



# Towards COP 15

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# Outline

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  - Mechanisms
  - Status
- Developments and lessons learned
  - Cap and trade
  - CDM
- COP15
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What measures are needed in your country to prepare for COP 15?

# Kyoto Protocol



# Kyoto Protocol

to the United Nations Framework Convention on Climate Change

- UNFCCC moved from voluntary efforts to legally binding emission levels
- Adopted 11/12/1997 in Kyoto; entered into force on 16/02/2005
- Goal: "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."
- Establishes legally binding commitments for the reduction of four greenhouse gases (carbon dioxide, methane, nitrous oxide, sulphur hexafluoride), and two groups of gases (hydrofluorocarbons and perfluorocarbons) produced by industrialized countries (Annex 1 countries)
- January 2009: 183 parties have ratified the protocol (EU ratified it as one party)

# Kyoto Principles

- Kyoto Protocol sets GHG reduction targets for industrialized countries, and an international framework for addressing global warming through international cooperation
  - Industrialized = Annex 1 countries, responsible for global warming, hence also for reducing GHG emissions
  - Non-industrialized = non-Annex 1 countries, not responsible for global warming and not responsible for reducing GHG

Human nature?: Global problem – Get other countries to solve it;  
Long term – Pass on to future generations

# Annex 1 targets

- Binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions: an average of 5.2% below 1990 levels over the five-year period 2008-2012.
- How? National measures + Kyoto mechanisms

# Commitments

- Annex I parties: commit to GHG reductions to 1990 levels
- Annex II parties: financial resources to assist developing country Parties implement the Convention

# Financial mechanism, GEF

- Global environment facility, GEF: responsible for operation of the financial mechanism
- Funding for:
  - Adaptation
  - Transfer of technology
  - Mitigation
  - National communications
  - Capacity building

# The Kyoto mechanisms

By setting targets, emission reductions took on economic value

- Emissions trading, “the carbon market“:
  - Trading of unused “assigned amount units” (AAUs) over the 2008-2012 commitment period
- Clean development mechanism (CDM):
  - Annex B Parties earn saleable certified emission reduction (CER) credits with emission-reduction projects in developing countries.
- Joint implementation (JI)
  - Countries (Annex B Party) can meet Kyoto Protocol commitments with emission reduction units (ERUs) earned from emission-reduction or emission removal projects in another Annex B Party
- (Land use, land-use change and forestry (LULUCF):
  - Removal units (RMU) on the basis of activities such as reforestation)

# Kyoto targets expected to be met

- Limited increase in OECD countries; large reduction in Russia and Eastern Europe
- Complicated data processing still ahead (national measures + Kyoto mechanisms)
- Minor impact on global temperatures. In 1990 the countries with a Kyoto target had a share of 30% in global greenhouse gas emissions; 20% in 2005 and dropping. Globally, Kyoto Protocol is a small, first step.
- Main weakness: Largest GHG emitting country, USA, not included

# Developments and lessons learned



# "CARBON MARKET"

- Since CO<sub>2</sub> is the principal greenhouse gas, people speak simply of trading in carbon.
- Carbon is now tracked and traded like any other commodity.
- Countries that have emission units to spare - emissions permitted them but not "used" - sell this excess capacity to countries that are over their targets.

