

Shifting Strategies in the Global Climate Negotiations

A Strategic Cooperation Project, Alternatives to The Kyoto Protocol

Joint Study between CICERO and FNI
funded by the Research Council of Norway

Guri Bang

CICERO – Center for International Climate and Environmental Research
PO Box 1129 Blindern, N-0318 Oslo, Norway
www.cicero.uio.no
guri.bang@cicero.uio.no
Phone: +47 22858756, Fax: +47 22858751

Gørild Heggelund

FNI – The Fridtjof Nansen Institute
PO Box 326, N-1326 Lysaker, Norway
www.fni.no
goerild.heggelund@fni.no
Phone: +47 67111904, Fax: +47 67111910

Jonas Vevatne

CICERO – Center for International Climate and Environmental Research
PO Box 1129 Blindern, N-0318 Oslo, Norway
www.cicero.uio.no

November 2005



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Title: Shifting Strategies in the Global Climate Negotiations

Publication Type and Number

FNI report 6/2005
also published as CICERO report 2005:08

Pages

30

Authors

Guri Bang, Gørild Heggelund and Jonas Vevatne

ISBN

82-7613-475-0

Programme or Project

ISSN

0801-2431

Abstract

Although the international climate change regime represents a genuinely global policy process, some actors have a more pivotal role than others – either as dynamos that drive the process, or as barriers to further development. We focus on four pivotal actors, which also are the four largest emitters of greenhouse gases in the world: the United States, China, the European Union, and Russia. We argue that the withdrawal of the United States from the Kyoto process has led to a shift of strategies in the climate regime, with a more pronounced split between the EU and like-minded countries on one side and G77/China and the USA on the other, with Russia playing an even more pivotal role than it did earlier. We point out how understanding the role of domestic policies and pressure groups is vital for understanding the positions and strategies taken by countries examined here. We discuss how the current developments in their policy-making can explain the shift of alliances in the climate regime, and what it might mean for the future of international climate collaboration, and conclude on whether or not interests are becoming more polarized.

Key Words

Kyoto Protocol, negotiations, climate policy, climate measures, EU, China, United States, Russia

Orders to:

Fridtjof Nansen Institute
Postboks 326
N-1326 Lysaker, Norway.

Tel: (47) 6711 1900
Fax: (47) 6711 1910
Email: post@fni.no
Internet: www.fni.no

Acknowledgement

This report is a Strategic Cooperation Project, Alternatives to The Kyoto Protocol, funded by the Research Council of Norway, and is a joint study between CICERO and FNI.

We are grateful for the valuable contributions from Steinar Andresen, Lars Gulbrandsen, Arild Moe and Jon Birger Skjærseth at the Fridtjof Nansen Institute, Atle C. Christiansen at Point Carbon, Asbjørn Torvanger at CICERO, and funding from the Research Council of Norway.

Oslo/Lysaker, November 2005

Guri Bang, Gørild Heggelund and Jonas Vevatne

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1. Introduction

When the Kyoto Protocol was first being hammered out (1995-97), negotiations were marked by distinct strategies of key actors.¹ The European Union (EU) took the role as frontrunner – pushing for short-term, ambitious emissions cuts for Annex I countries – while the United States teamed up with like-minded countries in the Umbrella group and pushed for maximum use of mechanisms for flexible implementation of commitments.^{2, 3} The Umbrella group was an important actor in the Kyoto Protocol negotiations, and consisted of Japan, the United States, Canada, Australia, Russia, Ukraine, New Zealand, Iceland and Norway.⁴ The other ‘economies in transition’ supported the Umbrella group’s stance.⁵ The Group of 77 (G77) and China, meanwhile, supported the EU position that Annex I countries should take the first steps towards emissions reductions, but fiercely refused to commit to any binding emissions reductions themselves.⁶ Ten years later, negotiations continue but many of the key strategies have shifted, and the roles of the key actors have changed. The most dramatic change came when the United States in 2001 decided to withdraw from further cooperation in the Kyoto Protocol, on grounds that the agreement would be harmful to the US economy.

In our study of the importance of strategy shifts among these key actors after the US withdrew from Kyoto, we start with a distinct introvert approach. More specifically, we focus on domestic climate policy development and discuss how domestic politics shape negotiation positions and strategies. We look into the four actor’s current positions, if and how their strategies have changed both with respect to the Kyoto Protocol and other key actors, and how their role in climate negotiations has developed.

We argue that a more pronounced split between the EU on the one side and G77/China and the USA on the other has occurred, this view is reinforced by the recent establishment of the The Asia-Pacific Partnership for Clean Development and Climate (APP4CDC).⁷ Moreover, Russia plays an even more pivotal role than it did earlier. Russia’s signature on the Kyoto Protocol in 1997 was to a considerable extent caused by expectations of large revenues from quota sales to the United States. When the US pulled out of Kyoto the relationship with the EU gained in importance. Russia delayed its decision to ratify the Protocol for several years. Knowing that the Protocol’s entry into force hinged solely on own action, Russia demanded side-payments, particularly from the EU. But this process has also brought Russia and the EU closer together in climate policy and Russia now has deeper common interests with the EU in future negotiations than it has had before.

Our argument is founded on the changes in the dynamics of the climate negotiations after the US repudiation of the Kyoto Protocol. What had previously appeared to be a growing recognition by domestic actors in the United States that climate change had to be addressed abruptly changed as a result of the Bush administration’s new policy.⁸ At the international level, it motivated the remaining parties to overcome controversies and resolve undecided issues at COP6 bis in Bonn and COP7 in Marrakech – the same issues which led to the failure at COP6 in The Hague. While

negotiations in Marrakech in 2001 were not visibly disturbed by the United States' new role,⁹ this was not the case at COP8 in New Delhi.¹⁰ At COP8, the EU and most Annex I-parties were eager to build on the positive atmosphere from the UN World Summit on Sustainable Development in Johannesburg in 2002 and initiate a discussion of post-2012 issues, which would include future commitments also for non-Annex I-parties. However, the United States had shifted both rhetoric and strategy, and now supported G77 in their rejection of discussing future (post-2012) commitments.¹¹ As a result, the Umbrella group is now more divided, with the US and Australia teamed up supporting a different set of positions than the rest of the group.

2. Analytical framework and methodology

A total of 155 countries and the European Union representing 61.6 % of total CO₂-emissions in industrialized countries¹² in 1990 have ratified the treaty.¹³ Annex I minus the United States and Australia represent some 29 per cent of global GHG emissions (2000). We have selected four key actors (the United States, China, the EU, and Russia) for our multiple case study (Yin 1984). The four are the largest emitters of GHGs in the world, and the climate regime's effectiveness is closely knit to them (see figures 1 and 2).

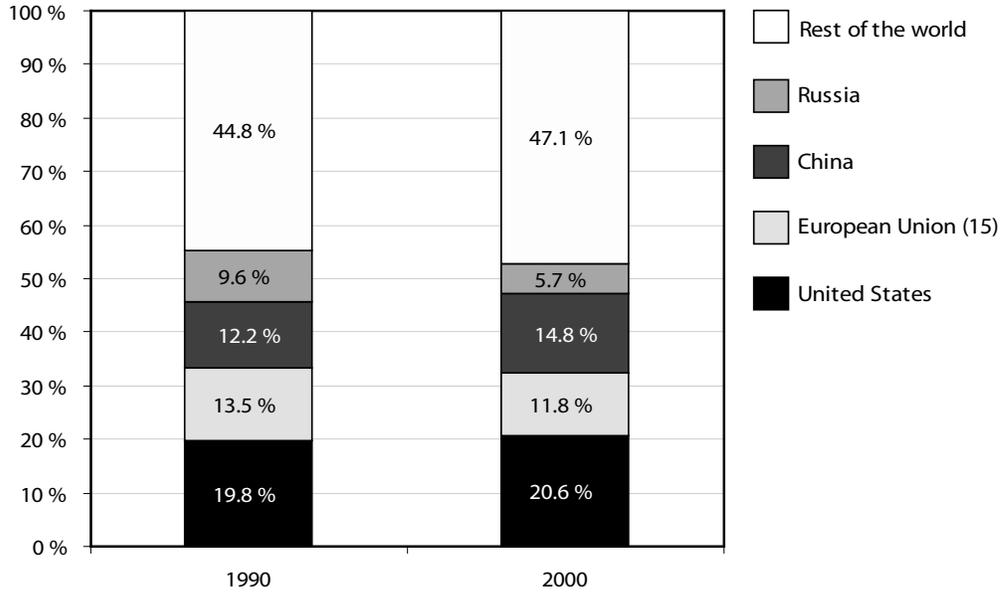
In their capacity as pivotal actors, they have during different stages of the climate negotiations served as dynamos, leaders, or barriers to further commitments and environmental effectiveness of the regime.

