

# Clean and Green Trends? Environmental Performance from 1996 -2007 in US Industrial Facilities

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# Abstract



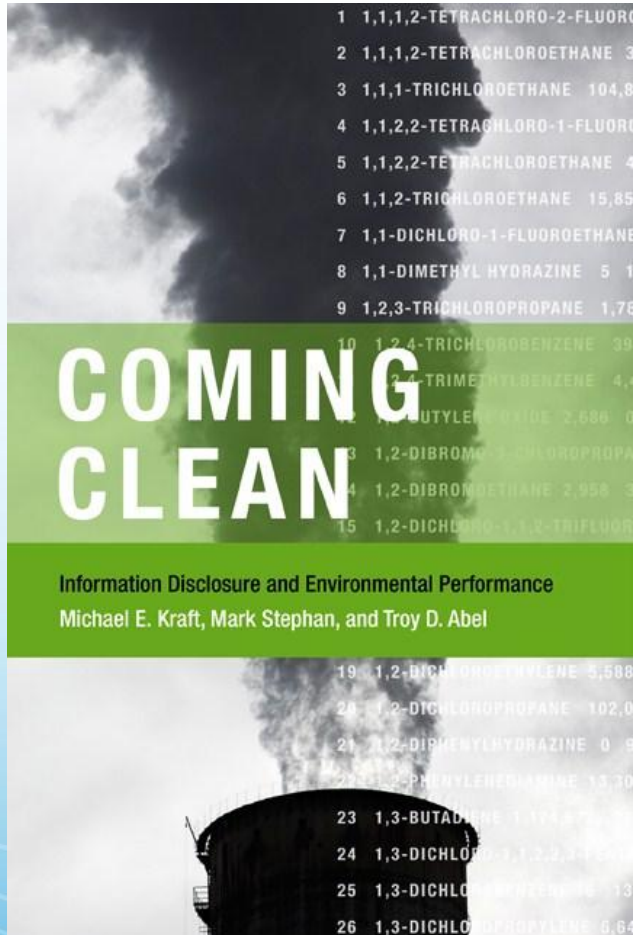
- This presentation utilizes national data from the Toxic Release Inventory (TRI) and the EPA's Risk Screening Environmental Indicators (RSEI) data to characterize facility level industrial environmental performance trends from 1996-2007. We develop a framework of industrial environmental performance that differentiates leading and trailing facilities by their combined changes in both air pollution risk and release volume from 1996 to 2007. Our methods provide a set of tools for understanding and conveying facility-level trajectories of industrial sustainability that are safer and cleaner.

# Overview

- Background
- Environmental Performance Dilemmas
- Cleaner and greener facilities
- Trends



# Background



- Building on our “Coming Clean” book
- Examining release AND risk trends with RSEI 2.3.0
- Facilities reporting in 1996, 2001, and 2007 (excluding smaller emitters) – **6722 facilities in all**
- Major conclusion—industrial environmental performance is cleaning faster than its greening

## Environmental Performance Dilemmas

		Facility
<i>Government</i>	Compliance	Beyond Compliance
<i>Encouraging</i>	1,5 (a,b)	4,4 (e,f)
<i>Commanding</i>	2,2 (c,d)	5,1 (g,h)

Source: Kraft, Stephan, and Abel (2011). *Coming Clean: Information Disclosure and Environmental Performance*

# Cleaner and Greener? 1991-95

<i>Risk</i>	Releases		
	Increasing	Decreasing	Total
<i>Decreasing</i>	972 (8%)	5,095 (42.1%)	6,067 (50.1%)
<i>Increasing</i>	4,604 (38%)	1,447 (11.9%)	6,051 (49.9%)
<i>Total</i>	5,576 (46%)	6,543 (54%)	12,118

Source: Abel, Stephan, and Kraft (2007). "Environmental Information Disclosure and Risk Reduction Among the States" *State and Local Government Review* 39(3): 153-65

