



POLICY BRIEF

They haven't even been recognised in the waste management system in Viet Nam. So how can they be part of the policy?

Informal sector considerations in EPR for plastic packaging design in Viet Nam (2020-2025)

EXECUTIVE SUMMARY

This policy brief examines the extent to which evidence on Viet Nam's informal waste sector informed the development of the country's Extended Producer Responsibility (EPR) policy for plastic packaging from 2020 to 2025. Document analysis and stakeholder interviews reveal that while substantial evidence exists on the role of informal waste workers, it appears this evidence did not significantly influence the design of Viet Nam's EPR system from 2020 to 2025. This is also reflected in the fact that the EPR legal framework does not explicitly recognize informal waste workers as a distinct stakeholder group or establish dedicated mechanisms for their participation and access to EPR-related support. The brief concludes with recommendations to strengthen EPR design and implementation such that it recognizes and reflects the contributions of the informal sector.

BACKGROUND

Informal Waste Sector in Viet Nam

Viet Nam's informal waste collection and recycling sector comprises a complex, multi-layered network of households, waste collectors, intermediaries, and recycling facilities [1]. The informal waste sector can be defined as individuals or enterprises engaged in private-sector recycling and waste management activities that are not formally recognised, organised, financed, or supported by public authorities, and that may operate alongside or in competition with formal systems [2]. The boundary between “informal” and “formal” is not always simple. Tong et al. [1] note that informal micro-businesses such as scrap dealers and recycling facilities may be registered and pay taxes, but are treated as ‘outsiders’ by public authorities. Based on where and how material recovery occurs, the system can be understood as comprising several interconnected actor groups.

At the collection level, informal recycling activities are carried out by street and dumpsite waste pickers, door-to-door scrap buyers, and, in some cases, workers employed in formal municipal waste collection services who recover recyclable materials outside their assigned duties [1]. Materials are recovered from public bins, streets, transfer points, or disposal sites or the environment and then sold. Intermediaries, commonly referred to as scrap dealers, play a central role in aggregating, sorting, and trading recovered materials from collectors. Recyclable waste is often sold multiple times, moving from small local dealers to larger traders before being transported to recycling facilities or craft villages [1].

At the processing end of the chain, craft villages and recycling factories recycle paper, plastics, metals, and glass into secondary products, often using relatively old or low-technology processes [1].

Recycling craft villages represent a distinctive and critical component of Viet Nam’s informal recycling infrastructure. Recycling craft villages, numbering in the thousands, process materials such as plastics, paper, and metals, and play a central role in transforming collected scrap into marketable products [3,4]. Often located in peri-urban or rural areas, craft villages are deeply embedded in informal supply chains, receiving materials from networks of scrap buyers and dealers operating in nearby cities [4].

Recycling processes in these craft villages frequently rely on outdated or low-efficiency technologies, limited pollution control, and informal working arrangements, leading to emissions, contaminated wastewater, and direct exposure of workers and surrounding communities to hazardous substances [4]. Herrador et al. [3] further note that although craft villages align with circular economy principles through reuse and material recovery, their contribution is constrained by regulatory gaps, limited investment capacity, and weak integration into formal waste governance systems.



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Informal Waste Sector in Viet Nam (continued)

The informal recycling sector in Viet Nam is highly gendered, with women playing a central role in activities such as door-to-door collection, sorting, cleaning, and material separation across junk shops, aggregation points, and recycling facilities, while men are more commonly engaged in formal waste collection and physically intensive transport activities [5]. While most waste workers are exposed to occupational health and safety risks, particularly in the informal sector, women are highlighted as being particularly vulnerable to precarious and unsafe working conditions [5].

Earlier studies cited by Tong et al. [1] suggested that informal recycling activities may reduce the amount of waste entering landfills by approximately 15–20% (although the applicability of these estimates to current national conditions remains uncertain) contributing to reduced municipal waste management costs while being a source of income for marginalised groups with limited alternative livelihood options (Tong et al. [1], drawing on Nguyen [6]; [7]). At the same time, the informal recycling sector in Viet Nam operates under precarious conditions and remains largely invisible in policy and regulatory frameworks. Many informal waste workers face limited legal and institutional recognition, inadequate access to social protection, and financial barriers to safer equipment and working practices, while recycling facilities in craft villages often do not have the proper permits, frequently rely on outdated processes associated with environmental pollution and occupational health risks [1,4].

