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International Climate Policy

Priorities of Key Negotiating Parties

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Problems und Conclusions

International Climate Policy: Priorities of Key Negotiating Parties

Since the adoption of the UN Framework Convention on Climate Change (UNFCCC) in 1992, international climate policy has risen in importance like no other environmental policy issue. Every year since then, climate protection was subject to intense negotiations with the 1997 Kyoto Protocol emerging as the first binding climate protection agreement to be reached under international law. In 2009 and 2010, international climate policy efforts are focused on negotiations over a new climate agreement. Although the signatory states to the UNFCCC have decided already in late 2009, before the 15th Conference of the Parties (COP 15) in Copenhagen, to take more time to design the new legal framework, this difficult project will only be accomplished with great effort. The first commitment period of the Kyoto Protocol, which entered into force in 2005, will end in 2012, leaving no international treaty that would commit participating nations to climate mitigation goals. For this reason, efforts are being made to reach further agreement in 2010 on the future of the Kyoto Protocol, on a new, broader treaty under the UNFCCC and on the actual role that the political agreement reached at the Copenhagen summit, the Copenhagen Accord, should play in enabling international progress.

The likelihood of a "gap" in international climate protection obligations is increasing. The timetable for and the content of international negotiations are ambitious, since a large number of countries needs to negotiate on a wide range of issues, some of which being highly complex, within a very short time horizon. Integrating the US into the process turned out to be the largest additional hurdle when the country rejoined negotiations after the change of administration in early 2009, and this situation has not improved in 2010, making an extension of deadlines necessary.

Alongside the formulation and negotiation of an international framework for mitigation, adaptation, technology and finance, the crucial objective given the scientific projections on climate change is to achieve a substantial level of climate protection with immediate effects. A UN treaty creates only a framework for this; the actual details have to be worked out by the individual countries and embodied in their respective national policies. In order to push the climate protection agenda forward, but also to enable the most severely affected countries to obtain aid for adapting to the consequences of climate change, it is important for the European Union (EU) and Germany to anchor climate policy firmly in all areas of domestic and foreign policy.

Given the slow progress at the international level, in particular the clear preference of other countries for a bottom-up, voluntary approach with national pledges, Germany and the EU face a particularly difficult situa-

tion. Based on the scientific findings of the UN Intergovernmental Panel on Climate Change (IPCC), the EU decided in 2005 to limit global warming to two degrees Celsius and wants to see this target included in a new international agreement with binding emission reduction commitments (top down). The EU Member States Italy, Germany, and the UK played a central role as part of the G8 plus 5 in reaching international consensus on the two-degree target, which is now part of the Copenhagen Accord. If this target is to be reached, however, greenhouse gas emissions will have to be reduced to an enormous extent by 2050. These reductions must take place above all in the industrialized countries, which will have to assume historic responsibility for climate change. However, the clear route to achieve this has not been laid out under the Copenhagen Accord. While emission pledges are being made until 2020, adding up to maybe a three-degree temperature rise, no long-term targets for 2050 were included. The emerging economies' withdrawal from signing up to reduction targets for 2050 in November 2009 indicates that China and other large and fast growing countries are afraid of signing up to a target that would undermine their economic development potential.

As of late 2009, the US was not prepared to meet the international climate policy challenge despite having restarted the stalled negotiations. Obama was deterred from doing so by the domestic policy situation, where a clear commitment at international level could potentially endanger passage of national climate legislation. In addition, the United States' negative experiences with the Kyoto Protocol in the domestic political arena contributed to its continued disagreement with the process. China, which had unveiled its first targets to reduce carbon emissions just before the Copenhagen talks commenced, underscored its demand that the US ratify the Kyoto Protocol and other industrialized countries continue their commitments under this treaty. This led to a stalemate in the run-up to the climate summit in December 2009, critically endangering the EU offer to raise its unilateral target from 20 to 30 percent by 2020.

Despite or indeed because of these conflicting interests, Germany and the EU have to reinvent their leadership role and take into account the national interests of other big emitters. On the one hand, the EU and its member states need to adhere to their ambitious goals and do whatever possible to inject fresh élan into further negotiations. High political priority should be given to continuing climate negotiations under the UNFCCC in 2010 and beyond with the aim of producing a new legal framework. However, the scope and character of such a framework should be subject to intensive debate. Not least of all, the United Nations should emerge from this process with a strong mandate. At the same time, the national concerns of the most important negotiating parties must be addressed—especially the US, China, India, and Russia—and attempts have to be made to further integrate Brazil and South Africa; two countries that have become very active in international climate policy in recent years. However, while efforts should not wane at the multilateral level, the weak

results of the Copenhagen climate summit indicate that even more capacity is needed to step up bilateral climate protection initiatives.

This study examines the climate policy priorities of the aforementioned countries and the EU, which together are responsible for the majority of global greenhouse gas emissions. All these countries see themselves as international leaders. This claim does not arise from their engagement in climate policy, but rather from security or economic policy. The studies in this volume underline how domestic policy factors and priorities influence the behavior of these countries in international climate negotiations. For the EU and all of the countries examined here, a key issue will be overseeing and monitoring the implementation of current and future reduction measures. The reporting requirements for greenhouse gas emissions (measurement, reporting, and verification) will be a fundamental condition for building mutual trust between the developing and industrialized countries.

For all of the countries, the energy sector will be the main connecting point for efforts to substantially reduce greenhouse gas emissions. Bilateral initiatives by the EU or Germany should therefore not only focus on a country's particular political needs but on the specific features of its power generation system. The climate policy situations of the EU and the countries examined here, and the conclusions and recommendations that can be drawn from them, can be summarized as follows:

- The EU sees itself as a leader in climate policy, but seems inflexible in responding to dynamic international developments. The EU—even more than its individual Member States—lacked ideas as to how to facilitate the US return to climate policy negotiations, although this was clearly foreseeable, or how to deal with new climate measures from emerging economies (especially China). In 2010, the EU will face numerous internal challenges: it will have to evaluate the outcomes of the Copenhagen conference and reach consensus on deepening its own reduction commitments (from 20 to 30 percent by 2020) as well as on the financial aid committed to developing countries under the Copenhagen Accord. At the international level the EU will need to reinvent its own leadership role and take account of the other UNFCCC members' interests in climate policy making.
- For the US, the process of developing a national climate policy is still underway. This forces international negotiation partners to slow down the UN process and wait for a US climate law to pass. Furthermore, the Obama administration's approach to climate policy depends on its success in other areas such as domestic health care policy. Increased US efforts to claim a leadership role in climate policy could place the EU in a new competitive situation in the medium term, both from an economic and a foreign policy point of view. The US interpretation of the Copenhagen Accord as a big success indicates the different approaches taken. For 2010, Germany and the EU will have to practice a farsighted and non-confrontational strategy toward the US in order not to further diminish the chances of achieving the US support for international

progress and the cooperation with the US on major climate protecting efforts.

- China's future emissions will have a decisive impact on the global climate. The Chinese government is aware of this fact, but economic growth is still the national priority. Efforts to achieve more energy-efficient economic growth have intensified significantly. There is even talk of a "Green Revolution," and this offers a crucial point of departure for cooperation. The Chinese position in the international climate negotiations is geared primarily toward the US position. Contrary to the US, China does not regard the Copenhagen Accord as a potential first draft of a new international agreement. Moreover, the People's Republic views the United Nations as the only legitimate forum for climate policy negotiations. Each of these points makes it unlikely that China and the US will join forces and take over global leadership on climate policy. China joined the BASIC group (including South Africa, Brazil and India) in Copenhagen and this group will be a useful tool for China to bring forward its claims for international progress.
- India is a difficult partner in international climate negotiations. Nevertheless, India has been following all major steps in the run up to Copenhagen, and also supported the Copenhagen Accord. For India, a key demand is that the industrialized countries should propose how to secure Indian power supply in the long term. Future energy needs will otherwise be met mainly with fossil fuels. Negotiation partners will have to offer the prospect of high financial transfers in order to wrest climate policy commitments from India, which continues in 2010 to position itself as partner of the BASIC group. The goal of negotiations with India should include to agree further on international monitoring of its carbon emissions, or at least for India to recognize that such measures help to assess the credibility of the industrialized countries.
- Russia's climate policy interests are determined by purely national cost-benefit calculations. The 2008/2009 financial crisis has substantially increased interest in trading surplus emissions credits under the Kyoto Protocol. The most important lever for future reductions in Russian emissions will be potential improvements in energy efficiency. Linking Russia's climate policy with its foreign energy policy offers Germany unique opportunities to exert a positive influence, while an EU position is hard to achieve. Interactions could arise in a wide range of contexts, ranging from the mutual long-term interest in supplying relatively low-carbon natural gas to projects to modernize the Russian economy. Here focused efforts to integrate Russian economic actors would be needed. The Copenhagen Accord is in line with the Russian (low) interests in international action. However, from a foreign policy point of view Russia takes as references the approaches announced by the EU, the US, and China in order not to become worse off under a new treaty than the two biggest emitters.
- Brazil has traditionally been very important for climate protection and international climate policy. Protection of the Amazon, the "lungs of the

world," is a sensitive issue: proposals from other countries are interpreted as interfering with the country's internal affairs. The introduction of mechanisms to make forest protection financially lucrative is in Brazil's interest. Brazil has also recognized the foreign policy potential of playing an active role in international negotiations, and is utilizing this to an increasing degree. This became evident in the Copenhagen negotiations, where Brazil brought forward high domestic mitigation targets. Moreover, Brazil will host the Rio plus 20 UN summit on Sustainable Development in 2012, which increases even further its interest in international climate policy progress.

- South Africa used to have the reputation of a pro-active climate negotiator. Since the new administration took office, however, this role is being called into question as national interests with close links to the coal industry have gained influence. South Africa has nevertheless committed itself to climate protection and developed scenarios for the future. Having taken on the important role as representative of the African continent in the climate policy negotiations, South Africa will continue to focus on gaining compensation for poorer countries, in particular in the light of the financial commitments made in the Copenhagen Accord. It will be particularly important to concretely define the fiscal transfers and offer targeted technical supports in the energy sector in order to make the South African government stick to its climate protection announcements.

The EU and Germany face major challenges if they want to make substantial progress in the international climate policy negotiations and undertake actions toward the two-degree target. The weaker the climate policy efforts of larger countries are, the greater the effort that will be required of the EU and Germany. A clear signal given by these larger countries on their international priorities, however, would potentially challenge the EU's leadership role and invigorate competition for climate-friendly technologies.

Climate policy has also taken center stage in the international debate on fair distribution and social justice. The emerging countries discussed in this study view these policy areas as a crucial test of whether the industrialized countries will take responsibility for the unequal global distribution of wealth and make efforts to improve the opportunities of people in poor countries. The "overheating" of international climate negotiations that has resulted is difficult to control and reveals how interests have shifted: the countries in this study, aspiring to global leadership, are claiming a voice in multilateral decision-making processes on future courses of development that are closely related to climate policy. They are using climate policy concessions to expand their role in international policy making. On the part of the industrialized countries, assuming responsibility for ongoing climate change would be an important gesture to show that they recognize these emerging global powers and their demands.

There are signs that existing international organizations (such as the World Bank and the International Monetary Fund) and the UNFCCC will

not live up to the expectations invested in them for reconciling the diverse climate policy interests at the global level. Changes need to take place in global governance structures, both in the coordination of national climate protection, for example, through emissions trading systems, and in the near-term and future organization of additional financial aid flows. Here, it is necessary to determine to what extent new institutions are needed. Without integrating these additional multilateral tasks into the existing structures of Bretton Woods and the United Nations, it will be impossible to establish climate protection as an overarching task anchored in all policy areas.

If Germany and the EU want to lead the way in international climate policy, they should consider the following measures:

- Medium to long-term bilateral cooperation to develop low-carbon technologies, particularly in the energy sector or in energy consumption. Potential partners include China, India, Russia, and South Africa. Technologies should focus on low-carbon coal-based carbon generation, renewable energy, and the expansion of energy infrastructures.
- Cooperation on improved data collection on greenhouse gas emissions and on the implementation of reporting requirements from international agreements.
- Commitments by the industrialized countries to provide larger financial transfers with a view to the 100 billion US Dollars announced by 2020 under the Copenhagen Accord, as well as clear institutional allocations of these financial flows. While a wide-ranging reform process is needed involving the existing international organizations (World Bank, IMF, UNEP, UNDP), a realistic approach would rely on incremental steps. The donor countries could coordinate their work in an informal "club" grouping (G8, etc.).
- The expansion of national emissions trading systems, broader imposition of taxes on carbon emissions, and international interlinkage of carbon trading markets. The high revenues this will generate would offset some of the need for financial transfers. Since the emerging countries will probably mainly be selling emissions rights, their integration into an international emission certificates market should be conceptualized in more precise and comprehensive terms.
- Overall, the comparability of international efforts will be key to any further EU policy, as the EU's conditional mitigation approach will need a basic understanding of other countries efforts. The internal justification of any further steps hinges on other countries' actions—whether or not they are part of international announcements or national ambitions.

The International Climate Policy Negotiations: Objectives, Themes, and Prospects for Success

Susanne Dröge

International climate policy faces enormous pressure for action. Climate policy efforts in 2009 were focused entirely on the United Nations (UN) climate conference in Copenhagen. Even before the UN summit, it was clear that the agreement needed would be impossible to reach by late 2009 and that the UN process would have to be accelerated in 2010 to conclude an internationally binding agreement. A new treaty under the United Nations Framework Convention on Climate Change (UNFCCC) should fill the gap in commitments after 2013, and should create a broad legal framework for international climate policy jointly with or integrating the Kyoto Protocol. The 194 signatories to the UNFCCC negotiate on two major themes: the future of climate protection and on measures for adapting to climate change. In these areas, numerous technological, financial, and legal questions still remain unresolved. As no strict global agenda on further negotiations was reached in Copenhagen, pressure to clarify procedures is high.

The sense of urgency arises primarily from scientific findings on the extent to which human beings have already accelerated climate change or will do so in the near future unless substantial progress toward climate protection is made. Findings to this effect have been published in reports by the Intergovernmental Panel on Climate Change (IPCC) and in other studies over the last several years.[1] The major polluters—the US and China—play a central role. Both of these countries are not just the largest emitters of greenhouse gases (GHG) worldwide; their participation in all levels of international cooperation will be crucial for future progress in many areas: in substantial climate protection, in supporting a multilateral agreement under the auspices of the UN, and in representing the interests of poorer countries. This constellation alone presents the EU, as the traditional leader and intermediary for international climate policy, with new challenges.

Other major negotiation partners that are discussed in this study also have to meet national and regional expectations while at the same time living up to their claim to be serious partners in international negotiations: India, Brazil, Russia, and South Africa. Integrating these countries' climate policies into their foreign policy agendas and national develop-

1 See Intergovernmental Panel on Climate Change (IPCC), *Fourth Assessment Report*, 2007; Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen (WBGU), *Welt im Wandel—Sicherheitsrisiko Klimawandel*, (Berlin, Heidelberg, 2007); Center for Naval Analysis (CNA), *National Security and the Threat of Climate Change*, (Alexandria, VA, 2007); Nicholas Stern, *The Economics of Climate Change*, (London, 2006), Executive Summary, http://www.hm-treasury.gov.uk/d/Executive_Summary.pdf.

ment interests will be absolutely decisive for future international efforts by the EU and Germany in this policy field.

Integrating climate policy into foreign policy: Key aspects

For the key negotiating parties discussed in this study, the climate policy negotiations under the UNFCCC are part of their foreign policy agendas but to widely differing degrees. The following questions were central to the individual country studies:

What interests exist in substantial climate protection and other core questions in the international climate policy negotiations? Which issues stand out and how much does each country contribution to global pollution? What role did each country play in previous UN climate policy negotiations and does this suggest probable outcomes of future negotiations?

What role does each country play as a global player? How does each nation's self-conception translate into its foreign policy, and how does its international climate agenda fit into its understanding of its own role? What external demands does each country face?

How important are climate policy issues such as energy provision, low-carbon growth, or compensation for climate damage by the international community in domestic policy?

How could new resolutions be passed at the UN level and potential bilateral initiatives with Germany and the EU impact the country's domestic policies and cooperation on international climate policy?

The international climate policy negotiations

International climate policy has gained importance like no other environmental policy issue since the signing of the UNFCCC in the year 1992. The annual negotiations taking place under the UNFCCC led to an initial climate protection agreement in 1997—the Kyoto Protocol—which is aimed at limiting emissions of GHG in the industrialized countries.

Under the Kyoto Protocol, which entered into effect in 2005 after ratification by Russia, the members of the UNFCCC are divided into two groups: those that have to reduce GHG (Annex B parties: industrialized countries and economies in transition[2]), and those that have not entered into any mitigation commitments (developing and emerging economies). The Kyoto Protocol only specifies low reduction targets, namely an average 5.2 percent reduction in GHG emissions below 1990 levels for the period

2 Annex B countries are listed under the Kyoto Protocol and refer to countries that have agreed to a target for their GHG emissions, including all the Annex I countries (as amended in 1998) but Turkey and Belarus. See http://unfccc.int/kyoto_protocol/items/3145.php (accessed March 9, 2010).

2008 to 2012 (first commitment period).[3] The Ad Hoc Working Group for Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) is responsible for the continued negotiations on further emission reductions after 2012.

Another central challenge is to integrate large emerging economies with rising GHG emissions (particularly China and India) into global emissions reduction efforts. At the 13th Conference of the Parties to the UNFCCC in Bali in 2007, a parallel process to the Kyoto Protocol was set in motion. The Ad Hoc Working Group on Long-Term Cooperative Action (AWG-LCA), aims at forging a global agreement in the areas of emissions reductions, adaptation to climate change, and technological and financial transfers, and to formulate a shared vision for the 194 signatory states. Furthermore, this new process has pointed the way for the US to become involved in international climate policy, after rejoining UN negotiations in 2009.[4]

For the 15th Conference of the Parties in Copenhagen in late 2009 it was planned not only that the Kyoto Protocol commitments would be expanded but also that an even more comprehensive treaty would be adopted. This would have established an extension of climate protection and further obligations well before the first Kyoto Protocol commitment period expires at the end of 2012. However, both negotiation tracks (Ad Hoc Working Groups) had to be prolonged until the 16th Conference of the Parties (COP16) in 2010 in Cancun, Mexico, because in November 2009 the plan to reach a new legal agreement in Copenhagen was abandoned based on the lack of time and consensus. In Copenhagen, instead, a political agreement, the Copenhagen Accord, was added to the negotiations for 2010.

Accelerated developments in climate policy since 2006

In the years 2007 to 2009, negotiations on a new international climate treaty have unfolded with extraordinary speed. Even by late 2006, at the 12th Conference of the Parties to the UNFCCC in Nairobi, there were complaints of a stalemate in negotiations under the Convention, and the only small progress noted was on measures to adapt to climate change. In 2007, the page turned. A series of factors contributed to this.

- In 2007, the UN Intergovernmental Panel on Climate Change (IPCC) submitted its Fourth Assessment Report. After a long struggle between the emerging and industrialized countries, it recognized the anthropogenic contribution to climate change, based on scientific research. Since then, the pressure on policy makers to tackle this problem has increased.
- The Bush administration, which had withdrawn from the Kyoto process in 2001, agreed at the G8 Summit in Heiligendamm in 2007 that "the UN climate process is the appropriate forum for negotiating future

3 A list of the reduction commitments is found on the website of the Framework Convention on Climate Change under http://unfccc.int/kyoto_protocol/items/3145.php.

4 See the chapter by Stormy-Annika Mildner and Jörn Richert (pp. 38ff) in this study.

global action on climate change," and that climate change poses a serious threat to humankind.[5] This change of course was brought about not least by a series of studies detailing security policy issues resulting from climate change.[6] Moreover, a few US states have begun enacting their own climate change policy measures. Towards the end of then-President Bush's term these pressures became too strong to resist. Bush even attempted to gain political traction from an about-face in climate policy by launching initiatives like the Major Economies Forum (MEF). When the new Australian Premier Minister Kevin Rudd ratified the Kyoto Protocol immediately after taking office in 2007, another country that had previously taken the US position changed loyalties. In 2009, the Obama administration finally began integrating US climate policy into international processes and has even taken a leadership role.[7] Nevertheless, the Kyoto Protocol has still not been ratified by the US.

- New dynamism has also been evident in some emerging economies, which have given up their traditionally passive role in favor of a more active one. This is particularly true of China. While in 2007, the People's Republic had not put forward a proposal for the 13th Conference of the Parties to the UNFCCC, where the first steps were to be made toward a new global treaty in 2012, the Chinese attitude changed in the course of 2009. China got involved in preparations for the Copenhagen conference and even announced reduction targets.[8] Countries like South Africa, Mexico, and South Korea have, with great effort, carved out positions for themselves in the international process, making proposals that go beyond purely national interests.[9]
- As early as the 2005 Spring Summit, the EU heads of state agreed on the target of limiting global warming to an average of less than two degrees Celsius above preindustrial levels. For the industrialized countries, this means reducing their emissions of carbon dioxide (CO_2) and other GHG by 25 to 40 percent below 1990 levels, and by 2050 by as much as 60 to 80 percent.[10] The EU has reiterated its commitment to these targets and therefore consistently increased pressure on its negotiation partners to establish the two degrees target in a new international treaty in Copenhagen. It has also proposed emissions reduction targets for the developing countries, although not relative to a base year but to a "business as usual" scenario, that is, the rate of emissions growth based on the probable future economic growth in these countries.[11]

5 G8 Heiligendamm, *Chair's Summary*, June 8, 2007, http://www.g-8.de/Webs/G8/EN/G8Summit/SummitDocuments/summit-documents.html.

6 CNA, *National Security and the Threat of Climate Change* [see n. 1].

7 See the article by Stormy-Annika Mildner and Jörn Richert (pp. 38ff) in this study.

8 See the article on China's role by Gudrun Wacker (pp. 54ff) in this study.

9 See the article by Jörg Husar on South Africa in this study (pp. 98ff).

10 See Council of the European Union, European Council Meeting, Brussels, March 22–23, 2005, *Presidency Conclusions*, 7619/1/05 REV 1, CONCL 1.

11 See EU Commission, *Towards a Comprehensive Climate Change Agreement in Copenhagen*, Commission Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Brussels, January 28,

Most importantly for the period after 2007 was the Bali Action Plan, adopted in late 2007 at the 13th Conference of Parties to the UNFCCC, in which all the member nations declared their intention to work towards a new climate change regime. This was to complement but not to replace efforts to renew the Kyoto Protocol.[12]

Negotiations in various forums

After the US withdrawal from the Kyoto Protocol in 2001, negotiations on international climate policy took place not only on the UN level but also in a variety of smaller forums such as the G8, the G8 plus 5, and the Major Economies Forum (MEF).[13]

It has become apparent over the course of the Kyoto negotiations in the 1990s and even more so in the very recent past that climate protection and the consequences of climate change constitute major policy challenges whose scale and urgency are increasingly beyond the scope of the UNFCCC adopted in 1992 in Rio de Janeiro. Climate policy is therefore being discussed in other, smaller forums.

G8/G8 plus 5: Climate protection was first identified as a concern for the world's leading economic powers by the UK during its G8 presidency in 2005. At the G8 Summit in Gleneagles, it was agreed that dialog would take place on climate change, clean energy, and sustainable development.[14] Since then, climate and energy issues have had a prominent place on the policy agenda of the G8. In Heiligendamm in 2007, when the "outreach" countries Brazil, China, India, Mexico, and South Africa were invited to participate in the G8 process, a breakthrough was achieved under the German G8 presidency by bringing the US into climate policy negotiations under the UN. In the subsequent years as well, the G8 plus 5 have made further preparations for Copenhagen, most recently in 2009 in L'Aquila, where the heads of state and government confirmed the two degree target.

Major Economies Forum (MEF): In 2007, the EU increased pressure to achieve a new international climate agreement. That same year, the US administration launched the Major Economies Forum, which originally comprised the world's twenty largest emitters of greenhouse gases. The US government's intention in doing so was to withdraw from the UN process while at the same time gaining a commitment from all the major emitters to address climate protection. The Obama administration took over this forum in 2009 under heavy time pressure due to its intention to rejoin

2009, COM(2009)0039 final; see also the article by Oliver Geden and Martin Kremer in this study (pp. 30ff).

12 See UNFCCC, *Bali Action Plan*, http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=3.

13 The members of the G8 plus 5, the G20, and the MEF are listed in Table 1 (p. 16).

14 See The Gleneagles Communiqué, *Climate Change, Energy, and Sustainable Development*, www.unglobalcompact.org/docs/about_the_gc/government_support/PostG8_Gleneagles_Communique.pdf.

international negotiations. The MEF has developed into an important forum, but here as well, the progress that had previously been achieved lost momentum in the run-up to the UN climate conference in December 2009.

Table 1
Greenhouse gas emissions of the G20 countries in 2005

Rank		*THG emissions (in mill. metric tons)*	*World share (in %)*	*Member of G8 plus 5*	*Member of MEF*
1	China	7.219.2	19.1	x	x
2	US	6.963.8	18.4	x	x
3	EU-27	5.047.7	13.4		x
4	Russia	1.960.0	5.2	x	x
5	India	1.852.9	4.9	x	x
6	Japan	1.342.7	3.6	x	x
7	Brazil	1.014.1	2.7	x	x
8	Germany	977.4	2.6	x	x
9	Canada	731.6	1.9	x	x
10	UK	639.8	1.7	x	x
11	Mexico	629.9	1.7	x	x
12	Indonesia	594.4	1.6		x
13	Italy	565.7	1.5	x	x
14	France	550.3	1.5	x	x
15	South Korea	548.7	1.5		x
16	Australia	548.6	1.5		x
17	South Africa	422.8	1.1	x	x
18	Turkey	393.2	1.0		
19	Saudi Arabia	374.3	1.0		
20	Argentina	318.3	0.8		
	G20 total (excl. EU)	27.647.7	73.2		
	Rest of the world	10.119,1	26.8		

Source: author's calculations, data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009), internet pages of the G20, G8 and the MEF.

G20: This most recent grouping of the world's major economic powers[15] was established with the primary goal of strengthening international financial market regulation after the financial crisis of 2008. The G20 has not engaged in negotiations over international climate policy. Climate advocates and scientists in particular still hold out hope that this forum will pay adequate attention to climate protection in its decisions on world economic policy. The "global green recovery" has been the subject of

15 See Table 1: The EU is a member of the G20, but countries like Germany, the UK, and France are also listed separately. This results in 19 individual countries plus the EU-27.

various initiatives and studies.[16] Although several countries including South Korea have declared their intention to invest mainly in measures with positive impacts on the climate and the environment, it is not yet possible to determine the extent to which they have actually implemented these measures.

For the poorer developing countries, the small island development states (SIDS), and also emerging economies like China, the UN remains the only acceptable forum for international decisions on climate protection. The industrialized countries, on the other hand, see informal "club-style" groupings as an appropriate framework to discuss individual issues with a smaller number of countries and thus jump-start the long and often arduous UN negotiations. Ultimately, however, these groupings are unable to conclude a legally binding agreement that involves all UN members.[17] In the future, it would be useful if such "clubs" were used mainly to support the UN negotiations and to sort out the priorities.

Climate protection and climate change

The Fourth Assessment Report of the IPCC published in the year 2007 shows the consequences of unchecked increases in GHG emissions but also demonstrates possibilities to curb this development. To mitigate climate change, global GHG emissions would have to decrease considerably by 2050 after reaching their peak in the next ten years. This is especially crucial because CO_2 and other gases remain in the atmosphere for decades and thus affect the environment over an extended period of time. To limit average global warming to two degrees Celsius, CO_2 emissions would have to be reduced by at least 17 gigatons[18] by the year 2020 relative to unchecked carbon dioxide emissions. With an unrestrained increase in emissions, it is predicted that global emissions will reach 61 gigatons by the year 2020.[19] For comparison: in 2008, global CO_2 emissions amounted to around 30 gigatons.[20]

Figure 1 (p. 18) shows the share of global CO_2 emissions in 2005 for each of the countries examined in this study. China and the US together were responsible for 40 percent of global carbon dioxide emissions, followed by

16 See Ottmar Edenhofer and Nicholas Stern, *Towards a Global Green Recovery. Recommendations for Immediate G20 Action*, Report prepared on behalf of the German Foreign Office, April 2, 2009, http://www.pik-potsdam.de/members/edenh/publications-1/global-green-recovery_pik_lse; Nick Mabey, *Delivering a Sustainable Low Carbon Recovery*, Proposals for the G20 London Summit, E3G, March 2009, http://www.e3g.org/images/uploads/E3G_Delivering_a_Sustainable_Low_Carbon_Recovery.pdf.

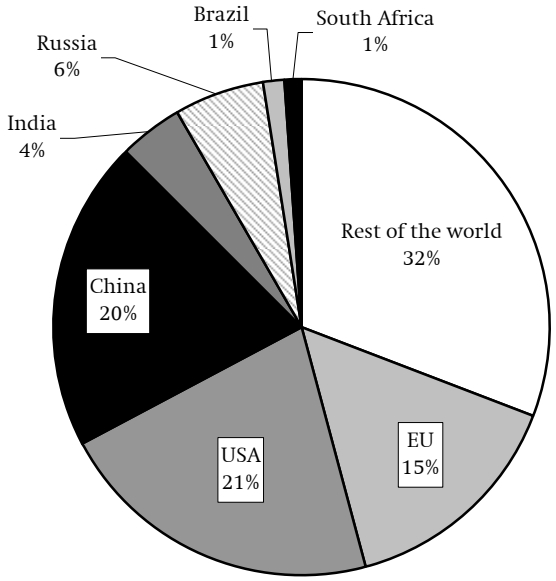
17 See Ulrich Schneckener, *Globales Regieren durch Clubs*, (Berlin: Stiftung Wissenschaft und Politik, August 2009), SWP-Aktuell 47/2009.

18 One gigaton equals one billion tons.

19 IPCC, *Fourth Assessment Report* [ibid., n. 1]; Project Catalyst, *Towards a global climate agreement—Synthesis paper*, (Brussels, 2009).

20 See Hans-Joachim Ziesing, "Differenzierte Entwicklung bei insgesamt weiter steigenden weltweiten CO_2-Emissionen," *Energiewirtschaftliche Tagesfragen*, (2009) 9, 56–65.

Figure 1
Share of individual countries and of the EU-27 in global carbon dioxide emissions, 2005



Source: author's diagram; data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009).

the EU with 15 percent. The category "rest of the world" (32 percent) includes the larger OECD countries such as Japan (5 percent), Canada (2 percent), South Korea (1.7 percent), and oil-rich countries such as Iran (1.6 percent) and Saudi Arabia (1.2 percent).

