



The Toxics Release Inventory

Past, Present, and Future Directions

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U.S. EPA

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TRI's Statutory Authority

❖ Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) §313

- Facilities in certain industrial sectors must report toxic chemical releases to air, water, and land and other waste management to EPA and the states each year.
- EPA must maintain the data and make it available to the public.

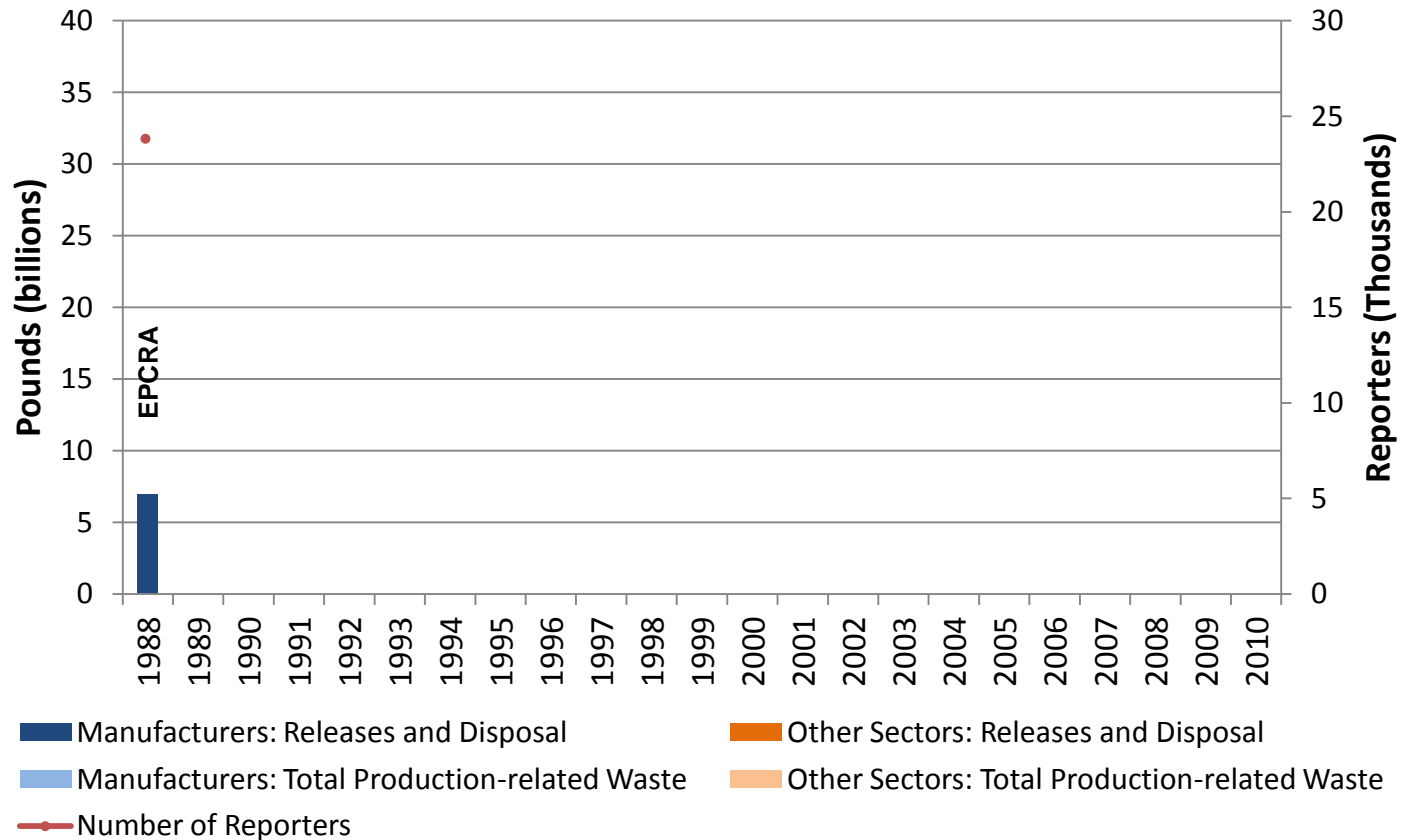
❖ Pollution Prevention Act of 1990 (PPA) §6607

- Facilities must also submit data on waste management and source reduction activities – recycling, energy recovery, and treatment





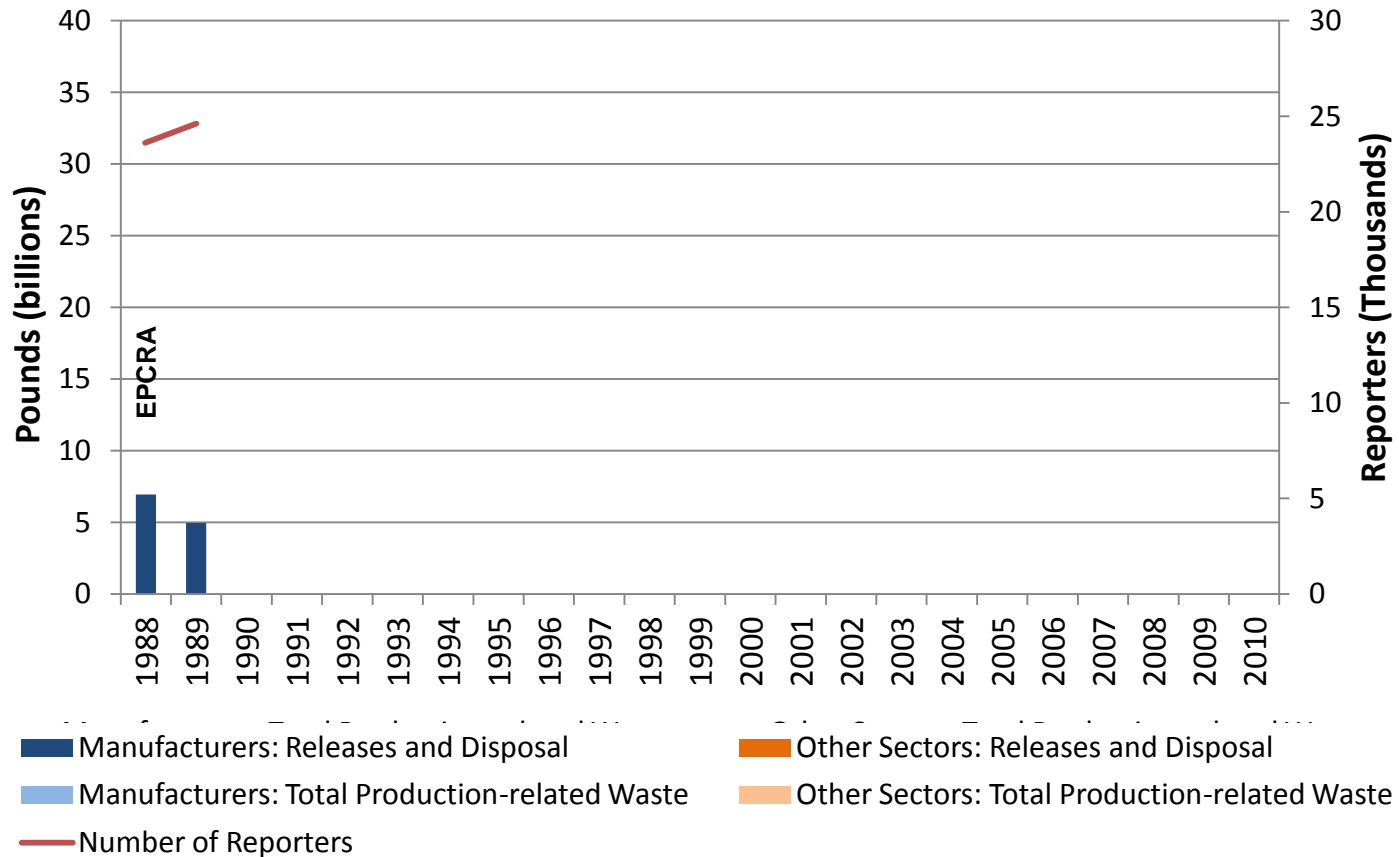
TRI Trends: 1988



1988: 2nd year of TRI reporting under Emergency Planning and Community Right-to-Know Act (EPCRA).

