



Climate Commitments and Conundrums: Introduction to the Kyoto Protocol

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What Will Become Of The Kyoto Climate Treaty?

by RICHARD HARRIS



AFP/Getty Images

Key provisions of the Kyoto Protocol expire in December of 2012, and experts say there's no real global framework in place to replace the treaty that was supposed to be the first step toward ambitious actions on climate change. Above, a coal-fired power plant in eastern China. China is now the leading carbon dioxide emitter in the world.

November 29, 2011

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Canada pulls out of Kyoto Protocol

[CBC News](#)

Posted: Dec 12, 2011 4:00 PM ET

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So how did we get here?

- What is the Kyoto Protocol?
 - Technically, the Kyoto Protocol is a supplemental agreement within the U.N. Framework Convention on Climate Change
 - Currently the most significant international climate change convention that imposes binding emission limits on the nations who ratified it
 - The Kyoto Protocol established important legal mechanisms to help reduce emissions over time



Why Seek the Kyoto Protocol?

- The Kyoto Protocol addresses the shortfalls of the U.N. Framework Convention on Climate Change
 - UNFCCC entered into force in 1994 with 194 signatories, including the United States
 - Established general goals, including a reduction of current greenhouse gas emissions to 1990 levels to help reduce the risk of disruptive climate change
 - Tools: common but differentiated responsibilities, precautionary principle



UNFCCC's Shortfalls

- Commitments:
 - All parties:
 - provide emission inventories (including sinks),
 - implement national plans to mitigate climate change, and
 - assist in transfer of technologies
 - Annex I parties:
 - adopt national policies to mitigate climate change “with the aim of” returning to 1990 emission levels;
 - additional funds to developing countries
- Problems:
 - No enforcement
 - 1990 levels not low enough by scientific consensus



Road to Kyoto

- Berlin Mandate, 1995
 - First UNFCCC Conference of Parties (COP)
 - Concluded UNFCCC Articles 4.2(a) and (b) were inadequate
 - Agreed “to begin a process to enable [COP] to take appropriate action for the period beyond 2000” by “strengthening commitments”
 - Essentially, agreed to agree
- Pre-Kyoto Political Maneuvering in U.S.
 - Senate Resolution 98 (1997)
 - President Clinton’s “Rio+5” announcement – “educate the American Public”
 - U.S. negotiation position: 1990 levels by 2008-2012 with future cuts by 2017



Outcome in Kyoto

- Agreement adopted, after much drama and brinksmanship, on Dec. 11, 1997. Ratified in February 2005 after the Marrakesh Accords and Russian approval (Article 25)
- Core concepts:
 - Targets and timetables for binding emission reduction commitments
 - Quantified emissions limitation and reduction objectives (QLROs) for Annex I parties (Annex B to Kyoto)
 - Flexibility mechanisms: joint implementation, emissions trading, Clean Development Mechanism



Kyoto – Emission Limits

- Binding emission limits for developed parties for period 2008-2012
 - Established in Article 3, and described in Annex B
 - Each Party has full discretion on national strategy to reach goal
 - Commitments vary for each party
 - Europe – 8 percent reductions below 1990 levels
 - U.S. – 7 percent
 - Must meet commitment on annual average during commitment period



Kyoto – Emission Limits (cont'd)

- “Economies in Transition”
 - May use a base period other than 1990
 - “Hot Air” Problem
- Basket Approach to greenhouse gases (GHGs)
 - Six GHGs with CO₂ equivalent metric
 - For HFCs, PFCs and SF₆, can use 1995 as base year



Kyoto – Emissions Limits (cont'd)

- The European Union Bubble
 - Article 4 – Annex I parties can fulfill commitments jointly
 - EU members agreed to collectively meet obligation
 - Burden sharing agreement among themselves
- Land Use and Forestry
 - Controversial – hard to quantify, not permanent, discourage clean energy investment
 - Kyoto (and Marrakesh) limited use: limited to afforestation, reforestation and deforestation since 1990
 - Expanded to agricultural practices in COP-6 (Bonn), but capped by complex formula
 - Parties can add Removal Units (RMUs) to their Allocated Amount or bank them.



