

Comment

Comment on Giacosa et al. Characterization of Annual Air Emissions Reported by Pulp and Paper Mills in Atlantic Canada. *Pollutants* 2022, 2, 135–155

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We are writing to respectfully offer clarification on interpretations of the National Pollutant Release Inventory (NPRI) presented in the recent paper “Characterization of Annual Air Emissions Reported by Pulp and Paper Mills in Atlantic Canada” by Giacosa et al. [1].

For context and clarity, the NPRI is legislated under the Canadian Environmental Protection Act 1999, SC 1999, c 33 (CEPA) to provide a publicly accessible inventory of pollutant releases, transfers and disposals [2] and is designed with mandatory (not ‘suggested’ as presented by Giacosa et al.) reporting requirements (thresholds) that are low enough so that the majority of facilities are required to report, ensuring that most commercial and institutional releases, transfers and disposals are captured in the inventory [3]. This design is consistent with other pollutant inventories around the world [4–9]. Beyond the provision of public access to pollutant release information, the NPRI is also one element, among many within the larger framework for the sound management of chemicals at federal, provincial and municipal levels. In this framework, the NPRI complements other initiatives and sources of information to support the prioritization, risk assessment, and risk management (including regulations) of chemicals [10,11], but on its own is not enough to make conclusions about exposure or risk, nor is it a direct regulator of emissions [5,12,13].

Given this context, it is unsurprising that all pulp and paper facilities in Atlantic Canada in this study met the NPRI reporting thresholds. However, Giacosa et al. cause confusion about the significance of this finding when they comment “there are no regulations for exceedances” of NPRI reporting thresholds, and later present NPRI data as very large percentages of exceedance (e.g., up to 100,000%) or “difference from reporting threshold”. This perspective, while attention-grabbing due to the magnitude of the percentages, suggests a misunderstanding of the function of NPRI reporting thresholds, which are designed to be exceeded to induce the requirement to report (and thus contribute to a comprehensive inventory), and not as maximum limits for environmental or human health protection.

This confusion is exacerbated when the same language and units (i.e., thresholds and percentages of exceedance) are used in a comparison of NPRI data to annual air emission limits set out in the Code of Practice for the Management of Air Emissions from Pulp and Paper Facilities [14]. The objectives of this code of practice are to recommend and promote the best practices to facilitate and encourage ongoing improvements in pulp and paper facilities with respect to certain air emissions, including total particulate matter. It includes emission limits that are performance standards comparable to the best existing emission performance levels in Canada. Exceedances in this context indicate that a facility is outside the expected performance for this sector when best practices are implemented. Moreover, while some of the emissions in this study (spanning 2002–2019) convert to estimates that exceed the emission limits (as adapted by Giacosa et al.), these instances pre-date the publication of the Code of Practice (published in July 2018), which was a point omitted

from Giacosa et al.'s discussion and which impacts the interpretation and importance of their findings of exceedances.

The confusion about the different meaning of “thresholds” and “exceedances” in these two contexts has recently materialized in the media, in the CBC article of 13 April 2022 entitled “New study shows Northern Pulp mill emissions exceeded federal threshold by 100,000%” [15]. The article, based on Giacosa et al.'s study, incorrectly reported that “Northern Pulp in Pictou County grossly exceeded maximum thresholds set by Environment and Climate Change Canada for a pollutant known as Total Particulate Matter 2.5”.

In response, and in order to support informed use of NPRI data and emissions analysis for this sector, we offer the clarification for *Pollutants* readers that the NPRI reporting requirements are not maximum limits, but rather are minimum thresholds intended to trigger mandatory reporting to the inventory. The quantification of exceedances of these reporting requirements as presented in this paper is a misleading interpretation of their function.

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