CICERO Report 2001: 03

An analysis of the Bonn agreement

Background information for evaluating business implications

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August 2001

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Tittel: An analysis of the Bonn agreement: Background information for evaluating business implications

Forfatter(e): Asbjørn Torvanger
CICERO Report 2001: 03
16 sider

Finansieringskilde: World Business Council for Sustainable Development
Prosjekt: An analysis of the Bonn agreement
Prosjektleder: Asbjørn Torvanger
Kvalitetsansvarlig: Knut Alfsen
Nøkkelord: Kyotoprotokollen, klimaforhandlinger, Kyoto-mekanismene

Samandrag: Denne rapporten er laga på oppdrag av World Business Council for Sustainable Development, og er skrive i august 2001. Føremålet er å presentere og analysere den nyaste utviklinga i klimaforhandlingane, spesielt frå del to av den sjette partskonferansen til Klimakonvensjonen i Bonn i juli 2001. Vidare skal rapporten gje bakgrunnsinformasjon for å evaluere kva "Bonn-avtalen" kan ha å seie for næringslivet. Rapporten er bygd opp som ei samling med plansjar med støttetekst som forklarar bakgrunnen og innhaldet i kvar plansje.

Språk: Engelsk

Title: An analysis of the Bonn agreement: Background information for evaluating business implications

Author(s): Asbjørn Torvanger
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16 pages

Financed by: World Business Council for Sustainable Development
Project: An analysis of the Bonn agreement
Project manager: Asbjørn Torvanger
Quality manager: Knut Alfsen
Keywords: Kyoto Protocol, climate negotiations, Kyoto mechanisms

Abstract: This report has been commissioned by the World Business Council for Sustainable Development and written in August 2001. The aim of the report is to present and analyze the newest developments in the climate negotiations, particularly from part two of the sixth Conference of the Parties to the Climate Convention in Bonn in July 2001, and to provide background information to evaluate what the "Bonn agreement" means for business. The report is organized as a collection of slides with supporting text explaining the background and contents of each slide.

Language of report: English

Rapporten kan bestilles fra:
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Acknowledgements

I thank my colleagues Knut Alfsen and Cathrine Hagem for valuable comments, and Lynn Nygaard for excellent language and editing assistance.

1 Introduction

The aim of this report is to present the newest developments in the climate negotiations, particularly from part two of the sixth Conference of the Parties to the Climate Convention (COP6-2) in Bonn in July 2001, and to evaluate what the "Bonn agreement" means for business.[1]

The Kyoto Protocol was adopted in December 1997, but has not yet entered into force since not enough countries have ratified the Protocol. At the fourth Conference of the Parties in Buenos Aires in November 1998 the "Buenos Aires Plan of Action" was adopted, with the aim to develop a final regulatory framework for the Kyoto Protocol over the next two years. However, the sixth Conference of the Parties to the Climate Convention (COP6-1) in The Hague in November 2000 failed to reach consensus on the remaining issues. After the American rejection of the Kyoto Protocol in March 2001, the future for the Protocol seemed bleaker than ever before. Despite that many observers had low expectations for COP6-2 in Bonn in July 2001, a number of parties, particularly the EU, showed enough flexibility to make an accord, the so-called Bonn agreement, possible.[2] After heavy negotiations during the last four days (and nights) of the conference, the agreement was adopted on 23 July.

Still there is no guarantee that the Kyoto Protocol will enter into force. For it to do so, industrialized countries representing at least 55% of carbon dioxide emissions among this group of countries in 1990 would have to ratify the Protocol. Without American ratification this means that most other industrialized countries have to ratify. Due to their large share of 1990 emissions, Russia and Japan are two pivotal countries in this context. The Bonn negotiations showed that Japan, Russia, Australia, and Canada might be the countries that are most reluctant to ratify. Much depends on the outcome of the next negotiation session at COP7 in Marrakech, Morocco, 29 October until 9 November 2001, where the plan is to adopt the final text required to make the Kyoto Protocol ratifiable. Some parties to the Protocol have expectations that it might enter into force by the new global summit "Rio plus ten" in South Africa in September 2002. This might be possible, but it is more likely that the Kyoto Protocol could enter into force by the end of 2002.

In the next section of this report, a short analysis of the negotiation positions of major parties with regard to four important topics is presented, both in a static and dynamic perspective. Then the main contents of the Bonn agreement are presented, divided into the four main areas of the Kyoto mechanisms (i.e., Emissions Trading (ET), Joint Implementation (JI), and the Clean Development Mechanism (CDM)), sinks (i.e. land-use, land-use change and forestry (LULUCF)), compliance under the Kyoto Protocol, and funding of climate measures in developing countries. Some emphasis is put on the Kyoto mechanisms since they are assumed to be of particular interest to business. The next section discusses the prospects for the Kyoto Protocol, and is followed by an analysis of the present and future position of the US. Finally, the last section explores the challenges of harmonizing different national and regional emissions trading initiatives, and trading under the Kyoto Protocol, particularly with respect to trading between the US and countries within "the Kyoto block."

