

**BACKGROUND NOTE:**

**SECTORAL APPROACHES IN A POST-2012 CLIMATE FRAMEWORK**

**Key questions:**

- What are sectoral approaches?
- Can sectoral approaches contribute to a post-2012 international climate framework? Which ones? For which sectors?
- How can governments engage with business to assess options for negotiation?

**Types of sectoral approaches**

A wide range of ongoing and proposed activities have been described under the heading of “sectoral approaches.” These include:

- Voluntary industry initiatives – Companies within some sectors have organized internationally around climate change. Aims vary and include: clarifying common issues; gathering performance data; demonstrating a sector’s contribution to climate efforts; setting voluntary standards; and developing proposals for government policy. Examples include WBCSD’s Cement Sustainability Initiative and efforts by the International Aluminum Institute and the International Iron and Steel Institute.
- Voluntary public-private partnerships – Some governments and companies are engaging in specific sectors through voluntary initiatives or agreements. Aims include those of the voluntary industry initiatives, as well as technology development. Examples include the Asia Pacific Partnership and the European Union’s GHG agreement with automakers.
- Bottom-up analysis/commitments – Some see a sectoral approach as a means of establishing an analytical foundation for commitments. Examples include: Japan’s proposal for setting mid-term national reduction targets; and CCAP’s proposal for sectoral analysis as a basis for developing country actions and to inform target-setting for developed countries.
- Sector-based crediting (“no-lose target”) – Many have proposed GHG crediting on a sectoral basis: countries earn credits for reductions below an agreed sector-wide baseline.
- Sectoral (“policy-based”) actions/commitments – Countries could agree internationally to individualized policies (i.e., SD-PAMs) in specific sectors. Actions/commitments could vary in form (e.g., efficiency standards, renewable energy targets, deforestation policies).
- Sectoral agreements – Countries could enter into agreements on actions/commitments in specific sectors, with the form varying by sector (e.g., performance standards, absolute or intensity targets, technology/finance mechanisms) and commitments differentiated.

## **Sectoral treatment under UNFCCC**

The Framework Convention and the Kyoto Protocol adopt a generally comprehensive approach, encompassing GHG sources from all sectors, with exceptions: land use and forestry are addressed separately, and aviation and shipping emissions are being considered sectorally outside the UNFCCC. Sectoral approaches are among the items before the Ad Hoc Working Groups considering future action under both the Convention and the Protocol.

### **Rationales for sectoral approaches**

While sectoral approaches are clearly second-best in some respects – in particular, they are less economically efficient than economy-wide approaches – they may offer significant benefits:

- Addressing competitiveness – Perhaps the strongest rationale is to alleviate competitiveness concerns by agreeing on levels of effort across a given sector. This applies primarily in globally traded energy-intensive industries such as steel, aluminum, and cement.
- Broadening participation – Sectoral approaches offer an alternative action/commitment pathway for countries not prepared to assume binding economy-wide targets.
- Targeting key sectors – Sectoral approaches can target efforts to sectors where action is urgently needed, whether because emissions are high and rising, there is significant risk of capital/technology lock-in, or finance/technology cooperation is critical.

### **Which sectors are candidates?**

Factors to consider include a sector's:

- Emissions, including global share (see appendix), projections, and reduction potential;
- Economics (adjustment costs and investment horizons);
- Vulnerability to competitiveness impacts and carbon leakage;
- Concentration (emissions, ownership, and markets);
- Homogeneity (products and processes);
- Boundaries (e.g., electricity used for steel production accounted as steel or power?)
- Ease of monitoring and administration (including data availability); and
- Technology and finance needs.

