The International Climate Change Regime: Legal Status of the Atmosphere and the UNFCCC

International Climate Change and Energy Law
Spring semester 2012
Dr. Christina Voigt
1. The Legal Status of the Atmosphere

2. 1992 UNFCCC

3. 1997 Kyoto Protocol
   2. Cancun Agreements (2010)
   3. Durban platform and way forward (2011)

4. Global Carbon Market
The Atmosphere
Legal status:

- Common resource
- Shared resource
- Common heritage of mankind
- Common concern of humankind (Preamble UNFCCC)
Preamble UNFCCC, para 1:
…”change in the Earth’s climate and its adverse effects are a common concern of humankind,…”
International Climate Agreements

- UNFCCC 1992/1994
- Berlin Mandat 1995
- **Kyoto Protocol 1997/2005**
- Marrakech Accords 2001
- Bali Action Plan 2007
- Copenhagen Accord 2009
- Cancun Agreements 2010
- Durban Platform 2011
How to make international climate law?
Or this way?
UNFCCC

• Adopted in 1992 in NY
• In force since 21 March 1994
• Almost universal participation:
  – 194 States and the EU
• Framework Convention
• Legally binding international agreement
  – Ultimate objective, art. 2
  – Principles. Art. 3
  – Groups of States, art. 4 and Annexes I and II
  – Institutional Framework and Reporting
Institutional Structure

UNEP/WHO

IPCC

UNFCCC

COP, art. 7

SBSTA
Art. 9 UNFCCC

Secretariat

CMP, art. 13 KP

SBI
Art. 10

CDM EB
Art. 12 KP

JISC
Art. 6

Compliance Committee
art. 18 KP

Facilitative Branch

Enforcement Branch

Annex I: OECD + EiT
Annex II: OECD
Non-Annex: developing countries

Groups:
EU
Umbrella: USA, CAN, NO, AUS, NZ, RF, UK
G77 and China (subgroups: AOSIS and LDC, African Group)
EIG: Sveits, MX, South Korea
OPEC
BASIC: Brazil, India, China, South Africa
UNFCCC

Ultimate Objective, Art. 2:

"stabilizing of greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with the climate system."

• BUT:

"such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner."
“Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperature, widespread melting of snow and ice, and rising global mean sea levels.”

“Most of the observed increase in globally average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations. “

Discernible human influences now extend to other aspects of climate, including ocean warming, continental-average temperatures, temperature extremes and wind patterns.”
UNFCCC

• Ultimate Objective, Art. 2:
  
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  "such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner."
Potential climate changes impact

**Impacts on...**

**Health**
- Weather-related mortality
- Infectious diseases
- Air-quality respiratory illnesses

**Agriculture**
- Crop yields
- Irrigation demands

**Forest**
- Forest composition
- Geographic range of forest
- Forest health and productivity

**Water resources**
- Water supply
- Water quality
- Competition for water

**Coastal areas**
- Erosion of beaches
- Inundation of coastal lands
- Additional costs to protect coastal communities

**Species and natural areas**
- Loss of habitat and species
- Cryosphere: diminishing glaciers

Source: United States environmental protection agency (EPA).
## Projected impact of climate change

<table>
<thead>
<tr>
<th>Global temperature change (relative to pre-industrial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0°C</td>
</tr>
<tr>
<td><strong>Food</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td><strong>Water</strong></td>
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<tr>
<td><strong>Ecosystems</strong></td>
</tr>
<tr>
<td><strong>Extreme weather events</strong></td>
</tr>
<tr>
<td><strong>Risk of abrupt and major irreversible changes</strong></td>
</tr>
</tbody>
</table>

Source: Stern Review
Equilibrium global mean temperature increase above preindustrial

Temperature increase (°C) vs. GHG concentration stabilization level (ppm CO₂ eq)

- I
- II
- III
- IV
- V
- VI
Multi-model Averages and Assessed Ranges for Surface Warming

Global surface warming (°C)

Year

1900
2000
2100

B1
A1T
B2
A1B
A2
A1FI

Year 2000 Constant Concentrations
20th century
UNFCCC

• Ultimate Objective, Art. 2:
  "stabilizing of greenhouse gas concentrations at a level that would prevent dangerous anthropogenic interference with the climate system."

