

Tracking Emissions and Mitigation Actions: Lessons from National Practice

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About Climate Policy Initiative (CPI)

CPI is a global analytic group focused on the **effectiveness** of climate and energy policy.

Our research looks at **implemented policy** in the **major emitters**.

We **support** national efforts to achieve **low-carbon growth**.

Our Speakers

- **Julia Zuckerman**, Climate Policy Initiative
- **Brian Mantlana**, Department of Environmental Affairs, South Africa
- **Bill Irving**, Environmental Protection Agency, United States
- **Teng Fei**, Tsinghua University, China

Outline

1. Session Overview and Scope
2. **CPI's Work on MRV**
3. Survey of Existing Systems
4. Evaluation Framework
5. Key Findings
6. Good Practices
7. Next Steps

Scope of today's session

Tracking emissions and mitigation actions involves:

- **Measuring** GHG emissions and the impact of mitigation actions
- **Reporting** the results
- **Verifying** the accuracy of reported information.

In this session we'll use the term "MRV" broadly:

- Any institutionalized process a country uses to track its emissions and mitigation actions
- Not limited to the specific topic of international negotiations

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Three Key Lessons

- Countries have a wide range of MRV systems that are helping them achieve their mitigation goals.
- International systems can and do support effective national MRV.
- National systems to track emissions are currently more effective than systems to track mitigation actions.

CPI's Motivation

We are analyzing national MRV systems to:

- Understand current practices, identify strengths and gaps
- Help countries improve their own systems
- Identify good practices so countries can learn from each other
- **More broadly, “demystify” MRV.**

We are not seeking to rank countries relative to each other.

Fundamental to **CPI's own mission to assess policy** impacts, evaluate effectiveness, and work with governments to improve.

CPI's Work on MRV

Describe national MRV systems in China, Germany, Italy, United States

Tracking Emissions and Mitigation Actions: Current Practice in China, Germany, Italy, and the United States (February 2012)

Assess systems according to a common framework

Tracking Emissions and Mitigation Actions: Evaluation of MRV Systems in China, Germany, Italy, and the United States (May 2012)

Identify emerging needs for MRV and recommend priority areas for improvement

Meeting Emerging MRV Challenges in China, Germany, Italy, and the United States (forthcoming)

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What have we looked at?

Our survey spans MRV systems:

- Operating at the national level
- Across all emissions sources and sinks
- Tracking emissions and mitigation actions, regardless of underlying purpose.

Lesson 1: Countries have a wide range of MRV systems that are helping them achieve their mitigation goals.

China

Emissions

- National Inventory
 - For 1994
(completed 2004)
 - For 2005 (in progress)

Mitigation Actions

- National Communications
- Statistics Indicators, Monitoring and Examination (SME) system for energy
- Annual progress reports on climate change (since 2008)

Germany

Emissions

- National Inventories (annual)

Mitigation Actions

- National Communications
- Biennial reporting under EU Monitoring Mechanism
- Integrated Energy and Climate Program (IEKP)
- Individual policy tracking systems, including progress reports on renewables

Italy

Emissions

- National Inventories (annual)

Mitigation Actions

- National Communications
- Biennial reporting under EU Monitoring Mechanism
- Annual reporting on energy efficiency and renewables
- Individual policy tracking systems

United States

Emissions

- National Inventories (annual)
- Facility-level GHG reporting

Mitigation Actions

- National Communications
- Federal policy oversight mechanisms: Reports on climate change spending; Government Accountability Office
- Individual policy tracking systems

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Framework for Evaluation

Identifies six **criteria** for effective MRV systems:

- Transparency
- Comparability
- Reliability
- Usefulness
- Timeliness
- Completeness

Each criteria has a set of observable **indicators**; scores are based on the presence of these indicators.

Example: Transparency

Indicators

- Are underlying data publicly available for review and use?
- Are data collection and/or emission estimate methods publicly available and clearly described?
- Is transparent expert review part of the reporting process?
- Is there a clear identification of sources of uncertainty and methods for measuring it?
- Does the system include standardized documentation of methods and key decisions, and strong record-keeping practices in general? Are there consistent procedures for archiving results and documents?

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5. **Key Findings and Country Results**
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General Findings

Lesson 2: International systems can and do support effective national MRV.

- National emissions inventories
- National communications to UNFCCC

Lesson 3: National systems to track emissions are currently more effective than systems to track mitigation actions.

- All four countries are struggling to identify the most effective and efficient policies; this requires comparable data on outcomes, cost-effectiveness.

China

	EMISSIONS	MITIGATION ACTIONS
TRANSPARENCY	Somewhat transparent	Not very transparent
COMPARABILITY	Somewhat comparable	Somewhat comparable
RELIABILITY	Somewhat reliable	Somewhat reliable
USEFULNESS	Fairly useful	Fairly useful
TIMELINESS	Not very timely	Fairly timely
COMPLETENESS	Somewhat complete	Fairly complete



Germany

	EMISSIONS	MITIGATION ACTIONS
TRANSPARENCY	Very transparent	Somewhat transparent
COMPARABILITY	Very comparable	Somewhat comparable
RELIABILITY	Very reliable	Fairly reliable
USEFULNESS	Very useful	Fairly useful
TIMELINESS	Very timely	Fairly timely
COMPLETENESS	Very complete	Fairly complete