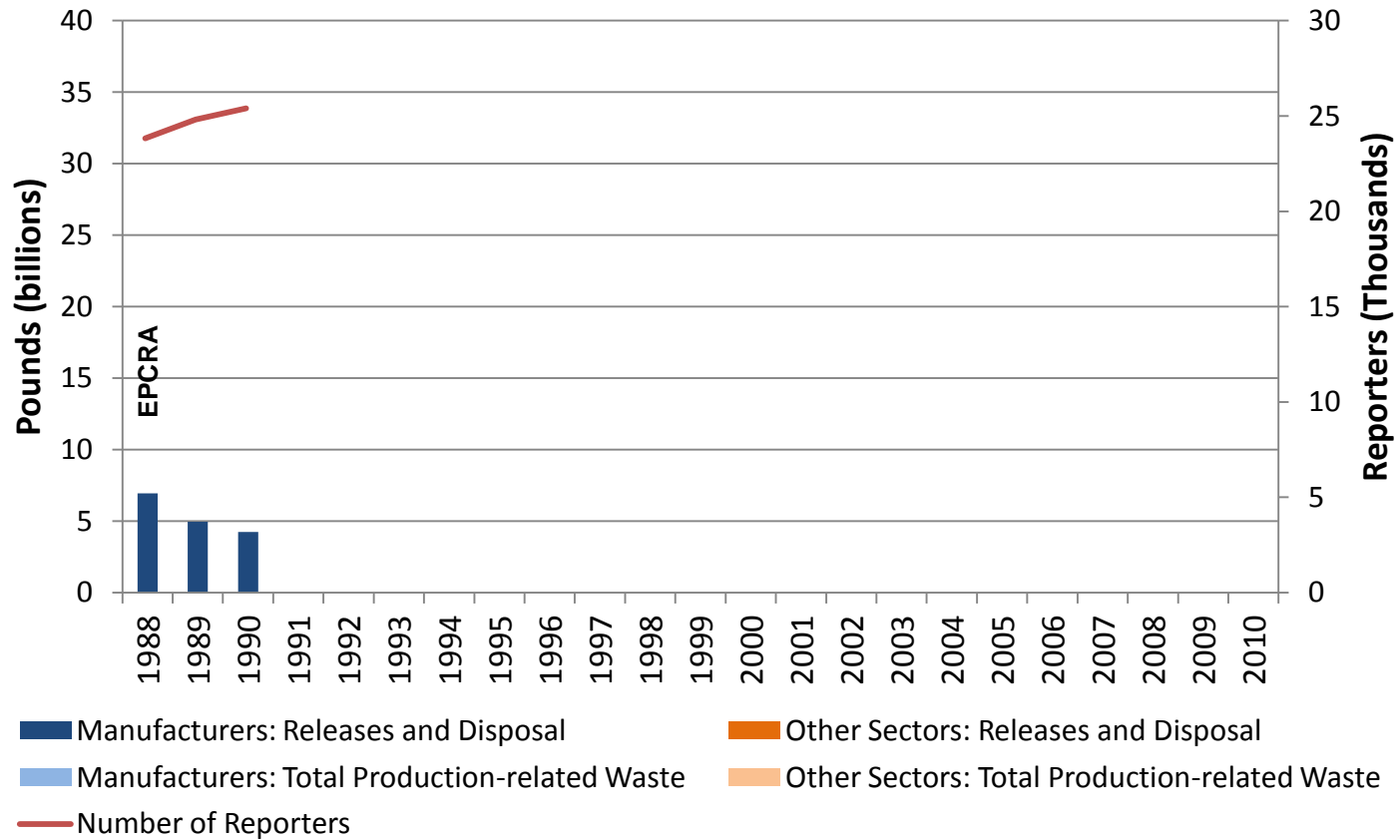


TRI Trends: 1988-1989



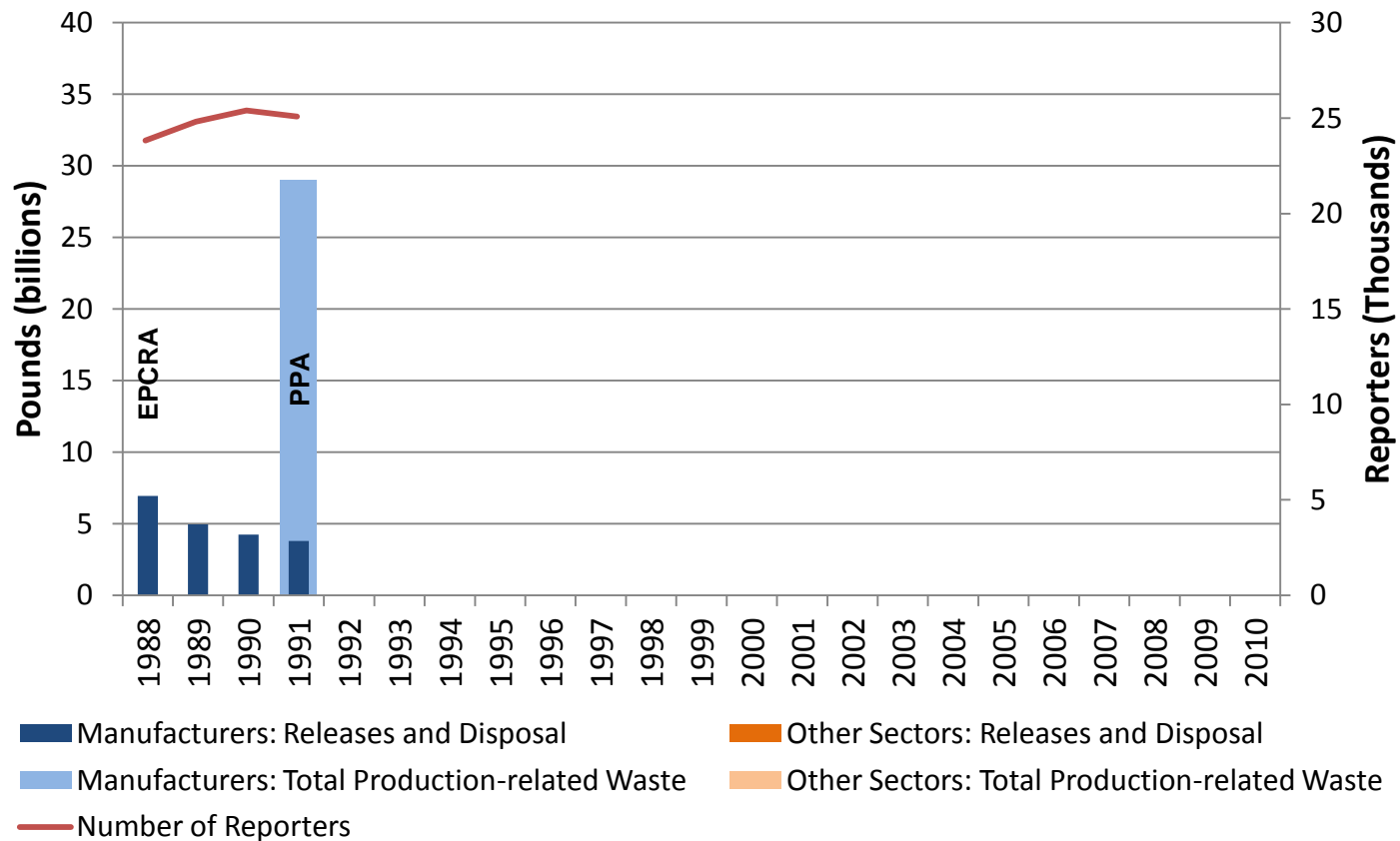


TRI Trends: 1988-1990





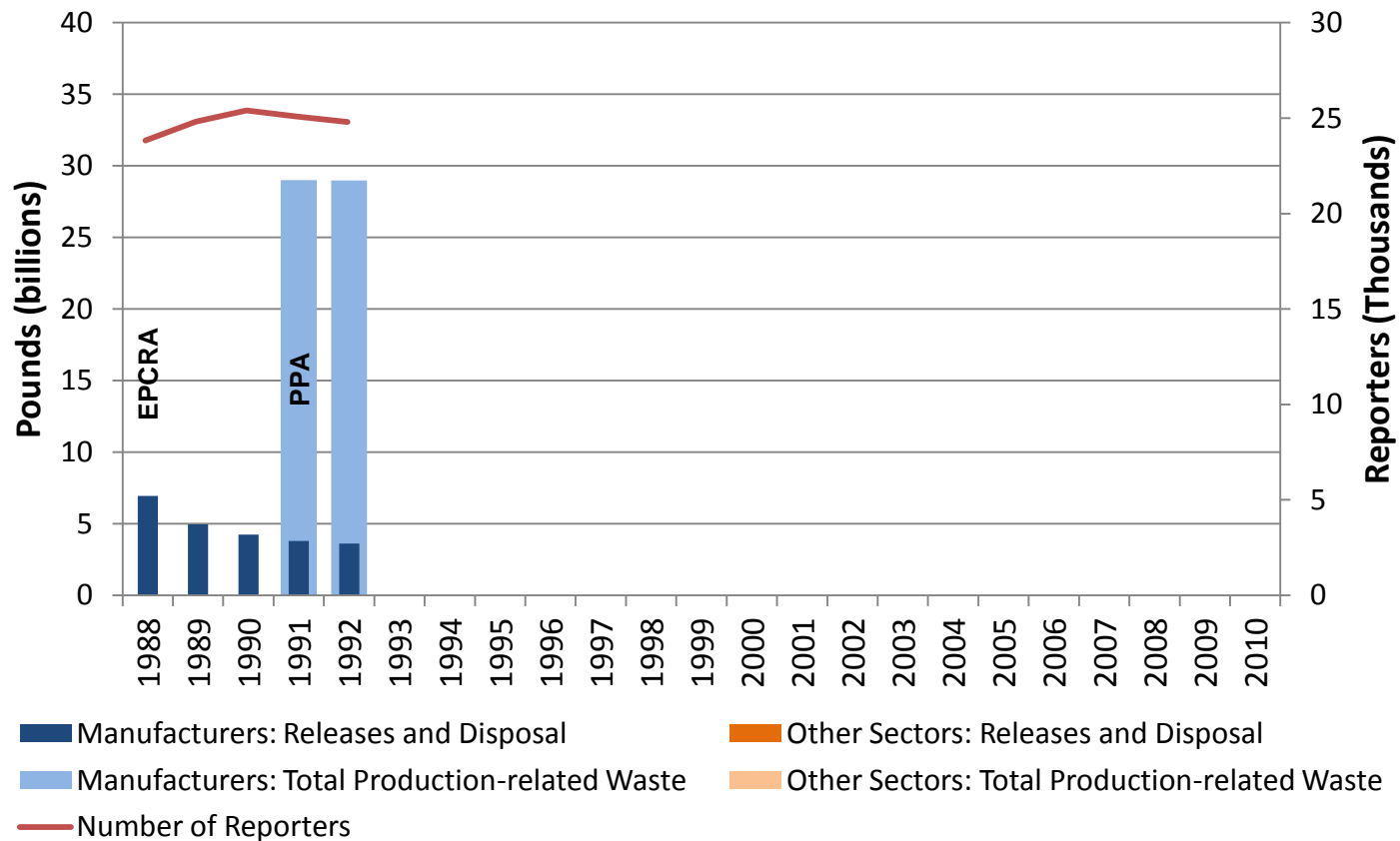
TRI Trends: 1988-1991



1991: Pollution Prevention Act (PPA) adds waste management reporting to TRI.