# Cleaner and Greener? 1996 - 2001

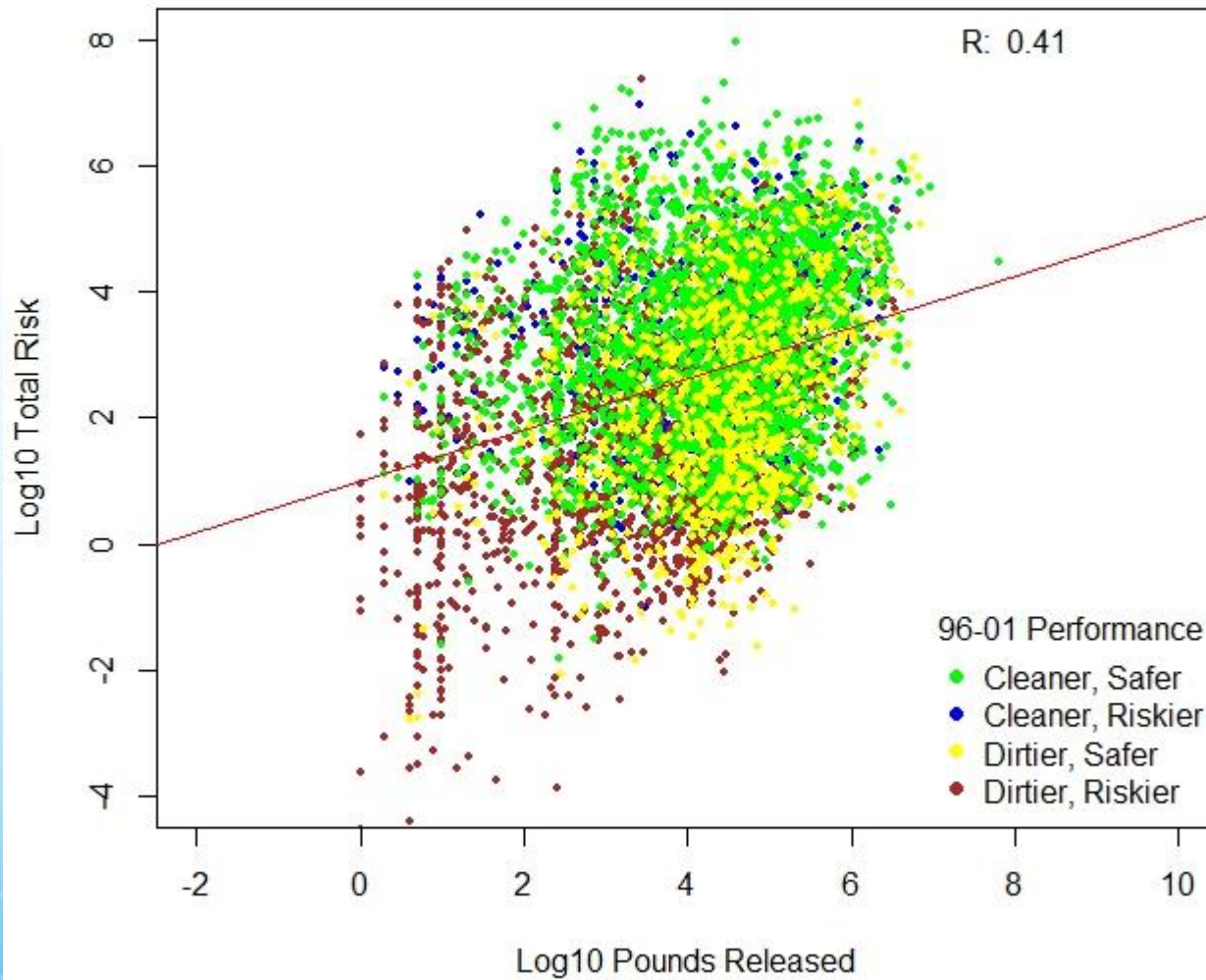
<i>Risk</i>	Releases		
	Increasing	Decreasing	Total
<i>Decreasing</i>	535 (8%)	2,982 (46%)	3,517 (54%)
<i>Increasing</i>	1,982 (30%)	1,043 (16%)	3,025 (46%)
<i>Total</i>	2,517 (38%)	4,025 (62%)	6,542

