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STUDY

Addressing the Challenge of Global Climate Mitigation

An Assessment of Existing Venues and Institutions

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- Recent setbacks in the climate negotiations have given new impetus to a debate about the adequacy of alternative venues and institutions for global cooperation on climate change mitigation.

- A survey of existing venues and institutions ranging from formal treaties and organizations to technical dialogues and political summits shows that no alternative forum can currently replace the technical capacity, negotiating experience and broad backing embodied in the United Nations climate regime. Nevertheless, the UN process is expected to remain slow in delivering results.

- Complementary processes offer interesting opportunities to address divisive issues that have stalled progress in the past, while also helping to advance complex technical discussions and identify new options. An approach involving multiple fora, but centered on the UN climate regime, is therefore recommended to take forward the mitigation agenda.

Dialogue on Globalization

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Executive Summary

Climate change is now widely recognized as a political priority, but different views exist on how to shape an international response. Following recent setbacks in the climate negotiations, this question has also grown to encompass the adequacy of different venues and institutions for addressing the challenge of climate change mitigation. As an aim of international cooperation, mitigation can encompass multiple dimensions, and hence can be measured against different benchmarks. For its point of departure, this paper focuses on the objective of keeping average global temperature increases below 2 °C above preindustrial levels, an objective that has been endorsed by the international community on various occasions.

Authoritative surveys of the mitigation pledges adopted to date by different countries strongly suggest that these will fall far short of what is required to achieve the 2 °C goal. Unsurprisingly, current approaches to climate mitigation are therefore undergoing critical scrutiny, along with the venues and institutions facilitating the relevant international cooperation.

For a number of years, observers of – and participants in – the international climate negotiations have debated the merits of the mainstream approach to cooperation, based on a binding international treaty with centrally agreed principles, objectives and commitments, flanked by numerous procedures, mechanisms and institutional bodies. Recent developments at the international level, notably the Copenhagen climate summit held in late 2009, have renewed claims that cooperation would be more effective under a less formal approach, driven by decisions taken at the national level, with greater flexibility to accommodate domestic circumstances and priorities.

While each of these contending paradigms undoubtedly has its own strengths and weaknesses, the authors argue that such binary distinctions do not reflect the reality of current interactions on climate change between states. Instead, the main section of this paper reviews the actual achievements of existing venues and institutions, focusing on a broader range of criteria, such as geographic inclusiveness, institutional resources, and the level and nature of engagement.

Against this premise, the paper assesses the structure and achievements of a number of existing and proposed fora for international climate cooperation. It starts with the United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol (KP) as the most prominent venues in the collective effort to achieve mitigation objectives, but also covers another influential instrument adopted under the auspices of the United Nations (UN), the Montreal Protocol.

It proceeds to survey venues outside the UN context that concentrate on climate change, with an analysis of the Major Economies Forum (MEF) and the no longer active Asia-Pacific Partnership on Clean Development and Climate (APP). Thereafter, it shifts attention to relevant institutions with a broader agenda, focusing on the achievements and potential roles of the Group of Eight (G8), the Group of Eight and Major Emerging Economies (G8+5), the Group of Twenty (G20), and the Organisation for Economic Cooperation and Development (OECD), with its affiliated International Energy Agency (IEA).

The Cartagena Dialogue for Progressive Action is described as an attempt to combine high-level political and working-level technical discussions among actors seeking an ambitious, comprehensive and legally binding climate regime.

What follows is a discussion of high-level meetings with little or no institutional structure. This starts with an evaluation of the Petersberg Climate Dialogue launched to complement the formal negotiations under the UNFCCC, as well as the Cochabamba Conference convened as a counterpoint to mainstream multilateral cooperation. In this section, attention is also briefly devoted to the upcoming Rio Plus 20 Summit and its potential role in promoting future efforts to mitigate climate change.

Finally, initiatives centered around technological cooperation are analyzed, drawing on the International Partnership for Mitigation and MRV, the REDD+ Partnership and the comparatively recent French-Kenyan Clean Energy Initiative as examples representative of a broader range of similar endeavors.

Drawing on the foregoing assessment of international venues and institutions, and based in particular on their past achievements in climate change mitigation, the analysis concludes that a forum will successfully tackle climate change mitigation if it meets at least six central

criteria, of which four are structural in nature, while two link to the political vision and will of the parties involved: (i) all major current and future emitters are participants; (ii) it has sufficient resources and expertise to deal with the complex aspects of mitigation; (iii) it is able to ensure transparency, both procedurally, but also with regard to efforts and emissions; (iv) it can facilitate agreement on mitigation and take relevant decisions; (v) it is backed by a firm political will to act swiftly to achieve the 2 °C goal; and (vi) it reflects a common vision on how this goal should be achieved.

While the UN climate regime meets a number of these criteria, including greater institutional experience and resources than any other contending forum, it currently seems to lack political will among important parties and a common vision on the way forward. However, as the recent climate summit in Cancún has shown, the vast majority of countries are willing to continue their engagement in the UN climate regime, investing political capital if needed. Its virtual universality, and the perceived legitimacy arising from it, strongly suggest that the UNFCCC will continue to play a central role in global efforts to promote climate change mitigation and provide the means necessary to enhance transparency and a deeper understanding of national mitigation efforts and emission levels.

When it comes to meeting the mitigation challenge, however, the UN climate regime may not be able to act with the necessary urgency, notably to secure the prompt inflection in global emissions growth called for by climate science.

Unfortunately, the analysis in this paper also shows that no alternative venue is currently able to meet all of the foregoing criteria for effective mitigation. In settings where a smaller membership may contribute to swifter agreement, for instance, a lack of an established mandate to adopt formal decisions will limit the impact and credibility of any understandings reached. Conversely, high-level political dialogues and summits can promote flexibility and progress in the deliberation of divisive issues, but they do not offer the institutional resources and technical expertise required to facilitate implementation. In the final analysis, however, none of the venues and institutions surveyed in this paper is able to entirely avoid the complex politics currently constraining robust progress in the negotiations under the UN climate regime. The actors necessary to achieve adequate political agreement on and successful implementation of the 2 °C goal have various national constraints and conflicting views on the appropriate approach to international climate protection. In each setting, this leads to difficult hurdles when searching for a common strategy. Just changing the venue does not necessarily solve the underlying problems.

Rather than identifying a single panacea for climate change mitigation, the analysis shows that different approaches to climate cooperation exhibit distinct strengths and shortcomings, typically accompanied by correlating trade-offs. What this situation affords is the prospect of harnessing complementarities resulting from varying degrees of political weight, formality, institutional capacity, and specificity of mandate.

And that is indeed the path currently in evidence in global cooperation on climate change, where mitigation efforts under the UN climate regime are already being bolstered by progress in other venues and institutions.

As the international community proceeds along a number of parallel tracks, however, it will need to attend to new potential risks, for instance overlap and redundancy of efforts, a tendency to support only the forum most closely aligned with individual domestic interests, and new institutional dynamics as existing bodies expand their activities and infrastructures in the area of climate change. Given the urgency of rapid progress on the mitigation challenge, moreover, resources need to be used judiciously, suggesting a need to build on existing capacities where available.

Overall, while the use of different venues to enhance global mitigation efforts appears adequate, the number of venues has to be limited to create a coherent dynamic and efficient use of resources.

Facing the urgency of increased mitigation and the slow progress under the UN climate regime, the authors argue that the G20, serving as a high-level political forum assembling all major emitters, could help to advance the issue by providing clear guidance on how to achieve mitigation on a scale adequate to the challenge of global warming. So far, parties have not shown a common will to use the G20 as a venue to address climate change. It would require a group of high-level politicians from

both developing and developed countries to champion such an approach and make mitigation a priority on their respective agendas for the G20.

As always, the prospects of assembling such a group and its ability to succeed will be strongly influenced by the domestic political situation in each G20 member state. But that also applies to all other initiatives: even the best regime design cannot, by itself, ensure success in achieving the 2 °C goal without the will of the parties to act, at both the national and the international level.

List of Abbreviations

ALBA	Bolivarian Alliance for the Peoples of Our America
APP	Asia-Pacific Partnership on Clean Development and Climate
AR4	Fourth Assessment Report of the United Nations Intergovernmental Panel on Climate Change
AWG KP	Ad Hoc Working Group under the Kyoto Protocol
AWG LCA	Ad Hoc Working Group on Long-term Cooperative Action
BASIC countries	Bloc of four large developing countries: Brazil, South Africa, India, China
CDM	Clean Development Mechanism
CEM	Clean Energy Ministerial
CFCs	Chlorofluorocarbons
COP	UNFCCC Conference of the Parties
EIG	Environmental Integrity Group
EIT	Economy in Transition
FAO	Food and Agriculture Organization
G2	Group of Two: China and USA
G8	Group of Eight: Canada, France, Germany, Italy, Japan, Russia, the United Kingdom and the United States
G8+5	Group of Eight and Major Emerging Economies: China, India, Brazil, Mexico and South Africa
G20	Group of Twenty: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, Republic of Korea, Turkey, United Kingdom, United States of America and the European Union, which is represented by the rotating Council presidency and the European Central Bank
G77	Group of 77
GA	United Nations General Assembly
GHG	Greenhouse gases
GNP	Gross National Product
HAP	Heiligendamm L'Aquila Process
HCFCs	Hydrochlorofluorocarbons
HDP	Heiligendamm Process
HFCs	Hydrofluorocarbons
IAEA	International Atomic Energy Agency
IEA	International Energy Agency
IMF	International Monetary Fund
INC	Intergovernmental Negotiating Committee
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency
JpoI	Johannesburg Plan of Implementation
KP	Kyoto Protocol

LULUCF	Greenhouse Gas Inventory Sector: Land use, land-use change and forestry
MEF	Major Economies Forum on Energy and Climate Change
MEM	Major Economies Meeting
MRV	Measurement, Reporting and Verification
NAMA	Nationally Appropriate Mitigation Actions
NGOs	Non-Governmental Organizations
OECD	Organisation for Economic Co-operation and Development
OEEC	Organisation for European Economic Cooperation
REDD+	Framework to address greenhouse gas emissions from deforestation and forest degradation in developing countries
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNCSD	United Nations Conference on Sustainable Development
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
QELROs	Quantified Emission Limitation and Reduction Objectives
WSSD	United Nations World Summit on Sustainable Development

1. Introduction

Climate change has been widely recognized as a political priority by the international community. Views differ widely, however, about the right way to shape an international response. Closely related is the question of the right institutions to drive international climate cooperation. Following the disappointing United Nations (UN) climate summit in Copenhagen in December 2009, in particular, questions relating to the »how« and »where« of global climate efforts have been discussed with renewed vigor. This paper first assesses the broad lines of reasoning on the »how«, and then discusses the main international policy venues and institutions – the »where« – potentially shaping future climate policy. It goes on to link these various debates so as to suggest possible ways forward in the struggle for a more effective framework of international mitigation action.

Any answer to these overarching questions has to be formulated against the backdrop of political dynamics and the objectives that need to be achieved. There would be little use in defining a theoretical optimum. In the practice of global governance, policymakers need to analyze relevant policy trends, survey the options at hand, and attempt to move the debate forward in the direction they consider most promising for achieving specific interests.

For this paper, the imperative of limiting average global temperature increases to 2 degrees Celsius (2 °C) above preindustrial levels, an objective that has been decided upon by the international community,[1] will be used as the central point of reference. Against this overarching objective, the paper will describe the main existing and proposed venues for international climate cooperation, identifying past achievements or potential; it then draws on this description to discuss possible options and challenges for more effective mitigation action going forward.

Although many policymakers and stakeholders are calling for equal weight to be given to mitigation of climate change and adaptation to its impacts[2] – something also reflected in the results of the latest UN climate summit in Cancún[3] – the following analysis will focus on the mitigation challenge. This is not a value judgment on the relative importance of mitigation and adaptation, but rather a reflection of the need for focus in an issue area of considerable complexity.

Hence, this study will first outline the broader imperative of global greenhouse gas (GHG) emission reductions and identify contending policy approaches to achieve this end. What follows is a comprehensive overview and assessment of international policy fora currently engaged in mitigation, covering venues with different degrees of formality, institutional capacity, and specificity of mandate. Building on this survey and subsequent analysis, the study identifies a series of conclusions. An annex provides additional information on the mitigation challenge and options to distribute related burdens among relevant actors.

2. Clinching the Need for Global Emission Reductions

According to the Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC), »[u]nmitigated climate change would, in the long term, be likely to exceed the capacity of natural, managed and human systems to adapt«.[4] This defines an imperative for policymakers to act resolutely on the prevention of runaway climate change.

As the worst impacts of a changing climate are not necessarily felt where the largest emitters are located, and since rising temperatures can be successfully controlled only if all countries – or at least all major emitters – act jointly, climate change is a truly global challenge, requiring a response from the international community. Governance of climate change and its causes is therefore often considered a prime example of a collective action problem.[5]

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1. See, most recently, Decision 1/CP.16, Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, para. 4.

2. Adaptation can be understood as measures to reduce vulnerability and to increase the resilience to the effects of global warming. Mitigation efforts are usually measures to reduce the emission or concentration of greenhouse gas emissions in the atmosphere.

3. See Decision 1/CP.16, ibid., para 2(b).

4. IPCC (2007), p. 19.

5. The atmosphere is a global public good and avoiding dangerous anthropogenic interference is thus a common interest, see Stern (2006), pp. 450-452, citing Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Cambridge, MA: Harvard University Press, 1965).

While this fact is rarely questioned, very different views exist on how the international community can and should effectively cooperate, taking into account highly divergent socioeconomic and political realities and priorities. However, the proposed solutions all tend to take into account emission volumes and their geographic breakdown to answer the related question of which country should reduce emissions and by how much. It would be beyond the scope of this paper to find the perfect mix of criteria or decide on adequate mitigation efforts for individual countries or groups of countries; instead, the following passages will convey a basic understanding of the challenges at hand and the key arguments driving the related political debate. This debate must be taken into account when discussing the appropriate venue for identifying an international answer to the mitigation challenge.

2.1 What Mitigation Levels Are Needed?

Using the internationally agreed objective of keeping global warming below 2 °C[6] (2 °C goal) as a starting point, the public can turn to science for advice on how far emissions have to be reduced in order to achieve this goal. As the main scientific body advising the international community and a recognized point of reference for the UN climate negotiations, the IPCC, in its lowest stabilization category, has assessed the GHG emission reductions needed to limit global warming to 2 to 2.4 °C.[7] The scenarios it uses suggest that, to achieve stabilization at this level, CO_2 emissions would have to peak in the years 2000-2015, and a reduction of global CO_2 emissions of -50 percent to -85 percent would have to be achieved by 2050 compared to emission levels in the year 2000. In other words, to limit global warming to 2 to 2.4 °C, the global community must achieve a turnaround in CO_2 emissions growth over the next five years, and – at a minimum – halve global CO_2 emissions by mid-century. Accordingly, to achieve the 2 °C goal with some degree of probability, the foregoing reduction levels may still prove insufficient. Researchers continue to measure, analyze and model climate change.[8] With its next Assessment Report, which is expected to set out even lower stabilization scenarios, the IPCC may underscore the need for even stricter emission reduction targets. In the following analysis, however, the mitigation numbers listed above will be taken as the minimum level of ambition needed from the international community if it wishes to take its own 2 °C goal seriously.

