NAMAs: Sector Approaches to a Post-2012 Agreement

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Key Messages

- Climate change will create enormous damages, particularly for the poor
  - While the historic responsibility for emissions lies primarily with the developed world, it is physically impossible for all reductions – and politically untenable for all costs – to be borne by these countries.
- Significant investment will be required to mitigate emissions; actions will need to come from both developed and developing countries
  - Global agreements using Kyoto Protocol styled market mechanisms are likely to be limited to Annex I Parties only during the next commitment period
  - Alternative approaches must be found to engage developing counties – as well as to encourage more aggressive action (and financial support) by more developed countries
- Sectoral approaches offer such a mechanism – although issues of competitiveness, investment support, IPR and equity must all be addressed

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Climate Damages

Impacts and Responsibility

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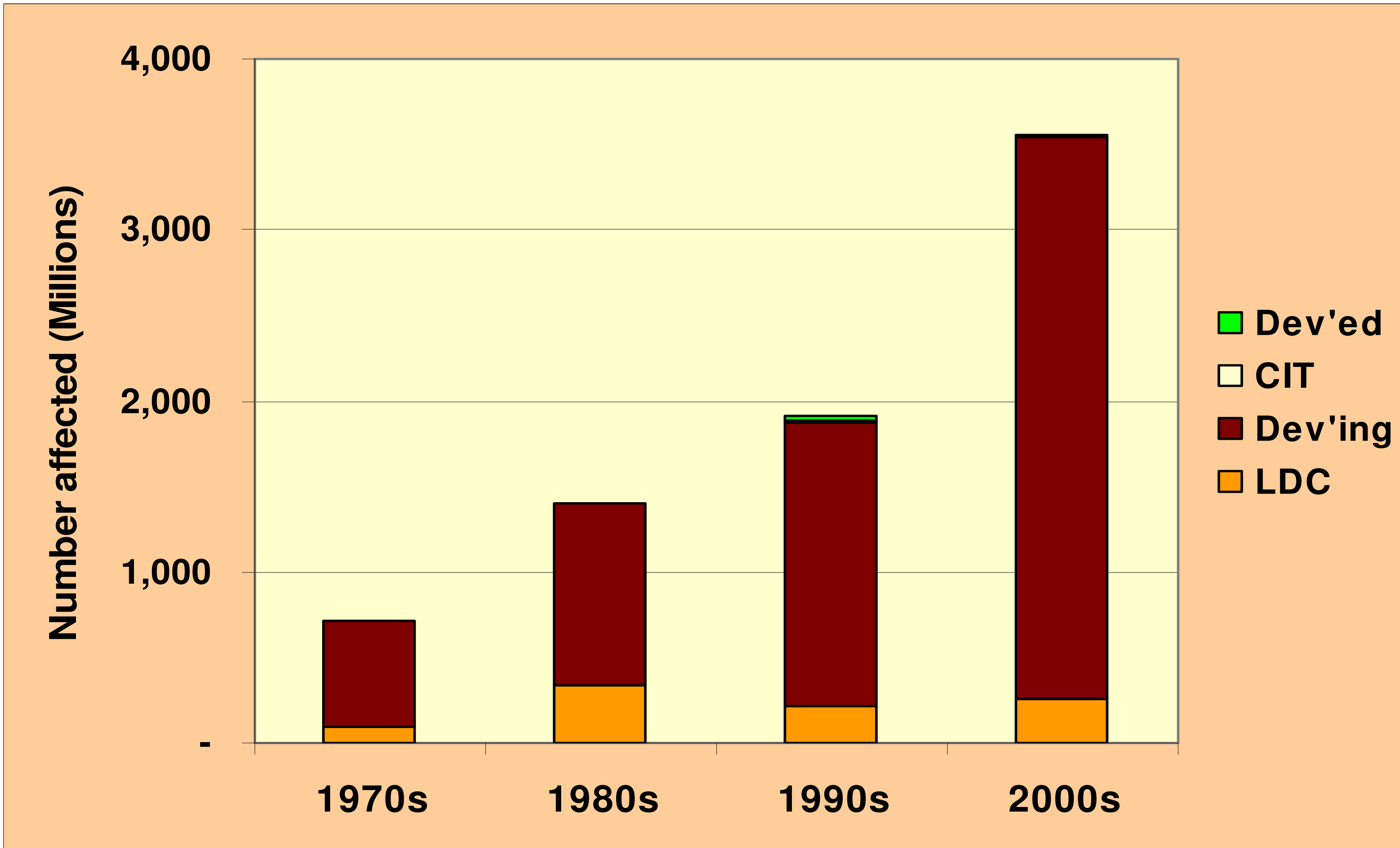
Climate Related Damages:

