

Open vs Closed Consultation Impact on Decision Making: Evidence from France

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Abstract

Extended Producer Responsibility (EPR) has become a cornerstone of circular economy policy, yet the regulatory processes that define the mandates of Producer Responsibility Organizations (PROs) remain a "black box" in academic literature. In France, the drafting of PRO specifications is embedded in a simultaneous twofold consultation process: a technical expert committee (CiFREP) and an open public consultation. Drawing on the theory of informational lobbying, this paper investigates how the French Ministry for Ecological Transition navigates the informational asymmetries inherent in environmental regulation. We utilize an original dataset of 940 stakeholder contributions collected across 23 regulatory initiatives between 2021 and 2025, comprising both publicly scraped comments and manually extracted minutes from CiFREP expert meetings. We employ a novel NLP pipeline that combines document-diffing techniques to isolate textual modifications between draft and final decrees with Large Language Model (LLM) processing to categorize the regulatory intent of these changes. By projecting stakeholder inputs and regulatory shifts into a shared semantic space, we compute cosine similarity scores to quantify the degree of influence across different actor types. This research contributes to the

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literature on interest group influence and environmental governance by providing a scalable, quantitative framework to measure how stakeholder discourse is converted into binding regulatory content.

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1 Introduction

Extended Producer Responsibility (EPR) is an environmental policy instrument that assigns producers the financial and organizational responsibility for the end-of-life management of the products they place on the market. By internalizing waste management costs, EPR aims to correct an environmental externality while, at least in principle, creating incentives for eco-design and upstream waste prevention (Lindhqvist, 2000; Walls, 2006). In many European countries, and particularly in France, this responsibility is predominantly implemented through collective schemes operated by accredited Producer Responsibility Organizations (PROs) (Micheaux and Aggeri, 2019), which coordinate and finance waste management activities on behalf of producers (Mayers, 2007; Atasu and Subramanian, 2012; Gui et al. 2016).

In France, the implementation of EPR relies on a specific institutional arrangement in which public action is largely mediated by these organizations. Acting as regulated intermediaries between public authorities, producers, and operational waste management actors, PROs operate within a framework defined by a specification (*cahiers des charges*), which specify their missions, operational obligations, environmental targets, and governance requirements (Benabdelkrim, 2025). The design of the specification constitutes a critical point in the regulation of EPR schemes, as it structures both the scope of action of PROs and the economic incentives that shape their behavior, with direct implications for the environmental and economic performance of EPR systems.

The development of PROs' specifications in France is embedded in a formal, twofold consultation process. Draft specifications are submitted to the Commission Inter-filières

de Responsabilité Elargie des Producteurs (CiFREP), a specialized expert body comprising producers, local authorities, environmental associations, waste operators and the state while concurrently being released for a broad public consultation open to a wide range of stakeholders. This process aims at enhancing regulatory legitimacy and efficiency by collecting information from actors that possess critical knowledge regarding different policy alternatives. This is informational lobbying defined as the "strategic supply of politically relevant information to government representatives" (Baron, 2013). Informational lobbying can have a great impact on how policymakers perceive issues, identify points of consensus or conflict and evaluate policy options (Bunea, 2025). Yet, despite its central role in the institutional architecture of EPR, this consultation process remains largely underexplored in the academic literature. Existing studies predominantly focus on the ex post outcomes of EPR, such as collection rates, recycling performance, or eco-design incentives (Cahill et al. 2011; Kunz et al. 2018; Favot et al. 2022), while paying limited attention to the upstream regulatory processes through which the rules governing PROs are formulated, contested, and stabilized.

