socio-economic risk mitigation strategies (Sub-Chapter D), the analysis must shift to external economic-administrative risks. This second fundamental risk is known in climate policy literature as carbon leakage. This theory posits that when one jurisdiction implements strict climate policy (such as a carbon tax) while its neighboring jurisdiction does not, emission-intensive economic activities will tend to relocate. These activities move to jurisdictions with looser regulations or pollution havens (Akkaya & Bakkal, 2020). This relocation not only nullifies the intended environmental benefits—as global or regional emissions do not decrease but merely shift location—but also creates economic losses (market distortions) for the jurisdiction that applies the strict policy.

In the context of the Motor Vehicle Fuel Tax (MVF Tax) reformulation in DKI Jakarta, this leakage risk manifests specifically and directly as fiscal leakage. This phenomenon is also frequently referred to as fuel tourism. This phenomenon occurs due to the fragmented structure of Indonesian fiscal decentralization within the Jabodetabek metropolitan area (Jakarta, Bogor, Depok, Tangerang, Bekasi).

When the Provincial Government of DKI Jakarta revises DKI Jakarta Provincial Regulation Number 1 of 2024 to implement a more expensive emission-based MVF Tax (executing the mandate of Law Number 32 of 2009), fuel prices within the DKI Jakarta jurisdiction will automatically increase. However, the directly bordering buffer zones—such as Bogor City, Depok City (West Java Province), as well as Tangerang City and South Tangerang City (Banten Province)—will likely still apply the conventional "selling value" based MVF Tax, which is significantly cheaper. These regions operate under different provincial legal regimes.

The artificial price differential resulting from conflicting inter-provincial regulations will create powerful economic incentives for consumers. Rational consumers will massively engage in fuel tourism. These consumers, primarily commercial transport fleets (logistics, online transportation) and daily commuters domiciled in border areas, will intentionally refuel at gas stations outside the DKI Jakarta jurisdiction (Depok, Tangerang, Bekasi) to avoid the higher tax. This phenomenon will simultaneously thwart the two main objectives of the MVF Tax reformulation (Permana & Sampurna, 2025). *First*, the ecological objective (regulatory) fails because emissions do not decrease, but merely shift refueling points. *Second*, the fiscal objective (budgetary) fails because the MVF Tax revenue base (Regional Own-Source Revenue or PAD) of DKI Jakarta will be significantly eroded. In contrast, these funds are crucial for the revenue allocation (revenue recycling) scheme in Sub-Chapter D.

Addressing this fuel leakage risk juridically and administratively is far more complex than addressing regressive impacts. Regressive risk (Sub-Chapter D) can be resolved internally by the DKI Provincial Government through the earmarking design in the Provincial Regulation. Conversely, fuel leakage mitigation is external. This mitigation requires cross-jurisdictional fiscal policy coordination (intergovernmental). This issue highlights a fundamental weakness in the implementation of fiscal decentralization for issues possessing cross-border externalities, such as air pollution (Kresnandra, 2016). The ideal solution is to harmonize emission-based MVF Tax policy across the Jabodetabek metropolitan area. However, this is difficult to achieve if relying solely on voluntary inter-regional government initiatives. MVF Tax is a vital source of PAD for West Java and Banten Provinces.

Herein lies the key role of Law Number 1 of 2022. This Law serves not only as a grantor of authority (Article 25) but also as a facilitator of harmonization. Unlike the previous Law, Law Number 1 of 2022 grants the Central Government (in this case, the Ministry of Finance) greater authority. This authority is to conduct regional tax policy synchronization for the national interest. In this context, the "national interest" is the achievement of Indonesia's legally binding NDC target,

as outlined in Law Number 16 of 2016. Therefore, the most effective juridical mitigation strategy is Central Government intervention. This intervention utilizes the authority within Law Number 1 of 2022 to mandate the synchronization of MVF Tax rates and bases in the Jabodetabek region. The objective is to prevent regulatory arbitrage that undermines the national mitigation agenda.

If fuel leakage risk is a manifestation of carbon leakage at the regional level (inter-regional), a far greater challenge exists at the international level. Global climate policy is also currently confronted with the risk of carbon leakage. Countries with strict climate regulations (e.g., the European Union) fear their industries will lose competitiveness or be forced to relocate to countries with loose regulations (such as Indonesia). To address this risk, the European Union has implemented the Carbon Border Adjustment Mechanism (CBAM) (Akkaya & Bakkal, 2020). Simply put, CBAM is a "carbon import tariff." This tariff will be imposed on energy-intensive products (such as steel, cement, fertilizer, aluminum) imported by the European Union from other countries (including Indonesia). The condition is that the country does not have a domestic carbon price equivalent to the European Union's carbon price.

The presence of CBAM fundamentally alters the global fiscal policy landscape. This policy also situates the MVF Tax reformulation in DKI Jakarta within a broader, more urgent context. CBAM effectively exports the European Union's carbon pricing policy to all its trading partners (Firdausy et al., 2025). It creates very strong external pressure for Indonesia to immediately adopt national carbon pricing, not merely sectoral (Coal-Fired Power Plants/PLTU) or regional (DKI Jakarta). If Indonesia fails to implement a credible domestic carbon price, Indonesia's superior export products will be subject to high carbon import duties by the European Union. This directly lowers Indonesia's international trade competitiveness.