Most Impacts in Developing Countries



Source: UK Embassy, based on World bank data

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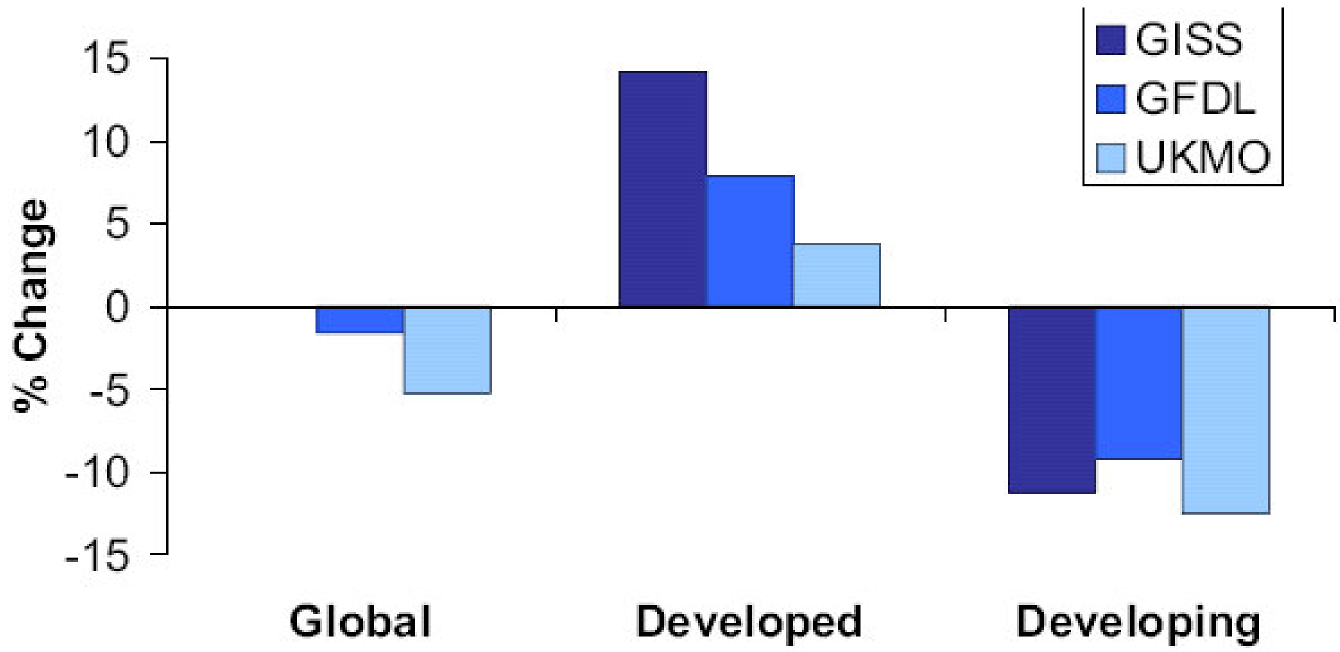
Change in Cereal Production

(2X CO_2)



Source: Stern Report, 2006

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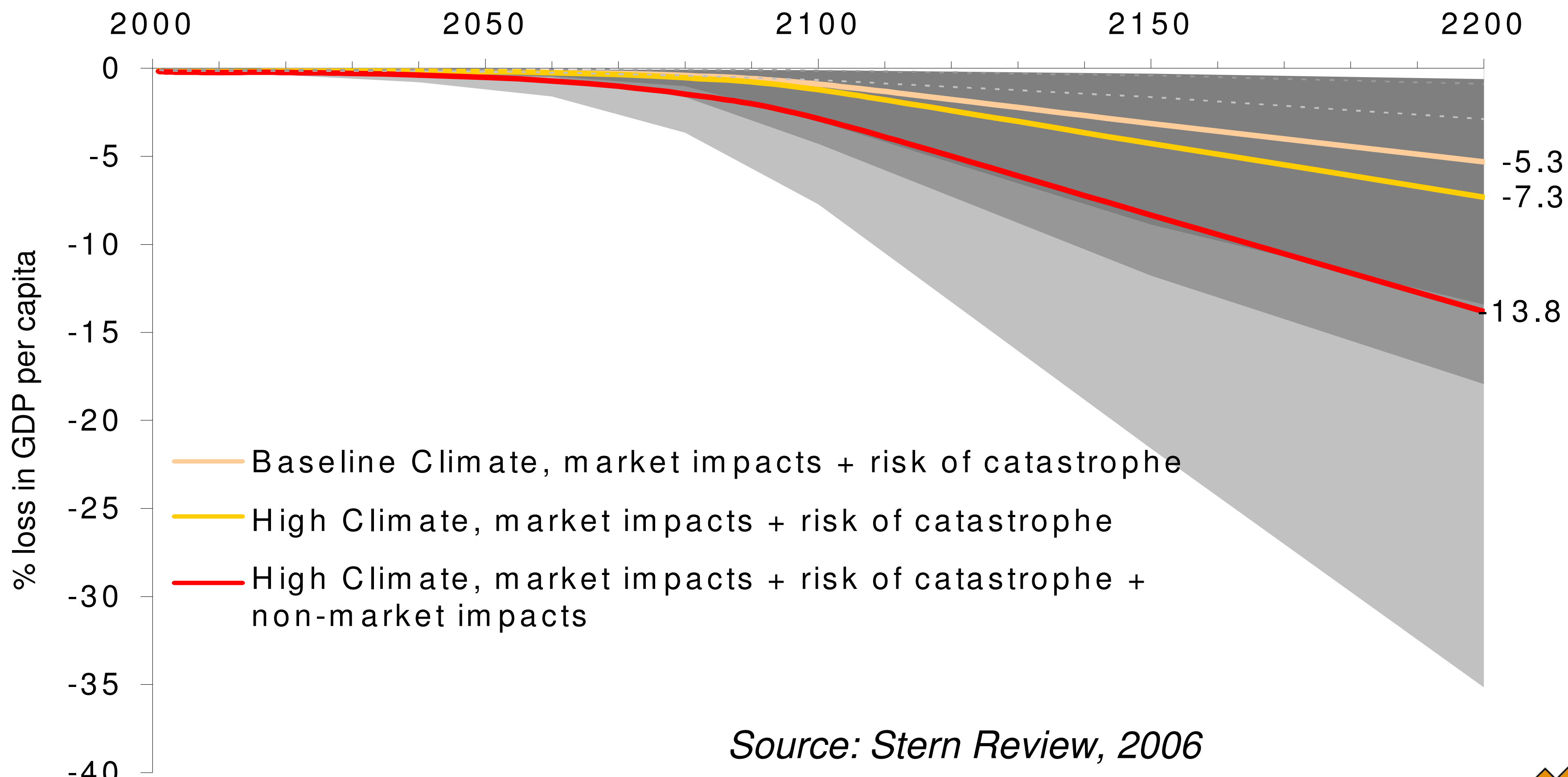
THE COST OF INACTION WILL BE LARGE