The informal recycling sector performs many of the functions that Extended Producer Responsibility (EPR) schemes seek to strengthen, including the collection, sorting, and recovery of recyclable materials. EPR can provide resources to improve these systems when informal actors are recognised and included in their design and implementation [8]. Conversely, EPR schemes that exclude informal workers may restrict access to materials, increase competition and disrupt established livelihoods and material flows, potentially undermining recovery outcomes [8]. The extent to which EPR supports both material recovery and livelihoods depends, in part, on how existing informal systems and workers are considered in EPR policy design and implementation.

Extended Producer Responsibility for Plastic Packaging in Viet Nam

Extended Producer Responsibility refers to a group of policy instruments that assign producers responsibility for managing the environmental impacts of products throughout their lifecycle, including the post consumer phase [9,10]. In practice, EPR systems typically require producers and importers to organise or finance the collection, recycling, or treatment of products and packaging after use [10,11]. In Viet Nam, the legal framework for EPR was established under Articles 54 and 55 of the 2020 Law on Environmental Protection. Article 54 provides the legal basis for producers' and importers' recycling responsibilities, including those applicable to packaging, while Article 55 addresses responsibilities for waste collection and treatment. During 2020–2025, the EPR framework was progressively operationalized through implementing regulations, notably Decree No. 08/2022/ND-CP and its amendments, including Decree No. 05/2025/ND-CP. Following the study period, Viet Nam introduced further changes to its EPR framework through Decree No. 110/2026/ND-CP, which took effect on 25 May 2026. These developments provide an opportunity to consider how evidence concerning informal waste workers could inform future EPR policy and implementation. Each of these stages represents opportunities for evidence collection and stakeholder input to inform decision making.

Although informal waste workers contribute to the collection and recovery of recyclable materials, Viet Nam's EPR framework does not establish dedicated provisions recognizing them as a distinct stakeholder group or providing direct access to EPR systems or financial support. Their participation may nevertheless occur through collection and supply arrangements linked to formal recycling operators. Informal waste workers may contribute to material recovery without directly benefiting from EPR support mechanisms and vice versa. However, the extent to which material flows outside formal EPR arrangements affect overall system performance requires further empirical assessment.

One interviewee highlighted the perceived legal and institutional barriers to accessing EPR financial support:

"Informal forces are not regulated in the legal system and are subject to management. This force must have legal status and be recognised by the Ministry of Natural Resources and Environment as eligible to receive support from the EPR fund."
– P10

RESULTS

This policy brief examines whether and how evidence on the informal sector informed the development of Viet Nam's EPR policy. The evaluation framework, found in the appendix of the [*Evidence use in designing Viet Nam's EPR policy with lessons for EPR design in other countries*](#) report, examined key indicators for determining the use of evidence in policy making including the availability of evidence, stakeholder engagement as an evidence source, and recommendations from the evidence and stakeholders for including the informal sector in policy design and implementation. These are described below.

1 The Secondary Evidence Base: Available but Fragmented

The review identified a substantial but fragmented body of evidence concerning Viet Nam's informal waste sector before and during the EPR policy development period. However, the extent to which this evidence was accessed, considered, or used by policymakers remains unclear.

Before the adoption of the 2020 Law on Environmental Protection, several studies had examined aspects of Viet Nam's informal waste sector, including its structure, recycling activities, and socio-economic characteristics, including DiGregorio [12], Mehra et al. [13], Mitchell [14], Kawai et al. [15], de Bercegol et al. [16], UNDP [17], World Bank [18], cyclos GmbH [19], Krishnan and Backer [5], and UNEP et al. [20].

Evidence on the scale and conditions of recycling craft villages demonstrated their simultaneous economic significance and precarity.

A 2018 World Bank report [18] highlighted the central policy tension within the informal sector: while these activities operate under precarious conditions and rely on outdated, polluting technologies, they also provide important employment opportunities for vulnerable and marginalised communities. The World Bank [18] estimated that the informal sector collected and separated approximately 6% of the total domestic solid waste generated in Viet Nam, while formal collection services separated an additional 4%. The report also noted that recycling activities were predominantly undertaken in craft villages.

Evidence from international experience also highlighted how EPR design can influence the role and performance of informal recycling systems.

