



Center for
Clean Air Policy

Introduction and Overview

Alexander Ochs, Director of International Policy
Center for Clean Air Policy

GHG Mitigation Opportunities in Brazil and Mexico
ECLAC, Santiago, Chile
March 25, 2009

Center for Clean Air Policy (CCAP)

- Washington, Cal., NY, Beijing and Brussels-based environmental think tank
- Committed to advancing pragmatic and cost-effective climate and air quality policy through analysis, dialogue, and education
- CCAP's 30-country Future Action Dialogue has produced agreements on emissions trading, design of Clean Development Mechanism, now focused on post-2012 climate policy



Center for Clean Air Policy (CCAP)

- Running multi-stakeholder dialogues in the U.S. and the EU to build agreement on key climate policy elements, domestically and int'l
 - » Helped design the EU CO₂ emissions trading program, work with the EU on the advancement of its climate and energy package
 - » Currently help Members of U.S. Congress consider and design policies
- Long history of working with key developing countries (China, India, Brazil, Mexico) to design national climate policies and assist them in finding a strategy for int'l negotiations



Assisting Developing Country Climate Negotiators through Analysis & Dialogue

- Ongoing project since 2005, sponsored by UK DFID
- Key objective: help DCs participate more effectively in international climate mitigation efforts, by:
 - » Identifying options they may employ to reduce their GHG emissions
 - » Developing detailed strategies for their implementation
 - » Building capacity, readiness and preparation to participate in an international climate regime

Assisting Developing Country Climate Negotiators through Analysis & Dialogue

- Analyses completed and currently underway in Brazil, China, India, and Mexico
 - » Micro- and macroeconomic analyses of GHG mitigation options
 - » Sectoral GHG projections for 2020
 - » Cost curves for key technologies and projects

Assisting Developing Country Climate Negotiators through Analysis & Dialogue

- Development of comprehensive implementation strategies for select mitigation options that can overcome existing policy barriers
- Development and advancement of national climate action plans
- Integration into emerging international post-2012 framework
- Extension to include additional countries

Workshop overview
GHG Mitigation Opportunities
in Brazil and Mexico

9:00-9:20 Welcome and Introduction

9:20-9:40 International Overview: National
Appropriate Mitigation Actions and
the Global Deal on Climate Change
Alexander Ochs, CCAP

9:40-10:40 Q&A and Discussion

10:40-11:00 Coffee Break



Workshop overview

GHG Mitigation Opportunities in Brazil and Mexico

11:00-11:20 Mitigation Analysis of the Brazilian
Forestry Sector

Alcido Wander, EMBRAPA/CNPAP

11:20-12:20 Q&A and Discussion

12:20-13:00 Mitigation Analysis of the Brazilian
Ethanol and Biodiesel Industries

Isaias Macedo, NIPE/UNICAMP

Luiz Horta, UNIFEI

13:00-14:00 Q&A and Discussion



Workshop overview

GHG Mitigation Opportunities in Brazil and Mexico

14:00-15:00 Lunch

15:00-15:20 Potential Sectoral Goals in the Cement
and Oil Refining Sectors in Mexico
Mark Houdashelt, CCAP

15:20-16:20 Q&A and Discussion

16:20-17:00 Summary and Concluding Remarks
Alexander Ochs, CCAP





Center for
Clean Air Policy

NAMAs and the Global Deal on Climate Change

Alexander Ochs, Director of International Policy
Center for Clean Air Policy

GHG Mitigation Opportunities in Brazil and Mexico
ECLAC, Santiago, Chile
March 25, 2009