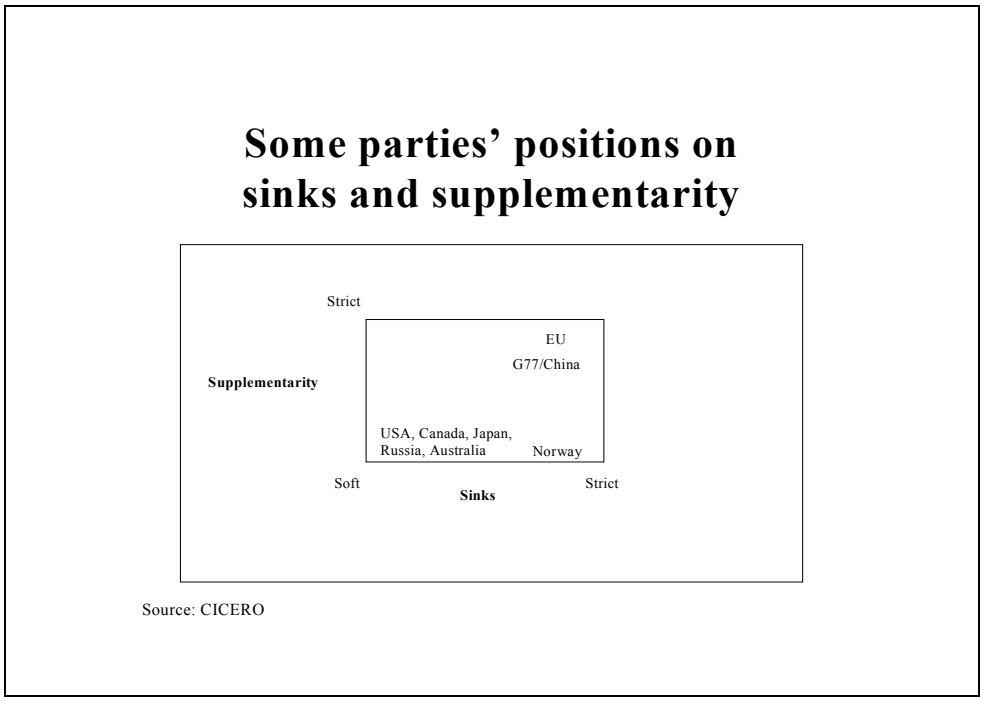
[1] The official name of the Climate Convention is United Nations Framework Convention on Climate Change (UNFCCC).

[2] The Bonn agreement is presented in the document UNFCCC 2001.

2 Negotiation positions of major parties

One of the challenges of the negotiations under the Buenos Aires plan of action has been to bridge the parties' different views and positions on important components of the Kyoto Protocol. **Slide 1** shows some major parties' positions on sinks and supplementarity until early 2000 or July 2001 (COP6-2) (compare with the change in positions depicted in Slide 3). Along the horizontal axis, some parties favored soft rules on sinks (LULUCF) that would make it possible for many countries to account for sizeable volumes of carbon fixation in living or dead biomass stock as part of fulfilling their Kyoto target. Other parties, such as the EU, favored stricter rules, arguing that the science in the area is lacking at present, that there are many technical difficulties, and that soft rules would undermine the Kyoto targets and incentives to de-carbonize energy systems. Along the vertical axis, the parties' position on the supplementarity clause of the Kyoto Protocol is shown, where the idea is to focus the parties' attention on domestic actions to mitigate emissions.[3] The so-called Umbrella group (Australia, Canada, Iceland, Japan, New Zealand, Norway, Russia, Ukraine, and the USA) favored soft rules on supplementarity, which would imply no quantified ceiling on the use of the Kyoto mechanisms, whereas the EU and developing countries (G77/China) favored stricter rules. At the Buenos Aires conference, the EU proposed that "a concrete ceiling on the use of the flexibility mechanisms has to be defined in quantitative and qualitative terms…." Before COP5 in Bonn in 1999, the EU elaborated this proposal into a formula-based approach to define an absolute ceiling on using the Kyoto mechanisms, roughly equivalent to limiting purchase and sale of quotas to 50% of the required emissions reductions to meet the national Kyoto targets.

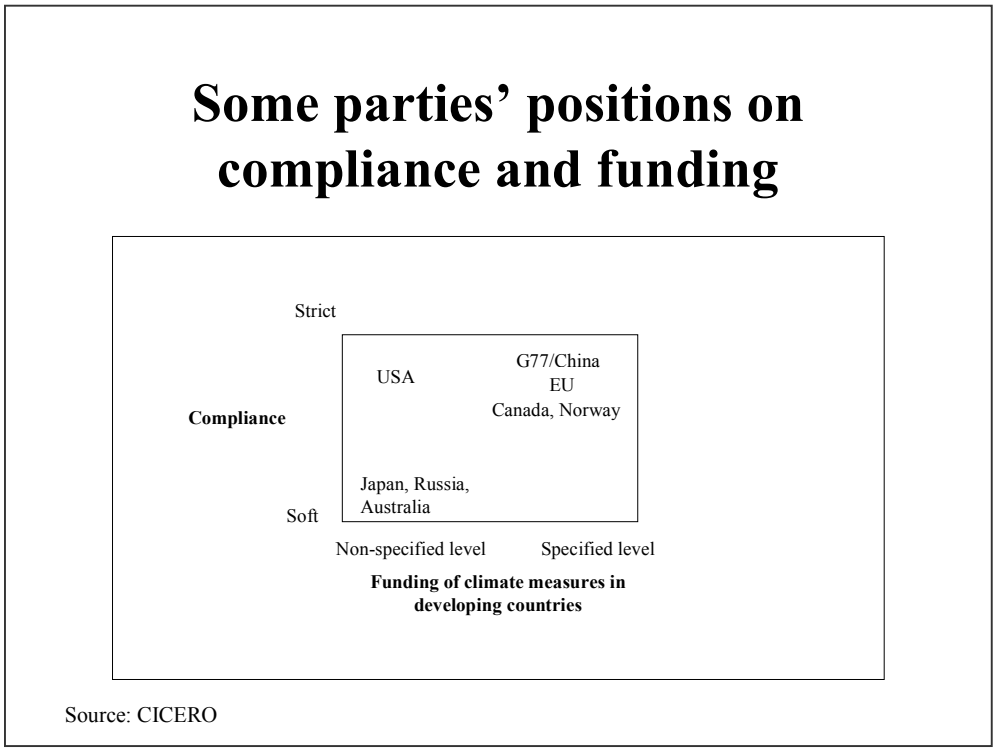
Slide 1. Some parties' position on sinks and supplementarity