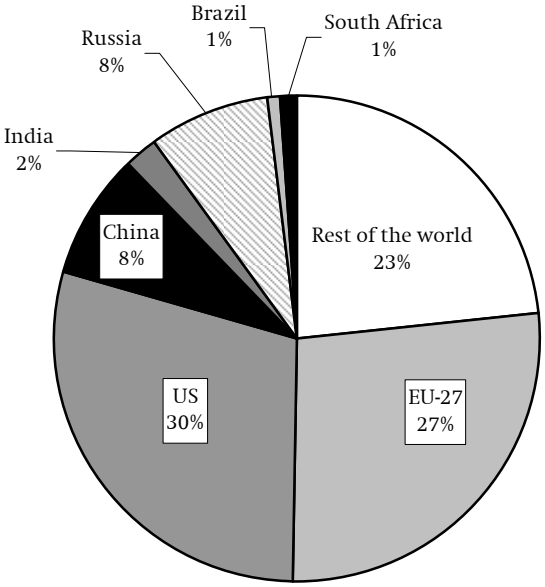
The climate policy negotiations focus, however, on historical emissions. Figure 2 shows the contributions of the countries analyzed in this study (EU, US, China, India, Brazil, Russia, and South Africa) to the CO_2 emissions currently found in the earth's atmosphere. The EU and the US have produced by far the highest emissions.

This historic perspective is largely consistent with the results that can be derived from per capita emissions calculations (Figure 3, p. 20) in metric tons of CO_2. There are striking differences between the seven countries and the global average once 2005 emissions levels are examined relative to population size.

In the EU, per capita CO_2 emissions in 2005, at 8.4 metric tons, were twice as high as the global average (4.3 metric tons of CO_2), while there were differences among the various EU Member States.[21] China's rate coincides with the global average, while the US ranked highest in per capita

21 In 2005, the average in Germany was 10.6 metric tons of CO_2 per capita, in Poland 8.3 metric tons, in Romania 5 metric tons. Calculated based on Ziesing, "Differenzierte Entwicklung" [ibid., n. 20], Table 4, on the emissions data of the EU-27 and their respective population figures.

Figure 2
Cumulative carbon dioxide emissions, 1850 to 2005 (in millions of metric tons), Share in global emissions by country



Source: Data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009). Rest of the world: especially other OECD countries.

CO_2 emissions. It is also striking that South Africa only had a global share of one percent in 2005 (Figure 1), but with 7.2 metric tons ranked just below the EU in per capita emissions.

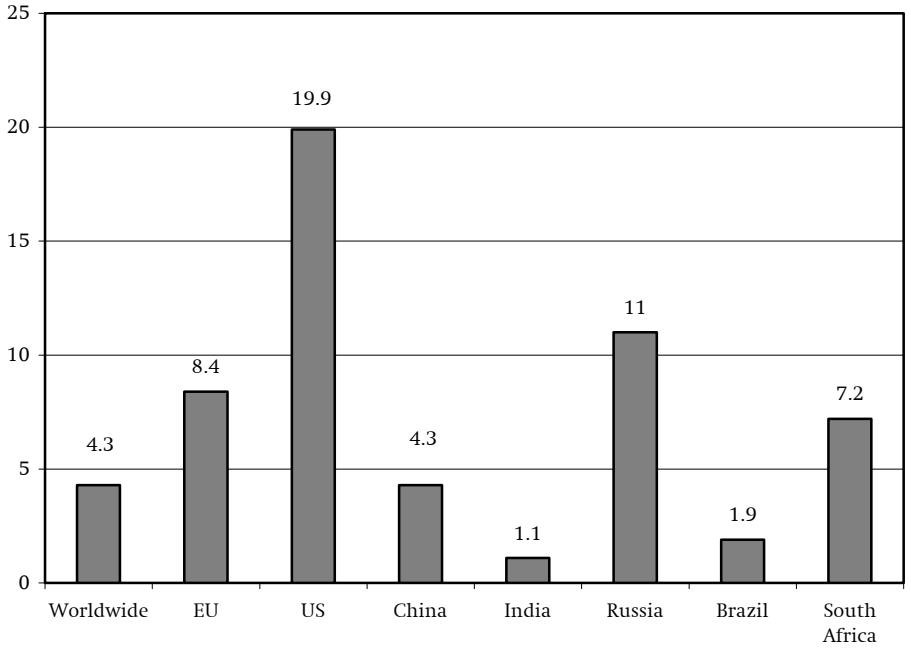
In the climate policy negotiations, the dividing line in the conflict over targets for reducing GHG is defined by these figures. The G77, developing countries together with the emerging economies, have called for the industrialized countries to live up to their historic responsibility by taking the lead on emissions reductions. At the UNFCCC preparatory meeting for Copenhagen in November 2009, this became clear once again: with the support of representatives of the G77 countries, the representatives of the African Group[22] refused to take part in further negotiations unless concrete reduction figures for the Kyoto Protocol after 2012 were submitted, taking the scientific findings as their point of orientation.[23] The Kyoto Protocol incorporates the principle of historical responsibility, applying

22 The African Group is comprised of 50 African countries. In the climate negotiations, they emphasize that they are particularly affected by the impacts of climate change. They also advocate the reduction of poverty and better access to resources. See Algeria on behalf of the African Group, *Key Elements of LCA [Long-Term Cooperative Action] Negotiation Text*, final version, April 8, 2009, http://unfccc.int/files/meetings/ad_hoc_working_groups/lca/application/pdf/african_group_submission_lca_april_2009.pdf.

23 See "Summary of the Barcelona Climate Change Talks, November 2–6, 2009," *Daily Bulletin* (International Institute for Sustainable Development Reporting Services), http://www.iisd.ca/climate/rccwg7.

binding reduction commitments only to the industrialized countries. The industrialized countries, on the other hand, have demanded—also with reference to scientific findings—that the major emerging economies take on future reduction commitments as well since they could potentially increase their emissions substantially. An opportunity to expand mitigation efforts beyond the group of countries in the Kyoto Protocol was created with the Bali Action Plan. It provides for negotiations on mitigation actions by the emerging and developing countries as well.[24]

Figure 3
Per capita carbon emissions in the year 2005 (in metric tons)



Source: author's diagram; data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009).

If the emerging economies set emissions reduction targets, it will be crucial to link these with the figures on per capita consumption or to take into account forecasted growth rates (compared to "business as usual" scenarios) so that these countries do not view climate protection as endangering their development potential. The emerging economies have rejected the idea of absolute reduction targets like those in the industrialized countries, citing their lack of technologies and the already high historical emissions levels of the industrialized countries.[25]

The large majority of global CO_2 emissions comes from power generation, the use of fossil fuels in the transport sector, land use, and energy use

24 See UNFCCC, *Bali Action Plan* [ibid., n. 12].

25 See especially the position of India or China on this question, as discussed in the articles by Christian Wagner (pp. 67ff) and Gudrun Wacker (pp. 54ff).

to heat or cool buildings.[26] Figure 4 (p. 22) summarizes emissions sources for 2005. They are classified according to a standardized system into power generation and heating, industry, transport, and additional processes.[27] In any case, for substantial climate protection it is vital that the policy measures are designed according to the most important emission sources. To develop more environmentally friendly investment options in the future, particularly in the energy sector, an international framework has to be created to facilitate technology transfer and financial assistance to developing and emerging economies.

The agenda of international negotiations and the Copenhagen Accord

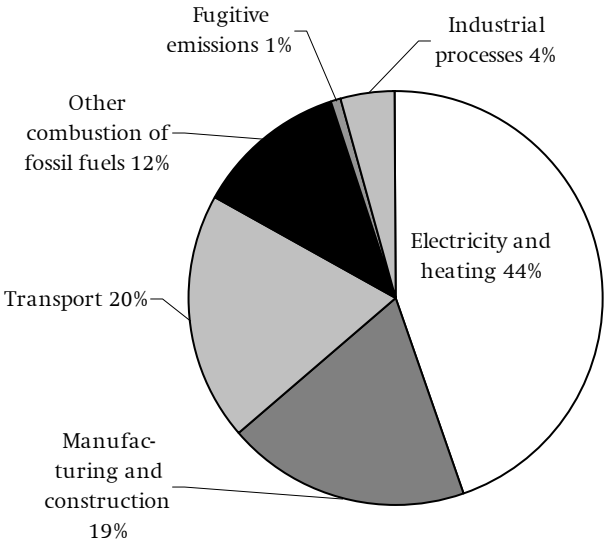
A new regime negotiated by the signatory countries to the UNFCCC based on the Bali Action Plan covers four areas: emissions reduction, adaptation to unavoidable climate change, financial and technological support. Figure 5 (p. 24) shows what the structure of a future climate regime could look like.

This structure contains the four negotiation areas of the Ad Hoc Working Group on Long-Term Cooperative Action (AWG-LCA). For all of the reduction measures for which individual countries can be recognized (national appropriate mitigation actions, NAMAs), a procedure is to be put in place for monitoring, reporting, and verification. Compulsory monitoring and reporting is also planned for adaptation to climate change. The relationship between a potential new agreement and the existing Kyoto Protocol remains unclear. This is especially true of the mitigation commitments that the industrialized countries would have to make under both regimes. While the Copenhagen Accord includes a number of features of this architecture, it lacks the full support by UNFCCC members and does not set out a binding roadmap for future actions. Rather, the Accord represents a voluntary approach for mitigation pledges until 2020, it includes

26 See also the information on the sectors of some countries in this study.

27 The sectors mentioned are excerpted from the Common Reporting Framework (CRF) used by the UNFCCC. The CRF defines the sectors I. All Energy (Combustion and Fugitive), II. Industrial Processes, III. Solvent and Other Product Use, IV. Agriculture, V. Land Use Change and Forestry, VI. Waste, VII. Other.
In the interests of comparability, the figures only present the first two sectors: I. carbon emissions in the energy sector (broken down in the CRF into a. "Electricity and heating," b. "Manufacturing and construction," c. "Transport," d. "Other combustion of fossil fuels"—that is, emissions that are not taken into account under a. to c.—as well as e. "Fugitive emissions" caused, for example, by mining operations or burning of natural gas) and II. The sector "Industrial processes," that is, all carbon emissions that are generated as a direct by-product of industrial production and are not energy-related, for example in the iron, steel, aluminum and cement manufacturing. For a detailed discussion of the CRF see National Greenhouse Gas Inventories Programme, *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories. Reporting Instructions*, Vol. 1, 1997, http://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ri.pdf.

Figure 4
Global carbon dioxide emissions by sector, 2005



Source: author's diagram; data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009).

Table 2
Issues listed in the Copenhagen Accord

Issues	*Included?*
Two degrees target	Yes
2020 mitigation targets by Annex I parties; pledges by non-Annex-I parties	Yes, voluntary, to be listed by 31 January 2010
2050 mitigation targets, all parties	No
"Peaking" of GHG emission paths	Yes, without time frame
Common but differentiated responsibilities	Yes
Adaptation	Referenced
Market-based policy tools	Referenced
Financial assistance, short term	Yes, $US 30bn by 2012
Financial assistance, long term	Referenced, $US 100bn by 2020
Technological cooperation	Yes
MRV for nationally financed NAMAs	Yes, w/o international control, biannual reporting
MRV for NAMAs with international support	Yes, with international registry
REDD plus	Yes
Implementation control of Accord	By 2015

Source: UNFCCC, *Copenhagen Accord*, December 18, 2009, http://www.unfccc.int.

financial commitments until 2012 and a mix of voluntary and mandatory action on measurement, reporting, verification (MRV) depending on the source of funding (see table 2 for details of the Accord).

The Copenhagen Accord falls short of the key aspects which have been regarded as crucial for a reliable climate policy for the long run under the UN, in particular the reduction targets by 2050. However, the Copenhagen Accord also represents the willingness of a majority of countries to move forward on climate policy, and the preferred route, given the lack of agreement on a number of major issues.

Critical issues

Negotiations on the Kyoto Protocol and a new treaty will need to address several highly critical issues. These include the relationship between the Kyoto Protocol, which is binding under international law, and a new, comprehensive agreement as well as the role for the Copenhagen Accord. The Kyoto Protocol offers the legal framework for climate protection efforts by the industrialized countries up to the year 2012. It obligates these countries to continue negotiating—the Kyoto Protocol does not have an expiration date. The developing and emerging economies are pushing to adopt a second commitment period (Kyoto II), the only means, in their view, for the historic polluters to fulfill their responsibility. They reject combining these two areas of negotiation. The greatest challenge for Kyoto II, however, is that the US, which withdrew from this process in 2001, does not plan to rejoin negotiations.

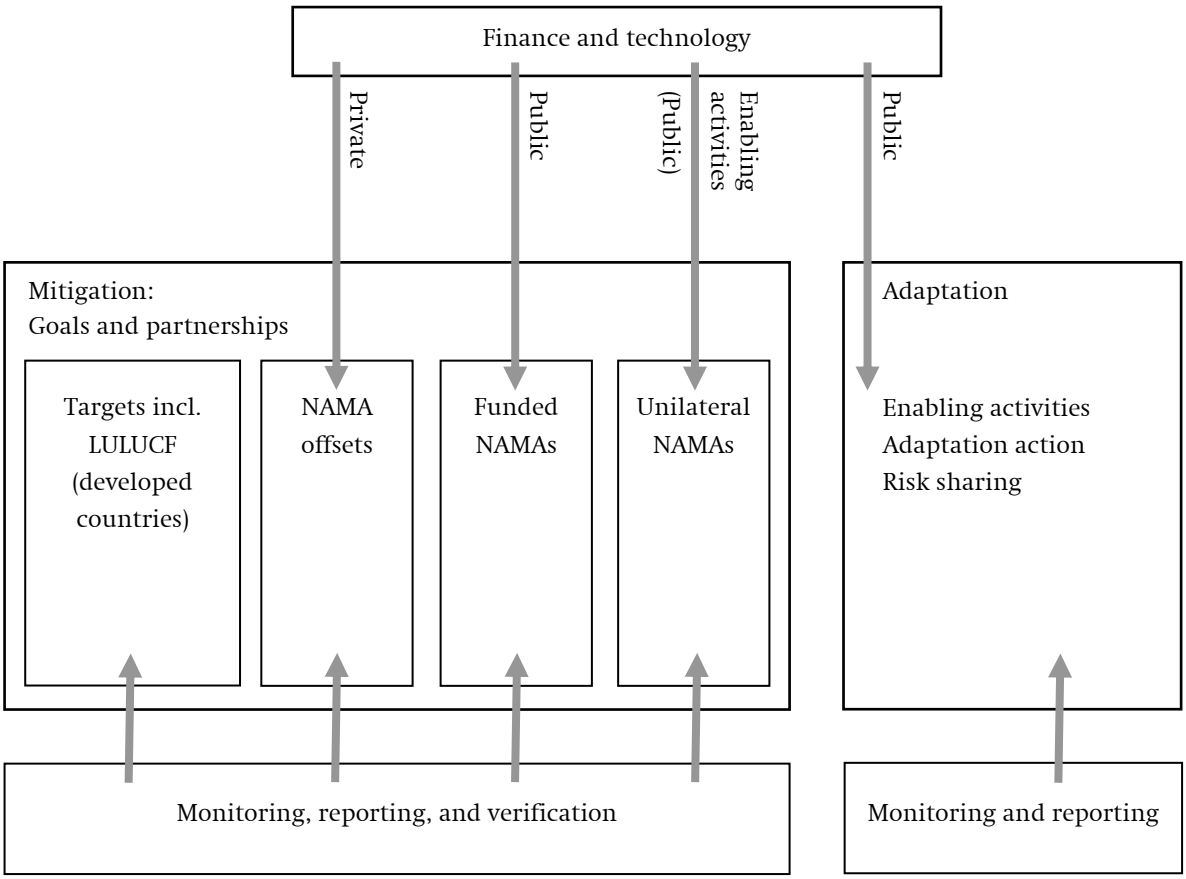
The figures for mitigation targets by 2020 provided by the industrialized countries in fall 2009 and again in the pledges made under the Copenhagen Accord in 2010 are far below the levels needed to reach the two degree target.[28] This would fail to fulfill the EU's renewed precondition for raising its own reduction targets, bringing its unilateral target from a 20 percent emissions reduction compared to 1990 rates up to 30 percent if other industrialized countries undertake similar efforts.[29]

For the four main areas of negotiation for a new agreement, the situation looks equally complex. Except for an agreement on collective funding for measures to reverse deforestation, there is an almost total lack of consensus.

28 According to evaluation of the Annexes 1 and 2 of the Copenhagen Accord, the pledges made by February 2010 add up to 18 percent at the lower and 25 percent at the higher end. See http://www.unfccc.int and European Commission, International climate policy post-Copenhagen: Acting now to reinvigorate global action on climate change, Commission Staff Working Document, SEC(2010) 261 accompanying COM(2010) 86 final, Brussels, 9.3.2010

29 See EU Commission 2010, *International climate policy post-Copenhagen: Acting now to reinvigorate global action on climate change*, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2010)86 final, March 9, 2010.

Figure 5
Proposed architecture for a new climate agreement after 2012



Source: adapted from the presentation by A. Howard, UNFCCC Secretariat, 9th Workshop of the International Energy Agency on "Greenhouse Gas Emissions Trading," Paris, September 14, 2009; LULUCF: Land use, land-use change and forestry; NAMA: Nationally Appropriate Mitigation Action.

Reduction targets, base years, country categories

Proposals for emissions reductions under a new agreement mainly focus on *long-term* goals, which basically seek to achieve the two degree target.[30] While the two degree target has been included in the Copenhagen Accord, the necessary reduction targets for 2050 were not agreed upon. The pressure exerted on emerging economies in 2009 to agree to 2020 targets under a new regime was partly successful—at least a number of announcements were made and entered in the Annex to the Copenhagen Accord. Aside from this disagreement over target dates, there is no agreement on which *base year* to use. The EU insists on the year 1990; other countries that

30 Also the Major Economies Forum met at the 2009 G8 plus 5 Summit in L'Aquila, where they produced a common declaration on the two degree target. See the *Declaration of the Leaders*, Major Economies Forum on Energy and Climate, July 9, 2009, www.whitehouse.gov/the_press_office/Declaration-of-the-Leaders-the-Major-Economies-Forum-on-Energy-and-Climate.

will not achieve their targets under the Kyoto Protocol (Canada, Japan) are arguing for 2005 as the base year, which the US also plans to use in its national legislation. Different *target concepts* are proposed: China rejects absolute targets and argues instead for relative targets based on economic performance (meaning that with high economic growth, emissions increase in absolute terms), while India insisted on the per capita emissions target. The Copenhagen Accord reflects these differences, and in its Annexes different base years and types of targets can be found.

The Kyoto Protocol divides the signatory countries into two groups: the industrialized countries and economies in transition that have to reduce emissions, and the emerging economies and developing countries that are not subject to any commitments. The US in particular has called for this division to be lifted while China firmly rejects this idea. Without differentiated commitments, however, a new agreement will not succeed in achieving substantial climate protection and to take into account the common but differentiated responsibilities.

Achieving and crediting emissions reductions

A very critical question is how to evaluate NAMAs by emerging and developing countries that are not willing to commit to legally binding targets. The key issue here is to achieve comparability among the efforts of different countries with differing national conditions and policies. Moreover, national efforts (e.g., investments in energy efficiency or national carbon taxes) should take place outside the set of projects that are already covered by the Kyoto mechanisms or that provide compensation (offsets) for emissions in other countries (e.g., forest protection). There may be a risk of double counting here.

It remains to be determined what role the flexible mechanisms established since the Kyoto Protocol—emissions trading, Clean Development Mechanisms and Joint Implementation (both provide credit for reductions achieved abroad)—should play in any future agreement. The EU has proposed expanding the emissions trading scheme to all of the OECD countries by 2015 and to the non-OECD countries by 2020, additionally and as an interim approach the EU suggests for more advanced developing countries carbon markets for specific sectors only. Credits could then be recognized under the EU emissions trading scheme.[31] Also under consideration is a reform of the Clean Development Mechanism, which is based on projects in developing countries initiated by companies from industrialized countries. These projects need to be evaluated and approved through elaborate procedures. In particular, approvals should be provided more quickly through previously defined programs (e.g., Energy Investment Programme).

31 See EU Commission, *2009 Communication on Copenhagen Negotiations*. For detailed information on these decisions see the website of the Directorate-General for the Environment: http://ec.europa.eu/environment/climat/climate_action.htm; and EU Commission 2010, ibid., n. 29.

Adaptation measures and financing

A growing demand for financing on the part of the developing countries will arise from adaptations to climate change in such areas as flood protection and cultivation methods in agriculture. In 2007, a World Bank fund was created for this purpose. A much larger proportion of future costs will result from measures that these countries undertake to reduce emissions. Estimates on the required financial resources range between 55 and 100 billion Euros annually up to 2020.[32] This sum cannot be provided solely through public funds. The EU estimates that up to 50 billion Euros could be provided through public funds, but the rest would have to be provided by the private sector. Private investment would require, above all, a strong carbon price signal that could be created by expanding carbon dioxide emissions trading and increasing carbon taxes.[33] While the Copenhagen Accord took up the short-term financial assistance adding up to $US 30 bn, with major commitments made by the EU and the US, it only indicates that the sum of US 100 bn should be mobilized by 2020.

Despite the commitment under the Copenhagen Accord, the major donor countries are moving slowly. Although the EU and the US have offered transfers until 2012, the actual delivery of fast-track finance still needs to be specified. This is subject of further national and international consultations in 2010. In previous negotiation rounds, the developing and emerging countries (G77 and China) proposed that one percent of the GNP of industrialized countries should be donated to finance climate measures in the less developed countries. This would currently amount to 400 billion US dollars—the World Bank estimates a similarly high need.[34] A commitment of this magnitude is considered unrealistic since the industrialized countries do not want to commit to a fixed share, while at least there is the political will to upgrade the financial funds until 2020 to the amount of $US 100 bn, as proposed by the EU.

Closely linked to the question of financing sources is the management of future financial flows. Here, no agreement has yet been reached, the Copenhagen Account mentions a "Copenhagen Green Climate Fund" without further specification. The primary challenge lies in integrating such financing into the existing international structure of assistance by the World Bank, the UN Environment Programme (UNEP) and the UN Development Programme (UNDP) as well as national and international development assistance programs.

32 See Project Catalyst, *Auf dem Weg zu einem weltweiten Klimaschutzabkommen*, Briefing Document, June 2009. Here the range is estimated at between 55 and 80 billion euros per year between 2010 and 2020. The EU estimates 100 billion euros annually from 2013 on. More details can be found in the article by Oliver Geden and Martin Kremer in this study (pp. 30ff).

33 See "Summary of the Barcelona Climate Change Talks" [ibid., n. 23].

34 See "Bangkok Blues," *The Economist*, October 15, 2009; World Bank, *World Development Report 2010. Development and Climate Change*, (Washington, D.C., 2009).

Technology transfer

Just as controversial as the issue of financial transfers is that of technology transfers between industrialized and developing countries. Essentially, the issue revolves around intellectual property rights acquired by private companies that can be used to offset investments in research and development. Free transfer of property rights would not only destroy incentives for innovation but also be difficult to implement in practice. In the industrialized countries, after all, patent owners are private companies, but in China, most companies are publicly owned and are interested in American, German, or French technologies. There is, however, room for new approaches to this issue. It would make sense to increase cooperation between countries on technological research since the intellectual property rights to innovations would then be distributed among all those involved. The technological cooperation mentioned in the Copenhagen Accord remains rather vague, reflecting the diverse views on the topic. However, this reference is the outcome of progress made under the Ad Hoc Working Group for Long-Term Cooperative Action on acceptance of a Technology Mechanism. Yet its functions are subject to further identification, in particular its role in funding particular activities.

Forest protection

A new mechanism is set to be introduced for forest protection: Reducing Emissions from Deforestation and Forest Degradation (REDD). It is designed to create incentives to maintain and protect forests, the destruction of which plays a major role in climate problems (the IPCC estimates that deforestation is responsible for releasing approx. 20 percent of carbon emissions into the earth's atmosphere). To this end, a UN Programme Fund was created in 2008.[35] Countries like Indonesia and Brazil that contribute to climate change by cutting down rainforests stand to benefit most from the REDD system. Ultimately the objective of such efforts must be to have a significant positive effect on the climate. This is one of the few areas in which agreement was brought forward in Copenhagen. The REDD-plus concept was introduced which broadens the scope of activities, including conservation measures for forests.

Possible progress in the international climate policy negotiations

The negotiations that took place in 2009 to prepare the way for a Kyoto II and a new global agreement focused mainly on finalizing the treaty texts. Four weeks before the start of the Copenhagen conference, however participants of the APEC summit in Singapore and the EU announced that the signing of an agreement was no longer probable in 2009: not enough

35 Managed by the UN Development Programme, see UN-REDD Programme Fund, http://www.undp.org/mdtf/un-redd/overview.shtml.

progress had been made on key points of substantial climate protection and in obtaining the necessary financial commitments.

The chances of complete agreement on all unresolved aspects negotiated under the two tracks, the Kyoto Protocol and a new climate agreement, by December 2009 were already low in summer 2009. The technical details—for example, the mechanisms for global carbon trading, nationally appropriate mitigation action or for a new system to conserve carbon sinks—required extensive negotiation. Since the US had little time to join the international process and produce national-level climate change legislation, US Climate Envoy Todd Stern announced early on that the US would welcome the prospect of a Copenhagen II conference.

In 2010 negotiations will continue as the mandate under the two tracks was prolonged until the next summit in Cancún, Mexico. The climate summit in Copenhagen did only deliver the minimal consensus: a set of individual decisions (e.g., forest protection, financial commitments) under the Bali Action Plan, and a political declaration of intentions (Copenhagen Accord). The Accord, although it contains major ingredients for a successful future climate regime is not be binding under international law. Given its political importance—25 heads of state and governments were personally involved in its drafting, it could help promote legally binding regime in the coming years.

For the continued UN negotiations in 2010, it still needs to be determined which role the Accord and its most important cornerstones (mitigation pledges, financial commitments, MRV rules) could play for a new binding agreement and the future of the Kyoto Protocol.

The EU and Germany will be facing a series of challenges in 2010 and the years thereafter, and not just because negotiations will be going into overtime. In the best-case scenario, the high European standards for international climate policy will be reflected in whatever treaty is ultimately reached. At worst, Germany and the EU will have to give up, at least in part, on "Plan A," which was to establish a reliable, legally binding path of international emissions reductions toward a two degree target. In any case, in parallel to further efforts at the multilateral level it will be crucial to promote national interests in increased energy efficiency and low-carbon technological progress, particularly in the bigger countries and emerging economies, and to offer support in achieving this.

Both Germany and the EU should develop strategies to win over the six major negotiating partners introduced in this study, the US, China, India, Russia, Brazil and South Africa, in support of both the immediate continuation of climate policy negotiations and further progress in climate policy. In addition, the following issues should be pushed forward jointly with other international partners like Japan, Canada, and Australia in the framework of the G8 plus 5 and G20:

- Further ambitions and agreement on national reduction targets for the industrialized countries, oriented toward a two degree target, and the recognition of measures in the developing and emerging economies as well as their pledges under the Copenhagen Accord. This should take

place over the course of the year 2010 and 2011. Smaller formats like the G20 should be considered for these issues.

- Medium to long-term bilateral cooperation in the development of low-carbon technologies, particularly in the energy sector or for energy usage, especially in China and India. These include low-carbon power generation, the use of renewable energies and the expansion of energy infrastructures.
- Cooperation on improved data collection on greenhouse gas emissions and on the implementation of reporting requirements from international agreements.
- Fast-track finance from the industrialized countries as soon as possible to reach the level of $US 30 billion until 2012, and further efforts to reach as much as $US 100 billion by 2020 as stipulated under the Copenhagen Accord. This needs to be embedded in clear institutional assignments of new financial flows. Here, it will be crucial to involve existing international organizations (World Bank, International Monetary Fund, UNEP, UNDP).
- The expansion of national emissions trading systems and CO_2 taxes as well as international integration of carbon markets. Part of the acute need for financial transfers can be covered by the high revenues generated through emissions trading in the industrialized countries. Since the emerging economies will probably be the ones selling emission rights, their integration into the international certificate market should be conceptualized more thoroughly and defined in more concrete terms, as part of bilateral cooperations.
- Overall, the comparability of international efforts will be key to any further EU policy, as the EU's conditional mitigation approach will need a basic understanding of other countries efforts.

The European Union: A Challenged Leader in Ambitious International Climate Policy

Oliver Geden and Martin Kremer

The disappointing outcome of the Copenhagen climate summit in December 2009 has reinforced the European Union's commitment to remain the most active and ambitious actor in global climate change policy.[1] The EU already played a key role in the negotiations that commenced in 1988 on the UN Framework Convention on Climate Change (UNFCCC), as well as in drafting and implementing the 1997 Kyoto Protocol. But the leadership role of the EU has become especially apparent since negotiations began on a new global climate treaty.[2] With the EU's first commitment in 2007 to reduce greenhouse gas emissions 20 percent unilaterally by 2020 (base year 1990) and increase this reduction goal to 30 percent if an ambitious new agreement is reached, it has injected new dynamism into recent international climate policy negotiations. Copenhagen, however, has also revealed that the EU needs to embed its climate diplomacy in strategic foreign policy relations if it does not want to be sidelined during the final stages of negotiations, first and foremost by the United States and key emerging economies like China.

With its engagement for an ambitious international climate policy, the EU is assuming its responsibility for the development of the world climate. At the same time, it sees great economic opportunities in the fight against climate change as well as possibilities to strengthen multilateral structures. The EU acts in international climate policy negotiations with a single voice, however, this is the result of a complex process of internal voting among member states. A more flexible mandate of the EU representatives in UN negotiations, exploiting to the highest possible extent the Lisbon Treaty's potential to reduce shared competences of the EU and Member States in negotiations of an international agreement[3] will be all the more important in the future, when key actors like the US, India and China are expected to make more substantive and concrete pledges on issues like mitigation and financing. Yet over the course of negotiations, the important institutional role of the Member States in climate policy may bring inner-European differences more clearly to light—for example, between the EU-15 and the new member states—and thereby endanger the EU's leadership role.

1 See the European Commission's non-paper *The Copenhagen Climate Change Conference: outcome and follow up*, issued in January 2010, on the occasion of the informal meeting of EU's environment ministers in Seville.

2 See Alexandra Lindenthal, *Leadership im Klimaschutz. Die Rolle der Europäischen Union in der internationalen Umweltpolitik*, Frankfurt, New York 2009, 125ff.

3 See the European Commission's Legal Service Opinion *Entry into Force of the Lisbon Treaty on the External Relations of the EU*, November 26, 2009.

Climate policy as means of strengthening "effective multilateralism"

The EU's aspired leadership role in international climate policy is not the result of suffering more than other regions from the impact of climate change. Rather the EU is one of the largest polluters worldwide with per capita emissions of 8.4 metric tons of carbon dioxide (2005)[4] annually. Furthermore, the current Member States, together with the US, are responsible for producing the majority of greenhouse gases that have entered the earth's atmosphere since the start of industrialization. In global climate policy the EU is therefore upholding its responsibility for the development of the world climate. Explicitly affirming the scientific findings of the UN Intergovernmental Panel on Climate Change (IPCC), the EU advocates the target of limiting global warming to a maximum of two degrees Celsius above preindustrial levels.