• BUT:
  "such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner."
Climate Change: Defining Options

- Reducing Emissions
- Expanding and Protecting Forests
- Life Style Changes

- Building Dams
- Flood Protection
- Erosion protection
- Irrigation Systems
UNFCCC

Principles:

• Precautionary Principle (3.3.)
• Sustainable Development (3.4.)
• Cost-Effectiveness (3.1 and 3.2)
• Inter-generational Equity (3.1.)
• Common but Different Responsibilities (3.1.)
UNFCCC

Commitments:

- Participants: all Parties, Annex I, Annex II, non-Annex Parties
- **All parties:** Art 4.1.:  
  - national inventories  
  - national and regional programmes to mitigate cc  
  - promote Sustainable Development  
  - promote conservation of sinks, adaptation, education etc.
- **Annex I Parties:** Art. 4.2.(a)  
  - develop **national policies and measures** on the mitigation of cc  
  - **Taking the lead!**  
    - reporting requirements (Art. 4.2.(b))
- **Annex II Parties:**  
  - provide financial resources to developing countries (Art.4.3)  
  - assist developing countries in meeting adaptation costs (Art. 4.4)  
  - technology transfer (Art. 4.5)  
  - allow degree of flexibility (Art 4.6)
UNFCCC

BUT: stronger commitments needed!

Art. 4.7: ”The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties.”

.... Art. 17: Protocol necessary (more specific obligations)
Figure 3: Total Greenhouse Gas Emissions by Region

- Developed Countries
- Developing Countries

1 Gt = 10^9 metric tons = 1 billion metric tons = 1 petagram (Pg)
The International Climate Change Regime: The Kyoto Protocol

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Quiz

1. Which legally binding international agreements exists in the field of climate change?
2. Where do we find the ultimate objective of the UNFCCC?
3. What are ”Annex-I countries”? 
4. What are ”non-Annex countries”? 
5. What is the COP?
Kyoto Protocol

- Entered into force 16.02.2005, Members: 192 States and the EU
- Sets quantified emissions limitation and reduction obligations (QELRO) for Annex-I Parties (37 States)
- Art. 3.1 KP: overall emissions from Annex I Parties shall be reduced to at least 5% below 1990 levels within 2008-2012 (First Commitment Period)
- Assigned Amounts (Annex B)
- Art. 3.1 KP: Annex I Parties shall not exceed their Assigned Amounts)
## Kyoto Protocol

Countries included in Annex B to the Kyoto Protocol and their emissions targets

<table>
<thead>
<tr>
<th>Country</th>
<th>Target (1990-2008/2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-15, Bulgaria, Czech Republic, Estonia, Latvia, Liechtenstein,</td>
<td>-8%</td>
</tr>
<tr>
<td>Lithuania, Monaco, Romania, Slovakia, Slovenia, Switzerland</td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>-7%</td>
</tr>
<tr>
<td>Canada, Hungary, Japan, Poland</td>
<td>-6%</td>
</tr>
<tr>
<td>Croatia</td>
<td>-5%</td>
</tr>
<tr>
<td>New Zealand, Russian Federation, Ukraine</td>
<td>0</td>
</tr>
<tr>
<td>Norway</td>
<td>+1%</td>
</tr>
<tr>
<td>Australia</td>
<td>+8%</td>
</tr>
<tr>
<td>Iceland</td>
<td>+10%</td>
</tr>
</tbody>
</table>
Kyoto Protocol

• Rules focus on:
  - **Commitments**: legally binding individual emissions targets and general commitments
  - **Implementation**: domestic measures and three novel implementing mechanisms (flexibility mechanisms)
  - **Minimizing impacts** on developing countries
  - **Accounting, Reporting and Review**
  - **Compliance**: Compliance Committee to assess and deal with problems of non-compliance
Flexibility Mechanisms

- Geographic location of abatement measures is climatically irrelevant
- Aim: global cost-effectiveness and reduction of compliance costs
- Assigned amounts (AU) can be divided up into units (Assigned Amount Units – AAUs) allowing Annex I Parties (37 + EU) to participate in the flexibility mechanisms
- Units create a tradable currency (1 unit = 1 t CO2 eqv.)
Flexibility Mechanisms

4 Types of Mechanisms:

- **Clean Development Mechanism (CDM)** Art. 12
  - Resulting in Certified Emissions Reductions – CERs
  - Non-Annex I/Annex I Projects

- **Joint Implementation** (Art. 6)
  - Resulting in Emission Reduction Units – ERUs
  - Annex I/Annex I Projects

- **International Emissions Trading**, Art. 17 (allows for trade with AAUs, ERUs, CERs)

- **Joint Fulfillment of Commitment** (Art. 4)
Why climate negotiations?