Source: Stern Review, 2006

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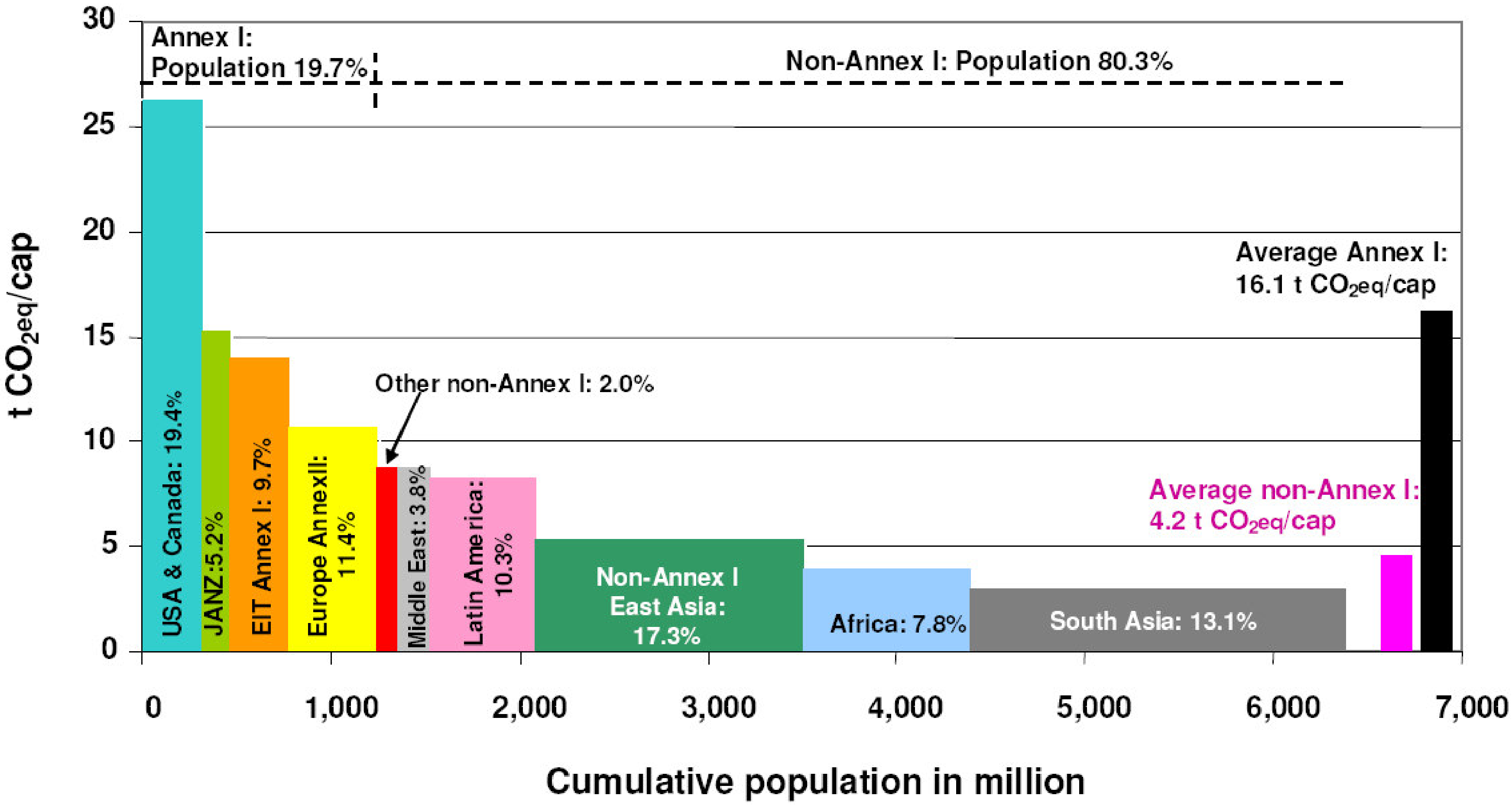
Responsibility for GHG Emissions



Source: IPCC, AR4, 2007

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A successful climate change solution will require global (and national) action and investment

Targets: The IPCC

CO_2 Concentration at Stabilisation (2005=379 ppm)	CO_2-equivalent Concentration at Stabilization (includes aerosols; 2005=375 ppm)	Year in which global emissions peak	Global average temperature above pre-equilibrium	Change in global CO2 emissions in 2050 (% of 2000 emissions)
350 – 400	445 – 490	2000 – 2015	2 - 2.4 ºC	-85 to -50
440 – 485	535 – 590	2010 – 2030	2.8 - 3.2 ºC	-30 to +5
570 – 660	710 – 855	2050 – 2080	4 - 4.9 ºC	+25 to +85