Still, EU climate policy is not driven solely by environmental policy motives. International climate policy is a field of activity for foreign policy in which it has always been relatively easy for the EU to adopt a consistent position toward third parties. Within the EU, international climate policy is therefore considered a useful area of activity in which to demonstrate the strengths of its preferred approach of *effective multilateralism* in an increasingly fluid multipolar world. It is therefore not surprising that climate policy has risen to become an integral component of European foreign policy.

An ambitious global climate policy is also in the economic and industrial policy interests of the EU. Europe has legitimate hopes of profiting from its technological and regulatory leadership, in particular in transforming energy systems. At the same time, the EU will have to prevent the effect that the unilateral efforts it has already undertaken will place its carbon-intensive industries at a disadvantage in global competition. International climate policy negotiations thus serve to create a level playing field and to anchor the EU's green growth strategy internationally.

The EU's climate policy is marked by a dynamic interplay between the global dimension and the internal EU dimension. The goal of limiting the world's average temperature increase to two degrees Celsius is at the core of the EU energy strategy, since, in the opinion of the European Council, pursuing this "strategic goal" will also serve to generate positive progress towards a sustainable, secure, and competitive energy supply.[5] Experiences of recent years, however, have shown that the interest in an ambitious climate policy varies widely among EU institutions. The most far-reaching proposals generally come from the supranational bodies—the European Commission and Parliament—while the Council of the EU and the European Council often expresses themselves in somewhat more reserved terms. This is due not least of all to the vast differences between

4 See Figure 3 (p. 20) in the article by Susanne Dröge.

5 See Council of the European Union, European Council Brussels, March 8–9, 2007, *Presidency Conclusions*, Doc. 7224/1/07 REV 1, 10f.

the individual Member States. While the most ambitious positions are taken within the group of the EU-15, the New Member States (NMS) and Italy usually take much more cautious positions.[6] This reflects the still considerable differences among the European countries in their economic strength and therefore also in their carbon dioxide (CO_2) emissions.

The EU in international negotiations

Because of the strong position of the Member States in European foreign policy, the capacity of the EU to take action on the international level has remained comparatively limited so far. Although the European Union generally speaks with one voice in international climate policy negotiations, this is preceded by a complex process of internal coordination. From a European point of view, climate policy lies under the shared authority of the EU and the Member States. While the Council and the European Parliament have equal rights in the internal EU legislative process—most recently in the revision of the emissions trading system—the European position, which is to be represented in international climate policy negotiations, is determined exclusively by the Member States. This takes place either in the Council of EU Environment Ministers or in the European Council of the 27 Heads of State and Government. In both the internal and external dimension of climate policy, the European Commission's designated role is to stimulate innovative thinking and generate ideas.[7]

For example, consensus on the European negotiation position for the Summit in Copenhagen was only reached in late October 2009, after a number of heated discussions. The decision had been prepared previously by the Council of Environment Ministers under the authority of the Council Working Party on International Environmental Issues. On part of the EU Commission, the Directorate-General for the Environment held primary responsibility.[8] Since September 2009, when the EU Commission first took a position on financing climate protection and adaptation measures, the Ecofin Council has become more involved as well as the ministers responsible for development cooperation. The environment ministers of the Member States took part in the negotiations in Copenhagen; with Andreas Carlgren, Sweden's environment minister representing the rotating Council presidency and chairing the EU team during the Copenhagen negotiations.

At an early stage, the Swedish Council Presidency had formulated the goal that the EU should ratify a new global climate agreement in Copenhagen. At the meetings of the European Council in Brussels on October 29

6 See Oliver Geden and Severin Fischer, *Die Energie- und Klimapolitik der Europäischen Union. Bestandsaufnahme und Perspektiven*, (Baden-Baden, 2008).

7 See Louise van Schaik, "The Sustainability of the EU's Model for Climate Diplomacy," in: *The New Climate Policies of the European Union: Internal Legislation and Climate Diplomacy*, eds. Sebastian Oberthür and Marc Pallemaerts, (Brussels, 2010), 1–22 (forthcoming).

8 In mid-2010, a newly founded Directorate General Climate Action will take over this role.

and 30, 2009, the heads of state and government then agreed on the overall EU strategy[9]—which it has not changed since then, despite the outcome of the Copenhagen summit. Based on the overarching two degrees target, the EU is stating that global emissions must reach their peak before 2020 in order to be reduced to below 50 percent by 2050—measured against the base year 1990. The industrialized countries should play a leading role and reduce their emissions by 25 to 40 percent by 2020, and by a total of 80 to 95 percent by 2050. By 2020, the developing countries—with the exception of the poorest—are to reduce the *increase* in their emissions by 15 to 30 percent below business-as-usual scenarios. The EU is advocating that climate protection measures implemented by third countries be included in the credit system of the Clean Development Mechanism (CDM) and Joint Implementation (JI). Forests should be taken into account in carbon trading, and global deforestation should be stopped by 2030 at the latest. The EU also calls for sectoral reduction targets for international aviation and maritime emissions.

For the EU, a key component of success in the international negotiations is that the resource base for financing mitigation and adaptation is expanded substantially, both through public and private sources. Levels of financial assistance from public funding sources should be determined using a contribution key based on countries' emission levels and ability to pay. But at the European Council in December 2009, no agreement has been reached on an internal EU distribution key. During the Copenhagen summit the EU has pledged to provide 2.4 billion euros annually from 2010 to 2012 (*fast-track financing*).

Climate policy as a flagship project for European integration

Since agreement was reached on an integrated EU energy and climate policy in early 2007, climate policy has undergone an enormous increase in importance for the EU. Although the Europeans were among the most important players in the international climate policy arena even before that time, climate policy as such has risen rapidly on the EU policy agenda. The Commission, Member States and Parliament finally recognized that energy provision and climate protection require not only innovative new approaches, but that decisive action in these policy fields could also be a useful means to underscore the value of the European integration project. In line with this President Barroso has created a new climate change portfolio under Connie Hedegaard in his new Commission for 2010–2014.

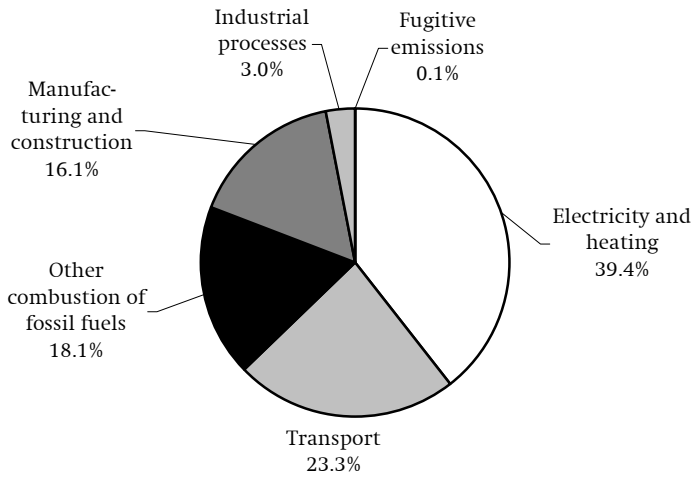
With their articulation of a European energy strategy focused on achieving the two degrees target, the 27 heads of state and government brought the previously marginal issue of climate policy to the very heart of European policy. The idea that the EU should pursue an ambitious course in climate policy has now become a mainstream position that is basically

9 See Council of the European Union, European Council Brussels, October 29–30, 2009, *Presidency Conclusions*, Doc. 15265/09, 3ff.

no longer questioned by any important interest group. It became clear that the EU is serious about the project of an integrated energy and climate policy at the latest in December 2008, when the Member States and Parliament agreed on the EU climate package.[10]

The new basic consensus on climate policy does, of course, leave room for the classic differences within the EU. While many business groups and some Member States warn the EU against moving forward too hastily and thus endangering the global competitiveness of the European economy, non-governmental organizations and the media are increasingly accusing the EU of not pursuing climate policy concerns aggressively enough.

Figure 6
Carbon dioxide emissions of the EU-27 by sector, 2005



Source: author's diagram; data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009). For further explanation see also n. 27 (p. 21) in the article by Susanne Dröge.

Climate policy within the EU is inextricably linked to the course of international negotiations on a post-2012 agreement. Even the March 2007 announcement of the EU's planned unilateral 20 percent reduction of GHG by 2020 was intended as a first signal to the international community. The subsequent legislative proceedings that began in January 2008 then served not only to discuss how the instruments would have to be designed in order to achieve the agreed-upon reductions. Rapid agreement on the climate pact consisting of four legal acts was seen by the Commission, Council, and Parliament from the very beginning as a major effort in EU climate diplomacy. It was possible to achieve this agreement within just eleven months—a record by EU standards—solely because of the general consensus that the EU would only succeed in international negotia-

10 For detailed information on the relevant decisions see the website of the Directorate-General for the Environment: http://ec.europa.eu/environment/climat/climate_action.htm.

tions if it translated its own words into actions. In order to gain credibility, the EU also had to quickly push forward with the adoption of a legally binding unilateral reduction target. At the same time, the EU—under the urging of large Member States like France and Germany—underscored the following point: if an ambitious post-2012 agreement could not be reached, the EU would not give up its own 20 percent target, but would take measures to protect European industry against competition from countries that reject climate policy commitments.[11]

Aside from the Directive (2009/31/EC) on the geological storage of CO_2 emitted by power plants, the precise stipulations of the legislative acts in the climate package are derived directly from the 20 percent reduction goal. This applies particularly to the reduction schedule outlined in the new emissions trading directive (2009/29/EC) for the period 2013–2020 as contained in the decision (406/2009/EC) for reduction commitments that differ among the Member States in those sectors that are not covered by the emissions trading scheme (households, transport, agriculture, etc.), as well as the accompanying directive (2009/28/EC) on increasing the share of renewable energy sources in EU consumption by an average of 20 percent, in the framework of which a national target was set for each Member State.[12]

The EU is maintains its offer for international climate policy negotiations of raising its minimum contribution from 20 to 30 percent if the other industrialized countries agree to make "comparable" commitments and if the emerging economies promise "appropriate" contributions. Even if swift progress in the climate negotiations after Copenhagen cannot be expected, the internal distribution key for the EU's contribution to a global financial architecture for climate change remains high on the EU's agenda. Furthermore, a move to the 30 percent target would have a significant impact on the internal measures already adopted by the EU. Considering the way negotiations on the EU climate package have progressed, major conflicts within the EU are likely if the reduction target would be raised again. This will already come to fore in the upcoming months, on the occasion of the impact assessment for the EU's potential move to a 30 percent commitment the Commission is preparing for June 2010.

As a first step, the EU would have to determine to what extent a post-2012 agreement actually does contain "comparable" reduction targets for industrialized countries and "appropriate" guidelines for emerging economies. In order to attain a modicum of political flexibility, the EU has prudently not attempted to set any clear criteria for this since 2007. If the EU is indeed compelled to increase its reduction targets for 2020 to 30 (or even just 25) percent as a result of negotiation outcomes, the legislative acts listed above would have to be adjusted accordingly. This would not be

11 See Susanne Dröge, "'Climate tariffs' and the Credibility of the EU Climate and Energy Package International Climate Policy and Carbon Leakage," *SWP Comments* C26 (September 2008).

12 See Franzjosef Schafhausen, "Das Brüsseler Klimapaket—wichtige Wegmarke für die internationalen Verhandlungen," *Energiewirtschaftliche Tagesfragen* 59, 3 (2009), 34–41.

done using a linear adjustment mechanism, however, but with entirely new legislative procedures. The EU climate package would again unravel, and negotiations would start afresh. The divergent interests between Member States that already became apparent in 2008 would erupt once more. The amount under consideration for economic and fiscal policy would be significantly higher with a new version of the package, and the dispute over fair distribution of burdens between old and new Members and between the individual industrial sectors would also enter the next round—but under significantly worse economic conditions than before. Many of the concessions made in 2008—for example, the exemption granted to East European electricity producers when auctioning their emissions trading certificates—would no longer be tenable under even more ambitious EU reduction targets.

The persistence of fundamental climate policy differences is evidenced not only by a case before the European Court of Justice (ECJ) over national allocations in the second phase of the EU's emissions trading scheme (2008–12), in which eight New Member States petitioned the ECJ to lift the caps on the number of emissions permits these countries can issue, which in their view were too restrictive. It is also seen in the dispute over the internal distribution of the EU's promised financing contribution to support developing countries, which shows that particularly Poland and Italy are not willing to budge from their confrontational position in negotiations. Hence it comes as no surprise that the EU in its submission to the Copenhagen Accord offered a pledge to reduce emissions by 20 percent and a conditional offer of 30 percent if other powers make comparable efforts—the same position which the EU held before the climate conference in Copenhagen.

Crucial importance for the EU

For the EU, much is at stake in negotiations over a post-2012 agreement: the EU conceives itself as a leader in international climate policy, and climate policy has moved to the forefront of the internal EU agenda in recent years. Yet there was a clear sense among the European negotiators at the early beginning that the long-cherished expectation of further binding commitments under the Kyoto Protocol and an internationally binding agreement emerging from the Copenhagen Conference was not realistic. In this process, the EU admittedly had to keep in mind that the outcome of the Copenhagen negotiations would significantly improve the chances of an early conclusion of an internationally binding climate agreement. Ideally, negotiations would have not just yielded agreement on key policy features of such a treaty, but also on a detailed roadmap for negotiations in 2010. The history of both international climate diplomacy and of negotiations by other multilateral negotiation forums (in policy fields like disarmament, world trade, or most recently the architecture of the world financial system), however, shows that "big solutions" only succeed

in exceptional cases—pragmatic steps in the right direction are often the most one can hope for.

This does not mean that the EU *has* to concede to a weak agreement because any more than that seems impossible. At the upcoming Conference of the Parties (COP-16) in Cancún the EU can always pursue the option—already taken once before in climate policy negotiations—of formally suspending the Conference in order to continue it after 2010. It would protect the EU from unpleasant debates, at least temporarily. First of all, the conclusion of a weak international agreement could encourage some Member States to argue again to revise inner-European ambitions. Second, a low-level compromise poses the danger of severely damaging the EU's reputation by disappointing the hopes invested in it by climate science, NGOs and ambitious developing countries—hopes that have been nourished by the EU itself.

No matter what concrete course international climate policy takes after the disappointing outcome in Copenhagen: future negotiation successes will depend on the EU in two respects. First, the Europeans will have to show that fulfilling their own reduction commitments is realistic and economically advantageous. Only then can they expect that other industrialized and emerging economies will agree to long-term emissions reduction pathways—entirely apart from the question of existing internationally binding commitments. Second, it will be vital that the developing countries can soon be offered financial resources for adaptation measures and technology transfers. This is the developing countries' main demand in the negotiation process: they have placed their hopes primarily in the EU's leadership role given the lack of support offered by other large industrial countries.

Besides the EU's credibility in delivering on the financial commitments made in Copenhagen, future negotiation success will all the more depend as much on the EU's "climate diplomacy"[13] in the wake of the Lisbon Treaty's institutional innovations and bottom up initiatives. It will be particularly important for the EU to demonstrate a capacity to respond flexibly to the various interests of the other industrialized and emerging economies despite complex internal coordination processes. In addition, all the more that rapid progress in UN climate negotiations appears elusive the EU may consider getting involved in more productive negotiation forums outside the UN process such as the Major Economies Forum (MEF) or the "G8 plus 5." From the EU perspective, exercising an effective and cooperative leadership role in international climate policy will require a "club" that is smaller than the G20 but has more political clout than the current G8.

13 See Martin Kremer and Sascha Müller-Kraenner, "Europe's Green Diplomacy. Global climate governance is a test case for Europe," *Internationale Politik—Global Edition* 2/2010, 26–29.

Going Green? The New US Climate Policy under Barack Obama

Stormy-Annika Mildner and Jörn Richert

Without the United States there will be no breakthrough in international climate policy. The US is responsible for more than 20 percent of global greenhouse gas (GHG) emissions. While carbon dioxide (CO_2) emissions in the EU decreased substantially between 1990 and 2005, they rose in the US by around 17 percent over the same period from 5 to 6 metric gigatons annually. This made the US the biggest polluter worldwide in absolute terms, only recently overtaken by China in 2007. In per capita CO_2 emissions, the United States placed sixth worldwide in 2006 with around 20 metric tons—twice the level of most EU countries and five times that of China.[1] Furthermore, without substantial concessions from the US, other countries—especially the large emerging economies—will not enter into an international climate agreement.

Barack Obama's electoral victory at the end of 2008 and the heightened importance of climate change in US domestic and foreign policy have given cause for hope. Yet despite numerous positive developments, including the passage of a comprehensive climate bill by the House of Representatives in late June 2009, enormous barriers still remain to be overcome before the US is able to take an active role in international climate negotiations. Although awareness of the issue has increased in the American public, only 43 percent of US citizens support climate legislation that could slow economic growth.[2] In the light of the economic and financial crisis of 2008 and 2009, for most Americans, climate change is not a high priority. According to a survey on political priorities for 2010 conducted by the Pew Research Center, the problem of global warming placed last out of a total of 21 issues.[3] Further survey results point to a general fatigue in the American population with the subject of climate change: in October 2009, just 57 percent of Americans surveyed believed that there was any solid evidence of climate change (April 2008: 71 percent) and only 35 percent believed that it was a very serious problem (April 2008: 44 percent). Among Democrats, 75 percent believed that climate change evidence was solid, while this was true of only 35 percent of Republicans.[4]

1 Further comparative data can be found in the introductory chapter by Susanne Dröge (pp. 11ff).

2 German Marshall Fund, *Transatlantic Trends 2009*, (Washington, D.C., 2009), 23, http://www.gmfus.org/trends/2009/docs/2009_English_Key.pdf.

3 Pew Research Center for the People and the Press, *Public's Priorities for 2010: Economy, Jobs, Terrorism*, January 25, 2010, http://people-press.org/report/584/policy-priorities-2010.

4 Pew Research Center for the People and the Press, *Fewer Americans See Solid Evidence of Global Warming*, October 22, 2009, http://people-press.org/report/556/global-warming (accessed January 10, 2010).

While more and more industries support nationwide climate policies and seek a competitive advantage in climate technologies, resistance from the business community has by no means vanished. Energy and carbon-intensive sectors (including the cement, steel, and glass industry) fear that implementing climate protection measures could reduce their competitiveness against countries without such measures in place. The main element of uncertainty in US climate policy is the Senate, which has to ratify every international agreement with a two-thirds majority. It is hardly conceivable that Obama will be capable of mobilizing such a majority. The fate of the Kyoto Protocol in 1997, when the Senate voted unanimously against a binding international treaty, proved the uselessness of such attempts once before. Much more likely is national climate legislation, although the fate of the climate bills currently discussed in Congress has become increasingly uncertain again after the Democrats lost their supermajority of 60 seats in January 2010.

US domestic climate policy reinvigorated

According to the report "Global Climate Change Impacts in the United States" released by the US Global Change Research Program under the National Oceanic and Atmospheric Administration the effects of climate change are already being felt clearly in the United States in the form of increased extreme weather phenomena, flooding, droughts, and forest fires.[5] A number of American think-tanks have also warned about the consequences of climate change for national security. Both the military and the intelligence agencies are studying the security policy challenges of global warming.

With these findings, the pressure for action has increased and climate policy efforts have taken on new momentum—in both the executive branch and the legislature—during the first year of Obama's presidency. The most dramatic change in climate policy has been seen in the administration. In the US, where the various departments of the federal government are much less independent than, for example, in Germany, the strategic course is set by the White House. There is no US Environmental Ministry; the Environmental Protection Agency (EPA) is responsible for ecological issues but does not possess the full status of a ministry. Under the Bush administration, numerous climate policy issues were addressed through the Department of Energy, while the EPA lost influence. International negotiations, on the other hand, are carried out by the State Department. However, in almost no other country does the legislature have so much sway in international climate policy as in the US. The domestic policy debate is therefore of immense significance for the US role in international negotiations. In Congress, two bodies in particular address climate questions: the Energy and Commerce Committee of the House of

5 Global Change Research Program, *Global Climate Change Impacts in the United States*, (New York, 2009), www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/download-the-report.

Representatives, and the Senate Committee on Environment and Public Works.

Change through regulatory policy?

The high hopes that Obama would herald a new era in climate policy—hopes cherished by many negotiation partners but especially the EU—were hardly surprising given the climate policy of the previous administration. Up to the end of his term of office, Bush never completely acknowledged the scientific consensus on the human causation of global warming. His administration's main argument against an international climate treaty was its cost to the American economy. Bush criticized the Kyoto Protocol for its binding reduction obligations and failure to incorporate important emerging economies. On these grounds the Bush administration expressly rejected the Kyoto Protocol in 2001. And at the 13th Conference of the Parties to the Convention in Bali in late 2007, the US refused to sign on to any binding reduction targets. It merely agreed to consider "measurable, reportable, and verifiable nationally appropriate mitigation commitments or actions" in future agreements.[6]

Barack Obama has charted a different course. He accepts the scientific findings on climate change without reservation. In the first few months of his administration, Obama not only discussed this issue in the context of American energy security; he also succeeded in skillfully linking climate policy with the current financial and economic crisis. He proposed a "Green New Deal" not just to curb climate change, but also to trigger a major restructuring of the American economy, create new jobs, and make the US economy more competitive. And indeed, the belief that climate legislation would create jobs is held by 36 percent of Americans.[7]

Already during his election campaign in 2008, Obama announced his intention to reduce greenhouse gas emissions 80 percent by 2050 (below 2005 levels),[8] increase the share of renewable energy sources in power generation to 25 percent by 2025, and invest 150 billion dollars over the next ten years in clean energy technologies. Obama also called for the introduction of an emissions trading system.

In his first few months in office, Obama worked closely with Congress to pass climate legislation. But he has dealt with the issue of climate protection mainly through regulations of the EPA and the Department of Transportation. In April 2009, the EPA proposed an *Endangerment Finding* stating that greenhouse gases contribute to air pollution and thereby endanger the health of the American people and environment. In December 2009, the EPA officially confirmed that the atmospheric concentration of CO_2 and five other greenhouse gases poses a danger to human health, also

6 Bali Action Plan, http://unfccc.int/files/meetings/cop_13/application/pdf/cp_bali_act_p.pdf.

7 Coral Davenport, "'Green Jobs' Czar Resigns Just as Both Sides Seek to Shape Public Opinion," *Congressional Quarterly Today*, September 14, 2009.

8 The base year 2005 is more favorable for the US than 1990, since total emissions increased significantly in the intervening period.

stating that greenhouse gases emitted by cars and trucks contribute to air pollution and thus constitute a health risk. These findings allow the administration to take stronger regulatory action under the Clean Air Act.[9] Not only was the EPA announcement a signal of Obama's determination to push the issue of climate protection; it was also a legal precondition for further regulatory action by his administration.

The Obama administration has also tightened the fuel efficiency standards for cars and light trucks (Corporate Average Fuel Economy, CAFE) that were called for in 2007 by the Energy Independence and Security Act. In May 2009, the Department of Transportation announced its standards for the year 2011.[10] The department estimates that these measures will improve the overall fuel economy of the US car fleet to 27.3 miles per gallon of gasoline (8.7 liters per 100 kilometers) by 2011. In mid-September 2009, the Department of Transportation proposed further rules to be put into effect in the following year. The proposed program would surpass the 2007 legislation twofold, increasing limits from 35 to 35.5 miles per gallon (approximately 6.6 rather than 6.7 liters per 100 kilometers) to be achieved by 2016, four years ahead of the previous target date of 2020. For the period from 2017 to 2020, the agency considers tightening these standards further. Increases in efficiency in the transport sector are an important step in the direction of an effective climate policy since this sector is responsible for almost 31 percent of total greenhouse gas emissions in the US (see Figure 7, p. 42).

The EPA also proposed its first-ever emissions standards for the transport sector. Under the program, an emissions limit of 250 grams of carbon dioxide per mile (approximately 155 g/km) would be reached by 2016,[11] reducing emissions in the sector 21 percent by the year 2030 compared to a "business-as-usual" scenario. In June 2009, the EPA permitted California to impose stricter exhaust emissions limits for automobiles than the national standards set in Washington—the Bush administration had prevented states from imposing their own more stringent standards.

On September 22, 2009, the EPA issued new greenhouse gas reporting rules for stationary emitters of greenhouse gases. Starting on January 1, 2010, major emitters of greenhouse gases, producing more than 25,000 metric tons of CO_2 equivalent emissions annually, as well as suppliers of fossil fuels or industrial greenhouse gases and manufacturers of vehicles and engines would be required to submit annual reports to the EPA. This group covers producers of 85 percent of US greenhouse gas emissions. On September 30, the EPA also proposed further regulations. First, stationary facilities that produce more than 25,000 metric tons of CO_2 equivalent per

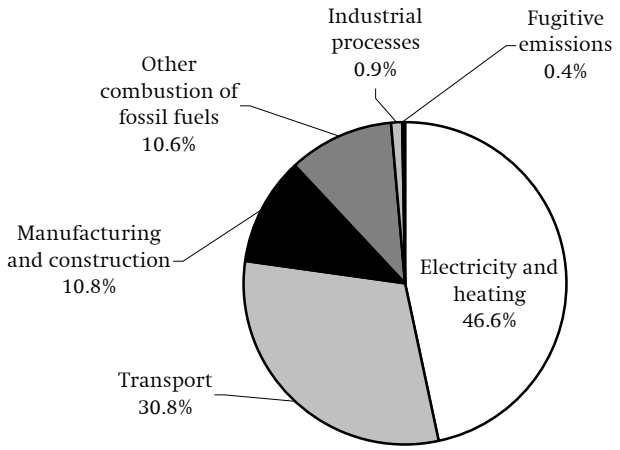
9 DIHK, BDI, *Washington News*, December 17, 2009; Andrew Light, Julian Wong, and Saya Kitasei, *Die US machen Ernst beim Klimaschutz*, http://blog.ufz.de/klimawandel/archives/121.

10 Federal Register, *Average Fuel Economy Standards, Passenger Cars and Light Trucks Model Year 2011; Final Rule*, GPO Access, http://www.gpoaccess.gov/fr/.

11 Federal Register, *Proposed Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards*, September 28, 2009, http://www.epa.gov/fedrgstr/ EPA-AIR/2009/September/Day-28/a22516a.pdf.

year and have already received operating permits from the EPA (for other pollutants) will be required to give estimates of greenhouse gas emissions when their permits come up for renewal every five years. This applies to around 70 percent of greenhouse gas emissions economy-wide. Second, in order to receive an operating permit, new and significantly modified facilities will be required to use the newest procedures and technologies available to minimize greenhouse gas emissions. An estimated 400 facilities per year would fall under this second regulation.

Figure 7
Carbon dioxide emissions in the US by sector, 2005



Source: author's diagram; data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009). For further explanation see also n. 27 (p. 21) in the article by Susanne Dröge.

If Congress does not pass a climate bill, Obama could attempt to use the EPA to introduce an emissions trading system. Whether he will actually do this is highly questionable: first, it is not entirely clear legally that this is possible under the Clean Air Act. Second, Obama would risk losing support in Congress for other important legislative initiatives (even from fellow Democrats). After all, many members of Congress have challenged the EPA's authority in regulating greenhouse gases. Since the EPA officially declared greenhouse gases a danger to human health in its *Endangerment Finding* of late 2009 and announced mandatory reporting rules requiring businesses to prove their ability to compensate for environmental damage and subsequent contamination (applying to parts of the coal, petroleum and chemical industry, as well as power generation),[12] the debate in Congress has heated up considerably. Republican Senator Lisa Murkowski (Alaska) in the Senate and Republican Congressmen Joe Barton (Texas) and

12 DIHK/BDI, *Washington News*, January 7, 2009.

Darrell Issa (California) in the House sponsored a "Resolution of Disapproval" that would block the EPA's Endangerment Finding.[13]

Stumbling blocks in Congress

Things have started to move not just in the executive branch but in the legislature as well. In the 789 billion dollar economic stimulus package (American Recovery and Reinvestment Act) that Congress passed shortly after Obama took office, environmental initiatives to boost the economy play an important role. A total of around 95 billion dollars—12 percent of the package—are allocated to investments in clean energy sources and the creation of "green jobs": this includes 23 billion dollars for renewable energies, 4 billion for clean coal technologies (Carbon Capture and Storage, CCS) and 52 billion for energy efficiency, of which 11 billion will go to modernizing the power system (smart grid) and 16 billion to water and waste management.[14]

In addition to these stimulus measures, the House of Representatives approved the hotly debated American Clean Energy and Security Act of 2009 (ACES) on June 26, 2009. Although the act that awaits Senate approval is a watered-down version of the original proposal, containing numerous compromises—and despite the fact that many environmental organizations have criticized the law as too industry-friendly—it nevertheless constitutes an important step in American climate policy. The ACES passed narrowly by a vote of 219 to 212, roughly along party lines. While the majority of congressmen from states along the West Coast and in the Northeast voted in favor of the proposed law, the skepticism of congressmen from the southern states, many rich of resources such as coal, and the manufacturing states of the Midwest is clearly reflected in the outcome of the vote. The act foresees a 17 percent reduction of greenhouse gas emissions by 2020 and an 83 percent reduction by 2050 (below 2005 levels). By 2012, the introduction of an emissions trading system is planned that will apply to around 85 percent of American emissions sources.

On September 30, 2009, Senators John Kerry (Chairman of the Senate Foreign Affairs Committee) and Barbara Boxer (Chairwoman of the Senate Environment and Public Works Committee) introduced the Clean Energy Jobs and American Power Act, which required similar emission reductions.[15] Barbara Boxer produced a revised version of the Clean Energy Jobs

13 Van Ness Feldman, *Climate Change Policy Update. December 21*, (Washington D.C./Seattle, December 2009), http://www.vnf.com/news-policyupdates-421.html.

14 HSBC Global Research, *A Climate for Recovery*, February 2009. See also: White House, *Energy and Environment*, http://www.whitehouse.gov/issues/energy_and_environment/.

15 While the Senate bill also deals with electricity generated through nuclear power and carbon capture and storage, in contrast to the ACES it does not address the field of energy in detail. Rather, energy measures are provided for in the proposed American Clean Energy Leadership Act. This bill was approved by the Senate Energy and Natural Resources Committee with a vote of 15 to 8 and passed on to the full Senate.

and American Power Act in late October containing numerous specifications, and in early November, the Senate Environment Committee voted 11 to 1—with all seven Republicans absent—to pass the bill. It came as no surprise that the bill did not come to a vote prior to the Copenhagen Summit. The Senate faced a tremendous workload even without the climate legislation: along with health reform and financial market regulation, twelve other 2010 budget measures awaited regular Senate approval.