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We argue that a more pronounced split between the EU on the one side and G77/China and the USA on the other has occurred, and that Russia plays an even more pivotal role than it did earlier. Russia would have preferred US ratification and delayed its decision to ratify the Protocol for several years. Knowing that the Protocol's entry into force hinged solely on own action, Russia demanded side-payments. In the process of evaluating whether to ratify or not, Russia shifted its strategy from supporting the US positions until the United States decided to withdraw, into successfully bending the EU position after own preferences after the US pullout. As a consequence, Russia now has deeper common interests with the EU in future negotiations than it has had before.

Figure 1: Relative distribution of global GHG emissions in 2000, including CO₂ from fossil fuels and cement, CH₄, N₂O, HFCs, PFCs, and SF₆, but not CO₂ from land use changes

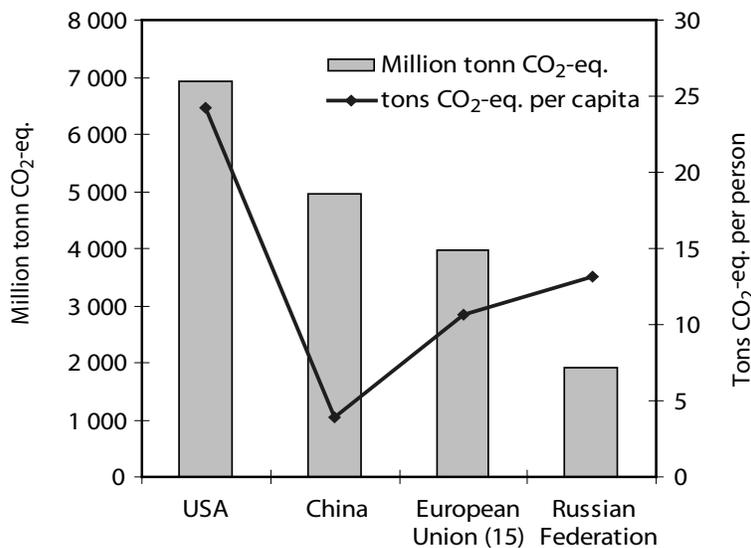
Relative share of global GHG emissions, 1990 and 2000



Source: CAIT (WRI 2004)

Figure 2: GHG emissions of the world's four largest emitters in total (left axis) and their GHG emissions per capita (right axis). Figures in CO₂-equivalents for the year 2000

GHG emissions total and per capita (2000)



Source: CAIT (WRI 2004), underlying sources: CDIAC, IEA, EPA, EDGAR

Our argument is founded on the changes in the dynamics of the climate negotiations after the US repudiation of the Kyoto Protocol. What had previously appeared to be a growing recognition by domestic actors in the United States that climate change had to be addressed abruptly changed as a result of the Bush administration's new policy.¹⁴ At the international level, it motivated the remaining parties to overcome controversies and resolve undecided issues at COP6 bis in Bonn and COP7 in Marrakech – the same issues which led to the failure at COP6 in The Hague. While negotiations in Marrakech in 2001 were not visibly disturbed by the United States' new role,¹⁵ this was not the case at COP8 in New Delhi.¹⁶ At COP8, the EU and most Annex I-parties were eager to build on the positive atmosphere from the UN World Summit on Sustainable Development in Johannesburg in 2002 and initiate a discussion of post-2012 issues, which would include future commitments also for non-Annex I-parties. However, the United States had shifted both rhetoric and strategy, and now supported G77 in their rejection of discussing future (post-2012) commitments.¹⁷ As a result, the Umbrella group is now more divided, with the US and Australia teamed up supporting a different set of positions than the rest of the group.

In the next sections of the report, we elaborate on possible consequences for the climate regime resulting from the new alliances at COP8 and COP9, and the emerging split between the EU on the one side and G77/China and the United States on the other concerning the focus of future negotiations. We look first into domestic climate policy trends in the EU, the United States, China, and Russia and demonstrate how these policy trends have consequences for the international regime. For each actor we analyze the role and interests of key domestic actors, since negotiations are more than a game between unitary rational actors that pursue their national interests from a rational cost-benefit perspective; they are also a struggle between negotiators involved in complex 'two-level games' taking place simultaneously at the international and domestic levels.¹⁸ We also focus on how and why environmental NGOs and other non-state actors, such as the major oil corporations, influence policy development. In conclusion, we discuss the implications of the shifting strategies for the future dynamics of the climate negotiations and the climate regime.

3. Key actors changing negotiation strategies

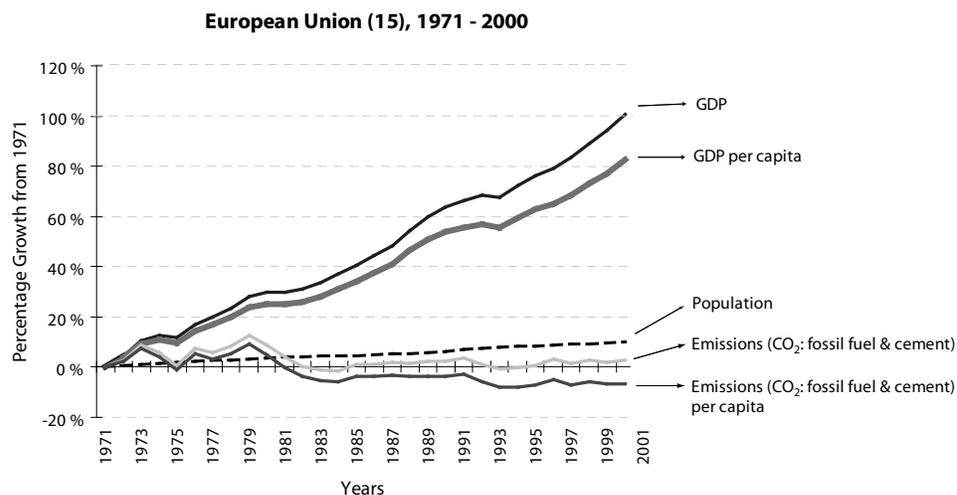
As a result of the Kyoto Protocol, an increasing number of domestic and non-state actors are becoming more directly affected by joint international commitments to reduce greenhouse gas emissions. Among the four key actors in this study, only the EU and Russia have taken on mandatory measures to comply with or implement the international climate regime. However, all of the four key actors are confronted with, and to a varying degree take into account, the need to address global climate change. The ways in which these actors have responded, however, vary considerably. The distribution of costs and benefits among key target groups as well as a number of other factors play a crucial role in explaining why this policy process turns out to be so different in these four key climate actors.¹⁹ It also gives us a better explanation for their positions and strategies in the international negotiations.

3.1 The EU

The EU has had strong leadership *ambitions* ever since the climate change problem emerged on the international agenda in the late 1980s. As a pusher for setting short-term commitments, and keeping the focus of the negotiations within the ‘targets and timetables’ framework, the EU had reasonably good success. The EU leadership role in the negotiations escalated markedly after the United States rejected the Kyoto Protocol in 2001. At the time, the EU was the only actor with sufficient political energy and strength to push for the adoption of the Protocol. Considering the US reservations to engage on the issue, it represented a rather rare ‘window of opportunity’ for EU leadership on the international scene. Thus, it is not only concern for the environment but also more general political ambitions to stand forth as a united and forceful actor that motivates EU climate policy.²⁰

The EU has historically been rather sceptical to the use of Kyoto mechanisms, favouring instead a climate strategy based on co-ordinated policies and measures (PAMs), and pushing for limitations on the use of the Kyoto mechanisms. However, there has been a remarkable change since the third Conference of the Parties (COP) in Kyoto in 1997, culminating in the adoption of a directive for pan-European emissions trading set to commence in 2005,²¹ and a directive for the inclusion of project-based mechanisms as cornerstones in EU climate policy.²² On this account the EU could today be regarded as a frontrunner in the development and implementation of the Kyoto mechanisms.²³ Responsible for 14% of total GHG emissions (EU-25), and with a growing economy, what the EU does to reduce emissions has an important imprint on potential climate change. Over the past two decades EU emissions are reduced, and accompanied by moderate population growth and substantial growth in economic output (See figure 3). Reduction in CO₂ emissions in the EU area is mainly a result of radical reforms of the energy sectors in UK and East Germany, mainly due to other factors than environmental policy.

