

Best Practices for Defining Cumulative Impacts

ABOUT THIS SUMMARY

In October 2024, the National Environmental Justice Advisory Council Cumulative Impacts Workgroup published a report of recommendations to the EPA, [Reducing Cumulative and Disproportionate Impacts and Burdens in Environmental Justice Communities](#). To improve environmental health protections by reaching a larger audience, the Union of Concerned Scientists prepared eight fact sheets summarizing the workgroup's recommendations. Natalie Gehred, a doctoral student in molecular biology at the University of California, Los Angeles, and Dr. Kristie Ellickson, a senior scientist at the Union of Concerned Scientists, prepared the summaries.

This document summarizes Theme 2 of the report: [EPA should workshop, translate, and improve the Office of Research and Development definition of cumulative impacts before full Agency adoption](#).

For additional summaries, please visit act.ucusa.org/NEJAC. For the full report, please visit act.ucsusa.org/NEJAC-report.

Given that definitions are foundational in framing the development of programs and methods, the NEJAC proposes several important considerations for defining cumulative impacts within regulatory agencies. Above all, the definition must be worded to drive actionable analyses that decrease disproportionate burdens and exposures.

Highlight the social determinants of health to support a broader understanding of cumulative impacts in communities with environmental justice concerns.

A goal for this work must be health equity, the state in which everyone has a fair and just opportunity to attain their highest possible level of health. A good definition of cumulative impacts must clarify the role of social determinants of health. According to the Centers for Disease Control and Prevention, these are key determinants of health inequities, defined as “the unfair and avoidable differences in health status seen within and between populations” (CDC 2024).

Many definitions of cumulative impacts could benefit from including social determinants of health more explicitly. The EPA's Office of Research and Development defines cumulative impacts as "the totality of exposures to combinations of chemical and non-chemical stressors and their effects on health, well-being, and quality of life outcomes." While the term "non-chemical stressor" can be interpreted to include the social determinants of health, it is a field-specific term that is not clearly understood in all contexts.

Engage frontline community partners to ensure that the definition of cumulative impacts is culturally competent, useful to environmental justice communities, and relevant to communities' lived experience.

People in overburdened and underserved communities have important insights regarding environmental inequalities, and they have the right to participate in discussions about cumulative, disproportionate impacts. Therefore, regulatory definitions of cumulative impacts must be useful and understandable not only within the research community but also for the general public and, especially, overburdened communities. While there are few community-developed definitions for cumulative impacts, community-based organizations tend to respond to definitions that (Sheats and Baptista 2022):

- Are location- and context-specific, rather than more general, technical, and abstract relative to communities' experience of living daily with cumulative impacts;
- Include the various types of exposures and stressors that should be considered, rather than being limited to specific regulatory contexts (e.g., an air program defining cumulative impacts within the context of existing air regulations or the water program doing the same);
- Include the many ways of knowing, including risk estimates, pollution source density, social determinants of health, existing health conditions, and community lived experience, conveyed through both qualitative and quantitative data;
- Indicate the importance of community participation in identifying and validating the stressors, impacts, sources, and communities most affected by cumulative impacts; and
- Use plain language and terms easily understandable by the communities for whom the definition is developed.

References

- CDC (Centers for Disease Control and Prevention). 2024. "Social Determinants of Health (SDOH)." January 14. https://www.cdc.gov/about/priorities/why-is-addressing-sdoh-important.html?CDC_AAref_Val=https://www.cdc.gov/about/sdoh/index.html
- Sheats, Nicky, and Ana Baptista. 2022. "Addressing Environmental Injustice Through the Adoption of Cumulative Impacts Policies: Policy Paper Supporting Policy Plank #2 of the Louisville Charter. Coming Clean." <https://comingcleaninc.org/assets/media/images/Louisville%20Charter%20content/plank%20%20policy%20brief.pdf>