How TRI Data are Used by Academics and Other Researchers

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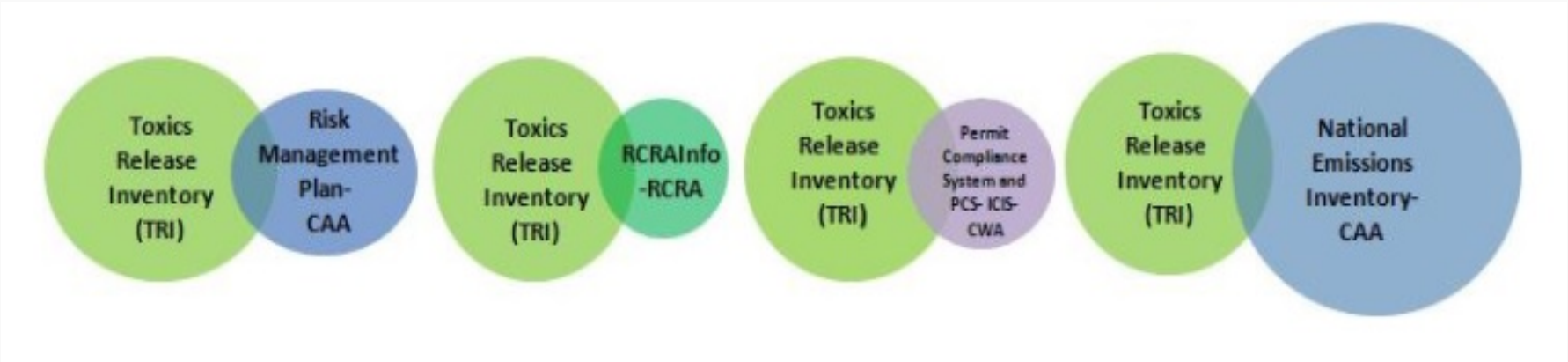
What makes TRI data unique?

Statutory Authorities:

- Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) § 313
  - Each year, facilities in certain industrial sectors must report to EPA and the states the quantities of certain chemicals they release to air, water, and land or otherwise manage as waste.
  - EPA must maintain the data and make it available to the public.
- Pollution Prevention Act of 1990 (PPA)
  - Facilities must also report progress in reducing waste generation and moving towards safer waste management alternatives.
  - Section 8 of the Form R