Figure 3: Economic development, population growth and emissions of CO₂ in the European Union (EU-15) for the period of 1971 to 2000



Source: CAIT (WRI 2004)

Lessons learned from international negotiations as well as experiences from the development of EU climate policy have played key roles in the process of changing attitudes to climate policy options. Green NGOs played a key activist role, together with scientists providing expertise, in putting the challenge of global warming high on EU's political agenda in the latter half of the 1980s. After negotiations were formalised in the early 1990s the governments took control over the process, and the influence of various green groups was reduced.²⁴ NGOs have nonetheless been able to use their limited resources to stamp their imprint on the climate regime. Nearly all environmental NGOs in the climate change negotiations co-ordinate their positions through the Climate Action Network (CAN), a global network of almost 300 NGOs working to reduce GHG emissions to ecologically sustainable levels.²⁵

At the international level, negotiations and social interaction with other actors showed the EU that the Kyoto mechanisms provided a condition *sin qua none* for some countries to commit to legally binding emission reduction targets. Hence, the slow progress in the negotiation process, the US repudiation of the Kyoto Protocol in March 2001, and the need to prevent other Annex I countries from abandoning the Kyoto process gradually led the EU to change its position and become more prone to making concessions, and thereby take leadership when the hegemon resigned. Another mitigating factor is that developments during the 1990s brought evidence that achieving the EU's Kyoto target could prove to be more difficult than previously expected. The use of emissions trading was increasingly seen as important to ensure cost-effective implementation of climate policies.²⁶

At the EU level, the protracted development of EU climate policy and increased learning about the Kyoto mechanisms gradually led to changes in preferences and policy. More specifically, the difficulties and barriers experienced in formulating a common and co-ordinated climate policy, the centrepiece of which was the proposal for a common carbon tax, served to reinforce the search for other policy instruments better suited for the EU context. Constituencies in the EU were supportive of climate change policy action, and governments were trying to reap the green vote. Furthermore, the support from both environmental and business NGOs in favour of prompt action to address climate change helped create a consensus about early action. Once a broad consensus had been reached among the complex group of countries, institutions, and stakeholders (such as proactive business NGOs, environmental NGOs, and governments trying to harvest the green vote) that must be involved to implement EU policy, it was difficult to change course.²⁷ The sheer complexity of the EU policymaking machinery impedes any abrupt changes in policy course. Thus when the US withdrew from the Kyoto process, too much was at stake and invested in the process for the EU to change path. The logical alternative was therefore to ensure that the Protocol with its mechanisms for flexible implementation worked.²⁸

Besides learning from policy failure and institutional and political constraints, there has also been a process of learning more about the Kyoto mechanisms as such within the EU institutions and at the Member State level. Until Kyoto, the concept of mechanisms for flexible implementa-

tion was a territory little explored by the EU, and knowledge was essentially limited to academic circles and businesses following debates on emissions trading in the United States. After COP3, however, work was intensified within the Commission, during which *social interaction* with actors outside the EU and learning about other countries positions played a key role. A similar learning process is also evident within the European Parliament, which has had rather limited knowledge on the use of market-based mechanisms in general, and the Kyoto mechanisms in particular.²⁹ Finally, it is important to recognise that opinions and positions on the use of Kyoto mechanisms have differed among Member States. In general, there appears to be a line of demarcation between Northern-European countries that tend to be more susceptible towards market-based instruments and Anglo-American liberal norms, and Member States like Germany and France that historically have been more inclined towards command-and-control approaches. Important in this respect is the start-up of domestic emissions trading schemes in Denmark and the UK, including also the set-up of procurement programs in the Netherlands for the purchase of credits from CDM and JI projects.

In terms of future challenges, two issues clearly stand out: First, it will be critical for the EU to facilitate the development of an efficient and liquid market for emissions trading at the pan-European and international level. This might serve as an example for other countries that mechanisms for flexible implementation can work as climate policy measures without ruining the economy. Second, the EU needs to ensure the development of a multilateral climate regime for the period after 2012 that is based on participation and commitments from a larger number of countries, including also developing countries. To achieve this, it is crucial that the EU meet its Kyoto commitment target.³⁰ Slow economic growth and difficulties in adjusting industries and work places to the new, globalizing economy in the 1990s proved that it may be more difficult than previously expected for the EU to meet its Kyoto target. If even the EU – the foremost advocate of the Kyoto Protocol – proves to be unable to comply, the signal effect could be devastating for the future of the Protocol and severely affect the dynamics of negotiations about future commitments. The EU has lately expressed preference for the multi-stage approach, saying that ‘the “staged approach” is a promising way to provide for differentiated participation by developing countries’ (EC 2005:45).³¹

3.2 The United States

The United States was from the outset of climate negotiations far more sceptical to taking on binding commitments than the EU, a scepticism that culminated with its withdrawal from the Kyoto Protocol in 2001.³² The economic aspects, more specifically the cost-effectiveness of climate policy, have been vital for both the choice of policy instrument and the degree of involvement in the international climate regime for the United States.³³ For example, throughout the Kyoto Protocol negotiations, the United States put much weight on the importance of flexibility and broad participation for keeping costs down. The Clinton administration’s support for Kyoto was based strictly on the assumption that international agreement could be achieved on some of the most disputed and conten-

tious issues in the Protocol: full emissions trading, joint implementation, and participation by developing countries.³⁴

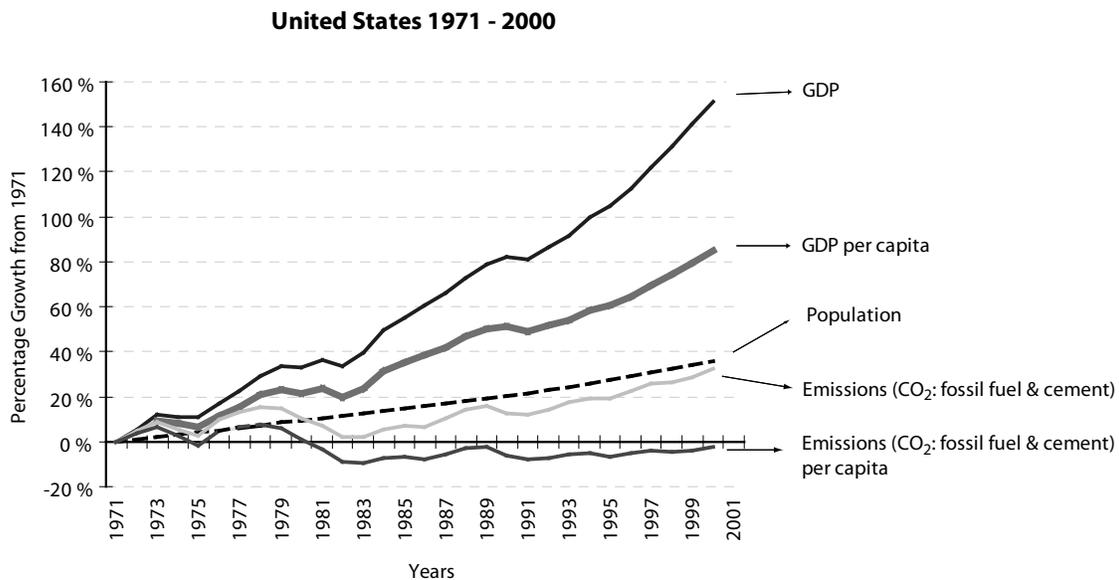
In the Kyoto protocol negotiations, the United States together with other members in the Umbrella group pushed for maximum flexibility. It opposed the EU on important positions, such as exempting the developing countries from binding commitments and imposing a ceiling for the use of Kyoto mechanisms to ensure that substantial action was taken domestically. The US also opposed the G77/China, insisting that developing countries must take on commitments in the first Kyoto period (2008-2012).

Economists predicted that the costs for the United States would be relatively higher if emissions reductions were to be achieved in the short term, as with Kyoto. Furthermore, they calculated that the United States would bear the lion's share of global costs in a Kyoto-like regime.³⁵ With a rapidly growing population combined with high rates of economic growth, U.S. emissions have been increasing steadily over the past couple of decades (See figure 4). In Kyoto, the United States committed to cut emissions by 7% from 1990-levels, but during the 1990s its GHG emissions has increased by 18%. Reversing this development would entail large costs.³⁶

As a consequence of potentially high costs for the United States, the United States Congress, with the support of influential stakeholder groups, consistently opposed the 'targets and timetables' approach that has been at the center of the Kyoto Protocol negotiation process.³⁷ U.S. politicians have favored a longer term trajectory towards stabilizing concentrations of GHGs in the atmosphere, arguing that it would in a more benign way secure continuous economic growth at the same time as it would mitigate climate changes.

The policy instruments that have been applied in US climate policy have focused on tax incentives and energy efficiency as cost-effective solutions for achieving reductions for companies, and on the needs for intensified research to reduce scientific uncertainty.³⁸ During the 1990s US firms in general were hostile to the idea of accepting policy regulations involving mitigation of GHG emissions. They adopted a confrontational strategy to avoid mandatory regulations, involving strong political pressure and outreach campaigns to influence the public opinion.³⁹ The Global Climate Coalition and Exxon were major driving forces behind that strategy. Over the last few years, there has been a more visible split between US firms continuing to pursue a confrontational strategy, and others who have decided to accept voluntary action to reduce their emissions, including participating in emissions trading markets.⁴⁰ For example, Environmental Defence has facilitated the Partnership for Climate Action, where US-based companies have announced a goal of reducing their aggregate emissions by 15% from 1990 levels by 2010 using market-based mechanisms.⁴¹ These firms show an interest in taking part in the growing markets applying Kyoto mechanisms and flexible policy solutions, such as emissions trading, joint implementation projects, and the World Bank's Prototype Carbon Fund.