In contrast to the ACES, the Senate version talked about a 20 percent reduction of greenhouse gases by 2020. The ACES envisaged auctioning an increasing percentage of emission certificates, starting from approximately 20 percent going up to about 70 percent by 2030.[16] The Kerry-Boxer bill made no mention of this. The House and Senate proposals also differ in the distribution of proceeds from auctioning of emissions permits. To garner support from Republicans and fiscally conservative Democrats, the Senate bill planned to use a significantly larger portion of proceeds to reduce the national debt than stipulated under the ACES (up to 25 percent starting in 2040). According to the ACES, these proceeds should mainly be used to protect consumers and to foster technological advance. Another key aspect are border adjustment measures on imports from countries with no or only inadequate climate protection measures. Here, Congress is thinking primarily of emerging economies like China. According to the ACES, the President will be required to consider the implementation of border adjustment measures from 2020 on. But Obama has decisively rejected such a regulation, which would meet with severe opposition from China and India[17] and whose compatibility with WTO rules is not yet certain.

Despite these differences between the two congressional proposals, the Senate bill seemed to have good chances of passing—at least initially: the Democrats held 58 out of 100 seats in the Senate, and two independents lean towards the Democrats. With these 60 seats, the Democrats held a supermajority and could overcome a filibuster—an attempt to prevent a Senate action by endless debating—by the minority party. In 2010 the situation has changed. Not only do many Democrats oppose the bill. Party discipline is much weaker in the US than, for example, in Germany; the specific economic interests of the particular state are more decisive than party membership. What is more, the Democrats have lost their supermajority after the Republican candidate won the Massachusetts Senate seat in January 2010. The seat had been vacant since the death of Senator Edward Kennedy in 2009. The bill will therefore not reach a vote by the full Senate without support of at least a few Republicans. How many Republicans ultimately vote for the bill will depend on the extent to which their demands are met: they want much more support for nuclear energy and clean coal

16 Pew Center on Global Climate Change, *At a Glance: American Clean Energy and Security Act of 2009*, (Arlington), http://www.pewclimate.org/docUploads/Waxman-Markey-short-summary-revised-June26.pdf.

17 See the contributions to this volume from Christian Wagner (pp. 67ff) and Gudrun Wacker (pp. 54ff).

technologies, the opening up of coastal waters for oil and gas drilling, and weaker interim targets for greenhouse gas reductions. Although the Senate proposal also touched on the issue of nuclear energy, important Republicans like John McCain and Lisa Murkowski view the planned measures as inadequate.

Thus, a bipartisan initiative, first proposed by Senators John Kerry and Lindsey Graham in the New York Times in October 2009, has more potential. The active support of at least one leading Republican is considered by many observers to be crucial for the success of climate legislation, since such a senator would be capable of mobilizing support from the rest of the party. According to Kerry and Graham, nuclear power is a "core component of electricity generation." Alongside their strong endorsement of CCS technology (advocating that the United States should aim to become the "Saudi Arabia of clean coal") the senators called for a compromise on the exploration of further oil and gas reserves (also offshore drilling in the protected outer continental shelf in the Atlantic and Pacific). They also consider imposing import taxes on greenhouse gas intensive products from countries with less ambitious climate policies. Kerry and Graham ultimately talked about setting a minimum and maximum price for the auctioned allowances in the framework of a national emissions trading system.[18] President Obama welcomed the initiative, saying that he supports the search for sustainable ways to develop the country's oil and gas reserves. He also emphasized that there is no technological reason why nuclear energy cannot be used in a safe and effective manner.[19] According to Graham, nuclear energy should be treated in exactly the same way as renewable energies. Despite these concessions, it will remain difficult for Democratic Party leaders to garner additional votes among the Republicans.

The draft of Graham and Kerry, recently joined by Independent Senator Lieberman, can be regarded as the most hopeful undertaking in the Senate after a passing of the Kerry-Boxer proposal turned unlikely. However, this comes at a price: An economy-wide emissions trading system might be replaced by a more disaggregated approach. Three major sectors—electric utilities, transportation and industry—might be tackled separately. While electric utilities would still be subject to an emissions trading system, industrial facilities would be subjected to such a system only several years later. Emissions in the transportation sector, on the other hand, could be addressed by a fuel tax.[20]

Moreover, no matter which bill will be approved by the Senate, it will differ in numerous respects from the version put before the House. Thus, it

18 John Kerry and Lindsey Graham, "Yes We Can (Pass Climate Change Legislation)," *The New York Times*, October 11, 2009.

19 Van Ness Feldman, *Climate Change Policy Update. Week of October 12–16*, (Washington D.C., Seattle, October 2009), http://www.vnf.com/news-policyupdates.html (accessed November 11, 2009).

20 "Emissions bill would push new approach; Abandoning Cap-and-Trade. Senate measures to target sector separately," *The Washington Post*, February 27, 2010.

is necessary to consolidate the two bills. A submission of the final legislation by Congress to the President's desk should therefore not be expected before the upcoming mid-term election.

The US claim to global leadership

While the Bush administration lost the United States a great deal of respect around the world with its contempt for multilateral forums and frequently confrontational political style, Obama is working to regain the lost legitimacy and rebuild a basis of common values with allied nations. At the beginning of the new millennium, President Bush pursued a strategy of obstruction in UN negotiations. In the years that followed, he sought alternatives to multilateral climate negotiations in bilateral and minilateral forums outside the Kyoto Protocol offering maximum flexibility and requiring no binding reduction obligations for the US (for example, the Asia-Pacific Partnership on Clean Development and Climate).[21] Obama is pursuing initiatives apart from the UN-process as well. In contrast to Bush, however, he has made some progress—though modest—both in the context of the Major Economies Forum (MEF) and in bilateral negotiations with China (referred to as the G2) that is at least partly in line with the ambitions of the United Nations Framework Convention on Climate Change (UNFCCC) process. In their final declaration in July 2009, the MEF leaders affirmed the scientific view that the increase in global average temperature above pre-industrial levels should not exceed two degrees Celsius and agreed to work with each other in Copenhagen "to identify a global goal for substantially reducing global emissions by 2050."[22] Although India stated shortly thereafter that this declaration did not change anything about its climate policy strategy, it should be noted that this was still the first time that some large emerging economies (including China) had ever agreed to such a goal. That same month, a *U.S.-China Memorandum of Understanding to Enhance Cooperation on Climate Change, Energy and Environment* was issued to provide the basis for closer cooperation with China.[23] However, since Copenhagen, no further progress has been achieved in the bilateral and minilateral forums.

Although Obama shares his predecessor's interest in bilateral initiatives, he is pursuing a much more liberal, multilateral approach. His administration has revived US involvement in the United Nations, showing a serious interest in the negotiations. At the UN Climate Talks in Bonn in

21 Danko Knothe, "Straight Down the Dead End Street: Kontinuität und Wandel in der Klimaschutzpolitik," in *Weltmacht in der Krise. Die US am Ende der Ära George W. Bush*, eds. Jochen Hils, Jürgen Wilzewski, and Söhnke Schreyer (Trier: Wissenschaftlicher Verlag Trier, forthcoming).

22 *Declaration of The Leaders of The Major Economies Forum on Energy and Climate*, http://www.guardian.co.uk/environment/2009/jul/09/climate-change-g8 (accessed November 9, 2009).

23 U.S. Department of State. Bureau of Public Affairs, *U.S.-China Memorandum of Understanding to Enhance Cooperation on Climate Change, Energy and Environment*, http://www.state.gov/r/pa/prs/ps/2009/july/126592.htm (accessed November 11, 2009).

late March 2009, US Climate Envoy Todd Stern said that the US recognizes its unique responsibility for climate protection, and stressed that climate protection requires a global response, with very significant measures from the world's major economies.[24] The other major polluters are pushing the US to take the lead—although less based on an ostensible claim to leadership than as a way to make up for past failures. The EU, itself a target of such accusations, has long called for rectification of problems plaguing the Kyoto Protocol. The emerging and developing countries insist that the Western industrialized countries assume their historic responsibility. Positive signals from the United States are essential, especially to gain concessions from India and China.

The Obama administration's active role in domestic climate policy raised hopes for a constructive role of the US in international climate policy. However, this did not imply a US position equivalent to EU ambitions. Moreover, the US demanding a leadership role has proven problematic—for the EU in particular. First, the US has (again) entered a political process in which the EU sees itself as natural leader. Apart from disagreement on concrete policy measures, this has added further disarray about the actual role the respective parties play within the negotiation process as such. Second, while multilateralism is often regarded a goal in itself by European countries, the United States always takes a pragmatic approach towards multilateralism. This is important in two respects: on the one hand, it means that countries like China and India also have to do their part to ensure the success of climate protection—without their contribution, American involvement is virtually unthinkable. On the other hand, UN negotiations are important, but they are not the only path the US is pursuing in international climate policy. Third, US foreign policy is decisively determined by domestic political factors. The US' capability to take the lead by benevolently meeting other parties' demands is limited.

US involvement in multilateral climate negotiations: demands and proposals

In the run-up to the Copenhagen Conference, the US position became increasingly concrete. This process was accompanied by several surges of hope and disappointment. On May 4, 2009, the Obama administration provided its first input to the Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA) process, in the form of a draft negotiating text. According to this document, the industrialized countries should commit to strict medium-term targets for the period up to 2020 "in conformity with domestic law" as well as to "long-term net emissions reductions of [ ]

24 *Press Briefing of the U.S. Delegation UNFCCC Climate Change Talks Bonn, Germany*, March 29, 2009, http://germany.usembassy.gov/events/2009/mar-29-stern/ (accessed November 11, 2009).

by 2050."[25] In general, every party to the United Nations Framework Convention on Climate Change—that is, less developed countries as well—should establish Nationally Appropriate Mitigation Actions (NAMAs) and a low carbon strategy, including a definition of emissions trajectories up to 2050. The measures should be based on measurement, reporting, and verification (MRV) criteria. All countries, with the exception of the least developed ones, should also be required to announce their emissions annually.

Furthermore, the paper provides for a new country group: "developing countries whose national conditions reflect greater responsibility or capability." These countries (for example, China) are called on to substantially and quantifiably reduce their emissions, assuming a "business-as-usual" emissions trajectory up to 2020 and net emissions reductions by 2050. Furthermore, the country groups should become more permeable: countries beyond a certain level of economic development should—based on objective criteria—be moved up to the status of industrialized countries with the concomitant climate protection responsibilities. The US Deputy Special Envoy for Climate Change, Jonathan Pershing, said: "we want more countries to belong to the group of industrialized countries than today, for example Korea."[26] This proposal has been met with harsh critique, especially from the developing countries.

Also on financial aid, the US administration wants to hold the large emerging economies to higher standards. In his speech at the UN Climate Meeting in New York in September 2009, Obama said special efforts should be made to help those countries that "do not have the same resources to combat climate change as countries like the United States or China do"[27] and promised to dramatically increase US financing for climate protection measures in developing countries. The United States traditionally focuses strongly on public-private partnerships, as reflected in the Global Climate Change Program of the United States Agency for International Development (USAID).[28]

In the run-up to the climate summit in Copenhagen, the US position was characterized mainly by reservations. This was perceptible both at the September 2009 Climate Change Summit in New York initiated by UN General Secretary Ban Ki-Moon and in the G20 meeting in Pittsburgh shortly thereafter. In New York, Obama described the goal of the Copenhagen summit only as a "significant step forward in the global fight

25 United States of America, *Paper No. 39: U.S. Submission on Copenhagen Agreed Outcome,* May 4, 2009, http://unfccc.int/resource/docs/2009/awglca6/eng/misc04p02.pdf, empty brackets in original.

26 See "China muss sich zur CO_2-Minderung verpflichten," *Spiegel Online,* June 12, 2009, http://www.spiegel.de/wissenschaft/natur/0,1518,630010,00.html.

27 *Remarks by the President at the United Nations Secretary General Ban Ki-Moon's Climate Change-Summit*, September 22, 2009, http://www.whitehouse.gov/the_press_office/Remarks-by-the-President-at-UN-Secretary-General-Ban-Ki-moons-Climate-Change-Summit/.

28 USAID, *Global Climate Change Program*, http://www.usaid.gov/our_work/environment/climate/.

against climate change,"[29] not as a concrete solution for a treaty after 2012. Obama emphasized that an international treaty would also have to be backed domestically. At the climate talks in Bangkok in October 2009, the US emphasized its commitment to forging a new global climate treaty. But what was meant were national commitments that would be implemented by national regulatory agencies. Even more, the US still rejected an internationally binding treaty modelled on the Kyoto Protocol.

It finally became clear at the APEC Summit in mid-November, when the APEC countries failed to agree on common reduction targets, that a breakthrough in Copenhagen was not within reach. The original proposal had been to reduce greenhouse gases 50 percent by 2050. This long-term target was ultimately rejected. In late November, just a few days before the climate summit in Copenhagen, Obama finally announced the first real offer that the US was prepared to put on the table: a 17 percent reduction in greenhouse gas emissions by 2020 below 2005 levels and "ultimately in line with final U.S. energy and climate legislation." The goal would then be to extend these cuts to 30 percent by 2025, 42 percent by 2030, and ultimately 83 percent by 2050. This corresponds approximately to the reduction targets in the climate bill passed by the House of Representatives.[30] However, the US offer did not go far enough for its negotiation partners. The focus of criticism was the base year used to calculate emissions reductions: the US does not use 1990 as base year like the EU but 2005. Since US emissions increased steadily between 1990 and 2005, the proposed reduction of 17 percent by 2020 would have meant just a 4 percent reduction with 1990 as base year.

A collective sigh of relief was heard throughout the international community when Obama announced that he would not participate in the start of the international climate summit in Copenhagen but in the second week, during the decisive phase of negotiations. The President had said up to just a few weeks earlier that he only wanted to participate if the chances of a breakthrough were high. Then, when the EPA announced—with perfect timing—on the opening day of negotiations that it had classified CO_2 and five other greenhouse gases as hazardous to health and public welfare, participants in the summit were almost euphoric. The EPA statement not only signaled Obama's determination to move forward with climate protection but also fulfilled a crucial legal precondition for the administration to take stronger regulatory action.

The rejoicing was premature, however. Obama was ultimately unable to improve on the disappointing US carbon reduction target. One day before Obama's arrival at the summit, Secretary of State Hillary Clinton announced that the US would join efforts of other industrialized countries to jointly mobilize 100 billion dollars per year by 2020 to address the climate

29 *Remarks by the President at the United Nations Secretary General Ban Ki-Moon's Climate Change-Summit*, September 22, 2009 (see n. 27).

30 White House Press Release, *President to Attend Copenhagen Climate Talks*, November 25, 2009, http://www.whitehouse.gov/the-press-office/president-attend-copenhagen-climate-talks (accessed November 26, 2009).

change needs of developing countries—on the condition that the recipients also committed to concrete climate goals and complied with regular monitoring.[31] The US delegation had thus run out of room to maneuver, and Obama was unable to make any further proposals. Instead, he confronted the international community with a choice: either accept the US position or endanger international climate policy by risking the breakdown of negotiations.[32] With Obama's strong emphasis that the US position was final and his reaffirmation of the validity of scientific findings—no longer a point of contention internationally—his speech aimed more at the domestic as at the international audience. In any case, the majority of negotiating parties were disappointed at the missed chance to inject new life into the negotiation process. More than a few accused the president of arrogance.[33]

The summit in Copenhagen ended without binding outcomes, and it clearly revealed the limits of Obama's international climate policy. The Copenhagen Accord was finally agreed upon among a smaller group of countries (aside from the US this included China and the EU, but also India, Brazil, and South Africa) during the final hours of the Summit's closing session was, to the surprise of these negotiating parties, not formally approved by the final plenary of UNFCCC members. At that point in the negotiations, Obama had already left. The Accord, instead of being adopted, was only "noted" by the plenary of the 194 UNFCCC member states.[34]

There are numerous gaps in the Copenhagen Accord.[35] It calls on the parties of the Framework Convention on Climate Change to report on the fulfillment of their own targets to the UNFCCC Secretariat. The Annex I countries of the Framework Convention are expected to report their reduction targets for the period up to 2020 by January 31, 2010. This also includes the US. The question of base year is left up to the parties themselves. Developing countries are required to report their mitigation strategies by January 31, 2010, as well, but these strategies do not necessarily have to take the form of absolute emission reductions. Furthermore, no concrete upper bound is set for total global CO_2 emissions through the year 2050. This demand was sacrificed in favor of measurement, reporting, and verification (MRV) requirements. Nationally-driven initiatives are to be monitored by national agencies. If countries want to obtain financial

31 "Hillary Clinton in Copenhagen: US Ready To Join $100 Billion Climate Finance Deal," *Huffington Post*, December 17, 2009; Hillary Clinton, *Remarks at the United Nations Framework Convention on Climate Change*, Copenhagen, December 17, 2009, http://www.state.gov/secretary/rm/2009a/12/133734.htm.

32 White House, *Remarks by the President at the Morning Plenary Session of the United Nations Climate Change Conference*, Copenhagen, December 18, 2009, http://www.whitehouse.gov/the-press-office/remarks-president-morning-plenary-session-united-nations-climate-change-conference.

33 "Kuba wirft Obama Lug und Trug vor," *NGZ Online*, December 21, 2009.

34 Further details can be found in the introductory chapter by Susanne Dröge (pp. 11ff).

35 *Decision -/CP.15: The Conference of the Parties Takes Note of the Copenhagen Accord of 18 December 2009*, http://unfccc.int/files/meetings/cop_15/application/pdf/cop15_cph_auv.pdf.

assistance to achieve these measures, the accord calls for international assessment of the measures in question. Furthermore, the developing countries have been offered the prospect of financial support amounting to 100 billion dollars annually by 2020. This is not binding, however: the only actually binding commitment is for fast-start funding of 30 billion dollars in the next three years, of which the US offered to contribute at least 2.9 billion dollars.[36] Where this money will come from specifically is not stated, although the document refers to a wide "range of potential sources."

While the outcomes of the Copenhagen summit were disappointing for many of the participants in negotiations—like the EU—they do reflect several aspects of US interests. The question of base year was left open; emissions reductions targets are to be set by each country independently. If developing countries want to receive international financial assistance for climate measures, they are required to report on their mitigation strategies. Furthermore, there are no internationally binding obligations. Still, the US did not get everything it asked for: particularly the degree of involvement and commitment on the part of the emerging economies does not meet US demands.

At the end of January 2010, the US submitted its reduction targets for the period up to 2020. The result is not surprising as it is in line with the President's proposal and the targets set in the House climate bill: "In the range of 17 percent, in conformity with anticipated U.S. energy and climate legislation, recognizing that the final target will be reported to the Secretariat in light of enacted legislation."[37]

Prospects: moving closer to the US

Before the domestic policy process is concluded, the US will undoubtedly not make any internationally binding commitments. In contrast to President Clinton, Obama will not take the risk of being defeated in the Senate. The Clinton administration never presented the 1997 Kyoto Protocol for Senate ratification since the Senate had already expressed firm opposition

36 Following an analysis of the World Resource Institute, approx. 1.8 billion dollars of this amount are part of the actual fast-start funding. This includes 531 million dollars for mitigation and 245 million dollars for adaptation in the fiscal year (FY) 2010 as well as 711 million dollars for mitigation and 334 million dollars for adaptation in FY2011. The fast-start funding for the FY2012 has yet to be announced. Beside the actual fast-start funding, the overall amount of 2.9 billion dollars includes 1 billion dollars which the US is expected to provide for Reducing Emissions from Deforestation and Degradation (REDD+) over the turn of three years. Of this amount, 579 million dollars have already been included into the US budget (232 million in FY2010, 347 million in FY2011). In FY 2011, the US Administration plans to provide an additional 50 million dollars for the Scaling-Up Renewable Energy Program for Low Income Countries (SREP). World Resource Institute, *Summary of Climate Finance Pledges Put Forward by Developed Countries*, (Washington, D.C., 2010), http://pdf.wri.org/climate_finance_pledges_2010-02-18.pdf.

37 UNFCCC, *Quantified Economy-wide Emissions Targets for 2020*, http://unfccc.int/files/meetings/application/pdf/unitedstatescphaccord_app.1.pdf (accessed February 2, 2009).

in its 95-0 vote to pass the Byrd-Hagel Resolution, using the same arguments as those used later by the Bush administration. One way of circumventing a blockade in Congress would be through further comprehensive regulations by the EPA. It is unclear whether Obama will go this route, however, since he would be risking harsh criticism from his own party—entirely aside from the unresolved legal issues regarding EPA management of an emissions trading system.

In light of the domestic political situation in the US, the EU's options for action are limited. The EU has few instruments at its disposal to influence the US position in international negotiations. In this situation, the EU should continue leading by example and convincing the other negotiation partners that this complex situation can be overcome only through courage and political resolve. The form of an agreement plays a central role. The EU strongly urges commitment to legally binding emission reduction targets on the international level. The US administration, however, emphasizes the necessity of bringing international commitments into conformity with national legislation. Even if the EU might wonder whether it still makes sense to pursue a legally binding agreement with specific targets in view of the resistance to this from the US, it should by all means maintain its demand for binding and substantial emissions reduction. Although a legally binding agreement might not be achieved in the short run, there are substantial advantages of it: It makes the actions of the negotiation partners visible to other countries and objectively verifiable. An international regulation would also, in the ideal case, establish sanctions. Until a sufficient majority of 67 votes in the Senate is in sight, however, negotiators will have to focus on pragmatic steps forward instead of presenting a legally binding agreement as a non-negotiable short-term requirement.

In preparation for the next UN climate meeting (set to take place in Bonn in June 2010), the focus should thus be on measurement, reporting, and verification of mitigation action under the Copenhagen Accord. Even without legally binding international targets, the negotiation partners can still ensure that their efforts to meet climate targets are clearly visible and verifiable. This corresponds well with the demands of the Senate and thereby increases the chances of national climate legislation in the US.

Since opportunities to influence the US position from the outside appear to be limited, in seems worthwhile to foster cooperation with actors inside of the United States. Here, Congress is particularly important. Furthermore, ambitious US states such as California and climate-friendly interest groups might put pressure on the federal level. A major focus should be on convincing these actors that climate policy is in their own (economic) interest. Cooperation might also help in harmonizing standards, for example, regarding the energy sector and emission trading. This would help to avoid future regulatory inconsistencies and unnecessary trade barriers. There are several forums, such as the Transatlantic Economic Council (TEC) and the EU-US Energy Council, that provide an opportunity to do so. So far, these Councils are dominated by the executive

branch of government. Taking into account the US political system, the US Congress should be more closely incorporated in these discussions. Furthermore, the International Carbon Action Partnership (ICAP) provides the opportunity to cooperate with ambitious regional climate initiatives within the United States. A broad range of domestic actors from the US is also participating in the German-American Transatlantic Climate Bridge. This cooperation should be strengthened. Although pursuing these paths will not radically change the US position, it might contribute to a more amenable US position in the future and bring forward domestic action on protecting the climate.

Caught in the Middle: China's Crucial but Ambivalent Role in the International Climate Negotiations

Gudrun Wacker

After three decades of rapid economic expansion, China has become the biggest emitter of carbon dioxide on the planet, probably surpassing the US some time in 2007. For the purposes of the Kyoto Protocol it is regarded as a developing country—and thus no limits were placed on how much it could emit. China issued its most recent official figures on greenhouse gas emissions in 1994. Since then, the only information on its emissions growth is based on calculations and estimates by international bodies. China's emissions of greenhouse gases per capita remain relatively low, close to that of other large emerging economies.[1] However, it reached the global average of 4.3 metric tons per capita by 2005. In cumulative terms, too, China is catching up rapidly. The International Energy Agency (IEA) has estimated that by 2030, Chinese emissions could reach 400 percent of their 1990 level.[2]

In general, China is attempting to find a balance between economic growth, energy security and environmental protection. This is challenging due to three factors: rapid industrialization, rapid and ongoing urbanization, and a coal-based energy system.[3] In addition, there are huge regional discrepancies within China in terms of income but also in energy use and emissions. No society in this stage of development has managed to dramatically reduce its emissions during the process. The investments in infrastructure that China is making now and will make over the next decade will determine whether a low-carbon development path is emerging.

There is an obvious discrepancy between China's stated willingness to tackle the causes of climate change at a national level, and the positions that Chinese negotiators take in the international arena together with

1 Figure 3 in Susanne Dröge's contribution to this volume gives an overview (p. 20). See also Andreas Oberheitmann and Eva Sternfeld, "Unser Land soll sauberer werden," *Internationale Politik*, February 2009, 26–34 (27).

2 See Linda Jakobson, "China," in: *Towards a New Climate Regime? Views from China, India, Japan, Russia and the United States on the Road to Copenhagen*, eds. Anna Korppoo et al., (Helsinki: The Finnish Institute of International Affairs [FIIA], 2009), FIIA Report 19/2009, 22–46 (39), available at http://www.upi-fiia.fi/en/publication/72/ (accessed January 9, 2009).

3 On urbanization, see Kenneth Lieberthal, Written Statement for Senate Foreign Relations Committee. Hearing on "Challenges and Opportunities for US-China Cooperation on Climate Change," April 6, 2009, http://foreign.senate.gov/testimony/2009/LieberthalTestimony090604a.pdf (accessed September 1, 2009): 1992 to 2009 200 million people, approx. 15 million annually. See also Karl Hallding, Guoyi Han, and Marie Olsson, *A Balancing Act: China's Role in Climate Change*, (Stockholm: The Commission on Sustainable Development, March 2009), 107.

representatives of the G77. This became obvious in the 2009 Conference of the Parties to the UNFCCC in Copenhagen.

What impact is climate change having on China, and what impact is China having on climate change?

The route China has taken towards development and modernization has allowed the country to achieve double-digit economic growth rates over the last thirty years, but it has also had negative effects on social justice and the environment. Of the various environmental problems China faces today, climate change is not regarded as the most important. More emphasis is placed on water pollution and air pollution, both of which have direct negative effects on the population. A White Paper issued in autumn 2008[4] detailed the ways in which China is already being affected by climate change, and gave some forecasts for the future. However, it described these effects in rather general terms. The impact on agriculture and livestock breeding would, it said, be negative overall, especially because of regionally-high temperatures and droughts. Forests and natural ecosystems would also be damaged, for example, by increases in pests and diseases. In terms of water resources, more frequent flooding, especially in the south of the country (due to glacial melt and rainfall), and droughts, especially in the north, are already evident. The increase in sea levels will threaten the prosperous coastal zones of the country with flooding, soil salinization, and erosion. In this context, the report forecasts that climate change will have negative effects on social stability and will result in high economic costs.

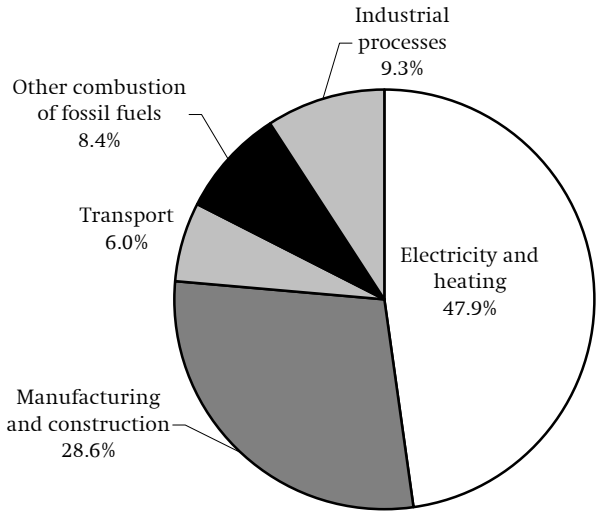
Although China places the blame for climate change mainly on the industrialized nations, it can scarcely deny its own contribution to the increase in global emissions. While Chinese emissions had been increasing at a markedly lower rate than the country's economic growth rate between 1980 and 2000,[5] energy consumption and emissions grew faster than the economy between 2001 and 2005. The increase in energy consumption (and in emissions) in recent years is due primarily to energy-intensive heavy industry, construction (related to urbanization) and infrastructural projects. By contrast, transport and services make up a relatively small share of emissions; but one that is projected to increase rapidly in the future (see Figure 8, p. 56).[6] Coal still makes up almost 70 percent of China's energy mix, and this level of dependence on coal, and on electricity produced by coal-fired power stations, is expected to persist for decades.

4 See Information Office of the State Council of the People's Republic of China, *China's Policies and Actions for Addressing Climate Change*, (Beijing, October 2008), Chap. 2 [n.p.], http://www.gov.cn/english/2008-10/29/content_1134544.htm.

5 While economic output quadrupled during this period, energy consumption doubled.

6 Jakobson, "China" [see n. 2], 34f. In 2005, 47.9 percent of Chinese carbon emissions were caused by electricity and heating, 28.6 percent by manufacturing industry and construction, and only 6 percent by transport (EU: 23.3 percent; USA: 30.8 percent). See also Hallding, Han, and Olsson, *A Balancing Act* [see n. 3], 63.

Figure 8
Chinese carbon dioxide emissions by sector, 2005



Source: author's diagram; data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009). For further explanation see also n. 27 (p. 21) in the article by Susanne Dröge.

Even Chinese experts are not entirely sure what path future emissions growth will take. This uncertainty relates partly to the reliability and accuracy of the data collected and the forecasts that have been made. But in view of the country's rapidly increasing energy needs, energy security and the increasing dependence on energy imports have become burning issues. As a result, increasing the efficiency of energy consumption and diversifying the sources of energy are at the forefront of national programs.

In 2007, the Chinese regions were instructed to implement a "National Plan on Dealing with Climate Change." The White Paper[7] outlined the current situation and the measures being taken to address it. A number of laws have been passed dealing with various aspects of environmental protection, energy conservation and slowing emissions growth, and a number of actions have already been taken:[8]

- *Energy efficiency*—Objectives of the 11th Five-Year Plan (2005–2010): reducing energy intensity by 20 percent per unit of GDP (although results have so far not matched this target); increasing electricity prices in 2008; closing small and out-dated power plants; closing inefficient factories (especially steel, cement); and special programs for the 1,000 most energy-intensive enterprises ("1,000 Enterprise Efficiency Plan");
- *Renewable energies*—Renewable Energy Law (February 2005): the amount of energy generated from wind, solar power (photovoltaics), biomass, and

7 See *China's Policies and Actions for Addressing Climate Change* [see n. 4].

8 An overview is given in: Jane A. Leggett, Jeffrey Logan, Anna Mackay, *China's Greenhouse Gas Emissions and Mitigation Policies*, (Washington, D.C., September 9, 2008), CRS Report for Congress, Order Code RL34659, http://www.fas.org/sgp/crs/row/RL34659.pdf.

water should be increased to 20 percent of energy production by 2020; China is already one of the biggest, if not the biggest, producer of wind turbines and solar panels and provides a large market for related technologies;
- *Expansion of nuclear power* (to 70 gigawatts by 2020);
- *Emission standards for automobiles*—limits that are 40 percent more stringent than in the US; introduction of the EU-4 norms for new vehicles; additional tax on large new vehicles; and subsidies for the development of electric cars;
- *Improving building standards* (non-military buildings are responsible for 28 percent of Chinese energy consumption), increased use of energy-efficient electrical appliances;
- *Taxation on energy-intensive goods for export;*
- *Afforestation;*
- *Capture of methane* in coalbeds; construction of pipelines to make use of the methane.