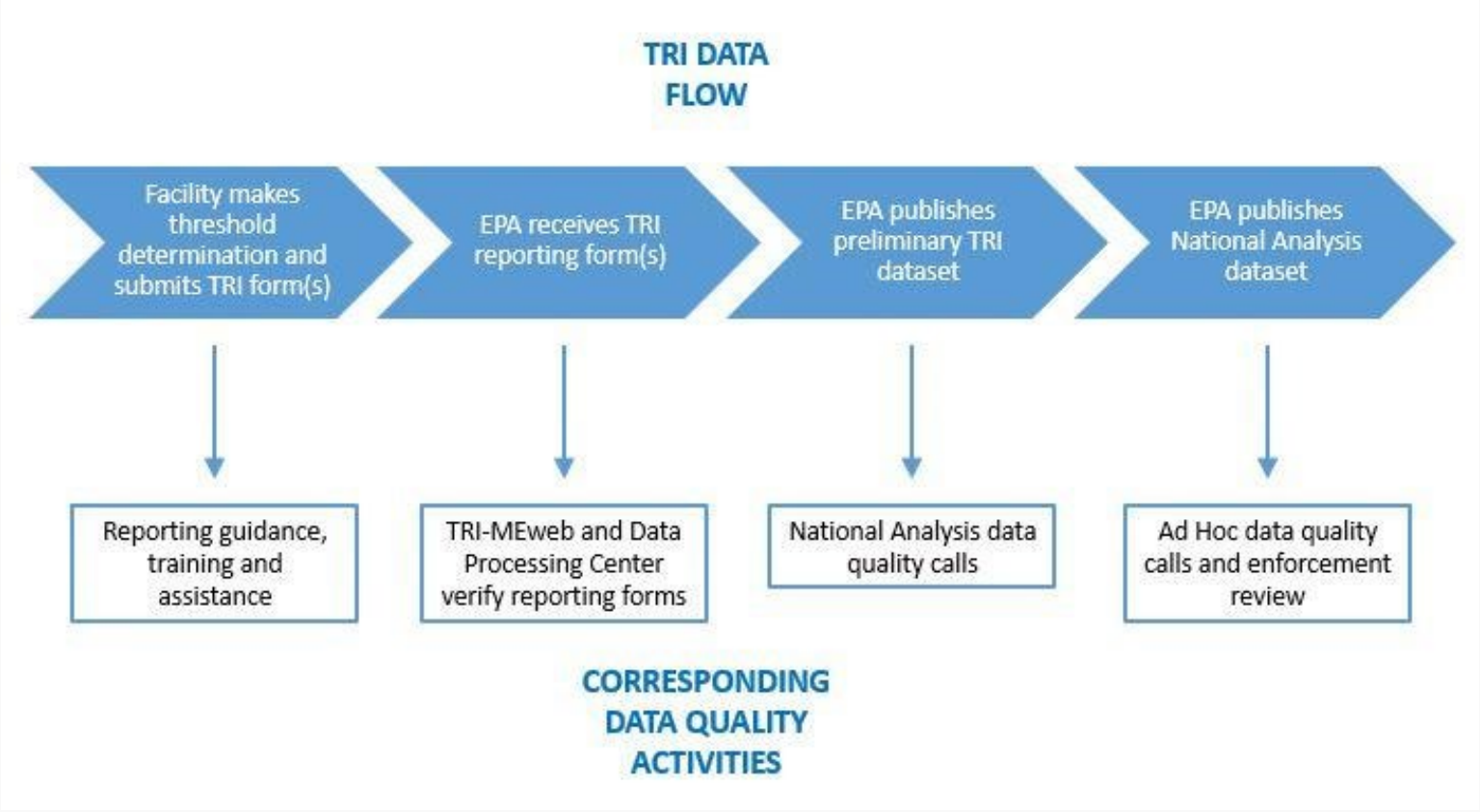
What makes TRI data unique?

- Annual – more frequent data than many other programs
- Multimedia – only multimedia dataset from EPA
- P2 and waste management information – more than just releases
- TRI data help to complete the picture



What makes TRI data unique?

Robust data quality program



TRI University Challenge

- Objectives:
  - Expose students to TRI information
  - Support development of a diverse portfolio of innovative projects using TRI data
  - Create a “force multiplier” for TRI
- Outcomes:
  - Partnered with 20 schools
  - Interacted with over 200 students
  - Journal articles, university awards, publicly-accessible data tools, YouTube data use tutorials

Disclaimer

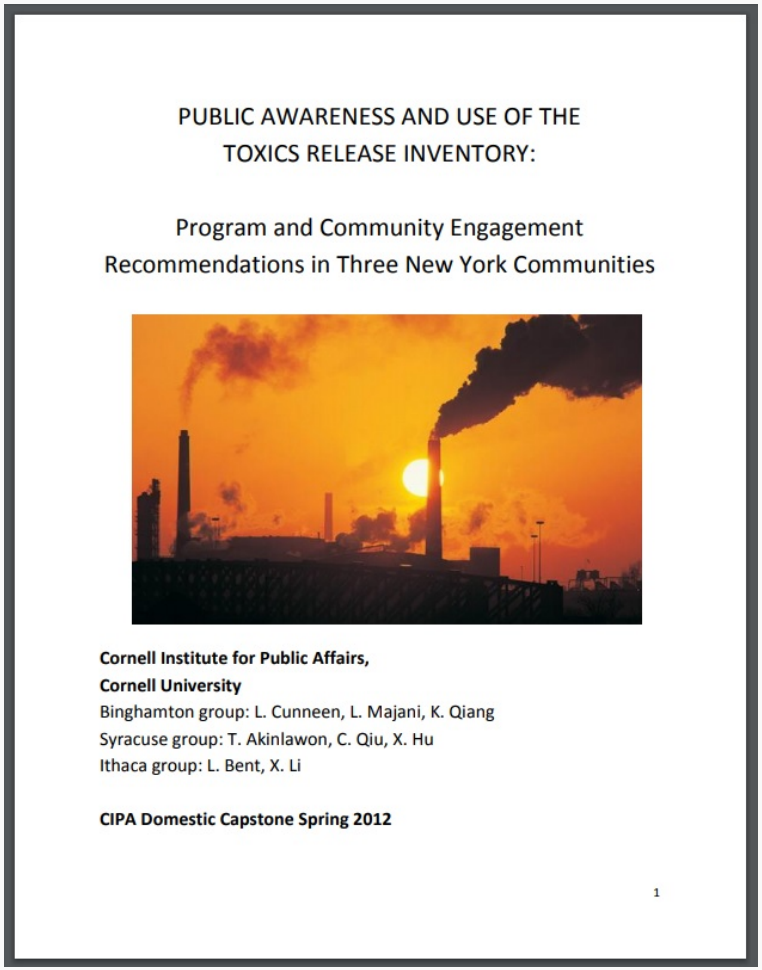
The TRI data uses referenced in the projects and materials discussed in the slides that follow are provided as examples. Mention of these projects and materials does not constitute an EPA endorsement of their use, or of the individuals, groups, and organizations who developed them or their conclusions.