Figure 4: Economic development, population growth and emissions of CO₂ in the United States for the period of 1971 to 2000.



Source: CAIT (WRI 2004).

The NGO community has been divided over several issues, most notably the contributions of sinks – that is land use, land-use change and forestry – and the Kyoto mechanisms to the reduction of GHG emissions.⁴² This is largely due to different philosophies regarding the role of the market in global environmental governance. Environmental Defense has promoted market-based mechanisms and sinks as means to curb human-induced emissions. The World Wildlife Fund (WWF) and a few expert NGOs, in particular Center for International Environmental Law (CIEL) and the Foundation for International Environmental Law and Development (FIELD), also had influence in the United States in the design of an effective and novel Kyoto compliance system. These organisations seem to have had some success with the insider strategy, framing issues in a creative and constructive way and providing expert advice to negotiators, particularly in the early phases of negotiations on new topics.⁴³

Considering the complexity of the climate issue, it is perhaps not surprising that a non-confrontational insider strategy seems to have been more successful than traditional activism in influencing the international climate negotiations and domestic policy. In the US, however, this was before the election of George W. Bush to the US Presidency immediately following the suspension of COP6 at The Hague. As a result of the change of the US administration and the statement by President Bush that the US would not become a party to the Kyoto Protocol, environmental NGOs have almost given up on promoting the treaty in the US. Although European NGOs have been able to influence both international and domestic climate policy, US-based NGOs have focused on international talks, business and consumers to compensate for lack of access to their home government.⁴⁴

Domestically in the United States, a much stronger public demand and pressure on policy outcome has come from parts of the industry lobby. Representatives of powerful corporations that stand to be adversely affected by mitigation policies – in particular large energy corporations in the oil, gas, and coal industries – have continued to exercise substantial clout and effectively work against any kind of commitments.⁴⁵ Multi-national oil companies have different strategies for approaching climate change, but common grounds may be found in the link between international institutions and major multinational companies at either side of the Atlantic. The Kyoto Protocol represents a potent political force that has affected, and will most likely continue to affect, US multinationals with significant activities in Europe.⁴⁶ While the Kyoto Protocol restricts access to participation in the Kyoto mechanisms to members of the Protocol, US multinationals operating in Europe and Japan will have to be in the same markets as companies that are operating on the inside of new ‘carbon markets’. How the positive and negative consequences add up for US multinationals remains to be seen. But many companies have had experience reducing emissions and have proved that such reductions can be achieved without negative economic consequences or increased loss of jobs. It is becoming clear that the reduction of greenhouse gas emissions is a problem that is not impossible to solve, and that the policy solutions are within reach.⁴⁷ It is, however, also clear that the business sector cannot be the main driving force behind a proactive development. Fair and credible governmental incentives are required to continue a process of innovation and change that can be a potent response to climate change.⁴⁸

In the absence of strong domestic political pressure within the United States in favor of a more proactive climate policy from the general public the Bush administration is unlikely to take steps towards a mandatory policy or indeed any policy to seriously limit greenhouse gas emissions. In US politics the Kyoto Protocol has become synonymous with a burdensome solution to the climate change problem, and has no chance of gaining support. However, the United States might become more open to reengaging in other forms of international climate policy cooperation.

Concerns about the stringency and costs of emissions caps, including risks of unexpectedly high costs, will certainly constrain the range of targets that may be adopted by the United States for the foreseeable future. Technology focus – and more specifically interest in development of fossil-based no- or low-emissions technologies – is likely to be a resilient trait in the U.S. approach to climate policy even regardless of electoral outcomes.⁴⁹ The Bush administration sees fossil fuels as pivotal to America’s future energy supply, even in a future where control of carbon emissions is deemed necessary. Commitment to the continued use of coal is not limited to the current administration. Since the oil shocks of the seventies, Americans have worried about their dependence on ‘foreign oil’. Environmental concerns apart, domestic coal constitutes a cheap and reliable alternative. Coal interests also have considerable political clout, as illustrated by the leading role Senator Robert Byrd of coal-rich West Virginia has played in opposing the Kyoto Protocol. The increased salience of energy security concerns in the post-September 11 political climate and the political realities stemming from the importance of coal in ‘swing states’ that tend to decide presidential elections and Congress-

sional majorities have led moderate environmentalists, such as the Natural Resources Defence Council and leading Democrats, to embrace R&D spending for development of carbon sequestration and coal-derived hydrogen fuels.⁵⁰ These observations suggest that research and development activities regarding fossil-based technologies are likely to remain an area of intense interest for U.S. authorities – also with respect to possible international cooperation.

As a result of these domestic policy traits, the United States changed its negotiating strategy since COP8 from insisting on developing country commitments to warning against it.⁵¹ The turnaround seems to be a result of outspoken opposition to the Kyoto Protocol, since it would affect the US economy negatively if emissions cuts are performed the way the Protocol determines. By supporting developing countries in not accepting commitments under such an international regime, and at the same time presenting new and alternative ways to reduce emissions that at the same time secure continued economic development, e.g. intensity targets or emissions relative to GDP, the US takes a stronger unilateral control over how it intends to handle the climate change issue. New coalitions are being built with both industrialized and developing countries, for instance with Australia, Italy, India, China, South Korea, and others, through bilateral agreements that focus on technology R&D, and carbon storage solutions rather than on short-term emissions reductions. In other words, the United States is engaging in new forms of multi- or bilateral cooperation, hence engaging in a new strategy for facing the challenges posed in the international climate change negotiations.

3.3 China

In the international negotiations, China in alliance with G77 has consistently refused to take on and even discuss emission commitments, arguing that it has implemented extensive abatement measures despite its position as a developing country. China's measures in relation to population control, energy efficiency and pricing are therefore arguments in the climate change discussion (See figure 5).

Low per capita emissions has been an argument used by China in the negotiations – one eighth of the USA and about half of the world average⁵² – and places the responsibility of first-step emissions reductions on the Annex I countries. According to WRI's CAIT-database however, China's per capita emissions (2000 figures) are higher, about one sixth of the US' (see figure 2). Although long awaited, China submitted its initial National Communications to the UNFCCC in November 2004.⁵³ The National Communications indicate that China's GHG emissions/CO₂ equivalents in 1994 were 3650 million tonnes, of which CO₂, CH₄ and N₂O contributed 73 percent, 20 percent and 7 percent respectively.⁵⁴ 1994 CO₂ emissions were 2666 million tonnes, which is half of the figure applied in the CAIT base. Furthermore, China claims that the country's historical contribution to climate change is low.⁵⁵

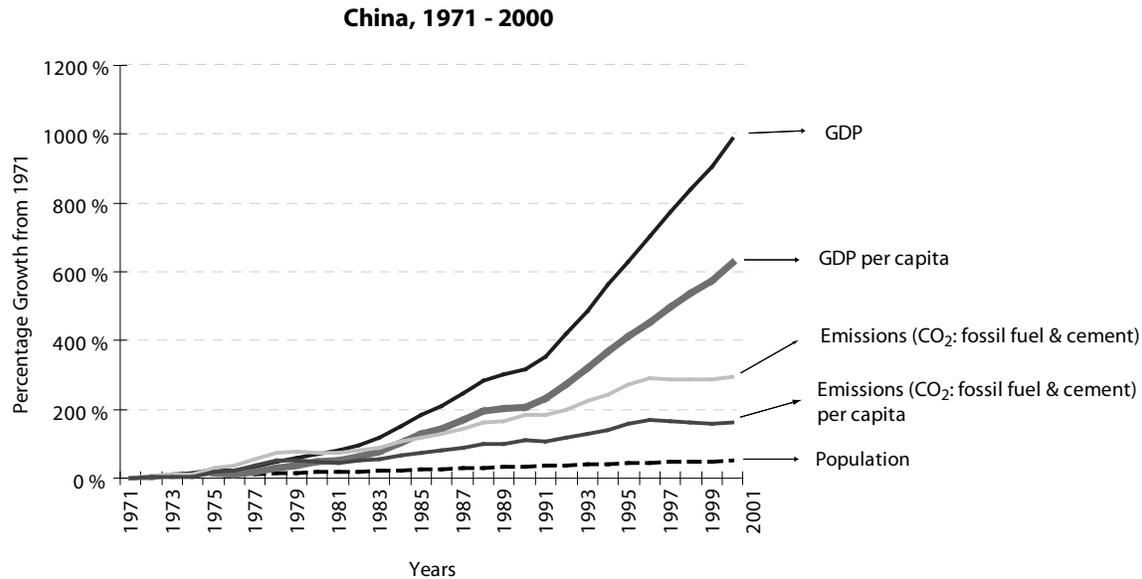
China is often perceived as one of the key countries in the international climate regime for the following two reasons. First, China is one of the key players in the global climate change game due to its status as the world's second largest emitter of greenhouse gases (GHGs) after the