Carbon capture and storage (CCS) techniques would be extremely important, given the dominance of coal in primary energy generation. However, China has not been particularly active in this area as the technology is not yet fully developed and as the process itself reduces energy efficiency by roughly 10 percent.[9]

After some initial hesitation, China did become involved in the Clean Development Mechanism (CDM). In the period up to July 2008, 244 projects were launched that would contribute to an annual reduction in carbon dioxide (CO_2) of 113 million metric tons (this would mean that China would contribute half of the global reduction achieved through CDM). China is proposing that this program be continued after 2012.

Despite these measures and the planned increases in efficiency, Chinese emissions will continue to grow in absolute terms (albeit at a slower rate than to date) over the coming decade, even if lower economic growth rates of 6.5 to 8 percent annually are assumed.

Reading the Chinese White Paper gives the impression that China sees combating climate change as an utmost priority. But China's more fundamental development objectives and the political situation in the country put this in some doubt.

Political situation and institutional framework

Economic development and modernization of the country, while at the same time maintaining political and social stability, has been the highest priority for Chinese leaders during the entire reform period. Despite the economic progress made over the last thirty years, poverty reduction is still a central goal. The legitimacy of the Chinese leadership is based increasingly on the promise of rising living standards for a large part of

9 Hallding, Han, and Olsson, *A Balancing Act* [see n. 3], 72.

the population.[10] After the global financial and economic crises, the Chinese leaders see it as vital to maintain economic growth at a level of at least eight percent in order to maintain social stability and to create or retain jobs. Under these circumstances, climate policy has to take a back seat. Nevertheless, energy security as well as environmental and climate protection have become part of the political agenda and are ideologically embedded in the concepts of "scientific development" and "harmonious society."

China's foreign policy actions are in line with its domestic development objectives and are intended to create a favorable environment for the achievement of those objectives. In addition, China would like to be seen as a responsible actor on the world stage ("responsible stakeholder") and to be treated as an equal and reliable partner. However, Beijing is not prepared to sacrifice core domestic interests for the sake of its international image. China continues to place emphasis on the principles of national sovereignty and non-interference. This means that it tends to reject any international commitments that would be subject to outside monitoring or control. Moreover, China would not feel comfortable if it were unable to fulfill its obligations and then be criticized for failing to do so.

Overall, China is extremely cautious about taking on any roles involving international leadership. However, it has become increasingly engaged over the last two decades, particularly in the framework of the United Nations (e.g., in international peacekeeping). China sees itself as a developing country but also—partly as a result of how it is viewed abroad—as a major power, or at least a regional power. Beijing thus attempts to be both a representative and a spokesman for the developing countries, as well as a cooperation partner for the industrialized nations. It is experiencing increasing difficulty in meeting the expectations of all sides—especially since in many areas, China shares neither the interests of a traditional developing country, nor those of an established industrialized country. The climate change negotiations in Copenhagen have illustrated this dilemma in a very vivid way.

Since 2005/2006, the Chinese leaders have taken on the issue of climate change in the context of energy security. In 2007, a "National Leading Group" headed by Premier Wen Jiabao was set up to tackle climate change. But despite some attempts at reform, the system of institutions involved in energy and environmental issues remains very fragmented, and there is no clear division of competences. This means that making decisions and implementing them—usually done in a top-down manner—is extremely complex. In addition, there are no independent monitoring or supervisory bodies.

At a national level, the most important of all the institutions involved with climate change and energy supply in China is the National Development and Reform Commission, NDRC. An office for the National Leading

10 Officially, China's goal is to quadruple per capita income by 2020 (against 2000 levels), thus attaining a "well-off society in an all-round way."

Group has been set up within the NDRC. The NDRC also created a special body to coordinate the implementation of measures across the country. In addition, there is an Expert Group for scientific decisions concerning climate change.

The environmental agency, which was upgraded to a full ministry only in the spring of 2008, does not have adequate financial resources or staff. At the local level, environmental authorities do not have the power to monitor or oversee enterprises that have a higher administrative ranking. There is still no Chinese ministry for energy that might be responsible for actually coordinating all measures related to the energy sector.[11] In particular, the division of labor between the different departments and institutions is not clearly defined. Thus, it is not clear which institution is responsible for ensuring the implementation of laws. Large energy companies can have more power than governmental institutions. This problem is unlikely to disappear any time soon since these powerful actors have an interest in maintaining the status quo and have been successful in undermining any attempts by the Chinese leaders at reforming the system.[12] A few years ago, for example, an attempt was made to introduce a form of "Green GDP" that would take environmental costs into account when calculating economic performance. Due to resistance at local levels this could not be enforced. However, at least the environmental impact in the regions is now considered when assessing the performance of governmental officials, and thus has some influence on their chances for promotion.

China and the international climate policy negotiations

Responsibility for climate change issues in China is not centralized, but depends on the government level. At the national level, the NDRC and a number of other institutions are responsible, while for the international negotiations, the foreign ministry also becomes involved.

China has become active in international climate policy-making in many ways and formats: within the G8 Outreach/Heiligendamm process, in a regional context within the Asia-Pacific Economic Cooperation (APEC), the East Asian Summit, and the Boao Forum for Asia.[13] China is also a member of the Carbon Sequestration Leadership Forum, the Methane-to-

11 On the fragmentation of the energy sector, see, for example, Erica Downs, Testimony before the U.S.-China Economic & Security Review Commission, August 13, 2008, 2–4, http://www.uscc.gov/hearings/2008hearings/written_testimonies/08_08_13_wrts/08_08_13_downs_statement.pdf (accessed September 1, 2009). An example is that the National Energy Agency does not have the power to set energy prices. A new "National Energy Commission" was formed in January 2010, but it can be doubted that this will solve the issue of fragmentation.

12 Ibid.

13 APEC is essentially an economic grouping of Asian as well as North and South American states; it includes the US. The first East Asia Summit was held in 2005. Participants are the ten ASEAN states and China, Japan, Korea, India Australia and New Zealand. The Boao Forum, the Asian equivalent of the Davos economic forum, takes place once a year on the island of Hainan.

Market Partnership, and the Asia-Pacific Partnership on Clean Development and Climate initiated by the US under President Bush. It is engaged in bilateral dialogues on climate change with the EU, India, Brazil, South Africa, Japan, the US, Canada, Australia, and the UK. It has been providing support for African countries and Small Island Development States (SIDS).[14] In October 2009, India and China signed a statement of intent on cooperation in the area of climate change.

In general, China is in favor of strengthening the position of the United Nations, and climate policy is no exception. In February and May 2009, China submitted position papers to the UNFCCC.[15] These papers emphasized that the Kyoto Protocol and its principle of "common but differentiated responsibilities" should continue to apply. In particular, they demanded that the industrialized countries should set binding targets for reducing emissions (40 percent below 1990 levels by 2020).[16] Other demands included: no binding limits on emissions for developing countries; no subcategories within the group of developing countries; the creation of financing funds (managed and overseen by the Conference of the Parties, COP); and that the industrialized countries should provide support for Nationally Appropriate Mitigation Action (NAMA) in the developing countries by contributing 0.5 to 1 percent of their GDP (on top of existing development aid) to the financing funds for technology transfer and patents. In particular, these funds should be targeted at the least developed countries (LDC) and SIDS. The reductions in emissions thus achieved should nevertheless be credited to the developing countries.

China has listed the technologies that should be prioritized for technology transfer as: advanced coal technologies, energy-efficient building technologies, clean vehicles, and advanced industrial technologies.[17] Beijing argues that technology transfer should not be left to market forces. The Chinese negotiators entered the negotiations with these "maximum" demands on the industrialized countries (emissions limits and technology transfer).

In the course of the preparations for the Copenhagen climate summit it had become clear that the decisions made by the US and its positions on further international commitments would have an important influence on

14 *China's Policies and Actions for Addressing Climate Change* [see n. 4], Chapter 7.

15 "China's Views on the Fulfillment of the Bali Action Plan and the Components of the Agreed Outcome to be Adopted by the Conference of the Parties at Its 15th Session," February 2, 2009, http://unfccc.int/files/kyoto_protocol/application/pdf/china060209.pdf; and "Implementation of the Bali Roadmap. China's Position on the Copenhagen Climate Change Conference," May 20, 2009, http://en.ndrc.gov.cn/newsrelease/t20090521_280382.htm (accessed May 20, 2009).

16 This corresponds to the stance of the Outreach Five and of the members of the Heiligendamm Process and the G77.

17 Joanna I. Lewis, Testimony before the US-China Economic and Security Review Commission Hearing in "China's Energy Policies and Their Environmental Impacts," August 13, 2008 http://www.uscc.gov/hearings/2008hearings/written_testimonies/08_08_13_wrts/08_08_13_lewis_statement.pdf. An overview of all the statements given to this hearing is at: http://www.uscc.gov/ hearings/2008hearings/hr08_08_13.php (accessed July 27, 2009).

the Chinese position. The two biggest consumers of energy and emitters of CO_2 are responsible for about 40 percent of global CO_2 emissions. Thus, cooperation between the two countries would mean a sea change compared to previous negotiation phases. Any common approach would put an end to the chicken game where each country hides behind the other in order not to be the first mover. Shortly after the presidential elections in the US, and given the expectations for a qualitative change in American climate policy under Obama, two reports appeared in the US exploring the possibility of US-Chinese cooperation on climate change (or "clean energy") and outlining some recommendations.[18] According to the two reports and to expert hearings before Congressional committees, China could only be expected to budge if the US significantly shifted its own position.

China does not want to be perceived by the international community as a spoiler. Yet it was clear that in Copenhagen China itself would not agree to absolute caps on emissions because such limits might slow down economic growth at home. However, improving energy efficiency is regarded as a different matter, since progress in this area would not necessarily threaten economic growth. In September 2009, Hu Jintao announced at the climate summit of the United Nations that China would significantly reduce its carbon intensity. In late November 2009, shortly before the conference in Copenhagen, China put some figures on this target, stating that by 2020, it would reduce its CO_2 emissions per unit of GDP by 40 to 45 percent.[19] At the G8 summit in L'Aquila China also signed on to the target of limiting global warming to two degrees Celsius. However, it has yet to clarify what this would imply for its own actions.

Despite negotiations between the US and China on a bilateral partnership focusing on clean energy and energy efficiency and a Memorandum of Understanding signed by both countries in July 2009 within the framework of their "Strategic and Economic Dialogue"[20], US negotiators in Copenhagen like Todd Stern displayed a hard line vis-à-vis China by announcing that no country should expect any financial support from the US if it did not agree to international monitoring and that China was not among the group of countries in need of such financial support.[21] As a reaction to this, Chinese negotiators offered more transparency in data, but they did not consent to international monitoring, and they declared

18 Kenneth Lieberthal and David Sandalow, *Overcoming Obstacles to U.S.-China Cooperation on Climate Change*, (Washington, D.C.: China Center at Brookings, January 2009), John L. Thornton Center Monograph Series, No. 1; Asia Society and Pew Center on Global Climate Change, *Common Challenge, Collaborative Response. A Roadmap for U.S.-China Cooperation on Energy and Climate Change*, January 2009.

19 "China Sets Targets for 2020 Carbon Cuts," *Financial Times*, November 26, 2009. These figures have also been submitted to the Copenhagen Accord in January 2010.

20 "U.S.-China Memorandum of Understanding to Enhance Cooperation on Climate Change, Energy and the Environment," July 28, 2009, http://www.state.gov/documents/organization/126802.pdf (accessed September 2, 2009).

21 See e.g. Andrew C. Refkin and Tom Zeller Jr., "U.S. Negotiator Dismisses Reparations for Climate," *New York Times* (online), December 10, 2009.

that they did not expect financial support from industrialized countries going to China.

Up until the Copenhagen conference, the Chinese position was firmly embedded in the G77, which now comprises 130 developing countries. China knows that the official introduction of subcategories for developing countries would weaken its own negotiating position. For that reason it is not (yet) open to international debate on this topic and insists on a continuation of the Kyoto protocol. In Copenhagen, however, for the first time in the history of the G77, the divide among the members became apparent when the small island of Tuvalu broke the ranks and called for mandatory caps of emerging economies starting in 2013 as well as insisting on a maximum temperature rise of 1.5 degrees Celsius (instead of 2 degrees). Briefly before Copenhagen China met with the three other big emerging economies Brazil, South Africa and India. In Copenhagen, this grouping became known under the acronym BASIC.[22] Despite the differences that became visible within the G77, the BASIC group still claims to present the interests of the developing countries.

Media reports have offered a broad range of accounts of the actions and behavior of the Chinese delegation in Copenhagen. Interpretations vary as widely as the assessment of the final accord itself: the US tried to drive China into a corner[23] or China single-handedly ruined any positive outcome.[24] The role and mandate of Wen Jiabao for shifting China's previous position was debated as well as the actual result China wanted. Given the Chinese stance on its domestic climate and energy policy and development priorities, it can hardly surprise that China remained firm on mandatory caps, on external monitoring and verification and on keeping the Kyoto Protocol alive as the major format for the industrialized countries to meet their historical responsibility for climate change.

The debate in China

There is a considerable gulf between the goals China has set for itself domestically and the position it has been taking in international negotiations. This is mainly because the Chinese leaders do not want to enter into any international agreements that might stop them from taking whatever action they feel necessary to promote economic growth. Over recent years, the political elites have become increasingly interested in climate change issues, but awareness of the problem in the population in general is still low. Issues such as water and air pollution, by contrast, have a more direct negative effect on the population, and these are a regular source of popular protests.

22 See Jonathan Watts, "China transforms balance of power in Copenhagen' negotiating halls," *The Guardian* (online), December 17, 2009.

23 See Peter Lee: "The Copenhagen Challenge: China, India, Brazil and South Africa at the Barricades," *The Asia-Pacific Forum: Japan Focus Newsletter*, February 2, 2010.

24 This version was supported by Mark Lynas in *The Guardian*: "How do I know that China wrecked the Copenhagen deal? I was in the room," December 22, 2009.

Official statements emphasize that China has a right to decide on its own development. The assumption is that while future Chinese CO_2 emissions will increase more slowly than in the recent past, they will only begin to fall, in absolute terms, from 2050 onward.[25] A 900-page study issued in August 2009 by experts from the NDRC and the Development Research Center of the State Council suggests that Chinese emissions could peak in 2030, but that this best case scenario ("enhanced low carbon") would require investments of approximately 100 billion euros per year until 2050.[26]

Some academics and researchers have put forward alternative ideas. Hu Angang, a renowned Chinese intellectual and a professor of economics at Tsinghua University, has argued that China should play a much more active role.[27] He believes that the concept of dividing the globe into developed and developing countries should be abandoned and replaced with a more nuanced system based on the Human Development Index (HDI). This would result in "phased" obligations for China: for the first five years after 2012 the country would not be required to reduce its emissions, but after this initial phase, binding targets for reduction would apply. In addition, given the huge regional differences within the country, China could itself be divided into different zones. Richer regions, for example Shanghai and its environs, would lead the way in reducing emissions. Other Chinese researchers feel these suggestions are not practicable but do also recognize the necessity for China to at least set itself voluntary targets for emissions reductions, for example during the 2018 to 2022 stage. From 2023 to 2027, they believe, China could then commit to carbon intensity targets as a precursor to absolute limits on emissions.[28] This was not initially a mainstream position. But in the run-up to the international climate change negotiations in late 2009, China has announced such an "intensity target" on a voluntary basis (up to 45 percent less CO_2 per unit of GDP by 2020). This modified official position is, in turn, bound to affect the domestic debate on the issue.

While China is often seen, especially in the West, as the world's biggest polluter, China sees itself as a developing country that supplies the West

25 According to Su Wei, the Director General of the climate change office at NDRC, in mid-August 2009. See Kathrin Hille, "Beijing Sets Date for Emissions Cut," *Financial Times*, August 18, 2009.

26 On the *2050 China Energy and CO_2 Emissions Report* see "China Emissions to Peak at 2030: Report," *China Daily*, August 18, 2009. In this best-case scenario, China's emissions could fall to 2005 levels by 2050.

27 See Hu Angang, *A New Approach to Copenhagen,* April 6, 2009 (in three parts), http://www.chinadialogue.net; and Chris Buckley, "China Government Adviser Urges Greenhouse Gas Cuts," *Reuters*, September 8, 2008, http://www.reuters.com.

28 See ZhongXiang Zhang, "In what format and under what time frame would China take on climate commitments? A roadmap to 2050," June 2, 2009, http://mpra.ub.uni-muenchen.de/15587/1/MPRA_paper_15587.pdf (accessed June 10, 2009), 12f.

with cheap consumer goods.[29] Informal and unofficial conversations with Chinese researchers reveal that some of them believe that the West is using the issue of climate change to attempt to limit and contain China's development.[30] Such mistrust of Western political motives was considerably reinforced in 2008 during the Olympic Games: Western criticism of China expressed during of the Olympic torch relay and the Games themselves were taken as a sign that the West does not want to acknowledge China's success in modernizing itself nor its growing power. Both the demands for developing country action put forward in Copenhagen by industrialized countries and the industrialized countries' reluctance to commit themselves under the Kyoto Protocol most likely fuelled suspicions that climate policy is being used to put pressure on developing countries and to control their development.

A way forward?

There was little prospect to begin with of China agreeing to internationally set, binding limits on emissions during the Copenhagen negotiations. However, the Chinese announcement that it would set its own target for carbon intensity meant that it did not want to stand in the way of a successful outcome to the negotiations on a Copenhagen agreement. There was thus certainly some potential for a deal, especially if the US had been willing to alter its position to a considerable degree and if the EU member states had been able to take advantage of this.

In contrast to most Western media and politicians, China officially praised the Copenhagen Accord as an important first step which should be respected by all sides.[31] Shortly after Copenhagen a ministerial-level meeting of the BASIC countries took place in Delhi to discuss further coordination and cooperation. They pledged to come together in this constellation once in every quarter and also to work closely with other members of the G77.[32] The BASIC group called for an early flow of the funds promised by industrialized countries, but also announced to set up their own fund to help poorer developing countries, some of which had accused the group of four to have moved away from the G77. The four countries emphasized the importance of close cooperation with other members of the G77 and China "to ensure an ambitious and equitable outcome in Mexico through a transparent process."[33]

29 According to Hallding, Han, and Olsson, *A Balancing Act* [see n. 3], 104–105, the main reason that China is a net carbon exporter is that its imports come mainly from countries with non-carbon-intensive economies (Japan, the EU, North America).

30 See for example Jakobson, "China" [see n. 2].

31 See comment of the Chinese Foreign Ministry's spokesperson after Copenhagen on December 21, 2009 at http://www.fmprc.gov.cn/eng/xwfw/s2510/2535/t646731.htm (accessed February 20, 2010).

32 "Joint statement issued at the conclusion of the second meeting of Ministers of BASIC group, New Delhi," January 24, 2010, http://www.info.gov.za/speeches/2010/10012512451001.htm (accessed February 24, 2010).

33 Ibid.

The investments that China will make over the next decade will determine how its emissions will develop. Despite statements to the contrary, it is by no means certain that China will really focus on energy efficiency. From a Western perspective, one problem is that national goals set by the Chinese leaders are not adequately implemented in practice. But at the same time, the industrialized countries also have an ambiguous attitude towards the *successful* implementation of certain Chinese decisions. One example is that China is now the biggest global producer of solar cells and wind turbines. Given that the production volumes for the huge Chinese market will be enormous, along with China's well-known issues with respecting intellectual property, Western industrialized countries may find themselves struggling with conflicting objectives. To protect their own competitive advantage, Western manufacturers will be particularly reluctant to engage in technology transfer to China. However, if China does not receive such transfers, it is unlikely to be willing to enter into deals on climate change.

The window of opportunity now open to China should be a convincing argument. Already, Chinese emissions per capita are above the global average and are rapidly catching up with Western levels. While China is currently in a strong negotiating position, this is unlikely to be the case ten years from now. In other words, China is now in a position to ask for support from the industrialized countries, for example, in the form of technology transfer. This insight is also the background to the ideas developed by economist Hu Angang.

China's international partners, in particular the US and EU, have to take into account the institutional fragmentation within China. In light of the weak outcome of Copenhagen, it becomes all the more important to continue and strengthen concrete cooperation with China on the central, regional and sub-regional level. For joint projects, it will be important to identify the most appropriate partner; this might even be a local organization or a business company. The British suggestion of "low carbon zones" picks up on China's experience with special economic zones. Here, the idea is that relatively prosperous regions with high levels of emissions would lead the way. This also corresponds nicely with Hu Angang's proposals.

In addition, the EU should welcome any positive cooperation between the two biggest CO_2-emitting states: this would put an end to their mutual blocking behavior and would promote mutual understanding and trust. The fear that the US and China could reach their own agreement and then force it on everyone else[34] was proven groundless by the events in Copenhagen. At present it is unclear, however, in what form the cooperation between Washington and Beijing on clean energy etc. will continue.

If the Chinese leaders are really unanimous about placing a high priority on the issue of climate change, there is some prospect that the measures that have been planned or already introduced will be fully imple-

34 See Keith Bradsher, "U.S. and China Agree to Study Ways to Make Buildings More Energy-Efficient," *New York Times*, July 17, 2009.

mented. Over time, Beijing would then hopefully to enter into additional international obligations. In this context, an argument similar to that employed for China's accession to the WTO could apply: If China enters into binding international obligations, the Chinese government could use such obligations as a reason to eliminate domestic obstacles to reform.

India: A Difficult Partner in International Climate Policy

Christian Wagner

After the end of the Cold War, few countries experienced such an increase in international attention as India. The process of liberalization after 1991 led to a considerable improvement in India's political and economic relationships with the developed countries. Indian foreign policy has long involved multilateral relationships, and since the founding of the Non-Aligned Movement in 1961, India has taken on a role as a spokesperson for developing countries. However, it also rejects any legally binding international agreements, insisting on retaining its own sovereignty. As a result, India will pursue primarily its own interests within the climate change negotiations, especially with regard to its economic development and the reduction of poverty. Given its growing environmental problems and its need for a secure energy supply as a precondition for economic growth, India is certainly interested in the success of international climate policy—but not necessarily at the price of binding commitments.

Economic rise and the need for energy

India has become an essential partner in global governance issues, due to its size with more than one billion people and its economic success. While 90 percent of the population in 2005 lived on less than US$2.50 per day, the ten percent of the population with a higher level of income, who could be described as middle class in the broadest sense, are a large grouping even in global terms. With 100–140 million people, this group would make up the tenth biggest state in the world. India's new international importance is also reflected in the strategic partnerships it has formed with almost all the large industrialized countries.

For many years, India, along with China, has been one of the powerhouses of the global economy. The transformation from a state-regulated economy focused on the domestic market to an export-oriented economy aimed at integration into the global market has increased India's share of global trade, although this still counts for less than one percent. As a result, energy consumption has increased dramatically alongside economic growth. All available forecasts assume that India's energy consumption will increase significantly over coming decades due to its still-increasing population and rapid industrialization. In 2010, India will be the fourth-largest global consumer of energy after the US, China, and Japan[1], and based on current growth rates it will be the fifth-largest economy in

1 See Pramit Mitra, "Indian Diplomacy Energized by Search for Oil," *YaleGlobal*, March 14, 2005, 2.

the world by 2025. Between 2004 and 2030, total energy consumption will almost double. But even if the Indian economy grows by eight percent per year until 2031/32, the total primary energy supply per capita will still be lower than the global average for 2003, and will be considerably lower than the average among the OECD countries in 2003.[2]

The country's economic development is also accompanied by an increase in its emissions of GHG. India is already the third-biggest emitter of GHG, after the US and China. However, there are notable differences in per capita emissions. In 2005, US per capita emissions of CO_2 were approximately 20 metric tons; the figure for India was just 1.1 metric tons.[3] The International Energy Agency (IEA) estimates that in the period to 2030, India's CO_2 emissions will grow by 2.9 percent, the highest increase in the world. Its share of global CO_2 emissions will increase from 4 percent in 2003 to 6 percent in 2030.[4] This means that in absolute terms (although not in per capita terms), India would be one of the biggest energy consumers as well as one of the biggest CO_2 emitters, by 2030. Figure 9 gives a breakdown of Indian CO_2 emissions by sector. Electricity production, heating and cooling make up the vast majority of emissions at 57 percent, followed by the industrial and construction sectors (around 20 percent). The fastest growth in the medium and long term is expected to be generated by these two sectors, along with transport.

A tough stance in international climate negotiations

India has taken a consistent stance in international negotiations on climate change and the environment. As in other areas of international politics, for example, the non-proliferation treaty and the reform of the UN, India has demanded equal status with the major powers. From India's point of view, responsibility for the increase in greenhouse gases lies with those who polluted in the past. For that reason, the Indian government argues that the industrialized countries should make considerable efforts to reduce their emissions, as planned for in the continuation of the Kyoto Protocol agreement. As a developing country, India claims the right to economic development to further the country's modernization and to reduce poverty. The Indian Prime Minister Manmohan Singh has stated, as a conciliatory gesture, that India's per capita emissions of greenhouses gases should never be allowed to exceed the average figure for industrialized countries.[5] But given India's low level of industrialization, especially in

2 See Government of India, Planning Commission, *Integrated Energy Policy. Report of the Expert Committee*, (New Delhi, 2006), 32.

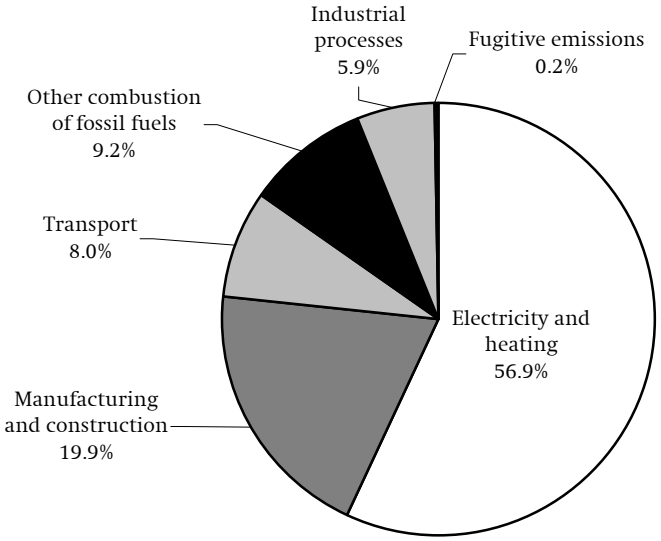
3 See Figure 3 in Susanne Dröge's contribution (p. 20). More recent data are provided by Shyam Saran, *India's Climate Change Initiatives: Strategies for a Greener Future*, (Washington, D.C.: Carnegie Endowment for International Peace, March 23, 2009), http://www.carnegieendowment.org/files/Saran_Speechpercent20atpercent20Carnegie.pdf (accessed July 24, 2009).

4 See International Energy Agency, *World Energy Outlook 2005*, (Paris, 2005), 93.

5 See Ministry of External Affairs (MEA), *The Road to Copenhagen. India's Position on Climate Change Issues*, (New Delhi, 2009), 3.

comparison to China, and its still-growing population, this "Singh Convergence Principle" (SCP), while it does have some symbolic significance, mainly underlines India's reluctance to enter into any binding agreements.

Figure 9
Indian carbon dioxide emissions by sector, 2005



Source: author's diagram; data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009). For further explanation see also n. 27 (p. 21) in the article by Susanne Dröge.

Traditionally, the Indian Foreign Ministry is in charge of international negotiations. But in climate and environment-related negotiations, the Ministry of the Environment and Forests (MoEF) plays an important role. The chief negotiator is Shyam Saran, a former Secretary of State who has been appointed the Prime Minister's Special Envoy on Climate Change. To date, India has made nine submissions to the UNFCCC.[6] In the international negotiations, the country has been able to use its established role as a representative of the developing countries to push its own agenda. Refering to its independence and to the principle of non-interference in domestic affairs India rejects the industrialized countries' demands for lower emissions, additional obligations to report to the UNFCCC Secretariat on changes in national emissions levels, and proposed sectoral approaches.[7]

In the climate change negotiations, India has been pursuing a similar strategy to the one it has used in other international negotiations. India refuses to enter into binding international agreements because it feels

6 Ibid., 7/8.

7 See "India," *Towards a New Climate Regime? Views from China, India, Japan, Russia and the United States on the Road to Copenhagen*, ed. Anna Korppoo and Alex Luta, (Helsinki: The Finnish Institute of International Affairs [FIIA], 2009), FIIA Report 19/2009, 47–65 (52f), http://www.upi-fiia.fi/en/publication/72/ (accessed September 1, 2009).

they would restrict its own development. In the past, India made use of anti-colonial rhetoric to reject external regulations; this has now been replaced by a discourse of modernization, which, however, is not focusing on a low-carbon development strategy. Any internationally binding rules in climate policy or environmental policy are thus interpreted as obstacles that would prevent the Indian government from achieving its desired goal of eight to nine percent annual economic growth.

For these reasons, India can be described as the "hardest nut to crack"[8] in the current climate change negotiations. Still, it would be possible to reach an agreement with India, albeit at a high price. Despite its initially negative stance, there is likely to be some interest on the Indian side in reaching an agreement with the industrialized countries if energy security and technology transfer are included within a deal.

The first point in this regard is that India's dependency on energy imports will increase considerably by 2030. This applies not just to oil and gas, for which the country is already largely dependent on imports, but also to coal, which is currently the most important domestic source of energy. By 2030/31, India will have to import some two-thirds of its coal consumption, and probably 90 percent of its oil consumption.[9] This will change India's foreign policy challenges, particularly due to the increasing dependency on Middle Eastern and Gulf states and increasing competition with China.[10] As such, India itself has a considerable interest in reducing its dependency on fossil fuels and promoting the use of renewable energies if it wants to secure annual economic growth of around eight percent.

The second issue is technology transfer. India desperately needs to catch up in technological terms, particularly in energy technologies. Many industrialized countries, including the US and Germany, have made energy one of the core elements of their relationships with India.

A third issue of interest is the attempt to create an international emissions trading system; India has had positive experiences with selling emission credits under the Clean Development Mechanism (CDM). Although the country has considerable reservations about any additional binding international commitments, the CDM, which was agreed under the Kyoto Protocol, has been welcomed in India. It has become the second-largest source of CDM credits.[11]

On the backdrop of India's unyielding negotiating stance it was astonishing that Prime Minister Singh signed a declaration on energy and climate at the G8 summit in July 2009 in L'Aquila, in which India accepted—

8 Cited by Dorothée Junkers, "Milliarden-Streit um neuen Weltklimavertrag," *Deutsche Presseagentur* (dpa), July 24, 2009.

9 Shyam Saran, "Will India's Growth Story Confront a New Constraint," Speech by Special Envoy of Prime Minister on Climate Change, India International Centre, July 26, 2008, http://meaindia.nic.in/speech/2008/07/26ss01.htm (accessed July 27, 2009).