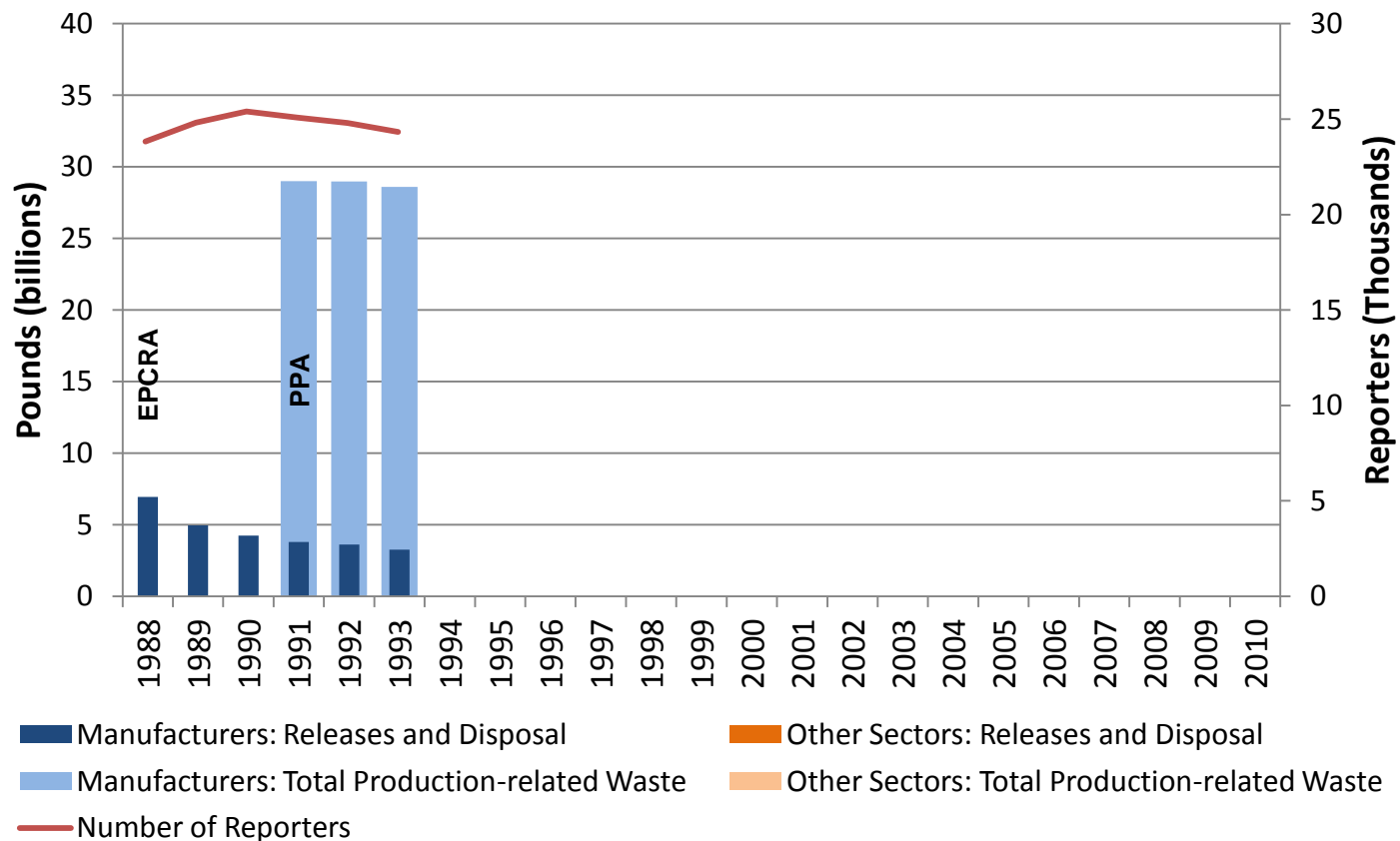


TRI Trends: 1988-1992



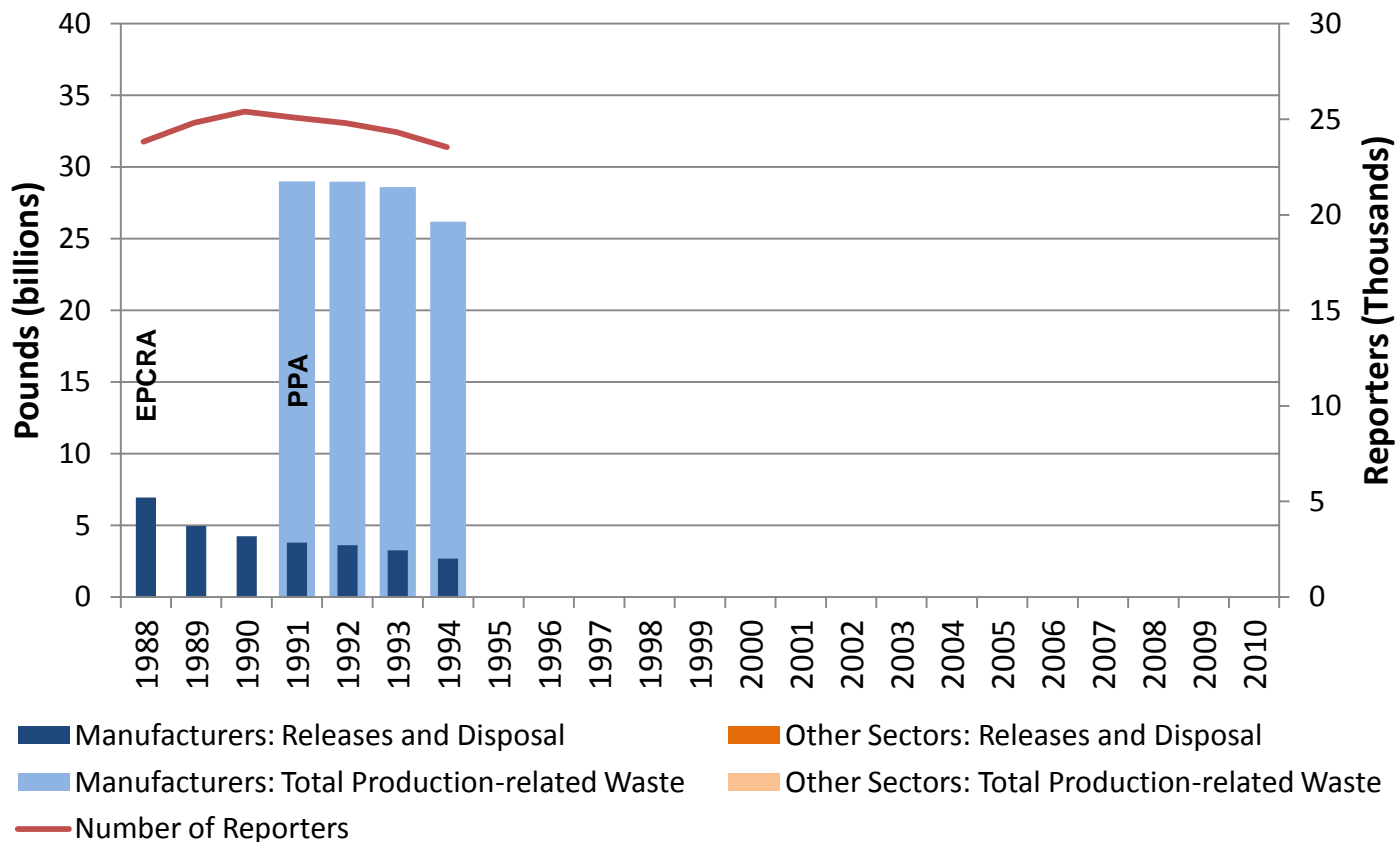


TRI Trends: 1988-1993



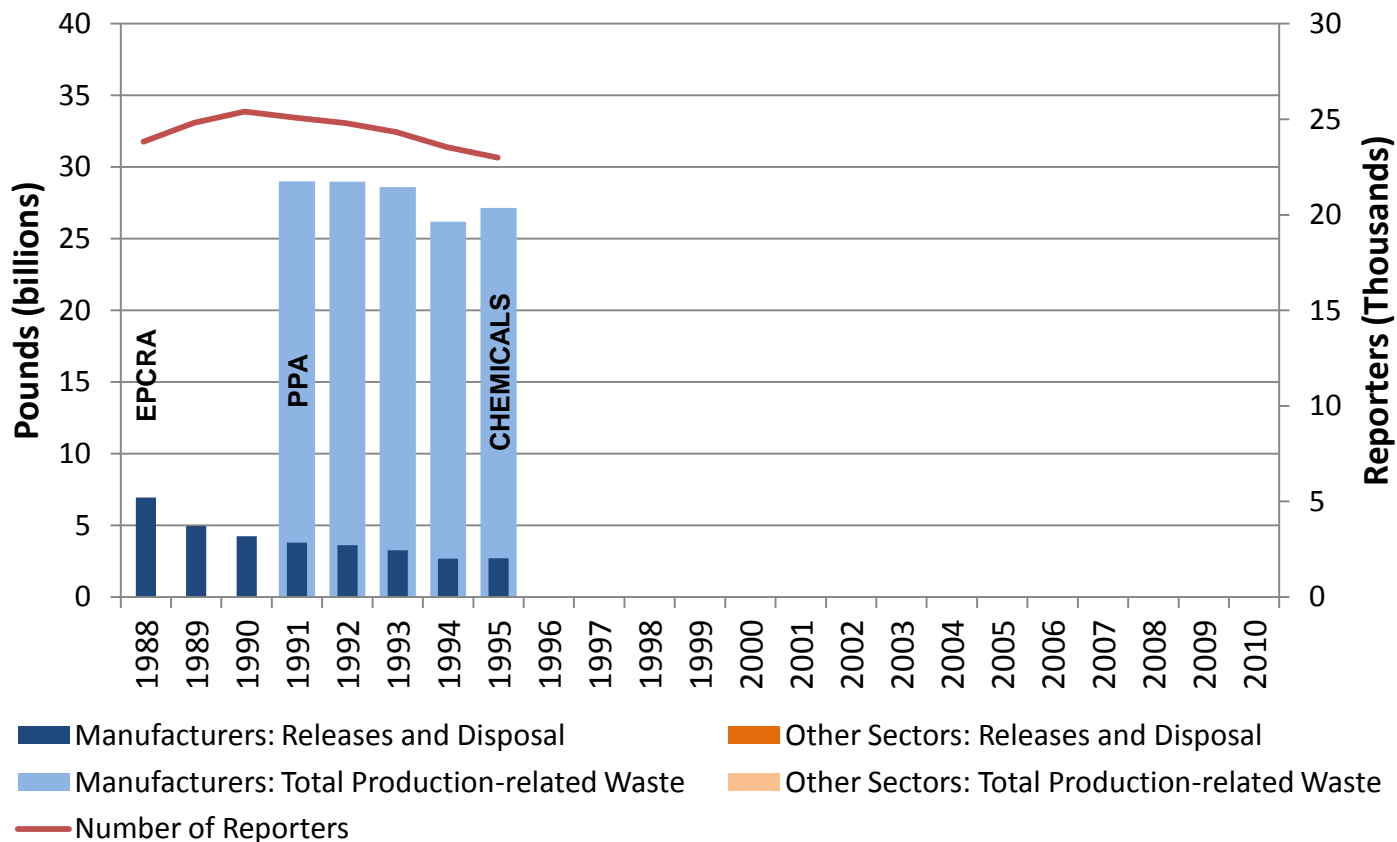


TRI Trends: 1988-1994





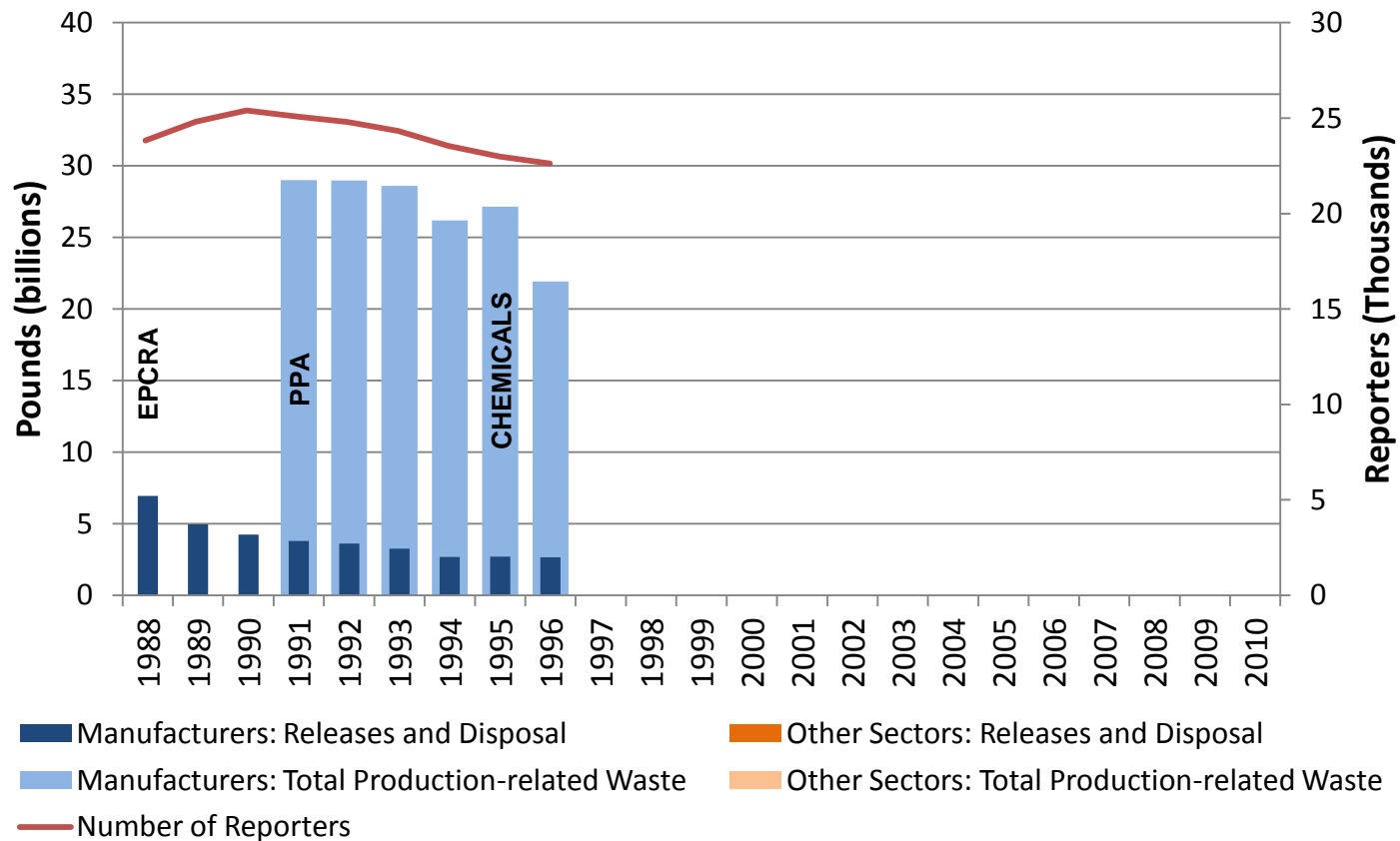
TRI Trends: 1988-1995



1995: Chemical expansion adds close to 300 chemicals to TRI.

