



# Harmonizing Data from International Pollutant Release and Transfer Registers

TRI National Conference  
Abby Burton

# Background

- Pollutant Release and Transfer Registers – PRTRs
- Organisation for Economic Cooperation and Development (OECD) Working Party on PRTRs developed PRTR International Analysis project
- Can PRTR data be used in global analysis?

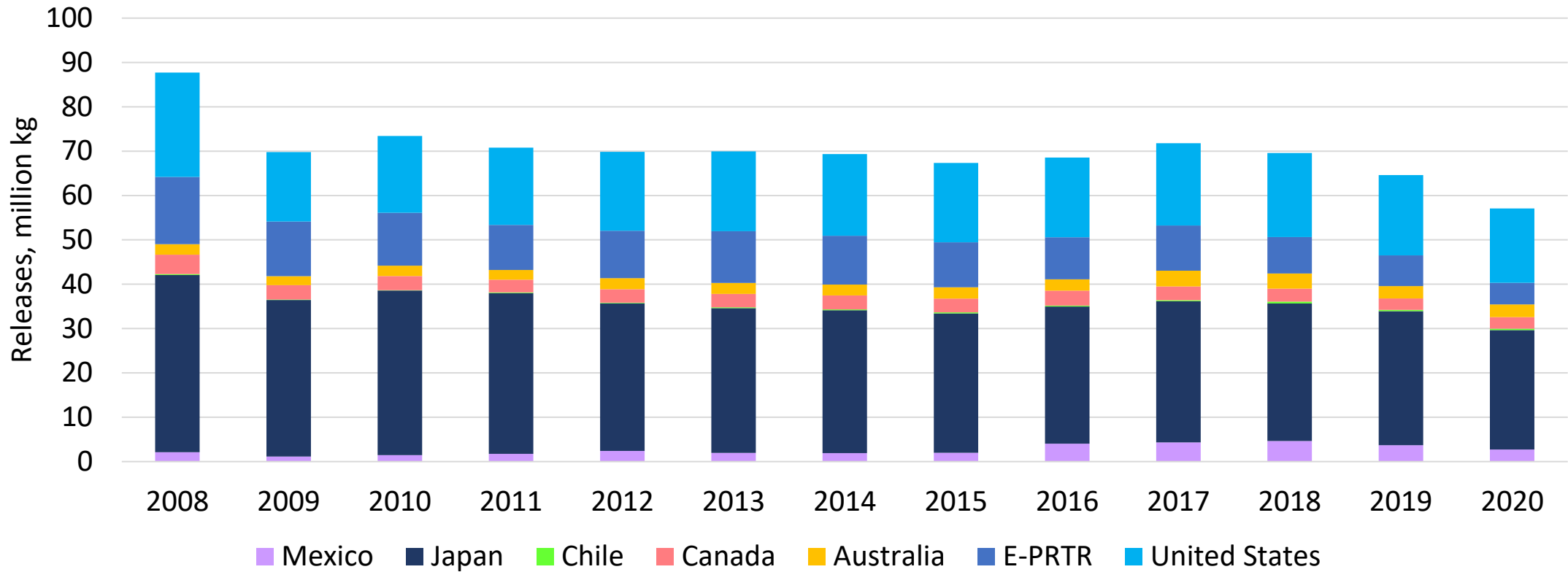


# Selecting Data

- First-of-its-kind analysis – limited scope to contain the project
- 7 PRTRs
  - Geographic coverage – North & South America, Europe, Asia, Australia
  - Not every PRTR included
- 14 pollutants
  - Pollutants of higher concern, and covered by most of the 7 PRTRs
- Manufacturing Sector
- Air and Water Releases
- Toxicity Scores (UseTox)

# Preview of Results

Releases of 12 pollutants by PRTR





# Chemicals Selected

- “Atmospheric Pollutants”

- Particulate Matter
- Sulfur Oxides

- “Toxic Pollutants”

- 1,2-Dichloroethane
- Benzene
- Di-(2-Ethylhexyl) phthalate (DEHP)
- Dichloromethane
- Ethylbenzene
- Styrene
- Tetrachloroethylene
- Trichloroethylene
- Cadmium
- Chromium
- Mercury
- Nickel



# Considerations for chemicals

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- Selection of chemicals
  - Balancing range of chemicals and adequate PRTR representation
- Reporting of metals
  - Metals vs. metal compounds
  - Oxidation states of chromium
- Reporting of “atmospheric pollutants” (criteria air pollutants)