2.2 Who Should Reduce Emissions, and By How Much?

Taking the foregoing scientific guidance on global emission reductions as a starting point, the next question that arises is: who should reduce emissions, by how much and by when? This is one of the most contested and difficult questions in the international climate negotiations. Any answer to this question is by necessity normative. However, there seems to be some agreement that the answer will have to reflect one of the main principles of the United Nations Framework Convention on Climate Change (UNFCCC), the principle of »common but differentiated responsibilities and respective capabilities«,[9] calling on wealthier nations to adopt a leadership role in mitigation efforts.

Any agreed response, furthermore, will have to take into account actual emissions and respective trends. Many developing countries, in particular, also propose

6. 194 countries are party to the United Nations Framework Convention on Climate Change (UNFCCC). Thus, the ultimate objective of this treaty can be taken as an agreed global objective for fighting climate change. The ultimate objective of the UNFCCC is spelled out in its Article 2: »prevent dangerous anthropogenic interference with the climate system«. More simply, the UNFCCC aims to prevent humans from causing dangerous global warming. However, the UNFCCC does not define the term »dangerous«. Determining what constitutes »dangerous« involves reaching value judgments – and these typically differ considerably within the international community. Still, over the past two decades, parties have not ceased looking for a common understanding of this term, creating a common vision and goal to help structure commitments and stimulate action. For example, since 1996 the EU had been discussing and promoting a target of limiting global warming to 2 °C above pre-industrial levels. Other parties have called for more ambitious targets (that is, limiting global warming to 1.5 or even 1 °C compared to pre-industrial levels), whereas others have remained silent on (or critical of) proposed levels of ambition, or have requested reference to concentration levels (ppm) rather than temperature goals. However, over recent years and months, the 2 °C target has been gaining broad support. It was integrated in the Copenhagen Accord (although without a reference point) and, finally, at the climate summit in Cancún in 2010, parties not only agreed that global warming is unequivocal and that most of the observed climate change since the mid-twentieth century is man-made, but also that anything above 2 °C compared to preindustrial levels must be considered dangerous, see Decision 1/COP.16, para 3, 4; Environment Council, 1939th Council Meeting, Luxembourg, 25 June 1996, see press release, online at http://europa.eu/rapid/pressReleasesAction.do?reference=PRES/96/188&format=HTML&aged=1&language=EN&guiLanguage=en.

7. See IPCC (2007), p. 20, category I; IPCC (2007a), p. 39, category I.

8. See, for example: Rummukainen et al. (2010).

9. Article 3 (1) UNFCCC: »The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.«

taking into account historical or cumulative emissions. Socioeconomic factors, such as economic growth, population growth, and level of development, are also important considerations influencing the debate. Ultimately, weighing these various factors and reaching agreement on the distribution of efforts will have to be a political decision. In an Annex to this paper, central emission trends in the developed and developing world are assessed in greater detail, also drawing attention to different ways of looking at these trends and how they affect the political debate on GHG mitigation, such as per capita and cumulative emissions.

Overall, however, the numbers show that a comparatively small number of countries and regional groups (such as the EU) largely determine global emissions trends; these countries include both developing and developed nations.[10] Not surprisingly, some observers have therefore argued that an international agreement need only include major emitters to be effective,[11] since the largest 15 countries (counting the EU as one) account for around 80 percent of global GHG emissions. Others, however, insist that those with historical responsibility should act first, thereby diverting attention, at least for now, from the developing world, despite the fact that current emission trends suggest it will be impossible to limit global warming to 2 °C without some engagement from developing countries. Yet another view holds that technology development is the critical factor for a global solution and should be the focus of decision-makers rather than devoting too much attention to mitigation commitments.[12]

Reaching an agreement on questions such as which country should reduce emissions and by how much is clearly difficult. Nevertheless, turning to science again, the IPCC 4th Assessment Report informs us that most equity-based interpretations – taking into account factors such as capacity to act and level of development – call for developed countries as a group to reduce their emissions significantly by 2020 (up to 40 percent below 1990 levels), and by even greater levels by 2050 (up to 95 percent). Developing countries, on the other hand, would need to reduce emissions below their projected baseline emissions within the next few decades.[13] More specifically, science tells us that »in line with IPCC findings, with a 30 % reduction below 1990 levels for developed countries and a ›substantial deviation‹ of 20 % below business-as-usual levels for developing countries [until 2020], it is possible to lower post-2020 reduction rates to less than 2.5 % per year relative to 2000 levels«.[14]

International political will, as reflected in the UN negotiations, seems to be moving in this direction, albeit with significant difficulty and far too slowly if one considers the urgent need for emissions peaking in the short term and radical reductions in the longer term.[15] Indeed, parties remained unable to agree on a global emission reduction objective for 2050 at the UN climate summit in Cancún. However, they did decide to continue negotiating the issue with a view to considering it at the climate summit in December 2011 in Durban, South Africa.[16] Without going into much detail, it warrants mentioning that, in other fora, smaller groups of highly influential parties have already committed politically to such long-term goals. Industrialized countries in the Group of Eight (G8), for example, have committed themselves politically to the idea of halving global emissions by 2050 and reducing emissions from the developed world by 80 percent or more in the same timeframe.

Considering the need for emission reductions to limit temperature increases to 2 °C, the next logical question that arises is: are the current mitigation efforts pledged by countries around the world sufficient to achieve this important objective?

10. For more details, please see the Annex to this paper.

11. Saunders/Turekian (2011), p. 25.

12. See IPCC (2007a), p. 90.

13. IPCC (2007a), p. 90.

14. Rogelj/Meinshausen (2010), p. 1128; suggesting a deviation of 15-30 percent from business as usual in 2020 for non-Annex I parties: den Elzen/Höhne (2010), pp. 247 sqq.

15. To illustrate the difficulties: for 2050, the draft of the 2009 Copenhagen Accord a few hours before the closing of the meeting still contained global targets of -50 percent from 1990 levels and an aggregate developed country target of at least -80 percent by 2050. However, the final version had no language on the long-term emission reduction goals. See Rogelj et al. (2010), p. 2. At the Cancún summit in 2010, parties were once again unable to reach agreement, either on the numbers or on the framing of the cumulative emission reduction objective for 2050. Ultimately, the underlying dissent is over the question of which country or group of countries should bear which burden. Developing country parties such as China fear that they will be forced to constrain their future economic growth by committing to emission reductions and are – for many reasons – unwilling to take this risk. Likewise, they are unwilling to perpetuate a situation in which currently developed countries are allowed to retain higher per capita emissions in 2050 than the currently developing world.

16. Decision 1/CP.16, supra, note 1, para 5.

2.3 Are We on Track? Mitigation Offers on the Table

Formally enshrined in a 2010 decision of the parties to the UNFCCC, the pledges submitted by more than 80 parties from both the developed and the developing world are the best point of reference for mitigation efforts currently envisioned by the international community beyond 2012. Different groups of researchers have analyzed these mid- and long-term pledges,[17] and because the pledges have not significantly changed since they were first submitted, these analyses provide a good impression of whether the world is on track to meet the mitigation challenge.

Although the specific results of the studies differ, the overall message is clear: the level of ambition reflected in the pledges is far from adequate to avoid a severe risk of temperature rising above 2 °C. This assessment holds true even if the non-binding nature of these pledges as well as additional loopholes are left unconsidered,[18] although both clearly may further impact the equation.

In pessimistic scenarios, the Copenhagen Accord pledges would not stimulate any significant mitigation efforts beyond what can be expected anyway under a »business-as-usual« scenario.[19] The 2 °C goal would be missed »with virtual certainty (>99 %)«.[20] But even in the most positive scenarios – assuming that all countries meet the upper end of their mitigation pledges – the picture does not become much rosier. Although the resulting emissions trajectory would be significantly lower than that in a business-as-usual scenario, it is still far above the pathway to achieving the 2 °C goal.[21] Scientists estimate that, by 2020, the present pledges are likely to lead to a world with global CO_{2eq} emissions which are 10-20 percent higher than current levels.[22]

This sentiment is also shared by policymakers in several countries and regions. For instance, the internal debate in the EU reflects a broad agreement that the global community has not yet shown sufficient commitment to reaching the 2 °C goal.[23] Even in the 2010 Cancún Agreements, the parties acknowledged that scaled-up mitigation efforts are needed.

Not only are the near-term mitigation pledges insufficient to meet the 2 °C objective, but the absence of a 2050 emission target as a yardstick for longer-term efforts is a critical deficit in the current international architecture.[24]

If the mitigation challenge is taken seriously, these assessments are sobering. As one group of authors summed it up: »[c]urrent pledges mean a greater than 50 percent chance that warming will exceed 3 °C by 2100«.[25] But there is also hope: »tackling climate change is still manageable, if leadership is shown«.[26]

2.4 Interim Conclusions

Based on the current political framework and pledges made thereunder, current mitigation efforts fall far short of what is needed to achieve the 2 °C goal. Annex I parties,[27] as a group, are still not on the path to adequate emission reductions; and while the expected mitigation efforts may be lower, the same holds true for emission trends in developing countries.

What emerges is a complex and highly contingent picture in which far-reaching moral, economic and political questions mingle with scientific facts. But some important conclusions may still be drawn. First, few, if any, would deny that the fairly small group of large emitters – covering both industrialized and emerging economies – need to be engaged in mitigation of the climate challenge. Second, given the reality of the negotiations and the deeply entrenched principle of »common but differentiated responsibilities«, it appears inevitable that the developed world, which is responsible for the greater share of historical GHG emissions and also has greater

17. For a comprehensive list, see Rogelj et al. (2010), p. 2; more recently also UNEP (2010); den Elzen et al. (2011).

18. On the loopholes and the influence on future emissions, see Rogelj/Meinshausen (2010), p. 1127 sqq.

19. For country specific evaluations, see Rogelj et al. (2010), pp. 5 sqq.; see also European Commission (2010); UNEP (2010), p. 3.

20. Rogelj et al. (2010), p. 7.

21. UNEP (2010), pp. 3, 41 sqq.

22. Rogelj/Meinshausen (2010), p. 1126.

23. European Commission (2010a), pp. 14 seqq.

24. Rogelj et al. (2010), p. 8.

25. Rogelj/Meinshausen (2010), pp. 1126, 1128; assuming a temperature increase of 2.5-4.2 °C above preindustrial levels in 2100 in a pessimistic scenario: Rogelj et al. (2010), p. 7.

26. UNEP (2010), p. 3.

27. Annex I countries are industrialized countries listed in Annex I to the UNFCCC. They include the 24 original OECD members, the European Union, and 14 countries with economies in transition.

economic capacity to pursue mitigation efforts, will be expected to take on a larger burden than developing countries. It can therefore be said with some degree of certainty that any coordinated response to the mitigation challenge will have to involve all major emitters and also require more ambitious efforts from industrialized economies in order to achieve the 2 °C objective. Based on these assumptions, the remainder of this study will assess the capacity of existing and potential climate architectures; but first, an important trend in the approach to international climate cooperation will be briefly highlighted, as it is serves to better categorize different cooperation options and understand their underlying rationale.

3. Which Mitigation Approach is Best? Alternative Regime Architectures

International climate protection has long been centered on the conventional model of a binding treaty to shape and guide intergovernmental cooperation. Internationally binding commitments and the centralized coordination of policies and measures have evolved to become a driving force within the regime, flanked or facilitated by additional regime elements such as compliance control and market-based instruments. Other approaches, such as informal cooperation on technology research and deployment, have also emerged over time, but these have never dominated the international debate to the extent seen under the foregoing system of mitigation commitments and instruments. Indeed, many of these alternative forms of cooperation were designed to contribute to the conventional model aimed at enhancing a multilateral treaty regime with global scope.

Recent years have seen a remarkable evolution of the foregoing dynamic, however. In many ways, the momentous climate summit held in Copenhagen in December 2009 marked a setback for the multilateral, comprehensive and binding treaty paradigm. Several observers, especially in the broader public and in non-governmental organizations (NGOs), had looked to Copenhagen with hopes of witnessing the passage of a new and ambitious climate treaty. In the run-up to Copenhagen, some of these hopes were watered down by the evident lack of progress. Hopes remained that, at the very least, the foundations for a future agreement could be laid. In the end, however, the most visible outcome – the Copenhagen Accord – was not only watered down in content, it was not even agreed upon; parties merely »took note« of the Accord, denying it the endorsement of a formal decision of the parties. While important elements of the Accord have since been included in formal decisions at the Cancún climate summit, the experience in Copenhagen reflects the challenges involved in agreeing to a new international climate treaty. Likewise, the negotiations in Copenhagen and thereafter have failed to capture an earnest collective will to act on mitigation, especially relative to the recommendations formulated by climate science. Unsurprisingly, this disparity between the politically feasible and the scientifically necessary has afforded new momentum to an earlier debate about the merits of alternative governance architectures, prompting a myriad of new conceptual proposals and recommendations.[28]

In an attempt to structure this debate, one common approach has been to frame such proposals and the attendant shift in policy preferences as falling along a continuum of approaches, with one end representing a top-down approach, the other end a bottom-up approach, and actual climate policy located somewhere between these two poles.[29]

Conceptually, a top-down approach would be based on formal engagement between sovereign actors, usually states, along traditional channels of multilateral diplomacy. Such negotiations are expected to result in binding – rather than purely political – international commitments adopted through an international treaty, often complemented by centrally integrated processes, a compliance regime, and hierarchical institutions, which in turn shape and drive domestic implementation efforts. Institutionally, the Kyoto Protocol approach with its binding mitigation obligations can be seen as the prototype of a top-down approach in international climate policy.

Within the framework of a bottom-up approach, by contrast, countries retain the ability to define both the nature and scope of their national climate efforts. While they may cooperate with other partners by coordina-

28. Aldy/Stavins (2007); Aldy/Stavins (2010); Barrett/Toman (2010); Bodansky/Diringer (2007); Bosetti et al. (2008); Evans/Steven (2009); Olmstead/Stavins (2009); Pizer (2007); Stavins (2009); Stavins (2010); Tangen (2010); German Advisory Council on Global Change (WBGU, 2010). An overview of earlier proposals is provided by Aldy/Barrett/Stavins (2003); Bodansky (2004).