10 See Christian Wagner, *Energie, Sicherheit und Außenpolitik in Indien*, (Berlin: Stiftung Wissenschaft und Politik, May 2007), SWP-Studie 12/2007.

11 See Korppoo and Luta, eds., *Towards a New Climate Regime?* [see n. 7], 61, and the details given in Claudia Zilla's contribution to this study (pp. 88ff).

for the first time—the two degrees target for reducing global greenhouse gas emissions. This initiated a debate in India whether the government had given up its prior stance and might be ready to enter into legally binding concessions.[12]

Domestic policy priorities and their influence on India's interest in the global process

Climate change and environmental issues play only a marginal role in domestic political debate. There are only few differences in policy among the main political parties and between environmental organizations and the government.[13] Since the 1990s, the public awareness of environmental problems has grown. There is now a Ministry for Renewable Energies, and in 2008, the government presented the first National Action Plan on Climate Change (NAPCC). This plan outlines eight "national missions," which include promoting solar energy, improving energy efficiency, sustainable development of the Himalayas ecosystem, a vision of a "green India," and sustainable agriculture.[14]

The challenge in many areas, however, is not a lack of ability to analyze the problem, but the capacity to implement a solution. This has become evident in, among other areas, public goods such as education and health services, which have been gravely deficient for many years. Because of these deficiencies, India is ranked only 132 in the Human Development Report 2008. One can assume that implementing international agreements would prove equally difficult. The Millennium Development Goals (MDG) are one example. Due to the problems with health services, India is unlikely to meet these goals. There are other similar problems in the implementation of public policy for environmental purposes. The Environmental Performance Index ranks India 120th of 149 states.[15] The inability in policy implementation is mainly caused by corruption and political patronage.

Given the cross-party rejection of legally binding agreements, all Indian governments are faced with the challenge to find a domestic consensus for any international concession. Admittedly, Indian governance does not require international agreements to be ratified by the parliament. But since the 1990s, governments have usually been coalitions or minority governments, and international agreements can thus easily cause a crisis threatening the continuation of the government. In the summer of 2008, the communist parties supporting the government rejected the Indian-American agreement on atomic power because they believed it would threaten the independence of Indian foreign policy.

12 See R. Ramachandran, "Climate Change and the Indian Stand," *The Hindu*, July 28, 2009 (accessed July 28, 2009).

13 See Korppoo and Luta, eds., *Towards a New Climate Regime?* [see n. 7], 62f.

14 See Raj Chengappa, "What India Should Do," *India Today*, July 14, 2008, 26–30.

15 See http://www.yale.edu/epi/files/2008EPI_Rankings_1page.pdf (accessed July 28, 2009).

India after Copenhagen

India's position at the Copenhagen summit in December 2009 was coherent. Beforehand, India signaled that it would only commit to an outcome if it involved financial and technological assistance which furthers structural economic change. Moreover, there was a strong all party consensus supported by civil society against any legally binding agreements. India claimed its right for industrialization and economic growth, leading to modernization and poverty alleviation. This position was supported by forecasts by which India would have about 15 percent of the world's population in 2030 but would contribute only six percent of global CO_2 emissions. Internationally India tried to build a common consensus with like-minded countries like South Africa and China.[16] At first sight, with the Copenhagen Accord India seemed to have achieved its main goals. There was no binding agreement and there were major concessions for financial and technological support by the developed countries.

During the negotiations in Copenhagen, the BASIC group (Brazil, South Africa, India, China) emerged as the most important counterweight vis-à-vis the developed countries. Internationally, the formation of the BASIC group and their common approach at the summit was regarded as a success. From the Indian perspective, the cooperation with China is of major interest, with which India has intensified the relations since the 1990s despite the territorial disputes. With Brazil and South Africa India had already established the IBSA-Initiative in the context of the WTO. The Indian government was aware that BASIC could split the unity of the Group of 77 developing countries (G 77). The meeting of the BASIC group in New Delhi in January 2010 therefore emphasized their common interests with the G 77.[17]

Domestically, the reactions of the government to the Copenhagen Accord were more thoughtful than expected. Prime Minister Manmohan Singh made various statements which indicated that the government was not satisfied with the outcome of the Copenhagen summit. Immediately after Copenhagen, Singh declared that ecological devastation "will have far more greater consequences in India than in the West." Moreover he was critical whether India should pursue the same path of industrial modernization than the developed countries.[18] In January 2010 he deplored the "very limited success" of Copenhagen and emphasized the need for greater energy efficiency and renewable energy in India.[19] Another interesting outcome of Copenhagen was the resignation of Shyam Sharan who acted as

16 See Aarti Dhar, "India, China Sign MoA [Memorandum of Agreement] on Climate Change," *The Hindu*, October 22, 2009, http://www.thehindu.com/2009/10/22/stories/2009102257 490100.htm (accessed October 23, 2009).

17 See Aarti Dhar, "BASIC bloc to inform U.N. of voluntary mitigation steps," *The Hindu*, January 25, 2010.

18 See "For informed, rational debate on climate change," *The Hindu*, December 22, 2009.

19 See P. Sunderarajan, "Very limited progress at Copenhagen: Manmohan," *The Hindu*, January 4, 2010.

chief negotiator. He stepped down in January because of differences with Environmental Minister Ramesh.[20]

The Indian government submitted its proposal for domestic mitigation to the UNFCCC under Annex 2 of the Copenhagen Accord. It announces to reduce emission intensity of India GDP by 20–25 percent in comparison to 2005 levels by 2020. These figures had already been in the public debate before Copenhagen and were not regarded to be very ambitious. One of the most remarkable comments came from Environmental Minister Jairam Ramesh. He declared that India may be willing to drop its long-held position on the role of per capita emission. Moreover, he declared for the first time that with a new formula on burden sharing on future greenhouse emissions India may also agree to an international binding agreement.[21] In February 2010, India introduced a new national system for energy efficiency certificates for industry. This underlines Prime Minister's Singh claim that India should play a more prominent role in climate protection.[22]

It remains an open question in how far Copenhagen had an impact on India's climate policy. The announcement and new initiatives after Copenhagen are mostly in line with India's national climate policy. Minister Ramesh's remarks on a new approach towards per capita emissions at least indicate a new awareness that the traditional argumentation will not be helpful to cope with environmental problems, both at the national and the global level. But it remains to be seen in how far domestic opposition against legally binding agreements could be overcome given the strong sensibility of the issue. Ramesh's remarks show that India is becoming aware of its global responsibility not for the historic stock but for present and the future emissions.

India's agreement to join the Copenhagen Accord in March 2010 illustrated that the government is becoming more open towards environmental, climate, and energy issues. India will continue to bring its position into alignment with those of other important developing countries like the members of the BASIC group.[23] As long as multilateral agreements will be difficult to achieve, India's efforts can be strengthened by closer bilateral collaboration. In particular, the need for better technology and financial support to modernize industries and agriculture and to improve energy efficiency should be considered. The development cooperation between Germany and India already focuses on energy and environmental issues. Strengthening such bilateral cooperation with India may thus lead to greater success in climate and environmental issues in the multilateral process.

20 See "Ramesh Admits 'Differences' with Saran," *Times of India*, February, 24, 2010.

21 See Priscilla Jebaraj, "India May Drop per Capita Stand," *The Hindu*, February 8, 2010.

22 See Christiane von Hardenberg, "Indiens Energieverschwender sollen zahlen," *Financial Times Deutschland*, February 23, 2010.

23 See Aarti Dhar, "India, China Sign MoA [Memorandum of Agreement] on Climate Change," *The Hindu*, October 22, 2009, http://www.thehindu.com/2009/10/22/stories/2009102257490100.htm (accessed October 23, 2009).

Russia: Climate Policy on the Sidelines

Kirsten Westphal

Only rarely and to a limited extent climate policy made it on to the Russian government's policy agenda. Yet Russia plays a central role in climate talks. As the world's largest exporter of climate-damaging energy sources (oil, gas, and coal) the country has much to lose in negotiations on the reduction of greenhouse gas emissions. But at the same time, Russia was a key country in the ratification of the Kyoto Protocol and has been one of the biggest net winners under the Kyoto regime. The country did not have to make any effort at reducing emissions and would have been able to gain from international trade of its surplus emission rights. Yet the starting point for negotiations over the Kyoto Protocol was a completely different one than exists today. It is therefore difficult to predict what position Russia will take in the climate policy negotiations.

Russian emissions trends

According to the International Energy Agency (IEA)[1] Russia was the third-largest emitter of greenhouse gases in 2007, responsible for more than 5.5 percent of global carbon dioxide (CO_2) emissions. With regard to per capita emissions, at 11 tons the country still lies behind the US (19.9 tons), but is still far ahead of the EU (7.2 tons).[2] With a population of 142.5 million people, Russia produced approximately 1.9 billion tons of CO_2 emissions in 2007. Yet in the same year, Russian emissions were 34 percent below the base year, 1990.[3] The economic transformation that began with the end of the Soviet Union was accompanied by the collapse of heavy industry, resulting in a sharp decrease in CO_2 emissions. The Kyoto Protocol's use of 1990 as base year therefore benefited Russia significantly. In 1990, Russian emissions were 2.2 billion tons of CO_2, but by 1998 the level had sunk to 1.45 billion tons, then increasing gradually in the following years. Previous emission savings were due primarily to structural changes in the Russian economy, and very little to reforms or efficiency increases in the energy

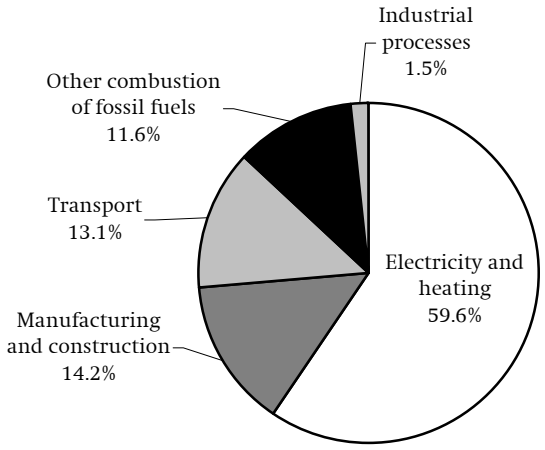
1 International Energy Agency (IEA), *Key World Energy Statistics 2009*, (Paris, 2009), 48–57, www.iea.org/textbase/nppdf/free/2009/key_stats_2009.pdf, and Energy Information Administration, *Country Energy Profiles*, (Washington, D.C., 2009), http://tonto.eia.doe.gov/country/index.cfm.

2 For data on 2005 and an international comparison, see the information in Figures 1 (p. 18) and 3 (p. 20) in the chapter by Susanne Dröge, based on data from the Climate Analysis Indicators Tool (CAIT), (Washington, D.C.: World Resources Institute, 2009).

3 Anna Korppoo, "Russia," in *Towards a New Climate Regime? Views from China, India, Japan, Russia and the United States on the Road to Copenhagen*, ed. Anna Korppoo and Alex Luta, (Helsinki: The Finnish Institute of International Affairs, 2009), FIIA Report 19/2009 81–99 (92).

cycle. Figure 10 shows the distribution of CO_2 emissions across the various economic sectors in the year 2005.

Figure 10
Russia's carbon dioxide emissions by sector, 2005



Source: author's diagram; data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009). For further explanation see also n. 27 (p. 21) in the article by Susanne Dröge.

Effects and influence of climate change

Russia's territory stretches across several climate zones. Thirty million people live in extremely cold regions, where three-quarters of the fuels used in the country are burned. Transport and travel routes are also long due to the vast expanse of the territory. Furthermore, the Russian economy is highly energy-intensive.

Global warming brings Russia advantages as well as risks. Russia's Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet) came to similar conclusions in its 2005 report[4] on the effects of climate change on the territory of the Russian Federation. The report explicitly confirms that climate change is a human-induced phenomenon and urges the Russian government to take the necessary measures and precautions to mitigate the impact of climate change. But above all, the report makes patently clear that global warming also poses a threat to national security.

One of the impacts predicted by Roshydromet is the flooding of large areas of Saint Petersburg and Jamal. 40 million residents across the entire territory are already suffering from the side-effects of poor water quality

4 Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet), *Strategic Prediction for the Period of up to 2010–2015 of Climate Change Expected in Russia and Its Impact on Sectors of the Russian Economy*, (Moscow, 2005).

and environmental destruction. If this leads to an increase of infectious diseases, the country's ability to defend itself will be imperiled. The effects of climate change on Russian agriculture cannot, according to Roshydromet, be clearly gauged. While positive impacts may include longer growing seasons, an increase in arable land, and cultivation of new crops, negative phenomena like longer drought periods and extreme precipitation are also likely.

The Roshydromet report sees the effects of global warming on the fuel-energy complex as ambivalent. Hydropower will become more viable—at least in the medium term—due to the increased flow of water in rivers and streams. Other aspects described in a positive light include better access to the Arctic continental shelf, ice-free harbors, and shorter heating periods in winter. Among the negative consequences of global warming cited are melting permafrost and the resulting damage to the energy infrastructure (especially pipelines) but also to the entire infrastructure (streets, the structural strength of buildings). Roshydromet calls for a package of measures to be developed that take socioeconomic developments thoroughly into account. The report was an important step in bringing this issue into Russia's domestic policy process.

Energy abundance and climate policy

Key factors in the Russian position on climate policy are its major role as an energy producer and exporter and its high domestic energy consumption. Direct revenues from the oil and gas sector make up nearly 40 percent of Russia's national budget depending on price levels. Another 10 percent are indirect revenues from corporate and value added taxes. Fossil energy trade generates around two-thirds of Russian export earnings. In Russia, the availability of cheap, domestic energy has always been a primary national interest: in communist times, it was used to claim superiority over capitalist regimes abroad; during the economic transition, it was used to facilitate structural change and temper the social hardships that accompanied economic decline. Today, Russia uses two to three times more energy than Germany per unit of economic output.[5]

Socioeconomic development is a key factor for the level of emissions. What is true to some extent of all countries was especially true of Russia after the collapse of the Soviet economic system: Russia benefited from 1990 as base year not only because a sharp decline in production during the difficult economic transformation brought about considerable emissions reductions, but also because the Russian economy was restructured in the process. While the service sector contributed only about 36 percent to the gross domestic product (GDP) in 1990, its share had risen to over 66 percent by 2005.[6] This structural change is also reflected in energy consumption: in relative terms, the industrial sector's share in total consump-

5 "Deutsche wollen Russland beim Energiesparen helfen," *Handelsblatt*, June 11, 2009, 7.
6 Korppoo, "Russia" [see n. 3], 87.

tion declined, while that of private households and the transport sector has risen. The energy balance also shows that the percentage of gas in domestic consumption has increased, while the shares of nuclear energy, coal, and oil have decreased.[7] The share of renewable energies lies at around seven percent, more than six percent of which comes from hydropower, leaving the other renewable energies with a negligible share.

Reforms to reduce energy consumption could lead to a reduction of CO_2 emissions. In its "Low-Carbon Russia" scenario, the Moscow Center for Energy Efficiency (CENEf) comes to the conclusion that with the adequate policies, Russia could easily achieve a further reduction target of between 20 and 30 percent for the year 2020, using 1990 as base year.[8] Here, Russia still has significant potential but a considerable need to catch up. The political elite's interest in keeping energy prices low will only increase during the current economic crisis: not just for social reasons, but also to bolster the competitiveness of Russian industry. Russia exports energy-intensive products like steel and aluminum, making the availability of relatively cheap energy an important factor in maintaining international competitiveness. In foreign trade as well, Russia—as the world's main exporter of fossil fuels—would be affected both economically and politically by efforts to save costs and reduce emissions through the increased use of renewable energies. For this reason alone, Russia's position on climate targets is ambivalent at best.

A low profile in climate policy, but continued participation in international forums

Until recently, climate change in Russia was neither a political issue nor even part of the public awareness. Global warming was even associated with positive expectations. An opinion poll in 2007 found that 45 percent of Russians did not want to see any public funds used to reduce emissions and 28 percent wanted only very limited funds allocated to measures against climate change.[9] And while the percentage of the population that believes global warming could have catastrophic effects on humanity has risen to 50 percent (2008),[10] the issue is still not being pushed onto the agenda "from below" through public pressure or by influential individuals. As a result, politicians face the task of initiating top-down processes and justifying policy measures. While this problem exists in Western countries as well, in Russia climate change has attracted little public attention so far, and has neither a tradition nor a strong lobby. Rather, climate

7 IEA, *Key World Energy Statistics 2009* [see n. 1].

8 Oldag Caspar, Anna Korppoo, and Thomas Spencer, *Russia in the UN Climate Talks. An Observers' Policy Brief*, June 2009, 1.

9 Korppoo, "Russia" [see n. 3], 83.

10 Vserossijskij centr izučenija obščestvennogo mnenija, *Grozit li nam global'noe poteplenie* [Russian Center for Opinion Surveys, *Are we Threatened with Global Warming?*], Press publication 1049, September 17, 2008, http://wciom.ru/arkhiv/tematicheskii-arkhiv/item/single/10708.html (accessed November 6, 2009).

policy is a new policy field that has been introduced to Russia from abroad. The extent of this process can be seen from the enforcement of the Kyoto Protocol for which the Russian ratification was crucial. This ratification on November 18, 2004, was the result of a complex package deal between Russia and the European Union. The two sides simultaneously agreed on the four common cooperation themes; the EU promised to back Russia's accession to the World Trade Organization (WTO); and Russia pledged to ratify the Kyoto Protocol.

Russia has played a largely constructive role both within the G8 and in the Major Economies Forum (MEF). The informal "club" setting, in which the leading heads of state formulate far-reaching but non-binding declarations, corresponds to the country's policy approach and its self-conception. At the July 2009 G8 Summit in L'Aquila, Russia—like the other major economic powers—agreed on the goal of limiting global warming to two degrees Celsius, but without committing to the necessary emissions reductions. The G8 goal of reducing emissions by far more than 50 percent by 2050 is viewed by the Kremlin as "very ambitious" and the collective goal of reducing emissions by 25 to 40 percent by 2020, using 1990 as base year, as "unreasonable" (meaning too high).[11]

Already in 2007 in Heiligendamm, the Russian Federation, together with the other G8 partners, recognized the findings presented in the Fourth Report of the UN Intergovernmental Panel on Climate Change (IPCC) and thus the human contribution to global warming. The group of the G8 plus 5 provides Russia with the option to respond to the positions of the US and China, both of which are considered by Russia to be important leaders in the negotiations.

The picture is much more mixed when it comes to Russian behavior in the UN framework. Russia has received substantial attention in the international community for its key role in ratifying the Kyoto Protocol. But expecting similar support for a new global climate regime would be too optimistic. First, other countries play the key role this time around. Second, Russia has presented itself as a veto power in international negotiations over the last decade, and is abstaining from binding multilateral agreements. Recent examples of this behavior include Russia's (domestically controversial) refusal to accelerate preparations to join to the WTO and its withdrawal from the Energy Charter Treaty.

Russia's climate doctrine and further national steps

Since 2008 and to an intensified degree since 2009, Russia has shown some movement on climate policy, and also on related issues like energy efficiency. However, policy activity in this area is starting from a very low level. Prime Minister Putin's announcement of a project to develop a

11 "G8 Emission Cut Target Unacceptable: Medvedev Aide," *Agence France-Presse* (AFP), July 8, 2009.

national climate doctrine on April 23, 2009,[12] was the first significant political recognition of global warming of any kind. While the document is extremely vague and contains no concrete figures, interestingly it is in broad agreement with the Roshydromet report on the consequences of climate change. It even mentions the danger to national security and the necessity of early, comprehensive, and balanced government measures. At the same time, it states that national interests should take top priority. Project activities reflecting these aims are to be launched in Russian policy as well as in the framework of a "complete and equal international partnership." The doctrine establishes that the maximum efforts needed to reduce greenhouse gas emissions will be made, aimed primarily at increasing energy efficiency, and secondarily at expanding the use of renewable energies and reducing market imbalances and distortions through financial and fiscal measures. Furthermore, the doctrine states that forests should be protected and reforested as natural carbon sinks.

Further, the national climate doctrine emphasizes that climate problems can only be solved through a universal, international regime, and states that this regime should be maintained based on UNFCCC principles. It also mentions the principle of common but differentiated responsibilities, which guarantees a fair distribution of burdens among nations while taking into account specific national circumstances: each country's level of socioeconomic development and its ecological and climatic conditions. For the political process in the Russian Federation, it is significant that all federal, regional, and communal bodies will be granted responsibility. Yet the know-how required to implement this doctrine is lacking in many respects, even on the federal level alone.

All these statements should not obscure the fact that Russia has not yet made any commitment to real reduction targets. First, President Medvedev announced in June 2009 that the government planned to reduce emissions by 2020 taking 1990 as base year by 10 to 15 percent.[13] With 1990 as the base year, this would mean that Russian emissions could increase by 30 to 35 percent between 2007 and 2020. Then at the EU-Russia Summit on November 18, 2009, the Russian President laid out his plan to reduce CO_2 emissions by 20 percent and thus to adopt the EU target, also indicating that even greater reductions of 22 to 25 percent were conceivable but would still require negotiation.[14] At the UNFCCC climate negotiations in Copenhagen, Medvedev reconfirmed the 25 percent target. However, this should be viewed in the context of forecasts that emissions in 2020 will be approximately 25 percent below 1990 levels without any major effort. According to the Medvedev plan, CO_2 emissions will increase by 1.5–2 percent annually in any case. And this would mean almost a doubling of

12 Proekt Klimatičeskaja Doktrina Rossijskoj Federacii [Project Climate Doctrine of the Russian Federation], www.mnr.gov.ru/files/part/9500_project_climate_doktrine.doc (accessed November 9, 2009).

13 "Russia to Work together with Partners in Climate Change Area—Medvedev," *ITAR-TASS World Service*, June 21, 2009.

14 "Russland will EU-Klimaziele übernehmen," *Süddeutsche Zeitung*, November 19, 2009.

emissions compared to the period 1990 to 2007, when annual emissions increased at an average rate of 1 percent annually. Under this scenario, Russia would emit almost 3 billion tons of CO_2 in 2020, compared to 2.2 billion tons in 2007. On this backdrop, Russia's quantified economy-wide emissions target of 15–25 percent stipulated in the Annex to the Copenhagen Accord in 2010 is an alarming step backward.[15]

In contrast to other countries, Russia still has no emission targets in place for the now decisive period up to 2050. Whether these will be adopted is highly uncertain. The national energy strategy for the period up to 2030, adopted in September 2009, gives further reason for pessimism. In it, the government states plans to maintain the approximate 1990 level. It is therefore becoming clear that the Russian government's primary goal is its socioeconomic development and modernization. All other objectives are subordinate to this—including potential climate targets.

Russia in the financial crisis—new incentives to take an interest in climate policy

The economic crisis that began in fall 2008 hit Russia particularly hard. The oil price collapse had especially far-reaching consequences for the country. The 2009 federal budget was initially calculated based on an oil price of 75 dollars per barrel, which was then adjusted downward to 65 dollars over the course of the crisis. The gas sector plays an important role not only for export revenues but also as a supplier of cheap fuel. Here, exports to Europe and other countries decreased by 11 percent in 2009 (in the nine months ending on September 30, 2009, compared to the nine months ending on September 30, 2008). In this situation, Russia discovered the flexible Kyoto instruments as a last-ditch escape route to bring its lagging modernization process up to speed. The driving force in this effort appears to be the Economics Ministry under Elvira Nabiullina. Apparently, the idea has gained currency that more capital can be generated out of the Kyoto Protocol. Russia had previously demonstrated a sweeping disinterest in additional funding given its surging revenues from oil and gas sales. And while bureaucratic obstacles remain high, the political will is slowly emerging to launch projects under the Joint Implementation scheme. The gas conglomerate Gazprom, for instance, is planning to initiate projects with Western partners by 2012.[16] Spearheading the project will be the influential SBER Bank, which is majority owned with an over 60 percent stake by the Russian Central Bank and managed by the former reform-oriented Economics Minister German Gref. These projects will be closely coordinated with the Economics Ministry, which is currently headed by

15 "Appendix I—Quantified economy-wide emissions targets for 2020," http://unfccc.int/home/items/5264.php (accessed February 2, 2010).

16 The project was rumored to have an equivalent value of up to 200 million tons. Since the market value per ton at the end of 2009 was around 20 euros in the EU emission trading system, such a high supply of additional certificates could rapidly reduce their market value.

Gref's previous deputy director. All these factors underscore the increasing interest in such projects, given Russia's growing demand for financial resources.

Emission reductions as a side effect: efforts to improve energy efficiency

In Russia, there is increasing consensus that too much energy is being wasted. Preliminary administrative steps have already been taken and concrete implementation is set to begin. On June 4, 2008, President Medvedev issued Decree No. 889, stipulating that energy intensity per unit of GDP should be reduced 40 percent by 2020 percent against 2007 levels. But how to create the legislative framework to enforce this decree remains unclear. The corresponding law is on the way. A previous legislative text from the year 1996, however, proved relatively ineffectual. Nevertheless, Medvedev stated at the Copenhagen Summit that Russia had reduced the energy intensity of the GDP by 30 percent between 2000 and 2007.[17]

The Russian Energy Ministry introduced a new energy strategy in late August 2009 for the period up to 2030.[18] Future efforts are broken down into three stages: the period 2013 to 2015 should be used to overcome the crisis on the energy market. From 2015 to 2020, efforts should focus on boosting the energy efficiency of energy producers and energy-consuming enterprises. By 2030, the transition to a non-fossil-fuel-based energy system should be complete. The energy intensity of GDP is to be reduced over the three phases, first to 80 percent, then to 62 percent, and by 2030 to 46 percent. Although this is an ambitious goal, it has to be taken into account that this strategy assumes annually increasing energy demand. This demand is estimated at 100 million tons of hard coal units (HCUs) per year in the first stage, 200 million tons of HCUs in the second stage, and up to 300 million tons of HCUs in the third. In order to keep greenhouse gas emissions at 1990 levels or slightly (5 percent) above, improvements are planned for the gas infrastructure and pipelines. In addition, renewable energies should be increasingly used for electricity and heat generation.

From a climate policy perspective, the paper's assumption of constant emission levels is cause for pessimism. Already in the energy strategy of 2003, which applied to the period up to 2020, improving energy efficiency and creating an energy-efficient economy were identified as key policy tasks. The potential for savings was estimated at 39 to 47 percent; less conservative estimates put that figure as high as nearly 60 percent. Although it was an achievement that goals were set at all, they have rarely been put into practice. Furthermore, Russia is facing the problem that regulatory measures in energy and climate policy are not mutually conducive or compatible with each other—an issue that is equally serious at the European and global level. The energy strategy up to 2020 promotes the idea that coal should be used to an increased extent in power generation in order to

17 *RIA Novosti*, December 18, 2009.

18 Press Release, August 26, 2009; Novosti Minenergo Rossii, August 27, 2009, http://minenergo.gov. ru/news/min_news/1515.html (accessed November 9, 2009).

export more of the country's gas resources. This measure would be devastating as coal-based power generation is both more inefficient and more detrimental to the climate than other fossil sources. The expansion of nuclear energy also called for in the strategy is more likely to take place on paper than in reality.

In January 2009, the Russian government issued a decree declaring that the share of renewable energies in power generation should be increased to 4.5 percent by 2020.[19] The major hydroelectric power plants were not even included although the potential for large and particularly smaller hydropower plants has not been exhausted by any means. A strategy based on expanding renewable energies would fit Russia's geographic conditions well. The country harbors enormous potential to produce renewable energy, ranging from large wind parks on the coasts to solar power and geothermal energy in other regions. The variety of other regenerative energy sources in Russia is negligible, however, compared to other countries. A decentralized power supply system would be more appropriate for the country given the varying population densities among regions.

Additional energy savings can be expected given the rising domestic energy prices. But since electricity and gas prices are still regulated in Russia, there are no individual incentives to save on heat and electricity provision. By 2011, gas prices are expected to approach the export price level. If similar profits can be made with gas on the Russian market, this may diminish the attraction of the coal strategy. Since the Russian electricity monopoly RAO EES was restructured, it has also become easier for the regional electric companies to raise power prices for industrial consumers. But again, price limits will still remain in effect up to 2011. Gazprom would benefit from price deregulation, first, because domestic prices would rise, and second, because it would be able to export a larger amount of its gas thanks to energy savings on the domestic market. According to new Gazprom data, 100 billion cubic meters of gas could be saved on the Russian domestic market at relatively low cost—an amount that corresponds approximately to annual consumption in Germany.

These plans originate, however, from a time before the economic crisis. It remains to be seen if they can actually be maintained. This is true for both private households and industrial consumers, who see their competitive advantage on world markets vanishing in the face of rising prices. For Russian steel and aluminum producers, but also for other metal-exporting sectors, this advantage is a major matter.

Russia's position in the climate policy negotiations

Russia is taking its self-imposed position on the sidelines of international climate policy. The prominence of climate issues within the country is low. On the other hand, Russia's low profile on the international stage and its

19 *The Moscow Times.com*, January 21, 2009, in: Korppoo, "Russia" [see n. 3], 90.

reserve in stating objectives and taking positions does make strategic sense for its involvement in negotiations.

In the Russian government, differing interests can be identified. The Economic Ministry is beginning to utilize the flexible Kyoto instruments to its own advantage. But frictions appear to exist in this ministry as well. The Russian press quoted Vice Minister of Economy, Andrej Klepaz, as saying that the costs resulting from the Kyoto Protocol would make up almost two percent of Russian GDP. Similar figures were thrown around during the heated debates over ratification of the Protocol.[20] Deputy Prime Minister Igor Sechin, who is connected to the government-owned Rosneft oil company, could assert a particularly strong influence opposing a new climate pact. Whole development strategies for the oil and gas industry have failed in the wake of economic crisis, resulting in a huge need for investment. The oil industry has much to lose from continually declining emissions caps under the emissions trading scheme (cap and trade). The coal industry faces the same problem, but has less lobbying power than the oil industry and makes no secret of its enormous need for investment and modernization. It is therefore open to Western involvement. Despite this, Energy Minister Sergei Shmatko should probably be counted among those attempting to hinder such developments.

It is virtually impossible to gain substantial insights into Russia's concrete negotiating position. One can only speculate on what frictions might exist between President Medvedev, who seems to lean toward the Economics Minister, and Prime Minister Putin, who apparently prefers a tougher stance. The lack of transparency results not least from the fact that the Minister of Natural Resources and Ecology, Yuri Trutnev, is still a novice negotiator. In the past, negotiations were led on the Russian side by the independent agency Roshydromet that compiled the report on the consequences of climate change in Russia. After Medvedev took office, the agency was integrated into the Ministry for Natural Resources and Ecology and placed under its authority.

Domestic policy developments suggest a series of points that define Russia's position in international climate policy negotiations.

