

Legal Policies on Financial and Economic Support for Enterprises to Promote Environmentally Sound Plastic Waste Recycling in Vietnam Today

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Abstract: This article examines the current state of, and proposes improvements to, legal policies on financial and economic support designed to encourage enterprises in Vietnam to recycle plastic waste in an environmentally sound manner. It focuses on three principal groups of instruments: tax and fee incentives; financial support and green credit; and green tendering and public procurement of recycled products. The analysis finds that Vietnam has begun to establish a legal framework to encourage investment, facilitate access to finance, and develop markets for recycled products. However, the relevant policies remain fragmented and are primarily based on the field of investment rather than environmental outcomes. Criteria for identifying green recycling projects and products are not yet consistent; links with extended producer responsibility (EPR) remain limited; mechanisms for risk sharing, verification, monitoring, and effectiveness assessment are incomplete; and green public procurement has yet to generate stable market demand. Accordingly, the article proposes shifting to support based on environmental outcomes; establishing consistent legal criteria and a unified database; developing dedicated green credit and risk-sharing mechanisms; strengthening coordination with EPR; incorporating environmental criteria and life-cycle costs into public procurement; and improving mechanisms for policy verification, monitoring, and evaluation. These measures seek to establish a coherent policy mix that helps reduce investment costs, expand financing flows, create markets, and advance the circular economy.

Keywords: legal policies; financial and economic support; plastic waste recycling; green credit; green public procurement; extended producer responsibility; circular economy.

1. Introduction

Plastic waste pollution is not only a waste management issue; it also reflects the limitations of market mechanisms in allocating the costs and benefits arising throughout a product's life cycle. In a linear economy, the price of a plastic product may not fully reflect the environmental costs associated with its production, consumption, collection, and post-use treatment. Recycling, by contrast, may generate external benefits, such as reducing the amount of waste requiring treatment, conserving resources, and partially replacing virgin materials, while recycling enterprises directly bear the costs of collection, sorting, technology, and quality control (Kinnaman, 2016; Larrain et al., 2021). The divergence between private costs and social benefits may result in levels of investment and recycling below the socially optimal level, thereby providing an economic rationale for state intervention through taxes, fees, deposit-refund schemes, extended producer responsibility (EPR), and measures supporting markets for recycled materials (Atri & Schellberg, 1995; OECD, 2022a, 2022b).

This issue warrants particular attention in Vietnam. A World Bank market study found that, in 2019, Vietnam recycled only approximately 33% of the total volume of the four main types of plastic examined. Approximately 75% of the material value of these plastics—equivalent to USD 2.2–2.9 billion annually—was lost because some 2.62 million tonnes of plastic were not recycled into valuable materials (World Bank, 2021). Another study estimated that Vietnam generates approximately 3.1 million tonnes of plastic waste on land each year, at least 10% of which leaks into waterways (World Bank, 2022). These figures indicate that Vietnam's challenge concerns not only the volume of plastic waste generated but also its ability to recover the economic value of materials after use.

From a law and economics perspective, recycling enterprises simultaneously face high costs of investing in technology, inconsistent quality of input materials, limited access to finance, and uncertainty in downstream markets. Meanwhile, recycled products must compete with products made from virgin materials whose prices do not fully reflect environmental costs across their life cycle. Unless the incentives established by law change this cost-benefit relationship, enterprises are unlikely to have sufficient motivation to invest in recycling technology over the long term. The key question, therefore, is not merely whether the State has adopted support policies, but whether those policies actually influence recycling enterprises' investment decisions, access to finance, and markets for their products.

International studies suggest that no single instrument can fully address the market failures affecting plastic recycling. Regulatory effectiveness depends on the consistency, comprehensiveness, and coordination of

the policy mix across the entire product life cycle. Research on plastics policy in the European Union indicates that a lack of coordination among regulatory instruments, gaps in measures to stimulate demand for recycled materials, and inconsistent standards for determining recycled content may impede the transition to a circular economy (Eckert et al., 2024). Empirical research in Japan also suggests that recycling legislation can increase the proportion of recycled plastic used in products, although the extent of its effect depends on instruments that directly promote demand for recycled materials (Kumamaru & Takeuchi, 2023). The central issue, therefore, is not the number of policies, but the quality of their design, their coordination, and their ability to create sufficiently clear economic signals to influence market behaviour.

In Vietnam, the 2020 Law on Environmental Protection established a legal basis for the circular economy, extended producer responsibility, and the use of economic instruments in environmental protection. The 2020 Law on Investment and the laws governing taxation, credit, procurement, and the management of public assets have also gradually established support mechanisms for environmental protection and waste recycling activities. In addition, the National Green Growth Strategy and the Scheme for the Development of the Circular Economy in Vietnam identify the need to mobilise financial resources, promote sustainable production and consumption, and develop markets for circular products. These instruments, however, fall within different areas of law and have distinct beneficiaries, eligibility requirements, and implementation mechanisms. The question is whether they have formed a coherent policy mix or continue to operate in a relatively fragmented manner.

Among the materials reviewed, most studies on plastic waste in Vietnam focus on the scale of pollution, the plastics value chain, waste management, extended producer responsibility (EPR), or technical barriers to recycling. Few legal studies examine together the three groups of instruments that directly affect recycling enterprises' investment decisions and viability: tax and fee incentives; financial support and green credit; and green tendering and public procurement. This gap calls for an integrated legal policy analysis. Reducing investment costs without improving access to finance may be insufficient; likewise, providing finance without establishing a stable market for recycled products is unlikely to encourage long-term investment.

Accordingly, this article addresses three research questions. First, what financial and economic support mechanisms do current laws and policies provide for enterprises that recycle plastic waste? Second, do the limitations in the design and implementation of these instruments concern the level of incentives, eligibility requirements, or a lack of coordination among policies? Third, how should the law be improved so that taxes, fees, green credit, and public procurement form a policy mix capable of reducing investment costs, sharing risks, and creating a market for recycled products?

To address these questions, the article employs legal analysis to identify the substance of, relationships among, and gaps in current provisions. It uses deductive reasoning to apply theories of market failure, environmental externalities, and transaction costs to the assessment of policy design; inductive reasoning to draw broader conclusions from the implementation of the law; and comparative legal analysis to examine, selectively, the experience of the European Union and findings from international studies. The comparative analysis does not seek to replicate foreign models mechanically. Instead, it identifies design principles that may be relevant to Vietnam, taking account of its institutional conditions, administrative capacity, and the stage of development of its recycling market.

The article's contribution is an analytical framework for financial and economic support policies based on three types of effect: reducing investment costs through taxes and fees; improving access to finance and sharing risks through financial support and green credit; and generating market demand through green tendering and public procurement. Using this framework, the article assesses each instrument's consistency, accessibility, verifiability, and ability to influence behaviour. It then proposes legal reforms that would shift support from eligibility based on the field of investment towards support linked to environmental outcomes, strengthen coordination with EPR, reduce institutional transaction costs, and develop a stable market for recycled products.

2. Discussion

2.1. Current legal policies on tax and fee incentives for enterprises engaged in environmentally sound plastic waste recycling in Vietnam

In policies aimed at developing a circular economy, taxes and fees can be designed not only to generate revenue but also to send price signals that change the relative costs of production, investment, and consumption choices, thereby encouraging more efficient resource use and reducing environmental impacts (Milios, 2021). Unlike traditional environmental regulation, which relies primarily on administrative *command-and-control* measures, fiscal instruments are designed to affect enterprises' cost-benefit structures directly, encouraging them to choose production and business practices with better environmental outcomes. The OECD (2022) identifies the environmental impacts of plastics as negative externalities and proposes a range of policy instruments to curb pollution, encourage recycling, and improve the competitiveness of recycled plastics. UNEP

FI (2023) observes that charges, taxes, and fees designed to reflect environmental and socioeconomic costs not yet included in prices can help sustainable alternatives compete with virgin plastic production. As regards policy coordination, UNEP (2023) proposes combining design rules that improve recyclability, recycled-content targets, and fiscal incentives for recycling facilities. The OECD (2022) also examines the roles of extended producer responsibility (EPR), recycled-content targets, and adjustments to EPR fees in promoting circularity across the plastics value chain.