29. Bodansky/Diringer (2007), p. 1.

ting their activities and defining common aspirations, decision-making remains largely decentralized and focuses on the national level. In its most extreme variation, bottom-up climate cooperation would occur only through informal and fragmented institutions with no identifiable core, no common rules (for instance, on accounting), and weak or nonexistent linkages.[30] Bottom-up approaches may also emerge under the auspices of the UN; good examples of a bottom-up approach are the »pledges« submitted by many nations within the framework of the negotiations on a future UN climate regime. Under the approach chosen by the Copenhagen Accord, for instance, cooperation would be based on mitigation pledges that are not binding, but rather political commitments that may be conditional or linked to certain events or developments, expressed in different metrics, and – if it so happens – breached without constituting a violation of international law. Such proposals are typically coupled with a top-down dimension, namely the international review of performance in line with the pledges; and this, in turn, symptomatically illustrates the limitations of a binary distinction between the two extremes.

To be sure, a system as complex as the international climate policy architecture cannot be cleanly assigned to either of these extreme positions.[31] Nonetheless, the debate on top-down versus bottom-up has continued, reflecting the respective preferences of proponents of each approach.

Overall, proponents of bottom-up approaches doubt the very ability of a top-down architecture to address the climate challenge, as it is thought to underestimate the attendant complexities while overestimating the willingness of decision-makers and stakeholders to act.[32] Instead, they highlight the importance of flexibility, which they believe will allow each actor to define activities that are technically, economically, and politically acceptable and possible in light of local or regional conditions.[33] Using such a bottom-up approach is seen as avoiding the cumbersome process of international law and its requirement of unanimous consent, as well as the aversion of some countries to signing up to binding international obligations. As a result, such cooperation is thought to lower the threshold for both meaningful national and international engagement and overall progress on climate mitigation. It is seen as allowing similarly minded actors to form coalitions and take action that accommodates their individual circumstances and specific interests. By not requiring a binding commitment at the international level, the bottom-up approach is sometimes also viewed as encouraging higher levels of ambition because sanctions for non-compliance are lacking or at best limited, thereby creating no deterrent for bold pledges.

Unlike formal treaties, such informal or internationally non-binding commitments might also avoid the conservative tendency of binding arrangements, which are apt to lock-in low levels of ambition (because some parties might fear »sanctions« in case of failure) while, at the same time, proving vulnerable to defection (due to the lack of effective international instruments to force sovereign states into compliance).[34] Additionally, advocates of bottom-up approaches will cite their propensity to improve stakeholder involvement, increasing the political viability of implementation. Once under way, the resulting cooperation is expected to develop in an organic manner as parties explore new forms of governance and gradually increase their level of commitment. Finally, proponents argue that resources would be better spent on building coalitions of the willing and lighthouse projects than wasting time on achieving little to no progress at the global level.

However, many of these alleged benefits come at a price, and establishing a preference with regard to either bottom-up or top-down models of cooperation very much depends on the weight afforded to the respective advantages and disadvantages, as well as to potential trade-offs. For instance, bottom-up approaches are generally thought to afford less transparency, certainty, and reciprocal confidence than a formally binding top-down agreement, potentially deterring some actors from adopting commitments without assurance that others will engage in similar efforts.[35] Without a

30. Keohane/Victor (2010), pp. 3-4.

31. Indeed, many features typically ascribed to one approach can also be found in the other, see Dai (2010), pp. 633-634.

32. Rayner (2010), p. 616; rather, according to Rayner, action should occur at the same level as the causes and effects of climate change, which is the local level.

33. See, for instance, Victor/House/Joy (2005).

34. Victor/House/Joy (2005).

35. Hare et al. (2010), p. 607; Pew Center on Global Climate Change (2005), p. 19.

single overarching framework specifying the expected level of ambition from regime participants and defining the many parameters of mitigation,[36] it may prove more difficult to predict environmental outcomes, in terms of ensuring both that individual efforts add up to what is scientifically required and that actors meet their pledges within the proposed timeline.

By circumventing the established decision-making processes of international law, moreover, the outcome of bottom-up regime-building has been censored as being less legitimate than universally negotiated commitments, especially where small groups of powerful states decide to resolve a global challenge to the exclusion of large parts of the international community.[37] Although the latter argument may be considered less persuasive purely in the context of mitigation,[38] the global climate regime encompasses many additional dimensions, such as adaptation, finance, technology, and so on, and the mitigation challenge is never addressed in isolation from these other aspects. Likewise, the global nature of the challenge is underlined by the fact that the mitigation efforts pursued by one group of countries will affect the climate impacts felt in other countries, necessitating a truly global approach.

Over time, the existence of several regimes could potentially lead to forum-shifting or even »forum-shopping«, in which actors move a regulatory agenda from one forum to another, abandon a forum, or pursue the same agenda in more than one forum in pursuit of their best interests, leading to what may prove to be incoherent results.[39] Likewise, participants in one forum may hold off decisions as they wait for progress in another forum, and vice versa. It bears acknowledging, however, that a bottom-up approach will not necessarily lead to the existence of several regimes. Likewise, adoption of a top-down approach cannot automatically be equated with the existence of only one regime. The level of fragmentation in international climate cooperation cannot thus be simply linked to whether states favor a bottom-up or top-down approach. Instead, a number of variables will determine the degree of coherence of the international policy architecture. For instance, if a future top-down approach were to find international backing comparable to the nearly universal support enjoyed by the UNFCCC, the ensuing dynamic is likely to result in less fragmentation than loose, bottom-up cooperation. What is more, fragmentation alone need not always compromise the strength of the regime. Instead, the success of a policy architecture will depend as much on the political will of its participants and the mutual relationship of coexisting norms and institutions (synergistic, complementary, or countervailing).[40]

In specific contexts, it is nonetheless clear that a bottom-up approach will render it more difficult to harness the full potential of a completely integrated and globally harmonized approach; for instance, in the case of emissions trading, only a truly global carbon market will unlock the full efficiency gains offered by this instrument, for instance in terms of abatement cost heterogeneity, market size and liquidity. And finally, reversing an argument made in favor of the bottom-up approach, proponents of a top-down approach claim that past experience under the Kyoto Protocol and the Montreal Protocol has shown an international agreement – despite its weaknesses in content and implementation – to be more likely to drive international ambition than a bottom-up approach.

Again, the debate about these contending approaches should not be framed as an either/or question. In practice, a mixture of policy approaches has already been established, and a combination of bottom-up and top-down elements will also form part of the future global climate regime. Indeed, the real question should not be whether one approach is preferable to the other, but where the right mix lies. As mentioned earlier, there can be neither a static nor a theoretical answer to this question. Finding a satisfactory solution will always de-

36. Such parameters include, for instance, definitions of a »business as usual« emissions trajectory, the emissions base year, how emissions from different sources are measured and counted, which kind of global warming potential (GWP) factors need to be applied to different gases, which gases are included in the mitigation objectives, and so on.

37. See Bodansky et al. (2004); Reinstein (2004). For an example from recent practice, see Bolivian President Evo Morales, reflecting sentiments held by a group of states joined together in the so-called Bolivarian Alliance for the Peoples of Our America (ALBA), when he described the Copenhagen Accord as a »product of closed-door diplomatic horse trading« that has been »reticently approved by an elite group of negotiators«. United Nations »Press Conference by Bolivia's President on People's Congress«, May 10, 2010, online at: htttp://www.un.org/News/briefings/docs/2010/100507_Morales.doc.htm.

38. In the case of mitigation, every effort undertaken by any state or group of states will benefit the international community as a whole, rendering the legitimacy argument less forceful.

39. Braithwaite/Drahos (2000), p. 29; see also: Benvenisti/Downs (2007).

40. On the risks and opportunities accompanying such fragmentation, see Biermann et al. (2009), especially p. 19; see also Vihma (2009).

pend on the context at any given moment, taking into consideration the objective (in this case, the 2 °C goal, which itself is prone to change in line with new scientific insights), as well as the political realities in international negotiations and, last but not least, the specific realities faced by affected countries. Both bottom-up and top-down elements, in other words, will be an inherent feature of the future climate regime. The following sections will review achievements of different existing venues and institutions, focusing on a broader range of criteria such as geographic inclusiveness, institutional resources, and the level and nature of engagement. It forgoes a summary definition of such criteria, again in view of the dynamic and highly diverse circumstances in each case; a table at the end of the analysis, however, groups the assessed fora in such a manner that broad comparisons of different features are rendered possible.

4. How Successful Is International Climate Cooperation in Reducing Emissions? An Assessment of Current Cooperation Venues

While the UN climate negotiations have surely been the most prominent venue for addressing mitigation efforts, a multiplicity of other fora – be they climate-specific or general, technical or broadly political, more top-down or more bottom-up – are also addressing the mitigation challenge or aspects thereof. More recently, and especially after the Copenhagen climate summit of 2009, a new dynamic has emerged, shifting international attention to alternative or supportive fora alongside the UN regime. However, it still remains unclear whether and how such venues might complement or even replace the negotiations convening under the auspices of the UN. To shed further light on this question, the following sections will outline the most prominent venues and their goals and achievements with respect to the overarching aim of reaching the 2 °C goal. Even with this exclusive focus on mitigation, however, selection was necessary to allow for more analysis alongside the description of each forum. Accordingly, a number of institutions peripherally involved in mitigation, as well as venues whose focus is on a very narrow aspect, have been omitted.[41] Likewise, the numerous bodies dedicated to the administration and disbursement of climate finance – including multilateral development banks – are not included in the analysis, as their remit is again narrow and more facilitative in nature.[42]

4.1 Classical Multilateralism: The United Nations

Since its inception in 1945, the UN has constituted the most comprehensive effort at multilateral cooperation in the history of international affairs. Its aspiration of universal membership and emphasis on the sovereign equality of all states, large or small, wealthy or poor, has afforded it a degree of legitimacy rivaled by no other international organization. However, its broad scope and the procedures and routines through which it operates have all rendered the UN an unwieldy and inefficient institution in the eyes of many critics. Of course, the cumbersome and occasionally fruitless processes geared towards defining a common position only remind us that the UN can never perform better than its members allow. Moreover, taking into account the wide disparities in national interests and the fact that foreign policy is typically an extension of domestic policy, the challenges involved in acting swiftly on complex problems are hardly surprising.

To some extent, the foregoing characteristics – both positive and negative – also extend to the numerous specialized agencies of the UN, as well as to the treaty regimes adopted under its auspices. In the area of climate change, the UN has operated mainly through a framework convention, the UNFCCC, and subsequent rules elaborated within the institutional setup created by that treaty. Although different facets of the climate change issue have also been addressed by the UN General Assembly, the UN Security Council or the UN Environment Program (UNEP),[43] the center of gravity is clearly the work done under the auspices of the UNFCCC and its Kyoto Protocol.

In addition and almost accidentally, the Montreal Protocol on Substances that Deplete the Ozone Layer has had considerable relevance for the mitigation of GHGs.

41. Michonski et al. (2010) discuss a number of bodies not dealt with here, such as the United Nations Environment Programme (UNEP), the Food and Agriculture Organization (FAO) or the International Atomic Energy Agency (IAEA).

42. Again, Michonski et al. (2010) offer a useful discussion of the role of institutions such as the World Bank.

43. For more details on UNGA and UN Security Council see: Bausch (2009), pp. 53 seqq.; For the climate-related work of UNEP, refer to the UNEP website: http://unep.org/climatechange. On the role of UNEP in global environmental governance, as well as on the UNEP reform debate, see: Beisheim/Simon (2010), p. 1. If discussions on a reform to strengthen UNEP ever proceed, its role in climate governance may acquire new weight.

4.1.1 The UNFCCC and its Kyoto Protocol

The UN climate regime – not unlike the UN in general, but in contrast to many of the alternative fora discussed below – is credited with high legitimacy and near universal membership. However, the past two decades of its operation, notably as states have turned to negotiating new and stricter rules with significant implications for the current and future global economy, have been anything but smooth. Indeed, progress and stagnation at the level of the UN climate negotiations exemplify the potential, the difficulties, and the cumbersome nature of UN climate efforts.

A Slow Start: The UNFCCC and the Kyoto Protocol

Calls for concerted international action on climate change date back more than two decades. When, in 1988, the United Nations General Assembly declared global warming a »common concern of mankind«,[44] it paved the way for formal negotiations[45] under the auspices of the UN, ultimately resulting in the adoption of the UNFCCC in 1992.[46] A milestone in early climate cooperation, the UNFCCC entered into force on 21 March 1994 and has since been ratified by 194 parties, affording it one of the broadest memberships of any international agreement.[47] Given the need for consent,[48] however, broad participation translated into substantive commitments that were largely programmatic in nature; the adoption of more specific obligations had to be deferred to a subsequent instrument.[49]

To this end, parties adopted a negotiating mandate in 1995;[50] yet both its definition and implementation saw states pitted against each other in an arduous marathon of consultations, setting the tone of future negotiations.[51] By late 1997, the international community had adopted the contentious Kyoto Protocol,[52] a separate instrument under international law that required ratification by a sufficient number of signatories before it could enter into force.[53] A number of setbacks and several years of diplomatic stalemate followed, indicating that the nearly universal support enjoyed by the parent convention would not be easily extended to its subsequent Protocol.[54] Nearly a decade after its adoption, and only narrowly meeting the criteria for entry into force, the Kyoto Protocol became effective on February 16, 2005, albeit without the backing of the largest economy and largest GHG emitter at the time, the United States.[55]

Seeking a Vision for the Future: Negotiations before Copenhagen

Since the quantified emission limitation and reduction objectives (QELROs) adopted by Annex I parties under the Kyoto Protocol expire in 2012, its governing body immediately adopted a mandate to negotiate new commitments after the entry into force of the Protocol in 2005. This was also required according to the rules set out in the treaty.

For negotiations to progress, however, parties had to account for the divergent membership of the UNFCCC and the Kyoto Protocol. Although there had been a controversial debate about whether and how to address mitigation by developing countries – which had been exempted from QELROs in the first commitment period – under the Kyoto Protocol negotiations, Annex I parties also did not want to extend their efforts without cer-

44. Protection of Global Climate for Present and Future Generations of Mankind, UN General Assembly Resolution 43/53, 6 December 1988, endorsing the establishment of the Intergovernmental Panel on Climate Change (IPCC).

45. Protection of Global Climate for Present and Future Generations of Mankind, UN General Assembly Resolution 45/212, 21 December 1990, which established an Intergovernmental Negotiating Committee (INC).

46. On the negotiations, see Bodansky (1994); Goldberg (1993); Sands (1992).

47. United Nations Framework Convention on Climate Change (UNFCCC), New York, May 9, 1992, in force March 21, 1994, in: International Legal Materials (1992), Vol. 31, p. 849; the status of ratification is published online at http://www.unfccc.int/essential_background/convention/status_of_ratification/items/2631.php.

48. On the role of unanimous consent and its problematic consequences for international environmental governance, see Palmer (1992).