- *Specific national circumstances and economic priorities.* Russia will clearly demand that specific national circumstances be taken into account. It opposes the principle of historic responsibility, citing its already tough climatic conditions and the geographic expanse of its territory. Russia also argues that it has undergone a difficult period of transformation, that the economic recovery is not yet complete, and that it needs some leeway to increase emissions. Modernization of the Russian economy is the key priority. These arguments will likely be reiterated ever more emphatically if the economic crisis continues. Representatives of the Russian government argue that their country's sharp drop in emissions in the past has compensated for other countries' increasing emissions. This was evident at

20 Anna Korppoo and Thomas Spencer, *The Layers of the Doll. Exploring The Russian Position for Copenhagen*, (Helsinki: The Finnish Institute of International Affairs [FIIA], November 5, 2009), FIIA Briefing Paper 46/2009, 7.

the Copenhagen Summit when Medvedev and Trutnev both highlighted the Russian contribution to global CO_2 reductions in the past. According to them, Russia accounted for half of the CO_2 reductions achieved worldwide. In consequence, the country does not recognize any obligation to make real emissions reductions.

- *Base year 1990.* Closely linked to its assertion of specific national circumstances is Russia's argument for 1990 as base year. The Russian position on this issue is similar to that of the European countries, but in clear opposition to those of countries like the US, China, and India.
- *Russia's surplus emission allowances and market mechanisms.* Russia still has around 3.3–4.6 billion tons of surplus allowances from the Kyoto Protocol that it has not yet sold on the market. So far it has not been necessary to cash in on these credits. Only since the economic crisis Joint Implementation projects are considered as an attractive new source of funding. Russia will undoubtedly attempt to use this package of "hot air" as bargaining token, and also as a means of offsetting the announced 20 to 25 percent reduction commitments. Since the large number of certificates would endanger the integrity of the carbon market this provides significant potential to exert pressure. As Russia benefited from the market mechanisms of the Kyoto Protocol, a major point of contention will be the "exchange rate" for trading the old emissions allowances from the Kyoto Protocol for credits under the "Green Investment Schemes."[21] Russia will attempt to generate the largest financial transfers possible.
- *Forest sinks.* In November 2009, Prime Minister Putin declared as one of the country's key demands to recognize all Russian forests as carbon sinks, stating that Russian carbon sequestration had not been fully taken into account in the Kyoto Protocol. Indeed, this issue has turned out to be a make-or-break issue for Russia. This would yield credits of 5 to 10 percent of Russian CO_2 emissions starting in 1990 and would allow Russia to essentially "buy its way out" of emissions reduction commitments or to significantly soften announced reduction targets. It is therefore conceivable that a qualitative debate will take place on the use of forest sinks to offset CO_2 emissions and on mechanisms for compensating carbon sequestration.[22] Russia wants to apply a broad definition of forest management, and promotes the bar-to-zero approach in order to not account for emissions from forest management until the sector becomes a net source of emissions. Russia also supports a projected baseline approach, which

21 The Green Investment Scheme (GIS) is a newly developed mechanism in the international emission trade system allowing the East European countries to sell off surplus quantities of "hot air." The proceeds from these sales are to be channeled into emissions-reducing projects.

22 For comprehensive information, see Korppoo and Spencer, *The Layers of the Doll* [see n. 20], 5–7.

would allow factoring in more intense forest management, instead of historical baselines.[23]

- *New country categories.* For Russia, maintaining the status of the transition economies is a crucial issue. Creating new country groups based on criteria like per capita GDP would worsen Russia's situation as long as its population continues to shrink while emissions rise. The Kremlin insists with increasing stridency that a huge gap exists between Russia as a transition economy and the other Annex I countries, and that the burdens are not fairly distributed. From the Russian point of view, the country groups should reflect each country's starting conditions and its real capabilities to take action.
- *Comprehensive agreement.* Russia has made very clear that it will only join an agreement if all major emitters—such as the US and China—are involved. This has also turned out as a make-or-break issue for Russia. The Kyoto Protocol is seen in Russia as largely ineffective because of its restriction to the industrialized countries. In relative terms, such an agreement should not worsen the Russia's position in relation to countries like the US or damage its competitiveness against China or India.

Negotiation potential and conclusions

Russia's involvement in the international climate process is essential for two reasons. First, Russia is a major emitter of greenhouse gases and wants to secure its future proceeds from supply of fossil- energy sources. Second, since Russia sees itself as a world power, it wants to be taken seriously internationally in this policy realm as well. The country's decisive role in ratifying of the Kyoto Protocol still defines the Russian national identity in this respect.

The Copenhagen Accord fits the Russian interests as it is a bottom-up approach with voluntary mitigation targets and the lack of long-term goals. Nevertheless, Russia's climate policy remains largely on the sidelines. International attention is focused on the EU, the US, and China. These three negotiation partners also form the most important reference points in defining Russia's position in the negotiations. Russia seeks to avoid ending up worse off in relation to the US and China. Moreover, the targets Russia agreed upon in the Copenhagen Accord's Annex somehow reflect the EU's strategy: Russia offers a reduction of 15–25 percent, making its real effort dependent on the extent to which its forest sinks are accounted for and on binding commitments of all major emitters.[24] The international community will have to prepare itself for an increasingly tough negotiation partner as it was exemplified by Medvedev's premature departure from the UNFCCC conference in Copenhagen. Furthermore, a quid pro quo package deal like the Kyoto Protocol will be difficult to

23 Alexandru Luta, Anna Korppoo, Mari Luomi, and Andrew Jones, *Towards a New Climate Regime? The Key Players Gearing up for Copenhagen*, (Helsinki: The Finnish Institute of International Affairs [FIIA], December 1, 2009), UPI Working Papers 60, 12.

24 http://unfccc.int/home/items/5264.php (accessed February 2, 2009).

achieve. With a view to the four building blocks of the Bali Action Plan that are up for negotiation (mitigation, adaptation to climate change, financing, and technology), it appears that mitigation and financing will be crunch issues. The main synergy effects can be probably expected in technology cooperation.

Tough struggles are likely to ensue in negotiations on a global climate regime as Russia attempts to bargain over the monumental sale of its surplus emissions allowances and over its forest sinks. As an owner of unused emissions credits under the Kyoto Protocol, it has much to lose and little to gain. Key quantitative benchmarks for Russia's position include its economic development and the base year 1990. Russia is also likely to bring qualitative issues to the bargaining table, such as the role of forestry and the definition of country groups. Negotiations with Russia will therefore revolve around finding a balance among these questions.

If Russia fails in its strategy of maintaining its privileged position under Kyoto with regard to emission credits and the use of flexible market instruments, it could adopt an opt-out strategy. In this case, it could retreat to the position of voluntary national targets and a bottom-up approach, limiting itself to measures in particular sectors and thus undermining the binding legal approach by supporting a mixture of domestic and international compliance.

Much in the negotiations will depend on whether global economic recovery brings with it an increased demand for energy and rising energy prices. The economic crisis creates favorable conditions for negotiation with Russia, on a global climate regime and a continuation of the Kyoto Protocol. Russia is most likely to join the international process when its primary interest in economic modernization is taken into consideration. Great potential for international cooperation and flexible instruments exist in the areas of energy saving, energy efficiency, and renewable energies. The foundation of the Russian-German Energy Agency (RuDEA), which is co-financed by Russia, gives cause for optimism. Its aim is to promote energy saving, energy efficiency, and increased use of renewable energies. This is evidence that the energy industry does have an interest in reform. Russia is showing a growing awareness and increased willingness for cooperation—although starting from a very low initial level.

It will become ever more important to identify key players with climate policy interests in these regions and federal bodies that will be particularly affected by climate change. Following widespread restructuring and privatization, regional power plant operators and electric companies will have an interest in energy saving, efficiency measures and alternative power generation. One may also assume that the Russian gas monopoly Gazprom, for example, sees the advantages of a national climate strategy and an international agreement. Gas is a relatively clean and, above all, versatile fuel, so gas producers would tend to benefit from a stricter international climate regime over the longer term. The gas industry would like to increase its share of energy consumption. If basic efficiency measures were put into effect, Gazprom would gain advantages on the Russian

domestic market. Thus it comes as a surprise that Gazprom has not lobbied harder in this direction, leaving aside its close ties to the Russian government.

Europe in particular should emphasize the benefits Russia as a gas exporter would derive from stricter, binding international regulations. At the same time, incentives for Russia's international cooperation can be created through energy efficiency measures and joint efforts in this area.

Brazil and Climate Policy: A Creative Partner with High Potential

Claudia Zilla

Since the 1992 Earth Summit in Rio de Janeiro, where the UN Framework Convention on Climate Change (UNFCCC) was adopted, Brazil has been part of the global climate debate. Brazil has signed and ratified the UNFCCC[1] as well as the Kyoto Protocol.[2] This is fully in line with the country's commitment to multilateralism, and to the UN system. Brazil is in particular dedicated to expanding international regimes and the scope of international law.

Brazil's special role: increasing emissions, but home to the "lungs of the world"

When attempting to assess Brazil's contribution to global climate change, a mixed picture emerges. On the one hand, the country's emissions of greenhouse gases (GHG) are low if measured against the size of the population (1.9 tons carbon dioxide [CO_2] per capita[3]), and even lower (0.43 kilograms CO_2 per US dollar), when measured against gross domestic product (GDP).[4] These numbers are lower than those of the emerging economies China, India, Russia, and South Africa, and also below not only the global average but also the Latin American average. Furthermore, Brazilian energy consumption is relatively low at 1.18 tons oil equivalent (toe) per capita, or 0.29 toe per thousand US dollars of GDP.

Brazil has a comparatively clean energy mix, in which hydropower is dominant (around 36 percent) and coal plays a marginal role (around 1 percent). In 2008, the share of renewable energies was 45.3 percent.[5] In the period 1990 to 2000, the primary consumption of renewable energy increased by 46.5 percent.[6] Biofuels are especially important in Brazil: at 17 billion liters of ethanol per year, Brazil is the world's largest producer of

1 The UNFCCC was signed by Brazil in 1992 and ratified by the Brazilian parliament in 1994.

2 The Kyoto Protocol, which was signed by Brazil in 1998 and ratified in 2002, went into effect in 2005.

3 See also the contribution by Susanne Dröge to this study (pp. 11ff). The figures are based on the Climate Analysis Indicators Tool (CAIT), Version 6.0, Washington, D.C.: World Resources Institute, 2009.

4 Unless otherwise noted, the figures and estimates are taken from information published by the International Energy Agency (IEA) (2009).

5 Empresa de Pesquisa Energética, *Balanço Energético Nacional 2009*, (Rio de Janeiro, 2009), https://ben.epe.gov.br/downloads/Resultados_Pre_BEN_2009.pdf.

6 Data from econsense, Forum for Sustainable Development of German Business, *Fact Sheet Brazil*, 2008, http://www.climate-policy-map.econsense.de/factsheets_download/factsheet-brazil.pdf.

this sugarcane-based fuel.[7] Ethanol is not just exported (Brazil holds 50 percent of the global ethanol export market): the main market for ethanol is domestic (approximately 85 percent of ethanol production).[8] Thus bioethanol meets around 50 percent of national demand for automobile fuel. The Brazilian government is also working to transfer these technologies to Central America and Africa to promote the production of biofuels in developing countries.

On the other hand, GHG emissions in Brazil are increasing at an alarming rate. Between 1990 and 2000 CO_2 emissions increased in absolute terms by around 58 percent, per capita by around 31 percent. In the same period, primary energy consumption rose around 49 percent. These figures reflect the political priority on rapid economic development in a country where 30 percent of the population still lives below the poverty line and high social inequality prevails.[9] The large majority of CO_2 emissions comes from the transport sector (see Figure 11, p. 90). The picture changes when looking also at the CO_2 emissions resulting from land use, land-use change, and forestry (LULUCF),[10] which make up 81 percent of total emissions.

Brazil is a country of extraordinarily rich biological diversity. It contains numerous biomes, two of which (Mata Atlántica and Cerrado) are counted among the "top biodiversity hotspots" in the world.[11] The Brazilian territory is also home to a large portion (840,000 km^2) of the Sistema Aqüífero Guarani, an underground water reservoir. The tropical forests of Amazônia, the world's largest rainforest, contain the earth's most extensive hydrographic network. This area meets 20 percent of global freshwater demand and is referred to as the "lungs of the world" for its role in con-

7 Stormy Mildner and Claudia Zilla, *Brasilien und Biokraftstoffe. Chancen und Stolpersteine für eine engere Zusammenarbeit mit der EU und Deutschland*, (Berlin: Stiftung Wissenschaft und Politik, November 2007), SWP-Aktuell 60/2007.

8 Claudia Zilla, "Brasilien: Eine Regionalmacht mit globalen Ansprüchen," in *Neue Führungsmächte: Partner deutscher Außenpolitik?*, eds. Jörg Husar, Günther Maihold, and Stefan Mair, (Baden-Baden: Nomos, 2009), 49–67 (51).

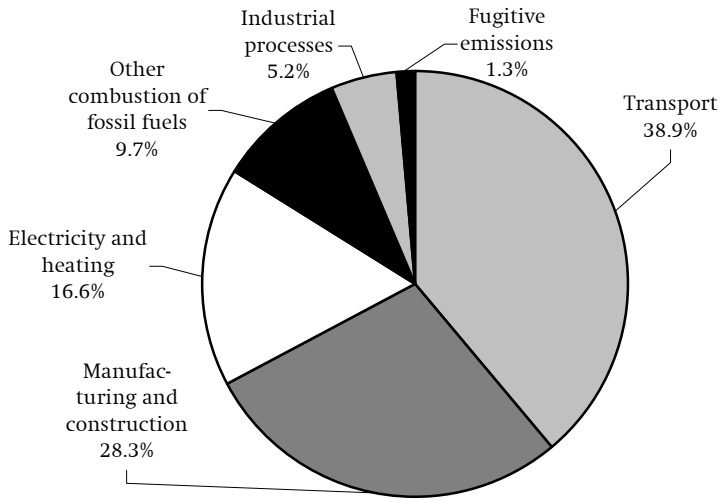
9 Economic Commission for Latin America and the Caribbean (ECLAC), *Social Panorama of Latin America*, (Santiago de Chile, December 2008).

10 The Intergovernmental Panel on Climate Change (IPCC) created "Guidelines for National Greenhouse Gas Inventories" (1996). They distinguish between "Agriculture", and "Land Use Change and Forestry," as follows: "Agriculture" refers to activities specific to agricultural production, e.g., CH_4 emissions from livestock management and rice production and N_2O emissions from agriculture soils; "Land Use Change and Forestry" includes: 1. emissions and removals of CO_2 due to forest management, 2. emissions of various GHGs arising from the conversion of existing forest and natural grassland to other land uses, 3. the removals of CO_2 arising from the abandonment of formerly managed lands and 4. CO_2 emissions and removals from soil associated with land use change and management." Quoted from the article "Agriculture and climate change" by Alessandra Sensi (Eurostat) at: http://ec.europa.eu/agriculture/envir/report/de/clima_de/report.htm.

11 The following data on the vulnerability to consequences of climate change were taken from the report by the Comisión Económica para América Latina y el Caribe (CEPAL), *Cambio climático y desarrollo en América Latina y el Caribe: una reseña*, (Santiago de Chile, February 2009), 27.

tributing oxygen to the earth's atmosphere and its capacity as a sink for CO_2. Yet it faces human-created risks. Around 20 percent of global CO_2 emissions stem from slash-and-burn clearcutting in the rainforest. These still-widespread practices have a doubly negative effect: first, CO_2 is released into the earth's atmosphere, and second, deforestation destroys trees that would absorb CO_2 in the future. Slash-and-burn agriculture and deforestation have declined significantly in recent years thanks to efforts by the Brazilian government. Under the UNFCCC, reduction of CO_2 emissions by less deforestation was not taken into account.

Figure 11
Brazil's carbon dioxide emissions by sector, 2005



Source: author's diagram; data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009). For further explanation see also n. 27 (p. 21) in the article by Susanne Dröge.

Brazil's ecological diversity is also suffering directly from the impacts of climate change: in 2004, the first hurricane ever (Catarina) reached the coast of Brazil. The average temperature in the coastal region and precipitation in the Southern part of the country have increased in recent years. This has had a negative effect on, for example, the wheat harvest, which fell six percent in 2004.[12] Three percent of species in Brazil are threatened with extinction. Around 17 million hectares of the Amazon rainforest have disappeared in the period 1970 to 2007. According to current forecasts, other negative impacts are expected especially in the Northeast and North of Amazonia by the end of the 21st century: desertification, droughts, water shortages, and rising sea levels. The latter could even create a wave

12 The effects of climate change on agriculture are not only negative, however. The increased precipitation led, for example, to an increase in corn production in the period 1960–2000 (+12 percent) in southern Brazil; CEPAL, *Cambio climático y desarrollo en América Latina y el Caribe: una reseña* [see n. 11], 27.

of environmental refugees in the populous Northeast and along Brazil's coast (8,500 km long), home to 70 percent of the Brazilian population.[13]

Brazil as a global player

In its foreign policy, Brazil holds a commitment to multilateralism and the principles of self-determination, non-intervention, and equality between states. It adheres to a narrowly defined conception of sovereignty that makes it difficult to build effective regional and global governance structures. Brazil's intensive foreign policy engagement under the administration of Fernando Henrique Cardoso (1995–2002) was augmented with a "Southern accent" under current President Luiz Inácio Lula da Silva (2002–2010). He intensified cooperation with emerging and developing countries. In terms of both "hard" as well as "soft" power, Brazil can be described as a "regional power" in South America, although the government in Brasília avoids claiming this role, since it is not undisputed among the neighboring states. On environmental issues, however, Brazil's *ideational leadership* in the region is not particularly strong. The Brazilian government has made little effort so far to develop common positions on climate policy with other Latin American countries.

Brazil's role in foreign policy follows two tracks: first, Brazil is pushing to create a block of countries in the Southern hemisphere whose shared interests stand in tension with those of the North. Second, it wants to claim a place for itself among the world's leading nations based on its potential for economic development and in other areas. To reach this goal, Brazil is trying to build close relations with the US and the EU on an equal footing. In pursuing this dual approach, Brazil has become involved in various "club" governance forums in both the North and the South. It is a member of the G20 Leaders, has formed the leading G4 bloc together with China, India, and South Africa within the developing countries group of the G20 in the World Trade Organization (WTO), and participates in the G77 group of developing countries. Brazil also belongs to the group of the Outreach Five in the expanded G8 Forum.[14]

On climate change, Brazil takes a classic multilateralist approach and favors strengthening the UN, institutionalized through the UNFCCC and the Kyoto Protocol. In this context, four factors influence Brazil's position: first, its self-conception as an emerging nation that carries virtually no historical responsibility for climate change and is compelled to pursue its own socio-economic development to combat the country's endogenous inequalities; second, its export strength in biofuels and the technologies used for their development; third, the awareness of its vast wealth of natural resources and ecological potential; and fourth, its efforts to play a

13 Konrad Adenauer Foundation, *Klimareport International*, (Cologne, 2007), 44f, http://www.kas.de/wf/ doc/kas_12492-544-1-30.pdf.

14 An overview of the member states in the G20 and G8 plus 5 can be found in Table 1 in the chapter by Susanne Dröge (p. 16).

more important role in international policy, which sometimes brings forward the "Southern component."

Against this backdrop, the question arises as to what role Brazil will take in the international efforts toward climate protection and how this role should be evaluated. In the near term, the question revolves around the perspectives of a new international climate treaty and in the longer term around Brazil's contribution to global governance in climate policy.

International climate policy negotiations and obligations

The Brazilian Foreign Ministry Itamaraty takes the political and institutional lead in Brazil's international climate negotiations. It is by regional comparison a relatively powerful government agency. The President of the Republic, the Environmental Ministry, and the Ministry for Science and Technology also play an important role in the negotiations.

Up to now, no emissions reduction targets have been imposed on Brazil, in line with its status as a country not listed in Annex I of the UNFCCC. It adheres to the principle of "common but differentiated responsibility," based on two arguments: first, the historical responsibility of the industrialized countries, who furthered their own economic development through the extensive use of fossil fuels in the 19th and 20th century, and second, the greater vulnerability of the developing countries to the effects of climate change. Developing countries argue that they have contributed little to the overall problem and possess fewer financial resources to combat its effects. At the Kyoto negotiations in 1997 and in the adapted proposal of 1999, Brazil contended that the historical contribution of each industrialized country to global warming or to greenhouse gas emissions (since the year 1850, the beginning of industrialization) should be used to determine that country's reduction obligations. In addition, the industrialized countries should make financial transfers to emerging and developing economies for adaptation measures.

While Brazil has campaigned for the inclusion of the Clean Development Mechanism (CDM) in the Kyoto Protocol, and Brazilian diplomats were directly involved in its development, Brazil has traditionally resisted attempts to address forests in international negotiations. There are two reasons for this: first, the country did not feel prepared to tackle the problem of deforestation in the Amazon rainforest. Second, Brazil wanted to leave the issue of land use and forestry completely aside to avoid discussion of its increased emissions resulting from these activities.[15] Brazil has also opposed attempts to solicit voluntary commitments to reduction

15 Brazil's position had already changed at the 2005 Conference of the Parties to the UNFCCC in Montreal, when the Coalition for Rainforest Nations raised the issue of "Reducing emissions from deforestation in developing countries" in negotiations on the design of a post-2012 climate regime. See Imme Scholz, *Wie kann die Einbeziehung der Wälder in das Klimaregime nach 2012 so gestaltet werden, dass sie zu einer Chance für Amazonien und die Bekämpfung des Klimawandels wird?*, (Berlin: Heinrich Böll Foundation, February 26, 2008), http://www.boell.de/oekologie/oekologie-2033.html.

targets from the developing countries. In recent years, however, Brazil has softened its defensive position on both points. As a country with huge areas of forest, Brazil proposed to the 12th session of the Conference of the Parties (COP 12) to the UNFCCC in November 2006 that financial incentives be created for developing countries to reduce emissions caused by deforestation. The approach has been referred to since Bali 2007 as REDD (Reducing Emissions from Deforestation and Forest Degradation).[16]. Without Brazil's openness to discussion, this progressive formalization of the forest issue would have been impossible. At the UN climate conference in Posen in December 2008, Brazil took a step forward, proposing its first concrete targets for reducing emissions from deforestation. These goals are anchored in the "Plano Nacional sobre Mudança do Clima" (National Plan for Climate Change) unveiled by President Lula on December 1 2008. Shortly before the Copenhagen conference, Brazil went another step further. President Lula da Silva announced that Brazil would enter into negotiations with the offer of reducing its CO_2 emissions 36 to 39 percent below a "business-as-usual" scenario by the year 2020.[17] Lula further engaged by initiating a meeting of the Amazon basin countries in the Brazilian city of Manaus in late November 2009, where a joint position was to be developed in preparation for the UN climate conference. Of the nine countries in the region, only three were represented on the highest level, that is, by their Presidents: Brazil, Guyana, and France.[18] While the Manaus Declaration on Climate Change did not result in the "ambitious message" for the climate summit that Lula had hoped for, it was a clear call for the industrialized countries to reduce their emissions and make a stronger financial commitment to climate change mitigation and adaptation in the developing countries.[19]

Opportunities for implementing international negotiation outcomes in Brazil

Since the end of the 1990s, climate policy in Brazil has shown strong momentum towards institutionalization. The number of institutional forums and actors involved has increased considerably.

The Interministerial Commission for Climate Change (Comissão Interministerial de Mudança Global do Clima, CIMGC) founded in 1999 is responsible for coordinating regulatory policies following from the

16 The REDD Programs were founded to address the high CO_2 emissions from forest clearing and deforestation as the second-highest source of human-caused carbon emissions. The REDD process is part of the Bali Action Plan, which is aimed at producing a new global climate agreement.

17 "The rich countries talk a lot and do little," Interview with Brazil's President Lula, *Die Zeit*, November 19, 2009.

18 The overseas department French Guiana borders on Surinam in the West and on Brazil in the Southeast.

19 On the *Declaración de Manaos sobre Cambio Climático*, Manaos, Nobember 26, 2009, see: http://www.rree.gob.pe/portal/boletinInf.nsf/mrealdia/3B2EBF53367FA4480525767B0053EF28?OpenDocument.

UNFCCC and its aid instruments.[20] The CIMGC has nine departments; it is placed under the authority of the Ministry for Science and Technology and is supported by the Ministry of the Environment. One of the tasks of the Interministerial Commission is the approval of projects under the CDM. Brazil was the first country to implement such a project (in 2004). Measured by the number of activities in this area, it is now in third place (8 percent) after China (37 percent) and India (27 percent).[21] On a global scale, there are currently a total of 5,302 projects in various phases of development, 1,780 of which have already been registered by the CDM Executive Council.[22] This corresponds to a potential reduction of over 363 million metric tons CO_2 equivalent (or a global share of six percent) for an initial period of ten years for projects with a limited duration or seven years for projects that can be extended. The majority of CDM projects in Brazil is in the energy sector and thus mainly aimed at reducing emissions of CO_2 but also methane (CH_4) and nitrogen monoxide (N_2O).

Since 2003, the Brazilian government has been organizing a National Environmental Conference (Conferência Nacional do Meio Ambiente, CNMA) at irregular intervals. This conference is a participatory, deliberative process consisting of several phases. The national plenary assembly is preceded by conferences on the municipal, regional, and state level, which allow more than 100,000 people from throughout the entire country to become involved. The third and most recent national environmental conference in 2008 produced concrete proposals for a National Plan for Climate Change.

In the year 2007, the Brazilian government established the Interministerial Committee on Climate Change (Comitê Interministerial sobre Mudança do Clima, CIM) and its Executive Group (Grupo Executivo, GEx), assigning them the task of developing a national policy addressing these issues. The CIM is placed under the authority of the Casa Civil da Presidência da República (Office of the Presidency) and consists of representatives of 17 different federal institutions. The Brazilian Forum on Climate Change (Fórum Brasileiro de Mudanças Climáticas, FBMC), in which representatives of civil society organizations are involved,[23] takes part in the

20 Predecessor institutions to the CIMGC were the Comissão Interministerial para o Desenvolvimento Sustentável (CIDES), which was founded in 1994, and the Comissão de Politicas de Desenvolvimento Sustentável e da Agenda XXI Nacional founded five years later.

21 Since most CDM projects are, on the one hand, carried out by Japan, and on the other, aimed mainly at reducing the use of coal in power generation, such projects are mainly being carried out in Asian countries with a high-carbon energy mix.

22 Data on CDM projects from August 19, 2009, Ministério da Ciência e Tecnologia, http://www. mct.gov.br/upd_blob/0205/205755.pdf.

23 The Fórum Brasileiro de Mudanças Climáticas (FBMC) was created in 2000 with the goal of raising awareness in the population at large of the negative effects of anthropogenic greenhouse gas emissions and of involving them more closely in decision-making on policies to address these problems. The Forum consists of members of national agencies, the state environmental ministers, representatives of the business community and

meetings of the CIM and together with representatives of eight ministries forms the GEx, which is coordinated by the Ministry of the Environment. The first outcome of these institutional interactions on climate issues was the June 2008 legislative project on a national policy on climate change, which was ultimately adopted by the National Congress. It includes an action plan dealing with four main themes (climate change mitigation; effects, vulnerability, and adaptation; research and development; and education and communication) and measurable targets for the following projects: reducing deforestation, reforestation, use of ethanol, recycling urban waste, increasing the efficiency of the power supply system, and power generation from renewable energy sources.[24]

These executive initiatives are discussed at the parliamentary level. The Committee on Climate Change (Comissão Mista Especial de Mudanças Climáticas do Congresso Nacional) has been involved in this debate and in formulating policy in this area since the year 2007.

The institutional framework described above has internalized the international discussion on anthropogenic GHG emissions and helped raise awareness of the detrimental effect these emissions have on the country. However, three factors hamper the formulation of a climate-friendly policy and the implementation of the corresponding decisions: first, socio-economic development is still seen as the primary goal, and the powerful agribusiness sector, which is competitive in global trade and has its own specific interests regarding environmental policy, limits the scope of environmental policy. Second, the huge territory of the country (over 8,500,000 km²) and the federal state structure hinder the effective implementation of central government decisions by lower levels and in regions where the government's monopoly of power is barely felt. Third, the rainforest possesses high political and strategic importance in Brazil. Due to its narrow understanding of the principle of sovereignty, Brazil reacts very sensitively to proposals for the internationalization of Amazônia, but also to the high-profile activities of numerous international non-governmental organizations in Brazil.

Negotiation potential and conclusions

Brazil is a key actor in global climate policy. Both its ecological potential, which must be protected, and its development model, which stands at odds with environmental goals in many respects, make the Latin America giant an indispensable partner in global climate governance. Brazil has traditionally taken a hard line on assuming obligations for environmental protection mechanisms, and has opposed the imposition of binding reduc-

of civil society, non-governmental organizations, and academics. Brazil's president chairs the forum.

24 See Governo Federal, Comitê Interministerial sobre Mudança do Clima, Decree No. 6263 of November 21, 2007, *Plano Nacional sobre Mudança do Clima (PNMC)*, (Brasília, December 2008), http://www.mma.gov.br/estruturas/imprensa/_arquivos/96_01122008060233.pdf.

tion targets on developing countries. At the same time, Brazilian politicians and experts have been intensively involved in the international discussion, and Brazil has instituted a series of measures to protect forests and fight climate change. Brazil's role in global climate policy can therefore be assessed as rather positive. The Brazilian Government is interested in achieving institutional reform of the international environmental policy architecture—as its joint statement with France of November 2009 suggested and its ambitions for the Rio plus 20 UN world summit on Sustainable Development in 2012 are high.

In Copenhagen, President Luiz Inácio Lula da Silva showed great commitment. He denied a mere political declaration, advocated instead a substantial agreement and also declared to be ready to provide financial and technological support to poor countries.[25] Brazil joined together with the emerging economies South Africa, India and China the so called BASIC group, which claims to represent the developing countries' interests, engaged directly at the core of negotiations, and drafted together with the US the Copenhagen Accord. This grouping, which has already met two times, "is not just a forum for negotiation coordination, but also a forum for cooperative actions on mitigation and adaptation including exchange of information and collaboration in matters relating to climate science and climate-related technologies."[26] As foreseen in the Accord, Brazil inscribed its targets before February 1, 2010. It presented numerous and ambitious policies and measures to achieve an emissions reduction of 36 to 39 percent regarding its projected emissions by 2010 and emphasized at the same time that this domestic actions are voluntary in nature.

As to the longer term perspective, it should be noted that Brazil has shown increasing willingness to compromise on climate issues. The question arises as to whether this trend will continue after the presidential elections in October 2010.[27] The international community can best foster Brazil's willingness to compromise by clearly distancing itself from initiatives that question Brazilian sovereignty over the region of Amazônia and push Brazil into a defensive position. The more clearly the industrialized countries articulate that they know Brazil's compliance to reduction targets can only be voluntary and corresponding to the principle of "common but differentiated responsibility"—the greater will be their chances of success. Germany and the EU should coordinate joint actions with their

25 Emmanuel Guérin and Matthieu Wemaere, *The Copenhagen Accord: What Happended? Is It a Good Deal? Who Wins and Who Loses? What Is Next?*, IDDRI, SciencesPo, No. 08/09. December 2009, p. 5.