# Cleaner and Greener? 2001 - 2007

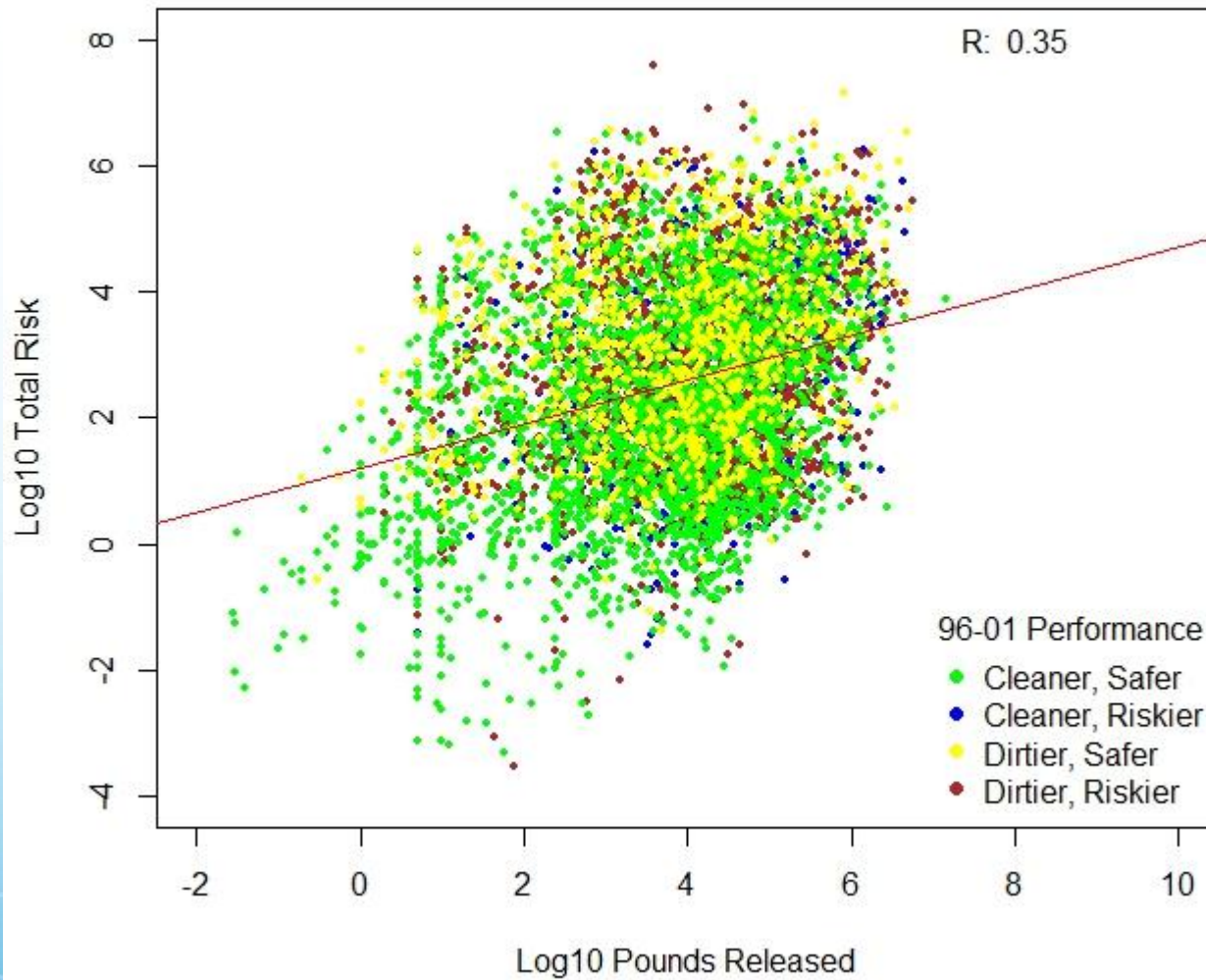
<i>Risk</i>	Releases		
	Increasing	Decreasing	Total
<i>Decreasing</i>	521 (8%)	3,175 (48%)	3,696 (56%)
<i>Increasing</i>	1,907 (29%)	972 (15%)	2,879 (43%)
<i>Total</i>	2,428 (37%)	4,147 (63%)	6,575