Outline

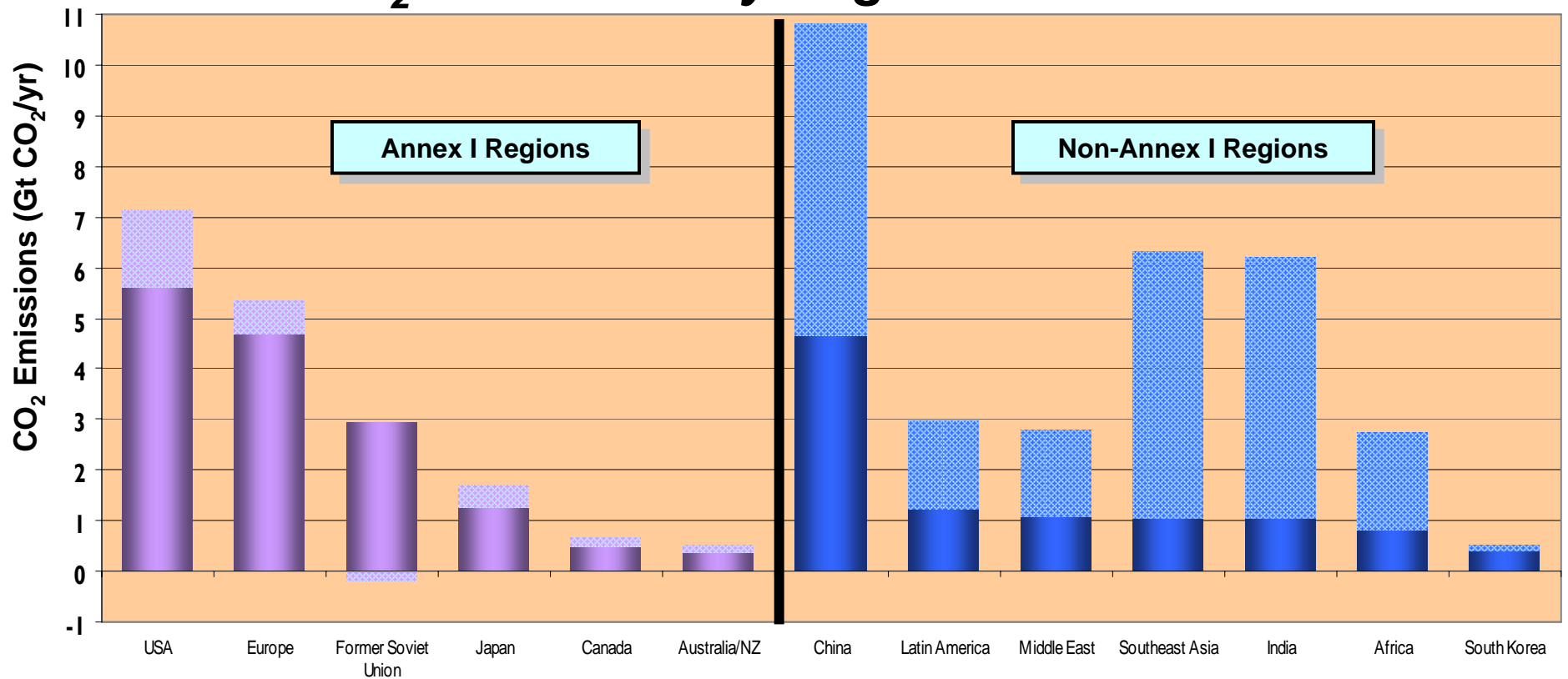
- I. Overarching goals and status quo
- II. Overview of international negotiations
- III. Role of developing/major emerging countries
- IV. Nationally Appropriate Mitigation Actions & Finance
- V. Country case studies
- VI. Sectoral Approaches

Overarching goals and status quo

- Science is clear, IPCC AR-4 (2007)
- Policy mandate is clear: UNFCCC, Art. 2
- $<2^{\circ}\text{C}$ global warming requires stabilization of GHG concentrations at 450-550 ppmv CO_2e by 2100
- Current emission trends unacceptable
- *Global* problem

Emissions

CO₂ Emissions by Region - 2000 & 2050



¹ Includes Fossil and other industrial CO₂.

Source: U.S. Climate Change Science Program. 2007. *Scenarios of Greenhouse Gas Emissions and Atmospheric Concentrations* (MINICAM Results).

