

Forum on IPCC 4th Assessment Report
(September 5th, 2007)

**Policies, instruments and
co-operative arrangements**
(AR4 – WG3 – Chap.13)

Philippe Thalmann

Professor of economics of the natural and
built environment, EPFL

Action must be taken, also by developing countries

Scenario category	Region	2020	2050
A-450 ppm CO ₂ -eq ^b	Annex I	-25% to -40%	-80% to -95%
	Non-Annex I	Substantial deviation from baseline in Latin America, Middle East, East Asia and Centrally-Planned Asia	Substantial deviation from baseline in all regions
B-550 ppm CO ₂ -eq	Annex I	-10% to -30%	-40% to -90%
	Non-Annex I	Deviation from baseline in Latin America and Middle East, East Asia	Deviation from baseline in most regions, especially in Latin America and Middle East
C-650 ppm CO ₂ -eq	Annex I	0% to -25%	-30% to -80%
	Non-Annex I	Baseline	Deviation from baseline in Latin America and Middle East, East Asia

Voluntary action is necessary and good but insufficient

- Individuals, businesses, NGOs, sub-national governments are taking steps to reduce GHG emissions (many examples in report: §13.4)
- Important preparation for GHG reduction (raise awareness, show feasibility, spur innovation)
- Taken together, those steps lead to little actual emissions reduction
- National policies are needed

International coordination raises effectiveness and efficiency

- No single country or single sector accounts for more than 25% of global GHG emissions \Rightarrow effectiveness requires multilateral action
- There are great inter-sectoral and international differences in GHG abatement costs \Rightarrow same reduction at lesser cost if abatement efforts are allocated efficiently

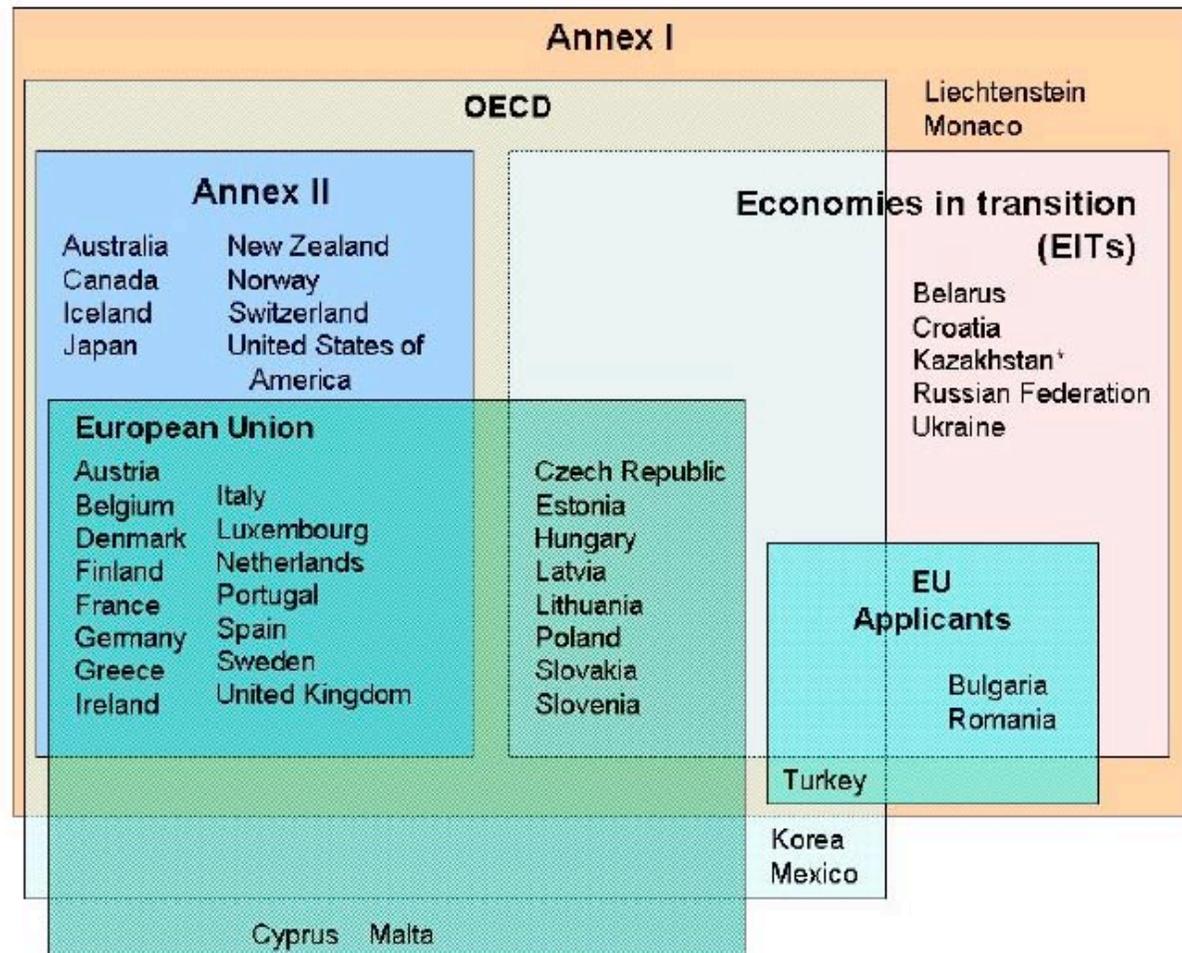
International coordination is very difficult

- The UNFCCC and Kyoto Protocol are first, very modest steps
- Lessons learned:
 - no visible impacts on participating economies
 - no international instrument (carbon price)
 - great administrative difficulties of CDM
 - doomed if not followed up by more stringent and broader targets
- A great deal of research on and proposals for the architecture of the follow-up agreement(s) (§13.3)

Conditions for next international agreement

- A successful next agreement requires:
 - climate-effective goals (long-term vision) and targets (near-term action)
 - specific actions
 - timetables
 - incentives for participation and compliance
- It might be a set of partial agreements with multiple coalitions involving provisions for free trade and technology transfer, possibly even help with adaptation

Many possible coalitions



*: Added to Annex I only for the purpose of the Kyoto Protocol at COP7

Figure 13.2 Current country groupings under the UNFCCC, OECD and EU.

Source: Höhne *et al.* (2005).

Adequate national policies

- Emissions ought to be reduced across all sectors and GHGs
- This requires a portfolio of instruments tailored to national conditions (regulation, taxes and subsidies, tradable quotas, information and other voluntary approaches)
- Conditions:
 1. environmental effectiveness
 2. cost efficiency
 3. attention to distributional effects
 4. institutional feasibility
- Beware of interaction with other national policies

Why has so little been obtained to date ?

- Conflicts with other objectives and policies (e.g. energy independence in USA \Rightarrow use more coal)
- The dominant priority of nearly all governments is economic growth and they believe that this requires cheap energy
- Climate policy creates winners and losers
- The policy-making process is particularly complex