49. This approach to environmental diplomacy is credited with facilitating consensus within a shorter timeframe, while also increasing the ability of the regime to adapt dynamically to rapidly changing factual and legal circumstances, see generally Susskind (1994).

50. See Decision 1/CP.1, FCCC/CP/1995/7/Add.1, June 6, 1995 (the »Berlin Mandate«), which opened a new round of negotiations on »a protocol or another legal instrument«.

51. On the negotiation process, see Oberthür/Ott (2000).

52. Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto Protocol), Kyoto, December 10, 1997, in force February 16, 2005, in: International Legal Materials (1998), Vol. 37, p. 22.

53. Under Article 25 (1) of the Kyoto Protocol, it was to enter into force once fifty-five states »deposited their instruments of ratification, acceptance, approval or accession«, on condition that those states account for at least 55 percent of the 1990 CO_2 emissions by developed states.

54. See, *inter alia*, Brandt/Svendsen (2002); Dessai/Lacasta/Vincent (2003).

55. On the US decision to reject the Kyoto Protocol, see Lisowski (2002).

tainty that large emitters outside the membership of the Kyoto Protocol – most importantly, the US – would be equally involved in any future mitigation efforts. Strong forces thus pushed for negotiations to proceed under both the UNFCCC and the Kyoto Protocol, with two separate, but overlapping and interrelated tracks.[56]

By December 2007, discussions under the UNFCCC and the Kyoto Protocol had progressed sufficiently to enable the adoption of a more sophisticated mandate, the Bali Roadmap, which called for a focused process to be concluded two years later.[57] The mandate was celebrated as a success for both its timeliness and its content. From the mitigation perspective, it was a breakthrough that developing countries agreed to frame their »actions« in the context of the negotiations for a future climate regime.

The ensuing negotiations sought to address not only complex technical, institutional, and legal issues, but also the question of how to achieve a balance between the efforts that were to be taken by individual parties, and between the understandings reached under the two separate negotiating tracks. Over two years, parties worked with unprecedented intensity on the large number of issues to be addressed. Each meeting closely succeeded the previous one; hundreds of pages of negotiation text were drafted. Also, the political profile of the climate summit rose. Many heads of state and government became involved, promising to attend the all-important summit that would conclude these two years of negotiations. And yet, despite all the efforts and rising expectations, progress in the negotiations was slower than originally hoped.

Shattered Dreams: The Copenhagen Summit

The Copenhagen climate summit was by far the biggest climate summit ever. Not only did it attract more than 40,000 accredited participants, but it was attended by some 120 heads of state and government. Building on the political momentum before the summit, a number of countries increased their mitigation offers. Overall, a majority of countries in both the developed and the developing world seemed willing to consider a comprehensive new climate treaty, although several important nations continued to voice reservations.

Expectations of the outcome of the summit fluctuated over time and were closely linked to political developments in key countries. While hopes ran high right after Bali and remained strong until the beginning of 2009, expectations began to crumble when parties failed to bring down the negotiating text to a manageable length in the months leading up to the Copenhagen summit. Optimism returned, to some extent, as the number of heads of state and government who announced they would join the summit rose – and especially when US President Barack Obama declared he would be present in Copenhagen for the final negotiations. Some argued that President Obama would not be willing to attend if there was a serious risk of returning home without a tangible outcome.

Overall, the picture was diverse – as were the strategies. While some participants sought to keep expectations high and thus also the pressure to reach a global agreement, others engaged in a strategy of lowering expectations so as to land more softly in case of disappointment. But when leaders from around the world converged in Copenhagen in December 2009, it soon became clear that the negotiation processes under the UNFCCC and the Kyoto Protocol had failed to narrow down potential options sufficiently for passage of a new international treaty. Furthermore, a number of countries showed no willingness to commit themselves under a binding arrangement, and the substantive positions of countries such as China, India and the US were hard to reconcile.

Accordingly, negotiations during the two-week summit proved to be exceptionally cumbersome. Organizational failures, excessive public expectations and unforeseen media interest added to the overall tension. As late as the final days of the conference, no tangible results had emerged, while throughout, the process become increasingly chaotic and opaque.

In an atmosphere of rising mistrust, a group of 26 heads of state and government elaborated a new document designed to be sufficiently vague to meet with the approval of all dissenting factions.[58] Having been excluded

56. For details, see Bausch/Mehling (2006).

57. See, in particular, Decision 1/CP.13, FCCC/CP/2007/6/Add.1, March 14, 2008 (Bali Action Plan).

58. Decision 2/CP.15, FCCC/CP/2009/11/Add.1, 30 March 2010 (»Copenhagen Accord«).

from these final negotiations, however, several countries complained about the lack of inclusiveness and transparency. In the end, due also to the lack of leadership from the COP presidency, even this minimal »Copenhagen Accord« did not gain enough support to be passed as a formal decision of the parties. Countries such as Sudan, Venezuela, and Bolivia voiced their discontent with the results presented. However, given the absence of alternative options, parties agreed to »take note« of the Copenhagen Accord, with several parties censuring its lack of ambition and the undemocratic process in which it had been drafted.

Evidently, the Accord was not the new climate treaty many had hoped for. It did not even establish a roadmap for such a new treaty. Being only »noted«, the Copenhagen Accord was nothing more than a political declaration the parties could adhere to or ignore.

In terms of substance, the Copenhagen Accord fell short of establishing a robust regime for binding mitigation efforts. It did, however, contain a long-term goal – 2 °C – and invited the submission of mitigation pledges, bolstered by a political pledge of considerable financial support for adaptation and mitigation, including efforts in the field of reducing emissions from deforestation and degradation. Also, it envisaged monitoring, reporting and verification or international consultation and analysis as follow-up, based on voluntary pledges, and called for a review of efforts by 2015. Institutionally, moreover, it foresaw the creation of a »Green Climate Fund«, a »Technology Mechanism«, and a »REDD+ Mechanism«, without, however, going into detail on these institutions and their setup.

Considering the lack of progress and tangible results of the Copenhagen Summit, it is not surprising that the mandates for the two-track negotiations were once again extended. While some – especially in Europe – saw the Copenhagen outcomes as a »failure« or »debacle«,[59] others – especially in the US – saw it as a step forward with regard to both its substance and the political level of its endorsement.[60] If nothing else, the results of the 2010 summit in Cancún show that the Copenhagen Accord delivered a sense of direction.

59. See, for example: Müller-Kraenner (2010); Oberthür (2011).

60. See, for example: Climate and Environmental Governance after Copenhagen, Transatlantic Lunch with Adil Najam, 2010, online at http://ecologic.eu/3241.

Renewed Hope? Going Forward from Cancún

After the Copenhagen summit, international climate cooperation had reached a crossroads. A sense of insecurity over what can and should be delivered by the UN regime was strongly felt among negotiators and stakeholders. Expectations were kept to a minimum so as to avoid a disappointment similar to the one experienced in Copenhagen. Accordingly, many parties that had aimed for a new treaty (or at least a roadmap thereto) in Copenhagen were now looking for a balanced set of decisions.[61] Furthermore, acknowledging the political dimension that climate policy had by then acquired, Mexico as the host country decided to appoint its foreign minister, Patricia Espinosa, as president of the upcoming COP, not its environment minister.

It was thus with a sense of cautious optimism and some apprehension that the international community came together for the next COP in Cancún at the end of 2010. Throughout the negotiations, Espinosa emphasized – and arguably kept – her promise to deliver a transparent, party-driven process. In part, this may have contributed to the largely constructive spirit of the negotiations, which evidence a willingness on most – if not all – sides to continue to address climate change under the auspices of the UN. Accordingly, parties committed themselves with a view to finding practical solutions, avoiding long disputes over procedural issues. Nevertheless, positions remained highly diverse and it was unclear whether the COP presidency, which received significant support, would be able to draw all the strands together. In the end, the international community was able to agree upon a set of three decisions – the so-called »Cancún Agreements«.[62] These decisions reaffirmed and thus added legitimacy to central elements of the Copenhagen Accord (including the 2 °C objective and the financing pledges). More specifically, the Agreements elaborate on various aspects of the Copenhagen Accord, lay the foundation for a number of new institutions, and outline a comparatively detailed work plan. In doing so, the

61. See also Oberthür (2011).

62. Although there seems to be some confusion about which of the Cancún decisions are to be considered part of the »Cancún Agreements«, according to the official UNFCCC website, the following decisions are included: Decision 1/CP.16 (on the outcome of the AWG LCA), Decision 1/CMP.6 (on the outcome of the AWG KP) and Decision 2/CMP.6 (on LULUCF). See online at http://unfccc.int/documentation/decisions/items/3597.php?such=j&volltext=%22cancun%20agreements%22#beg.

Agreements were not only able to restore a certain degree of trust in the UN climate regime, but also advanced global climate governance. And yet, Cancún still fell short if measured against the need for urgent mitigation action.

Parties were able to agree on the long-term goal of limiting global warming to 2 °C above pre-industrial levels and the national mitigation pledges were assembled in an informal document. Other issues addressed included: enhanced measurement, reporting and verification (MRV) and assessment of information, as well as relevant financing issues; and a framework to address emissions from deforestation and forest degradation in developing countries (REDD+). Being aware that the action outlined would not suffice to reach the long-term goal, parties also decided on a review of progress to be concluded by 2015. Furthermore, developed country parties are urged to upscale their mitigation targets.

Institutionally, the parties decided, among other things, on the establishment of a Technology Mechanism (including the »Technology Executive Committee« and the »Climate Technology Center and Network«) and the Green Climate Fund designed to assist developing countries in financing emission reductions and adaptation measures to climate change and a related »Transitional Committee«. However, more work is now needed to actually operationalize these new institutions.

Procedurally, the work plan and a number of workshops (for example, on the mitigation pledges) are to shape and push the agenda going forward. Of great importance for global mitigation efforts, the work program foresees that parties should establish a common understanding of a global mitigation target for 2050; work towards agreeing on the timing of global peaking of GHG emissions; specify the modalities for the review of progress; and negotiate new market mechanisms under the Convention to enhance the cost-effectiveness of and promote mitigation actions.[63]

Despite the fact that many questions relating to implementation of the Cancún Agreements remain unanswered, the foregoing decisions – also due to their comparatively ambitious work program – were widely perceived as enough of a step in the right direction to provide new impetus to the negotiations. Some of the most difficult decisions, however, were postponed for the time being; in the area of mitigation, these include agreeing on a global peaking time for emissions, defining a global 2050 emissions reduction target, tightening up the insufficient reduction pledges made in Copenhagen (let alone enshrining them as internationally binding obligations), and the question of how to raise and secure funds over the long term for supporting mitigation efforts in developing countries.

The decisions call on the industrialized nations to expand their reduction pledges, and also explicitly state that all countries have to increase their mitigation ambitions. For the next climate summit – COP17 in the South African city of Durban – the objective will be to determine an inflection point for global GHG emissions and a long-term mitigation target for 2050. Considering the political realities at the latest negotiations, both aims will prove challenging and may indeed be too ambitious.

Likewise, the guidelines adopted by states with binding stabilization and reduction goals under the Kyoto Protocol are equally vague. In particular, the negotiations in Cancún threatened to derail when parties addressed the question of extending commitments under the Kyoto Protocol beyond 2012. For now, states have merely been able to agree on a compromise, according to which industrialized parties to the Protocol must negotiate a second commitment period before the first one expires at the end of 2012. A global mitigation target for 2020, which parties to the Kyoto Protocol – but not, for instance, the US – were able to agree upon, is outlined in a decision reached within the Kyoto Protocol negotiation track. It mentions in its preamble that science has called for reduction emissions by Annex I parties of on average 25 - 40 % relative to 1990.[64]

Overall, while it is still too early to anticipate the outcomes of the Durban summit, the challenge of achieving tangible progress on core issues is considerable, given the two-track negotiations and the different interests on the table. It will be a matter of difficult political fine-tuning to manage expectations in such a way that they do not overheat, while also not attenuating positive dynamics. The pressure for a decision on a second commitment period under the Kyoto Protocol is likely to increase further as the summit approaches. At the same time,

63. For a more detailed description of the work program, see: Oberthür (2011).

64. Decision 1/CMP.6 on the Outcome of the work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol, preamble.

agreement on a future protocol under the UNFCCC cannot be expected. The willingness of some countries to step up their level of ambition is encouraging. However, in the current political situation little movement can be expected from key players such as the US.

Being aware of the diplomatic challenges, South Africa has decided to follow the Mexican example and appoint its foreign minister as incoming COP president. However, the environment minister will be head of delegation during the negotiations. This split will require careful management. Furthermore, South Africa is both part of the BASIC group and part of the African group. It will be interesting to see which perspective – if any – comes out strongest during the presidency. In any case, the focus might shift more to adaptation and financing issues than to the issue of mitigation. However, there is an urgent need to raise the level of ambition to move closer to a pathway towards achieving the 2 °C goal.

Should efforts to advance mitigation fail in Durban, the review of overall progress, which is to be concluded in 2015, may provide the next opportunity to discuss a long-term climate regime. However, the scientific advice on the need for emissions peaking clearly underscores the need for aggressive mitigation action already before 2015. Accordingly, the Durban summit will have to provide answers on how to implement the Cancún Agreements, including some tangible outcomes on the question of emissions reductions. Also, the architecture of future mitigation efforts is as yet unclear. Here, the Durban summit could contribute to a clarification of topics such as accounting rules or the relationship of voluntary pledges and binding commitments. It is uncertain what the summit will be able to deliver in this context, but it seems that the international community is now thinking of advancing with a step-by-step approach so as not to overburden itself with ambitions it cannot live up to (and thus avoid the mistake made and painfully felt by some players after the Copenhagen summit).

UN Climate Regime: Assessment and Outlook

What Has the Regime Achieved with Regard to Mitigation?

Looking back, how can one rate the success of the multilateral climate regime established by the UNFCCC and the Kyoto Protocol? First of all, assessment depends on what one defines as success. If it is measured by the degree to which the regime has compelled parties to mitigate GHG emissions in accordance with the recommendations set out by the scientific community, the UNFCCC and the Kyoto Protocol clearly have to be viewed critically: even the very modest mitigation targets specified in the Kyoto Protocol have yet to be achieved by all the developed nations they apply to. One party, Canada, has simply ignored its emission reduction target, showing that even binding agreements have their limitations when political will is absent. While the Protocol marked an important step in climate cooperation, its practical effect has thus been described as narrow, thin, or even ultimately symbolic by critics.[65] Although both the Protocol and the UNFCCC have to be measured by more than their success in achieving emission reductions, it can be stated with reasonable certainty that neither is currently adequate to the ultimate objective of preventing »dangerous anthropogenic interference« with the climate system.