[3] Article 17 on emissions trading states that "Any such trading shall be supplemental to domestic actions …."

Slide 2 presents a similar position map as Slide 1, but now with funding of climate measures in developing countries along the horizontal axis and compliance along the vertical axis. Japan, Russia and Australia have resisted a specified level for industrialized countries to transfer to the three funds under the Climate Convention and the Kyoto Protocol to support developing countries in coping with the challenges of climate change. In earlier proposals by the President of COP6, the Dutch minister of environment Jan Pronk, a figure of one billion USD annually was mentioned. On the other hand, developing countries, the EU and some other countries favored a specified funding level. In terms of compliance to the Kyoto Protocol, countries like the USA, the EU and Canada argued for a strict regime as an important underpinning of the environmental efficiency of the Kyoto Protocol and a solid basis for the Kyoto mechanisms. This position has been opposed by Japan in particular, but also by Russia and Australia, since these countries have argued for a softer compliance regime. Japan managed to have "legal" removed from the wording "To adopt, at its sixth session, a legal instrument on procedures and mechanisms relating to compliance as an integral part of the Kyoto Protocol.", and to postpone the final decision on compliance to the first meeting of the parties to the Kyoto Protocol (MOP), which can first take place after the Protocol has entered into force.[4]

Slide 2. Some parties' positions on compliance and funding

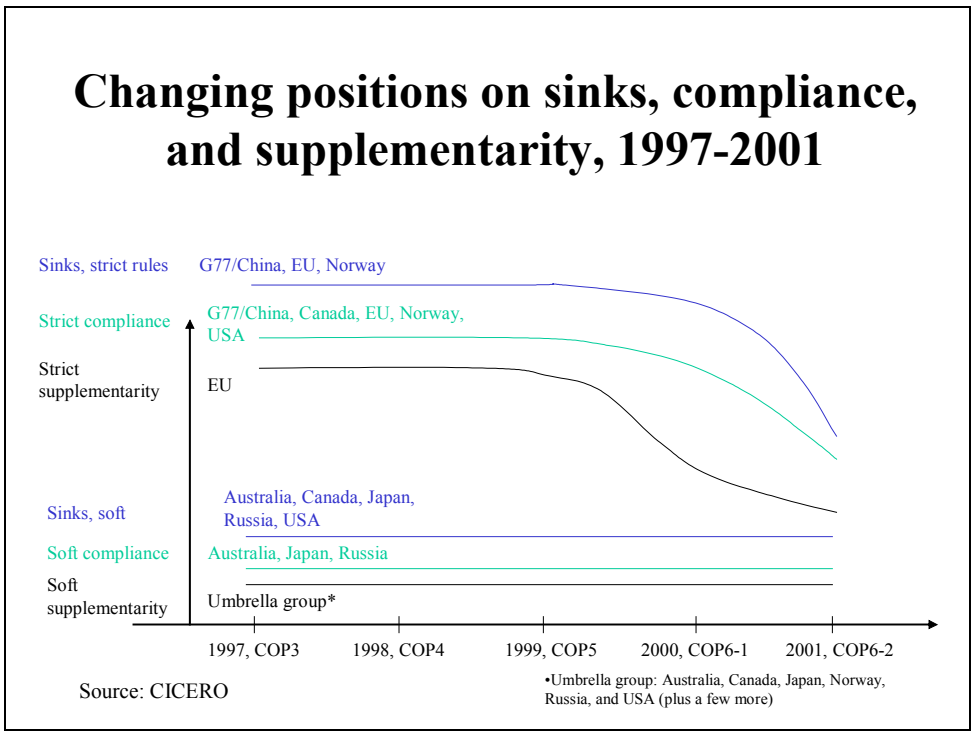


Source: CICERO

[4] The final wording is "To adopt, at its sixth session, the procedures and mechanisms relating to compliance as specified above; and recommend the adoption, by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, at its first session, of procedures and mechanisms relating to compliance in terms of Article 18 of the Kyoto Protocol."

