Managing CO2 emissions in the Cement Sector: Exploring policy scenarios for Flexible mechanisms

A member-led project of the World Business Council For Sustainable Development (WBCSD)

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Introduction

- Two basic questions:

1) What is the ultimate goal?

2) Why do we need market (flexible) mechanisms?

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Ultimate goal

- The Paris Agreement says:

Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change

On that purpose, mitigation of GHG emissions is essential

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Market (flexible) mechanisms

To do what ?:

1) Maximize the GHG emissions reduction

2) Minimize the implementation cost

while fostering sustainable development

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Needs

1) Market
   a) Set up conditions to establish a market for GHG
   b) Price on carbon and associated mechanisms
2) Mechanisms
   a) Measurement (MRV)
   b) Additionality
3) Flexible

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Sectoral Approach - What is it?

A combination of policies and measures, developed to enhance efficient, sector-by-sector, greenhouse gas mitigation, addressing data, policy, technology and capacity building within each sector.

1. **International Cooperation with major sector actors** to develop and share: appropriate sector tools, systems, data, best practices, UNFCCC crediting policies, benchmarking and technology development
2. **Nationally appropriate** actions

   Emission goals and policies could differ depending on national ambition, different NDCs, different development needs…

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Sectoral Approach – Potential Benefits

- Greater **speed** in implementation due to the smaller number of parties involved in building a workable program
- Greater **scale** in terms of addressing sector-wide emissions, rather than emissions on a project-by-project basis as is presently done under existing mechanisms
- **Faster technology development and deployment** through international cooperation, particularly for carbon capture and storage (CCS).
- **More capacity building to establish** effective systems and measures which work at a sector level (and could be scaled up) without trying to manage economy-wide impacts.
- **Better policy design** with sector-tailored tools to manage competitive impacts which can result from different carbon policies in different countries or regions.

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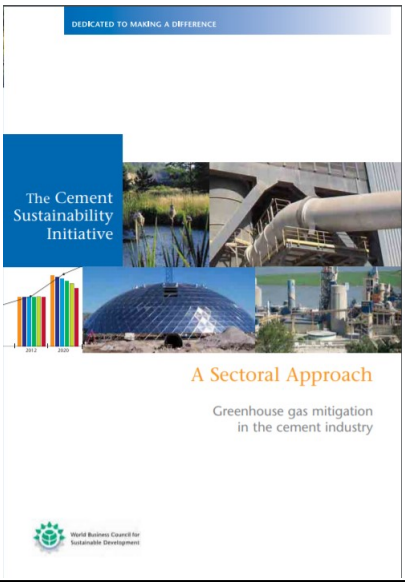
Cement Sectoral approach (2009)

- CSI has aggregated independently-verified data
  - Getting the Numbers Right (GNR) database
- CSI developed a model as soon as 2009
  - International cooperation
  - Involvement of several stakeholders
    - ERM, PwC (for the GNR database)
  - Peer-review
    - Lawrence Berkeley National Laboratories (USA)
    - The International Energy Agency (Paris, France)
    - Research Institute of Innovative Technology for the Earth (Japan)



Sectoral Approach - CSI Key Principles

A sectoral approach to GHG management must:

- Work within the UNFCCC, compatible with existing and future mechanisms (e.g. ETS,CDM/JI);
- Include key developed and developing economies;
- Use simple metrics and standardized methodologies;
- Use verified emissions data to track compliance;
- Involve government to help set, monitor and enforce agreed goals;
- Enhance new technology development, especially CCS

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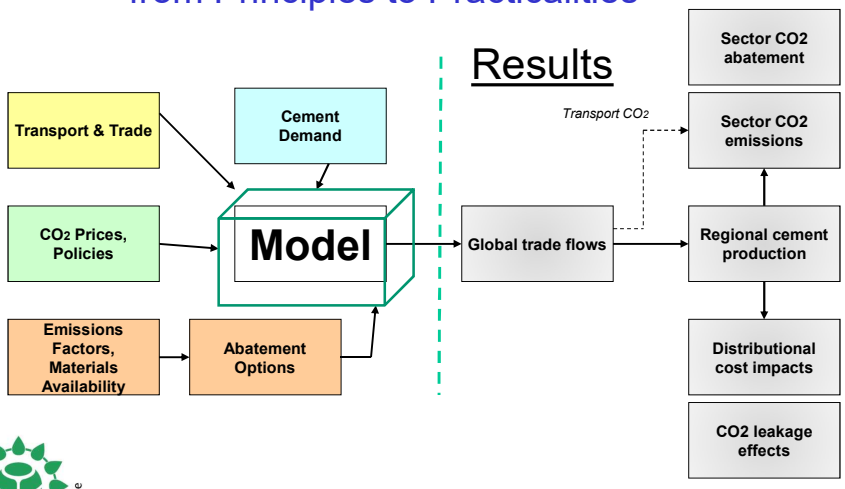
Modeling Policy Options: from Principles to Practicalities