Nevertheless, while success in terms of short-term emission reductions may be hard to argue in the case of the UNFCCC and the Kyoto Protocol, other aspects of the regime can indeed be seen as important achievements for broader climate cooperation, and that may have implications for mitigation efforts in the future. For one thing, with the largest membership of any multilateral treaty, the UNFCCC has undoubtedly been very successful in securing near-universal endorsement, channeling participation through a formalized and thereby more transparent regime and negotiation process. Clearly, such broad membership also has in good part been responsible for the lack of agreement on more ambitious commitments and objectives; however, the mere fact that virtually the entire international community has become engaged in a multilateral process of deliberation and negotiation affords the outcomes a unique legitimacy.

Also, the UN climate regime has triggered comprehensive processes through which to address broader questions of a future climate regime. Although parties have not yet been able to agree on many aspects of that regime, the UN negotiations have helped raise the political profile of climate change and its mitigation. By now, even heads of state and government are well aware of the importance of the issue and are getting involved in the international negotiations.

65. Victor (2001); Bell (2006); Böhringer/Vogt (2004).

More technical aspects of the regime have facilitated a better understanding of the scope and nature of the challenge; for instance, the reporting obligations currently imposed under the UNFCCC and the Kyoto Protocol have greatly increased transparency and knowledge of emissions trends in different jurisdictions and, by extension, at the global level.

At a practical level, moreover, the UNFCCC and the Kyoto Protocol have also resulted in the creation of an infrastructure with its own resources and highly diverse expert staff that currently no other international institution or initiative focused on climate change can match. The UNFCCC secretariat alone, with a staff of several hundred experts,[66] brings a pool of technical knowledge to the climate process that would be very difficult to build up in any other institution or venue.[67] Also, given its nearly two decades of evolution, the UNFCCC has been able to build up an institutional memory (for example, a vast documentation database) and professional routines that, again, would take years to develop in another setting or forum. The differentiated institutional framework is unique in the domain of multilateral environmental agreements. And it is still growing, as exemplified most recently by the Cancún Agreements. While a multiplicity of institutions is by no means a value in itself, it reflects the multifaceted nature of the issue at hand, along with the technical expertise which the UN regime has been able to establish. Arguably, however, this diversity and breadth may also be adding to the sense of disorientation and overwhelming complexity felt by many observers, which has also become a stumbling block within the negotiations.

One of the most evident outcomes of the Kyoto Protocol has been the creation of a carbon market, especially through the Clean Development Mechanism (CDM). Such a market for mitigation would not have been possible without the binding QELROs and the comparatively advanced compliance regime of the Kyoto Protocol. Leaving aside justified concerns about the environmental integrity of certain mitigation projects and high transaction costs, the CDM regime has far exceeded initial expectations in terms of the investment it has attracted, helping to deploy climate friendly technologies, bringing about greater involvement by the private sector, and identifying a number of pathways for mitigation.

Furthermore, capacity-building efforts under the UNFCCC and the Kyoto Protocol have contributed to disseminating knowledge about the challenges of global warming and possible solutions around the world. By virtue of its universal participation, institutional underpinnings and annually recurring summits, the UN climate regime has effectively launched the issue of climate change onto the political agenda of all members of the international community.

Overall, the UN regime has been able to deliver outcomes of considerable importance. At the same time, it has not yet been able to prove its capacity to live up to the challenges at hand, with regard to both urgency of action and the requisite level of ambition. The regime has not even been able to prove its capacity to enforce obligations. Understandably, this has not bred a sense of unwavering confidence in the UN as the single most important forum for solving the climate crisis. Two questions, therefore, invariably arise: first, can more be expected from the UN climate regime in the future, and second, are there any convincing alternatives?

What Can Be Expected in the Future?

One of the stumbling blocks at the UN level is the need for consensus, which – at least on issues involving widely divergent interests and lack of political will – has tended to allow agreement only on sufficiently watered down compromises. Many stakeholders have called for the adoption of rules of procedure that would allow majority voting, thereby preventing individual parties from blocking an overwhelming majority of countries prepared to move forward. However, past experience suggests that an agreement to introduce general majority ruling (in addition to the few cases already foreseen in the Convention and its Protocol) will not be achieved in the near future. Without even entering into the discussion over the advantages and disadvantages, it can therefore be expected that decision-making on the

66. The size of the Secretariat reflects the complexity and breadth of the negotiations. Its size is unusual in the field of multilateral environmental agreements, as can be seen when comparing, for example, the UNFCCC Secretariat with the Secretariat serving both the Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol.

67. According to the UNFCCC Secretariat, its staff of »around 500 international civil servants works towards the UNFCCC's goals, guided by the Convention's 194 and the Protocol's 190 Parties. Among other things, the staff supports climate change negotiations, organizes meetings and analyses and reviews climate change information and data reported by Parties«. See UNFCCC, Fact sheet: UNFCCC Secretariat, online at http://unfccc.int/files/press/backgrounders/application/pdf/unfccc_secretariat.pdf.

basis of consensus will remain the default mode of adopting decisions in the UN climate regime. Nevertheless, the Cancún summit saw parties exploring new ways of dealing with the consensus requirement, albeit at the risk of undermining the perceived legitimacy of the outcomes.[68] Furthermore, given the need to have all major emitters on board when addressing mitigation issues, a change in decision-making procedures alone might not solve the impasse when divisions are held by influential parties such as China and the US, where procedures will be superseded by politics.

Indeed, another, even more critical stumbling block is the lack of a shared vision between parties, something that is also likely to extend to any alternative forum. As long as countries or regions with such diverse positions as China, India, AOSIS, the US, and Saudi Arabia assemble around one table, finding common ground will prove challenging. This underlines the importance of bridge-building, a task the EU is likely to be willing to continue to perform. But even with the EU and other parties showing how credible solutions can be found, the path towards a regime able to meet the mitigation challenge will take time, and – judging from the pace of past progress – unfortunately will take more time than is available in terms of the schedule mapped out by climate science.

Looking ahead, the Cancún Agreements outline a comparatively ambitious and broad work program, which may serve as a basis for the best possible progress given current political realities. But when measured against scientific recommendations, the UN needs all the help it can get in its mitigation efforts. And that is where additional – or perhaps even alternative – venues and institutions may play an important role. Some of the main candidates for such a role are introduced in the following sections.

4.1.2 The Montreal Protocol

To address the problem of stratospheric ozone depletion, the international community has adopted an international regime comprising the 1985 Vienna Convention for the Protection of the Ozone Layer and its 1987 Montreal Protocol on Substances that Deplete the Ozone Layer. A total of 196 Parties have ratified the Protocol, including the United States. It is widely considered to be one of the most successful multilateral environmental agreements, in terms of the number of parties and its verified progress towards safeguarding the ozone layer, promoting North-South cooperation, and building robust institutions.

The Montreal Protocol determines the phase-out of the production and consumption of several groups of ozone-depleting substances, most prominently chlorofluorocarbons (CFCs). Both developed and developing country parties are subject to reduction and phase-out obligations, although the timetables to complete the phase-out are more generous for developing countries. Phase-out schedules can be revised on the basis of periodic scientific and technological assessments.

The Montreal Protocol and Greenhouse Gas Mitigation

The international climate regime and the international ozone regime are interlinked and have influenced each other in various ways. Officially, the two regimes and their respective institutions have operated with limited coordination. Looking only at the issues relevant to climate change, however, and leaving out interactions that may affect protection of the ozone layer, the Montreal Protocol has had both positive and negative material repercussions for GHG mitigation.

On the one hand, the Montreal Protocol is acknowledged for its contributions to climate protection because CFCs and other ozone-depleting substances phased out under the Protocol are also powerful GHGs.[69] Furthermore, the Montreal Protocol may have triggered – as a side-effect – energy efficiency improvements for refrigeration and air conditioning appliances. Acknowledging these positive effects, leaders at the Major Economies Meeting (MEM) declared in 2008 that they will »continue to promote actions under the Montreal Protocol (…) for the benefit of the global climate system«.[70]

68. For a discussion of how the objections of Bolivia were overridden, and how this highlighted the delicate nature of authority and legitimacy under the UNFCCC, see Vihma (2011), pp. 2 seqq. Vihma goes on to argue that failure to agree in Cancún would have undermined the legitimacy of the UNFCCC process even more than overriding the veto of Bolivia (see p. 7).

69. According to calculations by the UN Environmental Program (UNEP), the implementation of the Montreal Protocol is projected to have reduced greenhouse gas emissions by an estimated 11 billion tonnes of carbon dioxide (CO_2)-equivalent emissions by 2010; it remains unclear to the authors whether the negative interplay has been taken into account in these calculations.

70. Declaration of Leaders Meeting of Major Economies on Energy Security and Climate Change, online at http://www.mofa.go.jp/policy/economy/summit/2008/doc/doc080709_10_en.html.

On the other hand, there have also been negative side-effects of the ozone protection policies.[71] The Montreal Protocol directly and indirectly promoted the use of hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs) as substitutes for ozone-depleting substances, despite the fact that these are potent GHGs. HCFCs and HFCs possess suitable chemical properties to serve as substitutes for CFCs in many applications, in particular in refrigeration and air conditioning and as a foam-blowing agent. The disruptive effect of the Montreal Protocol's promotion of HCFCs and HFCs on the climate change regime triggered scientific and technical cooperation between both regimes, starting in 1998. While it did not lead to consequential political decision-making in either of the regimes – let alone by the regimes jointly[72] – the resulting scientific reports made a valuable contribution to the political discussions.

In 2007, the parties to the Montreal Protocol finally embraced the objective of climate protection in their work, and agreed to an accelerated phase-out of HCFCs. The overall phase-out in developing countries was effectively brought forward by ten years. Stable and sufficient funding possibilities for developing countries, including priority funding for climate friendly alternatives, were a crucial element of the agreement on accelerated action.[73] Owing to the special »adjustment procedure« applicable to strengthening existing control measures under the Montreal Protocol, the 2007 agreement entered into force automatically, without any need for ratifications, in May 2008.

The accelerated phase-out of HCFC consumption and production agreed under the Montreal Protocol promises moderate positive effects on the ozone layer and the global climate. As regards the climate benefits, the avoided HCFC emissions reportedly amount to about 15 to 16 billion metric tonnes of CO_2 equivalent until 2040. As a second positive (side-)effect, reduced HCFC production in developing countries would automatically lead to reduced HFC-23 emissions. However, the net climate effect is likely to be much less, because several of the most promising substitutes are also powerful GHGs – most importantly, HFCs controlled under the Kyoto Protocol. Nothing in the agreement reached under the Montreal Protocol restricts the use of these substitutes.

The Montreal Protocol as a Future Driver for GHG Mitigation?

Despite its mixed impact on climate protection, some observers have portrayed the Montreal Protocol as being more successful in terms of mitigation than the Kyoto Protocol.[74] After Copenhagen, reports about meetings under the Montreal Protocol referred to a »more proven tool« to fight climate change than the UN climate regime itself.[75] Durwood Zaelke, president of the Institute for Governance and Sustainable Development, was quoted in the International Herald Tribune as stating that »[e]liminating HFCs under the Montreal Protocol is the single biggest chunk of climate protection we can get in the next few years«.[76] The less politicized atmosphere under the Montreal Protocol, coupled with its more streamlined procedures (especially with regard to amendments), were seen as important advantages; its success in protecting the ozone layer is considered evidence of its capabilities.

Certainly, the Vienna Convention and Montreal Protocol offer some useful lessons for mitigation. Interestingly, their success cannot be explained by reliance on an alternative governance paradigm to the UNFCCC and its Kyoto Protocol: both treaty regimes are highly formal and legally binding, with centralized institutions and a strong compliance mechanism.[77] In this respect, at least, proponents of bottom-up approaches to climate governance cannot draw support from the experiences under the ozone regime.

71. For a comprehensive overview, see Oberthür/Kelly/Matsumoto (2009).

72. For example, emissions of fluorinated GHG could have been directly restricted under the climate change regime, and parties to the Montreal Protocol could have given clear priority to existing non-GHG alternatives. The benefits might have been optimized through a coordinated approach based on both regimes.

73. Drost (2008), p. 211.

74. See, for example, Leber, »Emissions: Decades-old Global Pact Morphs into Potent Climate Treaty«, in: ClimateWire, November 26, 2008: »Nearly every country in the world easily agreed last week to halt the equivalent of 6 billion tons of carbon dioxide emissions, reaching a commitment that will slow climate change more than the entire first phase of the hard-won Kyoto Protocol.« This media report acknowledges further challenges, however, and quotes an expert: »Davies (…) does not think that the Montreal Protocol will ultimately be the best way to regulate these gases fast enough, as the negotiations and regulations can take years and are vulnerable to industry pressure, as well as the development of a persistent black market. ›Kyoto is the place where we solve global warming‹, he said.« (Admittedly, this statement was made before the disappointment of the Copenhagen summit.) See also Velders et al. (2007).

75. Broder, »Experts point to a more proven tool to fight warming«. International Herald Tribune, November 9, 2010, p. 2.

76. Ibid.

77. Indeed, the compliance mechanism developed under the ozone regime served as the model for the KP compliance mechanism.

Arguably, the success of the Montreal Protocol makes a case for the benefits of more narrowly focused regimes with fewer actors: substantively, the ozone regime is limited to phasing out a limited group of industrial chemicals, as opposed to the complex issues of mitigation, adaptation, technology transfer and finance – each with countless sub-contexts – that are currently dealt with in the UN climate regime. Where ozone-depleting chemicals are found only in narrowly defined contexts of economic activity and daily life, the climate challenge pervades nearly every facet of modern society. But this potential advantage of the ozone regime also would seem to rule out its suitability for broader climate mitigation beyond the substances it currently covers: as soon as the disproportionately more common GHGs CO_2 and methane are included in the scope of the Montreal Protocol, politics and divisions are likely to find their way into its governance processes, ushering in the same diplomatic challenges that have slowed down progress under the climate regime. Finally, the amendment procedures which currently allow the Montreal Protocol regime to adjust to new challenges comparatively swiftly would probably no longer be acceptable to parties if the regime's substantive scope was broadened.

Trying to shift the issue of climate protection in its entirety to this forum might thus not only fail to deliver the intended success, but also put at risk the efficiency of the Montreal Protocol.

4.2 New Impetus from Outside the UN?

4.2.1 Alternative Climate-Specific Venues

Growing recognition of climate change as a political priority, as well as the divisions stalling the climate negotiations under the UNFCCC and its Kyoto Protocol – especially after the Copenhagen summit – have prompted the international community to explore other venues for climate cooperation. Soon after the Kyoto Protocol entered into force in 2005, moreover, political forces critical of the UNFCCC climate process sought to divert attention from this increasingly important venue. One of the driving forces in this regard was the US. Ironically, both climate laggards and frontrunners have thus shown interest in exploring other fora to further their respective aims. While the growing significance of alternative venues is undeniable, however, practical experience – especially with a view to mitigation – is more limited. Based on their mostly brief track record, this section addresses past experiences and future prospects for contributions of existing and emerging fora to meaningful climate action.