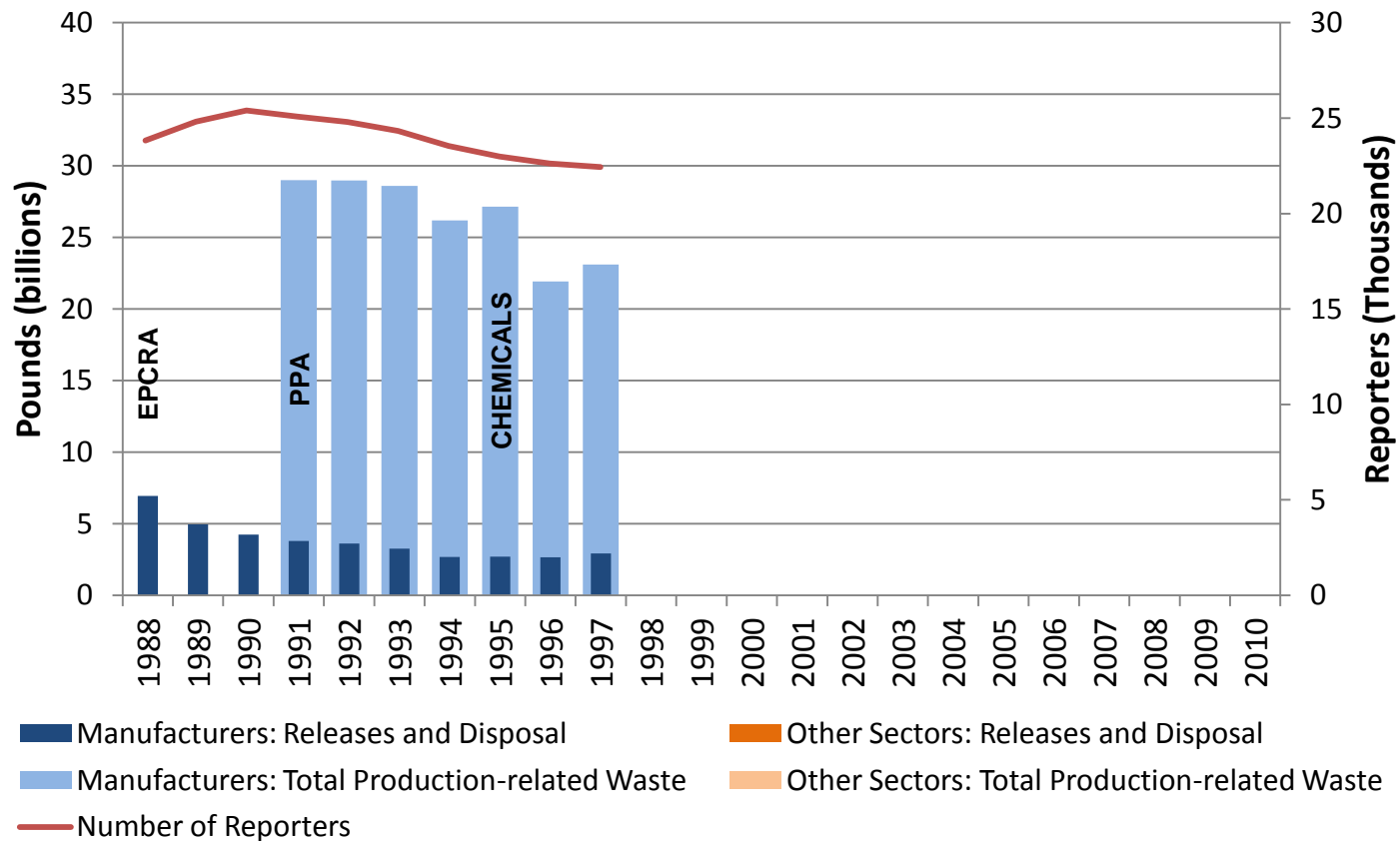


TRI Trends: 1988-1996



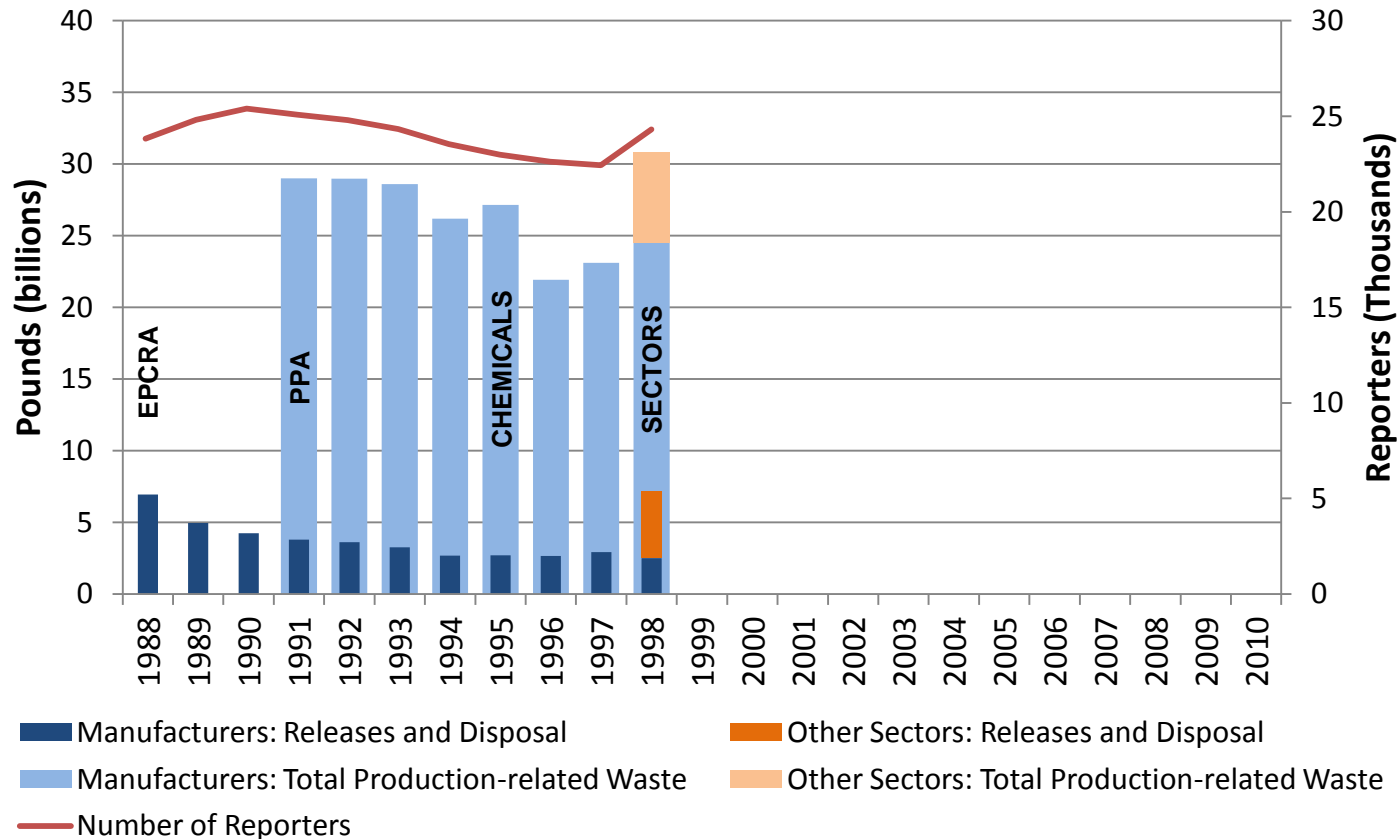


TRI Trends: 1988-1997





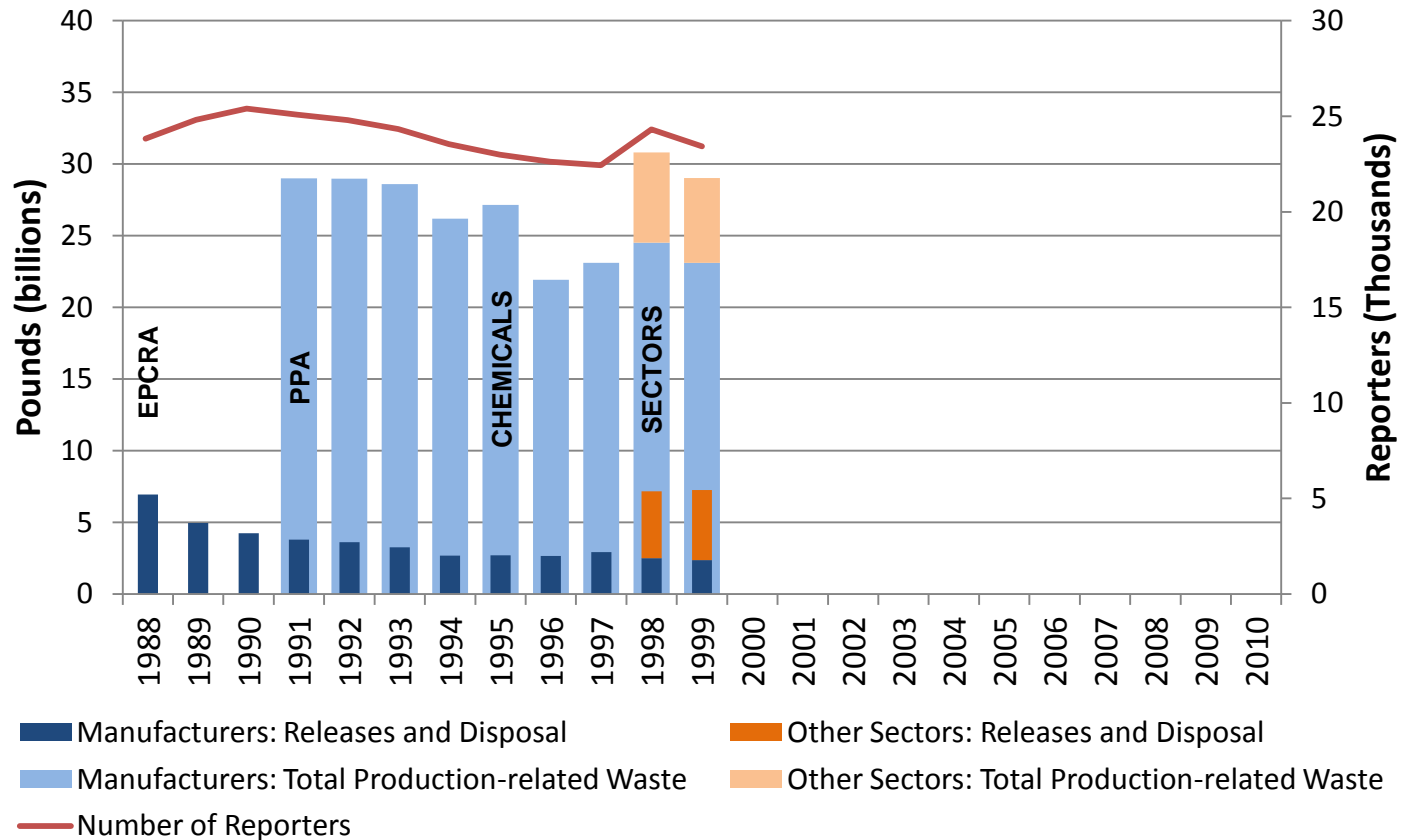
TRI Trends: 1988-1998



1998: Seven industry sectors are added to TRI – metal mining, coal mining, electric utilities, chemical wholesale distributors, petroleum bulk storage/terminals, hazardous waste management facilities, and solvent recovery facilities.

