

EPA's National Priority Site list improves compliance among repeat environmental offenders

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Introduction

The Environmental Protection Agency (EPA) is the authority for granting and enforcing environmental licences to industrial and agricultural activities in Ireland. These licences regulate air emissions and water discharges, as well as some other operational procedures. Traditional enforcement approaches used by the EPA for ensuring compliance with the conditions of the licences it issues rely on inspections, warnings, prosecutions and financial penalties. In recent years the EPA has used public information disclosure, in the form of the National Priority Sites (NPS) list, to influence polluter behaviour by increasing reputational pressure on licenced firms. This research examines whether the EPA's National Priority Site list improves compliance among repeat environmental violators. The list is published on a quarterly basis since 2017. In Q2 2026 there were just four licenced facilities on the NPS.

Data and methods

To investigate whether inclusion on the NPS list improves compliance, the environmental performance of NPS-listed firms is compared to the environmental performance of a 'control group' of firms with similar characteristics. The control

group includes facilities whose environmental performance is sufficiently poor to warrant close monitoring but that have not yet crossed the threshold for NPS designation. By comparing NPS-listed firms to the control group, the research design used in this study estimates the causal effect of NPS designation on environmental compliance.

The analysis is based on data from the EPA's Licensing, Enforcement, Monitoring, and Assessment (LEMA) system, which is used by EPA inspectors to conduct all enforcement and administrative reporting. The dataset consists of facility-level information on non-compliances, inspections, complaints from the public, incidents reported by facilities, opened compliance investigations, and periods in which a facility is designated as National Priority Site. The analysis is based on data for 951 facilities between 2016 and 2022, which includes the period just ahead of the inception of the NPS framework in quarter 3, 2017.

Results

The study finds that inclusion on the National Priority Sites list leads to measurable improvements in environmental compliance. Facilities identified through the programme reduce the incidence of violations following listing, demonstrating that information-disclosure mechanisms can be an effective regulatory tool.

However, these improvements should be viewed in context. The facilities placed on the NPS list typically experience a marked decline in compliance in the periods leading up to their designation. While compliance improves soon after listing, the gains are generally not large enough to exceed their earlier levels of performance. In effect, the programme appears to help facilities recover lost ground rather than achieve substantially better environmental performance than before.

Most of the observed reduction in non-compliance arises from improvements in administrative and operational procedures rather than from reductions in breaches of emission limit values. This suggests that firms respond by strengthening management and compliance processes where relatively low-cost changes are possible. By contrast, there is limited effect on behaviours requiring substantial investment in pollution-control or abatement technologies. Public disclosure alone does not appear to create sufficient incentives for firms to undertake larger capital investments that would further improve environmental outcomes.

Conclusions

The findings demonstrate that public information-disclosure programmes can play a valuable role in environmental enforcement. The National Priority Sites programme succeeded in improving compliance among some of the worst-performing facilities, confirming that reputational and transparency-based approaches can complement traditional regulatory interventions.

Two broad policy implications arise from the research. First, the current enforcement regime may not provide sufficiently strong incentives to alter the underlying environmental behaviour of persistent offenders. While inclusion on the National Priority Sites (NPS) list increases scrutiny and may encourage procedural improvements, the associated threat of prosecution and financial penalties appears too limited to drive substantial change amongst the worst environmental performers. Fines imposed through the district courts are often relatively modest and may not represent a significant financial deterrent for large industrial facilities. Granting regulators greater discretion to impose meaningful administrative penalties could strengthen incentives for firms to invest in pollution-control technologies and achieve deeper environmental improvements.

Second, the results suggest that enforcement based solely on sanctions may be insufficient and should be complemented by approaches that encourage voluntary environmental improvement. Previous research indicates that firms are more likely to improve environmental performance when regulatory pressure is combined with internal organisational drivers, such as dedicated environmental management systems, corporate sustainability objectives and shareholder expectations. Consequently, expanding existing approaches that provide technical support, promote environmental management systems and encourage investment in pollution-prevention measures may also contribute to delivering long-term improvements in environmental outcomes.