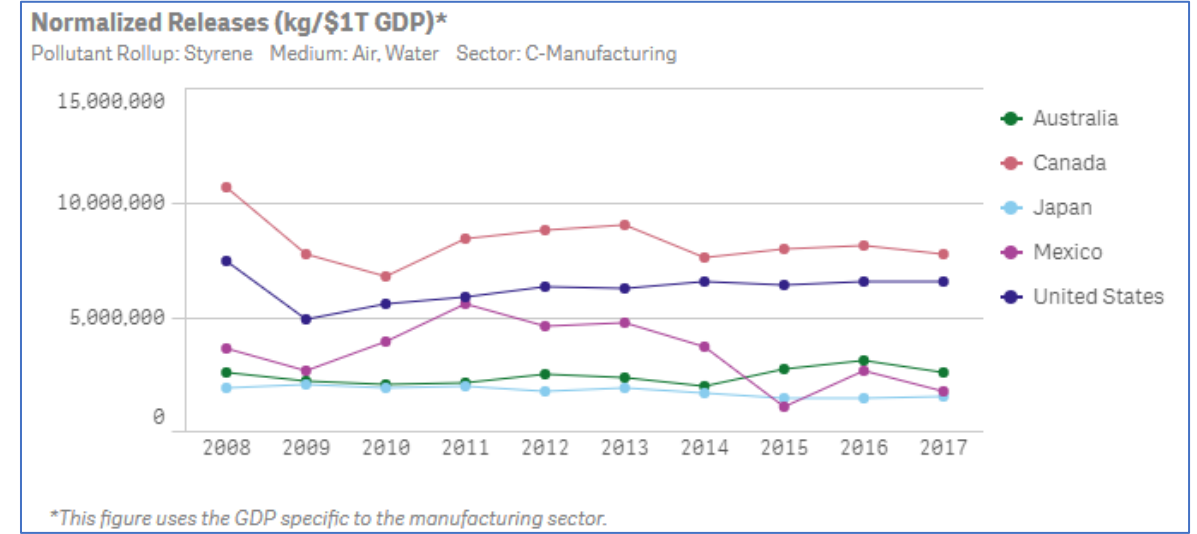
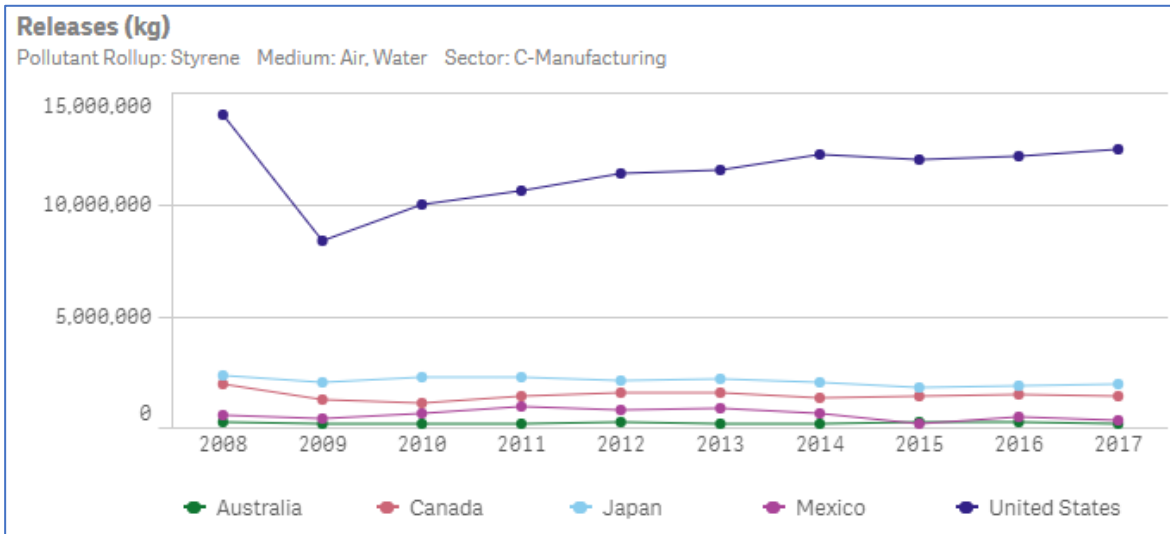
# PRTRs selected