In their analysis of EPR implementation in China, Thailand, India, and Argentina, Gupta and Sahay [21] found that excluding informal actors from EPR systems can undermine policy effectiveness. Informal collectors continue to recover valuable materials outside formal systems, reducing the availability of high-value recyclables for EPR-financed collection schemes, increasing costs, and lowering overall system efficiency. International experience suggests that EPR arrangements designed exclusive of the informal sector may create competition for valuable recyclable materials between formal and informal collection systems, potentially affecting existing material flows, livelihoods, and implementation costs.

Following the adoption of the Law on Environmental Protection, the evidence base expanded considerably.

During 2020–2025, when key EPR decisions and guidance were being established, a growing body of research examined the role of the informal sector in Viet Nam's waste management system, with increasing attention to workers' livelihoods, gender, occupational conditions, and the potential implications of EPR implementation (e.g., Tong et al. [1], IUCN-EA-QUANTIS [22], Löhle et al. [23], Phuong [24], Renaud & Quertamp [25], Retamal et al. [26], UN-ESCAP [27], UNDP [28], Viet Nam NPAP [29,30], World Bank [31], WWF [32], WWF-Viet Nam [33]). Collectively, these studies documented the scale of informal waste work, socio-economic conditions, and the dominance of recycling craft villages, consistently describing informal work as characterised by low and irregular incomes, poor working conditions, limited access to equipment, and a lack of formal recognition [23, 28, 29].

Evidence consistently demonstrated the structural importance of informal recycling within Viet Nam's waste management system.

Available studies showed that plastic recycling in Viet Nam is heavily dependent on informal labour and dominated by recycling craft villages [3]. Although not comprehensively studied, these activities were also associated with significant environmental impacts arising from outdated technologies and untreated wastewater discharges [19,34].

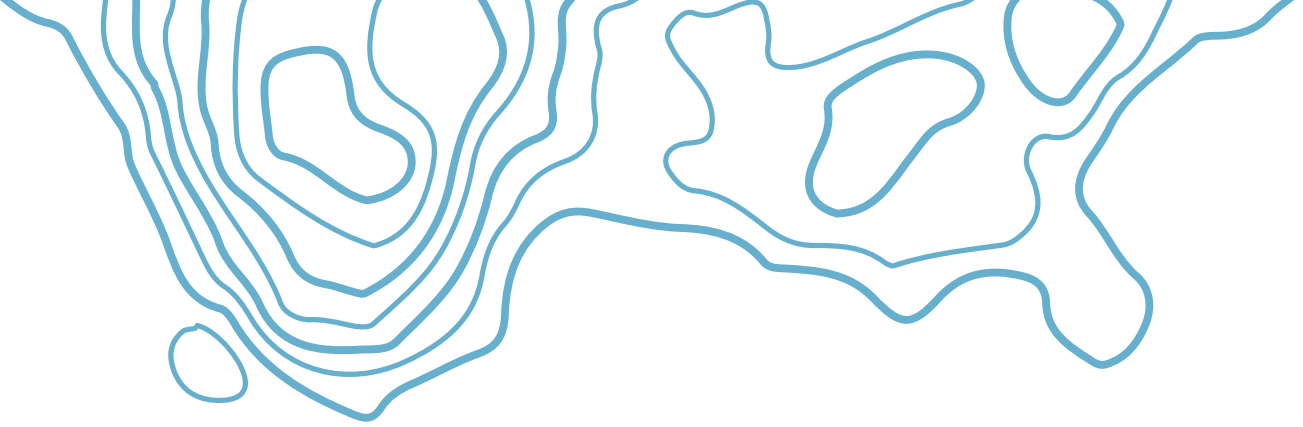
Evidence also identified important knowledge gaps for policymaking.

The Roadmap and Gender Context Assessment prepared by the Viet Nam National Plastic Action Partnership [29,30] provided detailed insights into the role of informal workers, particularly women, within Viet Nam's plastic value chain. At the same time, the reports concluded that important national-level data remained unavailable, including information on the size of the informal workforce and its intersections with gender, health, labour conditions, and social vulnerability [29].

The broader evidence base highlighted the risks of exclusion and opportunities of inclusion of informal workers into EPR systems.

Studies suggested that EPR can further marginalise informal workers by concentrating economic opportunities within formal systems, excluding workers unable to meet technical requirements, and increasing competition over valuable recyclable materials [8]. Conversely, other studies argued that integrating informal workers can improve livelihoods, increase recycling performance, and reduce system costs [11,23,35,36]. While several recommendations were informed by international experience, Viet Nam-specific studies also identified challenges and opportunities for informal sector inclusion.