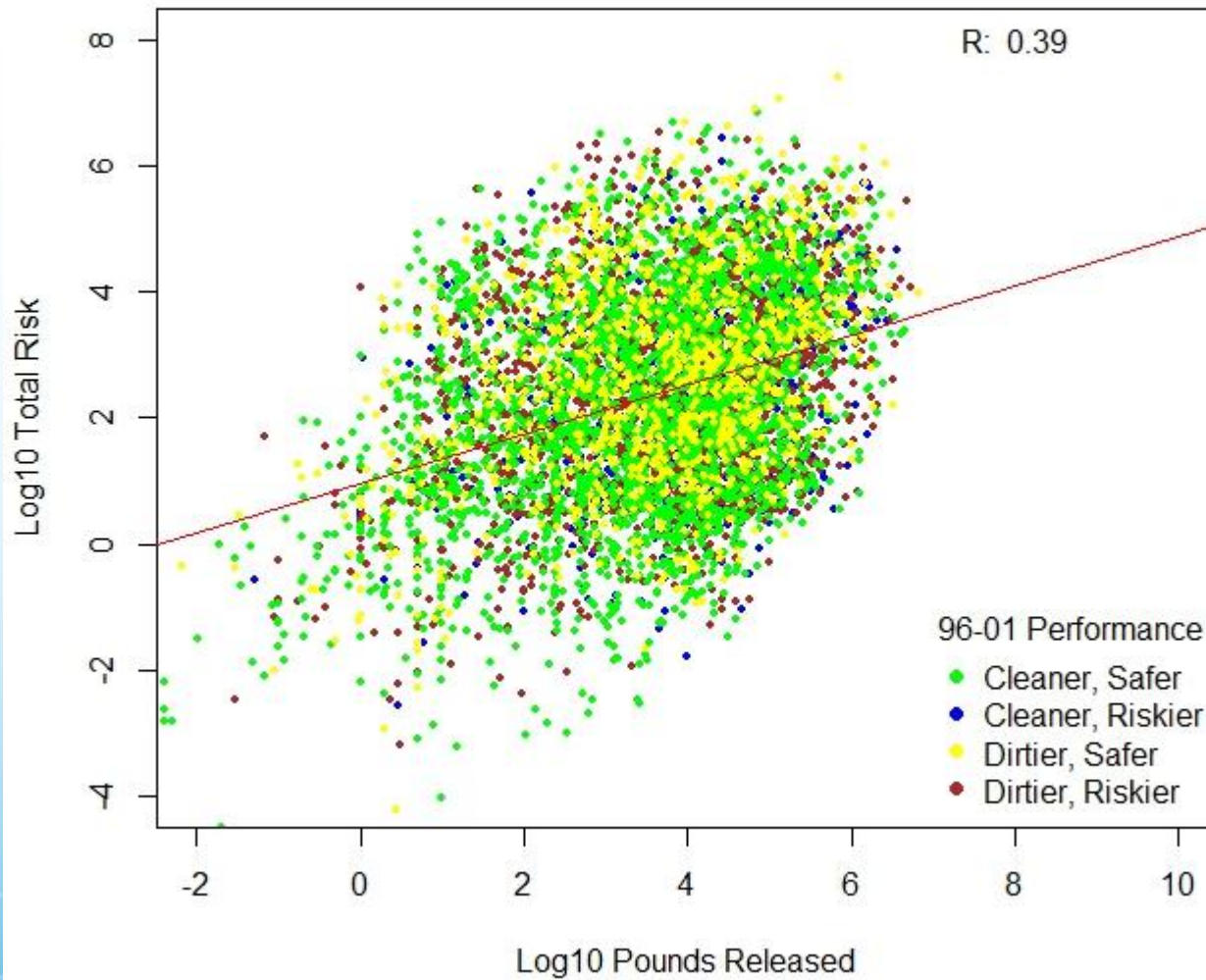
### 1996 Releases



### 2001 Releases



### 2007 Releases



# Looking Ahead

- New performance metrics.
  - Percent change from initial time period.
- Multivariate analysis on facility performance predictors
  - Substantively weighted least squares.
- Multivariate state comparisons.



# Acknowledgements

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- Questions?