Major Economies Forum on Energy and Climate Change (MEF)

MEF: Background

Launched by US President Barack Obama on March 28, 2009, the Major Economies Forum on Energy and Climate (MEF) continues the work of the MEM initiated by President George W. Bush in 2007.[78] At the beginning, the Bush initiative was perceived by many as a conscious attempt to divert political attention from the negotiations under the UNFCCC and the Kyoto Protocol. It took extensive international pressure from leaders such as German Chancellor Angela Merkel for the MEM to reposition itself as a forum contributing to the UNFCCC process. Another point of criticism was that, for many, the MEM was initiated primarily as a political instrument to draw major emitting developing countries out of the Group of 77 (G77) voting bloc in which they have frequently been organized within the UNFCCC regime.[79] While this, in theory, could also further global climate mitigation, the MEM was criticized »for pushing an agenda of voluntary measures to combat global warming, as opposed to mandatory caps on emissions«,[80] and for falling short with regard to tangible results.[81]

By contrast, the MEF promoted under the Obama administration has sought to create renewed momentum in international climate cooperation, clearly emerging in favor of the UN process, to which it aims to contribute.[82] Accordingly, rather than serving as a venue for formal

78. More details on the MEM and the MEF can be found in Bausch (2009), pp. 47 et seqq.

79. See also Light et al. (2009).

80. Online at http://www.greenpeace.org/international/press/reports/bush-mem.

81. At the MEM Leaders meeting in July 2008, the participants produced a »Declaration of Leaders Meeting of Major Economies on Energy Security and Climate Change«, online at http://www.mofa.go.jp/policy/economy/summit/2008/doc/doc080709_10_en.html. Chinese news criticized the MEM as »fruitless«: Zhang Jin, »No Progress on Carbon Emission Cuts at MEF Meeting«, May 27, 2009, China Radio International, online at http://english.cri.cn/6966/2009/05/27/1461s488215.htm.

82. Hillary Rodham Clinton, »Remarks at the Major Economies Forum on Energy and Climate«, April 27, 2009, online at http://www.state.gov/secretary/rm/2009a/04/122240.htm.

negotiations, the MEF is intended to facilitate »dialogue among major developed and developing economies« and to »advance the exploration of concrete initiatives and joint ventures that increase the supply of clean energy while cutting GHG emissions«.[83] Participation extends to 17 major economies in the developed and developing world, jointly accounting for approximately 80 percent of global GHG emissions.[84] The Obama administration has also tried to establish the MEF as an international forum rather than as a US initiative. Accordingly, meetings were hosted not only by the US, but also in other countries such as the UK, Italy, and Mexico. Nevertheless, the US has remained the single most influential country shaping the MEF profile, as reflected by the clear majority of meetings taking place in the US[85] and by the fact that work on clean energy has been one of the most tangible results of the MEF (see below).

MEF: Activities concerning Climate Protection

In the nine working-level meetings since its launch, representatives of the participating countries have focused largely on general mitigation needs and technology cooperation, although attention has also increasingly shifted to include other issues relevant to the international climate negotiations, such as climate finance.[86]

In 2009 in particular MEF parties made considerable efforts to use this forum to advance the climate agenda in preparation for the Copenhagen summit. In July 2009, the Heads of State and Government of the participating jurisdictions convened in the Italian town of L'Aquila for a »Leaders Meeting«, where they adopted a political declaration embracing the scientific calls to limit increases in global average temperatures above pre-industrial levels to 2 °C.[87] For Copenhagen, this was an important signal, which was further strengthened by a clear alignment of efforts with the G8 (see below).

In addition, this meeting launched a Global Partnership for low-carbon and climate-friendly technologies aimed at increasing and coordinating public sector investments in research, development, and demonstration of these technologies, with a view to »doubling such investments by 2015«.[88] To this end, the leaders of the MEF also requested a set of plans spanning ten climate-related technologies that together address approximately 80 percent of the CO_2 emissions reduction potential in the energy sector.[89] Using the Global Partnership as a starting point, US Secretary of Energy Steven Chu launched a Clean Energy Ministerial (CEM) with slightly expanded membership[90] and a mandate to pursue three objectives: improved energy efficiency, enhanced clean energy supply, and expanded access to clean energy.[91] At the inaugural meeting in Washington DC in July 2010, ministers from 24 countries launched 11 technology-focused initiatives to accelerate the transition to greater energy sustainability, for instance by promoting the rapid deployment of electric vehicles and supporting the market for renewable energy and carbon capture technologies. For the most part, these initiatives aim to coordinate efforts and improve the exchange of best practices; some are accompanied by funding pledges from participant countries, and some set in motion processes to elaborate technical and policy guidance. What they do not specify, however, is mitigation commitments for individual countries or emissions reduction objectives for the group as a whole.

Altogether, 2010 and 2011 have seen two CEMs, building on the 2009 MEF Technology Action Plans.[92] Another such CEM is planned for 2012. In hindsight, however, it appears that the MEF itself had its strongest political traction in 2009 in the lead-up to the Copenhagen climate summit.

MEF: Assessment and Outlook

While the exclusive focus on climate change, as well as its composition, affords the MEF an interesting position

83. State Department, »Major Economies Forum on Energy and Climate«, online at http://www.state.gov/r/pa/prs/ps/2009/04/122097.htm.

84. These are: Australia, Brazil, Canada, China, the European Union, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Russia, South Africa, the United Kingdom, and the United States.

85. For a list of events, see http://www.majoreconomiesforum.org/meetings.

86. For a summary of past meetings, see http://www.majoreconomiesforum.org/past-meetings.

87. Chair's Summary, L'Aquila, July 10, 2009, online at http://www.g8italia2009.it/static/G8_Allegato/Chair_Summary,1.pdf.

88. See http://www.majoreconomiesforum.org/the-global-partnership.

89. See http://www.majoreconomiesforum.org/past-meetings/the-first-leaders-meeting.html.

90. Participants at the launch were Australia, Brazil, Canada, China, Denmark, the European Commission, Finland, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Norway, Russia, South Africa, Spain, Sweden, the United Arab Emirates, the United Kingdom, and the United States.

91. See http://www.cleanenergyministerial.org/about.html.

92. For more detail, visit the official website: http://www.cleanenergyministerial.org/about.html.

in the climate debate in general and in the mitigation debate in particular, it has been criticized for lacking transparency and, perhaps more importantly, for being a vehicle of US foreign policy objectives. In the past two years, the MEF has arguably been useful as a complement to the negotiations under the UNFCCC. It has given participating states an additional venue for sharing views, identifying common interests and addressing potential or existing conflicts, all in a less formal atmosphere and with fewer actors than under the auspices of the UNFCCC. At the latest representative level meeting in November 2010, participants clearly used this forum to compare positions and discuss technical details in preparation for the Cancún negotiations, which followed a few weeks later.[93] However, the forum did not perform as a strong driving force for mitigation efforts. While contributing to the overall debate and creating a possibly useful format by launching the Global Partnership with its technology forum, it did not trigger significant breakthroughs.

Unlike the UNFCCC negotiations, however, which are aimed at outcomes vested with some degree of formality, the activities of the MEF are purely political in nature.[94] Without significant changes to its mandate, thus, the MEF could not become an alternative forum for mitigation negotiations geared toward binding and enforceable climate commitments. Admittedly, such commitments may not be what the international community ultimately decides to pursue; however, it is important to acknowledge that, in its current role, the MEF is unsuitable for facilitating anything but informal political arrangements.

Moreover, the MEF neither has the financial resources nor the staff to take over the various functions currently performed by the UNFCCC Secretariat. Furthermore, for some, it is still perceived as an initiative driven by the United States, something the spin-off Clean Energy Ministerial underscores; as such, it would most likely not be accepted as a legitimate forum for more comprehensive, let alone formal negotiations – neither by participants themselves, nor by the remaining members of the international community not included in the MEF process.[95] Last but not least, the domestic climate policy impasse of its main proponent, the US, and the unclear future of the MEF more generally both constrain its potential political weight. In the end, the MEF might contribute to advancing the future climate protection agenda – possibly with a focus on technology – but it is unlikely to become a driving force for meaningful mitigation action.

Asia-Pacific Partnership on Clean Development and Climate (APP)

According to its own description, the Asia-Pacific Partnership on Clean Development and Climate (APP) was an effort to »meet goals for energy security, national air pollution reduction, and climate change in ways that promote sustainable economic growth and poverty reduction«.[96] The APP was officially dissolved as of April 5, 2011, but still bears discussion in the context of this study as it outlines not only how political discord in the field of climate change has given birth to new initiatives, but also how such initiatives can again become obsolete.

The APP was announced in 2005 – the same year the Kyoto Protocol entered into force – and launched in 2006. One of the driving forces behind this partnership was the US under the Presidency of George W. Bush. Another supporter was Australia, which, in 2005, had not yet become a party to the Kyoto Protocol. Considering the timing and the parties involved, the Partnership was perceived by some as a strategy to divert attention from the UNFCCC process, again in order to create a counterbalance to the formal UNFCCC negotiations. Instead, the APP focused on technology and non-binding cooperation, even if – as critics contended – both objectives represented little more than an environmental fig leaf.[97] The journal *Science* described it as a means to »promote the deregulatory ecological modernization and thereby contest any deepening of developed

93. See http://www.majoreconomiesforum.org/past-meetings/the-ninth-leaders-representative-meeting.html.

94. Brazil and India, for instance, explicitly opposed the outcome of the Leaders Meeting being framed as a negotiated communiqué, arguing that negotiation of the elements of a climate deal should be left to the UNFCCC, see Teriete, »Major Economies Meet in Mexico – Many Good Ideas in their Text, But All in Square Brackets«, Climate Deal Campaign, World Wildlife Fund, June 24, 2009, http://blogs.panda.org/climate/2009/06/24/major-economies-meet-in-mexico-%E2%80%93-many-good-ideas-in-their-text-but-all-in-square-brackets.

95. It should be noted, however, that *no* such attempts are currently apparent to extend the mandate and role of the MEF.

96. See: http://www.asiapacificpartnership.org/english/default.aspx.

97. See, for example: Little, »Pact or Fiction? New Asia-Pacific climate pact is long on PR, short on substance«, August 4, 2005, online at http://www.grist.org/article/little-pact.

nations' emission reduction targets for the post-2012 period«.[98] As such, it was therefore seen to be »on the very soft side of the hard-soft law continuum«.[99]

Partners in this effort had agreed to cooperate among themselves to meet goals for energy security and climate change. They specifically and purposefully engaged with the private sector, while admittedly governments remained in charge of the initiative.[100] The Partnership was aimed at expanding investment and trade in cleaner energy technologies, goods, and services in key market sectors. Prior to the dissolution of the APP, partners approved eight public-private sector task forces covering: aluminum, buildings and appliances, cement, cleaner fossil energy, coal mining, power generation and transmission, renewable energy and distributed generation, and steel.

In the end, the APP was supported by Australia, Canada, China, India, Japan, Korea, and the United States. These partners collectively accounted for »more than half of the world's economy, population and energy use«, and produced »about 65 percent of the world's coal, 62 percent of the world's cement, 52 percent of world's aluminum, and more than 60 percent of the world's steel«.[101] The partnership endorsed more than 300 collaborative projects across the partner countries. Following the dissolution of the APP, some of the projects will continue in other fora.

In hindsight, this partnership between key countries and the private sector failed to deliver major breakthroughs in terms of climate change mitigation. Even if projects and work continue in other fora, they will have only limited and fragmented impact on the climate challenge.

4.2.2 Alternative Venues with Broader Agendas

Group of Eight (G8)

G8: Background

The Group of Eight (G8) industrialized nations is a forum for the governments of eight developed nations in the northern hemisphere.[102] It is not a voting block, like the G77; instead, it emerged as an informal meeting in response to the 1973 oil crisis, and was established – at the time with only six participants (Group of Six) – in 1975. Already one year later, Canada joined the group and in 1998, with Russia's accession, it became the G8. The responsibility of hosting and chairing the G8 rotates through the member states on a yearly basis.

Each year, the G8 process culminates in a summit of the Heads of State and Government of the participating countries. In preparation for this summit, several meetings at ministerial level are convened. The presidency sets the agenda, hosts the summit, and determines which ministerial meetings will take place. Nevertheless, the presidency will typically have to secure sufficient buy-in from the other G8 member states to ensure a constructive and fruitful debate. It aims primarily to send political signals and set trends, and does not produce binding results. Unlike the UNFCCC, there is little scope for or likelihood of the establishment of large standing institutions, such as a strong secretariat.

For climate protection, the G8 is interesting not only in that it assembles particularly influential states and economies, but also in that these countries have particularly high absolute, per capita and historical emissions.

G8: Activities on Climate Change

Since the 2005 summit hosted by Tony Blair, then Prime Minister of the United Kingdom, climate change has featured as a more or less prominent issue on the annual agenda of the G8. »More or less« reflects the fact that climate issues have not received equal attention every year: under the Russian G8 Presidency in 2006, for instance, climate protection was less of a priority, illustrating the important role of the rotating presidency in defining the G8 priorities. In 2007, by contrast, the German Presidency once again put great emphasis on the objective of climate mitigation. At the Heiligendamm summit that year, the G8 nations agreed that the UN climate process is the appropriate forum for negotiating future global action on climate change,[103]

98. McGee/Ros (2009), p. 213, see also p. 215.

99. Karlsson-Vinkhuyzen/van Asselt (2009), p. 195.

100. Karlsson-Vinkhuyzen/van Asselt (2009), ibid.

101. See: http://www.asiapacificpartnership.org/english/default.aspx.

102. Its members are currently Canada, France, Germany, Italy, Japan, Russia, the United Kingdom and the United States.

103. Chair's Summary, June 8, 2007, online at http://www.g-8.de/Content/EN/Artikel/__g8-summit/anlagen/chairs-summary,templateId=raw,property=publicationFile.pdf/chairs-summary.pdf.

something that had been disputed by certain nations – in particular, the US under President George W. Bush – which might have preferred to see climate negotiations relegated to a less influential forum with reduced weight attached to binding mitigation obligations. In hindsight, this proved to be an important contribution of the G8 to climate diplomacy, and helped to pave the way for the successful UN climate summit in Bali.

In the following years, climate policy seemed to have become an established item on the annual G8 agenda. In 2008, the G8 expressed its determination to reach agreement on the goal of reducing global GHG emissions by at least 50 percent by 2050.[104] Furthermore, the G8 nations addressed important issues related to climate finance.