USA. China contributed 13.5% of global CO₂ emissions in 1996, whereas IEA figures say 17.2%.⁵⁶ As illustrated by figure 1, China's share of the global GHG emissions was 14.8% in 2000, compared to the US share of 20.6%. During the 1990s, China's GHG emissions have increased by almost 40 percent due to strong economic growth (see figure 5), and IEA anticipate a yearly increase of 2.8% (IEA 2004). This view is contrasted by research results indicating that China managed to reduce emissions in the period 1996 to 1999.⁵⁷ It is generally acknowledged, also by Chinese officials and academics, that the country will soon surpass the United States unless drastic measures are carried out.⁵⁸ Second, China's status and influence in the G77 makes it a key country in the climate negotiations. As the world's largest developing country with an influential voice in the United Nations, China is expected to play an important role in leading the developing countries in the future climate regime. On one hand, global climate change is not a critical priority for China, as the primary objective of the Chinese leaders is to develop the economy and improve the standard of living for China's citizens, as well as to reduce local air pollution. On the other hand, Chinese scientists and bureaucrats are increasingly concerned about the impacts of climate change on China.⁵⁹

Since 1998, the National Development and Reform Commission has been responsible for co-ordinating work on domestic climate change in China; this illustrates the increased emphasis on climate change issues as the commission has the overall responsibility for the economic development issues in China. NDRC together with the Ministry of Foreign Affairs and the Ministry of Science and Technology are engaged in formulating China's negotiation positions. China was initially sceptical to the introduction of the Kyoto mechanisms under the UNFCCC, and saw JI and CDM as instruments for developed countries to run away from responsibility. The country's position towards the Kyoto mechanisms has nevertheless shifted from scepticism to a more pragmatic focus on maximising benefits. In the past few years, the process of establishing a national system for identification, approval and implementation of CDM projects in China illustrates the changes in Chinese attitude towards the CDM after COP7.⁶⁰ China at last announced the establishment of a Designated National Authority in June 2004 after some delay, and the State Council finally adopted and issued provisional rules for management of CDM projects.⁶¹ After more than one year, the revised measures for management of CDM projects were introduced and were effective 12th October 2005 (NDRC 2005); the measures replace the interim measures of 2004.⁶²

In addition, several CDM initiatives funded by bilateral and multilateral donors will contribute to capacity building in this area.⁶³ China has developed important expertise in CDM policymaking within its bureaucracy, and has a few research institutes that focus mainly on technical aspects related to CDM projects. One challenge for China would be to include economists and market specialists in this work to gain understanding of the international market and thus increase the country's ability to compete internationally for CDM projects.⁶⁴

Figure 5: Economic development, population growth and emissions of CO₂ in China for the period of 1971 to 2000.



Source: CAIT (WRI 2004)

With regard to future negotiations, China has approved the Kyoto Protocol (on 30 August 2002)⁶⁵, but has opposed any discussion as to how and when developing countries shall take on commitments. Climate policy is defined as a foreign policy issue, and is thereby influenced by spill-over from other foreign policy areas. Sino-US relations in the field of climate policy have been influenced by the argument voiced by US climate policy sceptics that the United States should not take on serious commitments as long as major developing countries like China and India do not have similar commitments. China has emphasised that as long as the United States does not take on commitments, it would be politically unacceptable for them to do so.

On the domestic level, taking on caps presents a risk of limiting the basic energy use for the population.⁶⁶ This is anticipated to have grave consequences for economic growth and thereby stability in the country. Also, China's increasing urbanisation implies that energy use will also grow, since the rural population (768 million people)⁶⁷ consumes limited energy at the moment. Currently, the consumption of rural energy is not counted in national energy statistics, thus the future emissions challenges will be in rural China.⁶⁸

The comments above indicate that China is unlikely to take on commitments within the realms of the Kyoto Protocol in the near future. However, with China's increasing emissions and its position as an emerging economic superpower, the pressure on China to take on commitments is intensifying. This is increasingly acknowledged by Chinese officials and is reported on in Chinese media.⁶⁹ The development level of China will be important issue in the future negotiations for the 2nd commitment

period to begin in 2005. Incomes are rising and the estimated level of income using purchasing power parity is 4 times higher than the official Chinese figure.⁷⁰ China however, states that it will keep its position as a developing country; the per capita GDP just passed USD 1000.⁷¹ China generally has a great influence in the G77 and there are no indications that China would wish to leave the G77 in the near future.⁷² It is nevertheless noteworthy that negotiators from developed countries state after COP10 that they may detect a small change in the rhetoric of the Chinese delegation in the past year, albeit their basic principles have not changed. It has nevertheless become easier to communicate with China.⁷³ It is premature to draw conclusions yet whether this will have any impact on the future role of China in the negotiations. China indicates that a different approach may be needed that takes into consideration the needs of the developing world. The current debate is distanced from other domestic policy issues, and does not relate to the development priorities of China. Thus, implementation driven by China's domestic needs may constitute a conceptual way for China to approach the climate change issue. In other words, development priorities could be used to frame the climate change debate. This may also lead to China playing a more active and positive role in the climate change negotiations, which may result in greater involvement by other major developing countries.

3.4 Russia

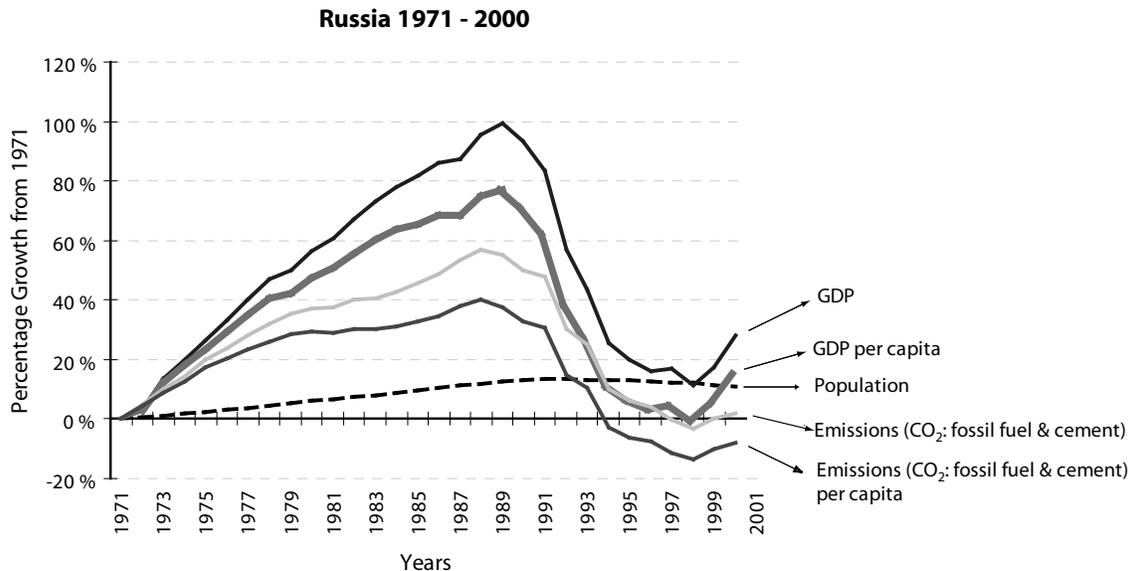
Russia's positive attitude to the Kyoto Protocol was initially firmly knit to the then assumed participation by the United States and the anticipation of economic gains from emissions trading between Annex I countries. In this phase, Russia supported the United States against the EU at difficult turning points in the international negotiations. After the United States withdrew from Kyoto, Russia performed a painful reorientation towards the EU; painful mainly because the outlook for economic gains was dramatically reduced. Russia sided with the EU when it became clear that the EU took over as the main driving force to implement an emissions trading system.

The Russian attitude to the Kyoto process and the further development of the climate regime has been framed by four major factors: first, the unresolved issues in Russian climate policy; second, the internal institutional struggles; third, strong economic interests; and finally, external tacit bargaining. Economic growth and emissions of CO₂ are closely linked in the Russian economy, with both trends peaking in 1989, and sharply falling as a result of the breakdown of the communist regime in 1990. From 1990 to 1998, Russian CO₂-emissions decreased by 35.6 %.⁷⁴ After 1998, however, both GDP and greenhouse gas emissions are on the rise again (see figure 6).