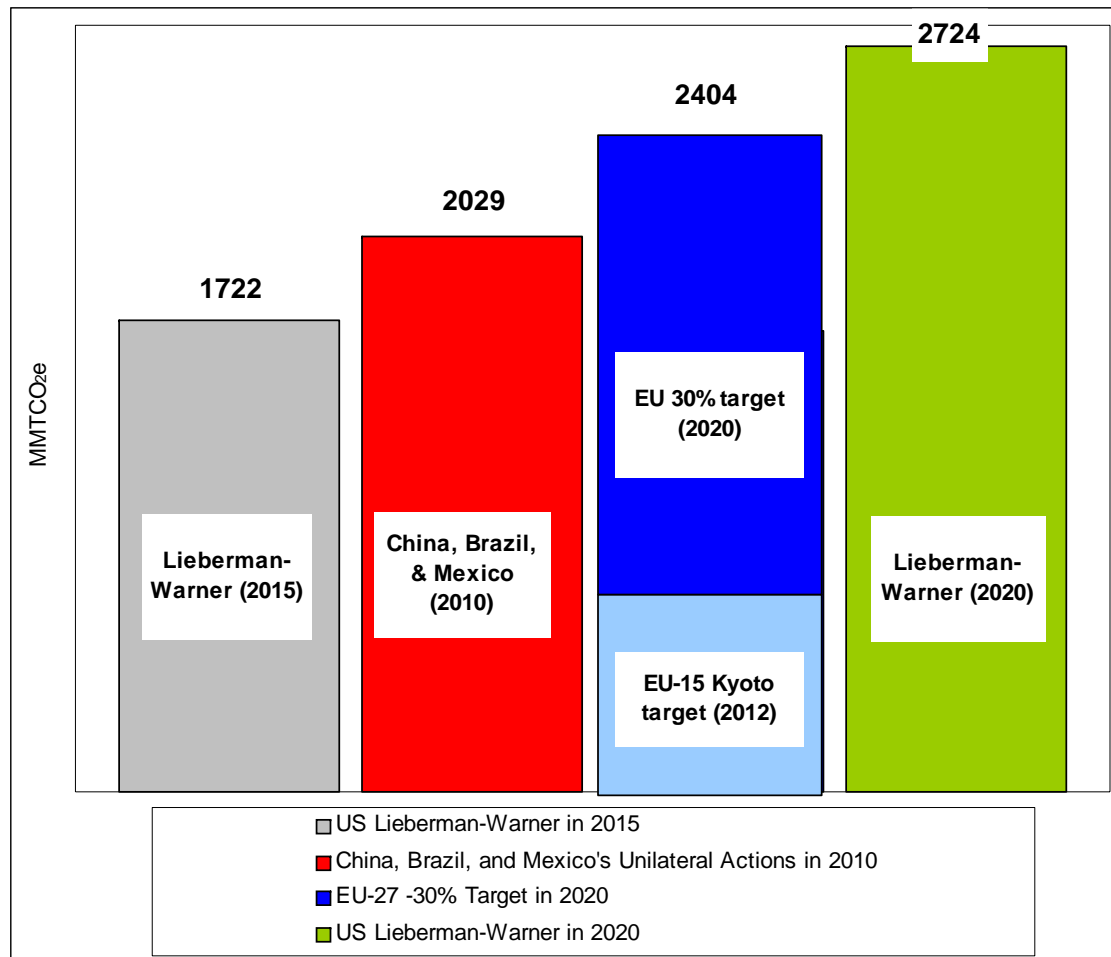
Overview of International Climate Negotiations

- Exciting and very productive time in the negotiations
- Real opportunity to reach a globally acceptable deal that involves both the developed and the major developing economies.
- Requires a single integrated framework

Overview of International Climate Negotiations

- Thru Copenhagen (December 2009)
 - » Need to reach agreement on the basic policy architecture for both Developed and Developing Countries for action beginning in 2012
- After Copenhagen (2010-2011)
 - » Parties will negotiate the specific details required for implementation of the policy architecture (a la the Marrakech Accords)

Developing countries are already doing more than many believe



Reductions from BAU

Source: CCAP, updated



International Policy Context

- Bali Action Plan (12/07) is the breakthrough Developed Countries have been waiting for
- Reaffirms “*common but differentiated responsibilities*” between developed and developing countries
- BUT goes much further: Developing countries will consider “***Nationally appropriate mitigation actions...in a measurable, reportable and verifiable manner***”

International Policy Context

The quid pro quo for agreeing....

-Developed Countries provide verifiable technology, financing, and capacity-building
- Menu of options: tech transfer, CDM, sectoral approaches, and reductions from deforestation (REDD)
- Since Bali, negotiations have focused on a menu of options under these so-called NAMAs:
 - » Unilateral Actions
 - » Conditional Actions
 - » Credit Generating Actions

International Policy Context

- Kyoto didn't include meaningful developing country action and had no mechanism to recognize developing country actions outside of the Clean Development mechanism (for which they were paid)
- One of the tests of any agreement in Copenhagen will be whether it creates a system for recognizing unilateral developing country action
 - » A large portion of the 2 billion tons of projected reductions in China, Brazil and Mexico, are unilateral – protecting the environment, not generating credits

NAMA Requirements

- All NAMA descriptions should include:
 - » Concrete details of implementation (timeframes, etc.)
 - » Expected emissions reductions
 - » Sustainable Development (and other) co-benefits
- If international assistance is requested:
 - » Unilateral NAMA
 - » Full Implementation
 - Basis for selection of unilateral action level
 - Up-front capital and long-term costs
 - The specific technology, finance and/or capacity-building assistance requested
 - Monitoring, Reporting and Verification strategy

How financing could work

Developing Country financial needs:

- Backed by NAMAs
- With MRV provisions

Executive Committee
under the UNFCCC
(Matchmaking
Body)

Available funds:

- GEF
- World Bank
- Regional Development Banks
- AF
- Bilateral assistance
- Multilateral Partnerships
- New funds (either under the UNFCCC or earmarked in national budgets)