In 2009, the year of the UNFCCC Copenhagen Summit, climate change was once again at the top of the G8 Summit agenda, and the G8 aligned their efforts with the Major Economies Forum (see above).[105] G8 leaders restated the foregoing emissions reduction figures, and went even further by agreeing on a reduction goal of 80 percent or more for developed countries by 2050, adding that »significant mid-term targets consistent with the long term goals« were needed and that global emissions have »to reach their peak as soon as possible«.[106] But despite the consensus among G8 leaders – including the US President – that climate change was an issue which needed to be dealt with, the negotiations in Copenhagen were largely disappointing. It came as no surprise, therefore, that the 2010 summit also brought little progress. Political will to address climate change in the G8 context had diminished dramatically, as was reflected, for instance, in the diminishing involvement of environment ministers. Accordingly, the summit document adopted in Muskoka, Canada, largely reiterated the main statements of the Italian summit, while adding a broad range of possible base years (»1990 or more recent years«) to the 2050 mitigation target.[107]

And with a view to the negotiations under the UNFCCC, the G8 leaders again emphasized that they »strongly support the negotiations underway within the (…) UNFCCC« and voiced their »support for the Copenhagen Accord and the important contribution it makes to the UNFCCC negotiations«.[108]

Likewise, in 2011, the French G8 Presidency reportedly had to be pressured into agreeing on a climate text which showed little tangible content. The Deauville summit declaration[109] integrated »climate change and biodiversity« as the fifth of seven separate chapters. Furthermore, climate change is mentioned in the context of other central topics, such as green growth or innovation. But again, little progress was achieved with respect to mitigation needs.

Overall, the G8 – like all the abovementioned fora – reflects the difficulty of advancing mitigation efforts in the absence of political will.

G8: Assessment and Outlook

When assessing the potential role of the G8 in the context of global mitigation efforts, it is of course important that this forum assembles some of the largest economies and emitters around the globe. And yet, in recent years, both economic power and emissions growth have been shifting at the international level, a development that will only accelerate. Furthermore, as the G8 is primarily a high-level forum for the exchange of ideas and opinions, it has very limited – if any – capacity to adopt operational decisions comparable to the formal decisions taken under the UN regime, such as the complex rules and procedures implementing the flexible mechanisms. In its current shape, the G8 lacks the institutional and technical expertise needed to promote comprehensive mitigation policies, let alone a new legal regime. While each G8 member has skilled personnel at the domestic level, and such experts could support the staff responsible for the G8 summit, there are probably challenges with regard to free capacities. Furthermore, there is currently no specialized Secretariat to support work carried out by the G8.

104. G8 Hokkaido Toyako Summit Leaders Declaration, Hokkaido Toyako, July 8, 2008, Points 22 to 35, online at http://www.mofa.go.jp/policy/economy/summit/2008/doc/doc080714__en.html.

105. Chair's Summary, L'Aquila, Italy, July 10, 2009, p. 5, online at http://www.g8italia2009.it/static/G8_Allegato/Chair_Summary,1.pdf.

106. Chair's Summary, L'Aquila, Italy, July 10, 2009, online at http://www.g8italia2009.it/static/G8_Allegato/Chair_Summary,1.pdf.

107. As in previous years, moreover, the expectation that major emerging economies undertake action was expressed, but then further specified to mean »quantifiable actions to reduce emissions significantly below business-as-usual by a specified year«. Chair's Summary, Muskoka, Canada, June 25-26, 2010, Points 21-22, online at http://www.canadainternational.gc.ca/g8/summit-sommet/2010/muskoka-declaration-muskoka.aspx?lang=eng.

108. Ibid.

109. The declaration can be accessed here: http://www.g20-g8.com/g8-g20/g8/english/the-2011-summit/declarations-and-reports/declarations/renewed-commitment-for-freedom-and-democracy.1314.html.

For the time being, therefore, what the G8 is able to deliver is nothing more than a forum to facilitate and foster political will and provide political guidance at the highest level. In some cases, this may amount to emissions reduction pledges. Thus, in practice, the G8 will be at its most effective when it triggers broader processes and, in doing so, facilitates a necessary high-level debate.

Actual experience bears out the foregoing assessment. To date, the G8 has had its greatest impact on the climate debate by moving the attendant issues up the political agenda, making them a topic dealt with by heads of state and government. For the small group of developed states constituting its membership, moreover, the G8 has provided a useful forum for political engagement and exchange.

At the same time, however, it needs to be acknowledged that the political declarations emerging from the G8 summits have done little to promote actual mitigation. By and large, they restate and confirm broad objectives and principles espoused within the framework of the UNFCCC and other fora. As argued earlier, this is not surprising, given the informal nature of the G8. But it also underscores the limitations of a body without a negotiating mandate, and without recourse to a professional secretariat and its financial resources and staff.

Indeed, over the past few years, the G8 has consistently affirmed the primacy of the UNFCCC process when it comes to climate negotiations. And even within the limited scope left for climate discussions within the G8, divergent priorities of the rotating presidencies have not made it easy to find a common voice or agree on strong mitigation language.

Going forward, the G8 will probably remain a forum for agenda setting and confirmation at the highest political level, facilitating progress on the margins, but not triggering the transformational action needed for effective mitigation. Given current political realities, this role is unlikely to change: it would take a dramatically expanded mandate and significant investments in technical staff and expertise to transform the G8 into a more important actor in international mitigation efforts.

Moreover, the scope and ambition with which the G8 addresses mitigation will continue to depend on the rotating presidency and whether it decides to pursue climate change as a priority. Ambitious presidencies have tended to implement »work plans«, allowing the issue of climate change – or certain aspects thereof – to remain on the agenda even after the presidency changes. This tool has been used successfully to keep issues and their discussion alive – so far, however, the work plans have not gained sufficient momentum to truly drive the international mitigation agenda. In addition, given that the agenda lies in the hands of the presidency, there is always a risk that mitigation may be dropped as a priority from one year to another.

Finally, the influence and political weight of the G8 are declining as other economies grow and new powers emerge, a trend reflected in the establishment of the G8+5 format and the recent ascendancy of the G20 (see the next sections). Also, the ongoing questioning of its legitimacy further weakens the G8.

At this point, some observers have even suggested that the G8's work continues only because of the well-established routine of meetings, as well as the »illusion that this community of values can achieve something significant«.[110] With current emission profiles, even an unexpectedly ambitious G8 could not reach the 2 °C goal by itself, as it excludes major emerging emitters.[111] Over the next decade, emission trends and economic growth trajectories are in fact likely to herald a decline in the influence of the G8 in the context of climate change mitigation.

Group of Eight and Major Emerging Economies (G8+5)

Over the years, the G8 presidencies have started to invite a number of emerging and developing countries as observers and participants to parts of the G8 discussions. Along these lines, one somewhat institutionalized extension of the G8 is the G8+5 group, which was formed in 2005 by then UK Prime Minister Tony Blair. This format adds China, India, Brazil, Mexico and South Africa to parts of the G8 talks. In 2007, their inclusion was solidified by the more formal *Heiligendamm Process* (HDP),

110. Frankfurter Allgemeine Zeitung, May 27, 2011, Magerer Ertrag in Deauville, online at http://www.faz.net/f30/common/Suchergebnis.aspx?term=eingespielten+Rhythmus+und+der+Illusion&x=0&y=0&allchk=1 (translation by authors).

111. This is why some see the G8 as an inadequate forum. See, for example, Müller-Kraenner (2010).

which launched a topic-driven, non-negotiating dialogue »on an equal footing«[112] between the member states of the G8 and the »+5« countries, and dealt with challenges for the global economy. It reflected the acknowledgment that, in an evolving global economy, the inclusion of the five largest emerging economies would be necessary to address global challenges.

This structured dialogue was intended to »enhance trust and confidence among the dialogue partners as well as developing common understanding on global issues«.[113] Thus, it aimed to complement »the work in other multilateral and regional institutions and fora«[114] rather than to develop the negotiation of new treaties or more formalized outcomes (apart from a joint declaration). The Organisation for Economic Cooperation and Development (OECD, see also below) was asked to provide a platform for this dialogue. It established a Support Unit to help the countries involved to achieve the aims of the HDP. The OECD and also the IEA supported the process with their analyses.

One of the four topic areas of this dialogue was energy, with a focus on energy efficiency, two areas that are decisive for climate protection. Working groups were established as part of this dialogue. This »new form of cooperation«[115] finally triggered, in 2009, the first ever G8/G5 joint declaration »Promoting the Global Agenda«,[116] a document which refers to climate change and clearly links the challenge to development objectives, without affording it a particularly prominent role. It includes, however, the concluding report of the HDP,[117] which addresses the issue of energy and efficiency in quite some detail (with a focus on retrofitting coal-fired power plants, energy efficient and sustainable buildings, and renewable energy).

After the two-year HDP, the Heiligendamm L'Aquila Process (HAP) was created with a two-year mandate, leading up to the French Deauville Summit in 2011. The HAP was to broaden the range of topics addressed (with energy remaining one of the core issues)[118] and aimed to produce more concrete results. It specifically sought to »explore further possibilities for producing spillovers from the HAP to other forums of international cooperation«.[119]

The HAP was seen as a »second phase« of the G8+5 dialogue, engaging participants in a »more ambitious way«. But again, this process »on an equal footing« aimed to »forge common ground and common positions« for introduction in other fora with a view to promoting the global agenda rather than to »reinvent the wheel«.[120]

However, the partners did not follow up on their own plans. There was neither a published interim report in 2010, nor a concluding report in 2011. No joint statement or advanced agenda gave any positive indication of the continuation and intensification of the G8+5 cooperation.[121]

In retrospective, it appears that the disappointing Copenhagen summit may have undermined any impulse to further the climate issue in the G8+5 setting. Although the Copenhagen summit was global and focused on climate issues, the extent of the controversial debate at the end – also between emerging economies and the G8 nations – may have contributed to a loss of appetite to continue related work in the G8+5 setting.

To some observers, therefore, the G8+5 process appears to have come to an end – also regarding the issue of climate mitigation. Admittedly, its format offers some potential, given that it brings together some of the largest current and future emitters of GHGs, including some of the most powerful countries on the globe, and – last but not least – many of the countries whose divisions

112. As underlined in paragraph 2 of the concluding document of the HDP – online at http://www.oecd.org/dataoecd/4/53/43288908.pdf.

113. See: http://www.oecd.org/site/0,3407,en_21571361_40549151_1_1_1_1_1,00.html.

114. As underlined in paragraph 2 of the concluding document of the HDP, online at http://www.oecd.org/dataoecd/4/53/43288908.pdf.

115. German Federal Government, Heiligendamm Process, online at http://www.g-8.de/Content/EN/Artikel/__g8-summit/2007-06-08-heiligendamm-prozess__en.html.

116. See: http://www.oecd.org/dataoecd/61/59/43299158.pdf.

117. See: http://www.oecd.org/dataoecd/4/53/43288908.pdf.

118. The HAP agenda is online at http://www.ioc.u-tokyo.ac.jp/~worldjpn/documents/texts/summit/20090709.O2E.html.

119. See: http://www.oecd.org/site/0,3407,en_21571361_40549151_1_1_1_1_1,00.html.

120. On this, for example, see Ulrich Benterbusch, OECD Director of the HDP, outlining the way forward: http://wn.com/the_heiligendamm_process_extending_the_g8-g5_dialogue.

121. On a side note, it bears noting that, in Deauville, the G8 also issued a joint declaration with Africa on shared values and responsibilities, which did not however mention climate at all and barely touched on the issue of renewable energy, while underlining the importance of access to energy, see http://www.g20-g8.com/g8-g20/g8/english/the-2011-summit/declarations-and-reports/declarations/shared-values-shared-responsibilities-g8-africa.1320.html.

have made it so difficult to agree at the UNFCCC level. But given the setting – less formal even than the G8 and with a »guest role« only for the »+5« states – and the absence of any major developments since 2009, it is unlikely that any strong declarations will be established in this forum, let alone anything of a more formal or even binding nature. Recent climate negotiations have made clear that countries such as China are no longer willing to participate at a side-table. In addition, given the shortcomings of the G8 as elaborated above, there seem to be few to no opportunities for achieving a breakthrough on mitigation issues under the G8+5.

A reassessment would be warranted only if, on the one hand, the G8+5 took the place of the current G8, and emerging economies became full participants in the discussions and, on the other hand, if the group decided to place climate protection at the top of its agenda. There are no indications, however, that these conditions will be met anytime soon, if ever. Recent developments at the international level suggest that – if anything – the G20 described in the next section is in a more favorable position to take on a leading role.

Group of Twenty (G20)

G20: Background

Since 1999, the Group of Twenty (G20) has brought together high-level public representatives from 20 large economies.[122] Again not a mere voting block like the G77, it was originally created in the wake of the 1997 Asian Financial Crisis to convene major advanced and emerging economies and help stabilize the global financial market. Since then, the G20 has also proceeded to address broader economic and related environmental issues. However, its mandate focuses on international economic development.[123] Past G20 summits have led to improved financial regulation and supervision, policy coordination, and governance reforms for the International Monetary Fund (IMF) and the World Bank. The G20 aims primarily to send political signals and set trends, not to produce binding results. Unlike the UNFCCC, there is no apparent intention to establish strong institutions, such as a permanent secretariat.

The G20 claims a »high degree of representativeness and legitimacy on account of its geographical composition (members are drawn from all continents) and its large share of global population (two-thirds) and world Gross National Product (GNP) (around 90 per cent)«.[124] But while this might be true compared, for example, to the G8, poor countries still see their interests as inadequately represented, giving rise to questions about the legitimacy, openness, transparency, accountability and effectiveness of the G20.[125] In 2008, the G20 gained in overall political importance as a result of the challenges raised by the global financial and economic crisis. This rise in power can be expected to continue,[126] partly at the expense of the G8. As a group, the G20 is not as homogenous in its interests, backgrounds, structures and value systems as the G8, making this development all the more interesting. On the one hand, it renders the G20 more powerful, but it will probably also make it more difficult to find common positions – including in the field of climate change mitigation.

G20: Activities on Climate Change

Following the Pittsburgh Summit of 2009, the G20 finance ministers were tasked with taking forward work in nine areas, including a »framework for strong, *sustainable*, and balanced growth« and »energy security and climate change«.

On the latter, the G20 has focused primarily on questions of how to finance global mitigation efforts, something G20 members addressed at both the 2009 and the 2010

122. The G20 comprises: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, Republic of Korea, Turkey, United Kingdom, United States of America and the European Union, which is represented by the rotating Council presidency and the European Central Bank. Initially, the G20 convened the finance ministers and Central Bank governors of these states, but more recently, G20 summits have also attracted heads of state and government.

123. See: http://www.g20.org/about_what_is_g20.aspx.

124. Official website of the French 2011 G20 presidency, FAQs: http://www.g20.org/about_faq.aspx.

125. See also Joy A. Kim, who points out, however, that this perspective on climate governance »is neither desirable nor useful«, Kim (2010), pp. 1, 10.