From a law and economics perspective, the plastic recycling market can be analysed through the framework of market failure: the price of virgin plastic does not fully reflect its environmental costs, while the price of recycled materials does not necessarily cover the full cost of producing them (OECD, 2022). Recycling involves collection, sorting, transportation, and processing costs, as well as barriers relating to prices, market demand, traceability, and investment in technology (OECD, 2022; Milios et al., 2018). Reducing pollution and the use of virgin resources can generate environmental benefits beyond the revenues earned by participants in the recycling value chain (OECD, 2022). If the State does not use taxes and fees to adjust the *incentive structure*, enterprises will tend to choose the lower-cost investment option of using virgin plastic rather than recycled materials. This conclusion has also been affirmed by a number of international studies examining the development of the recycling industry in the European Union. These studies emphasise that the central issue is not a lack of technology, but a lack of sufficiently strong economic signals to change enterprises' investment behaviour.

a) Current design of legal policies on tax and fee incentives

In Vietnam, tax incentives for enterprises that recycle plastic waste are not set out in a single sector-specific statute. Rather, they are structured as an integrated legal policy. This approach reflects a feature of modern environmental law: environmental protection objectives are incorporated into legislation governing investment, taxation, land, and scientific and technological development.

The policy's foundation is established, first and foremost, in the 2020 Law on Environmental Protection. Whereas the 2014 Law on Environmental Protection focused primarily on pollution control and waste treatment, the 2020 Law places greater emphasis on product life-cycle governance and the development of a circular economy. Article 5 sets out the principle of using economic instruments in environmental protection; Article 141 addresses the development of a circular economy; and Article 142 provides that the State encourages waste reuse and recycling and applies incentives under the laws governing investment, taxation, land, and credit. As a matter of legislative policy, waste recycling is therefore no longer regarded solely as a waste treatment activity, but is also recognised as an investment activity that the State seeks to encourage through economic instruments.

On that basis, the 2020 Law on Investment and its implementing instruments include waste collection, treatment, and recycling in the list of sectors and activities eligible for investment incentives. This provides a legal basis for enterprises that meet statutory requirements to receive corporate income tax incentives, exemptions or reductions in land rent, credit incentives, and other investment support. A notable feature of current investment incentive policy is that it seeks not only to address pollution but also to encourage technological innovation, efficient resource use, and the development of a circular economy, in line with the European Union's legislative direction following the adoption of the Circular Economy Action Plan.

The law on corporate income tax also maintains incentives for projects in the environmental protection sector and in sectors and activities eligible for investment incentives. Enterprises investing in waste treatment and recycling projects may, if they satisfy the requirements of investment law, qualify for preferential tax rates or tax exemptions or reductions for specified periods under the Law on Corporate Income Tax and its implementing decrees. The 2016 Law on Export and Import Duties and its implementing instruments also provide a basis for exempting from import duty machinery and equipment used to create fixed assets for projects eligible for investment incentives, subject to statutory conditions. This mechanism is particularly significant for recycling enterprises because many high-quality mechanical recycling lines, chemical recycling technologies, automated sorting systems using artificial intelligence, and modern emissions treatment systems still depend on imported equipment.

From a policy design perspective, Vietnam has gradually developed a relatively comprehensive legal framework for fiscal incentives for environmental protection and waste recycling activities. Compared with the period before 2020, there has been a fundamental shift in policy thinking: from granting incentives for pollution treatment activities towards encouraging investment in a circular economy. This change is consistent with an international legislative trend in which fiscal instruments are intended not only to reduce investment costs but also to promote innovation, extend the useful life of materials, and develop markets for secondary raw materials.

Nevertheless, a fundamental question arises when policy objectives are compared with the structure of current law: have existing tax incentives actually been designed to encourage enterprises to invest in plastic

recycling, or do they merely provide general incentives for environmental protection projects? This question informs the assessment of gaps in legal policy design in the following section.

b) Current gaps in the design of legal policies on tax and fee incentives for plastic waste recycling enterprises

Although Vietnam's legal policies have gradually established a framework of tax and fee incentives for environmental protection activities, the development of a plastic recycling industry within a circular economy raises a fundamental question: are existing incentives genuinely designed to motivate recycling enterprises, or do they provide only general support for environmental protection projects?

This is not merely a question of the level of incentives; it is a question of *legal policy design*. Experience in the European Union suggests that the effectiveness of fiscal policy depends less on the scale of incentives than on whether those incentives generate market signals strong enough to change enterprises' investment decisions. Accordingly, recent studies have shifted their focus from asking "Are incentives available?" to asking "Do the incentives change enterprise behaviour?"

First, current legal policies grant incentives on the basis of the field of investment rather than environmental and circularity outcomes

A defining feature of Vietnam's tax incentive policies is their reliance on sectors and activities eligible for investment incentives. Under the 2020 Law on Investment and related provisions, enterprises engaged in waste collection, treatment, and recycling operate in a sector eligible for investment incentives. This approach has the advantage of providing a common legal basis for enterprises to access tax, land, and credit incentives.

From a circular economy perspective, however, these incentives are based more on the nature of the activity undertaken (*input-based incentives*) than on its results (*outcome-based incentives*). In other words, the law primarily grants incentives because an enterprise engages in recycling, rather than according to the extent of its actual contribution to environmental objectives.

At present, the law does not provide for tax incentives linked to criteria such as the proportion of recycled plastic used in products; actual recovery and recycling rates; reductions in greenhouse gas emissions; savings in virgin resources; or the amount of recycled material returned to production cycles.

Under EU circular economy policy, certain financial obligations within extended producer responsibility schemes are designed to take account of product or packaging characteristics, including reusability, recyclability, and recycled content. This approach creates economic signals linked to a product's environmental characteristics, rather than determining obligations solely by the type of product placed on the market (Directive (EU) 2018/851; Regulation (EU) 2025/40).

From a law and economics perspective, this is a significant limitation: the incentives established by law are not sufficiently strong to encourage enterprises to maximise recycling performance. If the level of an incentive does not vary with environmental outcomes, an enterprise has less reason to continue investing in advanced technology once its project meets the minimum eligibility requirements.

Second, tax incentives have not been fully integrated with extended producer responsibility (EPR)

The 2020 Law on Environmental Protection established extended producer responsibility (EPR) as an important instrument for internalising environmental costs and promoting the circular economy. From a legal policy perspective, however, EPR and current tax incentives continue to operate relatively independently. Producers or importers that perform their EPR recycling obligations effectively do not have a mechanism for receiving corresponding tax incentives. Conversely, enterprises that invest in modern recycling technology do not directly benefit from improvements in the system-wide implementation of EPR. Although these instruments pursue the shared objective of developing a circular economy, they have not been designed to operate in a mutually reinforcing manner (*policy coherence*).

European circular economy policy experience suggests that EPR should be considered alongside complementary measures addressing both supply and demand. Research proposes combining EPR with requirements concerning product characteristics and recycled content, economic measures, and green public procurement to improve investment conditions and expand markets for secondary materials (Milios, 2018).

Third, the fragmented structure of incentive policies increases institutional transaction costs

A systemic limitation of the current legal framework is that provisions on incentives for recycling enterprises are dispersed across several statutes, including the Law on Environmental Protection, the Law on Investment, the Law on Corporate Income Tax, the Law on Export and Import Duties, legislation on land and on science and technology, and their implementing instruments. From a public administration perspective, this dispersion reflects the cross-sectoral nature of the legal system. Viewed through Douglass North's account of

institutions,[1] however, dispersed provisions increase enterprises' *institutional transaction costs*. To qualify for incentives, enterprises must identify multiple legal bases and complete administrative procedures before different regulatory authorities. This raises a question: if the cost of accessing a policy exceeds the benefit an enterprise receives, does the policy retain its incentive effect? This is the paradox identified in a number of international studies: a system of incentives may be formally comprehensive yet ineffective when transaction costs are too high.

Fourth, environmental fee policies remain more focused on regulating conduct than on encouraging recycling

In the theory of environmental economic instruments, taxes and fees may serve two distinct functions. They can increase the cost of polluting activities, acting as a *disincentive*, or they can be designed to encourage environmentally beneficial conduct through *positive incentives*.

In Vietnam, environmental fees currently serve primarily to cover the costs of pollution management and treatment or to regulate activities that adversely affect the environment. By contrast, fee reductions, refunds, or rates adjusted according to recycling performance, material recovery rates, or the use of recycled materials have not yet been established as a distinct policy.

As a result, fees have played a stronger deterrent role than an incentive role. Research on the circular economy, meanwhile, suggests that fiscal policy must send two signals at once to promote the recycling industry: it must increase the cost of the linear economic model and reduce the cost of the circular economic model.