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

Source: IPCC AR4

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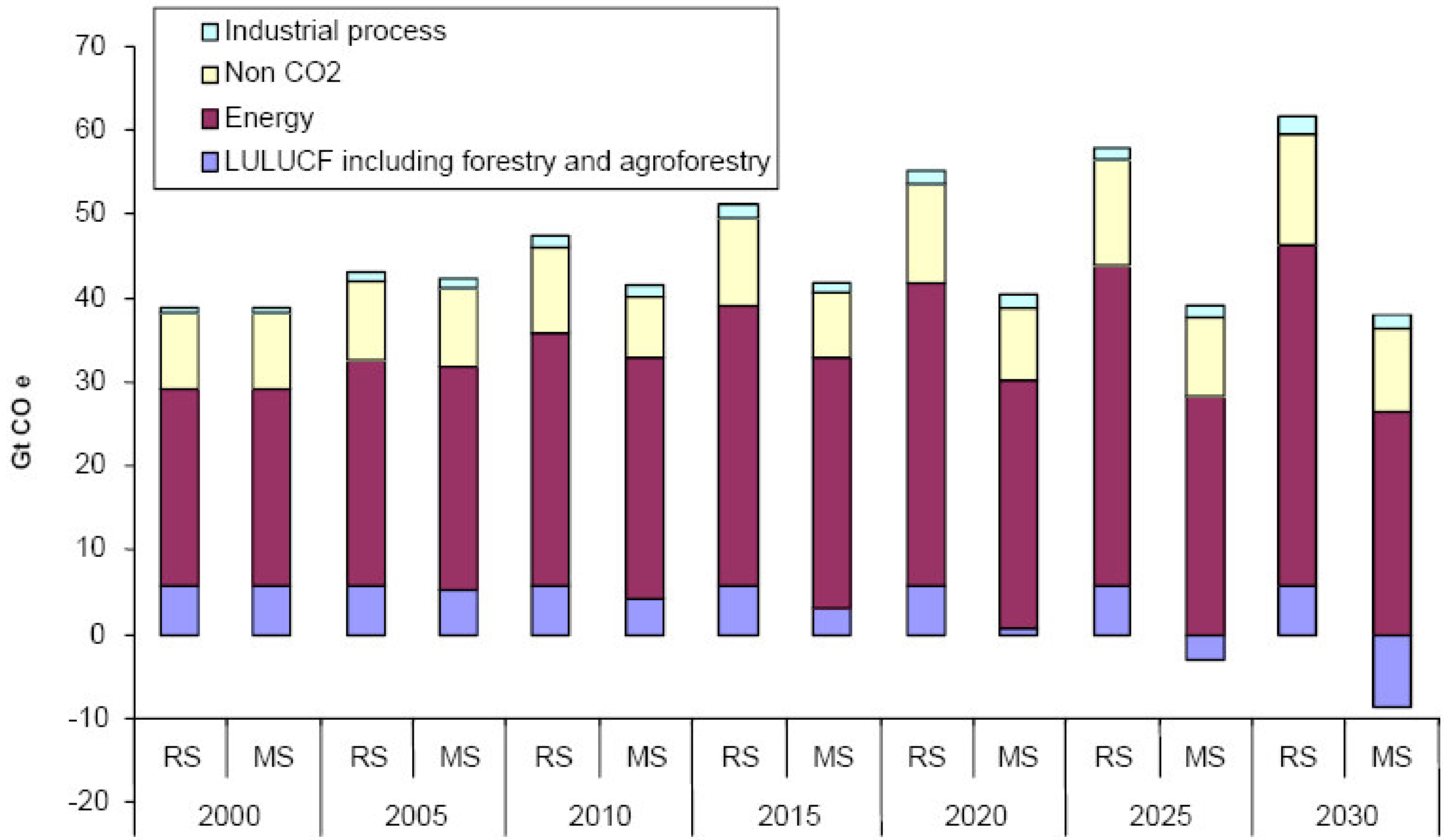
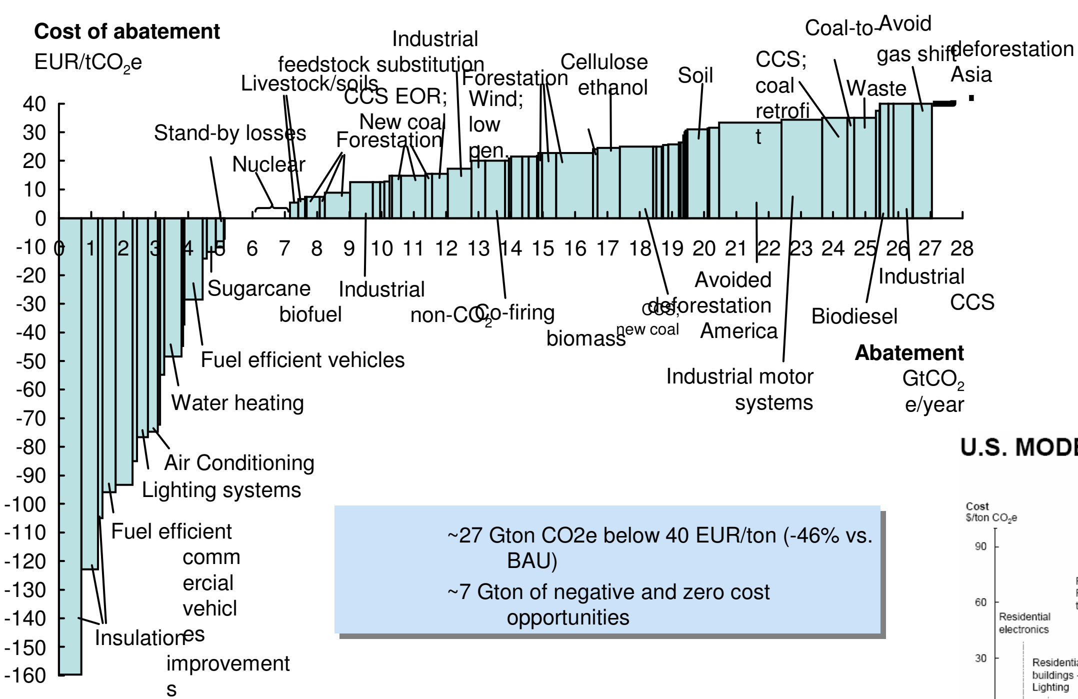
Emissions Reductions

(Return emissions to 2004 levels by 2020)



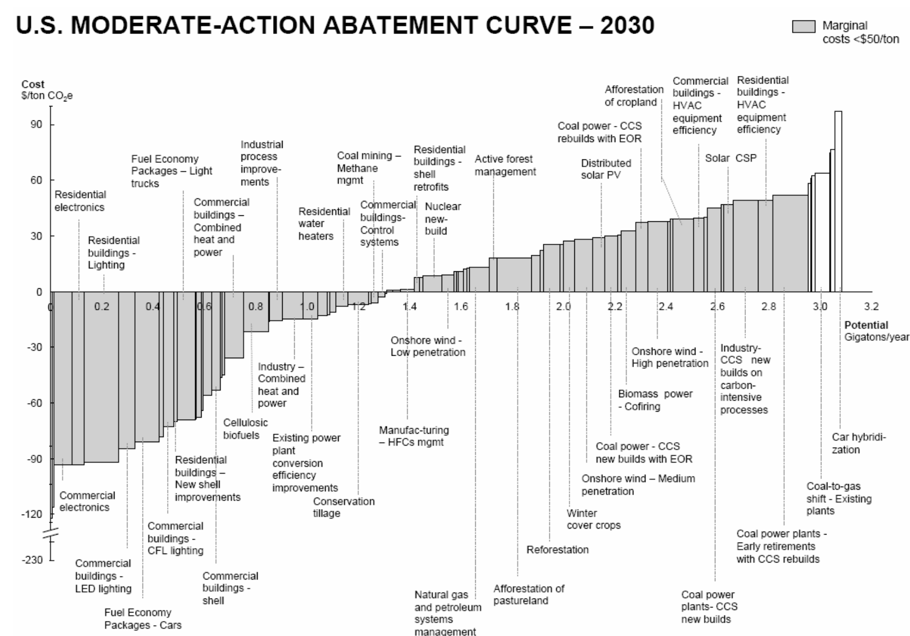
Source: UNFCCC, *Report on the analysis of existing and potential investment and financial flows, Dialogue Working Paper 8*

