# *Sectoral approaches to GHG mitigation in heavy industry*

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# Issues

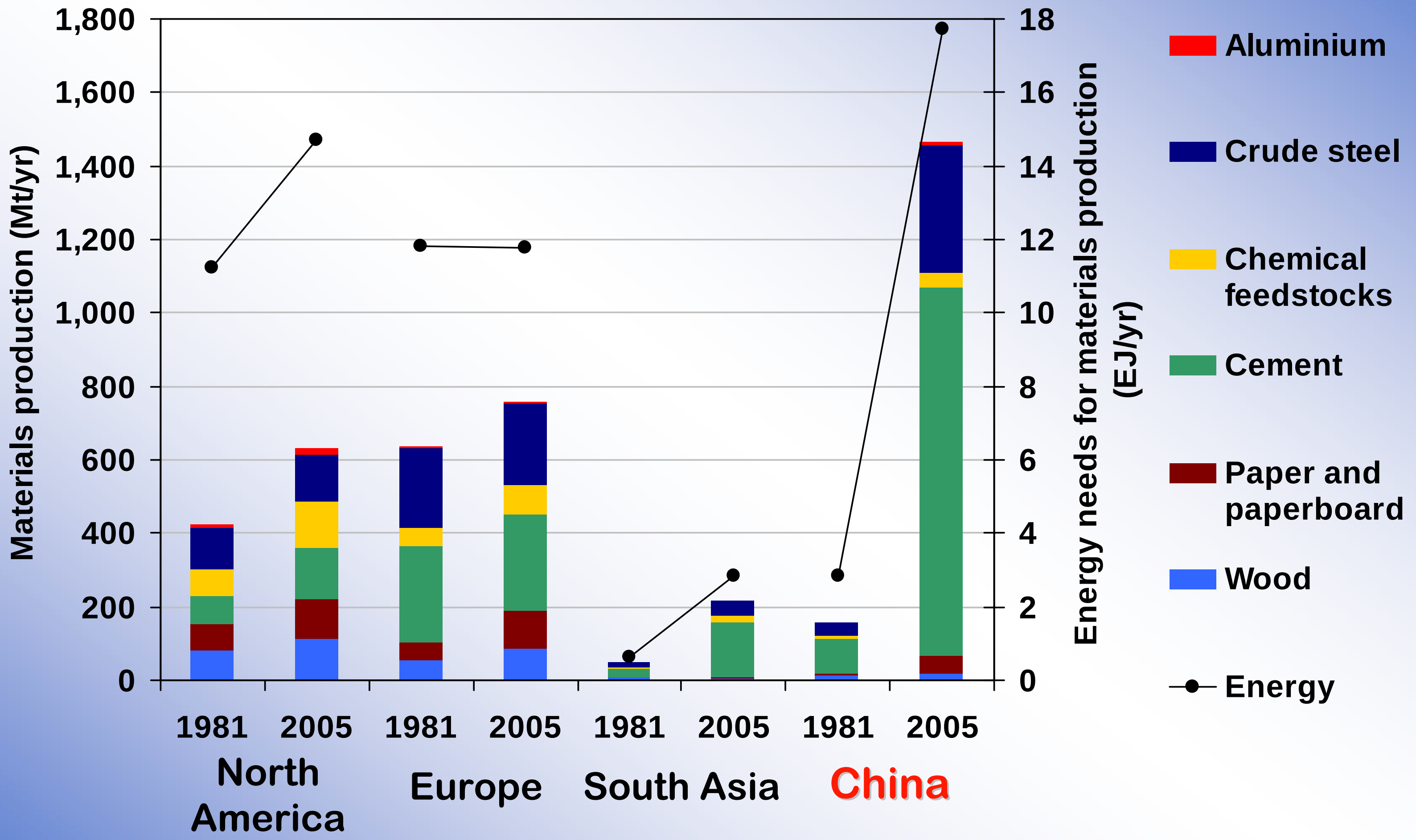
- Define sectoral approaches
- Existing approaches
- Integration into international climate policy framework
  - Including emissions trading

# Sectoral approaches: why?

- UNFCCC Parties seek ways to broaden greenhouse gas reductions
  - Developing countries: reluctance to take country-wide targets
  - Rapid growth in GHG-intensive industry outside Annex I regions
  - A focus on sectors could reveal win-win opportunities for $CO_2$ reductions – e.g. best practice sharing, energy efficiency
  - → Among options discussed: Sector-based commitments, for some countries, as part of a post-2012 climate regime?