TRI University Challenge Projects

George Washington University International Analysis:

Master's students from GWU's Environmental Resource Policy Program identified recommendations for enhancing the comparability of data from TRI-like programs (known as Pollutant Release and Transfer Registers) around the world.

TRI University Challenge Projects



PUBLIC AWARENESS AND USE OF THE TOXICS RELEASE INVENTORY:

Program and Community Engagement Recommendations in Three New York Communities

Cornell Institute for Public Affairs,
Cornell University
Binghamton group: L. Cunneen, L. Majani, K. Qiang
Syracuse group: T. Akinlawon, C. Qiu, X. Hu
Ithaca group: L. Bent, X. Li

CIPA Domestic Capstone Spring 2012

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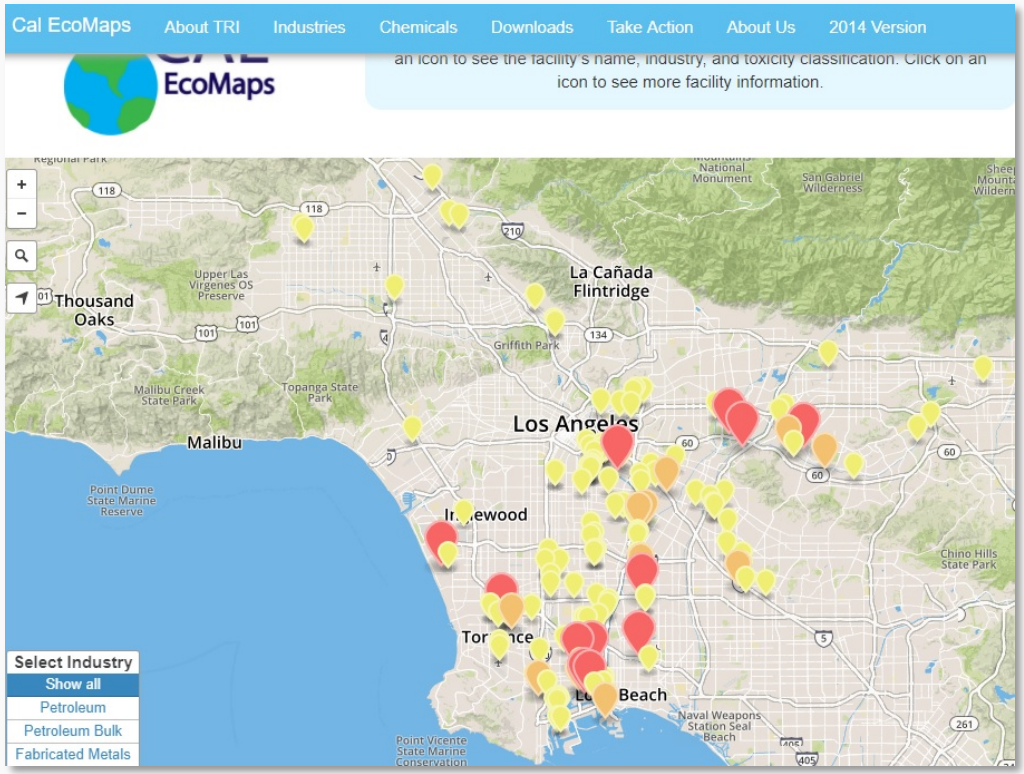
Cornell Institute for Public Affairs, Cornell University

Capstone Fellows at the Cornell Institute for Public Policy researched potential uses of TRI data by EPA and other stakeholders. Students conducted research in three communities in central New York: Binghamton, Syracuse and Ithaca.