Overall, the evidence available to policymakers demonstrated that Viet Nam's waste management system is highly dependent on informal recycling and that the design of EPR could significantly affect both policy effectiveness and the livelihoods of informal workers. However, the evidence remained fragmented across environmental, social, economic, and governance dimensions, with relatively little analysis directly examining how Viet Nam's EPR system should engage with the informal sector.



2 Stakeholder Input: Informal Sector Rarely Represented in Consultations

A broad range of stakeholders were included in consultations throughout the policy making period, and there was direct communication to the public as well. [Section 4.2](#) of the report provides a comprehensive overview of the consultation process. The findings of informal sector involvement is described below.

Informal waste workers were largely excluded from direct consultation.

The consultations examined in this study suggest that informal waste workers had limited opportunities to participate directly in formal EPR policy development processes. In several consultation processes, the perspectives of informal waste workers were communicated indirectly through organisations working with or supporting the sector, including VietCycle, URENCO, NPAP and the Viet Nam Zero Waste Alliance. However, these organisations have different institutional roles and should not necessarily be considered formal representatives of informal workers.

Interviews noted an imbalance in the representation of interests between informal stakeholders and private sector actors, including multinational corporations.

Private sector actors whose business interests are heavily affected by EPR are better resourced and often part of established and formally recognised business associations. In contrast, informal sector actors had neither the organisational structures nor the financial or institutional resources to participate meaningfully in these processes, adding to their limited presence in consultations and decision-making. Some government interviewees reported that invitations had been extended to informal sector stakeholders, although these invitations did not result in participation in the consultations concerned.

Interviews highlighted several practical challenges to integrating the perspectives of informal waste workers into EPR consultations.

The fragmented and geographically dispersed nature of the informal sector, together with the absence of organised associations, makes it difficult to reach workers and ensure they are represented through a unified voice. Limited accessible policy information, technical guidance, and opportunities for participation may constrain informal waste workers' ability to engage effectively in EPR policy discussions. Some are also hesitant about formalisation. Finally, participation in consultations can impose financial costs through lost daily income, making attendance difficult without compensation. In this context, interviewees suggested that NGOs working closely with informal waste workers may be better positioned to represent their interests in policy discussions.

Stakeholders presented contrasting views about how the EPR policy process should engage with the informal sector.

Some interviewees argued that, because informal workers operate outside the formal regulatory system, they should be excluded from both the EPR system and the policy consultation process. Others suggested that members of recycling craft villages and other informal workers may be reluctant to participate in consultations, fearing that engagement could draw regulatory attention to their activities. Interviewees expressed differing views on the appropriate forms and extent of informal sector participation in EPR policymaking and implementation. These differences highlight the need to distinguish between legal formalization, economic integration, and meaningful participation in policy decisions.

3 Literature and Stakeholder Insights on Engaging the Informal Sector in EPR Policy Development

In Viet Nam, the informal sector's extensive experience in material recovery and recycling would likely help in the development of an EPR system that is both efficient and equitable. Understanding their perspectives and recognising their roles during the EPR policy development process can strengthen the technical design and implementation of the EPR system. The literature and interviews offered recommendations on both engaging the informal sector in policy decision processes, as well as recognizing or integrating the informal sector into EPR. These recommendations are both relevant to decision makers themselves, as well as NGOs and other actors who wish to better involve the informal sector in EPR.

Include the informal sector in EPR policy development and design processes.

A position paper on EPR prepared by the Global Alliance of Waste Pickers advocates meaningful participation of waste pickers in EPR policy design, including discussions on financing arrangements (e.g., fees), implementation processes, and fair compensation for collection and recycling services [37]. The report also recommended engaging waste picker organizations, however there are no known nationally representative, worker-led organizations who can play an established role in formal EPR policymaking in Vietnam.

Engage small- and medium-size enterprises as intermediaries for informal waste workers.

Small- and medium-sized actors, including collection companies, junk shops, and aggregators—some operating within formal or semi-formal arrangements—are also recommended to serve as intermediaries between informal waste pickers and policy makers. As informal workers often sell materials through these actors, they may have detailed knowledge of local value chains and greater access to decision makers. However, their commercial interests and bargaining positions of these intermediaries may not fully align with those of individual waste workers. They should therefore be engaged alongside informal workers and/or their organisations. Interviews suggested that some such organisations are representing informal sector interests in EPR policy consultations:

"Informal workers are not directly invited but through intermediary organisations such as VietCycle, URENCO, etc. which are organisations related to/interested in informal groups."