Slide 3 presents the dynamics of the positions on the same issues as in Slide 1 and 2.2. We see that the positions were more or less fixed from the Kyoto conference in 1997 until the summer 2000, where parties prepared for COP6 in The Hague, in terms of supplementarity, and up to summer 2001 and COP6-2 in Bonn, where the EU and G77/China in particular had to give in on their strict positions on sinks and compliance to make an accord achievable in Bonn. The countries fighting for soft rules, particularly Australia, Canada, Japan, and Russia won this battle. Thus the end result was a weaker Kyoto Protocol than what many observers had anticipated after the Kyoto conference in the sense that there is a large opening for sinks, it's more or less up to a country to decide if the requirement of supplementarity in the use of the Kyoto mechanisms is met, and that sanctions in the case of non-compliance seems to be relatively mild.

Slide 3. Changing positions on sinks, compliance, and supplementarity, 1997-2001



3 The Bonn agreement

The four main issue areas of the Bonn agreement are shown in Slide 4.

Slide 4. The Bonn agreement

The Bonn agreement: Political compromise reached at COP6, part 2, in Bonn, 23 July 2001

Four main areas:

- Funding for developing countries
- Land-use, Land-use change and forestry (LULUCF)
- The Kyoto mechanisms: Emissions trading (ET), Joint Implementation (JI), and the Clean Development Mechanism (CDM)
- Compliance

Source: CICERO

3.1 The Kyoto mechanisms

Slide 5 presents an overview of the Kyoto mechanisms and domestic emissions trading, featuring units, participants and some other aspects.[5]

Slide 6 shows the main contents of the Bonn agreement with regard to the Kyoto mechanisms. As earlier noted the supplementarity requirement has softened compared to some earlier proposals. The wording is now "That the use of the mechanisms shall be supplemental to domestic action and 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."[6]

[5] For simplicity, all three Kyoto mechanisms are referred to as "quotas" as long as discrimination between them is not important in the context.

[6] Annex I comprises industrialized countries as defined by the UNFCCC.

Slide 5. Mechanisms for greenhouse gas emissions trading

Mechanisms for greenhouse gas emissions trading

Mechanism	Unit	Participants	Features
Domestic emissions trading	Quota	Firms and other national agents	Link to international emissions trading
International emissions trading	Quota Assigned amount unit (AAU)	Annex B countries (industrialized countries); private agents?	Supplementarity
Joint Implementation	Credit Emission reduction unit (ERU)	Annex B countries (industrialized countries); private agents?	Supplementarity; Monitoring and verification
Clean Development Mechanism	Credit Certified emission reductions (CER)	Annex B countries (industrialized countries) and non-Annex B countries (developing countries)	Supplementarity; Monitoring and verification; Tax as share of proceeds

Source: CICERO

The only Kyoto mechanism with a fee is the CDM, where 2% of the certified emissions reductions issued for a CDM project activity go toward financing the Kyoto Protocol adaptation fund (see section 3.3). This means that 2% of the credits produced by a CDM project are sold in the market and the earnings transferred to the adaptation fund.

With regard to both JI and CDM it is stated that Annex I parties are to refrain from using credits generated from nuclear facilities to meet their Kyoto commitments. There is some uncertainty with regard to the wording "are to refrain from using" and if this should be interpreted as "must not use," so the final legal text and its interpretation should be scrutinized.

The Bonn agreement states that it is the host party's prerogative to confirm whether a CDM project assists in achieving sustainable development. Article 12 of the Kyoto Protocol outlines that the CDM has the dual objective of both helping Annex I parties meet their commitments and assisting the host developing country in achieving sustainable development. Allowing the host country to ascertain the sustainability of potential CDM projects is a simplified approach that probably saves transaction costs, but may create uncertainty about the sustainability effects of CDM projects. The host country's evaluation would depend on the priority given to sustainability compared to benefits in terms of e.g. technology transfer through CDM projects. In the absence of clear and standardized criteria for sustainability, a CDM project that is acceptable in one host country may not be acceptable in another host country.

Slide 6. The Bonn agreement: The Kyoto mechanisms

The Bonn agreement: The Kyoto mechanisms

- No specified ceiling on trade (”domestic action shall thus constitute a significant element of ...”)
- A 2% fee on the CDM mechanism (transferred to the adaptation fund)
- Refrain from nuclear power
- Host party to confirm whether a JI or CDM project contributes to sustainable development
- Fast-track for small-scale CDM projects
- Fungibility between the mechanisms
- Emissions trading: Commitment period reserve

Source: CICERO

The Bonn agreement establishes a fast-track procedure for small-scale CDM projects whereby renewable energy projects with maximum output capacity less than 15 megawatts, energy efficiency improvement projects that reduce energy consumption by up to 15 gigawatt hours per year, and other project activities that reduce anthropogenic emissions by less than 15 kilotonnes of carbon dioxide equivalents annually can benefit from simplified modalities and procedures.

Fungibility between the Kyoto mechanisms refers to the degree to which quotas and credits generated through them can be interchanged at the global market, and thus function as one commodity in one market. If there are three segregated markets for the mechanisms, the fungibility is low. The Bonn agreement states that all three mechanisms can be employed to meet a party’s Kyoto commitments, thus supporting high fungibility at that level. However, due to some differences in the rules of the mechanisms – for instance with regard to who can participate, different constraints on the use of the mechanisms, and the fee placed only on the CDM – there is going to be less than full fungibility between the mechanisms.