As long as the climate problem has been on the international political agenda, there has been widespread climate scepticism in the Russian scientific establishment.⁷⁵ Prominent scientists have argued against the existence of anthropogenic climate effects, and some hold the view that on the balance, climate change would be good for Russia. This was a major reason why Russia was considered a laggard in the early phase of the climate negotiations.⁷⁶ In addition, there was widespread concern that

emission targets would harm Russian economic growth – arguments similar to those heard from developing countries. When Russia changed its positions and decided to accept binding targets by signing the Kyoto Protocol, it was no secret that the very promising economic benefits provided by the Kyoto mechanisms were a decisive factor.⁷⁷

Figure 6: Economic development, population growth and emissions of CO₂ in Russia for the period of 1971 to 2000.



Source: CAIT (WRI 2004)

After Kyoto an internal institutional battle became a major problem in Russian climate politics. In light of the enormous transfers promised by Kyoto, controlling positions in the development and future implementation of Russian climate policy became major stakes. This internal battle negatively affected further development of Russian climate policy: few AIJ projects were carried through, and reporting systems and inventories were delayed.⁷⁸ Also, there has been no settlement on the key issue of who owns the surplus quotas – ‘hot air’ – which was considered to yield enormous revenues under the Kyoto Protocol.

But even if there were conflicts between state agencies, climate policy was not really very visible on the crowded Russian political agenda. The top level of government was not involved in climate politics, and there was not much public debate. Over the last few years this has changed. Russian industries have finally started to show interest in the Kyoto mechanisms, notably the state-owned electricity system (UES), which established a carbon fund with the purpose of selling emission rights in exchange for investments in increased efficiency in the sector. Also the gas giant Gazprom has shown interest, in particular through co-operation with Ruhrgas. These industries, which are the biggest emitters, are against the sale of surplus quotas, since they have a vast amount of ‘fresh’ emission reductions to offer for emissions trading or joint implementation projects.

The exit of the United States from the Kyoto process had a dual effect on Russia. First, it meant that the outlook for big revenues was sharply reduced. This had the effect of turning many against ratification of the protocol. Second, it left Russia in a key role in determining whether the protocol would be implemented or not. These two developments form the background for the latest round in Russian climate politics starting in April 2002. Prime Minister Kasyanov set in motion a process that many outside Russia saw as a promise of ratification.⁷⁹ After just a few months it became evident that there were obstacles, and Russian officials, while in principle endorsing Kyoto, claimed that additional assurances of quota purchases or investments were necessary to secure Russian ratification. This was also the indirect message from President Putin at the climate conference held in Moscow September-October 2003.⁸⁰ Thus the ratification issue had definitely entered high politics, connected to World Trade Organization (WTO) membership, broader economic and energy cooperation with the EU, and geopolitical considerations – especially the relations with the United States.

The EU officially rejected a link to WTO membership, but the two issues were both discussed at an EU-Russia summit 21 May 2004. The EU endorsed Russian membership in WTO, while Putin said that ‘we support the Kyoto process. We have some concerns linked to the obligations we must take upon ourselves... We will speed up the process towards Russian ratification’.⁸¹ Putin thus came out more strongly in support of ratification than before, without ruling out the possibility of further negotiations. Apparently the relationship to the EU as well as clarification of acceptable WTO terms played a major role when finally, on 30 September 2004, the Russian government made the decision to propose to the Duma that Russia ratify the Kyoto Protocol. On 22 October 2004 the Duma ratified the Protocol.

Earlier, as when Kasyanov apparently set the process ‘in motion’ in 2002, the existence of draft legislation for implementing Kyoto and regulating key issues, such as the ownership of quotas, had been presented as a prerequisite for making a decision on ratification. But as long as the President gave no clear signal about his intentions, next to nothing happened. With the decision on 30 September, the government cut through this knot by endorsing ratification in principle – and at the same time ordering relevant ministries and other government bodies to work out a plan for implementation of the Protocol.⁸²

Even though Russia now has ratified Kyoto, the further development of Russian climate policy as well as negotiating positions can not be expected to be a smooth ride. More domestic actors are likely to get involved as the distribution of short term benefits from implementation get clearer. This can mean new conflicts and stalemates. In the negotiations on post-2012 the widely held reservations due to expected costs for Russia may re-emerge and make the country reluctant to take on more ambitious targets. These reservations are likely to have strong support until it can be demonstrated that also in Russia economic growth does not necessarily entail corresponding growth in energy consumption. On the other hand, if the government is able to overcome internal feuds and develop a good way of implementing Kyoto, increasing numbers of domestic actors are

likely to realize the potential of the Kyoto mechanisms.⁸³ They may exert some influence on negotiating positions. Nevertheless, industrial involvement is still in an early stage, and it is uncertain what will be the dominant position of e.g. the oil industry, the strongest lobbying group in the country.

Also after Russian ratification of the Kyoto Protocol, the underlying climate scepticism remains. Russia is still a long way from a national consensus on the climate problem and the correct remedies.

4. Implications of shifting alliances

The dynamics of the climate negotiations changed markedly after the U.S. repudiation of the Kyoto Protocol. The continued process of negotiation – and not least the making of a ‘new’ regime embedded in an existing regime⁸⁴ – will depend upon the ‘lessons learned’ through the implementation experiences on the part of pivotal actors using different policy mechanisms. Extrapolation of current policy-trends in the four key countries examined here points to a rather gloomy future for international climate cooperation prior to 2012. Even though the Kyoto Protocol and its mechanisms have engaged new actors and initiated new policies, and will supposedly continue to do so in the coming years, resistance to real and binding targets under an international agreement will be strong. Hence, continuation of the current negotiation modus under the UNFCCC seems unlikely to be successful in engaging all major emitters in a meaningful way in the near future.

Even though the Protocol has entered into force, considerable creativity is needed on the design of a future climate regime. This might include a new opportunity to engage the Annex I parties which have resisted ratification of the Protocol (like the United States), as well as major developing countries with large or rapidly increasing GHG emissions (like China). Negotiations for the second commitment period are according to Article 3.9 of the Kyoto Protocol, scheduled to commence no later than in 2005. However, at COP10 in 2004 the parties to the UNFCCC were not able to agree on whether or when these negotiations should start. They could not even agree on an official reporting format from the workshops to be organised the following year.

We find that there are at least two possible consequences for the future of the climate regime resulting from the new strategies of the four key actors. First, it seems like the trend of EU leadership in the push for ratification and implementation of the Kyoto Protocol and pushing for negotiations about future commitments is being enhanced. At COP10, the EU was clearly taking the lead in initiating discussions about future commitments.⁸⁵ Therefore, the performance of the EU and the Kyoto Protocol will have symbolic effects. Whether or not it is deemed a success will be important for the dynamics of future negotiations, both participants and non-participants of the Protocol. The EU has already decided to act as a pioneer in terms of implementing an emissions trading system from 2005 (see section 3.1). Seeking stability in its climate policy, the EU wants to maximize participation. Russia took advantage of its pivotal position, and increasingly demanded side-payments to ratify. At Marra-

kech, Russia achieved side-payments within the frames of the Kyoto Protocol in terms of being allowed to increase its use of sinks in its GHG emissions accountancy. In 2004, Russia demanded side-payments also outside the frames of the Protocol in terms of linkage between ratification and accession to WTO (see section 3.4).

With the Protocol in force, we believe that ‘the proof of the pudding will be in the eating’. If emissions trading and other Kyoto mechanisms turn out to be a success, the EU and its Kyoto partners would be in a stronger position for steering the direction of future negotiations. If the EU fails to fulfill its commitments, or emissions trading turns out to be more difficult or more unsuccessful than expected, they will be in a weaker position for having a decisive say for the future direction of the climate negotiations. This would complicate future negotiations, and most likely mean postponement of more comprehensive and environmentally effective policy action to mitigate climate change.

Second, the experiences made since COP8 tell us that the United States has changed its strategy from insisting on developing country commitments to warning against it, and has thereby entered into a direct opposition to the Kyoto Protocol and future commitments. The United States seems to be building new collaboration with both industrialized and developing countries, e.g. with Australia, India, China, through bilateral agreements. The United States has shown continued belief in technology development as the most cost-effective and environmentally efficient strategy to meet the climate change problem. In particular, carbon capture and geological storage technology is at the center of US attention, and constitutes a vital part of its current strategy. By entering into bilateral agreements with like-minded countries that share their belief in technology solutions, the United States can secure more unilateral control over its approach to climate policy than was the case in the Kyoto Protocol negotiations.