– P11

"Throughout these processes, political-social organisations and civil society organisations representing the voices of informal workers were involved."

– P16



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Prepare and raise the capacity of informal workers to engage in policy processes.

"... we need a capacity building programme [for informal waste workers] and we need the project who engage them to make them confident to speak in public."

– P8

Because informal workers in Viet Nam lack organisational or institutional support and are on the margins of society, they may not know about EPR in Viet Nam, may not consider or understand how it does or does not affect their livelihoods, and are not equipped to meaningfully engage in any formal policy processes. Given this reality, it has been suggested that efforts should focus on raising their capacity, building their trust and confidence, and strengthening their networks, for example by forming and supporting collective groups or cooperatives of informal waste collectors and recyclers [29,30]. This would enable the informal sector to advocate on their own behalf and identify how to be integrated, included, or recognized in policy making processes. These activities can be supported using funds generated in the VEPF, or through relevant government programmes, producer-led initiatives, development assistance, or other funding mechanisms, subject to applicable legal and financial requirements.

CONCLUSION

This brief provides insights into the extent to which the informal sector was recognised and considered during the development of Viet Nam's EPR policy, and the implications this may have for both recycling outcomes and the livelihoods of informal workers. The study found limited traceable evidence that information concerning the informal waste sector directly informed the development of Viet Nam's EPR policy during 2020–2025. However, the absence of identifiable evidence should not be interpreted as confirmation that such information had no influence on the policy process.

Although the contributions of informal waste workers have been acknowledged in policy discussions and stakeholder initiatives, the EPR framework does not recognize them and has not established dedicated mechanisms to ensure their direct participation in formal EPR decision-making and financial support arrangements. Similarly, the research did not discern if or how stakeholder consultation related to the informal sector were incorporated into the policy process. The review found limited traceable evidence that information concerning informal waste workers, including the gender-specific dimensions of their roles and working conditions, was explicitly considered in the final EPR policy framework.

Policy approaches that recognise and engage informal recycling actors have the potential to strengthen collection efficiency, improve recycling rates, and reduce the social and financial costs of waste management. As Viet Nam advances its EPR framework, a nuanced understanding of the informal recycling sector's structure, contributions, and vulnerabilities will be essential to developing policies that are both effective and socially inclusive.

Recommendations can be found on the next page.



RECOMMENDATIONS

This research finds that there are multiple, non-mutually exclusive ways to include evidence on the informal sector in EPR policy making processes moving forward. Some are underway as the next phase of Vietnamese EPR decision making is progressing. These are:

1 Collate existing evidence on the informal sector.

Existing evidence on Viet Nam's informal waste sector is substantial but fragmented, and it remains unclear if any of this evidence informed EPR decision-making. Developing a concise evidence synthesis for policymakers would improve access to existing knowledge. Incorporating this synthesis into consultations and capacity-building activities for government authorities would strengthen their understanding of the informal sector and help ensure its contributions and challenges are appropriately considered in EPR policy and practice.

2 Generate new evidence on the implications of EPR for the informal sector.

Targeted research should address key evidence gaps concerning Viet Nam's informal waste sector, including the scale of informal collection and material recovery, workers' socio-economic conditions, gender-related vulnerabilities, barriers to participation in formal recycling arrangements, and the potential impacts of EPR implementation on livelihoods and material flows. Such evidence, which can perhaps be funded using revenue generated by the EPR system, can help identify potential risks and opportunities and support more adaptive and inclusive policy design.

3 Conduct targeted consultations with informal waste workers.

It is often recommended that EPR consultations explicitly engage informal waste workers to better understand their contributions to waste management and identify ways to recognise them in policy design. Consultations should be designed to reduce participation barriers by using accessible language, suitable formats, convenient locations, and, where appropriate, compensating participants for their time. Holding consultations at the local level, particularly in recycling villages, can further increase participation by creating more direct engagement opportunities. Collaboration among the Ministry of Agriculture and Environment, relevant labor and social protection authorities, and local governments could help ensure that the perspectives and socio-economic concerns of informal waste workers are considered in future EPR consultations.