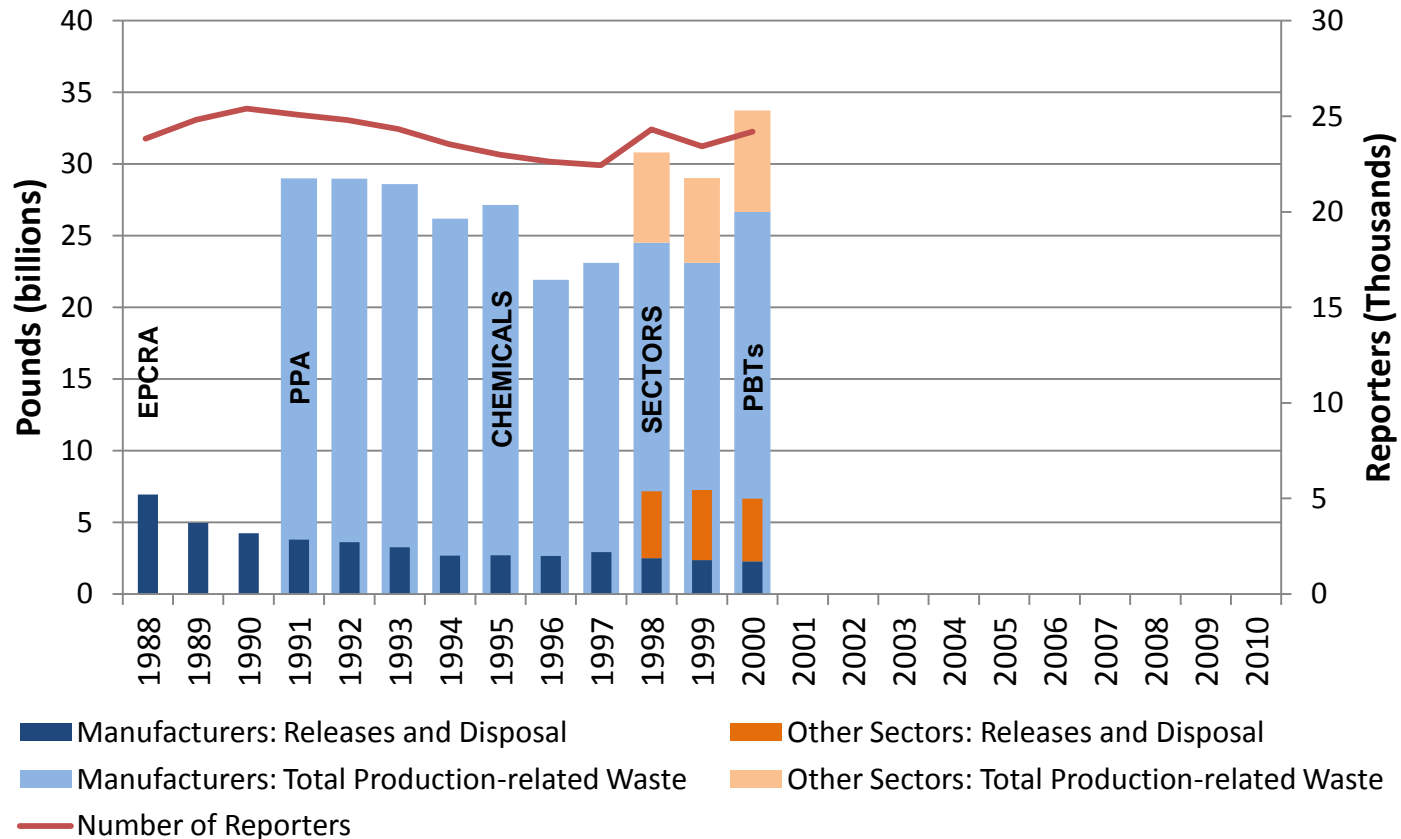


TRI Trends: 1988-1999





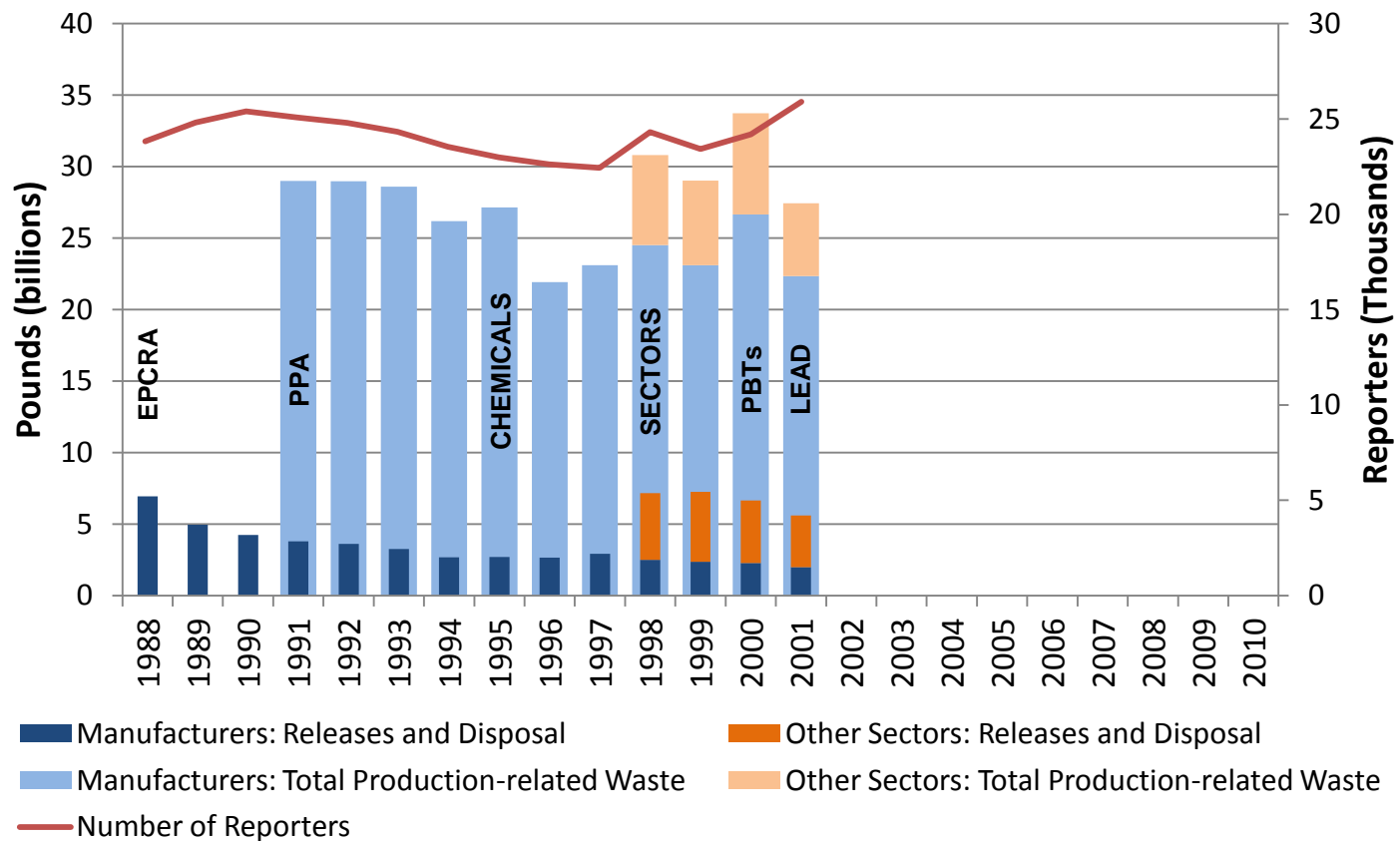
TRI Trends: 1988-2000



2000: Persistent bioaccumulative toxic (PBT) chemicals are added to TRI and the reporting thresholds are lowered for both recently added PBT chemicals and most previously covered PBT chemicals.



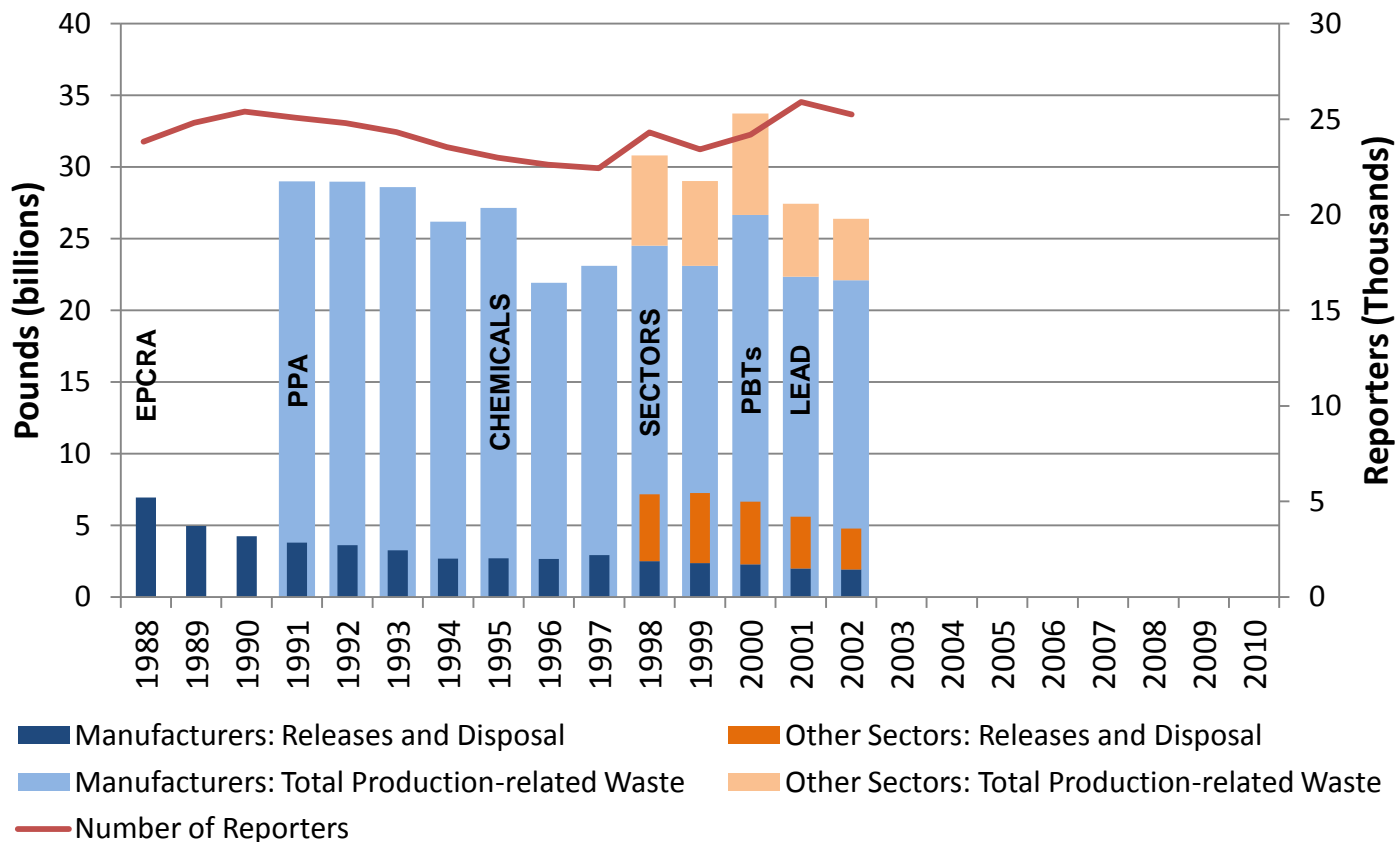
TRI Trends: 1988-2001



2001: The reporting thresholds are lowered for Lead and Lead Compounds, PBT chemicals.