• KP: first commitment period expires 2012 (not the Protocol!)
• Developing countries demand developed countries to continue with the KP (But: USA?)
• BUT: (some) Developing countries are becoming major emitters
• (Most) Developed countries insist on a "comprehensive" agreement, including all major emitters
Why a legally binding agreement?

• Discussion of pros and cons
Copenhagen Accord (2009)

“...one of the most successful failures in the history of multilateral diplomacy”
Copenhagen Accord
Copenhagen Accord

- 2 degree celsius target
- Deadline for submitting reduction targets and actions for all countries! (31.1.2010) ("bottom-up": pledge and review)
- Monitoring, Reporting and Verification (MRV)
- Finance (fast-start and long-term)
- Copenhagen Green Climate Fund
- Technology mechanism
- Redd+ mechanism
- Adaptation
- Carbon marked

But: CA was not adopted as a COP decision
Cancun Agreements

- Shared Vision: 2 degrees centigrade (review in 2013)

- Pledge and review: tables with targets (developed countries) and actions (developing countries)

- MRV: developed countries (international incl MRV of finance) for developing countries (national MRV, except for supported NAMAs – international MRV)

- REDD+ mechanism

- Establishment of Green Climate Fund Creation of new Climate Adaptation Framework and an Adaptation Committee

- Technology mechanism (consist of Technology Executive Commitee and the Climate Technology Center and Network (CTCN)

- Legal form? "legal options with the aim to complete the agreed outcome” (legally binding agreement to complement the KP, inclusive legally binding agreement for all countries, or cooperation through COP decisions rather than a new treaty or…?"
Cancun COP 16/CMP6

...and the redefinition of "consensus"
Durban (COP17/CMP7)

• Kyoto Protocol:
  – Parties formally recognized the second commitment period but delayed the decision on its length (5 or 8 years) to CMP8 in Qatar in 2012
  – Decision on the new greenhouse gas emission reduction targets delayed to CMP8
  – Parties were invited to submit information on their quantified emission reduction and limitation objectives (QELROs) for the second commitment period under the Kyoto Protocol by 1 May 2012.
Durban (COP17/CMP7)

- In detail, the Durban package included, amongst others:
  - Establishment of a new body to negotiate a global agreement (Ad Hoc Working Group on the Durban Platform for Enhanced Action) by 2015 to come into effect and be implemented from 2020;
  - Extension of the work of the AWG-LCA for one year;
  - Launch of a workplan on enhancing mitigation ambition with a view to ensuring the highest possible mitigation efforts by all parties (workshop to be held at the first negotiating session in 2012);
  - Identification of a new market-based mechanism to be defined under the Convention;
  - Launch of the Green Climate Fund;
  - Agreement on the second commitment period of the Kyoto Protocol;
  - Agreement on the LULUCF rules and on the changes to the existing flexible mechanisms.
Durban Platform

• The form of a new agreement was not decided
• Parties opted for three options - ‘protocol, legal instrument or agreed outcome with legal force’
Legal Form

• What is a “Protocol, another legal instrument or an agreed outcome with legal force under the Convention”?

• “Deal” between the EU (legally binding agreement/commitment) and India (legally binding outcome)

• “outcome with legal force”: not a legal instrument under the UNFCCC: amendment, annex, protocol

• Legal force = legally binding or something different? Outcome that is not legally binding? COP decision?
The Carbon Market

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Quiz

1. What does the KP contain and the UNFCCC doesn’t?
2. Which countries have obligations under the KP?
3. What are the main issues under negotiation?
4. Which flexibility mechanisms are set up by the KP?
Flexibility Mechanisms

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Joint Fulfillment of Commitment (Art. 4)

EU Burden Sharing Agreement
(Decision of EU Environment Council 16th June 1998)
EU 15 target: - 8%

Luxembourg - 28.0%
Austria - 13.0%
Belgium - 7.5%
Netherlands - 6.0%
Denmark - 21.0%
Italy - 6.5%
United Kingdom - 12.5%
Germany - 21.0%

Spain + 15.0%
Greece + 25.0%
Portugal + 27.0%
Ireland + 13.0%
Sweden + 4.0%
France 0%
Finland 0%
Kyoto Protocol: Flexibility Mechanisms

Eligibility Requirements:

- Annex I Party
- Ratification of KP
- Compliance
- Methodological and reporting infrastructure in place
- Establishment of designated national entities and registries
- Inventories for accounting the tradable units
Supplementarity

- Art. 17, Art. 12.3(b), Art. 6.1 (d) Kyoto Protocol
- Marrakesh Accords: (Decision 15/CP.7)

“The Conference of the Parties: ...