EU and US Abatement Curves



~27 Gton CO2e below 40 EUR/ton (-46% vs. BAU)

~7 Gton of negative and zero cost opportunities



Source: McKinsey, 2007

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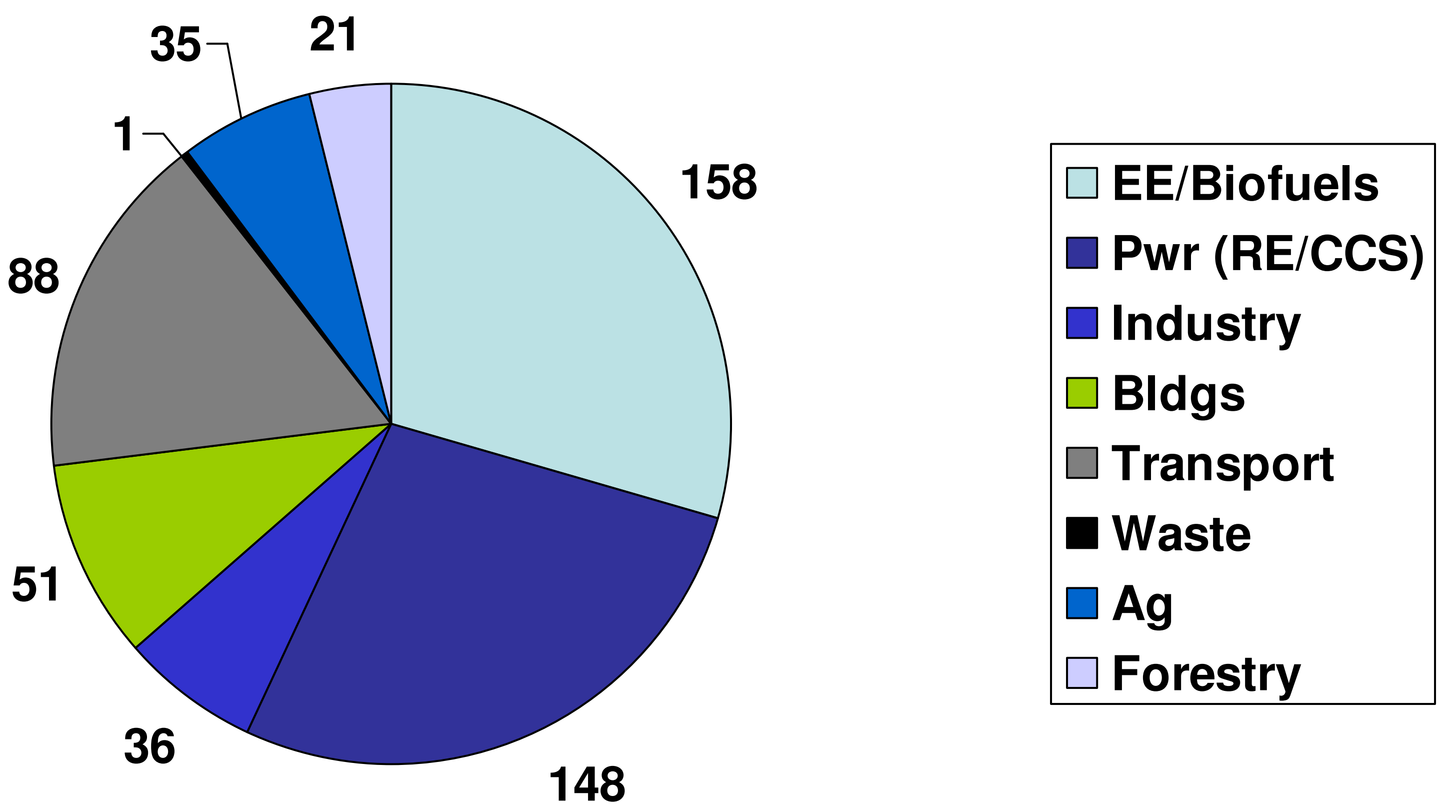
Scale of Global Investment

(Billion $, 2030 to return GHG to current levels)



Source: UNFCCC, Report on the analysis of existing and potential investment and financial flows, Dialogue Working Paper 8