This paper seeks to address this gap by providing a systematic analysis of the design process of PRO terms of reference through the examination of contributions submitted during the consultation process. The paper pursues three interrelated objectives. First, it aims to document who participates in these consultations by identifying the types of actors involved, their relative presence, and potential asymmetries in participation across firms, associations, citizens, local authorities, and PROs. Second, it seeks to analyze the nature of the arguments mobilized, the main lines of contention structuring the debates, and the emergence of discursive coalitions among actors with converging interests (Junk & Rasmussen, 2019, Kluver, 2013) . Third, and more fundamentally, the paper aims to assess the role of public consultations in the regulatory process itself, examining whether they function as a genuine democratic arena for the co-construction of regulatory frameworks or primarily as a procedural mechanism for the legitimization of pre-defined policy choices by comparing the impact of the public consultation to the expert consultation. (Bunea, 2017).

To achieve these objectives, the study mobilizes advanced Natural Language Processing (NLP) methods applied to an original corpus of textual contributions collected from public consultations related to EPR terms of reference across multiple waste streams. This approach allows the analysis to move beyond case-based or purely qualitative assessments by offering a systematic, scalable, and comparative examination of stakeholder discourse within regulatory arenas (Logeart, 2026; Bunea, 2026). It also enables an exploratory assessment of the extent to which consultation inputs are reflected in the final versions of the terms of reference, thereby shedding light on the relationship between participatory processes and regulatory outcomes.

By adopting this perspective, the paper contributes to two strands of literature. It first speaks to research on environmental policy governance and participatory regulation by empirically examining how stakeholder consultations operate in practice. Then, it also contributes to the literature on the organizational and institutional design of EPR systems by highlighting the role of upstream regulatory processes in shaping PROs' mandates and constraints.

2 Institutional Context

In France, the implementation of Extended Producer Responsibility (EPR) relies on a centralized regulatory process through which public authorities define, revise, and enforce the operational obligations imposed on producers. These obligations are formalized in specifications adopted by ministerial decree, which constitute the legal reference framework for the accreditation of Producer Responsibility Organizations (PROs) and individual compliance schemes. While the adoption of these specifications follows a formally defined legal sequence, their elaboration combines codified procedures with informal coordination mechanisms and parallel consultative arenas that jointly shape regulatory outcomes.

The preparation of a specification is initiated within the administration, primarily under the responsibility of the Direction Générale de la Prévention des Risques (DGPR), acting on behalf of the Ministry for Ecological Transition. This process may be triggered by the creation of a new EPR stream, the renewal of existing accreditations, or the need to

revise regulatory requirements in response to legislative changes, European constraints, or performance issues identified in existing schemes. At this early stage, government inspection reports emphasize that the administration does not operate in isolation but engages in upstream technical and legal arbitration aimed at stabilizing a first draft of the regulatory proposal.

These upstream interactions include informal pre-consultations explicitly identified in official inspection documents. They involve selected stakeholders considered essential for the operational feasibility of the scheme, including other ministerial departments (notably those responsible for industry and competition) and key economic actors already involved in EPR implementation, such as existing PROs or major producer representatives. Although this phase is neither codified in environmental law nor subject to formal transparency requirements, it plays a decisive role in reducing informational asymmetries and ensuring compatibility between regulatory ambitions and industrial or organizational constraints.

Once a sufficiently consolidated draft has been produced, the administration simultaneously engages two formal consultation channels. On the one hand, the draft specification is submitted to an online public consultation, conducted in accordance with the French Code of Relations between the Public and the Administration (CRPA). This consultation is open to all interested parties—including firms, associations, local authorities, and citizens—and constitutes the main transparency mechanism of the process. On the other hand, the same draft is presented in parallel to the Commission inter-filières de responsabilité élargie des producteurs (CiFREP), a permanent consultative body established in 2020 to oversee governance issues across EPR streams.

Importantly, these two consultative arenas operate independently and do not follow a hierarchical or sequential logic. The CiFREP does not review individual submissions from the public consultation; instead, it deliberates on the draft as synthesized and presented by the administration. The commission brings together representatives of producers, local authorities, environmental and consumer associations, waste management operators, and the State within a multi-college structure designed to ensure balanced representation. Its

deliberations may result in general opinions on the coherence of the regulatory framework, votes on specific provisions, or explicit requests for redrafting and additional targeted consultation.