Kyoto – Flexibility Mechanisms

- The Kyoto Protocol provides three flexible mechanisms that Annex I parties can use to meet their emission reduction obligations
 - International Emissions Trading
 - Joint Implementation
 - Clean Development Mechanism
- Fundamental question – auction vs. grandfathering?



Kyoto – International Emissions Trading

- Each Party receives an “Assigned Amount,” which can be divided into an “Assigned Amount Unit” (AAU)
 - i.e., right to emit one ton of GHG (CO₂e)
- Under Article 17, the Parties can trade AAUs with each other
 - Similar to Acid Rain Trading Program in U.S.
- Pitfalls
 - Must be “supplemental to domestic actions”
 - Risk of overselling (bad faith rent seeking)



Kyoto – International Emissions Trading (cont'd)

- To address these concerns, Article 17 sets out “speed bumps” to unlimited international emissions trading
 - “Commitment period reserve” of 90%
 - Equal to the lower of either 90% of the country’s Assigned Amount, or five times its most recent annual emissions inventory
 - Party cannot enter into trade if it would result in its holdings of AAUs or other Kyoto credits dropping below the reserve level
 - Which countries are most affected by this limit?



Kyoto – Joint Implementation

- Joint implementation also focuses on emissions trading, but from projects
- Straightforward –
 - A sponsor Party enters into transaction with a host Party to undertake project in the host Party's country, and
 - the sponsor party then transfers a portion of its Assigned Amount to the host Party as Emission Reduction Units
 - the host Party then simply adds the ERUs to its Assigned Amount



Kyoto – Joint Implementation

- Limits on Joint Implementation
 - Only among Annex I parties (although “legal entities” can be authorized by Parties to participate)
 - “Additionality”
 - Built-in incentive – why would host Party hurt itself with ineffective project?
 - Parties must meet basic Article 5 and 7 requirements – national registry for credits, submit annual emissions inventory, national system to calculate emissions
 - Two –track system: Track 1 with no external review, or Track 2 with approval from Joint Implementation Supervisory Committee



Kyoto – Clean Development Mechanism

- Clean Development Mechanism (CDM) – allows Annex I Parties to benefit from emission reductions projects in non-Annex I countries
 - CDM has become the primary mechanism to involve developing countries
 - Allow participation by private parties
 - Significant concern – incentives for non-Annex I countries?



Kyoto – CDM Basic Requirements

- Under Article 12, a CDM project must be:
 - “additional”
 - voluntary
 - Approved by each Kyoto Party involved
- More generally, CDM projects should help non-Annex I parties to “achieve sustainable development”
- A share of proceeds must go to CDM for expenses and to provide financial assistance for “particularly vulnerable” developing country parties



Kyoto – CDM Project Cycle

- Heart of CDM: the project approval cycle
- All CDM projects must receive third-party verification
 - “Designated Operational Entities” – can be private company
 - Can use standardized emission baseline inventories
- Project Design Document -- approved by DOE, then by CDM Executive Board
- Then must monitor and retain second (different) DOE to verify reductions. All Certified Emission Reductions (CERs) awarded on post-hoc basis.