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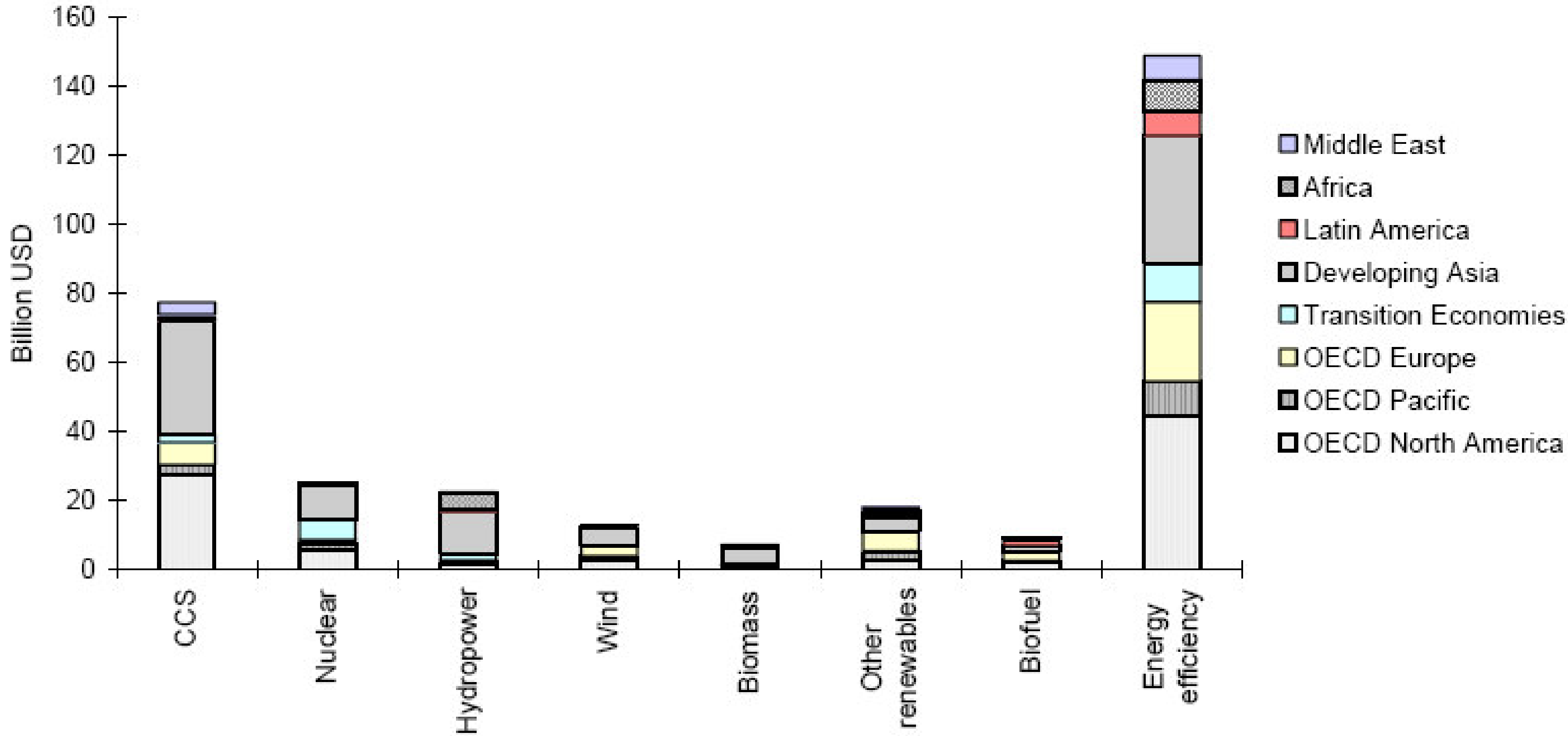
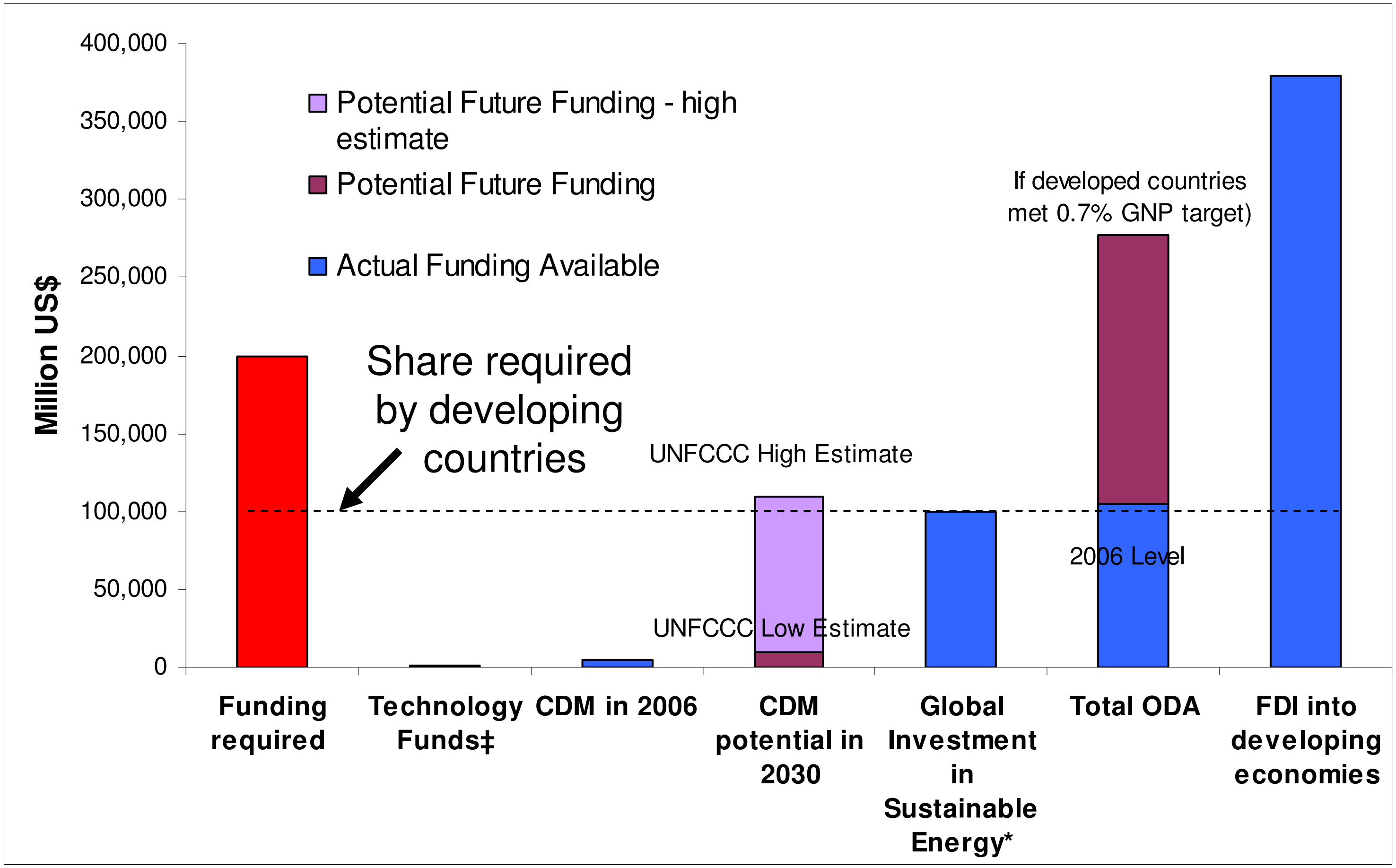
Financing/Investment