Caution: most models are false, some are useful

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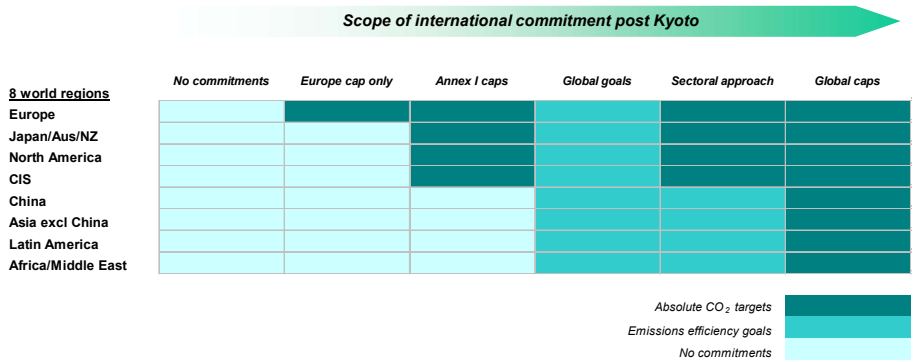
Policy scenarios evaluated:



Scenarios involve different combinations of carbon prices, mitigation options, national or regional carbon policies and commitments. Many other policy combinations possible in model in the Sectoral Approach. One has been chosen for modeling.

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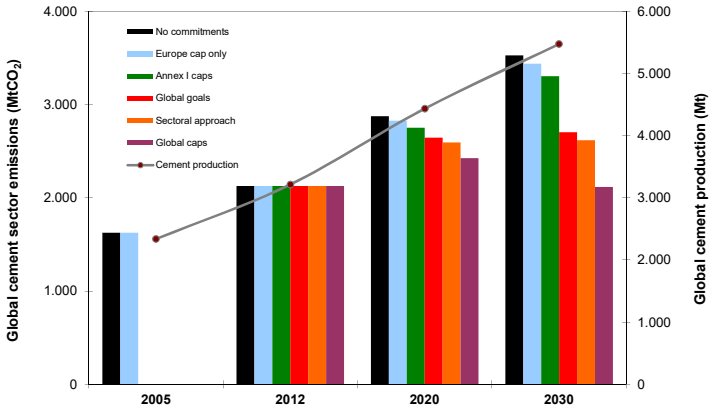
Comparison of scenario outputs: CO2 emissions projections

- Emissions increase in all cases from 2005-2030
- Impacts occur late in the scenarios, if at all
- Only 'Global caps' 'Global goals' & 'a sectoral approach' show impact on emissions



Cement demand forecast from International Cement Review and JP Morgan

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Key conclusions from Model Studies

1. 'Sectoral approach' shows real impact from 2020 onwards, and seems most practical to implement;
2. Greater worldwide sector CO_2 abatement is possible under scenarios which include non-Annex I actions;
3. Cement-sector specific technology and CCS can impact reductions
4. Abatement potential varies by region: hence nationally tailored approaches are key.
5. Risk of leakage (trade and CO_2) exists where emissions are capped in one region and not in others.

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Sectoral Approach: lessons learned

The sectoral approach was not accepted

- 2009 was another period – huge progress have been made
  - Multi-stakeholder cooperation (Facilitative Dialogue, Marrakech Partnership…)
  - Paris Agreement is a permanent regime
  - Paris agreement involve all countries
    - Not any more a North-South issue but also some South-South opportunities
- EU ETS and the use of rights from flexible mechanisms
  - First years – very high interest, including from the cement sector for CDM
  - When EU decided that it could no longer be used for compliance, then CDM rights got 0 value
  - If there is no market in developed countries, less interest for flexible mechanism
- Bureaucracy
  - CDM Executive Board was a very heavy process
  - GNR database was refused as baseline and benchmark by the CDM EB
  - MRV is key (but if there is no project there is 0 additionality)
- Huge opportunity for transfer of technology and knowledge
- Open cooperation between Parties and non-Party stakeholders

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