Overall assessment: The preceding analysis points to a fundamental conclusion: the principal limitation of Vietnam's current legal policies lies less in the absence of tax and fee incentive instruments than in their structure and design. The legal framework has begun to encourage enterprise investment in recycling through investment and tax incentives and incentives for importing equipment. These policies, however, remain primarily project-based rather than linked to environmental performance. They are insufficiently integrated with extended producer responsibility (EPR), have not fully established the economic signals needed to develop markets for recycled materials, and have not substantially reduced enterprises' transaction costs. These gaps in policy design help explain why a considerable distance remains between circular economy objectives and enterprises' actual investment decisions in Vietnam.

c) Causes of the limitations in legal policies on tax and fee incentives for enterprises engaged in environmentally sound plastic waste recycling

The limitations in the design and implementation of tax and fee incentive policies for plastic waste recycling enterprises are not isolated problems. They reflect the transition of Vietnam's legal system from a traditional environmental management model towards governance based on circular economy principles. The principal causes identified from the preceding analysis are as follows.

First, the design of fiscal incentive policies continues to draw primarily on the traditional investment incentive model and has not fully shifted towards encouraging a circular economy.

This is a fundamental cause shaping the structure of current tax incentives. For many years, Vietnam's investment incentives were designed to attract capital to priority sectors and activities. Eligibility was therefore determined mainly by the field of investment, investment location, or project size. When the 2020 Law on Environmental Protection established the circular economy as a development objective, tax incentives were extended to waste recycling activities, but their underlying design continued to follow the traditional investment incentive model. Enterprises consequently qualify for incentives primarily because they operate in the environmental protection sector, rather than on the basis of their actual contribution to resource circularity, emissions reduction, or higher recycling rates.

This incomplete shift has created a gap between circular economy policy objectives and fiscal incentive mechanisms, preventing tax measures from fully encouraging enterprises to innovate and improve recycling performance. International studies assessing the transition to a circular economy have also identified this issue, suggesting that the effectiveness of fiscal incentives depends more on environmental outcomes than on the characteristics of an investment project alone.

Second, the legal framework for the circular economy remains at an early stage of development, resulting in a lack of coordination among related legal policies.

The 2020 Law on Environmental Protection was the first to provide relatively comprehensive provisions on the circular economy and extended producer responsibility (EPR). However, many related areas of law—

including taxation, investment, procurement, science and technology, and technical standards and regulations—have not been revised in a coordinated manner to reflect this new direction. Thus, although the objective of developing a circular economy has been established in environmental law, fiscal instruments continue to be designed largely according to the logic of the earlier investment incentive system.

In other words, environmental law has developed faster than financial and investment law has adapted, leaving incentive policies without a unified framework.

Third, legal policies have not been developed on the basis of sufficiently comprehensive market signals and data on the recycling value chain.

A defining feature of the plastic recycling industry is that returns on investment are strongly affected by the prices of virgin and recycled materials, the costs of collection, sorting, and logistics, and the ability to sell recycled products. In designing tax and fee incentives, however, the current legal framework has approached recycling primarily as an investment activity, without adequately accounting for the operation of recycled-material markets.

Consequently, incentive policies have not generated **economic signals strong enough** to change enterprises' investment behaviour. EU circular economy studies likewise conclude that fiscal policies can be effective only when designed alongside measures to develop secondary-material markets and expand demand for recycled products.

Fourth, coordination among state authorities in the design and implementation of these policies remains insufficient.

Tax and fee incentives involve finance, investment, the environment, science and technology, customs, and land administration. Yet policies are still largely designed and implemented within the remit of individual sectors and authorities, while mechanisms for coordination across sectors remain limited. As a result, policies have been adopted without establishing adequate links among tax incentives, green credit, EPR, recycled-product standards, and green public procurement.

From a public governance perspective, this is a form of *institutional fragmentation*. It weakens policy coordination and limits the development of a coherent legal framework for the recycling industry.

Fifth, the standards, databases, and environmental performance assessment mechanisms needed to apply incentive policies remain incomplete.

Moving from incentives based on the field of investment to incentives based on environmental performance requires quantitative criteria for recycling rates, recycled content, greenhouse gas emissions reductions, and resource-use efficiency. At present, these criteria have not been established comprehensively or consistently, and data on recycling activities and recycled-material markets remain dispersed.

This makes it difficult for state authorities to quantify each enterprise's environmental performance and limits their ability to design incentives based on achieved outcomes.

Overview of the causes: The limitations of tax and fee incentive policies for plastic waste recycling enterprises stem primarily from the quality of legal policy design and the degree of coordination within the institutional framework, rather than from an absence of policies. The shift from traditional investment incentives towards circular economy incentives remains at an early stage. Weak links between environmental law and the laws governing taxation, investment, and finance, together with the lack of assessment criteria based on environmental performance and market signals, have reduced the effectiveness of tax and fee incentives in encouraging recycling enterprises to invest.

2.2. Current legal policies on financial support and green credit for enterprises engaged in environmentally sound plastic waste recycling in Vietnam

While tax and fee incentives serve to reduce enterprises' investment and production costs, financial support and green credit policies address a more fundamental barrier: access to the capital needed for technological transition and the development of the recycling industry. Some green projects have high upfront investment costs and long payback periods, which may lead lenders to view them as riskier. Empirical research also finds that financially constrained enterprises undertake fewer green investment measures (Kalantzis et al., 2022).[1] In the case of nature-based solutions, public benefits do not necessarily translate into revenue for project developers, potentially limiting their ability to mobilise private capital (Valero Freitag et al., 2024).[2] Accordingly, without public financing and green credit mechanisms to share investment risks, recycling enterprises may find it very difficult to secure capital to upgrade technology, expand production, or develop

recycling models based on circular economy principles. This is also why the OECD, UNEP, and many developed countries regard green finance as a pillar of circular economy and green transition policies.

a) Current design of legal policies on financial support and green credit

Unlike some countries that have enacted dedicated legislation on green finance or green investment, Vietnam does not currently have a specific statute governing green finance for waste recycling enterprises in general or plastic waste recycling enterprises in particular. Instead, financial support policies follow an *integrated legal model*, with provisions dispersed across legislation on the environment, investment, credit, banking, and sustainable development.

As regards environmental policy, the 2020 Law on Environmental Protection marked an important shift by establishing, for the first time, a legal basis for mobilising financial resources for environmental protection and the development of a circular economy. In addition to providing for the use of economic instruments in environmental protection, the Law states that the State encourages investment in waste reuse and recycling, the development of environmental technologies, and the circular economy, while providing incentives and support under the laws governing investment, taxation, credit, and land. This is a significant development compared with the 2014 Law on Environmental Protection: it reflects a shift from managing waste towards creating financial conditions for the development of the recycling industry.

On the basis of the 2020 Law on Environmental Protection, Decree No. 08/2022/ND-CP and [Decree No. 05/2025/ND-CP, which amends Decree No. 08/2022/ND-CP](#), elaborate on a number of matters concerning the circular economy, extended producer responsibility (EPR), activities eligible for environmental incentives and support, and mechanisms for mobilising social resources for environmental investment. In particular, these decrees extend the range of projects eligible for incentives to include projects involving waste collection, sorting, recycling, and treatment that meet environmental protection requirements. They primarily establish a legal framework for investment support, however, rather than a dedicated financing mechanism for plastic recycling enterprises.

The Vietnam Environment Protection Fund, established and operating under government regulations, also remains an important public financing instrument for environmental protection projects. Under current provisions, the Fund may provide preferential loans, post-investment interest support, grants, and co-financing for programmes and projects that meet environmental protection criteria. As a matter of law, projects to build waste treatment facilities, recycle waste, or manufacture environmental protection equipment may qualify for Fund financing if they meet the prescribed conditions. This indicates that the State has gradually developed a public financing institution to support enterprise investment in the environmental sector.

Alongside public financing, legal policies on green credit have gradually developed through instruments issued by the State Bank of Vietnam. In recent years, the State Bank has issued instruments encouraging credit institutions to increase lending to green projects, incorporate environmental and social considerations into lending, and progressively manage environmental risks associated with loans. The National Green Growth Strategy and the Scheme for the Development of the Circular Economy also identify green finance and green credit as key measures for mobilising non-state resources to support a transition in the growth model.

From a legal policy design perspective, Vietnam has established the principal components of a green finance system: (i) a legal basis for environmental investment incentives; (ii) a public financing institution in the form of the Vietnam Environment Protection Fund; (iii) a policy direction for developing green credit within the banking system; and (iv) national strategies on green growth and the circular economy. This represents a significant step in legislative thinking, from direct state investment in environmental protection towards the use of financial instruments to mobilise non-state resources and direct investment capital towards green activities.

Against the requirements of developing a plastic waste recycling industry based on circular economy principles, however, a legal policy question remains: has the current green finance system actually been designed to meet the needs of plastic recycling enterprises, or does it provide only general support for environmental protection projects?