With the aim of preventing parties from overselling their quotas and thus making compliance to their Kyoto target later impossible, a commitment period reserve rule is included in the Bonn agreement. **Slide 7** explains the main features of this rule.

At all times during the budget period 2008 – 12, a country should keep a reserve equal to 90% of its Kyoto target in the national registry. Thus the net sum of all transfers must be less than 10%. If a country in its most recent verified national report has emissions lower than 90% of its Kyoto target, this country would be allowed to transfer quotas equal to the difference between reported emissions and the Kyoto target. The 90% rule could pose a challenge for some countries that risk that large companies wish to transfer a sizeable share of their quotas

to other countries, which could compromise the commitment reserve rule. In designing a national emissions trading scheme, it is expected that the authorities will build in features that reduce the possibility of such occurrences.

Slide 7. Emissions trading: Commitment period reserve

Emissions trading: Commitment period reserve

- A country shall keep a reserve equal to 90% of its Kyoto target in its national registry
- This means that transfer of quotas to registries in other countries should at all times through the budget period 2008-12 be less than 10% of the Kyoto target of a country
- Alternatively, a country can transfer to other countries up to five times (due to the five-year budget period) the difference between its annual emissions according to the newest verified national report and its Kyoto target (provided the reported and verified emissions are lower than 90% of the Kyoto target)
- The motivation is to prevent nations from overselling their quotas and thus making compliance to their Kyoto targets later impossible
- If large companies for some reason want to transfer a large share of their quotas to registries in other countries, this could be in conflict with the reserve requirement of a country
- The national quota system must be designed to fulfill the requirement of a commitment period reserve

Source: CICERO

3.2 Sinks

Slide 8 shows the main contents of the Bonn agreement with regard to sinks (i.e., land-use, land-use change and forestry (LULUCF)).

A party must demonstrate that the activities have occurred since 1990 and are human-induced. The accounting is net-net, which means that net emissions or removals over the commitment period less net removals in the base year, times five, should be accounted for. A ceiling on eligible forest management activities for each industrialized country is specified in Annex Z to the Bonn agreement. The figure is 0.00 Mt Carbon per year for Australia, 12.00 Mt Carbon for Canada, 0.88 Mt Carbon for France, 1.24 Mt Carbon for Germany, 13.00 Mt Carbon for Japan, 17.63 Mt Carbon for Russia, and 1.11 Mt Carbon for Ukraine. In addition there is a constraint on sink activities under the CDM, which are limited to 1% of base year emissions, times five, due to the commitment period length of five years (2008-12). Furthermore sink activities under the CDM are limited to afforestation or reforestation projects. These accounting rules apply to the first budget period 2008-12, and may thus change later.

Slide 8. The Bonn agreement: Sinks

The Bonn agreement: Sinks

Land-use, Land-use change and forestry (LULUCF)

- Forest, cropland and grazing land management, and revegetation are eligible activities
- Net-net accounting
- A specified ceiling on forest management activities (Appendix Z)
- LULUCF activities under the CDM mechanism limited to 1% of 1990 emissions, times five (due to the 5-year commitment period 2008-12)
- Future reversal of any removal must be accounted for at the appropriate point in time
- Technologies relating to fossil fuels that capture and store greenhouse gases mentioned

Source: CICERO

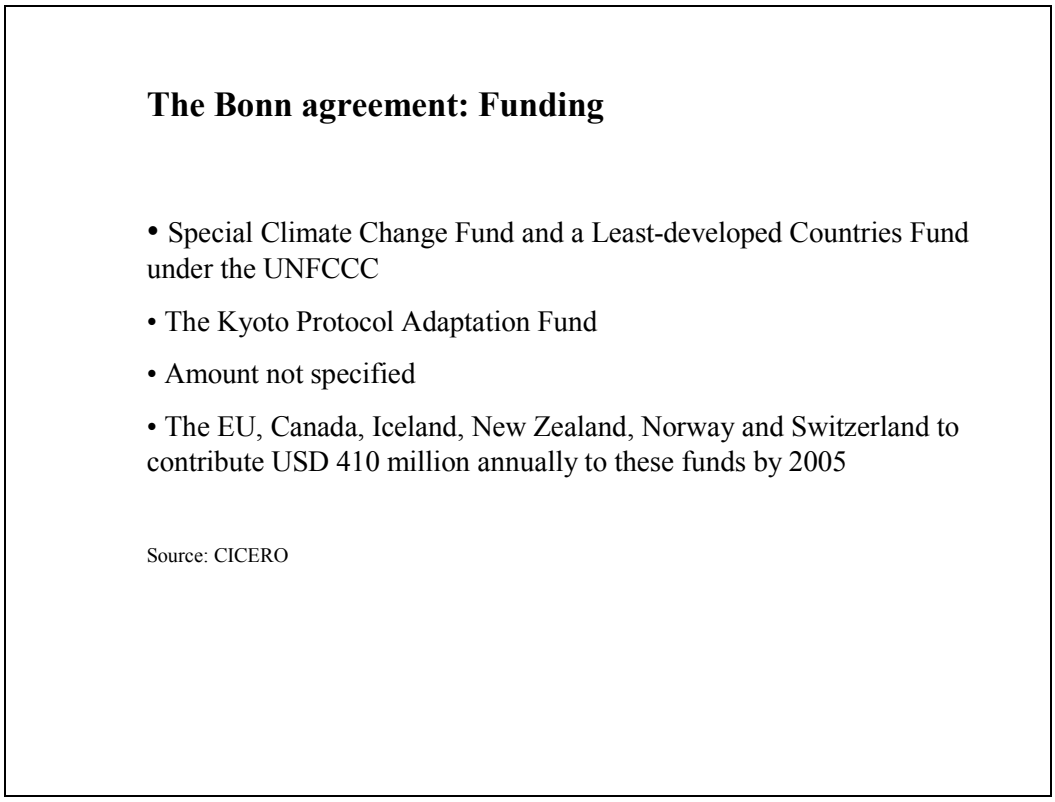
Another sink option, technologies relating to fossil fuels that capture and store greenhouse gases, are mentioned under Article 3.14 of the Protocol, which deals with potential adverse social, environmental, and economic impacts on developing countries from climate policy measures undertaken in industrialized countries.