**Affirming** that the use of the mechanisms shall be supplemental to domestic action and that domestic action shall **thus constitute a significant element** of the effort made by each Party included in Annex I to meet its quantified emission limitation and reduction commitments under Article 3, paragraph 1.”

(15/CP.7, preamble)
The Global Carbon Market

IET

€10
NOK 100

20 mil credits
= 2 Mrd NOK

20 mil CERs
0.8-1
Mrd NOK

20 mil ERUs
1.6 Mrd NOK

International
Emissions Trading
Art. 17,
3.10, 3.11 KP

Clean Development
Mechanism
Art. 12 KP

CERs
€4-5
NOK 40-50

Joint Implementation
Art. 6 KP

USA:
Federal?
WCI
RGGI (2012)

EU ETS
(2005)

NZ ETS
2008/2009

Others?
Japan
South Korea
China

China
Non-Annex I

China
Annex I

L
(Lithuania)

ERUs
€8
NOK 80

The Global Carbon Market

EU ETS
(2005)

International
Emissions Trading
Art. 17,
3.10, 3.11 KP

Clean Development
Mechanism
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Mechanism
Art. 12 KP

CERs
€4-5
NOK 40-50

Joint Implementation
Art. 6 KP

USA:
Federal?
WCI
RGGI (2012)
Zooming in: CDM

- Art. 12 Kyoto Protocol
- Offset mechanism
- Successfull projects earn tradeable certified emission reduction credits (CERs), each equivalent to one tonne of CO2, which
  - can be counted toward meeting Kyoto targets (compliance) or
  - can be traded on the Carbon Market (speculation, investment)
- Purposes (Art. 12 KP)
  1. Reduction of climate change mitigation costs in Annex I-States
  2. Assisting developing countries in achieving sustainable development
  3. Contributing to the ultimate objective of the UNFCCC
The Size of the CDM - Facts and Numbers

• 3838 registered projects (17.02.2012) in 70 developing countries

• Issued CERs: 565 mil. CERs (17.02.2012)

• Expected: During the time period 2008-2012: 2,700,000,000 CERs (2.7 billion t CO2 eqv.)

• Price: 1 secondary CER = 4,50€ (Point Carbon 16.02.2012)
Registered project activities by host party. Total: 3,841

- China (47.25%)
- India (20.33%)
- Brazil (5.23%)
- Mexico (3.54%)
- Malaysia (2.73%)
- Viet Nam (2.50%)
- Indonesia (1.95%)
- Others (16.45%)

http://cdm.unfccc.int (c) 16.02.2012 14:57
Expected average annual CERs from registered projects by host party. Total: 588,785,854

- China (64.08%)
- India (11.10%)
- Brazil (4.20%)
- Republic of Korea (3.44%)
- Mexico (1.95%)
- Indonesia (1.41%)
- Uzbekistan (1.11%)
- Malaysia (1.04%)
- Viet Nam (1.01%)
- Others (10.66%)
The Importance of the CDM

• ‘Bridge-Builder’ between:
  • Private actors and Governments/States
  • Developing countries and developed countries
  • Diverse interests: economic, environmental, social actors

• Unique and innovative use of market mechanisms in Public International Law

• Has in very short time mobilized and channelled significant investment flows into the developing world

• Created a market in a regulatory commodity (’Put a prize on carbon’) 

• Has become an important element of the post-Kyoto discussions

• Is one of very few elements in international climate negotiations which receives support from many (not all) sides

• BUT...
Challenges

- Non-Additionality of Projects (40-70%), Art. 12.5(c) KP
- Carbon Leakage, Art. 12.5(b) KP
- Sustainable Development? (Art. 12.2 KP)
- Negative Impacts on: biodiversity, local communities, water quality (Marrakesh Accords)
- Negative Policy Incentives (national and international)
- Sinking Credibility:
  - ‘Cash-Machine’ for brokers and intermediaries
  - Rich (polluting) countries buying their way out of responsibility
  - Objective: Environmental Integrity or Economic Efficiency or Both?

Video
The Problem of Additionality

• What is Additionality?: Emission reductions that would not have happened without the CDM project; no business as usual

• Non-additionality results in an increase in global GHG emissions

• If the emission reductions from the project would occur anyhow, then the CERs allow (entities in) industrialized countries to increase their emissions over their limit

• Additionality of a significant number of projects seems unlikely or questionable.