Empirical evidence from CiFREP proceedings indicates that these deliberations can lead to substantive modifications of the specifications, including the reformulation of contested obligations or the reopening of discussions on particularly sensitive issues. Although the CiFREP's role is formally advisory, its opinions exert a strong constraining effect on the administration, especially when concerns are expressed across multiple stakeholder colleges.

Following the closure of both the public consultation and the CiFREP deliberations, the administration returns to the drafting stage to finalize the regulatory text. This finalization process involves an administrative synthesis that selectively integrates inputs from both arenas, without any formal requirement to trace how specific public contributions are addressed. The finalized specification is then adopted by ministerial decree and published in the *Journal officiel*, at which point it becomes the binding framework establishing producers' responsibilities within the relevant EPR scheme.

Taken together, this institutional configuration reveals a regulatory process that formally emphasizes openness, participation, and multi-stakeholder governance, while relying in practice on parallel consultative mechanisms and strong administrative arbitration to stabilize regulatory outcomes. The coexistence of public consultation and CiFREP deliberation helps explain both the procedural legitimacy of the process and the limited scope for transformative change once draft specifications enter the formal consultation phase.

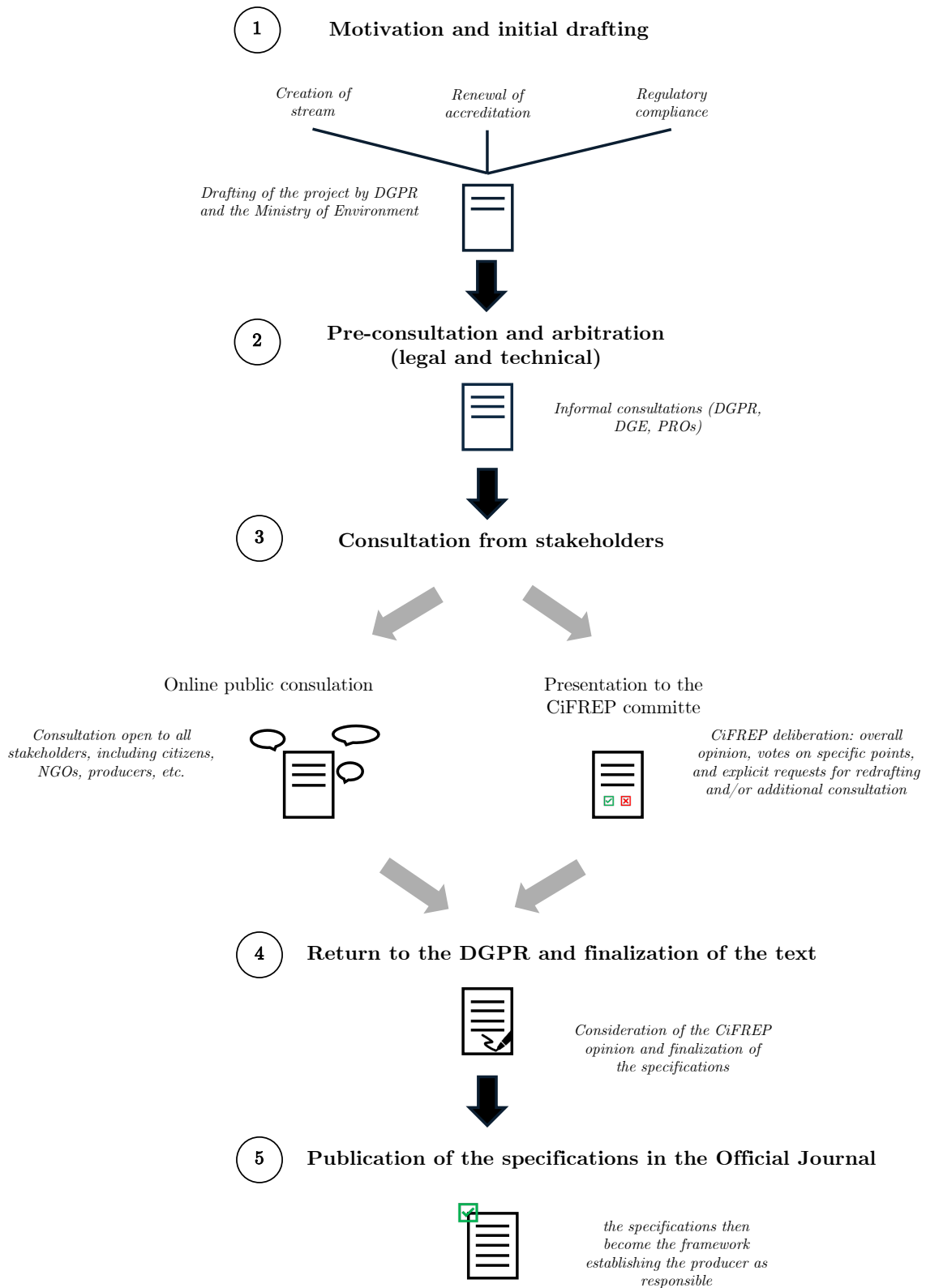


Figure 1: Steps of elaboration of PROs' specifications

3 Data and Corpus

To analyze the design of PRO specifications and the subsequent impact of stakeholder contributions, we constructed an original dataset by scraping the French Ministry of Ecological Transition’s public consultation portal. While the portal hosts over 100 consultations, we filtered our selection to include only those pertaining to PRO specifications (cahiers des charges) that received active stakeholder feedback. This resulted in a sample of 23 public consultations conducted between 2021 and 2025. For archived responses not currently available online, we are coordinating with the Ministry to retrieve the historical records.