3.3 Funding

Slide 9 shows the decisions on funding of climate policy measures in developing countries.

Altogether three funds under the UNFCCC and the Kyoto Protocol are established. The aim of the Special Climate Change Fund is to finance activities, programs and measures related to climate change in the areas of adaptation, technology transfer, resource management, and to assist developing countries highly dependent on fossil fuel production in diversifying their economies. The aim of the Least Developed Countries Fund is to support a work program for this group of countries, including National Adaptation Programs of Action. The aim of the Kyoto Protocol Adaptation Fund is to finance concrete adaptation projects and programs in developing country parties to the Protocol. No specific amount to be transferred to these funds is mentioned, apart from the 2% fee on the CDM to the adaptation fund. The group of countries shown in the last bullet point of Slide 10 made a joint statement at the same time as the Bonn agreement was announced that they will transfer USD 410 million annually to these funds by 2005. It seems that this promise, even if it is outside of the Kyoto Protocol, was required to have the developing countries accept the political compromise of the Bonn agreement.

Slide 9. The Bonn agreement: Funding



3.4 Compliance

Slide 10 lists the main contents of the accord on compliance to the Kyoto Protocol. The facilitative branch and the enforcement branch of the Compliance Committee each consists of one member from each of the five regional groups of the United Nations, one member from the small island developing countries, two members from industrialized countries, and two members from developing countries. The enforcement branch is responsible for determining whether a country (included in Annex I) is in compliance with its Kyoto target, methodological and reporting requirements, and eligibility requirements under the Kyoto mechanisms. Decisions by the Compliance Committee are taken by consensus. If consensus fails, a majority of at least three quarters is required. An additional requirement in the enforcement branch is a majority both among industrialized country members and developing country members. A country can appeal to the MOP related to meeting its Kyoto target if "it has been denied due process" by the enforcement branch.

In case of non-compliance, the key concept is the requirement to restore non-compliance to ensure the environmental integrity. If the greenhouse gas emissions of a country are 10 Mt Carbon above the Kyoto target in the period 2008-12, this country has to cover its deficit plus 30% in the next budget period (for instance 2013-17), totalling 13 Mt carbon in addition to its target for the new commitment period. Furthermore the country cannot participate in emissions trading until compliance is restored.

Slide 10. The Bonn agreement: Compliance

4 The future of the climate policy regime

4.1 Prospects for the Kyoto Protocol

Slide 11 notes that there are important issues and details of the rules regarding the Kyoto mechanisms, sinks, and the compliance system still to be dealt with at the Marrakech conference this autumn. The funding issue seems to be settled, but one should keep in mind that most parties view this as a package deal and are therefore not willing to accept a deal on one of the components until all the parties can adopt the complete package of all components of the Kyoto Protocol.

The fate of the Kyoto Protocol also depends on the final willingness of countries such as Russia, Japan, Australia, and Canada to ratify the Protocol. Since the USA (which is responsible for 36.1% of carbon dioxide emissions among industrialized countries in 1990) has rejected ratification, most of these countries must ratify for the Protocol to enter into force. Russian ratification is required under all circumstances (Russia is responsible for 17.4% of the emissions), whereas Japanese ratification (Japan is responsible for 8.5% of the emissions) is not required if (almost) all other industrialized countries ratify. The entry into force threshold is that countries representing at least 55% of 1990 carbon dioxide emissions among industrialized countries must ratify the Protocol, thus the USA plus countries representing more than 8.9% of these emissions can block the Protocol. In the best case, enough countries could ratify the Protocol to make it enter into force late in 2002.

One aspect of a softer compliance system as part of the Kyoto Protocol is a weaker foundation for the Kyoto mechanisms and thus greater uncertainty with regard to future demand for quotas and consequently quota prices.