The answer will reveal gaps in legal policy design and help explain why many recycling enterprises, particularly small and medium-sized enterprises, continue to face practical difficulties in accessing capital despite the gradual development of the legal framework for green finance.

b) Current implementation of legal policies on financial support and green credit for enterprises engaged in environmentally sound plastic waste recycling in Vietnam

In terms of institutional design, Vietnam has gradually established a relatively comprehensive legal and policy framework for mobilising financial resources for environmental protection, green growth, and the development of a circular economy. In terms of *policy implementation*, however, the effectiveness of financial support and green credit mechanisms for plastic waste recycling enterprises remains considerably below the

objectives of the legislation. This gap illustrates the distinction between *law in books* and *law in action*, a phenomenon identified in many studies of environmental governance and the circular economy.

In practice, financial support for recycling enterprises is provided primarily through three channels: (i) lending by credit institutions; (ii) preferential financing from the Vietnam Environment Protection Fund and certain local environment protection funds; and (iii) international financing, official development assistance (ODA), and green development support programmes. Although the legal framework enables enterprises to seek financing through these channels, the extent to which plastic recycling enterprises have benefited from them remains relatively modest.

First, legal policies provide a basis for green credit but have not established a dedicated credit mechanism for plastic recycling enterprises.

A positive feature of current policy is that the State Bank of Vietnam has gradually directed credit institutions to expand lending to green sectors and incorporate environmental and social considerations into lending activities. This provides an important basis for commercial banks to develop green credit products and give priority to financing environmental protection projects. From a legal policy perspective, however, green credit remains primarily a policy direction; it has not been institutionalised as a mandatory incentive mechanism or a dedicated credit programme for plastic waste recycling enterprises.

The law does not yet establish uniform criteria for identifying plastic recycling projects eligible for green credit, a mechanism for sharing credit risk between the State and credit institutions, or preferential interest rates or dedicated credit limits for the plastic recycling sector. Consequently, access to green credit in practice depends largely on each credit institution's business policies and risk appetite. Green credit policy has therefore not fully served as a legal instrument for encouraging investment in the recycling industry.

Second, the Vietnam Environment Protection Fund has helped finance environmental projects, but its support for the plastic recycling sector remains limited.

Under current provisions, the Vietnam Environment Protection Fund may provide preferential loans, post-investment interest support, and grants to environmental protection projects that meet statutory requirements. It is an important public financing institution that helps diversify sources of investment capital for waste treatment, energy efficiency, and cleaner production.

From the perspective of developing the plastic recycling sector, however, current legal policies do not establish a dedicated financing mechanism within the Fund for plastic recycling or the development of recycled materials. Plastic recycling projects must compete with various other environmental projects for preferential financing. This reduces the ability to concentrate resources on a sector identified as a priority for the development of a circular economy.

Furthermore, access to Fund financing requires enterprises to satisfy several requirements concerning legal documentation, financial plans, and environmental effectiveness. Meeting all these requirements remains a significant challenge for many small and medium-sized enterprises, which account for a substantial share of Vietnam's plastic recycling sector.

Third, financing generated through extended producer responsibility (EPR) has begun to provide additional resources for recycling but has not fully realised its capacity to support enterprises.

The implementation of EPR under the 2020 Law on Environmental Protection represents an important development in legal policies on environmental finance. For the first time, financial responsibility for recycling has shifted in part from the state budget to producers and importers through obligations either to organise recycling or to make financial contributions in support of recycling.

Because this mechanism has only recently been implemented, however, EPR-derived financial resources are still being established and have not yet had a clearly discernible effect on recycling enterprises' investment capacity. Current law also does not establish a mechanism for prioritising the use of EPR contributions for projects involving recycling technology upgrades, research and development, or the development of plastic recycling infrastructure. The link between EPR and financial support policy therefore remains limited.

Fourth, recycling enterprises continue to face considerable difficulties in accessing green finance.

Although the legal framework has expanded financing channels for environmental protection, many plastic recycling enterprises—particularly small and medium-sized enterprises—still find it difficult in practice to access preferential financing. The causes include not only enterprises' limited financial capacity but also the framework-level nature of current support policies. Criteria for identifying green projects, appraisal procedures, and coordination mechanisms among regulatory authorities and credit institutions remain insufficiently consistent.

From a law and economics perspective, this indicates that *institutional transaction costs* associated with accessing finance remain high. Enterprises must devote substantial time, personnel, and financial resources to meeting financing requirements, while the support received may be insufficient to offset the costs incurred. Consequently, green finance policies have had less influence on decisions to invest in recycling technology than legislators envisaged.

c) Causes of the limitations in legal policies on financial support and green credit

The limitations discussed above do not reflect an absence of legal policies. They arise primarily from the quality of institutional design and the degree of coordination across the policy framework.

First, green finance policy in Vietnam is still moving from broad policy directions towards implementation through specific legal instruments. Although several national strategies identify green finance as a key measure, progress has been slow in translating that direction into mandatory incentive mechanisms, consistent legal criteria, and dedicated support instruments for the recycling industry. This has created a gap between policy objectives and enterprises' ability to access support.

Second, financial support policies remain broadly framed for environmental protection as a whole and do not fully reflect the particular characteristics of plastic recycling. Existing instruments mainly address environmental projects in general, whereas plastic recycling has its own value-chain characteristics, fluctuations in recycled-material markets, technological innovation requirements, and long payback periods. The lack of dedicated financing mechanisms reduces the ability of these policies to encourage recycling enterprises to invest.

Third, financial support, green credit, extended producer responsibility (EPR), and technological innovation policies are not adequately coordinated. Although these instruments share the objective of developing a circular economy, they continue to be designed and implemented under different administrative mechanisms rather than as a coherent policy framework. This *institutional fragmentation* weakens the coordination of resources and limits the development of stable financing flows for the recycling industry.

Fourth, criteria for identifying green projects and databases used in credit appraisal are still being developed. Credit institutions therefore face difficulties in assessing the risks and environmental performance of recycling projects. Without comprehensive standards and data, credit institutions tend to apply conventional lending criteria, which restrict recycling enterprises' access to capital, particularly that of small and medium-sized enterprises.

The principal cause of the limitations in legal policies on financial support and green credit is therefore neither a lack of policy direction nor a lack of legal instruments. It lies in the extent to which policy directions have been translated into legal mechanisms capable of operating effectively, and in the lack of coordination among financial, investment, and credit instruments and circular economy policies. This gap has prevented green finance policy from fully encouraging enterprises to invest in modern, environmentally sound plastic waste recycling.

2.3. Current legal policies on green tendering and public procurement of recycled products to encourage environmentally sound plastic waste recycling by enterprises in Vietnam

While tax incentives and green credit policies aim to reduce investment costs, green tendering and public procurement policies aim to create markets for recycled products. These two groups of policies complement each other, addressing both the supply and demand sides of the recycled-material market. The European Union, the OECD, and many developed countries are also applying this policy approach to promote the circular economy.

From a law and economics perspective, high production costs are not the only reason enterprises may hesitate to invest in recycling; uncertainty in downstream markets is another. When recycled products compete directly with products made from virgin materials, enterprises often find it difficult to forecast sales, particularly during the early stages of the transition to a circular economy. Where the market does not generate demand for recycled products on its own, the State needs to use its purchasing power to address *market failure* and provide enterprises with a stable investment signal.

Studies of circular public procurement regard public demand for circular products and materials as a means of influencing markets and creating opportunities for innovation. Its effectiveness depends on how procurement requirements are formulated and how public purchasers coordinate with suppliers (Ntsondé & Aggeri, 2021).[1]

a) Current design of legal policies on green tendering and public procurement of recycled products

During the transition to a circular economy, green public procurement (GPP) is regarded as a policy instrument that can increase demand for secondary materials, including recycled plastic (OECD, 2022). In the

EU, research also examines the integration of circularity requirements into GPP procedures as a way to guide procurement practices and engagement with enterprises (Tátrai & Diófási-Kovács, 2021).[2] Unlike tax incentives or credit support, which primarily affect investment costs, GPP directly affects the prospects for selling products. It can therefore provide a stable market signal that encourages enterprises to invest in modern recycling technology and improve product quality. This approach has been recommended by the OECD, UNEP, and the European Union in their work on the circular economy and the development of recycled-material markets.

In Vietnam, legal policies on GPP have not been established as an independent body of law. Instead, they have developed through the interaction of procurement law, environmental protection law, and national strategies and programmes on green growth, the circular economy, and sustainable production and consumption. This reflects Vietnam's policy choice to incorporate environmental objectives into the existing legal framework rather than enact a separate GPP statute, as some countries have done.