Italy

	EMISSIONS	MITIGATION ACTIONS
TRANSPARENCY	Very transparent	Somewhat transparent
COMPARABILITY	Very comparable	Somewhat comparable
RELIABILITY	Fairly reliable	Somewhat reliable
USEFULNESS	Fairly useful	Fairly useful
TIMELINESS	Very timely	Fairly timely
COMPLETENESS	Very complete	Fairly complete



United States

	EMISSIONS	MITIGATION ACTIONS
TRANSPARENCY	Very transparent	Somewhat transparent
COMPARABILITY	Very comparable	Not very comparable
RELIABILITY	Very reliable	Somewhat reliable
USEFULNESS	Very useful	Somewhat useful
TIMELINESS	Very timely	Fairly timely
COMPLETENESS	Very complete	Fairly complete

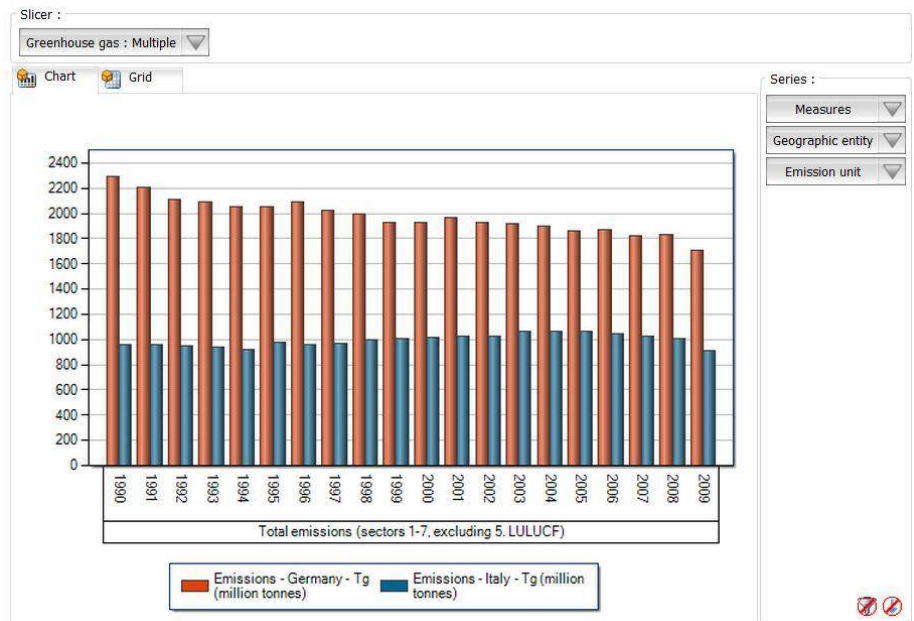
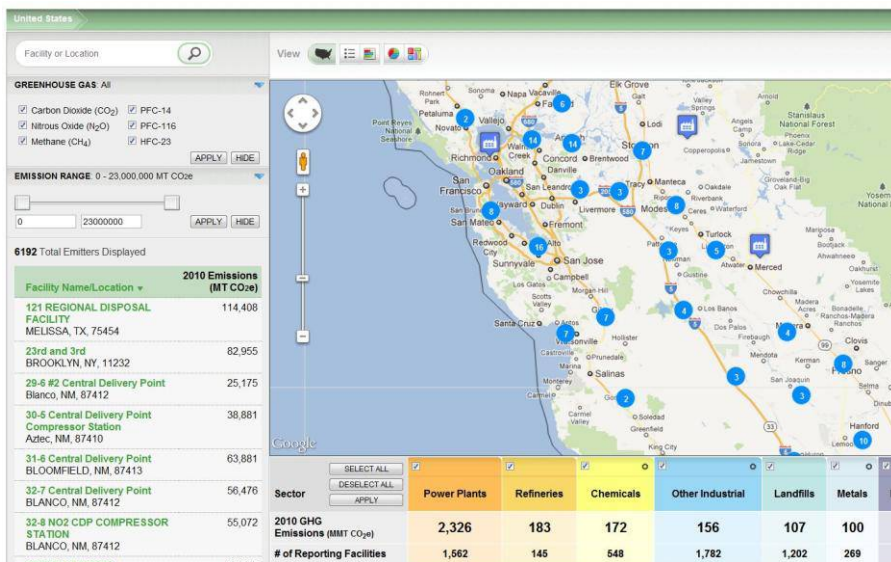


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Good Practices: Tracking Emissions

User-friendly data viewers



Good Practices: Tracking Emissions

- Publish inventory data as spreadsheets or searchable databases.
 - Enables further analysis by outside parties
- Report emissions by state/province.
 - Facilitates sub-national policymaking
 - Ensures comparability
- Check data accuracy and identify problems by using data from different sources.

Good Practices: Tracking Mitigation Actions

- Regular review of full suite of national actions or a subset of related policies, presenting results in common units and avoiding double-counting.
- Publish detailed description of methods underlying estimates and sources of uncertainty.
- Engage independent experts to evaluate methods for estimating mitigation outcomes.
- Independent third-party evaluation of policy performance and publication of findings.

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Next Steps

In next phase of work, CPI will:

- Analyze MRV needs emerging from international and domestic policy processes
- Assess how well the four countries in our study are positioned to meet these needs
- Identify highest-priority areas for improvement.

Questions for Discussion

- What are the latest developments in national MRV systems?
- What emerging needs and challenges do countries face?
- What, and how, can countries learn from each other?
- What lessons do national experiences hold for the international negotiations?