Slide 11. Prospects for the Kyoto Protocol

Prospects for the Kyoto Protocol

- Most remaining issues to be settled at COP7 in Marrakesh, Morocco, 29 October – 9 November 2001:
  - mechanisms (e.g. the role of private entities in emissions trading and the CDM)
  - rules for sinks
  - legally binding compliance system? (final rules postponed till the first MOP)
- Will Russia, Japan, Australia and Canada ratify the protocol?
- In the best case the protocol could enter into force late next year (the World summit 'Rio plus 10' takes place in South Africa in September 2002)
- The parties are to show demonstrable progress in meeting the protocol commitments by 2005; and they must engage in negotiations on targets for new budget periods by the same year
- Increased uncertainty regarding future quota prices because of softer compliance rules (than earlier proposed)

Source: CICERO

4.2 The United States' position

Slide 12 presents some points on the American position and likely consequences for the climate regime. A number of analyses show that US withdrawal will reduce quota prices on the global market due to the large potential quota demand of the United States. This will benefit buyers of quotas, but will also give weaker incentives for domestic climate measures and the development of new efficient, green technologies within countries that have ratified the Kyoto Protocol. Under all circumstances the USA is likely to develop its own climate strategy and be interested in establishing a domestic emissions trading system. There are good reasons to believe that the USA will allow American companies to meet, at least in part, their domestically fixed emissions reduction or limitation targets through participation in the Kyoto mechanisms. The authorities are interested in maintaining and developing US relations with important regions and countries such as the EU, Russia and China for economic, strategic and political reasons, apart from collaboration in the area of climate politics. Furthermore, such a policy might facilitate a later entry into the Kyoto Protocol regime. A high future flexibility in this area should be beneficial whatever the present climate policy looks like. American companies would be keen to participate in the global markets to gain experience, and also with a view to possible future re-entry by the USA. In addition, the companies could save expenses if the quota price is lower on the international market. Parties to the Kyoto Protocol

could favor the participation of American companies in the Kyoto mechanisms since this might increase the chance of later US entry into the Protocol. The USA may choose to follow the definitions and rules of the Kyoto mechanisms or develop their own variants, which will have consequences for transaction costs, see section 5.

Slide 12. The United States' position

The position of the United States

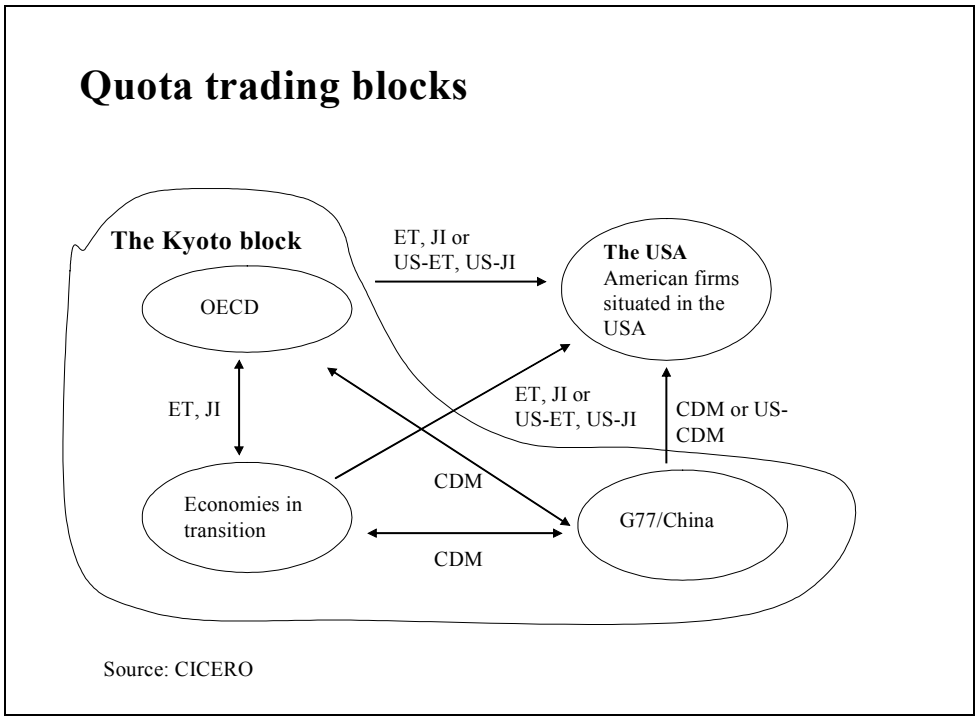
- The US withdrawal from the Kyoto Protocol reduces quota demand and thereby reduces the quota price
- The United States will develop a national climate policy strategy
- The United States may ratify the protocol later, and thus might participate in the second budget period (2013-17)
- The United States is likely to develop its own emission trading system
- American companies could be allowed to trade quotas with parties to the protocol as part of meeting targets defined under a national climate strategy
- The USA can choose quotas similar to the Kyoto mechanisms, or their own variants (ET-US, JI-US, CDM-US)
- The USA would be interested in quota trade with EU, China, Russia, and other countries for both economic, strategic and political reasons