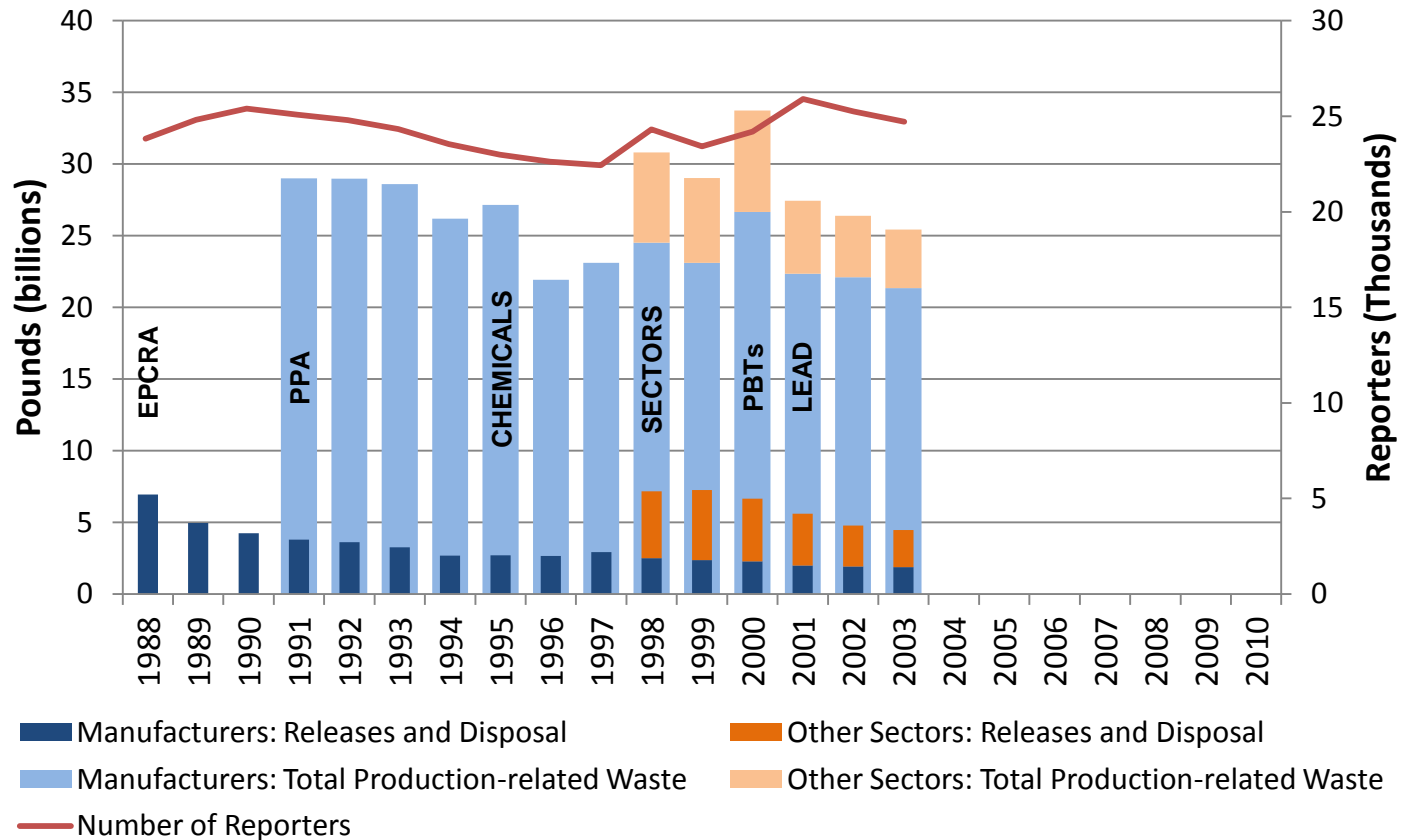


TRI Trends: 1988-2002



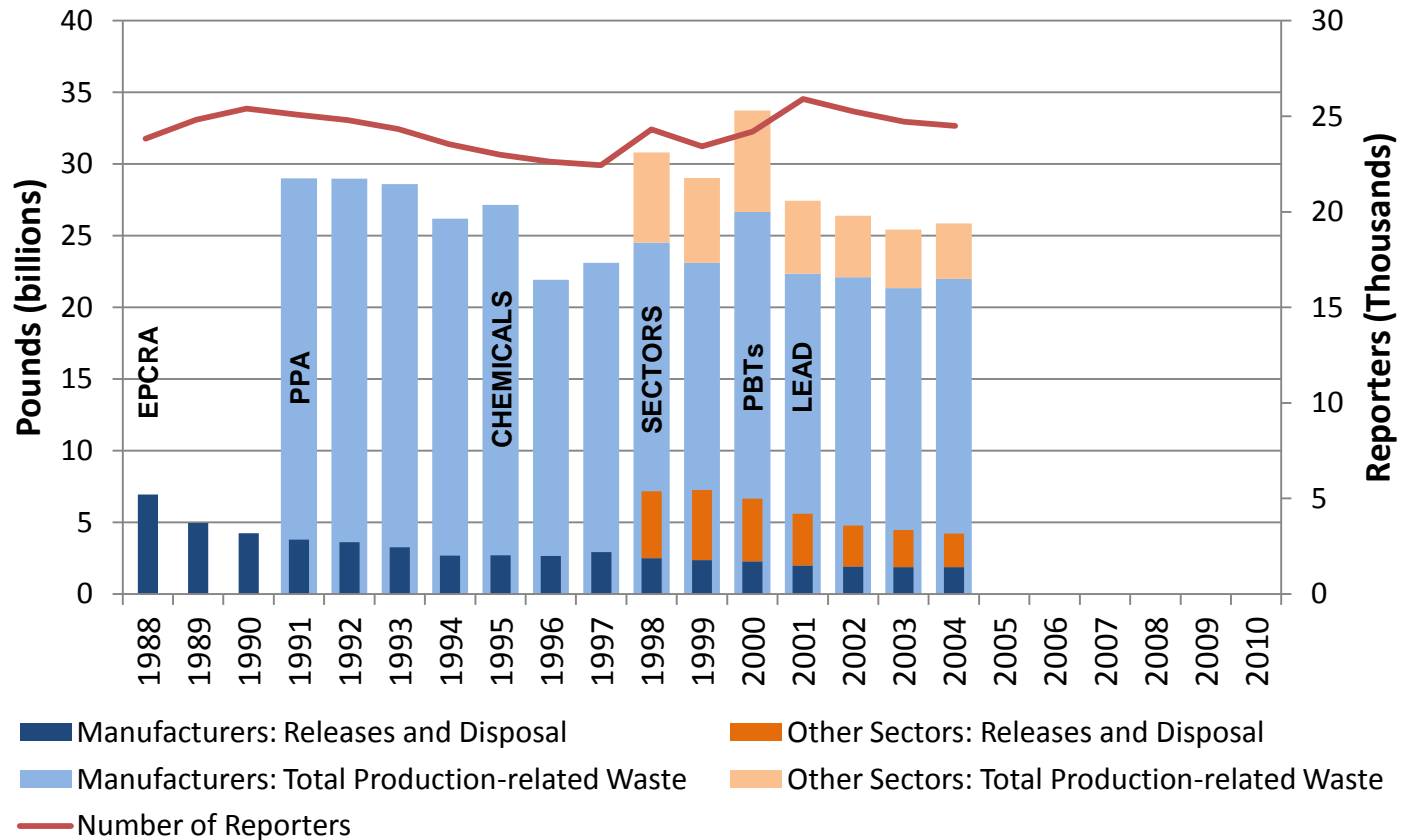


TRI Trends: 1988-2003



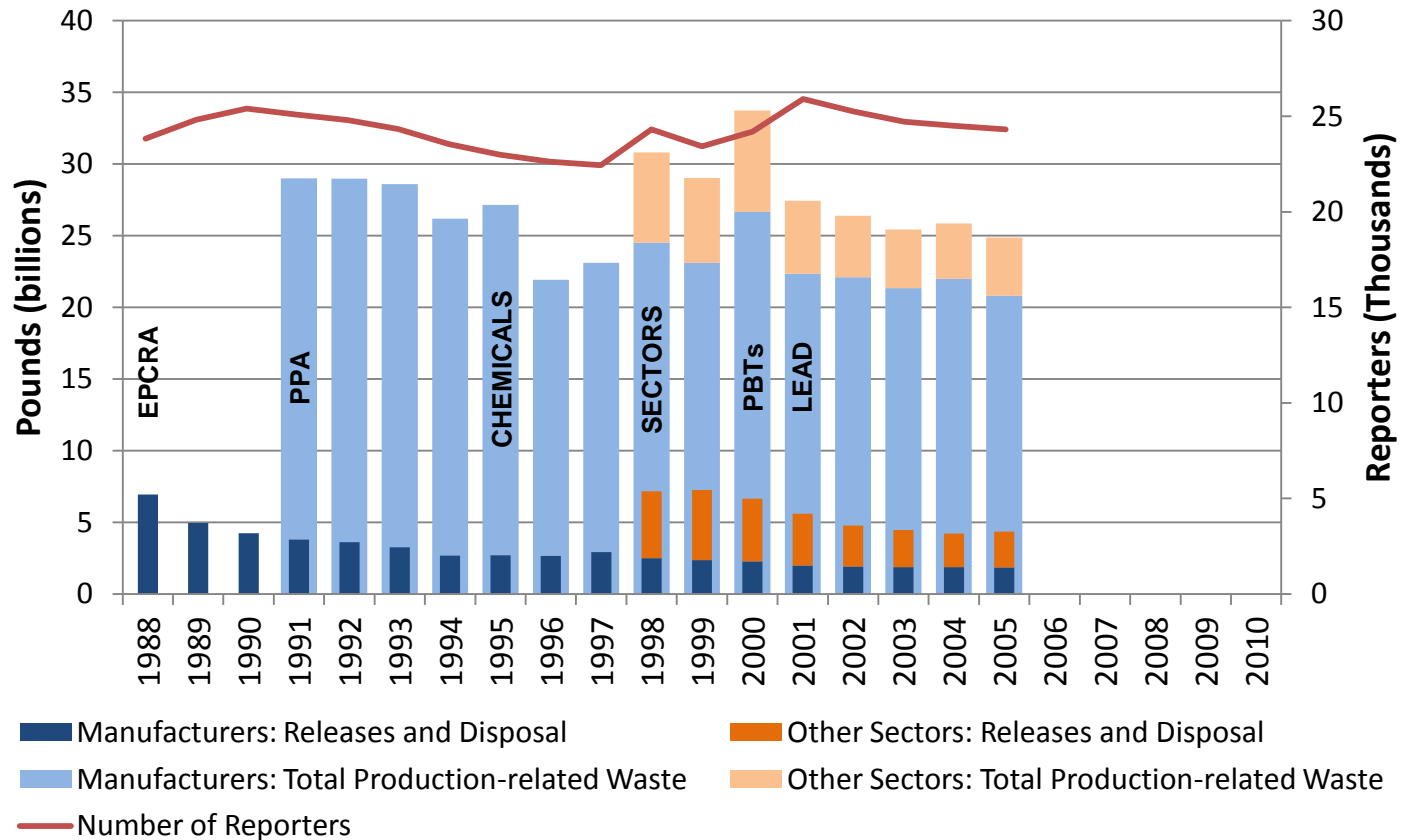


TRI Trends: 1988-2004



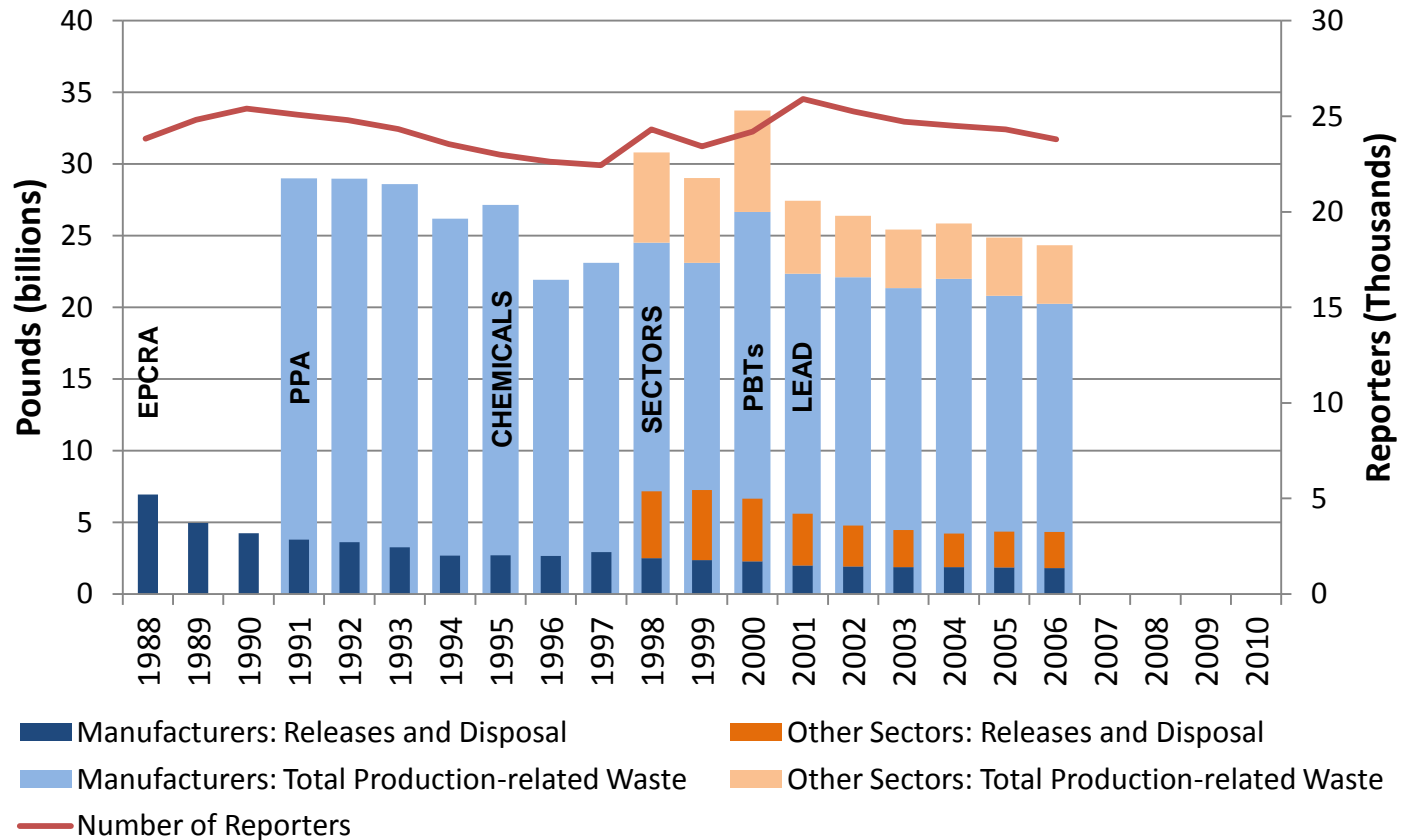


TRI Trends: 1988-2005



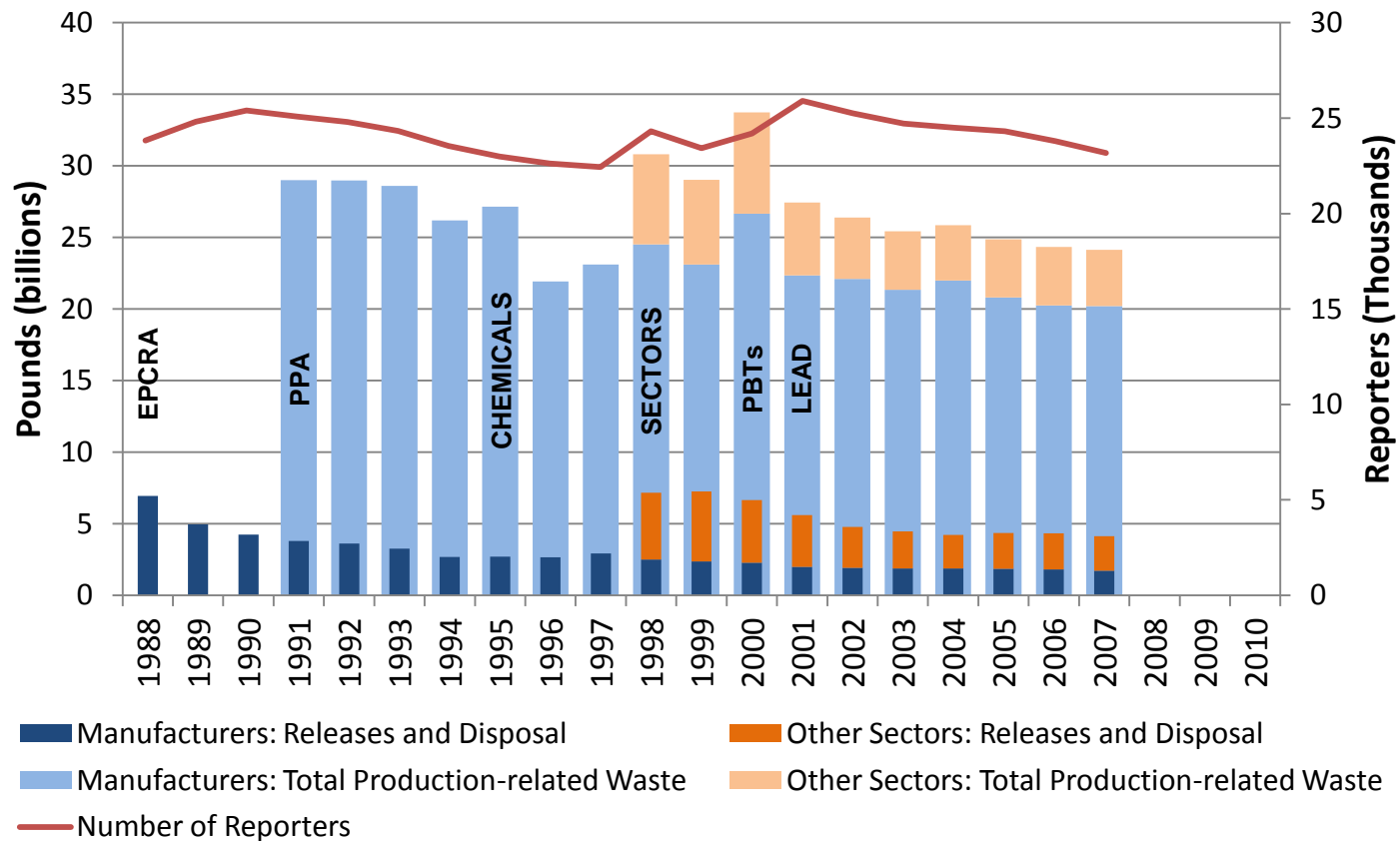


TRI Trends: 1988-2006



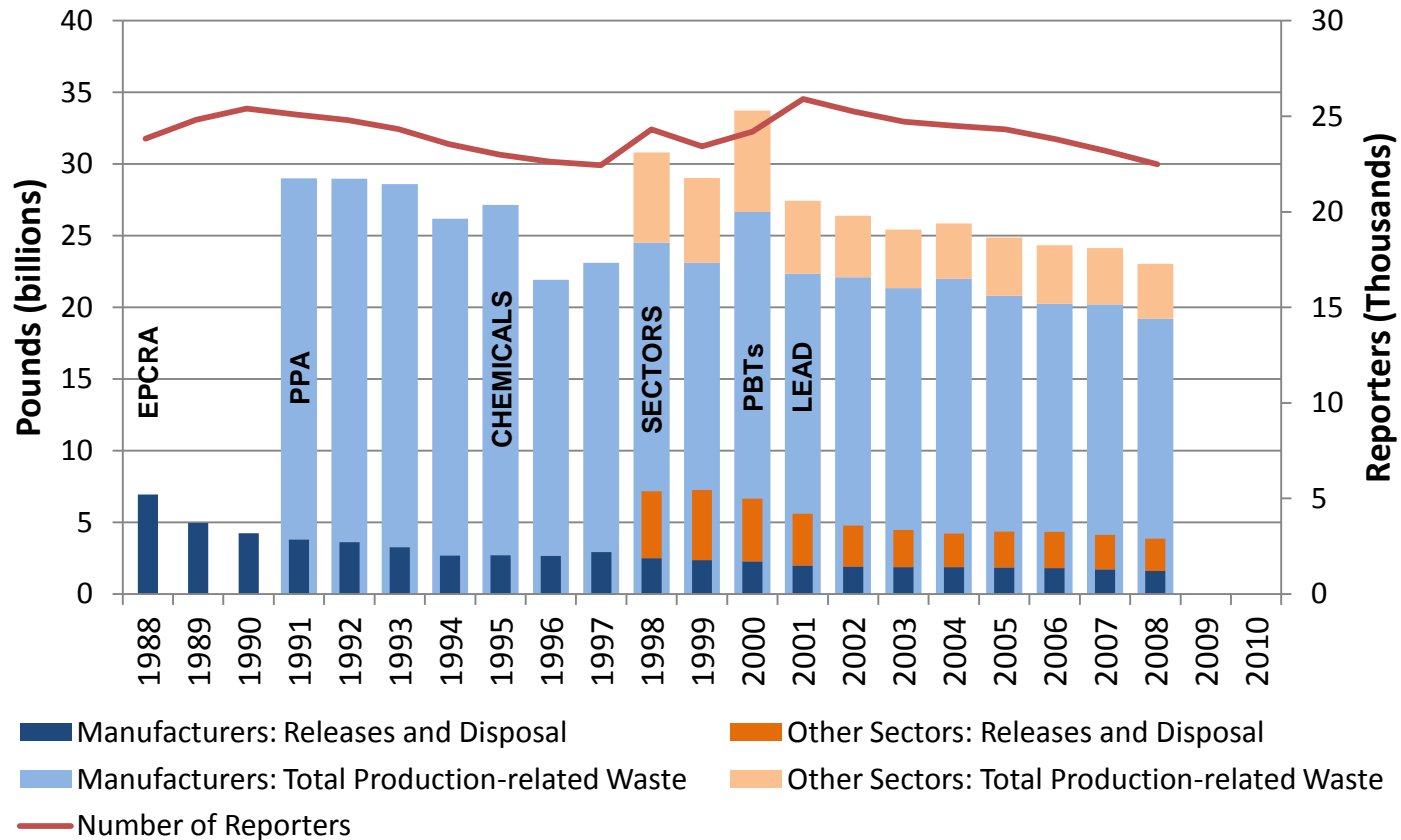


TRI Trends: 1988-2007



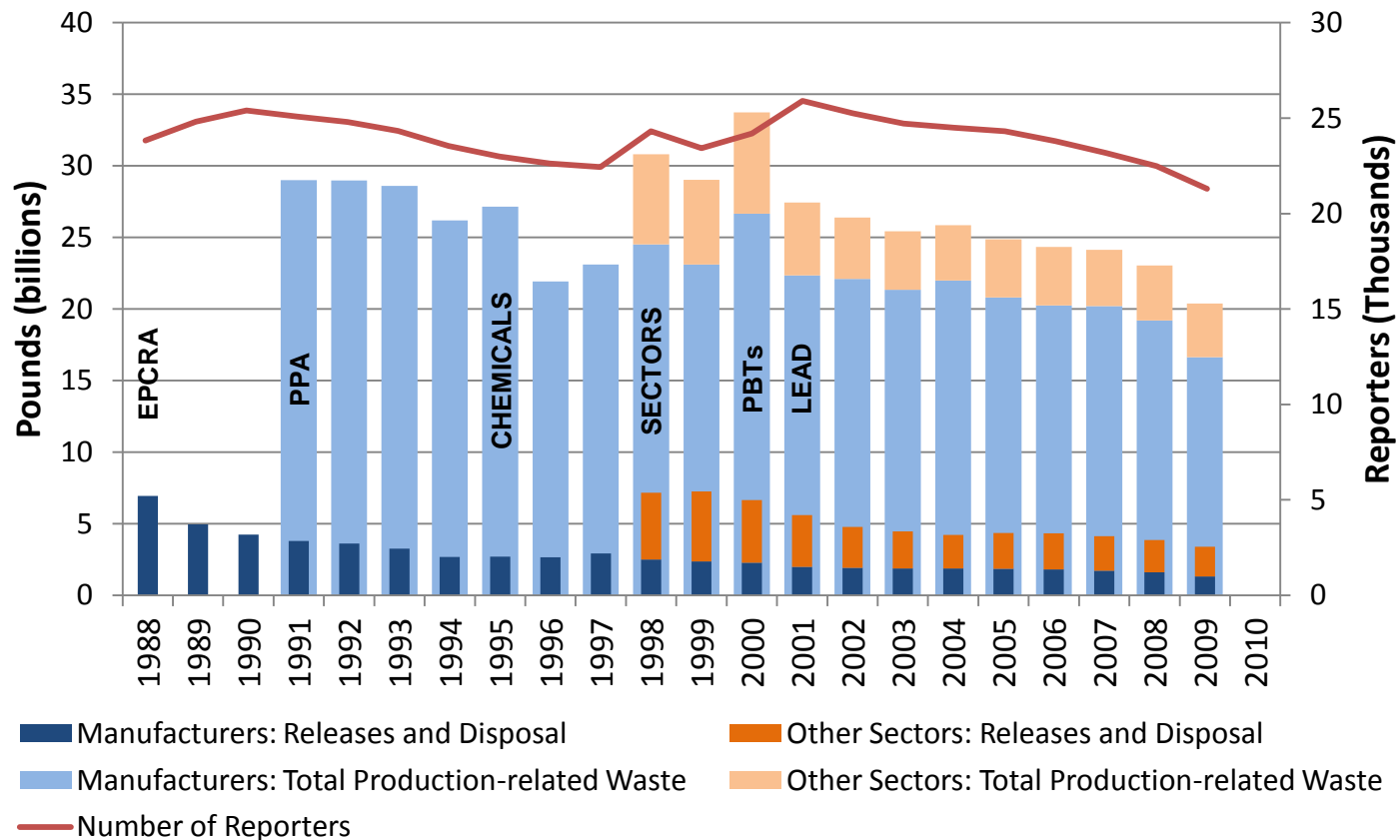


TRI Trends: 1988-2008



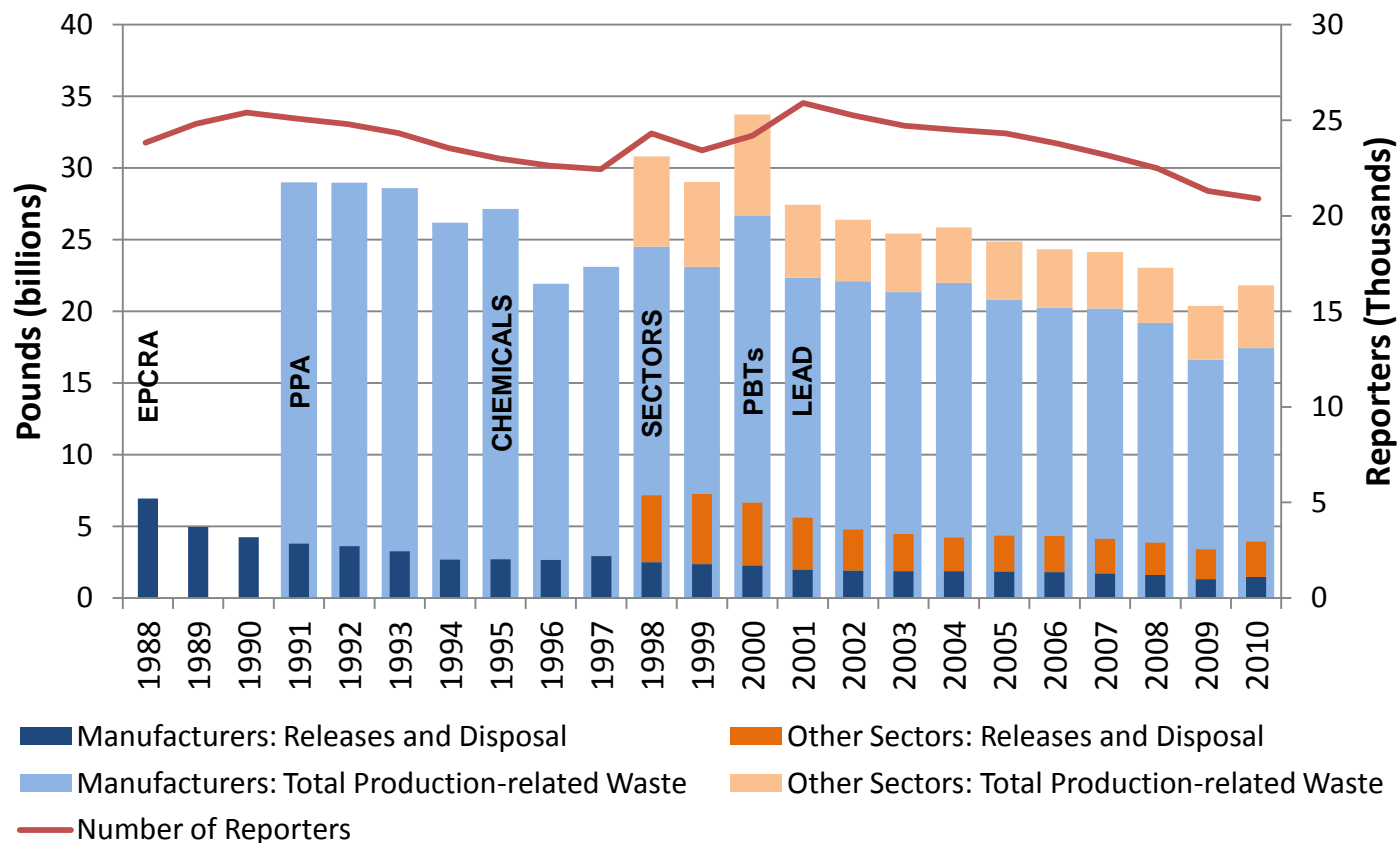


TRI Trends: 1988-2009



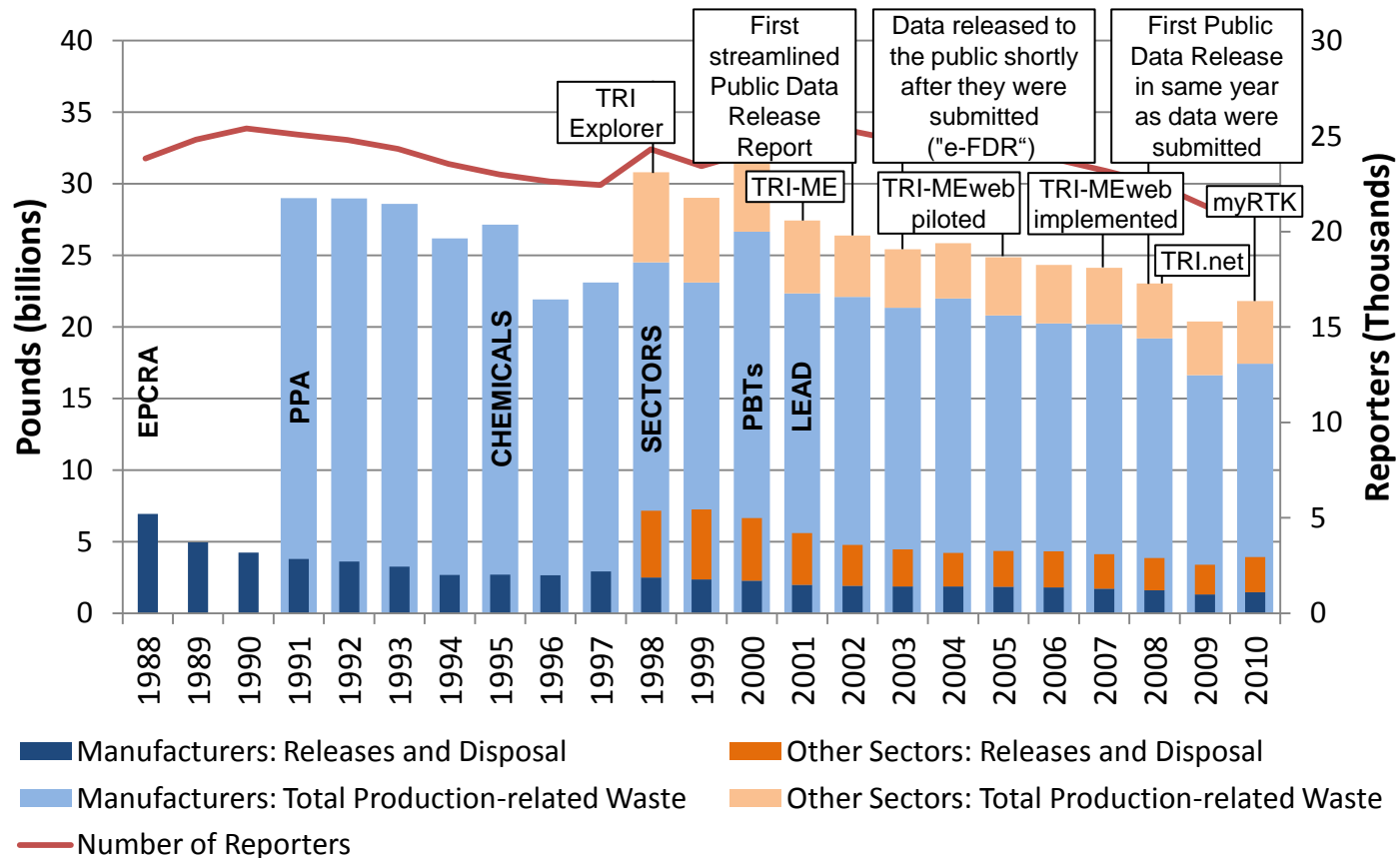


TRI Trends: 1988-2010





TRI Trends: 1988-2010





We have come a long way!

- The TRI has evolved considerably since the passage of EPCRA in 1986:
 - reported chemical release and other waste management quantities have declined steadily.
 - Access to TRI data has been greatly enhanced;
 - Newly submitted data are now in the hands of the public within a few weeks rather than 8 - 9 months after the reporting deadline;
 - A diverse suite of tools now exists for analyzing the data.



We have come a long way!

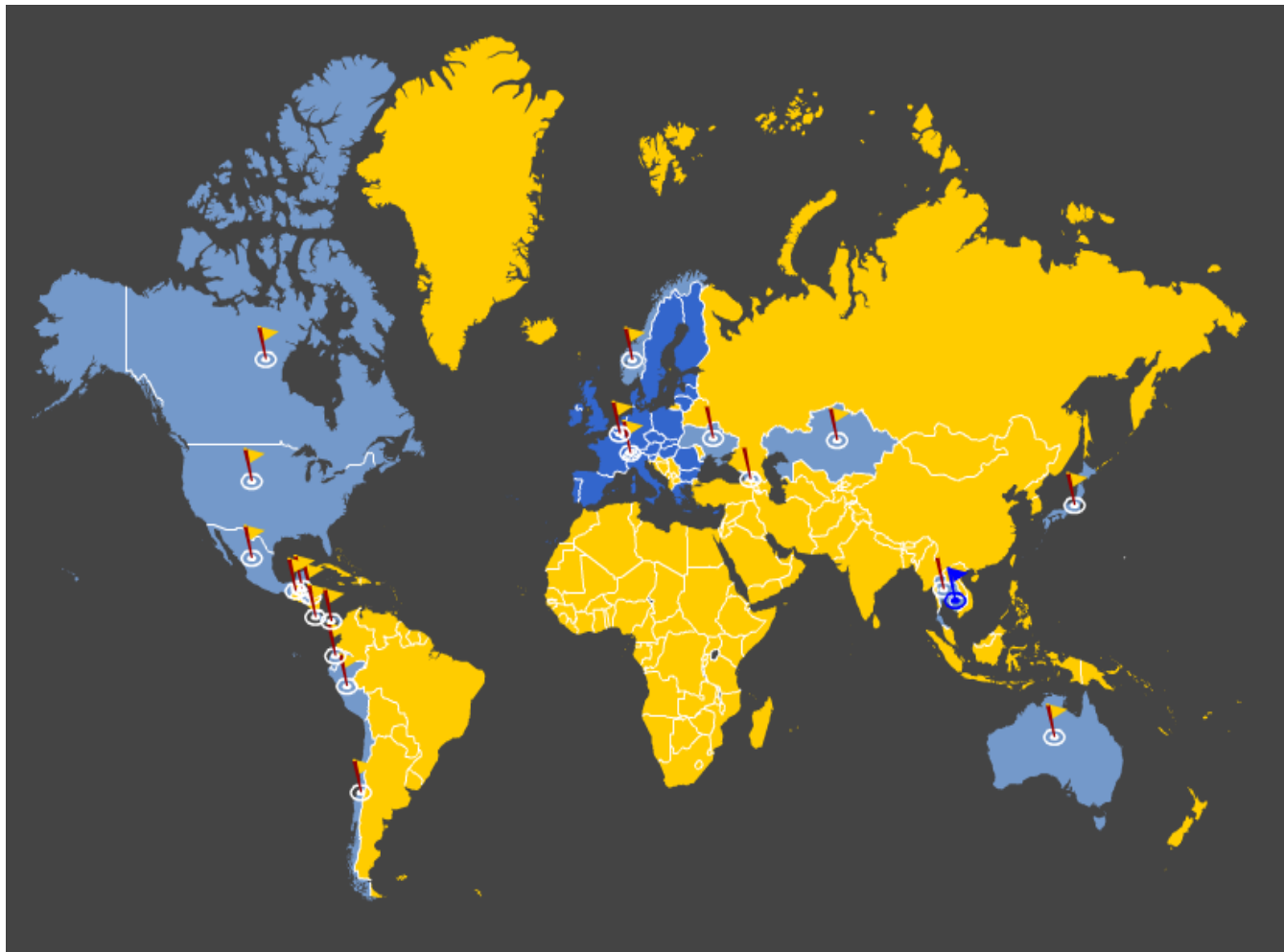
- Dramatic improvements have also been made to:
 - the data submission process;
 - the data quality processes, and
 - how TRI information can be accessed, analyzed and used by communities, academics, non-profits, industry and others.



The TRI has changed the World!

- The TRI was the very first public pollutant release transfer registry (PRTR);