From the perspective of procurement law, the 2023 Law on Bidding marks a significant shift in legislative thinking. In addition to seeking competition, fairness, transparency, and economic efficiency in the use of state funds, it progressively incorporates sustainable development, environmental protection, innovation, and green production considerations into contractor selection. This represents a departure from an approach focused on "purchasing at the lowest cost" towards one concerned with "obtaining the best value" (*best value procurement*), in which environmental value is considered alongside economic efficiency.

The 2020 Law on Environmental Protection, meanwhile, identifies the development of a circular economy as a central direction of national environmental policy. It encourages the use of environmentally friendly raw materials, fuels, and other materials; promotes waste reuse and recycling; and supports the development of markets for environmentally friendly products. Prime Minister's Decision No. 687/QĐ-TTg of 7 June 2022, approving the Scheme for the Development of the Circular Economy in Vietnam, and Decision No. 1658/QĐ-TTg of 1 October 2021, approving the National Green Growth Strategy for 2021–2030 with a vision to 2050, both identify the development of GPP as an important measure for expanding markets for green, recycled, and circular products.

In terms of legal policy design, Vietnam has therefore begun to establish a legal basis for using public procurement to promote the circular economy. A positive development is the shift from viewing public procurement solely as budgetary expenditure towards using the State's purchasing power as a means of influencing markets and guiding production and consumption towards sustainability. Compared with the requirements for developing recycled-product markets and with EU experience, however, current legal policies largely establish directions and principles. They do not yet provide a coordinated legal mechanism for translating circular economy objectives into specific obligations or criteria in public procurement. In other words, Vietnam has set a policy direction but has not fully developed the legal instruments needed to put it into effect. As a result, public procurement has not yet fully realised its potential to create markets for recycled products.

b) Current implementation of legal policies on green tendering and public procurement

From the perspective of *policy effectiveness*, a clear gap remains between legal policy design and implementation in practice. Although the legal framework has begun to provide a basis for incorporating environmental criteria into public procurement, green public procurement of recycled products has not yet become an instrument that generates market incentives for plastic waste recycling enterprises.

First, current law does not establish a clear legal mechanism for giving preference to recycled products in procurement funded by the state budget. The 2023 Law on Bidding permits environmental factors to be considered when selecting contractors, but does not require preference to be given to goods containing recycled materials or to products manufactured under a circular economy model. Nor have its implementing decrees established a list of goods and services for which green public procurement criteria must, or should preferentially, be applied. The inclusion of environmental criteria in tender documents therefore still depends primarily on each project owner's or procuring entity's understanding and decisions, resulting in inconsistent application.

Consequently, in most public procurement packages, bid price, technical quality, delivery schedule, and contractor capacity remain decisive criteria. Criteria reflecting a product's environmental value—such as recycled content, recyclability after use, life-cycle carbon emissions, and resource-use efficiency—have not been translated into specific, quantifiable evaluation criteria. Enterprises investing in modern recycling technology therefore lack a clear competitive advantage over suppliers of conventional products, diminishing the ability of public procurement policy to guide the market.

Second, the standards, technical regulations, and certification mechanisms for recycled products remain incomplete, limiting the implementation of green public procurement policy. Although Vietnam has adopted a

number of national environmental standards and ecolabels, it has not yet established a consistent set of standards for determining recycled content, the degree of circularity, or environmental criteria for many categories of recycled plastic products. The lack of uniform standards and assessment methods makes it difficult for procuring entities to formulate technical requirements and verify product quality. It also increases legal risk when green criteria are included in tender documents. This is a significant reason why green public procurement provisions have not been widely applied in practice.

Third, monitoring, evaluation, and accountability mechanisms for the implementation of green public procurement policy have not been fully established

A key requirement of green public procurement is not merely to include environmental criteria in contractor selection, but also to ensure that those criteria are fulfilled and verified throughout contract performance. Current law, however, focuses primarily on procedures for contractor selection and contract management. It does not establish a separate mechanism for monitoring and evaluating compliance with the environmental or circularity criteria included in tender documents. In practice, where a procuring entity selects a product or goods on the basis of environmental criteria, post-award checks still rely mainly on acceptance procedures concerning quality, quantity, and the contract performance schedule. There is no uniform procedure for assessing compliance with measures such as recycled content, recyclability after use, the proportion of recycled raw materials, or reductions in emissions over the product's life cycle. This weakens the effect of green criteria: an enterprise may meet the requirements stated in its bid, while verification after the contract is awarded remains difficult.

From a legal policy perspective, this is a significant gap in institutional design. A policy can be effective only if it has all three components: criteria-setting; implementation; and inspection, monitoring, and evaluation of results. Vietnam's green public procurement policy has focused primarily on the first component, while monitoring and evaluation have not been fully institutionalised. This weakens the binding force of the policy and limits the ability to quantify the effect of green public procurement on the development of recycled-product markets.

Fourth, legal policies on green public procurement are not closely linked to policies on the circular economy and extended producer responsibility (EPR)

A defining feature of circular economy policy is its cross-sectoral nature and the need for coordination among policies. Legal instruments concerning taxation, green credit, EPR, technical standards, and public procurement can be effective when designed as a coherent system in which each instrument supports the others. In Vietnam, however, although the 2020 Law on Environmental Protection established EPR and identified the development of a circular economy as a central policy direction, procurement law has not established a substantive link with these instruments.

Current law does not provide a mechanism for giving preference in public procurement to products made from recycled materials sourced through the EPR system or to enterprises that effectively fulfil their statutory recycling obligations. Nor does it provide for EPR performance or circularity certification to be used as a basis for evaluating a contractor's environmental capacity. As a result, policies pursuing the shared objective of developing a circular economy continue to operate relatively independently and have not produced a mutually reinforcing effect in implementation.

Experience in the European Union suggests that green public procurement can become a driver of market development when linked with EPR systems, ecolabel standards, digital product passports, and recycled-content criteria. Compared with this approach, Vietnam's legal policies have established an initial institutional foundation but have not yet provided comprehensive mechanisms for coordination among these policy instruments.

Fifth, green public procurement policy has not generated a market signal strong enough to encourage enterprises to invest in recycling technology

From a law and economics perspective, a central objective of green public procurement is not only to ensure that state-budget expenditure is environmentally responsible, but also to create stable market demand for green products and thereby change enterprises' investment expectations. In Vietnam, however, environmental criteria are still applied on a limited scale in public procurement. Legal provisions largely express policy directions and encourage action, rather than establishing obligations or specific preference mechanisms. Recycling enterprises therefore cannot forecast stable demand from the public sector as a basis for long-term decisions to invest in technology or expand production.

This indicates that current legal policies send a *policy signal* but have not yet generated a *market signal*. A policy signal expresses the State's direction, whereas a market signal influences enterprises' investment

decisions. Without a visible, stable market for recycled products, enterprises will have limited incentive to invest in modern technology, increase their use of recycled materials, or develop circular products.

c) Causes of the limitations in legal policies on green tendering and public procurement

The limitations discussed above arise primarily from the fact that the translation of green public procurement policy into law is still at a transitional stage, rather than from an absence of policy direction.

First, legal policies on green public procurement have developed through several statutes and strategies, but **there is no unified legal framework** specifying its definition, principles, criteria, categories of priority goods, and application procedures. Without a dedicated legal framework, current provisions largely remain statements of policy direction and do not provide a sufficient basis for consistent implementation in practice.

Second, the development of laws on the circular economy and recycled-material markets remains at an early stage. Although the 2020 Law on Environmental Protection established a legal basis for the circular economy and EPR, provisions on procurement, technical standards and regulations, product quality, and environmental certification have not been revised in a coordinated manner. Green public procurement has therefore not been fully integrated with other circular economy instruments.

Third, the technical standards, regulations, and databases needed to identify, certify, and verify recycled products remain incomplete. This directly causes difficulties for procuring authorities in formulating technical criteria, evaluating bids, and monitoring compliance with environmental commitments after contracts are signed.

Fourth, coordination among state authorities responsible for procurement, the environment, industry, and science and technology remains insufficiently effective. The absence of a single coordinating body contributes to fragmented policy design and implementation and has prevented the development of a coherent legal framework for expanding recycled-product markets through public procurement.

Fifth, the supply capacity of the recycled-product market and awareness of the value of green public procurement among procurement participants remain uneven. While the recycled-product market is not yet fully developed, applying environmental criteria in tendering is also difficult because of limited supply, market information, and methods for assessing products' environmental performance.