(In 2030, by region)



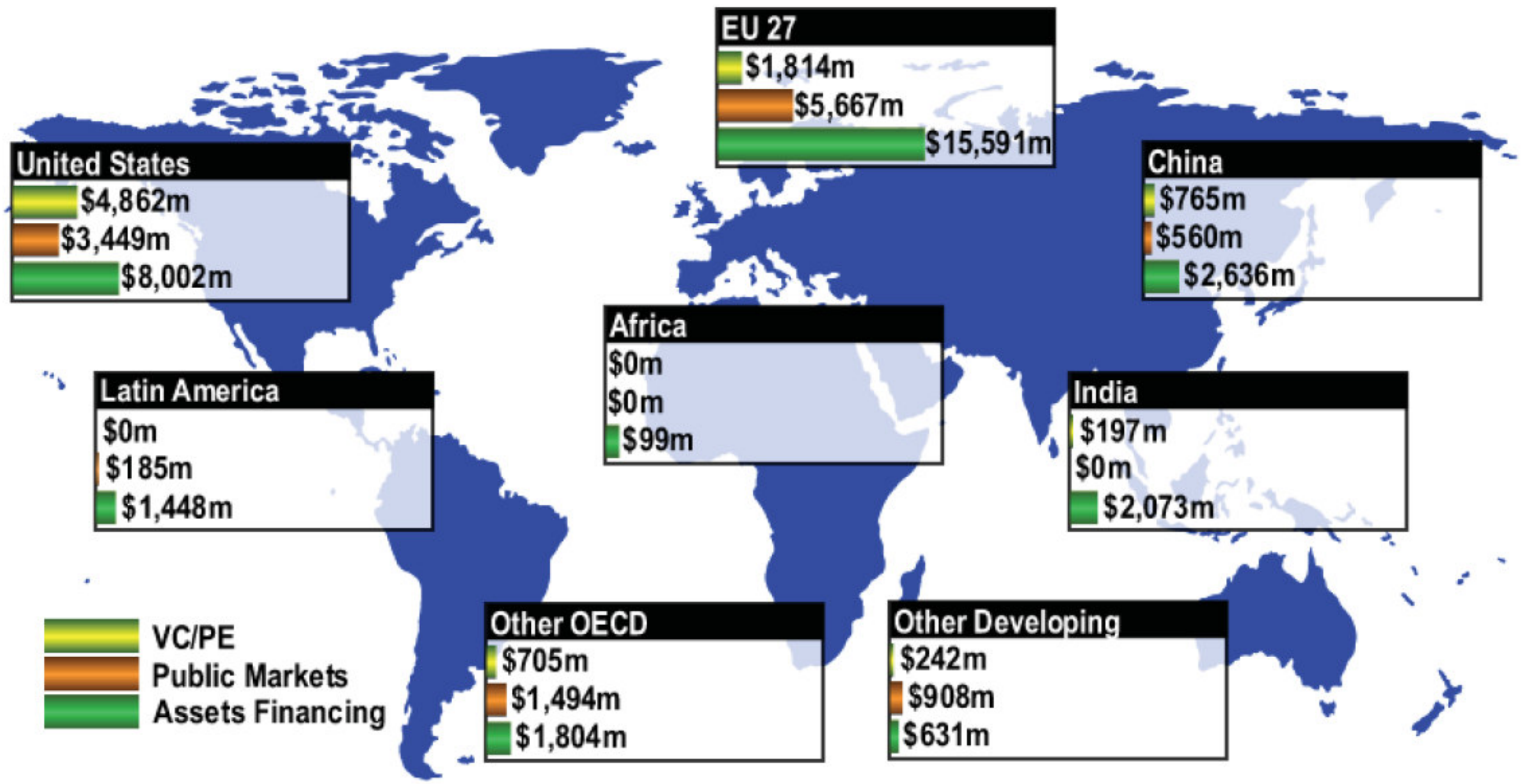
Sources: UNFCCC, 2006

Global Financing/Investment



Sources: New Energy Finance, UNCTAD Statistics, UNFCCC, and The World Bank

Investment in Sustainable Energy



Note: Grossed-up values based on disclosed deals. VC/PE figures: include PE buy-outs, and investor exits made through OTC market offerings. OTC & PIPE deals are included. Figures in brackets refer to (disclosed deals / total deals). Public Market figures: represent location of exchange on which a company raises money, not location of the company. Includes investor exits made through Public Market offerings. Figures in brackets refer to number of (IPOs / Secondaries / Convertible & Other). Asset Financing figures: represent total investment, and so include new build and refinancing of clean energy projects. Acquisitions of projects are not included. Figure in brackets refers to (total deals).

Source: SEFI, New Energy Finance

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Sector Approaches: Part of the Solution?

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Future Action: What Countries Say

Country	Global C&T	Domestic Targets	Technology R&D	Fin./Tech. Transfer	Adaptation
USA	No*/??	Emerging GHG, energy, transport	Yes	Limited	Yes
China	No	Energy, transport	Yes	Yes	Yes
EU	Yes	GHG, energy, transport	Yes	Yes	Yes
Brazil	No	Energy	Yes	Yes	Yes
India	No	Energy, local transport	Yes	Yes	Yes
Japan	With Others	GHG, energy	Yes	Limited	Yes

* Current Administration

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Alternative: sector approaches

- SDPAMS : merging development and climate agendas
- Common standards/technology agreements
- Sector/Policy CDM : credit against BAU baseline
- No Lose Targets : credit against national/sectoral emissions (or emissions intensity) target

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Pros and Cons of Sector Options