• Source: Delphi survey (Öko-Institut, 2007):
  • “Many CDM projects would also be implemented without registration under the CDM” (71% of the participants)
  • “In many cases, carbon revenues are the icing on the cake, but are not decisive for the investment decision” (86%)
Socio-economic and environmental benefits

“Project participants have submitted to the DOE documentation on the analysis of the socio-economic and environmental impacts, including impacts on biodiversity and natural ecosystems, and impacts outside the project boundary of the proposed afforestation or reforestation project activity under the CDM. If any negative impact is considered significant by the project participants or the host Party, project participants have to undertake a socio-economic impact assessment and/or an environmental impact assessment in accordance with the procedures required by the host Party. Project participants shall submit a statement that confirms that they have undertaken such an assessment in accordance with the procedures required by the host Party and include a description of the planned monitoring and remedial measures to address them.”

5/CMP.1, para 12 (c) (Marrakesh Accords)
Sustainable Development

“40. The designated operational entity shall:

(a) Prior to the submission of the validation report to the Executive Board, have received from the project participants written approval of voluntary participation from the designated national authority of each Party involved, including confirmation by the host Party that the project activity assists it in achieving sustainable development;”

3/CMP.1, para 40 (a) (Marrakesh Accords)
### Competing Interests: Who wants What and Why?

<table>
<thead>
<tr>
<th></th>
<th>As much investment as possible, many projects, many CERs</th>
<th>Competitive market (technology and financial flows, prestige)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Host countries</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project developer</td>
<td>As many CERs as possible, short lead times, easier processes</td>
<td>Maximize revenue</td>
</tr>
<tr>
<td>Buyers of CERs</td>
<td>Cheap CERs</td>
<td>Maximise profits</td>
</tr>
<tr>
<td>(Banks, Investment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Houses, private</td>
<td></td>
<td></td>
</tr>
<tr>
<td>entities)</td>
<td></td>
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</tr>
<tr>
<td>Annex I States</td>
<td>Cheap CERs</td>
<td>Reduce compliance costs</td>
</tr>
</tbody>
</table>
Project developer/investor

Host Government

DOE

Executive Board

DOE

Executive Board
CCS in the CDM (Durban: Decision-/CMP.7)

- Benefits:
  - Substantial potential to remove CO2 emissions
  - Transfer of CCS technology form industrialized to developing countries
  - Ensure (sustainable?) development and gradual withdrawal from fossil energy
  - Stringent and robust criteria for monitoring and selection of storage sites (Appendix B to Decision – /CMP.7)
  - Risk and liability
  - Environmental and socio-economic impact assessment based on BAT
CCS in the CDM (Durban: Decision-/CMP.7)

— ”Issues”

• Inmature technology
• Divert investment away from renewable energy
• Will it trigger even more investments in South Atlantic oil and gas exploitation?
• Will it make otherwise non-economic high-\(\text{CO}_2\)-content fossil gas discoveries economic and thus increase the share of fossil fuels in the global energy mix?
• Will it increase the amount of biomass power generation in Brazil or maybe intensify new-built gas power in the Middle East region?
• How do we avoid speculative projects, like those we have experienced in India and China with respect to HFC-23?
Flexibility Mechanisms

Catching the Sun, CDM PROJECT: 0079 Kuyasa low-cost urban housing energy upgrade, Khayelitsha (Cape Town; South Africa)
CDM PROJECT: 1261 Guohua Inner Mongolia Huitengliang Wind Farm Project
Bagasse based Co-generation Power Project at Khatauli, India
The Global Carbon Market: Pro and Contra Arguments

Pros:
- More emission reductions for the same money (cost-effectiveness)
- Transfer of technology and financial support to developing countries
- Emission reductions in developing countries
- Income, SD, capacity building

Cons:
- Right way to go?, Artificial global market for pollution rights?
  - Are developed countries ‘taking the lead’?
  - Hampers development of new technology in developed countries
- Uncertain climate effect
- Abstraction
- Expert field: missing public debate, democratic deficit…. 
Something New Under the Sun?

• International Climate Law – new and complex field of PIL
• Limitations on States’ sovereign rights
• New, innovative market mechanisms on a global scale
• Unprecedented experiment!
• Cost-effectiveness, differentiated commitments, technology transfer, financial assistance
• How to balance equity and efficiency?
• Is it the right way to go?