- Australia
- Canada
- Chile
- E-PRTR
  - Includes all EU countries
- Japan
- Mexico
- United States
  - TRI and National Emissions Inventory (NEI) data



# Economic Variability

- Normalization by manufacturing value added (UN data)



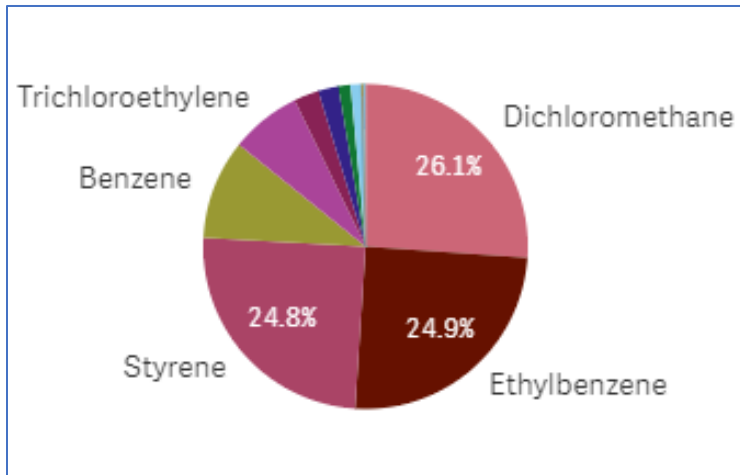


# Chemical Harmonization

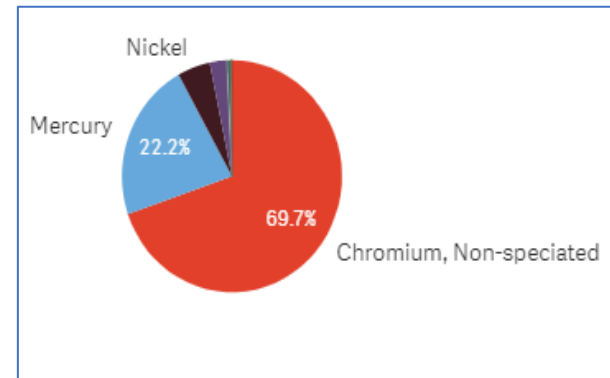
Pollutant	Australia	Canada	Chile	E-PRTR	Japan	Mexico	U.S.
1,2-Dichloroethane	✓	✓		✓	✓	✓	✓
Benzene	✓	✓	✓	✓	✓	✓	✓
Cadmium	✓	✓	✓	✓	✓	✓	✓
Chromium	✓ Cr(III) and Cr(VI)	✓	✓	✓	✓ Cr(VI), Cr(0), and Cr(III)	✓	✓
Di-(2-ethylhexyl) Phthalate	✓	✓		✓	✓		✓
Dichloromethane	✓	✓		✓	✓	✓	✓
Ethylbenzene	✓	✓		✓	✓		✓
Mercury	✓	✓	✓	✓	✓	✓	✓
Nickel	✓	✓	✓	✓	✓	✓	✓
Particulate matter*	✓	✓	✓	✓			** (NEI)
Styrene	✓	✓			✓	✓	✓
Sulphur oxides	✓ (SO <sub>2</sub> )	✓ (SO <sub>2</sub> )	✓ (SO <sub>2</sub> )	✓ (Total SO <sub>x</sub> )			** (SO <sub>2</sub> in NEI)
Tetrachloroethylene	✓	✓	✓	✓	✓		✓
Trichloroethylene	✓	✓		✓	✓	✓	✓

# Toxicity - UseTox

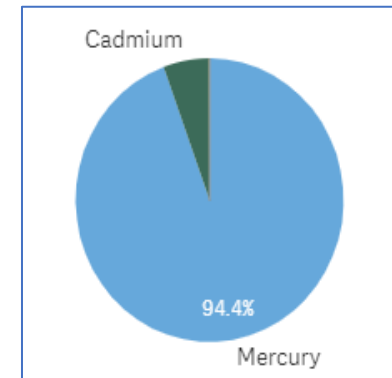
- UseTox – international model endorsed by UN Environment Program
- Pollutant, pathway-specific



Total releases by weight  
(toxics only)



Human (cancer and non-cancer) toxicity



Ecotoxicity