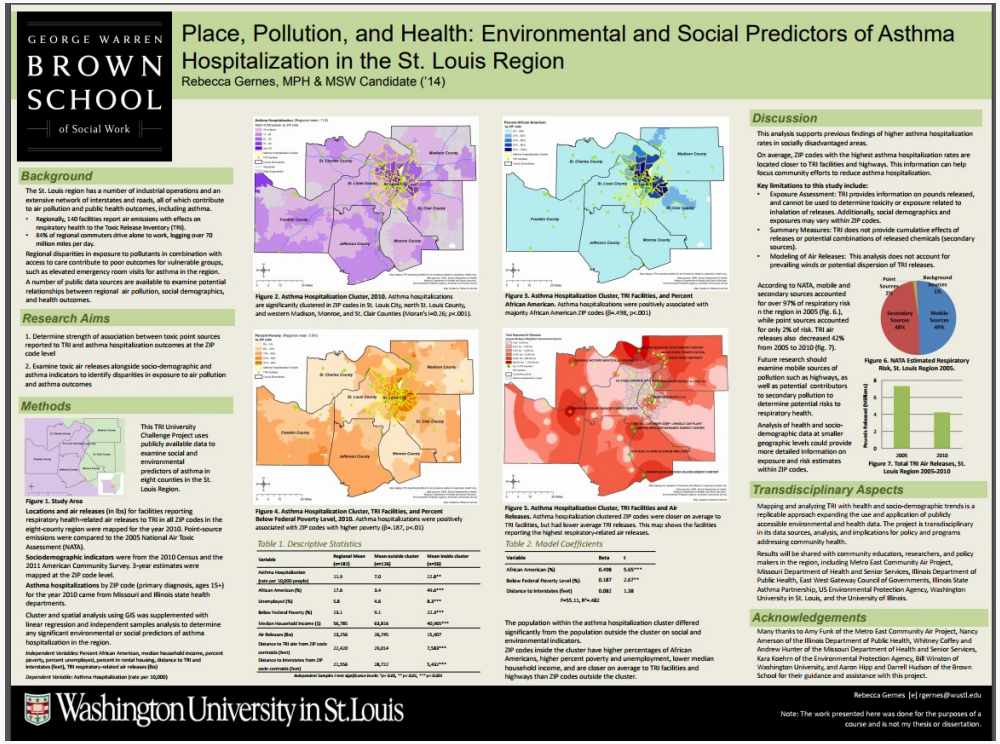
TRI University Challenge Projects



University of California, Los Angeles

Undergraduates developed the Cal EcoMaps website to highlight TRI reporting facilities in the Los Angeles Basin through an interactive map. Users are able to see information on profiled facilities from the petroleum, fabricated metals, primary metals, and chemicals sectors. The information includes total toxic releases per facility, releases per $1000 of revenue, percent of waste treated through preferred management practices, and an estimate of associated cancer risks.

TRI University Challenge Projects



Brown School for Social Work and Public Health, Washington University in St. Louis

A Master's student used TRI data to conduct an asthma incidence study in the St. Louis area. The purpose was to determine the strength of association between toxic point sources reported to TRI and asthma hospitalization outcomes at the ZIP code level, and to examine toxic air releases alongside socio-demographic and asthma indicators to identify disparities in exposure to air pollution and asthma outcomes.

TRI University Challenge Projects

State University of New York at Plattsburgh

The team of undergraduates created “Toxic Release!”, an eco-educational simulation game that demonstrates the various dynamics between stakeholders that are impacted by industrial chemical releases. The purpose of the game is to use TRI data to make the invisible dynamics associated with toxic releases more tangible. Players assume the roles of industry professionals, community members concerned with environmental and human health, and government regulators. These stakeholders then use computer models founded upon TRI data, role play, and environmental problem-solving frameworks to manage a toxic release scenario.