In parallel, we identified the corresponding CiFREP meeting minutes for these initiatives. We manually extracted the expert opinions expressed during these sessions specifically related to the draft specifications. Our final dataset comprises 940 unique comments: 427 sourced from the Ministry’s web portal and 513 manually extracted from CiFREP reports.

3.1 The Four-Tier Corpus

Our analysis relies on a comparative study of four distinct textual layers:

- **Draft Specifications:** The initial regulatory baseline proposed by the Ministry before the consultation phase.
- **Public Consultation Contributions:** Statements representing the “outsider” positions of a wide range of stakeholders.
- **CiFREP Expert Opinions:** Technical “insider” feedback extracted from official meeting minutes.
- **Final Official Specifications:** The definitive version published in the *Journal Officiel*, which allows us to trace textual deviations from the initial draft.

Table 1: Distribution of Stakeholders in Consultation Process ($N = 940$)

Stakeholder Type	Frequency	Percentage (%)
Business Association	315	33.51
Association	232	24.68
Operator Association	143	15.21
Business	85	9.04
PROs	33	3.51
Public Authority	18	1.91
NGO	13	1.38
Citizen	11	1.17
Operator	3	0.32
No Response (NR)	87	9.26
Total	940	100.00

4 Methodology

Our study leverages state-of-the-art Natural Language Processing (NLP) to quantify stakeholder influence. We proceed in three stages:

First, we employ document-diff techniques at the section and article level to isolate textual modifications—additions, deletions, and substantive edits—between the draft and final versions. Second, we utilize Large Language Models (LLMs) in batch mode to generate structured summaries of these modifications, capturing the regulatory intent behind each change.

Finally, we project both the stakeholder comments and the LLM-generated summaries into a shared semantic space. By calculating cosine similarity scores, we identify alignments between specific stakeholder demands and the observed regulatory shifts. This methodology allows us to move beyond descriptive participation metrics toward a quantitative, fine-grained assessment of which stakeholder categories effectively shape regulatory outcomes.

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