Tracking Emissions and Mitigation Actions: Lessons from National Practice

Kath Rowley and Julia Zuckerman
Climate Policy Initiative
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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
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

<table>
<thead>
<tr>
<th>Describe national MRV systems in China, Germany, Italy, United States</th>
<th>Tracking Emissions and Mitigation Actions: Current Practice in China, Germany, Italy, and the United States (February 2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess systems according to a common framework</td>
<td>Tracking Emissions and Mitigation Actions: Evaluation of MRV Systems in China, Germany, Italy, and the United States (May 2012)</td>
</tr>
<tr>
<td>Identify emerging needs for MRV and recommend priority areas for improvement</td>
<td>Meeting Emerging MRV Challenges in China, Germany, Italy, and the United States (forthcoming)</td>
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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
6. Good Practices
7. Next Steps
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.
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**Very** | **Fairly** | **Somewhat** | **Not very** | **Not at all**
## Germany

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**Intensity Scale**

- **Very**
- **Fairly**
- **Somewhat**
- **Not very**
- **Not at all**
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The scale for evaluation ranges from "Very" to "Not at all".

**Italy**

MRV: Lessons from National Practice
### United States

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#### Qualitative Scale:
- **Very**
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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?