3. Proposals for improving legal policies on financial and economic support to encourage enterprises to recycle plastic waste in an environmentally sound manner in Vietnam

3.1. Proposals for improving legal policies on tax and fee incentives for enterprises engaged in environmentally sound plastic waste recycling in Vietnam

The preceding analysis shows that, although Vietnam has gradually established a legal policy framework of tax and fee incentives to encourage enterprise investment in waste recycling, current policies remain limited in their scope, design, and effectiveness in practice. Incentives largely provide general support for environmental protection activities without fully reflecting the characteristics of the plastic recycling industry. Criteria for determining eligibility are dispersed and inconsistent; tax incentives are not linked to environmental outcomes or circularity performance; and the incentives have not been strong enough to encourage enterprises to upgrade technology and expand recycling capacity. Legal policy reform should therefore shift from an investment incentive approach towards one that creates markets and promotes the circular economy, so that taxes and fees become instruments for developing a modern recycling industry.

First, revise tax incentive policies so that environmental and circularity performance determine the level of incentives.

In practice, most tax incentives are designed according to the type of project or field of investment, rather than the environmental protection outcomes achieved by an enterprise. Although this approach helps attract investment, it does not provide sufficient incentive for enterprises to keep increasing recycling rates, upgrading technology, or reducing emissions during production.

The law should therefore be reviewed with a view to moving from *input-based incentives* to *performance-based incentives*. Preferential corporate income tax treatment, import duty incentives, or financial support would then be determined according to criteria such as the proportion of recycled materials used, material recovery rates, greenhouse gas emissions reductions, resource savings, and energy efficiency in recycling. This approach also reflects a policy direction being adopted by many European Union countries:

linking tax incentives directly to the environmental value generated by enterprises, rather than solely to their participation in the environmental protection sector.

It is consistent with the principle that “those who create environmental value should benefit from policy support”. It would also help prevent enterprises from meeting only formal eligibility requirements without making a substantive contribution to the circular economy.

Second, establish dedicated tax incentives for plastic waste recycling enterprises operating in accordance with circular economy principles.

One reason current policy is less effective is that plastic recycling falls within the broader category of environmental protection projects. Yet plastic recycling differs considerably from other environmental activities, such as wastewater treatment, hazardous waste treatment, and renewable energy, particularly in its investment costs, fluctuations in material prices, and market risks.

The laws governing investment and taxation should therefore be reviewed and amended to establish a distinct category of incentives for plastic recycling enterprises that meet circular economy criteria, with clear provisions on eligibility, applicable criteria, and corresponding levels of support. Dedicated incentives would better reflect the characteristics of the industry and provide enterprises with a transparent, consistent legal basis for accessing support.

Third, improve import duty policy to promote innovation in recycling technology.

Many advanced mechanical recycling technologies, chemical recycling technologies, plastic pyrolysis technologies, and modern emissions treatment systems still have to be imported. Technology investment accounts for a substantial proportion of recycling enterprises’ total costs.

The law on export and import duties should therefore be further developed to broaden exemptions or reductions for machinery, equipment, production lines, and specialised components used in environmentally sound plastic recycling. A regularly updated list of priority technologies should also be established to reflect scientific and technological advances. Incentives should be linked to environmental performance and emissions reduction criteria to avoid encouraging the importation of outdated, energy-intensive technologies or technologies that cause secondary pollution.

Fourth, design fee policies to provide economic incentives for enterprises to recycle.

Alongside taxes, fees should be designed as an instrument for influencing market behaviour. The environmental protection fee mechanism should be reviewed with a view to combining the *Polluter Pays Principle* with the proposed principle that “those who create circular value should benefit” (*Circular Economy Incentive Principle*).

On that basis, enterprises with high recovery and recycling rates, substantial use of recycled materials, or technologies that meet environmental standards could be considered for a partial reduction in their financial obligations or a partial refund of environmental fees according to their performance. Conversely, facilities using outdated technologies, generating substantial emissions, or failing to meet recycling requirements should bear higher environmental costs to support fair competition and encourage technological transition.

Fifth, establish consistent legal criteria and monitoring mechanisms for the application of tax and fee incentives.

A major limitation of current policy is that eligibility criteria are dispersed across several legal instruments and there is no uniform verification mechanism. This increases enterprises’ compliance costs and creates risks of inconsistent application or misuse of incentives.

A consistent set of legal criteria should therefore be established for determining which recycling enterprises qualify for incentives. It should address technology, recycled content, resource-use efficiency, emissions reductions, and compliance with environmental technical regulations. A mechanism for periodic inspection and assessment should also be established using environmental and production data and the results of enterprises’ fulfilment of extended producer responsibility (EPR) obligations. This would help ensure that incentives reach eligible enterprises, serve their intended objectives, and are not improperly claimed.

Sixth, coordinate tax incentives, EPR, and the development of recycled-material markets.

Experience in the European Union, Japan, and South Korea suggests that tax incentives are effective when they form part of a coherent policy framework encompassing EPR, recycled-material quality standards, green credit, green public procurement, and the development of secondary raw-material markets.

Legal reform should therefore ensure coordination among these instruments. EPR-derived financial resources should be prioritised to support recycling technology upgrades; tax policy should be linked to the

fulfilment of EPR obligations and circular economy criteria; and these measures should be connected with green public procurement to create a stable market for recycled products. When legal instruments are designed to work together, tax and fee incentives can encourage enterprises to invest in the plastic recycling industry over the long term and help develop a competitive, transparent, and sustainable recycled-material market.

3.2. Proposals for improving the law on financial support and green credit for enterprises engaged in environmentally sound plastic waste recycling in Vietnam

The preceding analysis shows that the greatest limitation of financial support and green credit policies for plastic waste recycling enterprises in Vietnam is not a lack of policy commitments to developing a green economy. Rather, it is the absence of a sufficiently strong legal mechanism to translate those commitments into actual financing for enterprises. Although the 2020 Law on Environmental Protection, the National Green Growth Strategy, the Scheme for the Development of the Circular Economy, and regulations issued by the State Bank of Vietnam have begun to establish a basis for green credit, the current legal framework has not yet created a dedicated financing mechanism for plastic recycling enterprises—a sector characterised by long-term investment and high market risk, but one that generates substantial environmental benefits for society.

In this context, legal reform should move from an administratively oriented approach to financial support towards one that develops a green finance market. Public and private financial institutions should be able to share risks, reduce the cost of capital, and encourage long-term investment in the recycling industry.

First, improve the legal framework for green credit by establishing a dedicated financing mechanism for plastic waste recycling enterprises.

The preceding analysis shows that recycling enterprises' principal difficulty is not simply a shortage of capital, but a lack of access to financing suited to the characteristics of their industry. Plastic recycling requires substantial upfront investment and has a long payback period. Its financial returns may not be apparent in the short term, while many of its benefits are public benefits, including reduced environmental pollution, resource savings, and lower greenhouse gas emissions. This divergence between private and social benefits leads credit institutions to assess recycling projects using conventional commercial criteria, making it difficult for enterprises to obtain credit even where a project has substantial environmental value.

To address this problem, the law should move beyond encouraging the development of green credit and establish a dedicated green credit mechanism for recycling enterprises. Building on the 2020 Law on Environmental Protection's provisions on promoting the circular economy and the State Bank of Vietnam's policy direction on green credit, consideration should be given to a consistent set of legal criteria for identifying plastic recycling projects eligible for preferential credit. These criteria should not rely solely on a project's financial performance. They should also incorporate environmental indicators, such as plastic waste recovery rates, the proportion of recycled materials used, greenhouse gas emissions reductions, resource savings, and the extent to which recycled plastic replaces virgin plastic.

Consistent criteria would substantially reduce differences in assessment methods among credit institutions. They would also provide a transparent legal basis on which enterprises could prepare documentation and develop investment plans. This reflects the approach recommended by the OECD and UNEP for developing green finance markets: green projects should be classified by measurable environmental outcomes rather than solely by an enterprise's field of activity.

More significantly, a dedicated credit mechanism would help bridge the gap between environmental and financial policies. It would enable lending to encourage investment in modern recycling technology, rather than remaining largely a matter of broad policy direction.

Second, improve the law governing public financial institutions to provide stable, long-term financial support for plastic waste recycling enterprises.

A significant reason for the limited effectiveness of current financial support policies is that resources for recycling are dispersed and unstable, and are not organised through a dedicated mechanism for the plastic recycling industry. Existing law provides for various environmental financing instruments, including the Vietnam Environment Protection Fund, local environment protection funds, financial contributions under extended producer responsibility (EPR), state-budget funding, and preferential credit programmes. These resources, however, are managed under different mechanisms, serve different environmental objectives, and have not formed a financial institution or mechanism capable of providing continuous support to recycling enterprises.