One of China’s main arguments in the negotiations so far has been that it would be impossible for the country to take on commitments as long as the United States refuses to do so. The current changes of strategies may result in several scenarios for China: The most likely scenario is the ‘business as usual’ – given the current situation where poverty alleviation and developing the economy are the main priorities, it is hard to believe that China suddenly will take on commitments to reduce its emissions. Nevertheless, there is a need to solve local pollution problems in the country, and bilateral and multilateral projects (such as energy related projects) may contribute to lower emissions, although not specifically because of climate change concerns.⁸⁶ The second scenario is that stronger US-China relations on related issues such as economic development, trade and alternative approaches to adaptation and mitigation, could distance China from the international negotiations and the tight binding to G77. China’s role in the negotiations might hence be altered through bilateral co-operation with the United States. A third possibility is that with China’s increasing importance and participation in world affairs, the country will take on a more responsible and positive role in order to make the United States look like the laggard. In a game of ‘changing roles’, China may soften its position. However, if China were to take on com-

mitments, it would have to gain substantial benefits like technology transfer and/or funding. Furthermore, even though China is no longer a poor developing country it would be politically difficult to leave the G77. Membership there still provides many valuable benefits such as a leadership role in the G77 and influence through the G77 on the negotiations.

We have identified several cases of shifting strategies and relations as a result of the altered engagement from the United States. In that respect we have pointed out how understanding domestic policies and pressure groups within the four key countries examined here is vital to understanding the positions and strategies they have adopted in the international negotiations. While the United States and pivotal developing countries have joined forces as a result of a rather paradoxical common interest in postponing discussions about future commitments at the latest COPs,⁸⁷ the EU and Russia have found it important to support each other to make possible an international emissions trading system.

The entry into force of the Kyoto Protocol may be seen as a political success, although it is well documented that its environmental effect is very limited.⁸⁸ In terms of hard commitments the Kyoto Protocol can be described as a 'mini-regime', as the overwhelming majority of the nations of the world not have to reduce emissions to comply with the Protocol.⁸⁹ Developing countries do not have to reduce emissions, and economies in transition (EIT) countries as well as some other key countries will meet their commitments with little or no effort. Hence, the Kyoto Protocol may well be a political achievement, but the *real* long-term challenges in transforming this 'mini-regime' into a truly global regime still lie ahead.

Russia will have a key role in terms of how it chooses to act in the emissions trading market. There is a huge difference between a Russia that sells quotas to reinvest in its industries, and a Russia that sells 'hot air'. The potential pathway of Russia will have consequences for the legitimacy of the Protocol and its planned emissions trading system. A Kyoto Protocol with considerable legitimacy might create international pressure that reverberates in domestic US politics, challenging the current perception in the United States that voluntary programs are the only policy that the constellation of domestic political actors can agree to. This could, in turn, lead to support of activities in Congress such as senators Lieberman and McCain's Climate Stewardship Act of 2005.⁹⁰ If not, a different climate regime may allow a long-term emissions reductions target, broad participation, and flexibility. In the United States, this would open for implementing policy instruments that credibly reduce economic uncertainty, which may increase willingness to adopt targets.

At the moment, it seems most likely that the United States will further develop its inclination to adopt technology-oriented policy solutions. This is the main field where the Bush administration has taken an initiative for further developing multilateral cooperation on mitigation policies, through e.g. the intergovernmental Carbon Sequestration Leadership Forum (CSFL), the International Partnership for the Hydrogen Economy (IPHE), the Methane-to-Markets Partnership, and the Asia-Pacific Partnership on Clean Development and Climate.⁹¹ This issue area could potentially be the one area where multilateral engagement from the United

States is possible until the country is ready to reengage in negotiations on emissions reduction commitments. It could prove to be a path for nurturing cooperation with selected countries and keeping the issue warm.⁹²

Another vital factor for success of a future climate regime is that the EU emissions trading system and the international emissions trading system under the Kyoto protocol turns out to be a success. The fact that the EU system has been successfully planned and that the EU members have managed to reach an agreement does not guarantee that the policy will result in environmental and economical efficiency. In the time perspective pre-2012, however, there is no doubt that the EU emissions trading system will be important as a reality-test for carbon emissions trading – a concept that has never been tested on such a large scale before.

5. Conclusions

We have identified three important shifts of strategies and relations in the international climate negotiations as a result of the United States repudiation of the Kyoto Protocol. First, the EU has become a more pronounced leader in terms of moving the Kyoto Protocol process forward. In collaboration with some of the members of the Umbrella group the EU has rallied around the Protocol, and secured its ratification and entry into force. Second, Russia has changed its strategy from previously supporting the United States, to currently supporting the EU in securing the entry into force of the Kyoto Protocol. Third, the United States has shifted its strategy towards a tacit understanding with the G77/China in not accepting future commitments to reduce GHG emissions, based on paradoxically different reasons.

These shifting strategies are founded in domestic climate policy developments, and we show how interest groups, distribution of costs, and policy preferences of domestic actors have consequences for what happens at the international level. We point to the EU's persistence and leadership in climate policy. Once the wide-ranging EU policy system is set on a policy course, options for altering the course is limited by the complexity, time, and resources involved in reaching a new consensus. The United States, on the other hand, has been bound by strong interest groups that stand to loose from emissions reductions, and a political majority in Congress that is unwilling to accept commitments in terms of emissions reductions that can lead to relative economic loss. China has also shown unwillingness to take on commitments, although the reasoning differs from the US'; to secure economic development and greater fairness for developing countries. In Russia, the delay of ratification of the Protocol was found to be a result of elements like internal institutional struggles, strong economic interests, and external tacit bargaining.

The implications of the shifting strategies for the future dynamics and development of the climate negotiations are found to be, first, that much hinges on the experiences we will gain from seeing international emissions trading of GHGs in practice for the first time under the auspices of the Kyoto Protocol. The success or failure of the Kyoto Protocol will be decisive for the bargaining power of the EU and other Kyoto members in future negotiations. Second, we find that since the United States has

changed its strategy from insisting on developing country commitments to warning against it, the US has entered into a direct opposition to the Kyoto Protocol and future commitments. By entering into bilateral agreements that focus on R&D and technology solutions, the United States can secure more unilateral control over its approach to climate policy than was the case in the Kyoto Protocol negotiations. These kinds of bilateral agreements might be the beginning of an alternative track to international climate cooperation – outside the auspices of the United Nations, or as a parallel track.

After ten years of international negotiations about how to address the climate change problem, the countries of the world have gained substantial experience and understanding for the complexity and political difficulties involved. In that respect, policy solutions for how to address the problem are better known today than in the early 1990s, as a result of the Kyoto Protocol negotiations. The international climate regime is, however, still marred by the constant and recurring dilemmas that cooperation on a global public good incorporate. In that context, it is very hard to identify a common political approach to address the problem as long as the uncertainties involved continue to be high and the issue of fair burden sharing is explicitly/apparently present.

Notes

¹ Bodansky 2001.

² The mechanisms for flexible implementation of the Kyoto Protocol comprise emissions trading (ET), joint implementation (JI), and the Clean Development Mechanism (CDM). The three now called *Kyoto mechanisms* were introduced and agreed upon at different times in the negotiation process; JI was introduced in 1992 at the seventh meeting of the Intergovernmental Negotiation Committee (INC-7) negotiating the UNFCCC (the term was changed into Activities Implemented Jointly (AIJ) at the Berlin conference in March 1995), followed by ET and finally the CDM was accepted at COP3 in 1997 which grew out of a Brazilian proposal for a Fund that should be financed by financial penalties on developed countries being in non-compliance.

³ Grubb et al. 1999.

⁴ The group was formed due to their common interest in emissions trading and joint implementation. However, (in particular) Norway, Iceland and New Zealand have disagreed with the others on some issues.

⁵ The East European countries awaiting accession to the EU gradually approached the EU position as the date for accession approached.

⁶ Aldy et al. 2003.

⁷ The Asia-Pacific Partnership for Clean Development and Climate (APP4CDC) was established in July 2005 at the Association of South East Asian Nations regional summit. The members of the APP4CDC are China, Australia, Japan, India, the US and South Korea. The pact of six nations aims to reduce greenhouse gas emissions through technology and voluntary partnerships (Black 2005). Not much information has been available on the partnership since its establishment, we therefore only mention it here. The countries will cooperate on the development, transfer and sale of clean technologies, to promote the efficient use of fuels. The agreement was welcomed by some as a supplement to the Kyoto Protocol (Brown 2005, Black 2005), despite any mention of mandatory

reduction targets for greenhouse gas emissions. Others see it as an attempt to divert attention away from the Kyoto Protocol by the USA and Australia who have not ratified the Protocol yet. The ministerial meeting scheduled for November in Australia has been postponed until after the COP 11 and COP/MOP 1 in Montreal in December 2005. See Brown 2005 and Black 2005.

⁸ Jacob 2001.

⁹ Even though the United States declared it would not take part in or interfere with the negotiations of the Kyoto Protocol at COP6bis, it shifted strategy towards COP7. The United States, as a party to the Convention, still took part in the negotiations of Convention-related issues and used the opportunity to exert influence indirectly by blocking consensus on Convention-related issues at COP7 to delay the Protocol-related negotiations. (Author's observation.)

¹⁰ Ott 2002.

¹¹ Jacob 2003.

¹² See UNFCCC Countries included in Annex I of the UNFCCC.