- Competitiveness concerns for trade-exposed energy-intensive industries
  - Climate policy costs hamper competition of some industries - in some countries only
  - Competitiveness concerns are a constraint on governments' willingness to set more ambitious goals

# Industry growth: China's lead




Source: IEA, 2007, *Energy use in the new millennium*.

# Typology of sectoral approaches (SA)

- *Sector-wide transnational approaches (TA)*
  - Industry-led: aluminium (IAI); cement (WBCSD-CSI); iron and steel (IISI)
    - Data gathering ➔ seeking best practice ➔ offer policy options / set unilateral goals
    - When feasible, pooling R&D in breakthrough technologies
    - Governments not involved so far
  - Public-private: task forces under the Asia-Pacific Partnership on Clean Development and Climate (APP)
    - Data gathering, information sharing on energy and environment, technology cooperation on a commercial basis
- *<u>Considered</u>: sector-level commitment (SC) under the UNFCCC*
  - Country-level, sectoral objective with greenhouse gas crediting
    - No-lose (non-binding) sectoral target (CCAP)
  - Sustainable Development Policies and Measures (SD-PAMs) – a form of pledge and review?

# Criteria to assess SA

- Environmental effectiveness
  - Leads to a meaningful environmental outcome, while waiting for a more global regime?
- Fairness
  - Set a more level international playing-field in relevant industries – where $CO_2$ policy drives a wedge in international cost-competitiveness
- Cost-effectiveness
  - Does not create “$CO_2$ havens” - large differences in marginal cost of avoided $CO_2$
  - Paves the way for - and does not hamper - a $CO_2$ price signal

# Instrumenting sectoral approaches

- **Benchmarking**
  - Traditionally: identify "best in class"
  - Sharing best practice (incl. policy experience, among governments) – see APP
  - Compare performance
  - Set common, medium-term goals
- **Incentives to undertake GHG reductions?**
  - No-regret potential – and "co-benefits"
  - Sector-based GHG credits, a step up from project-based crediting under the CDM

# Challenges ahead

- Technical (TA and SC)
  - Data: availability, international comparability, reliability?
- Institutional
  - TA: Industry federations are not Parties.
    - How to go beyond industry “pledge and review”?
  - TA: From industry-led initiatives to domestic policy (e.g. ETS allocation)
    - Industry/government: asymmetry of information
  - SC: developing countries’ capacity to move from a bottom-up project-level to a top-down sector-level?
- Evolution of climate regime
  - Sector-based crediting: an answer to competitiveness concerns?
    - Developing country installations would be paid to play
    - SC only help with ambitious baselines (beyond BAU)
  - Further: is broader GHG crediting sustainable politically and environmentally?

# OECD/IEA work
## *Annex I Expert Group on the UNFCCC*

- **Sectoral crediting mechanisms**
  ***Exploring Options for "Sectoral Crediting Mechanisms"***
  **– Bosi and Ellis (2005)**

  ***Sectoral Crediting Mechanisms: an Initial Assessment of Implementation Issues in the Electricity and Aluminium Sectors***
  **– Ellis and Baron (2005)**

  ***Sectoral Crediting Mechanisms for Greenhouse Gas Mitigation: Institutional and Operational Issues***
  **– Baron and Ellis (2006)**

- **Sectoral approaches**
  ***Sectoral Approaches to GHG Mitigation: Scenarios for Integration***
  **– Baron (2006)**

**http://www.oecd.org/env/cc**

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