Plastic waste recycling requires substantial capital, involves long investment cycles and rapid technological change, and carries considerable market risk. If financial support is short-term or depends on individual programmes, enterprises will find it difficult to develop long-term investment strategies or commit to

technological upgrades. The OECD and UNEP have also identified this consideration in assessments of circular economy policies: green finance can be effective when organised through stable financial institutions able to share risk and support enterprises throughout the investment cycle.

Vietnamese law should therefore be further developed to strengthen the role of the Vietnam Environment Protection Fund as a central financial institution supporting the recycling industry and the circular economy, rather than one providing primarily general support for environmental protection projects. Within the Fund's existing statutory functions, consideration should be given to dedicated funding programmes for plastic recycling enterprises. These programmes should focus on activities with substantial potential to create additional value, including investment in modern recycling lines, technological upgrades, research and development of recycled materials, automated sorting systems, and digital technologies for managing the recycling value chain.

The law should also provide a basis for diversifying the sources of capital for these programmes. In addition to state-budget funding, resources generated under EPR pursuant to the 2020 Law on Environmental Protection should be mobilised alongside official development assistance (ODA), climate finance, green finance, and other lawful funding. Diversifying capital sources would reduce pressure on the state budget and improve the sustainability of financing for circular economy development.

The allocation and use of funds should also be governed by public, transparent, and competitive procedures based on projects' environmental performance rather than primarily on administrative criteria. Project selection criteria should be quantified through indicators such as plastic recovery rates, the proportion of recycled materials used, greenhouse gas emissions reductions, resource savings, and the extent of technological innovation. This would support effective use of public financial resources while encouraging enterprises to continue improving the environmental performance of their recycling activities.

From a law and economics perspective, improving public financial institutions in this manner would help consolidate dispersed resources, reduce the cost of accessing support, share investment risks, and gradually establish a stable financing mechanism for the recycling industry. It would also help translate the objectives of the 2020 Law on Environmental Protection and the Scheme for the Development of the Circular Economy from policy directions into investment resources, supporting the development of a modern, circular, and environmentally sound plastic recycling industry.

Third, establish legal mechanisms for sharing financial risk between the State and credit institutions to expand financing for recycling enterprises.

A bottleneck in current financial support policy is that investment risk associated with recycling projects is borne almost entirely by credit institutions, while the benefits of recycling are largely public. As a result, many projects with substantial environmental value still struggle to obtain financing because they do not satisfy conventional lending criteria concerning profitability or collateral.

This is a form of market failure in the allocation of capital to activities that generate positive externalities. Under law and economics theory, where social benefits exceed an investor's direct financial benefits, the State should use legal instruments to redistribute costs and risks between the public and private sectors so that resources are invested in activities yielding long-term benefits.

The law should therefore provide for financial risk-sharing mechanisms for recycling projects that meet environmental criteria. Possible instruments for consideration include green credit guarantees, interest support, co-financing, and credit guarantee funds for recycling enterprises, particularly small and medium-sized enterprises undertaking technological upgrades. Sharing part of the risk does not mean replacing market mechanisms. It is intended to address market failure during the early development of the recycling industry and enable credit institutions to lend more readily to promising green projects.

Risk-sharing arrangements must also be based on objective, transparent, and verifiable criteria. This would ensure that support reaches eligible enterprises, serves its intended objectives, and is not misused. Green credit can effectively encourage long-term investment in plastic waste recycling only when the legal framework provides for a reasonable allocation of risk.

Fourth, strengthen the legal links between extended producer responsibility (EPR) and financial support and green credit policies for recycling enterprises.

The analysis in Chapter 1 shows that current financial support instruments for recycling enterprises and EPR have not been designed as a unified system. Although the 2020 Law on Environmental Protection established EPR as an important economic instrument for mobilising resources from across society for recycling, financing generated through EPR has not, in practice, become a stable mechanism for supporting technological upgrades and capacity-building among recycling enterprises. This weakens the regulatory effectiveness of legal policy and leaves EPR's potential contribution to the circular economy only partly realised.

EPR is not merely a mechanism for allocating responsibility between the State and producers. It is also a financial instrument for reallocating environmental costs across a product's life cycle. Collection, sorting, and recycling costs are thus gradually shifted from the State or the community to the actors that place products and packaging on the market. If the resulting resources are used only to meet immediate recycling obligations, however, rather than reinvested in technology, recycling capacity, and circular infrastructure, EPR delivers only part of its potential policy value.

The law should therefore establish stronger links between EPR and financial support and green credit policies. In particular, consideration should be given to clearer rules allowing part of EPR-derived financing to support recycling enterprises' technological upgrades, modern processing lines, research into recycled materials, and digital solutions for managing the recycling value chain. Effective fulfilment of EPR obligations should also be considered as a criterion for giving enterprises priority access to green credit programmes, interest support, or financing from the Vietnam Environment Protection Fund.

Linking these instruments would create a circular financing cycle in which resources mobilised through EPR return to support recycling activities. This would improve the use of resources from across society and contribute to the sustainable development of the plastic recycling industry. Many European Union countries also apply an approach under which EPR serves not only to ensure producer responsibility but also as an important source of financing for recycling infrastructure and technology.

Fifth, establish consistent legal criteria for green recycling projects and improve transparency in access to financing.

One reason current financial support policies are less effective is the absence of consistent legal criteria for identifying green recycling projects. This produces differences in interpretation and application among regulatory authorities, credit institutions, and enterprises. In practice, enterprises often have to satisfy different sets of criteria imposed by individual support programmes or credit institutions, increasing compliance costs, prolonging appraisal, and reducing access to financing.

The law should therefore be further developed to establish a consistent set of criteria for identifying environmentally sound plastic recycling projects. These criteria should apply throughout project selection, appraisal, lending, and post-investment inspection and monitoring. They should be based on measurable and verifiable indicators, including plastic waste recovery rates; the proportion of recycled materials used; greenhouse gas emissions reductions; resource savings; energy efficiency; compliance with environmental technical regulations; and contributions to circular economy objectives.

The law should also provide clearer requirements for the public disclosure of information on financial support programmes, including eligibility conditions, project selection criteria, appraisal procedures, disbursement results, and the effectiveness of fund use. Disclosure would reduce information asymmetries between regulatory authorities and enterprises, strengthen the accountability of implementing bodies, and limit discretionary allocation or misuse of support. From a public governance perspective, transparency and accountability are important conditions for effective financial support and for strengthening enterprises' confidence in the policy framework.

Sixth, strengthen legal mechanisms for policy coordination across finance, banking, the environment, and science and technology.

In practice, financial support for recycling enterprises is governed by several areas of law, including environmental protection, investment, banking, public finance, and science and technology. Although each serves a distinct purpose, a lack of coordination in policy design and implementation has dispersed resources, resulted in overlapping procedures, and reduced the effectiveness of enterprise support.

Legal reform should therefore strengthen links among policies and regulatory institutions so that financing instruments, green credit, support for technological innovation, and circular economy development are designed as a coherent system. Mechanisms for coordination among ministries and other relevant authorities should also be improved in the development of green project criteria, data sharing, assessment of investment effectiveness, and monitoring of the use of support funds

3.3. Proposals for improving legal policies on green tendering and public procurement of recycled products to encourage enterprises to recycle plastic waste in an environmentally sound manner

Reform of legal policies on green tendering and public procurement should aim to use the State's purchasing power to create stable demand for recycled products. This would encourage enterprises to invest in technology over the long term, improve product quality, and develop markets for recycled materials. At the same time, using public procurement to pursue environmental objectives must safeguard competition, fairness, transparency, efficient use of public funds, and avoid unnecessary barriers to market entry.

Reform must therefore go beyond adding a general principle that favours recycled products. It should establish a coherent legal mechanism covering the activities and entities to which the policy applies; environmental criteria; contractor selection; product verification; contract performance management; monitoring and evaluation; and subsequent policy adjustment. The following measures should be prioritised.

First, develop the legal framework for green public procurement in stages that reflect market capacity.

Policy directions on green growth, the circular economy, and sustainable production and consumption should be translated into provisions that can be applied directly in tendering and public procurement. The legal framework should clarify the definition and principles of green public procurement, its scope of application, relevant product categories, environmental criteria, assessment methods, and the responsibilities of those involved.

Legal reform should be based on a review of the 2023 Law on Bidding and the amendments and implementing instruments currently in force. It should also be consistent with the laws governing environmental protection, the management and use of public assets, technical standards and regulations, product and goods quality, and extended producer responsibility (EPR).

Mandatory requirements should not immediately be imposed on all goods, services, and procuring authorities. Initially, pilot programmes should cover selected categories of recycled products for which technical standards are reasonably clear, supply is sufficient, quality can be verified, and safety requirements will not be compromised. The State should gradually expand the list of products and the range of entities required to apply the policy only after reviewing and evaluating the pilots.