¹³ The Protocol entered into force on 16 February 2005 as a consequence of ratification by parties representing 55% of total CO₂-emissions in industrialising countries. Russia ratified the protocol in October 2004.

¹⁴ Jacob 2001.

¹⁵ Even though the United States declared it would not take part in or interfere with the negotiations of the Kyoto Protocol at COP6bis, it shifted strategy towards COP7. The United States, as a party to the Convention, still took part in the negotiations of Convention-related issues and used the opportunity to exert influence indirectly by blocking consensus on Convention-related issues at COP7 to delay the Protocol-related negotiations. (Author's observation.)

¹⁶ Ott 2002.

¹⁷ Jacob 2003.

¹⁸ Putnam 1988, Evans et al. 1993, Agrawala and Andresen 2001.

¹⁹ Underdal 1998; Sprintz and Weiss 2001.

²⁰ Hovi, Skodvin and Andresen 2003.

²¹ European Commission 2003

²² European Commission 2004

²³ Christiansen 2003; Christiansen and Wettestad 2003; Bang, Vevatne, Twena and Lee, 2004.

²⁴ Andresen and Agrawala 2002.

²⁵ Gulbrandsen and Andresen 2004.

²⁶ Christiansen and Wettestad 2003; Bang, Vevatne, Twena and Lee, 2004.

²⁷ Hovi, Skodvin and Andresen 2003; Boehmer-Christiansen and Kellow 2002.

²⁸ Ibid.

²⁹ Bang, Vevatne, Twena and Lee, 2004.

³⁰ In 2002, the greenhouse gas emissions from the 15 Member States of the European Union (EU-15) appeared to have decreased slightly. Emissions are estimated to have been 2.9% lower in 2002 than in 1990. GHG emissions were 1.9 percent points above the Kyoto target path, and 5.1 percent point above the target

of -8 percent for the Kyoto period (2008-12) (Source: http://europa.eu.int/comm/environment/climat/gge_press.htm).

³¹ In a multi-stage approach countries are assigned to one out of three (or four) stages or categories dependent on development level. Countries in the first category have no commitments to limit their emissions, whereas countries in the second category should reduce their emissions relative to GDP. Countries in the third category should achieve an absolute reduction of their emissions (den Elzen et al. 2003).

³² The White House (2001).

³³ Stewart and Wiener 2003, Bodansky 2001, Baumert et al. 2002.

³⁴ The White House 1998.

³⁵ Cline 1992, Nordhaus and Boyer 1999, Shogren and Toman 2001, Stewart and Wiener 2003.

³⁶ Ibid., and Grubb and Yamin (2001) and Svendsen (2003).

³⁷ Kraft 2000, Sprintz and Weiss 2001, Schreurs 2003.

³⁸ Bang et al. 2005, Rabe 2003.

³⁹ Bang 2004.

⁴⁰ Müller 2005.

⁴¹ Christiansen 2003. Firms like Alcan, Shell, BP, Entergy, Ontario Power Generation, and Suncor Energy are members in PCA.

⁴² Tjernshaugen 2005.

⁴³ Gulbrandsen and Andresen 2004.

⁴⁴ Ibid.

⁴⁵ Bang 2004.

⁴⁶ Skjærseth and Skodvin 2003.

⁴⁷ Browne 2004.

⁴⁸ Ibid.

⁴⁹ Bang et al. 2005.

⁵⁰ ENS 2003; Pickler 2003; Bang et al. 2005.

⁵¹ Ott 2002.

⁵² Interview with MoFA official Beijing 2004.

⁵³ See PRC 2004. It was launched on 9th November. The summaries in Chinese and English are available on the China Climate Change Info Net www.ccchina.gov.cn. The full Chinese version (PRC 2004) has been published and was circulated at COP 10.

⁵⁴ PRC 2004.

⁵⁵ Recent studies may call this claim into question. Historical emissions of GHGs from 1890 to 2000 state that China is responsible for as much as one tenth of the global warming in 2000. Dai 2004; Den Elzen et al. 2004. It is nevertheless difficult to know the exact figure due to several chaotic periods in China both before and after 1949.

⁵⁶ Zhang 2000 and WRI 2004 respectively.

⁵⁷ China reduced emissions in a period 1996-1999 (Streets et al 2001), however, this has been debated by experts (Wu et al. 2005). Streets et al. state that China's emissions were reduced in the period while China was experiencing economic growth (decoupling China's emissions from growth). While China's gross domestic product grew by one-quarter between 1996 and 1999, the reported use of coal dropped by over one-fifth See Sinton and Fridley (2000) for a discussion of the potential reasons for the drop in energy and coal consumption.

⁵⁸ It is interesting to note that the head of China's Meteorological Administration, Qin Dahe, stated that China's CO₂ emissions may surpass the US by 2030-2035 (Li 2004). This date is somewhat later than other estimates: IEA expect China's emissions to surpass the US by 2020 (IEA 2000). However, Qin Dahe's statement illustrates that concern about China's global CO₂ emissions exists in China.

⁵⁹ Heavy rains in normally arid areas, sand storms in Beijing, floods in China's major rivers, typhoons, and so on are directly attributable to climate change.

⁶⁰ Tangen and Heggelund 2003.

⁶¹ NDRC 2004.

⁶² The revised measures announced a tax of 2 percent on the projects in the priority areas, i.e. energy efficiency improvement, development and utilization of new and renewable energy and methane recovery and utilization. Afforestation (and possibly reforestation projects) (*zhishu zaolin*) will be levied 2 percent. Heavier tax is levied on HFC and PFC projects (65 percent), and N₂O projects (30 percent). The fees collected from these projects will go into a fund managed by the Ministry of Finance and jointly decided by the NDRC and other relevant ministries, to be spent on climate change activities. See NDRC 2005.

⁶³ Initiatives are funded (together with bilateral donors) by the World Bank, the Asian Development Bank, Canada, United Nations Development Programme, the EU and the World Bank Prototype Carbon Fund (PCF). See Wei, Heggelund, Tangen and Li (2004) for an overview.

⁶⁴ See the IBRD 2004 for more information regarding the potential for CDM projects in China.

⁶⁵ Xinhua 2002.

⁶⁶ Authers' interviews with academics at CASS and officials from NDRC, MoF in Beijing month 2003.

⁶⁷ CSB 2004.

⁶⁸ Authers' interviews with CASS academics Beijing 2003 and 2004.

⁶⁹ China Climate Change Info Net 2004a.

⁷⁰ See, for example, IEA, 2004.

⁷¹ China climate change info net 2004b and CSB 2004 respectively.

⁷² Interview, MoFA official, Beijing 2004.

⁷³ Interview with member of the Norwegian delegation, Ministry of Environment Oslo April 2005.

⁷⁴ WRI 2004.

⁷⁵ For a recent example of 'climate scepticism', see interview with the Head of Roshydromet, Alexander Bedritski, published in www.Strana.RU, 6 January 2003.

⁷⁶ Moe and Tangen 2001.

⁷⁷ Bedritskiy and Metalnikov 1998.

⁷⁸ Moe et al. 2001.

⁷⁹ Press release No. 580, 11 April, 2002, Press Center of the Government of the Russian Federation.

⁸⁰ <http://president.kremlin.ru/text/appears/2003/09/52992.shtml>

⁸¹ http://president.kremlin.ru/appears/2004/05/21/2016_type63380_64688.shtml

⁸² Press release from the Russian government 1 October, 2004, No. 1498 www.government.ru/data/structdoc.html?he_id=102&do_id=1659, accessed 11 October, 2004.

⁸³ Müller 2004.

⁸⁴ Young 2002.

⁸⁵ IISD 2004

⁸⁶ One example of this is the Asia-Pacific Partnership on Clean Development and Climate (APP4CDC), the agreement between China, Australia, Japan, India, the US and South Korea to cooperate on the development, transfer and sale of clean technologies, to promote the efficient use of fuels. (Brown 2005).

⁸⁷ The US rallied support of China and India to block European Union's (EU) efforts to start talks on how to reduce greenhouse gases after 2012, when the Kyoto Protocol on climate changes expires. China and India support US efforts to limit proposed talks next year on implementing current plans to reduce greenhouse gases. India Daily, Dec. 17, 2004, available at: www.indiadaily.com/breaking_news/17015.asp

⁸⁸ See, e.g., Hagem and Holtmark 2001.

⁸⁹ Andresen, Kolshus and Torvanger 2002.

⁹⁰ See a summary of the bill proposal at: <http://lieberman.senate.gov/newsroom/release.cfm?id=238307>

⁹¹ See a summary of President Bush's major climate policy initiatives at: www.whitehouse.gov/news/releases/2002/02/climatechange.html. See also details about technology initiatives at: www.cslforum.org/; www.iphe.net/; www.epa.gov/methanetomarkets/; www.methanetomarkets.org/

⁹² Bang et al. 2005.

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