This analysis leads to a final synthesis. The DKI Jakarta initiative to reformulate MVF Tax (driven by Law Number 32 of 2009) can be viewed as a crucial policy laboratory. This laboratory functions to test bottom-up carbon tax implementation in Indonesia. However, comparisons with successful countries, such as Sweden or Finland, indicate that the effectiveness of this instrument lies in its uniform implementation at the national level (Barus & Wijaya, 2021). The greatest juridical challenge for Indonesia is to synthesize these two pressures. The method is to use the DKI regional initiative as momentum to accelerate the adoption of a comprehensive national carbon pricing policy (as mandated facultatively by Law Number 7 of 2021). It is this national policy that will ultimately serve as the single solution for both leakage problems. This solution will: (1) resolve the fuel leakage problem at the regional level (by enforcing uniform rates in Jabodetabek),

and (2) resolve the carbon leakage problem at the international level (by providing a credible domestic carbon price signal to respond to CBAM) (Tjoanto & Tambunan, 2022; Solahudin, 2025).

## CONCLUSIONS AND SUGGESTIONS

Based on the results and discussion, it is concluded that reformulating the Motor Vehicle Fuel Tax (MVF Tax) into a carbon tax in DKI Jakarta faces layered, complex legal challenges. The first conclusion (addressing the first objective) asserts that, *de jure*, the administrative authority (State Administrative Law) to conduct such reformulation is available. The Provincial Government of DKI Jakarta can utilize the imperative ecological mandate under Article 42 and Article 43 of Law Number 32 of 2009 as the legal basis (*lex specialis*). This basis is utilized to transform the MVF Tax basis from "selling value" (as regulated in Article 25 of Law Number 1 of 2022 and Article 23 of DKI Jakarta Provincial Regulation Number 1 of 2024) to "emission content." However, the analysis finds that this policy is, in practice, unimplementable. This policy cannot be implemented due to an acute internal policy paradox. The Decree of the Governor of DKI Jakarta Number 542 of 2025 grants incentives (MVF Tax reduction) that are philosophically and legally inconsistent with the disincentive mandate of Law Number 32 of 2009. Consequently, this creates legal uncertainty and a condition of administrative default.

The second conclusion (addressing the second objective) demonstrates that the alignment model of MVF Tax reformulation with international legal obligations is achievable but conditional. Compliance with Article 6 of the Paris Agreement under Law Number 16 of 2016 demands carbon accounting integrity to avoid double-counting. The *sine qua non* for this regional mitigation action to be validly recognized in Indonesia's NDC is its integration into the national Monitoring, Reporting, and Verification (MRV) mechanism. The revision of the Provincial Regulation is insufficient if it merely changes the tax basis. This revision must contain imperative clauses mandating the reporting and verification of mitigation actions through the National Registry System for Climate Change Control (SRN-PPI).

The third conclusion (addressing the third objective) asserts that implementing risk mitigation strategies is necessary to ensure policy sustainability and justice. To address social impact risks (policy regressivity), the revenue allocation (revenue recycling) mechanism (specifically earmarking) must be applied imperatively at the regional level. This application must not be merely facultative, as in Law Number 7 of 2021. This design is essential to guarantee intra-generational justice by dedicating pollution tax revenue to subsidize affordable public transportation. Furthermore, to address economic risks arising from fiscal leakage (fuel leakage) to buffer zones (Bodetabek), inter-regional fiscal policy coordination is required. This coordination

is facilitated by the Central Government through the harmonization authority under Law Number 1 of 2022, which is also aligned with global external pressure (the Carbon Border Adjustment Mechanism/CBAM).

Based on these three conclusions, several suggestions are formulated. For the Provincial Government of DKI Jakarta, it is suggested to: *First*, immediately conduct a juridical evaluation and revocation of the Decree of the Governor of DKI Jakarta Number 542 of 2025. It is a mandatory prerequisite for eliminating the internal policy paradox and restoring legal certainty. *Second*, after the paradox is resolved, the Provincial Government of DKI Jakarta can initiate the revision of DKI Jakarta Provincial Regulation Number 1 of 2024, supported by a robust Academic Draft. This Academic Draft must explicitly: (a) change the MVF Tax imposition basis from "selling value" to "emission content" (executing the mandate of Law Number 32 of 2009); (b) mandate MRV reporting integration into SRN-PPI (fulfilling international compliance); and (c) establish a transparent and accountable earmarking scheme for public transportation subsidies (guaranteeing social justice).

For the Central Government (Ministry of Finance and Ministry of Environment and Forestry/KLHK), it is suggested that *first*, strengthen the SRN-PPI regulatory framework to integrate sub-national mitigation actions to avoid double-counting. *Second*, use the authority under Law Number 1 of 2022 to proactively facilitate inter-regional fiscal coordination (at a minimum, Jabodetabek). The objective is to prevent regulatory arbitrage and fuel leakage that could undermine the effectiveness of national policy. For future research, it is suggested that empirical-quantitative studies be conducted to model price elasticity and the economic impacts of various carbon tax rate scenarios in DKI Jakarta. This study is also expected to design the most effective social compensation schemes for vulnerable groups.

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