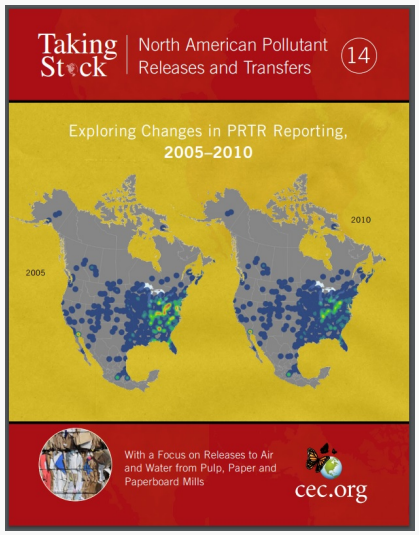
TRI University Challenge Projects

Indiana University-Bloomington

Faculty researchers merged TRI data with data from the Centers for Disease Control and Prevention and the Area Health Resource File, and made this merged dataset available to the public as Excel, STATA, and SAS files. This dataset has proven useful to broadly explore releases of chemicals from TRI facilities alongside socio-demographic and health data at the county level. The researches published an article in the journal Environmental Research about this project.

International Organizations that Use TRI Data

- Commission for Environmental Cooperation in North America (CEC) "Taking Stock" report
- Organization for Economic Co-Operation and Development (OECD) Pollutant Release and Transfer Register (PRTR) activities
- UN Environment Programme (UNEP) and UN Institute for Training and Research (UNITAR)
- UN Sustainable Development Solutions Network (UNSDSN) development of tracking indicators



UN environment
United Nations Environment Programme

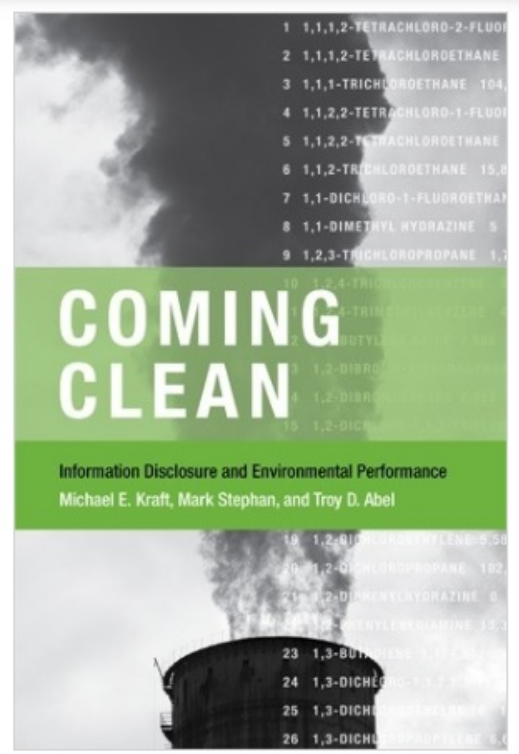
OECD
BETTER POLICIES FOR BETTER LIVES

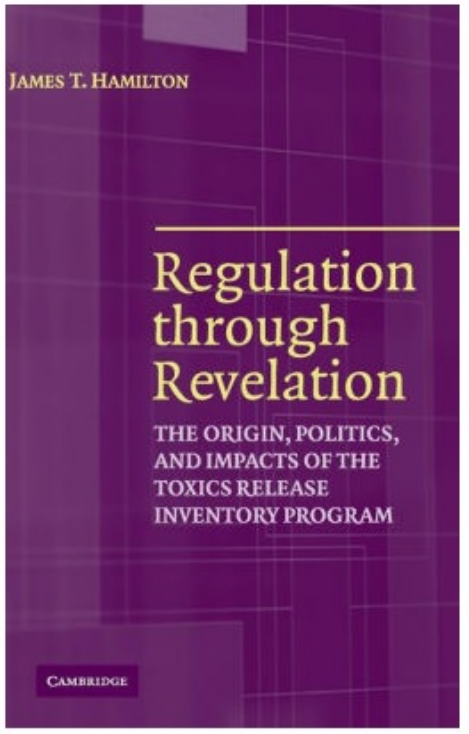
unitar
United Nations Institute for Training and Research
PRTR Platform

SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

Research about TRI

Researchers have looked at the TRI program as a subject unto itself to investigate the impact of information disclosure as a means to achieve environmental policy outcomes.





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