Kyoto – CDM for Non-Standard Projects

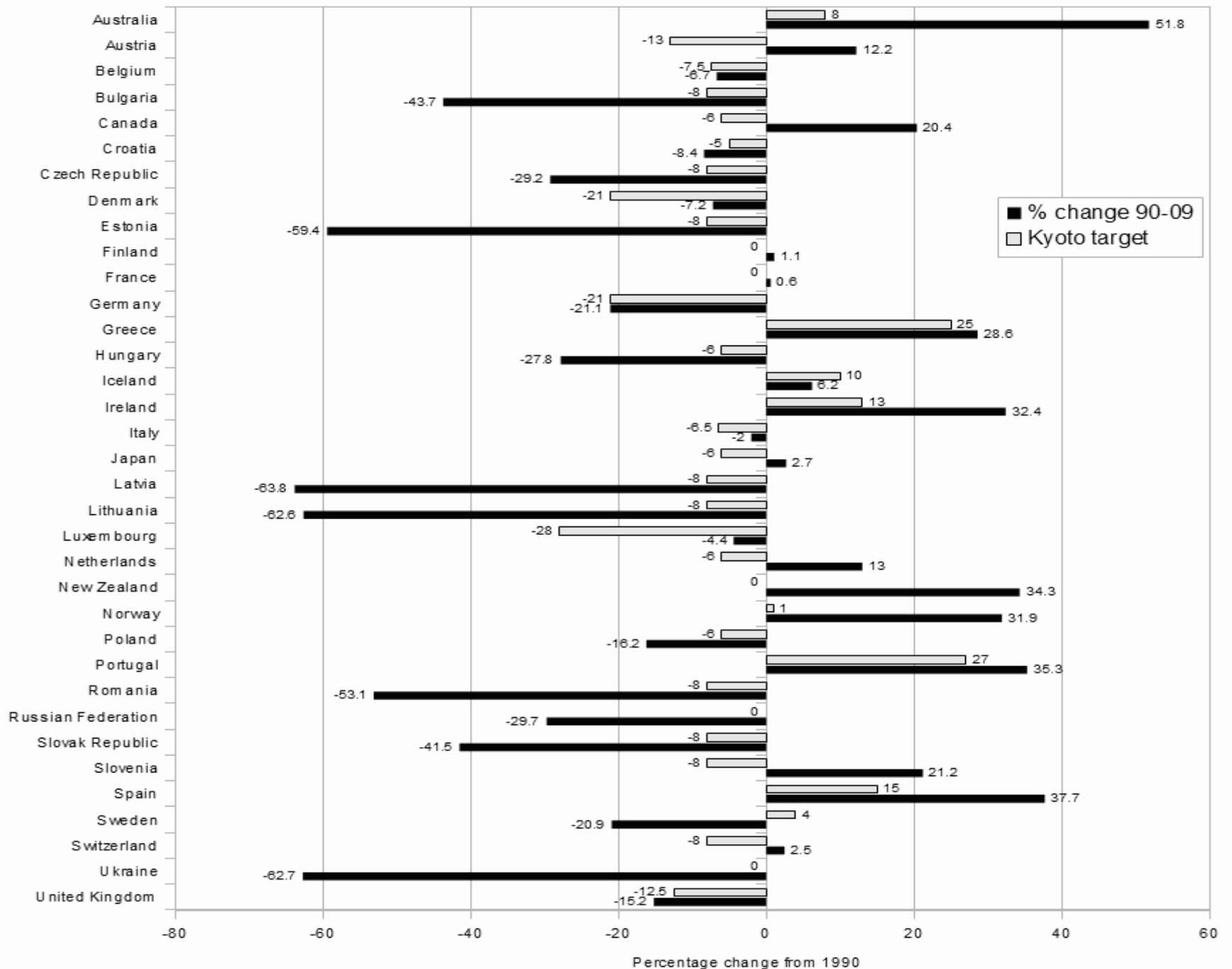
- Small-scale projects
 - E.g., renewable energy projects
 - Streamlined approval process
- Land use and forestry
 - Only for afforestation and reforestation
 - Time limits – 30 years (or 20-year credits up to 60 years)
 - tCERs (expire at end of commitment period) or ICERs (do not expire, but must replace them if loss occurs)



Kyoto - Compliance

- Transparency and disclosure mechanisms
- Non-compliance
 - Facilitative Branch of Compliance Committee
 - Enforcement Branch
 - Quasi-judicial
 - Can declare a Party ineligible for flexible mechanisms, adjust emissions inventories, and move credits to next commitment period with 30 percent interest penalty

Carbon dioxide emissions from fuel combustion and Kyoto Protocol targets





Questions?

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