4 Engage organisations that represent or work closely with the informal sector.

Given the fragmented nature of the informal sector, policymakers could also consult organisations that have established relationships with informal workers, including NGOs, community organisations, cooperatives, and local authorities. These intermediaries could help communicate the perspectives of informal waste workers to policymakers and facilitate dialogue between government authorities and communities that are otherwise difficult to reach. Targeted consultations with intermediaries can provide valuable inputs to decision making processes but should seek to supplement rather than substitute direct engagement with informal recycling workers.

5 Learn from international experience in integrating the informal sector into EPR.

Viet Nam should draw on the experiences of a wider set of countries that have sought to integrate informal workers into EPR and other waste management systems. International exchange can provide practical lessons on governance arrangements, financing mechanisms, stakeholder engagement, and approaches that both improve recycling outcomes and protect the livelihoods of informal workers, while avoiding common implementation challenges.

About this policy brief

This brief is part of a retrospective analysis of the policy development process for Viet Nam's EPR framework funded by the British Academy's evidence-informed policymaking grants, a research programme to look specifically at the use of evidence in policy making processes. The study used a structured policy evaluation framework. It examines the availability and generation of evidence during the policy development process, the role of stakeholder engagement as a source of evidence, and the traceability of evidence within policy documents. This research examines the availability, accessibility, and traceability of evidence during the development of Viet Nam's EPR framework. While it considers how evidence may have informed policy development, it does not seek to establish causal relationships between individual evidence sources and specific legal provisions or evaluate the technical performance of the EPR system. The findings provide insights for policymakers in Viet Nam and other Southeast Asian countries who are designing or strengthening EPR frameworks.

Particular attention is given to the extent to which knowledge relating to three themes relevant to inclusive policy design was considered during the policy development process and reflected in the final policy: reuse systems, gender dimensions within the plastics value chain, and the informal waste sector, which is the focus of this brief. The brief summarises findings concerning the availability of evidence on the informal waste sector, the extent to which its consideration can be traced in the EPR policy development process, and insights from the literature and stakeholder interviews on approaches to strengthening informal sector participation. It concludes with recommendations for strengthening evidence-informed EPR policymaking with respect to the informal sector.

The full study report and additional briefs can be accessed on the Global Plastics Policy Centre's website at <https://plasticspolicy.port.ac.uk/research/>



About the Global Plastics Policy Centre

Based at the University of Portsmouth, the Global Plastics Policy Centre is an independent knowledge broker that facilitates effective plastics policy-making in government and the private sector. The Centre provides evidence-based guidance at the interface of government, businesses, citizens, and researchers, including supporting the process to develop a legally binding instrument to end plastic pollution. For queries about the Global Plastics Policy Centre's research, please email globalplastics@port.ac.uk, or visit the website at <https://plasticspolicy.port.ac.uk/research/>



About the Norwegian Institute of Water Research

The Norwegian Institute for Water Research (NIVA) is an interdisciplinary research institute dedicated to advancing knowledge and solutions for environmental challenges. NIVA conducts research across freshwater, marine, and terrestrial environments, with extensive expertise in plastic pollution, waste management, and environmental policy. Through national and international research partnerships, including long-standing collaborations in Southeast Asia, NIVA supports the development of evidence-based policies and governance approaches to prevent plastic pollution, improve resource management, and protect ecosystems and human health. This work contributes to sustainable development and informs environmental decision-making at local, national, and global scales.



About the Vietnam Maritime University

Vietnam Maritime University is a national key higher education institution dedicated to capacity building and scientific research for sustainable marine economic development. The University delivers technological solutions and evidence-based guidance at the interface of government agencies, industrial enterprises, and international organizations. Alongside traditional engineering disciplines, marine environmental protection represents a core research focus. The university currently conducts interdisciplinary research and international collaborative projects on marine environmental management, marine plastic pollution, and evidence-based environmental policymaking, including studies supporting the development and implementation of circular economy and waste management policies in Viet Nam. Among these initiatives, research on marine plastic pollution remains central, aiming to mitigate waste sources, generate baseline data for policy formulation, and advance sustainable development goals.

Cite this policy brief

Karasik, R., Hằng Đ., Nøklebye, E., Asok A., March, A., Trang, N., Thu, N., & Huyền, B. (2026). Policy Brief: They haven't even been recognised in the waste management system in Viet Nam. So how can they be part of the policy? Informal sector considerations in EPR for plastic packaging design in Viet Nam (2020-2025). Global Plastics Policy Centre, University of Portsmouth. Available at: <https://plasticspolicy.port.ac.uk/research/vietnam-epr-informal-waste-sector-brief/>



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