A phased approach would make the law practicable and reduce the risk of imposing requirements beyond market supply capacity, weakening competition, or increasing procurement costs without commensurate environmental benefits.

Second, establish green public procurement criteria for each category of recycled product.

Environmental objectives can be incorporated into tender documents and used to evaluate bids only if criteria are developed for each product category. These criteria may address recycled content; the origin and traceability of materials; safety, durability, and useful life; reusability, repairability, or recyclability after use; energy and resource consumption; waste generation; and packaging requirements.

Criteria must be expressed in terms that can be measured, substantiated, checked, and verified upon acceptance. An indicator should not be made a mandatory condition in tender documents if there is no relevant standard, test method, or reliable data. Qualitative criteria without a clear assessment method may increase procuring entities' discretion, create difficulties for bidders, and give rise to disputes during contractor selection or contract performance.

The criteria should be technology-neutral and should not specify a particular technology, production process, or enterprise. Environmental requirements must be proportionate to the nature, scale, and intended use of each procurement package. Green criteria must not be used to restrict competition or confer an unjustified advantage on particular suppliers.

Guidance, model technical requirements, and assessment methods should accompany the criteria so that procuring authorities can apply them consistently and reduce legal risks for project owners, procuring entities, and evaluation teams.

Third, shift assessment from initial purchase price towards value and performance over the product's life cycle.

A recycled product may have a higher initial purchase price than a product made from virgin materials while delivering longer-term benefits through resource savings, less waste, a longer useful life, or lower post-use treatment costs. If assessment relies solely on the lowest bid price, the environmental value of recycled products may not be fully reflected.

The law should provide a clear basis for assessing purchase price alongside quality, durability, operating and maintenance costs, and the costs of recovery, reuse, recycling, and post-use treatment. This would mark a shift from procurement based on the "lowest price" towards procurement based on the "best value", considering economic and environmental performance together.

Life-cycle costing should, however, be applied only where the relevant cost components, data sources, assessment period, conversion method, and means of comparing bids can be clearly determined. Calculation methods and model forms should be developed for each product category. This would avoid inconsistent, unverifiable methods being devised separately by procuring entities.

Life-cycle costing does not mean that a recycled product should be selected regardless of its price. Its purpose is to identify the option offering the greatest overall value throughout the product's period of use. The

State can thereby create a market for recycled products while maintaining the principles of economy and efficiency in the use of public funds.

Fourth, improve certification, traceability, and verification mechanisms for recycled products.

The ability to determine whether a product actually meets its stated environmental criteria is essential to the practicability of green public procurement. Technical standards, regulations, and test methods should therefore be developed for each recycled-product category. The method for determining recycled content, traceability requirements, and the recognition of test, inspection, and certification results should be specified.

Ecolabels, environmental certification, or recycled-product certification may serve as evidence that a product meets green criteria. A particular label or certificate should not, however, be treated as the only acceptable form of evidence. Bidders should be allowed to submit equivalent test, inspection, or certification results, provided the documentation establishes that the product meets the tender requirements. This would support reliable information while maintaining competition and preventing certification procedures from becoming a barrier to enterprises.

A database of standards, recycled products, testing and certification bodies, and inspection results should also be developed gradually. It should contain accurate, regularly updated information and be connected with the electronic bidding system. This would give project owners and procuring entities a basis for checking information while reducing enterprises' costs of providing evidence.

Technology-based traceability should likewise be introduced in stages. The immediate priority should be to digitise information that is genuinely necessary and verifiable. Complex systems such as digital product passports should not be applied across the board before data standards, technical infrastructure, and interoperability mechanisms are in place.

Fifth, ensure compliance with environmental criteria throughout contract performance.

Environmental criteria must not be used solely to evaluate bids; they must also become specific contractual obligations for the contractor. Tender documents and contracts should specify the environmental measures to be met, supporting evidence, inspection methods and timing, the parties' responsibilities, and remedies if products fail to meet the agreed requirements.

Acceptance procedures should address not only quantity, conventional quality requirements, and delivery schedules, but also the environmental characteristics on which contractor selection was based. Where a procurement package specifies recycled content, material origin, recyclability, or post-use recovery, the contract must identify how compliance will be verified and who will conduct the verification.

Consequences should be proportionate to the nature and seriousness of a breach. They may include requiring corrective action or replacement, reducing payments, awarding damages, or applying other measures under the contract and procurement law. False information or unlawfully obtained certificates submitted by a contractor should be investigated and dealt with in accordance with the applicable rules.

Monitoring should focus on indicators that materially affect product quality and environmental value, without adding procedures that do not improve oversight. Results concerning compliance with environmental commitments should be compiled and evaluated, then used to improve criteria and select product categories for the next stage of implementation.

Sixth, strengthen links between green public procurement, EPR, and other circular economy instruments.

Green public procurement cannot realise its full potential if implemented separately from EPR, technical standards, ecolabels, taxation, and green credit. These instruments should form a coherent policy mix: EPR can help establish a stable supply of recycled materials; standards, technical regulations, and certification can assure product quality; taxes and green credit can help enterprises reduce transition costs; and green public procurement can create market demand for recycled products.

An enterprise should not automatically receive preferential treatment in a tender merely because it has fulfilled its EPR obligations. Fulfilment of EPR is a statutory obligation under environmental protection law and does not, by itself, establish that the enterprise's bid product is of higher quality or has better environmental performance than a competitor's product. EPR performance should be considered only where it has a direct, verifiable connection with recycled-material sourcing, traceability, or the environmental characteristics of the product being procured.

Links among these policies should be established through consistent criteria and data rather than through merely formal references between legal instruments. This would help instruments pursuing the same circular economy objective work together instead of operating independently.

Seventh, strengthen procuring authorities' capacity and enable enterprises to participate in the market.

The effectiveness of green public procurement depends directly on the capacity of project owners, procuring entities, evaluation teams, and contract management authorities. Specialist training should therefore cover identifying green procurement needs, drafting criteria that do not restrict competition, assessing life-cycle costs, checking certificates, and verifying environmental commitments upon acceptance.

Model tender documents, contract clauses, assessment methods, and inspection procedures should be issued for each product category. Standardised implementation tools would reduce procuring authorities' reluctance to include environmental criteria in procurement packages because of concerns about responsibility, while supporting consistency and transparency.

State authorities should also announce expected demand and procurement plans for green product categories sufficiently early for enterprises to adjust their technology, quality standards, and production capacity. Before criteria are established for a new product category, open market consultations may be held to assess supply capacity, competition, and compliance costs. Consultations must be transparent and must not confer a special advantage on any enterprise or bidder.

Criteria and evidentiary requirements should also be designed so that small and medium-sized enterprises with genuine capacity can participate. Overly complex requirements could narrow the market and favour only a few large enterprises.

Eighth, establish a mechanism for monitoring and evaluating policy on the basis of actual outcomes.

The effectiveness of green public procurement should not be assessed solely by counting the procurement packages that include environmental criteria in their tender documents. Indicators should reflect actual outcomes, including the value and proportion of green procurement; the quantity of recycled materials used; reductions in the use of virgin materials, waste, or emissions; the number of suppliers meeting the criteria; differences in life-cycle costs; and compliance with contractual environmental commitments.

An indicator should be used only where its measurement method, data source, and verification mechanism are clear. Emissions-reduction or resource-saving targets should not be set before an appropriate baseline and calculation method have been established.

Evaluation results should be disclosed to an appropriate extent and used directly to adjust product lists, technical criteria, assessment methods, and the degree to which requirements are mandatory at the next stage. Policy implementation would thereby create a continuing feedback loop between legal reform, procurement practice, and enterprises' supply capacity.

4. Conclusion

The central measure is not to grant automatic preference to every product described as "recycled". It is to establish a public procurement mechanism under which a product's environmental value is correctly identified, measurable, verifiable, and binding throughout contract performance. Green public procurement can provide lasting incentives for plastic waste recycling enterprises only if product quality, fair competition, efficient use of public funds, and practicability are also assured.

In the immediate term, Vietnam should pilot green public procurement with selected product categories that have clear standards and adequate supply. It should establish consistent criteria, assessment methods, and verification mechanisms, while closely monitoring effects on costs, competition, and environmental performance. Once reliable evidence from implementation is available, the State can gradually expand the product list and introduce more binding requirements. This approach would help turn green public procurement from a policy direction into a stable market signal, encouraging enterprises to invest in recycling technology, improve product quality, and participate more fully in the development of Vietnam's circular economy.

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