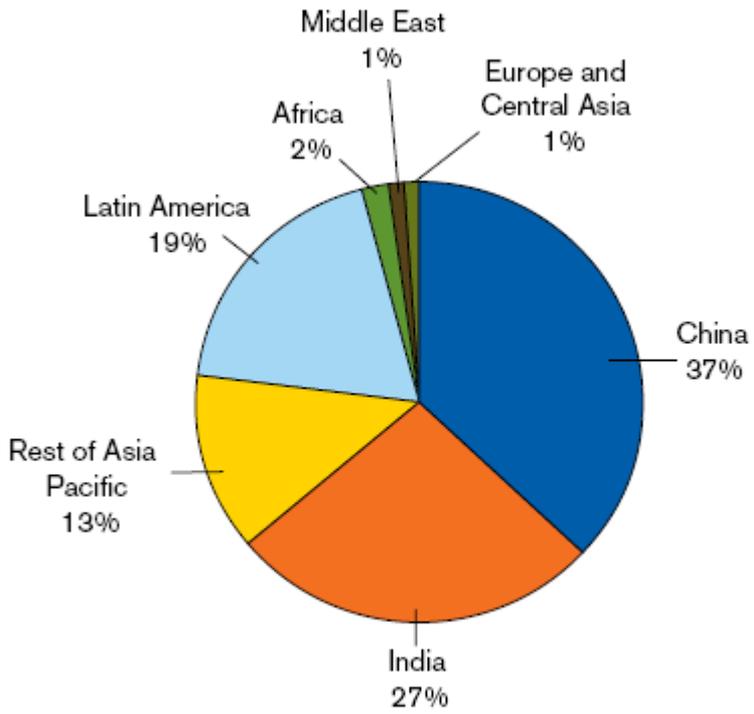
# Cap and Trade

- Cap: how much pollution in total allowed (for region)
- Licenses: Companies are issued credits, essentially licenses to pollute, based on how large they are, what industries they work in, etc. Extra credits can be traded with other companies.
- For companies which come in below their caps, this is great, because they can sell their extra credits, profiting while reducing their pollution.
- Those over the cap are penalized for their excess pollution while still bringing overall pollution rates down. In a sense, the need to purchase credits acts as a fine, encouraging companies to reduce their emissions.
- EU's Emission Trading System (ETS) established to meet Kyoto target (Worlds largest system). Covers over 10,000 installations in the energy and industrial sectors (50% CO<sub>2</sub> and 40% EU GHG emissions)

# CDM and JI = "Hot Air"?

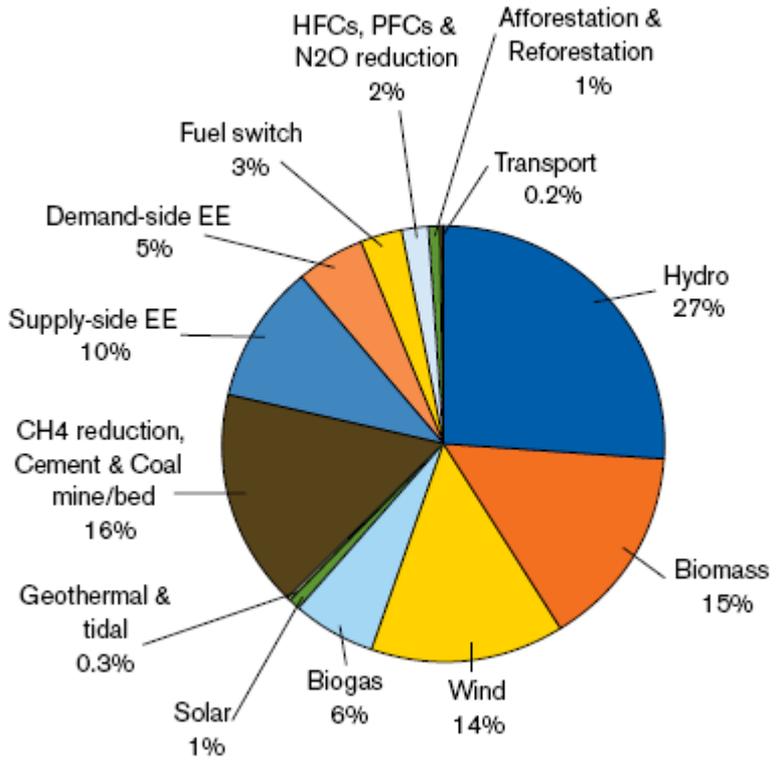
- EU, particularly Germany, historically opposed to less expensive investments in foreign countries to get credits towards meeting their own targets. e.g., Former Soviet Union earned credits for reductions that occurred regardless of Kyoto.
- Converse argument is cost effectiveness (more GHG reductions for less \$)

**FIGURE 1: PROJECTS IN THE CDM PIPELINE BY REGION**



Source: UNEP Risoe CDM/JI Pipeline Analysis and Database 1 October, 2008.

**FIGURE 2: PROJECTS IN THE CDM PIPELINE BY TYPE**



Note: EE = energy efficiency



CDM = (Rip-)Offsets?