- Sector option advantages
  - Can address issues of competitiveness (if all competitors are included)
  - Promotes newer (newest?) and (most?) efficient (lowest GHG) technologies/actions
  - May help tailor and channel financial assistance/investment (more difficult to do in sweeping, economy wide efforts)
- Sector option disadvantages :
  - May advantage richer countries with capacity to meet standards, tilting balance away from low income (and likely less efficient) manufacturing, reducing income
  - May require countries/companies with advanced technologies to give up their competitive edge
  - Scaling to global solution requires multiple agreements (for multiple sectors, and technologies)
  - Technology agreements may be at mercy of private sector (which may often hold IP)

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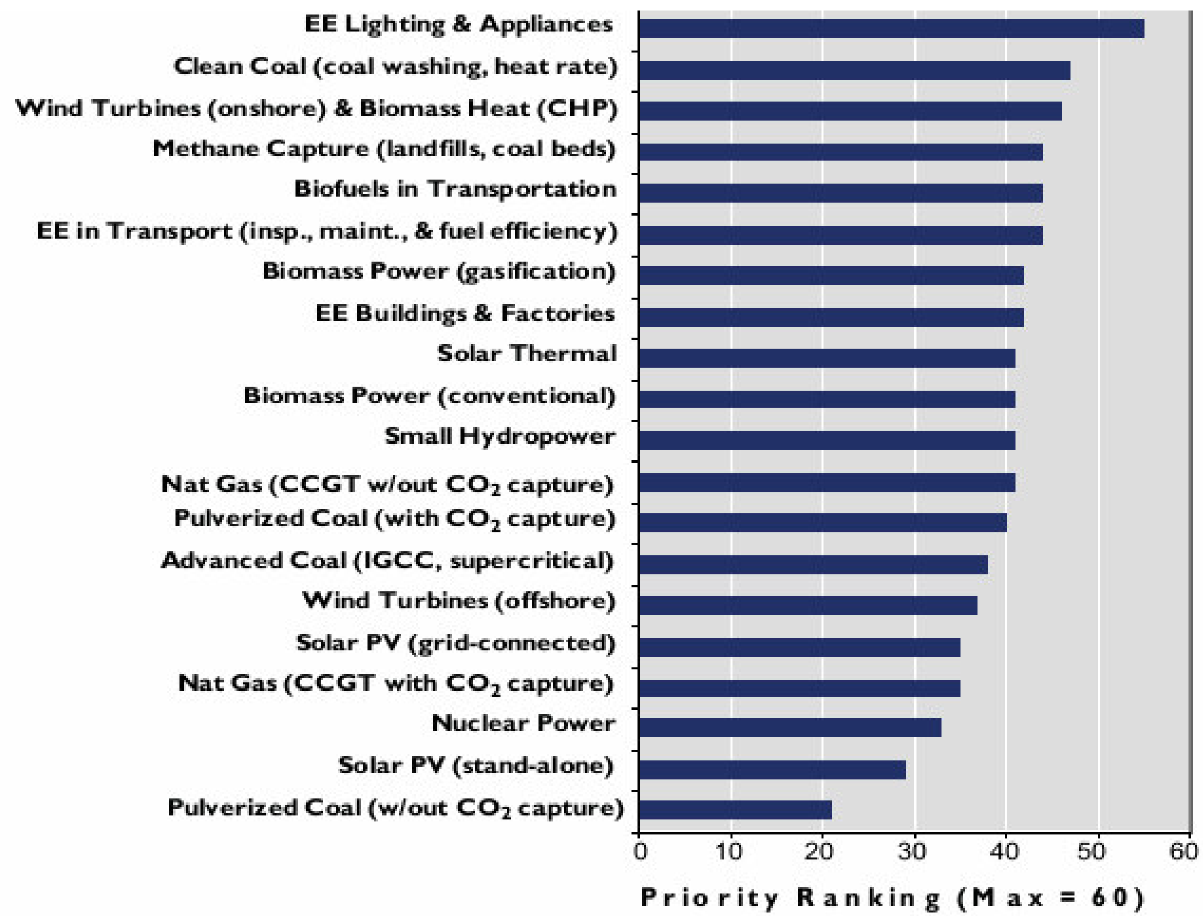
Multiple benefits in energy choices

Criteria
Regional applicability (potential for common regional action)
Total CO_2 emissions reduction potential (Mt/yr)
Cost of energy generated or saved (US cents/kWh)
Cost of GHG reduction (US$/tCO2e)
Potential to reduce pollution
Employment benefits (jobs/dollar invested)
Timeframe for widespread availability of technology
Potential for cost reductions in future



Source: USAID, 2007.

Concluding Thoughts:

Some provocative Q&A

Issues for Consideration (1)

Q: Is the best sector to start with an internationally competitive one or not?

A: Not competitive; the political difficulty of moving technology from those who have it (and are likely to be market winners) to those who do not will be extraordinarily difficult absent major interventions. The exception may be in technologies that do not offer competitive advantage (e.g., the IAI PFC agreement)

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Issues for Consideration (2)

Q: Are specific technology standards necessary, or is more generic best practice guidance adequate?

A: Both are needed; the determination should be based on the sector and the kind of change (including plausible timelines) desired. Rapid change built on existing technology can be met by standards (likely with major capacity building and financing); slower incremental change (perhaps of a larger magnitude and with less certain technology) may be better served with best practice guidelines.

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Issues for Consideration (3)

Q: How should sector standards/targets be set?

A: We have only limited experience with setting international sector standards. The Montreal Protocol's TEAPs offer one mechanism (assigning the role to an expert group), as do the Annexes detailing best techniques and practices of the Stockholm POPs convention (a more generic approach, leaving specifics to governments). It is likely that specific standards would need to be set by sector – and in some cases by specific technology – to have maximum effect.

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Issues for Consideration (4)

Q: Do we need international MRV?

A: Yes, particularly if the standards/agreements are to be set in binding legal commitments. The intrusiveness (and political fallout) of such regimes could lead to agreements of a less binding nature (albeit ones that could potentially be less effective)

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Issues for Consideration (5)

Q: Can sector standards/targets address equity?

A: Differentiation can be accommodated by providing differentiated target stringency or timing. Distribution effects can be addressed by providing varying levels of financial assistance/capacity support. Decisions on such differentiation are likely to be most contentious where the technology leads to competitive advantage.

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