

**FACT SHEET**

# BREAKING THE TOXIC CHEMICAL CYCLE AND PROTECTING VULNERABLE POPULATIONS REQUIRES SAFER ALTERNATIVES



- Toxic chemicals disproportionately burden vulnerable populations, including low-wealth communities and people of color, contributing to health disparities in conditions such as asthma, cancer, and reproductive problems.
- To achieve health equity for these communities requires the elimination of existing toxic exposures and the selection of safer alternatives that do not impact the health of vulnerable populations.
- This fact sheet outlines an approach to find safer alternatives to toxic chemicals in industry, agriculture, food, consumer products, or other uses—regardless of how the product, process, or chemical is regulated.

## WHY ALTERNATIVES ASSESSMENT MATTERS

Exposures to toxic chemicals such as lead, pesticides, and many others have disproportionately affected vulnerable populations.

Vulnerable populations are those that:

- have been disproportionately impacted by toxic chemicals; and/or...
- have an increased likelihood of adverse health effects from toxic chemicals due to greater susceptibility and/or exposure; and/or...
- have been, and continue to be, marginalized and excluded from processes and decisions that affect them.

These populations may include workers who are exposed to toxic chemicals in workplaces; low-income communities; communities of color; fence-line neighborhoods; communities that rely on subsistence for at least a portion of their diet (such as indigenous people of the Arctic); and infants, children, and pregnant women.

Historically, when we identify a problem chemical, the replacement is often another toxic chemical. This is called a regrettable substitution. Regrettable substitutions can particularly affect vulnerable populations that are harmed



by the original toxic chemical and then by its substitute. For example:

A chemical (diacetyl) used in butter flavoring for microwave popcorn caused disabling and irreversible lung disease in workers. After companies replaced the chemical with another thought to be safer, researchers discovered that the replacement also caused lung disease. Workers suffered serious health impacts from both the original chemical and its replacement.

To help businesses and government avoid regrettable substitution, scientists developed a process called alternatives assessment to identify, compare, and select safer alternatives to chemicals of concern, with a primary goal of reducing harm to human health and the environment. However, these methods have not focused on protecting the health of vulnerable populations.

## HOW DO WE ENSURE THAT ALTERNATIVES WILL BE SAFER FOR VULNERABLE POPULATIONS?

We interviewed five leaders working at the intersection of environmental justice, public health, and chemical policy to understand what is needed in the alternatives assessment process to protect vulnerable populations. The principle of health equity, a fundamental priority and value in public health that encompasses the protection of vulnerable populations, guided our investigation. Health equity means that everyone has the opportunity to obtain their highest level of health.

From the interviews, three major themes emerged: information access and quality; genuine stakeholder engagement; and trade-offs that may impact vulnerable populations.

## RECOMMENDATIONS FOR ALTERNATIVES ASSESSMENT

Based on these themes, we suggest some initial areas of focus for businesses and governments to strengthen the protection of vulnerable populations in an alternatives assessment process.

### 1. Create a plan for stakeholder engagement that includes identification of vulnerable populations impacted by the chemical of concern and ensures their participation in:

- All stages of an alternatives assessment, from scoping to post-implementation.
- Decision making on trade-offs presented by alternatives.
- Information gathering on chemical uses and exposures throughout the product life cycle.
- Information gathering on economic and social impacts.

### 2. To guide decision making, use the Commons Principles for Alternatives Assessment with additional language that addresses equity, as outlined in our discussion draft paper.

### 3. Ensure that persistent, bioaccumulative, and toxic chemicals are not selected as alternatives.

### 4. Ensure that chemicals posing serious chronic health hazards are not selected as alternatives.

### 5. Define a minimum data set needed to evaluate alternatives.

### 6. Understand the complete product life cycle in order to evaluate trade-offs.

### 7. Promote public communication of information regarding chemicals in products.

### 8. Require economic and social impact analysis to make trade-offs visible.

More work is needed to describe how to incorporate these concepts into the alternatives assessment process. The expertise and experience of vulnerable populations provide critical information needed to select the safest possible substitutes for toxic chemicals of concern that may affect their communities.

A truly equitable alternatives assessment process should engage and empower vulnerable populations, avoid regrettable substitutions, and ultimately improve the health and lives of those most impacted by toxic chemicals.