- There are now at least 50 countries that have a PRTR program;
 - Most were modeled after the TRI.
- More countries are expected to start PRTRs;
 - Particularly in South America and Central America.

Countries that Have PRTR Programs





Countries that Have PRTR Programs, or Pilot PRTR Programs:

Australia, Austria, Belgium, Belize, Bulgaria, Cambodia, Chile, Costa Rica, Cyprus, Czech Republic, Denmark, Ecuador, Estonia, Finland, France, Georgia, Germany, Greece, Guatemala, Honduras, Hungary, Iceland, Israel, Ireland, Italy, Japan, Kazakhstan, Korea, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, The Netherlands, Norway, Panama, Peru, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Thailand, Ukraine, United Kingdom, Mexico, Canada, and the United States.



As for the Future?

- EPA will continue to draw upon the ongoing advancements in information technology to:
 - improve the accessibility and quality of TRI data;
 - address ever-evolving user needs.



As for the Future?

- How can communities use TRI data to improve their environment?
 - Further engagement with communities;
 - Engagement with colleges and universities;
 - What communities can do to make TRI data and information more actionable.



As for the Future?

- Ever growing emphasis on sustainability worldwide, and within EPA

Just released:

National Academy of Sciences book.

Recommends EPA:

- formally adopt a sustainability paradigm;