Source: CICERO

5 Harmonizing quota trading systems

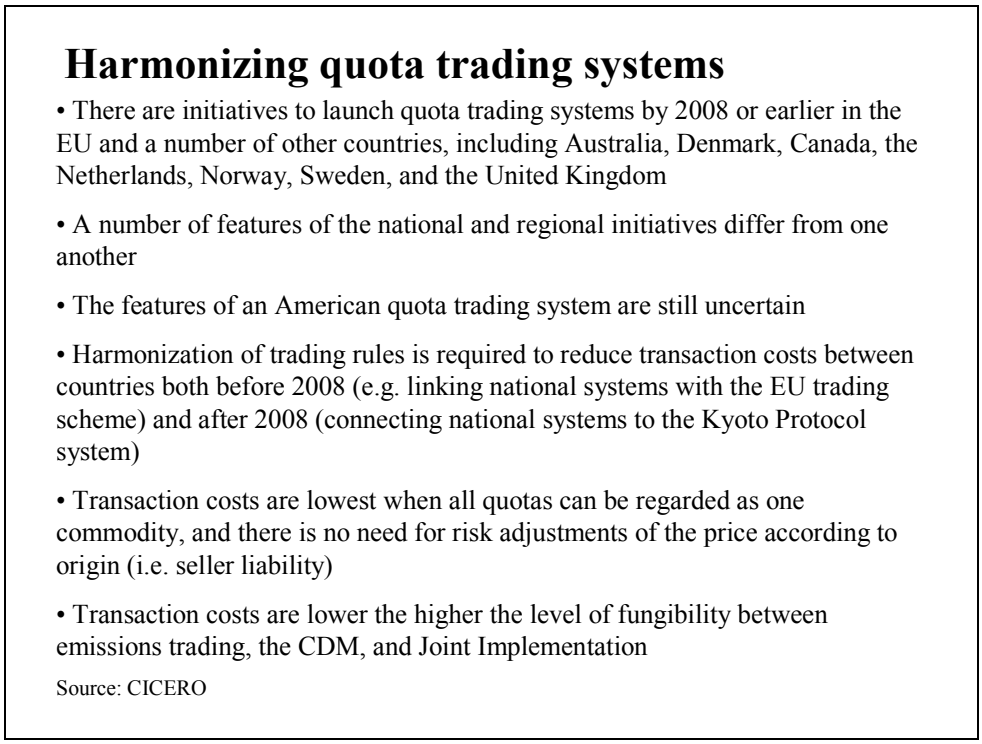
Slide 13 depicts the main trading blocks in the global greenhouse gas quota market. The "Kyoto block" is divided into three parts: the OECD (Annex II); economies in transition to a market economy (EITs, countries that are a member of Annex I but not Annex II); and developing countries (G77/China; non-Annex I parties). The slide shows how the various Kyoto mechanisms can be applied by a block for trading quotas with other blocks. If trading between the Kyoto block and the USA is allowed, this can take place through the Kyoto mechanisms (ET, JI and CDM) or through American versions (US-ET, US-JI, or US-CDM). In the figure it is assumed that American companies situated in the USA can only buy quotas, and are thus not able to sell quotas on the global market due to the fact that the national target for the USA, however that is specified, is not part of the Kyoto Protocol. However, there is a possibility that American firms are allowed to sell JI credits on the global market since these are project-based. Branches of American companies situated within the Kyoto block, for instance in Europe, are allowed to participate fully in the Kyoto mechanisms.

Slide 13. Quota trading blocks



Slide 14 presents some noteworthy points for the design of emissions trading systems to reduce transaction costs.

Slide 14. Harmonizing quota trading systems



There are a number of emissions trading systems initiatives with differing features, but this should not give rise to significantly higher transaction costs as long as the essential features are the same (see Slide 14). The simplest solution in this regard is to establish the finalized rules for the Kyoto mechanisms as the standard in all systems, also for a domestic system in the USA. Transaction costs are lowest when all quotas can be regarded as one commodity, even if such an ideal situation is not even likely for the Kyoto mechanisms alone.

Slide 15 shows quota system features that are important to harmonize different quota trading systems on the background of a number of different initiatives in single countries and the EU to establish domestic systems before the first Kyoto target year 2008.

Slide 15. Important features for harmonization of quota trading systems to reduce transaction costs

Important features for harmonization of quota trading systems to reduce transaction costs

Quota system features	Important for harmonization	Less important for harmonization - national authorities may choose different solutions
Quota definition and measurement	☒	
Strict reporting and verification rules	☒	
Sanctions on non-compliance	☒	
Participation by private and public entities		☒
Sector and greenhouse gas coverage		☒
Quota allocation principles		☒

Source: CICERO

Furthermore, harmonization of quota system features is important to minimize transaction costs in the case of trading between the USA and the Kyoto block. Thus the table presented indicates what features the USA might want to build into their domestic system to facilitate participation in the Kyoto mechanisms. The slide shows that the critical features for harmonization of quota trading systems are quota definition and measurement, strict reporting and verification rules, and sanctions on non-compliance. Features like sector and greenhouse gas coverage, what legal entities are allowed to participate, and quota allocation system are of less importance. Note that the Kyoto target implementation cost of a country depends not only on low transaction costs. Implementation costs are reduced if there is the widest possible coverage of sectors, private and public entities, and greenhouse gases included in the Kyoto Protocol. Thus points four and five in the table are important from an implementation cost perspective.

6 References

UNFCCC, 2001, 'Review of the implementation of commitments and of other provisions of the convention. Preparations for the first session of the conference of the parties serving as the meeting of the parties to the Kyoto Protocol (Decision 8/CP.4). Decision 5/CP.6, Implementation of the Buenos Aires Plan of Action', FCCC/CP/2001/L.7, 24 July, UNFCCC, Bonn.