Technology Finance

- Financing by setting aside a portion of allowances or auction revenues in domestic trading systems
 - » Examples:
 1. German Parliament has earmarked 30% of auction revenues
 2. European Commission has proposed that at least 50% of auction proceeds should be used for CCS deployment, int'l EE/RE, adaptation, and measures to avoid deforestation.
 3. Norwegian Finance Minister has proposed use for international programs including adaptation, technology, and reducing deforestation
 4. Lieberman-Warner bill used such an approach for int'l forestry

Technology Finance Assistance to Encourage Stronger Actions

- Technology & finance assistance could be provided:
 - » To build first-of-a-kind advanced technologies which are not cost effective
 - » To accelerate deployment by bringing down the cost of advanced technologies
 - » As incentive for participating developing countries to establish more aggressive “performance goals”
- Finance Assistance could take the form of:
 - » Loans,
 - » Incremental finance to fund the portion of a project that is more expensive than a traditional technology
 - » Tax credits to U.S. businesses to right down Intellectual property costs
- Finance could be provided:
 - » Bilaterally or multilaterally.
 - » There is not likely to be a single formula and there may be multiple mechanisms



Sources for Technology Finance

- Countries could provide financing by setting aside a portion of allowances or auction revenues in domestic trading systems, e.g.,
 - » German Parliament has earmarked 30% of auction revenues
 - » European Commission has proposed that at least 50% of auction proceeds should be used for CCS deployment, int'l EE/RE, adaptation, and measures to avoid deforestation.
 - » Norwegian Finance Minister has proposed use for international programs including adaptation, technology, and reducing deforestation
 - » Lieberman-Warner bill used such an approach for int'l forestry
 - » But it is a tough sell in the U.S.

China

- Chinese experts are considering a technology penetration type of approach as its more consistent with traditional five year plan strategies
- China has already:
 - » Required industries to improve energy intensity by 20% by 2010,
 - » Set tough CAFE standards and taxed SUVs
 - » Installed more wind capacity than any other nation in 2007 with a goal of 10% of electric capacity from renewables by 2010
 - » Retired many aging coal power plants (14 GW in 2007), cement kilns and steel mills

Mexico

- Pres. Calderon has set an ambitious aspirational goal to reduce GHG emissions 50% below current levels by 2050
- Mexico announced in Poznan that it will establish sectoral intensity targets for oil refining, cement, electricity and steel for 2020, based on a Stern-like review and CCAP analyses
- Mexico would meet those goals thru a cap & trade system covering the four sectors
- Unilateral reduction efforts in cement and oil refining could produce 5-11% reductions below BAU, and 19-22% reductions if international support is made available

South Africa & South Korea

- South Africa announced its intent to peak emissions no later than 2025
 - » Expects to have a final domestic climate policy adopted by the end of 2010
- South Africa also continues to implement sustainable development policies and measures that will reduce GHG emissions
- South Korea intends to announce a long-term, economy-wide target for emissions reductions later this year.

Chile

- Chile announced a 4 year program to research possible courses of action in terms of adaptation, mitigation, and local capacity building
- The plan includes over ten million USD for biofuels research, a 400 million USD national warranty fund for investments in renewable energy and efficiency, and the establishment of a Renewable Energy Center with a budget of over one million USD.
- President Bachelet: “This is [...] a concrete plan of action with goals, terms and resources”

Brazil

- Climate Plan emphasizes energy efficiency and Reduced Emissions from Deforestation and Degradation (REDD)
 - » Goal: to reduce average deforestation rate by 70% over the period of 2006-2017
 - » It would lower CO₂ emissions by about 413 million metric tons CO₂ in 2010 and a total of 4.8 billion metric tons over the life time of the whole program

Sectoral Approach

The “sector-based” approach focuses on controlling emissions from particular economic sectors in developing countries.

Advantages:

- » Quantitative and qualitative criteria
- » Ease of administration
- » Data availability
- » Greater equity
- » Increased technology transfer
- » Targeted emission reductions

NAMAs and Sectoral

- NAMAs could be combined to achieve a sectoral goals:
 - » Up-front assistance would be provided to help achieve the NAMA or to incentivize the choice of a more stringent NAMA (the no-lose goal)
 - » Any GHG emissions reductions achieved by exceeding the sectoral goal would generate international carbon credits
- Key design issue: Governance of the negotiation and financing process on “beyond unilateral” NAMAs
- Up-front assistance linked to MRV requirements

Conclusions

- CDM is not enough for Developing Countries to meet the target
- Current negotiations pose a great opportunity for innovation through NAMAs
- Sectoral approach is a cost-efficient tool for Developing Countries Climate Action Plans



Center for
Clean Air Policy

Gracias

ALEXANDER OCHS

Director of International Policy
Center for Clean Air Policy
750 First Street NE, Suite 940
Washington, DC 20002

Phone: +1.202.408.9260
Fax: +1.202.408.8896
aochs@ccap.org

www.ccap.org