26 Press Information Bureau Government of India, Ministry of Environment and Forest, Second Meeting of Ministers of BASIC Group met today, January 24, 2010.

27 According to the Brazilian constitution, current President Luiz Inácio Lula da Silva cannot run for a third term of office. Although recent surveys suggest that a change of governing party is unlikely, it remains uncertain to what extent Dilma Rousseff—the presidential candidate from Lula's party (Partido dos Trabalhadores, PT) and current Cabinet Chief—would continue his foreign policy.

"strategic partner."[28] They should encourage it to fulfill its national responsibility in a more effective manner and to intensify its regional engagement in climate issues. Germany and the EU should exploit Brazil's enormous potential as a "creative partner" in international climate policy, otherwise they run the risk to loose their leading role in international negotiations—as Copenhagen showed.

28 The "strategic partnership" between Brazil and Germany was first established in a joint Action Plan of February 2002. The last German-Brazilian Action Plan was adopted in May 2008. The "strategic partnership" between Brazil and the EU was concluded at the Lisbon Summit in July 2007 during the Portuguese Council Presidency. All of the documents on these partnerships contain a chapter on climate change. See, for example, the Joint Statement: Council of the European Union, Third European Union-Brazil Summit, *Joint Statement*, Stockholm, October 6, 2009 (14137/09, Press 285).

South Africa in the Climate Change Negotiations: Global Activism and Domestic Veto Players

Jörg Husar

In 2005, South Africa was only the 19th biggest emitter of carbon dioxide (CO_2) in the world with only 1.2 percent of global CO_2 emissions. As such, it cannot be regarded as a key negotiating party for any global climate agreement. The country's real importance lies in it being perceived as a leader on the African continent and a regional role model, as well as in the very proactive approach South African delegations have taken in the climate negotiations.[1]

South Africa's level of engagement stems partly from its ambivalent status as an emerging country. In many ways, South Africa is close to the industrialized countries, but it clearly has interests in common with the developing countries. It has thus developed a reputation as a foreign policy "bridge-builder" between the industrialized and developing countries. Cooperating with South Africa would thus appear to be a promising approach, particularly for the international climate change negotiations.[2]

South Africa's desire to make a contribution to multilateral solutions to global climate problems is founded on two distinct pillars. First, climate policy has been an integral part of the national agenda since the ratification of the United Nations Framework Convention on Climate Change (1997) and the Kyoto Protocol (2002), if not earlier. Second, over two-thirds of the country's energy comes from coal, the most damaging energy source of all in climate terms. In the past, the availability of cheap energy from domestic coal encouraged energy-intensive industries to locate in South Africa and offered few incentives for increasing energy efficiency. In addition, the emissions-intensive mining and energy sectors and related industries (minerals-energy complex)[3] are central to the South African economy. For these reasons, any attempt at reform is usually met with

1 See Alexander Ochs, "Auf der Suche nach neuen Verbündeten: Neue Führungsmächte als Partner deutscher Klimapolitik," in *Neue Führungsmächte: Partner deutscher Außenpolitik?*, ed. Jörg Husar, Günther Maihold, and Stefan Mair, (Baden-Baden, 2009), 203–235 (224–225).

2 This perception is widespread internationally. In a newspaper interview, British economist Sir Nicholas Stern observed that: "South Africa has the potential to bring opposing factions such as China and the US together" (*Mail & Guardian*, March 16, 2007). In the past, South Africa has taken a particularly prominent role in the NPT Review Conference (on non-proliferation), where it acted as an important mediator between the non-aligned states and the nuclear states.

3 See Ben Fine and Zavareh Rustomjee, *The Political Economy of South Africa: From Minerals-Energy Complex to Industrialization*, (London, 1996).

strong resistance by domestic lobby groups that act as veto players and therefore any kind of significant change is likely to take several decades.[4]

The effects of climate change on South Africa: prognoses and perceptions

Like the rest of the African continent, South Africa will be affected heavily by climate change. Estimates suggest that over the coming three to five decades, average air temperatures will increase by between one and three degrees, and precipitation—already relatively low—will fall by five to ten percent. In addition, precipitation will become more unevenly distributed in both temporal and geographic terms. This will have a negative impact on agriculture; for corn, which currently makes up 70 percent of South African agricultural production, crop reductions of up to 20 percent can be expected. On land that is already less productive, mostly farmed by small farmers, the decline could be as much as 60 percent. Existing problems with drinking water supply and the effects of ongoing desertification will be considerably reinforced by the decline in precipitation. South Africa's unusual level of biodiversity, a focus for the rapidly-growing tourist industry, is also endangered by climate change. One direct threat to human beings is the expected expansion of the malaria zone due particularly to the increase in multi-resistant mosquito species.[5]

Yet despite the fact that the country will be more adversely affected by climate change than many other states, climate change is not often discussed in the mass media and is also regarded as something of an elitist issue. Much of the population is passive about the problem.[6] Rather, South Africans are concerned with problems that have a more direct and individual impact: unemployment, AIDS, crime, corruption, and energy supply. Energy is mainly discussed in terms of the reliability of electricity supply. Since 2007, Eskom, which has a quasi-monopoly on the electricity supply, has been experiencing repeated capacity problems and has had to ration electricity. To increase supply, an investment program of the order of 385 billion rand (31.5 billion euro) has been launched for completion by 2013. But almost all of these funds will be spent on new coal-fired power stations. The only protests in reaction to this announcement came when it was revealed that electricity prices were to be increased to finance the new

4 See Harald Winkler and Andrew Marquand, "Changing Development Paths: From an Energy-Intensive to Low-Carbon Economy in South Africa," *Climate & Development*, 1 (2009), 47–65.

5 For a more detailed view of the effects, see Michel Boko et al., "Africa," in: *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, eds. Martin L. Parry et al., (Cambridge, 2007), 433–467; Guy Midgley et al., *Impacts, Vulnerability and Adaptation in Key South African Sectors. An Input into the Long Term Mitigation Scenarios Process*, (University of Cape Town, Energy Research Centre, October 2008).

6 See Leslie Masters, *The Road to Copenhagen: Climate Change, Energy and South Africa's Foreign Policy*, (Johannesburg: South African Institute for International Affairs, October 2009), Occasional Paper No. 47, 22.

projects. This underscores that the necessity of reducing emissions is not an accepted fact among the South African public.

National climate policy: good intentions come up against fossile structures

Despite the lack of awareness among the general population, South Africa has taken a pioneering role among developing countries in establishing a national climate policy. As early as 1994, the National Committee for Climate Change was set up to bring together all those involved in this policy field. South Africa is also taking a leading role in the current negotiations: post-apartheid administrations have been anxious to distinguish themselves from the legacy of the apartheid regime, a legacy that includes the high emissions generated by the South African economy. For decades, the mining of domestic coal was encouraged in order to reduce the country's reliance on oil imports as much as possible in the face of economic sanctions, both threatened and actual.[7] Despite being a high-emissions source of energy, coal is now used in South Africa not merely for electricity generation but also to produce liquid fuels via coal liquefaction. With per capita emissions of 7.2 metric tons of CO_2, the country is currently well above the global average (4.3 metric tons CO_2 per capita). The South African economy also generates a high level of emissions relative to the gross domestic product (GDP); to produce one million US dollars of GDP, the country emits 847 metric tons of CO_2—more than twice the G8 average of 427 metric tons per million US dollars.[8]

The entire South African economy continues to rely on the availability of cheap coal-fired electricity, from coal producers and the mining industry to aluminum smelters and other energy-intensive sectors. For many companies, low electricity costs are South Africa's major attraction and the reason they located there in the first place.[9] Over 60 percent of CO_2 emissions result from electricity production and heating (see Figure 12). In fact, just two companies contribute almost three-quarters of emissions: the electricity supplier Eskom is responsible for 53 percent, and Sasol (South African Synthetic Oil Limited), an energy company with unique global expertise in coal liquefaction, for another 19 percent. Eskom and Sasol are leading members of the National Committee for Climate Change. Other important voices in the debate include the Chemical and Allied Industries Association, the Energy-Intensive Users Group, and the Chamber of Mines. In addition to these influential organizations, there is a small group of

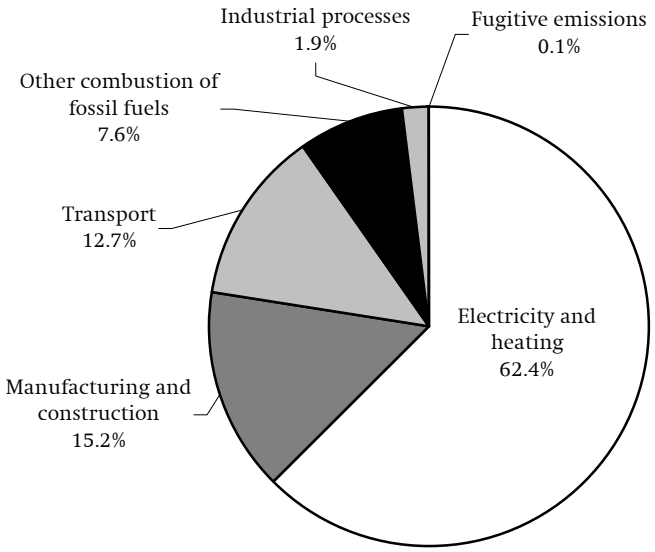
7 See Neta C. Crawford, "Oil Sanctions against Apartheid," in: *How Sanctions Work: Lessons from South Africa*, eds. Neta C. Crawford and Audie Klotz, (New York, 1999), 103–128.

8 Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009).

9 For example, the particularly deep South African gold mines produce ore with a relatively low gold content. They thus need above-average amounts of energy, in international terms, to produce a metric ton of gold. Higher energy prices would make exploiting these reserves uneconomical.

NGOs that focus on communicating (nationally and internationally) Africa's particular vulnerability to climate change and on campaigning for better support for climate-policy adaptation. This group includes the South African Climate Action Network.[10] A large number of environmental NGOs are attempting to pressure the government to reduce South Africa's dependence on fossil fuels. Along with the globally active groups, these include the South African Communities Environment Institute, Earthlife Africa Johannesburg, groundWork, and the South African branch of Friends of the Earth. However, the way in which the government organizes its separate consultative processes with companies, unions, and NGOs reveals major differences in the way these three groupings are regarded.[11]

Figure 12
South African carbon dioxide emissions by sector, 2005



Source: author's diagram; data from Climate Analysis Indicators Tool (CAIT), Version 6.0, (Washington, D.C.: World Resources Institute, 2009). For further explanation see also n. 27 (p. 21) in the article by Susanne Dröge.

From Mbeki to Zuma: a loss in status for climate policy?

While the former South African president Thabo Mbeki (1999–2008) saw himself as an international statesman and felt it was important that South Africa should play an active role in global climate change policy, his successor, Jacob Zuma, entered office with a promise to focus more closely on urgent domestic issues. The initial indications are that this change in focus will reduce South Africa's prominent role in the international climate change debate.

10 A list of the members of this network is available at http://www.sacan.org.za/.
11 See Masters, *The Road to Copenhagen* [see n. 6], 20.

Under Mbeki, and despite the fossilized structures of the South African energy sector, a number of climate-policy initiatives were created (although few have actually been implemented in practice).[12] The overall framework for these activities is the National Climate Change Response Strategy (2004), which was developed on the basis of the country's first communication to the UNFCCC Secretariat. The national Energy Efficiency Strategy (2005) suggests that energy efficiency should be increased by 12 percent by 2015, and the White Paper on Renewable Energy (2003) sets a target of 2013 for increasing the proportion of renewable energy in electricity production to 4 percent—a modest goal in international terms. The fact that industry has entered into a voluntary commitment in the form of the Energy Efficiency Accord (2005) gives some grounds for optimism: to date, 36 companies[13] and eight associations have signed the accord, promising to make their own contribution to putting the energy efficiency strategy into practice. However, the accord does not contain any quantitative targets and also emphasizes the "imperative of ... economic growth": energy efficiency commitments "should not be seen in isolation" of this and similar imperatives.

In 2005, the first national climate conference was held with over 600 delegates from government, business, academia, and the NGOs, which underlined the importance placed on the issue by the government. Between 2006 and 2008, a participatory project debated long-term mitigation scenarios and issued new recommendations for a national climate strategy. Based on these recommendations, the cabinet set a target range for emissions over the next 60 years: emissions should peak between 2020 and 2025, followed by a stabilization phase lasting about a decade; after this, emissions should then start to fall ("peak, plateau, and decline").[14] One of the measures being considered in order to achieve this target is the introduction of a carbon tax, although any such tax would, of course, meet with considerable resistance from businesses and industry associations. In March 2009, a second climate conference was held with more than 700 participants. The official discussion paper for the conference[15] states again that a National Climate Change Response Policy should be completed in 2010.

Since the inauguration of President Zuma in May 2009, an important organizational change has taken place in South African climate policy. The

12 See Winkler and Marquand, "Changing Development Paths" [see n. 4], 54.

13 They include the biggest energy producers and users in the country: Eskom, Sasol, BHP Billiton, Anglo American, AngloGold Ashanti, Anglo Platinum, Xstrata, Arcelor Mittal, and Exxaro.

14 See Department of Environmental Affairs and Tourism, *Government Outlines Vision, Strategic Direction and Framework for Climate Policy*, press release, April 28, 2008, http:// www.environment.gov.za/HotIssues/2008/LTMS/medStment_28072008.html (accessed September 9, 2009).

15 See *The National Climate Change Response Policy. Discussion Document for the 2009 National Climate Change Response Policy Development Summit*, Midrand, March 3–6, 2009, http://www.ccsummit2009.co.za/Downloads/2009-03-01_CLIMATE_CHANGE_POLICY_FRAMEWORK%20_Rev%207_.pdf (accessed September 9, 2009).

Ministry for the Environment and Tourism, which had been responsible for climate policy, has been split in two. The former Minister Marthinus Van Schalkwyk, who has made a name for himself internationally in climate change policy over recent years, retained only the tourism division and will no longer be involved in global climate negotiations. A new Ministry for Water and the Environment is now responsible for climate policy, led by Minister Buyelwa Sonjica, who had previously been responsible for mining and energy. While the government spokesperson Meseko emphasized, after a cabinet meeting in September 2009, that South Africa would over time take "responsible and measurable action" to reduce CO_2 emissions, he also stated that the only "viable source of energy at this particular point in time [was] through the use of coal-powered power stations."[16] Hopes that South Africa might adopt the role of a regional model by adopting courageous measures at a national level seem to have been dashed, at least for the moment. At an international level, South Africa rejects the idea of any binding commitment to reducing CO_2 emissions.

South Africa's stance in the international climate negotiations

Since the end of the apartheid era, South Africa, along with Nigeria, has been regarded as a central point of contact representing the African continent. This is evidenced not least by the inclusion of South Africa in the G8's "outreach process," in which it has been involved since the first G8 meeting in Okinawa (2000). In the African Union, South Africa has repeatedly demonstrated that it is capable of influencing the regional debate to a considerable extent, although South African diplomats are always anxious to avoid giving the impression of being a hegemonic power in the region.

When formulating its own negotiating position, South Africa places a high value on its own status as a developing country and emphasizes the overarching goals of fighting poverty and accelerating the country's socio-economic development. It believes that climate protection measures should not, under any circumstances, endanger these primary objectives. As such, South Africa shares the position taken by other developing and emerging economies that because of the industrialized countries' historic responsibility for climate change, the main pressure to reduce emissions levels should be on them rather than on the developing countries.

Along with its rejection of binding targets for emissions reductions by developing countries, one of South Africa's main concerns in the negotiations is how future adaptation measures will be financed. The country is taking a "360 degree approach":[17] while most Annex I countries intend to

16 Richard Davies, "'Unrealistic' for SA to Set Emission Targets," *Mail & Guardian*, September 11, 2009, 1.

17 See *Emerging Paradigms of Understanding on Climate Change Adaptation Issues: The 360° Approach*, Submission by South Africa to the Workshop of the "Dialogue on Long-Term

provide funding for incremental adaptive measures only ("climate proofing"[18] new investments, dam-building, etc), South Africa argues that multilateral funds should be used for "stand-alone" financing programs like setting up genetic and seed banks, developing new agricultural plants, constructing new groundwater desalination facilities, and resettlement. From South Africa's point of view, the funds available need to be increased ten- to one-hundred-fold, and historical injustices need to be taken into account when funds for adaptation strategies are being allocated. The funding for technology transfers should also be increased. To obtain these funds, South Africa has suggested that, among other things, the fees payable for Clean Development Mechanism projects[19] should be extended to the other climate protection instruments (i.e., emissions trading and joint implementation).

South Africa's basic position is in line with that of the G77, which aims to avoid binding commitments for the emerging economies.[20] In addition, with its model of an "African Renaissance,"[21] South Africa aims to coordinate its position closely with the African states ("African Group") in order to raise the continent's profile in international forums. South Africa currently holds the presidency of the African Ministerial Conference on the Environment (AMCEN), and as such was involved in developing the joint position on climate policy for the member states of the African Union laid down in the Nairobi Declaration of May 2009.[22] In this declaration, the environmental ministers emphasized that, among other points:

- the industrialized countries must hold to the commitments made on reducing emissions in Article 4, paragraph 3 of the United Nations Framework Convention on Climate Change (UNFCCC) and should also commit to reducing their emissions by 40 percent against 1990 levels by 2020, and by 80 to 95 percent by 2050;
- Africa is dependent on the technological and financial support of the industrialized countries for planning and implementing adaptation strategies (they call for spending of between 67 and 200 billion US dollars, which would make up as much as 0.5 percent of the GDP of the Annex I countries);

Cooperative Action to Address Climate Change by Enhancing Implementation of the Convention," (Bonn, May 17, 2007).

18 "Climate proofing" aims to reduce the climate-related risks to which investment projects are exposed to a socially and economically acceptable level.

19 Two percent of the certificate price goes to the adaptation fund, which is held by the World Bank.

20 See Sjur Kasa et al., "The Group of 77 in the International Climate Negotiations: Recent Developments and Future Directions," *International Environmental Agreements*, (2008) 8, 113–127 (125).

21 See Peter J. Schraeder, "South Africa's Foreign Policy: From International Pariah to Leader of the African Renaissance," *The Round Table. The Commonwealth Journal of International Affairs*, (2001) 359, 221–245.

22 See *Nairobi Declaration on the African Process for Combating Climate Change*, May 29, 2009, new.unep.org/roa/Amcen/Amcen_Events/3rd_ss/Docs/nairobi-Decration-2009.pdf (accessed September 8, 2009).

- all commitments by Africa to reduce its emissions should be voluntary, and further financial and technological transfers from the industrialized countries will be needed for such targets to be met;
- in future, increased support for Africa must focus on the continent's own priorities, i.e., adaptation, capacity-building, research and development, technology transfer and financing;
- a compliance mechanism should be introduced to monitor compliance with commitments to reductions, financial and technology transfers, and capacity-building;
- the Clean Development Mechanism must be improved to ensure that the projects are distributed more evenly in geographic terms;[23]
- the funding of the Global Environment Facility must be quadrupled at least; Africa must be given a high priority when projects are assigned; and the funds should be allocated based on the needs and priorities of the recipient countries.

In the run-up to COP15 in Copenhagen, the African Union set up a coordination mechanism in order to improve the visibility of the common African position in the negotiations: the Conference of African Heads of State and Governments on Climate Change (CAHOSCC). The CAHOSCC was mandated to advocate the African position on the basis of the Nairobi Declaration and the Prime Minister of Ethiopia, Meles Zenawi, was elected as its president.[24] In February 2010, the AU member states extended the mandate for CAHOSCC and Zenawi for the next two COPs in Mexico 2010 and South Africa 2011.

During the negotiations of Copenhagen, however, South Africa chose to engage directly at the core of negotiations by taking part in the so called BASIC group (Brazil, South Africa, India, China), which drafted, together with the US, the Copenhagen Accord. The BASIC countries see themselves as the spearhead of the G77. In contrast, the G77 chair criticized the Copenhagen accord and refused to take part in a subsequent BASIC meeting. Several African States also criticized the Accord as deeply unsatisfactory, the spokesperson of Sudan even called it a "suicide pact" for Africa.[25] South Africa's stance to speak for Africa in international climate policy has therefore been damaged.

Regarding the behavior of South Africa in the BASIC-US negotiations, there are diverging accounts: According to some analysts, South Africa indeed acted as "mediator between North and South."[26] However, the mere inclusion of South Africa into the BASIC group does not necessarily mean

23 Of 1804 registered projects, only 33 are currently being carried out on the African continent, 16 of them in South Africa.

24 Further members are South Africa (as president of AMCEN), Gabun as president of the Commission of the African Union, Libya as president of the African Union as well as the heads of states and government of Algeria, Kongo, Kenia, Mauritius, Mosambique, Nigeria and Uganda.

25 Richard Black, Copenhagen summit battles to save climate deal, http://news.bbc.co.uk/2/hi/sci/tech/8422031.stm.

26 Christian von Soest, *Mittler zwischen Nord und Süd. Südafrikas Position nach dem Klimagipfel in Kopenhagen*, http://www.internationalepolitik.de/exklusiv/view/1264607562.html.

that it played an important role in the talks with the US. Jairam Ramesh, the Indian Environment Minister, rather stated that China took the lead in finding a compromise.[27] Jacob Zuma did not even plan to attend the conference, until Nicholas Sarkozy himself called upon him to participate almost 'last-minute'.[28] During the talks between the US and the BASIC group, US-president Barack Obama allegedly convinced Jacob Zuma to accept the Accord, not the other way around.[29] The hopes of Sarkozy and other participants, Zuma may persuade the US to improve its offer, were clearly frustrated.

From a South African foreign policy perspective, the inclusion into the BASIC group was an important accomplishment. For some time now, South Africa's diplomacy fears its marginalization in global discussions due to the increasing dialogue among the "BRIC" countries (Brazil, India, Russia, China). With the participation in the BASIC group, South Africa was once again called to the table of the core negotiations—an important sign of international status for the country. However, it requires a good deal of wishful thinking to take this fact itself as a sign of dedicated mediation efforts.

The potential for negotiation and cooperation: "No money, no deal"[30]

There is an inherent contradiction within South African climate policy between the basic desire to play a constructive role in solving global problems and the fact that the country's energy supply has developed over decades into a very carbon-intensive one. Any climate policy action runs into difficulties as soon as it appears to threaten economic growth. In the past, South Africa has been very active in negotiations despite this problem. While the national climate conferences that have been held to date resulted purely from government initiatives, they do still illustrate that a variety of organizations are fundamentally willing to enter into a dialogue about climate issues. In other words, South African society can be mobilized by the topic of climate protection, in contrast, for example, to the population of Russia.

Since the handover of power from Mbeki to Zuma, there are some indications that the government is becoming less engaged with the global climate negotiations. But even during Mbeki's second term of office, some observers believed that the state was losing interest in acting as a "builder

27 "US-BASIC 'Copenhagen Accord' disappoints poor nations," http://www.expressindia.com/latest-news/USBASIC-Copenhagen-Accord-disappoints-poor-nations/556399/.

28 Mandy Rossouw, "France Presses Zuma on Climate," *Mail & Guardian*, December 4, 2009, http://www.mg.co.za/article/2009-12-04-france-presses-zuma-on-climate.

29 "Der Klimagipfel endet ohne verbindliche Ziele," *Zeit Online*, December 19, 2009, http://www.zeit.de/wirtschaft/2009-12/kopenhagen-klima-kompromiss.

30 A high-ranking member of the South African delegation summarized the country's position in these words in August 2009. Cited in Tony Carie, "Little Hope of US Signing Kyoto," *The Mercury*, August 5, 2009, 5.

of bridges between the North and the South."[31] Given this situation, international encouragement for South Africa is of central importance: Germany and the EU should do everything they can in the climate negotiations to foster South Africa's willingness to act as an intermediary between irreconcilable positions. This is especially true given that South Africa is hosting the 17th COP in December 2011. The president's loss of interest in the topic may reduce support for the issue in national politics, but this does not necessarily mean that the South African delegation will make no constructive contribution to the multilateral negotiations.

Nationally, some voices are beginning to argue that the country should move away from coal as the main source of energy. But to date they have not been able to make any real impact, faced as they are with the powerful lobby of the coal producers and users. This lobby meets any demand for climate protection measures with the argument that such measures would run counter to the necessary development of the country. Yet coal usage is not only damaging to the climate; it also has direct local consequences that are already damaging the South African environment and the quality of life of its inhabitants.[32] Only when public awareness of the problem increases will the government be forced to stop ignoring the critics. For this reason, as much effort as possible should be put into dialogue with the country's environmental NGOs.

At the core of South Africa's negotiating position is its demand for financial and technology transfers. In South Africa, even more than in other places, moving gradually to a low-carbon economy will require the energy system to be completely restructured in a way that will only be possible with outside support. Some first ideas have been developed for energy efficiency, an emissions trading system, and the use of renewable energies. Germany, in particular, could establish itself as a technology partner, and has already made this suggestion within the bi-national German-South African Commission. Energy topics have also risen in importance in the framework of the strategic partnership between South Africa and the EU; a structured dialogue on energy was launched in January 2009. South Africa is also engaged in climate-related cooperation projects with other partners, as for example in a trilateral working group with India and Brazil on energy efficiency and renewable energies.

In addition to the areas where South Africa will need financial and technological support, it does have the capacity for self-generated "green" growth in other areas. This applies to renewable energies, for example; any dialogue with South Africa should emphasize this topic because the use of renewable energies has to date been blocked by huge domestic resistance. In March 2009, Pretoria gave permission for feed-in tariffs for renewable energies. This marked the start of what has been a very hesitant process of

31 South Africa's controversial behavior in the UN Security Council in 2007/8 is regarded as evidence of this; see Elizabeth Sidiropoulos, "South African Foreign Policy in the Post-Mbeki Period," *South African Journal of International Affairs*, 15 (2008) 2, 107–120 (109).

32 See Victor Munnik, "Südafrika," in: *Die wahren Kosten der Kohle*, ed. Greenpeace, (Hamburg, 2008), 48–53.

opening the country up to the concept, but one that should be supported. One of the advantages of renewable energy is that it would allow remote parts of the country to be supplied with energy. This would reduce transport costs and increase access to energy, which would help to reduce rural poverty. However, some care must be taken as there is a widespread view that the industrialized countries may simply divert funds for renewable energies from their development aid programs. South Africa is one of the states that have demanded that any funds promised in the course in the climate change negotiations must be real "additional" funds.

Despite all the inherent contradictions in the South African attitude to climate policy, we should note that the country has already developed scenarios and actions for stabilizing and reducing its CO_2 emissions over the long term. Following the Copenhagen Accord, in January 2010 South Africa reiterated that it would "take nationally appropriate mitigation action" to reach a 43 percent reduction in greenhouse gas emissions in comparison with a business as usual scenario by 2025. However, the extent to which this will be implemented depends on the transfer of technology and financial resources by developed countries. Given the non-binding nature of these targets, however, ongoing encouragement from abroad is needed to ensure that concrete steps are taken in the intended direction. If this does not happen, there is a risk that due to the domestic situation and due to the groups involved, South Africa will resolve its contradictions through inaction, which is the easier option in the short-term, but also the more damaging one in terms of climate policy.

Appendix

Acronyms

ACEM	African Conference of Environmental Ministers
ACES	American Clean Energy and Security Act of 2009
AFP	Agence France-Presse
AMCEN	African Ministerial Conference on the Environment
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
AWG-KP	Ad Hoc Working Group for Further Commitment under the Kyoto Protocol
AWG-LCA	Ad Hoc Working Group on Long-Term Cooperative Action
BASIC	Brazil, South Africa, India and China
Bn	Billion
CAFE	Corporate Average Fuel Economy (US)
CAHOSCC	Conference of African Heads of State and Governments on Climate Change
CAIT	Climate Analysis Indicators Tool
CCS	Carbon Capture and Storage
CDM	Clean Development Mechanism
CENEF	Center for Energy Efficiency (Moscow)
CEPAL	Comisión Económica para América Latina y el Caribe
CH_4	Methane
CIDES	Comissão Interministerial para o Desenvolvimento Sustentável (Brazil)
CIM	Comitê Interministerial sobre Mudança do Clima (Brazil)
CIMGC	Comissão Interministerial de Mudança Global do Clima (Brazil)
CNA	Center for Naval Analyses (Alexandria, VA)
CNMA	Conferência Nacional do Meio Ambiente (Brazil)
CO_2	Carbon dioxide
COP	Conference of the Parties
CRF	Common Reporting Framework
ECJ	European Court of Justice
ECLAC	Economic Commission for Latin America and the Caribbean
Ecofin	Economic and Financial Affairs Council of the European Union
EPA	Environmental Protection Agency (US)
EU	European Union
FBMC	Fórum Brasileiro de Mudanças Climáticas (Brazil)
FIIA	The Finnish Institute of International Affairs (Helsinki)
G2	Group of Two (China, US)
G4	Group of Four (Brazil, Germany, India, Japan)
G8	Group of Eight (the seven leading western industrialized countries + Russia)
G8 plus 5	G8 plus the Outreach Five (Brazil, China, India, Mexico, and South Africa)
G20	Group of 20 (Finance Ministers and central bank governors of the G8, EU, IMF and major developing countries like India and the P.R. China)
G77	Group of originally 77 third-world countries in the UN
GDP	Gross Domestic Product
GEx	Grupo Executivo (Brazil)
GHG	Greenhouse Gas
GIS	Green Investment Schemes
HCU	Hard Coal Unit

HDI	Human Development Index
ICAP	International Carbon Action Partnership
IEA	International Energy Agency
IISD	International Institute for Sustainable Development (Winnipeg, Manitoba, Canada)
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
LDC	Least Developed Country
LULUCF	Land use, land-use change and forestry
MDG	Millennium Development Goal
MEA	Ministry of External Affairs (India)
MEF	Major Economies Forum
MoA	Memorandum of Agreement
MoEF	Ministry of Environment and Forests (India)
MRV	Measurement, Reporting and Verification
N_2O	Nitrogen Monoxide
NAMA	Nationally Appropriate Mitigation Action
NAPCC	National Action Plan on Climate Change (India)
NDRC	National Development and Reform Commission (China)
NGO	Non-Governmental Organization
NMS	New Member States (EU)
NOAA	National Oceanic and Atmospheric Administration (US)
OECD	Organisation for Economic Co-operation and Development
PNMC	Plano Nacional sobre Mudança do Clima (Brazil)
PT	Partido dos Trabalhadores (Brazil)
REDD	Reducing Emissions from Deforestation and Forest Degradation
RuDEA	Russian-German Energy Agency
Sasol	South African Synthetic Oil Limited
SCP	Singh Convergence Principle (India)
SIDS	Small Island Developing States
TEC	Transatlantic Economic Council
toe	Tons of Oil Equivalent
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
USAID	United States Agency for International Development
WBGU	German Advisory Council on Global Change
WRI	World Resources Institute (Washington, D.C.)
WTO	World Trade Organization

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