- articulate its vision for sustainability, and develop sustainability principles.



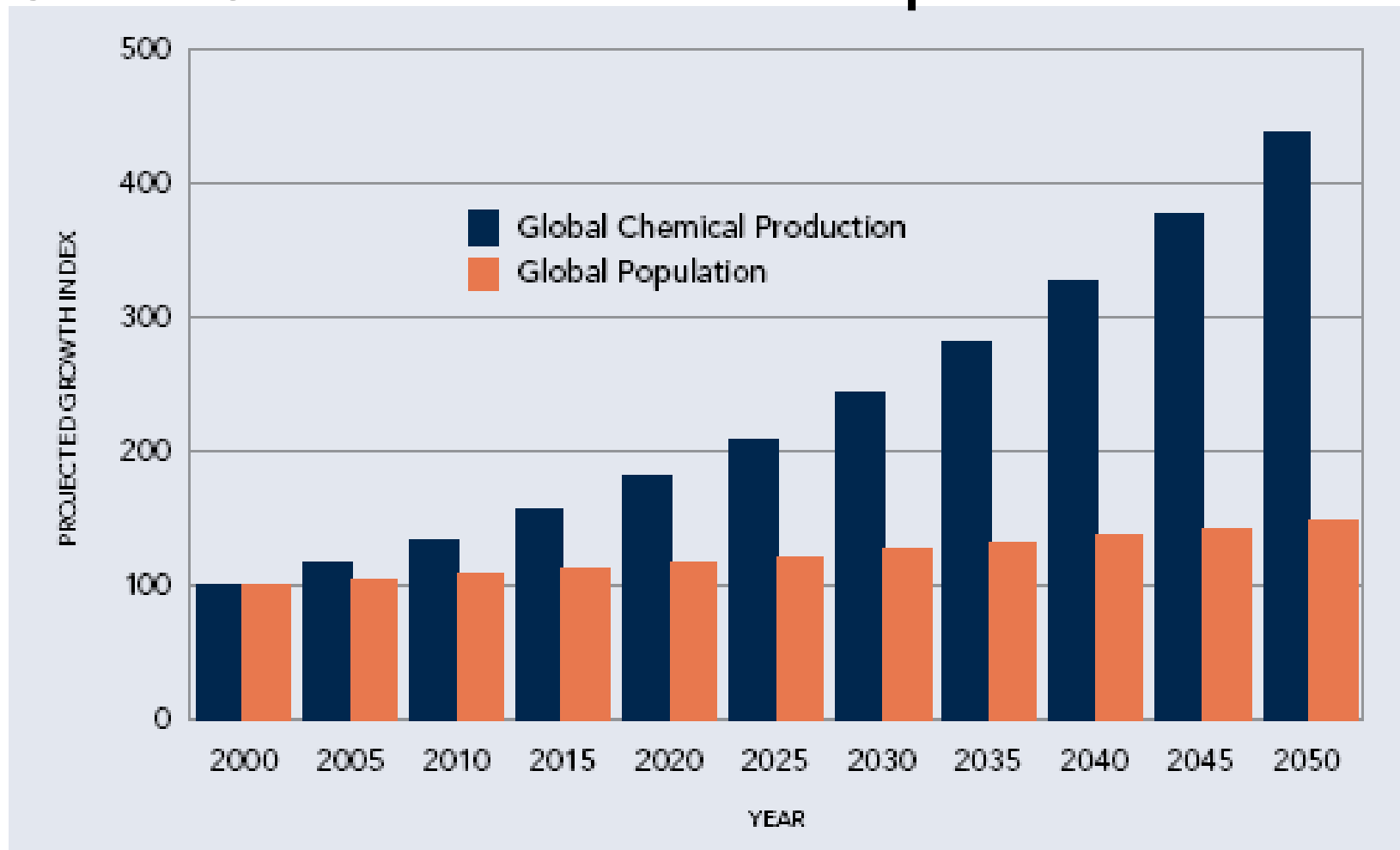


The Current Situation

- Emphasis on sustainability as a global paradigm is growing;
- Information technology is advancing;
 - allowing different datasets to be used together to assess sustainability progress;
- Chemical manufacturers are implementing green chemistry and engineering practices, making achievements in sustainability;
- Global chemical production is expected to increase 3% annually over the next several decades (doubling every 25 yrs);



Global Chemical Production is Expected to Increase





As for the Future?

- People, regulatory authorities and other organizations will turn to the TRI as a means to assess progress towards sustainability;
 - TRI collects pollution prevention information.
- The role of TRI data and information in sustainability will therefore need to be better defined.



As for the Future?

- Assess progress in sustainability:
 - On a continental level;
 - On a global level.
- PRTR data from different countries will need to be combined and viewed and analyzed more from a continental and global context.



As for the Future?

- To use PRTR data globally.....
 - Existing PRTR data will need to be more comparable (difficult);
 - Emerging PRTRs will need their data to be comparable with existing PRTRs.
- There will be a need to analyze PRTR datasets with other datasets
 - Do we know how to mash-up PRTR data sets with other datasets ?