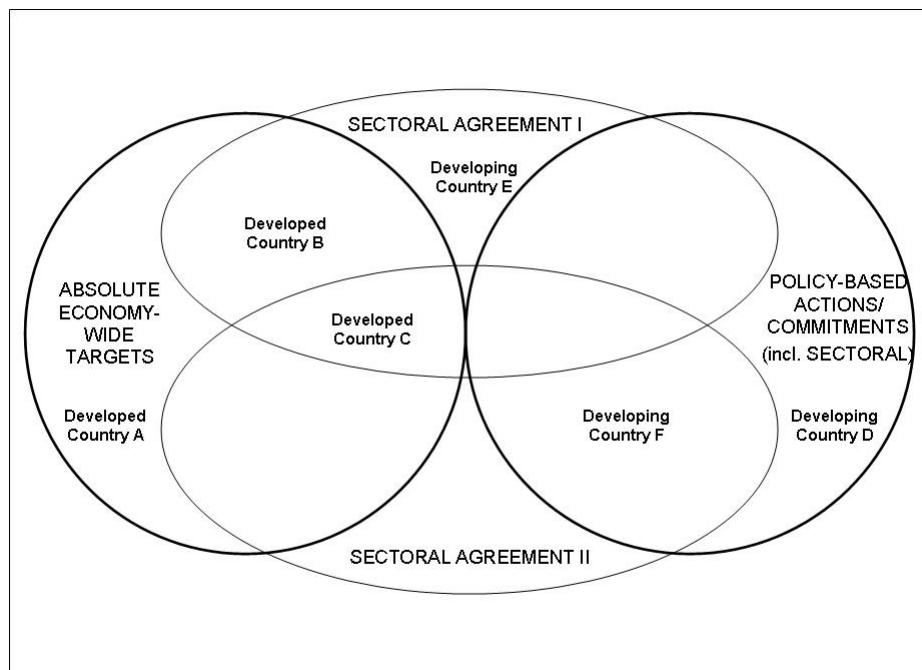
Different sectors may be candidates for different reasons. Globally traded energy-intensive industries are highly concentrated, homogenous, and subject to competitive pressures. The automotive industry is concentrated, homogenous and fast-growing. Electricity is very heterogeneous, but emissions are high and rising, very large capital investments loom, and broad-scale deployment of advanced technologies requires international cooperation.

## Fitting Sectoral Approaches in a Post-2012 Framework

Sectoral approaches could sit alongside other types of action/commitments as elements of a comprehensive post-2012 framework. For example, the framework could include absolute economy-wide targets for some countries; policy-based actions/commitments (sectoral or economy-wide) for other countries; and one or more overlapping sectoral agreements (with different country groupings in each).

In the illustration below:

- Developed Country A takes an absolute economy-wide target;
- Developed Country B takes a target and participates in one sectoral agreement;
- Developed Country C takes a target and participates in two sectoral agreements;
- Developing Country D takes a policy-based (possibly sectoral) action/commitment;
- Developing Country E participates in a sectoral agreement; and
- Developing Country F takes a policy-based (possibly sectoral) action/commitment and participates in a sectoral agreement.



## Other Issues

Sectoral approaches raise a number of other procedural and substantive issues, which include:

- Assessing relative effort – Some means are needed to assess the level(s) of effort proposed under a sectoral approach (whether a single-country action/commitment, or a sectoral agreement)

among countries), and to compare them to the efforts under other forms of action/commitment being proposed.

- Aligning sectoral and other actions/commitments – A sectoral action/commitment must be compatible with a country's other policies. At the international level, each of a country's actions/commitments could be treated separately for reporting or compliance purposes. (In the case of a country with both an absolute economy-wide target and a sectoral commitment, the latter would be one means of achieving the former, although compliance would be assessed separately.) At the domestic level, a country or region with a cap-and-trade system must decide how to treat a sector covered by a sectoral agreement: whether it is covered under the cap-and-trade system and, if so, how the two obligations are reconciled.
- Initiating sectoral approaches – In sectors where companies have organized voluntarily, proposals for government action/commitments may arise from the private sector. For sectoral approaches to emerge in other sectors, the initiative may have to come from governments. In either case, any consideration of sectoral approaches would benefit from a focused process of engagement between business and governments, possibly under the work program of the Ad Hoc Working Group on Long-Term Cooperative Action.

## Ongoing Work by Pew Center

Sectoral Options in Electric Power – Analyzing, with McKinsey & Company, a range of options for structuring agreements in the electric power sector including: differentiated targets (absolute and intensity); low-carbon standards (portfolio standard; technology standard); end-use efficiency standards; R&D agreements; and finance mechanisms.

Post-2012 Global Policy Scenarios – Modeling, with Battelle Memorial Institute, a set of alternative scenarios reflecting different policy architectures. Some scenarios include sectoral agreements in transportation, electricity or land use, alone, and in combination with other policy types (absolute targets, policy-based commitments).

## REFERENCES

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## Appendix – Emissions by Sector

This flow chart shows emissions by sector but also shows that sectoral boundaries are not always clear-cut. For example, electricity could be regarded as a distinct sector, or its emissions could be apportioned among end uses such as buildings and manufacturing. The figures for individual manufacturing sectors include both direct and indirect (electricity-related) emissions.

**World GHG Emissions Flow Chart**

