Cumulative Impact

The M-LEEaD Center's Community Engagement Core (CEC) increases awareness and understanding of environmental health research.

Stakeholder Advocacy Board members include:

- Community Health and Social Services
- Detroit Department of Public Health
- Detroit Hispanic Development Corporation
- Detroiters Working for Environmental Justice
- Eastside Community Network
- Ecology Center
- Henry Ford Health System
- Michigan Environmental Justice Coalition
- We the People of Detroit

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What is Cumulative Impact?

Cumulative impact is a model for understanding multiple environmental exposures, social and economic conditions, and personal risk factors that may increase someone's likelihood of experiencing harm. For example, having an existing health condition and being exposed to air pollution. The combined effect of these factors is called **cumulative impact.**

Exposure to multiple pollutants
e.g.: traffic pollution, closeness to toxic waste sites, workplace exposures, lead in water.

Psychological stressors
e.g.: chronic stress, adverse childhood events (ACEs).
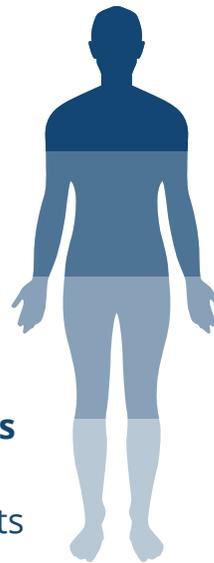
Pre-existing health conditions and biological factors
e.g.: diabetes, genetic factors, autoimmune disease.

Social and economic vulnerabilities
e.g.: limited access to health care, poverty, water affordability

By examining these factors together, we can get a clearer picture of the total impacts on public health. Cumulative impact is a useful tool for understanding why some groups may be more vulnerable to harmful effects from environmental exposures.

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Why is cumulative impact useful?

1 It can **more fully assess the health impacts** associated with polluting facilities and their emissions for the residents of surrounding communities.

2 It can **direct resources to communities** that experience higher cumulative impact to reduce their exposures and health risks

3 It can **inform policies and planning decisions** in order to promote the health of residents experiencing high impact.

4 It can **identify** places with higher health impacts and address medical care costs associated with decision-making.

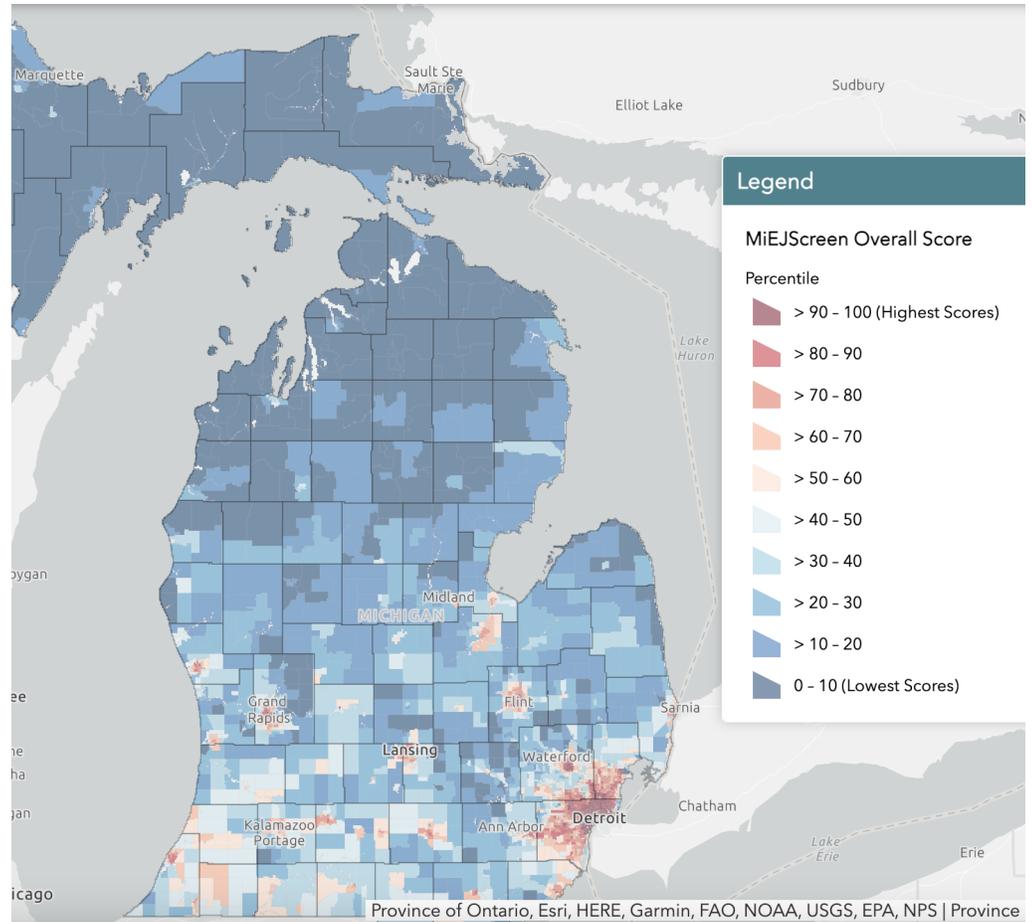## How can I use legislative impact to inform my decisions?

1 Use cumulative impact data to inform decisions on new infrastructure and **limit new pollution sources** in communities that already experience high cumulative impact.

2 **Intervene and invest in communities** experiencing high cumulative risk. For example, fitting air filtration systems in homes or schools that are close to sources of air pollution.

3 **Advocate for better monitoring** to provide a more accurate picture of the risks and impacts in a community.

4 **Require rigorous, independent health impact assessments** before issuing new or renewed permits for emission of pollutants

MiEJ Screen

The MiEJ Screen is a draft online tool created by the Department of Environment, Great Lakes, and Energy. This scoring system is an example of cumulative impact metric, as its uses multiple factors to identify communities most impacted by environmental exposures.

Legend

MiEJScreen Overall Score

Percentile

- > 90 – 100 (Highest Scores)
- > 80 – 90
- > 70 – 80
- > 60 – 70
- > 50 – 60
- > 40 – 50
- > 30 – 40
- > 20 – 30
- > 10 – 20
- 0 – 10 (Lowest Scores)

Province of Ontario, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS | Province

What factors are considered in MiEJ's overall score?

- Environmental Effects
- Sensitive Populations
- Socioeconomic factors
- Environmental exposures

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Last revised 06/2023