# Problems with CDM

- Offset allows industrialized country to keep polluting – discouraging investment in innovation
- Difficult to determine "additionality" – many projects would happen anyway (3/4 of CDM projects were running by the time they were approved)
- Perverse incentives: Inefficient companies rewarded (get more credits than efficient companies); stalls progressive legislation (where requirements equal to CDM benefit)
- Conflicts of interest: Validators hired by developers
- Not pro-poor: Small % of CDM both reduce emissions and have high poverty alleviation benefits

# Carbon offsetting driven by the needs of the North could undermine development in the South

- High transaction costs for offsets make small projects that target individual communities impractical
- Some offset projects have not reduced CO2 production over the long term
- Difficulties in credit accounting have allowed some carbon credits to be sold multiple times
- Some projects that have been funded are not sustainable and do little to reduce poverty
- Offsetting discourages people from taking action to cut their own emissions by allowing them to transfer responsibility for reducing emissions onto others
- Funds are not targeted to the communities that are most vulnerable to climate change impacts
- <http://www.cheatneutral.com/>

# AdMit

illustrative alternative to carbon offsetting

- Pioneered by New Economics Foundation (nef) and the International Institute for Environment and Development (IIED) with a consortium of environmental and development organisations
- Aims:
  1. compensation payment, not a get-out clause that allows business as usual
  2. target those who need it most

A consortium of organisations piloting AdMit for 18 months, ending in January 2010

- AdMit must neither excuse nor encourage further polluting behaviour.
  - Must incorporate measures to influence buyer behaviour, such as by making certain emission reduction steps conditional for entry to the scheme.
- Top quality screening process
  - to ensure maximum delivery of adaptation and sustainable development benefits. It needs to draw on the expertise of world-leading development and environmental organisations based both in the South and the North.

COP 15



# General info

- Conference of Parties: Annual meeting to review implementation of the Convention, known also as "UN climate conference".
- COP adopts decisions and resolutions to implement the Convention effectively
- Copenhagen: Rotating system, this year in Western European group
- Attendance: Bali had about 11,000 in 2007 (3,500 government officials, 5,800 UN and other intergovernmental bodies, 1,500 media)

# Institutional context

- Bali: Agreed to step up international efforts to combat climate change and reach an agreed outcome in Copenhagen
  - Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP)
  - Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA)
- Copenhagen: Replaces first phase of Kyoto Protocol, which expires in 2012

# 3 Phases of agreement

1. Copenhagen 2009: determine international targets; establish developed country caps; set developing country responsibilities.
2. 2010-2020: build effective and cooperative institutions on finance and technology as a basis for establishing developing country caps.
3. post-2020: all countries form part of an international cap-and-trade system and adhere to technological agreements.

# Four key issues (UNFCCC)

1. Establish ambitious emission reduction targets that industrialised countries will commit to
2. Agree to clear, nationally appropriate, mitigation actions that developing countries could undertake
3. Define stable and predictable financing to help the developing world reduce emissions and adapt to climate change
4. Identify institutions that will allow technology and finance to be deployed in a way that treats the developing countries as equal partners in the decision making process

# Warning to wealthy nations (Nicholas Stern)

- Industrialized countries must commit to curb their own emission levels by about 80 percent below 1990 levels as of 2050 for major developing nations such as India, China and Brazil to join a concerted global effort
- Focus on key standards (steel, cement, aluminum, paper, etc.) rather than green protectionism

# Other important issues

- Baseline year for reduction targets; the duration of the second commitment period
- Greenhouse gas reduction targets for second commitment period and beyond.
- Whether to include greenhouse gases currently excluded from the Kyoto Protocol.
- Will new agreement include GHG emissions from the international maritime and aviation industries (both omitted from the Kyoto Protocol).
- Will CDM rules be tightened to ensure environmental integrity?
- Whether the CDM will include the as yet unproved Carbon Capture and Storage technology being promoted as a way of allowing coal-fired power stations to continue operating and new ones to be built.
- Will the agreement include measures to curb the rate of deforestation, especially of tropical rainforests in developing countries - otherwise known as Reducing Emissions from Deforestation and Degradation (REDD).