126. This impression is supported, for example, by *Frankfurter Allgemeine Zeitung*, May 27, 2011, Magerer Ertrag in Deauville, online at http://www.faz.net/f30/common/Suchergebnis.aspx?term=eingespielten+Rhythmus+und+der+Illusion&x=0&y=0&allchk=1; Political indications for this trend are manyfold, for example: Deutsch-Chinesisches Gemeinsames Kommuniqué zur umfassenden Förderung der Strategischen Partnerschaft, July 2010, Point 9, online at http://www.auswaertiges-amt.de/cae/servlet/contentblob/334836/publicationFile/50199/100718-Deutsch-Chinesisches_Kommunique.pdf.

summits. At the Pittsburgh summit, states announced their intention to »rationalize and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption« as a means of helping to protect the climate, improve energy efficiency and transition to a green economy.[127] What was missing, however, was a clear time schedule for this phase-out, or the adoption of a binding agreement on this issue. Instead, the G20 requested the respective ministers to prepare implementation strategies and timeframes, and called on the IEA, the OECD and other institutions to report on such subsidies and suggest remedies. Dialogue, submissions, research and national implementation strategies followed,[128] and publication of research and strategy papers enhanced the transparency of the issue. After the Seoul summit of 2010, efforts can be expected to continue at the national and the G20 levels. If implemented, such a phase-out has the potential to considerably reduce GHG emissions compared to a business-as-usual scenario.[129]

Following the disappointment of the 2009 Copenhagen summit, some perceived a growing role for the G20, as all of the G20 members had agreed to or associated themselves with the Copenhagen Accord. Right after the Copenhagen summit, in particular, with the future of the Accord and of UN negotiations unclear, the G20 appeared to some to be a promising forum for climate cooperation. But this new-found interest did not necessarily match the wishes of the parties at the table; different G20 members from both developing and industrialized countries showed a keen interest in keeping the issue off the table.

In Seoul in 2010, G20 nations thus only reiterated their »commitment to take strong and action-oriented measures and remain fully dedicated to UN climate change negotiations«, reaffirming the objective, provisions, and principles of the UNFCCC.[130] They also reaffirmed support for the Copenhagen Accord, but did not venture to adopt any specific objectives. Instead, the summit declaration limits itself to a general commitment to »achieving a successful, balanced result that includes the core issues of mitigation, transparency, finance, technology, adaptation, and forest preservation«, and focusing on a number of actions related to green growth. During the ongoing French presidency, some parties showed an interest in pushing the climate finance issue more prominently onto the G20 agenda. Other parties, such as India and China, however, have resisted such approaches, fearing that this would dissolve the distinction between parties and party groups as established under the UN regime.

G20: Assessment and Outlook

Most importantly, if key nations such as China, India, and the US fail to support the notion of prominently addressing climate change mitigation through the G20, it will be difficult or even impossible to advance the issue in this forum.

Having said that, in the context of mitigation efforts, the G20 is an interesting forum with regard to both its members' emission profiles and their political and economic power. Reflecting the increased stature of the G20 following the 2008 Washington summit, its members announced on September 25, 2009 that the group would replace the G8 as the main economic council of wealthy nations.[131] While such a transition clearly cannot occur overnight, and the G8 will hence continue to play a role regardless, it stands to reason that the G20 could be influential for the climate debate if it applies its growing political weight to the topic. Naturally, that also presents opportunities for mitigation.

Conceptually, the G20 is of interest because – while it is a high-level forum – its original mandate has afforded the group a more applied focus compared to the G8, which mostly engages in »high politics«; consequently, the G20 would seem more suited to addressing some of the more complex technical issues raised by climate cooperation. Furthermore, the G20 assembles all major emitters and could thus successfully address the mitigation challenge at the global level.

127. G20, Leaders' Statement: The Pittsburgh Summit, September 24-25, 2009, online at http://www.pittsburghsummit.gov/mediacenter/129639.htm; see also Runnalls (2010).

128. For details, see Runnalls (2010), p. 164.

129. IGO-4 (2010), p. 5.

130. G20 Seoul Summit, Leaders' Declaration, November 11-12, 2010, online at http://www.g20.org/Documents2010/11/seoulsummit_declaration.pdf.

131. See: http://www.whitehouse.gov/the_press_office/Fact-Sheet-Creating-a-21st-Century-International-Economic-Architecture. It should be mentioned, however, that some researchers see a risk that the G20 will exhaust themselves; the trend then would rather be to integrate new countries in the G8 format. See, for example, Henkel (2009), p. 2.

But as the latest summit has shown, the primary focus of G20 nations remains financial stability and economic growth. The absence of a strong impulse from the Copenhagen Summit certainly has not helped to trigger political support and widen the G20 agenda to embrace climate protection more actively. Furthermore, the G20 does not engage in formal negotiations geared towards a binding outcome, but rather facilitates informal discussions which – at best – will yield political statements coordinating domestic action.

Its focus has not yet shifted to mitigation, nor have the G20 members endowed it with relevant financial and personnel resources.

Nevertheless, some observers assume that »[i]n the post-Copenhagen era, climate governance is likely to take a polycentric approach and the G20 could play a critical role in setting the direction of the green economy and addressing climate change by shaping the global agenda, seeking global cooperation and fostering harmonized policy commitments«.[132] Assuming a corresponding political will, which is not yet apparent,[133] the requisite shift in focus could be achieved and relevant expertise could be acquired; in other words, while the G20 may not yet be a driver of mitigation efforts, it could be instrumentalized and grow into such a role. The ability of the G20 to act swiftly »through its highly informal institutional set-up and flexible coordination tools without heavy obligations«[134] could prove useful in advancing the mitigation agenda. A first step could be to address aspects of the mitigation challenge which have a financial dimension, and installing corresponding working groups – something that has had considerable impact in the field of development cooperation, for instance.

Any leadership on climate issues will, of course, depend greatly on the respective G20 presidency. In addition, the presidency will need backing, and to ensure continuity, a broader group of G20 members will need to participate. In essence, the question thus really becomes: which country or group of countries could take the lead in transforming the G20 into a major force in climate mitigation? It bears mentioning that, in the run-up to the Cancún summit, the EU explicitly mentioned the G20 as a forum through which to engage with third countries on climate change.[135] However, the 2011 French presidency has not been pushing the issue in any transformative way. And even if one or more G20 members were to champion the cause of mitigation, it still remains unclear whether such an attempt would be welcomed and supported by the remaining members.

Considering the age of the G20, its current mandate centered on global financial issues, and the states it comprises, it seems unlikely that the G20 will become a driving force for mitigation efforts in the near future.[136] Like the G8, its ability to address the issue effectively would strongly depend on the leadership of the rotating presidency and the will of the parties involved; and like the G8, it currently lacks a robust institutional framework and the designated staff and resources needed to engage on the technicalities of climate protection at the same level as the UN climate negotiations. Furthermore, it needs to be underlined one final time that the G20, with its current institutional mandate, cannot deliver formal – let alone legally binding – results comparable to those currently in the focus of the UNFCCC climate negotiations. In the longer run, however, and subject to a corresponding surge in political will, the G20 could potentially reinvent itself and create a process through which a new international treaty might be drafted. Some have warned, however, that any attempt to reshape the architecture of the G20 would also entail the risk of losing its specific strength – which is to react swiftly and flexibly on an informal basis in topic-specific coalitions to new and pressing global problems.[137]

If the G20 were to play a stronger part in addressing the mitigation problem, some would urge it also to offer a seat to important groups such as AOSIS.[138] This, however, would mean changing the very nature of the G20

132. Kim (2010).

133. Some argue that the »expansion of its agenda beyond global economic governance (…) is a means for the group to further develop and solidify its status in the future« – this could be an additional incentive for heads to put climate change prominent on the G20 agenda. See Kim (2010), with further references.

134. Kim (2010).

135. European Council Conclusions, March 25/26, 2010, EUCO 7/10, online at http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/113591.pdf, p. 8: »The EU will strengthen its outreach to third countries. It will do so by addressing climate change at all regional and bilateral meetings, including at summit level, as well as other fora such as the G20. The Presidency and the Commission will engage in active consultations with other partners and rapidly report back to the Council.«

136. Houser (2010).

137. Kim (2010).

138. Müller-Kraenner (2010).

and is thus unlikely to occur. Furthermore, it appears very probable that, if the countries assembled under the G20 do agree on the way forward on climate protection, there could also be progress under the roof of the UN. The G20 could, however, impact the scope and speed of this progress considerably.

Organisation for Economic Cooperation and Development (OECD) and the International Energy Agency (IEA)

Born out of the Organisation for European Economic Cooperation (OEEC) of 1947, which was created to administer the Marshall Plan in post-war Europe, the OECD was officially established in 1961, expanding its original geographic scope beyond the boundaries of Europe. Currently, the OECD counts 34 member countries from around the world, including mainly industrialized economies, but also advanced emerging economies such as Mexico, Chile and Turkey. Other emerging economies, such as the BASIC countries – Brazil, South Africa, India and China – are included in OECD activities through an »Enhanced Engagement« program.[139]

Broadly speaking, the mission of the OECD is to promote policies that will »improve the economic and social well-being of people around the world«.[140] Its mandate mentions neither energy nor the environment, let alone climate protection, but does contain references to promotion of an »efficient use of economic resources«, as well as research and development cooperation.[141] Over time, the OECD has gradually increased its work on environmental protection and now has an Environment Directorate whose aim it is to provide governments with an »analytical basis to develop policies that are effective and economically efficient, including through country performance reviews, data collection, policy analysis, projections and modeling, and the development of common approaches«.[142]

While the OECD can contribute to the development of legislation, typically through so-called »OECD Acts« prepared by its numerous Committees and adopted by its Council, such acts are mainly limited to non-binding recommendations, declarations, and understandings. Under its constitutive treaty, however, the OECD Council also has the ability to adopt binding decisions and enter into international agreements with states and other international organizations.[143] In practice, the OECD has additionally acquired great importance through its publications and databases, becoming a widely used knowledge repository on specific issues such as environmental and energy taxes. For its work, the OECD can draw on ample resources, including an annual budget of EUR 342 million and a secretariat staff of approximately 2500.

For the issue of climate protection, the expertise and resources concentrated in the OECD provide an opportunity to complement and facilitate international cooperation with the systematic compilation and assessment of relevant information, for instance on policies and best practices. Especially when it comes to domestic implementation of mitigation policies and measures, the OECD has proven to be a valuable repository of data and practices used by policymakers and stakeholders around the world. For instance, the information made available by the OECD has already been of great value to the UNFCCC secretariat when drafting its important assessment of financial flows in the context of climate change.[144]

In accordance with its mandate, the OECD has also gathered experience in channeling capital flows to developing countries,[145] an expertise that could, theoretically, contribute to the operationalization of institutional mechanisms to administer future climate finance contributions, such as the »Green Climate Fund« established with the Copenhagen Accord. Also, past OECD work on transparency and reducing corruption could help inform efforts to institutionalize carbon-related market mechanisms.

139. See OECD, Members and Partners, online at www.oecd.org/document/25/0,3746,en_36734052_36761800_36999961_1_1_1_1,00.html.

140. See OECD, Our Mission, online at www.oecd.org/pages/0,3417,en_36734052_36734103_1_1_1_1_1,00.html.

141. Articles 1 and 2 of the Convention on the Organisation for Economic Cooperation and Development, Paris, 14 December 1960, online at www.oecd.org/document/7/0,3746,en_2649_201185_1915847_1_1_1_1,00.html.

142. See OECD, Environment Directorate, online at www.oecd.org/department/0,3355,en_2649_33713_1_1_1_1_1,00.htm.

143. See Article 4 of the OECD Convention, supra, note 132: »Article 5: In order to achieve its aims, the Organisation may: (a) take decisions which, except as otherwise provided, shall be binding on all the Members; (b) make recommendations to Members; and (c) enter into agreements with Members, non-member States and international organisations.«

144. UNFCCC, Investment and Financial Flows to Address Climate Change, 2007, online at http://unfccc.int/files/cooperation_and_support/financial_mechanism/application/pdf/background_paper.pdf; and the respective update: »Investment and financial flows to address climate change: an update«, document FCCC/TP/2008/7, 2008.

145. See Article 2 (e) of the OECD Convention, supra, note 132.

Nevertheless, despite the option to adopt binding decisions and elaborate international agreements, it appears very unlikely that the OECD, with its comparatively technical focus and limited membership, would become central enough to the climate process to serve as the venue for formal negotiations on a new climate protection regime. While the OECD theoretically has at its disposal sufficient resources to facilitate such negotiations, the highly political nature of climate cooperation would undermine the neutrality and objectivity with which the OECD is currently credited; and of course, given its membership, any formal arrangements elaborated under the OECD would only cover its current membership of 34 countries, excluding both the BASIC countries and the vast group of developing countries. It comes as no surprise, therefore, that nobody currently seems to be championing the idea of a leading role for the OECD in climate protection. It is more likely, therefore, that the OECD will remain a respected source of information and data on domestic policies, climate-relevant economic drivers and trends, and to some extent also harmonized standards on products and procedures.

When discussing the OECD in the context of climate protection, it is also important to include the International Energy Agency (IEA), which, although an autonomous intergovernmental organization, was established in 1974 in the wake of the 1973 oil crisis within the framework of the OECD.[146] It currently acts as energy policy advisor to 28 member countries in their »effort to ensure reliable, affordable and clean energy for their citizens«, focusing on the three objectives of energy security, economic development, and environmental protection.[147] With a staff of 200, composed primarily of energy experts and statisticians, the IEA works on energy efficiency and climate change policies, market reforms, energy technology collaboration and outreach to non-member countries, especially major consumers and producers of energy such as China, India, and Russia.[148] Compared to the OECD, the IEA is even more limited in its ability to be a forum for international negotiations or set out rules and standards,[149] not least given its narrow membership.[150] Accordingly, its role is also more likely to be that of information provider and database, for instance with influential publications such as the annual *World Energy Outlook*,[151] than as a direct venue for political engagement and deliberation. Different fora could and do draw on the resources and expertise of the OECD and the IEA, and could continue doing so for their mitigation-related work. In the context of the G8+5 HDP, for example, the OECD was tasked with supporting the dialogue, and IEA and OECD expertise and analyses helped advance the HDP agenda (see above). Also, the G20 has drawn on the resources and expertise of the IEA and the OECD when addressing fossil fuel subsidies.[152] This trend might increase if emerging economies become more involved in these institutions.

4.2.3 Coalition of the Willing: The Cartagena Dialogue

Soon after the disappointment of the Copenhagen summit, in March 2010, a new group was established, the Cartagena Dialogue for Progressive Action. This diverse group of approximately 30 countries from across Latin America, Europe, Oceania, South East Asia and Africa,[153] has convened in an informal space dedicated to working towards an ambitious, comprehensive and legally binding regime under the UNFCCC. The aim of the Dialogue is to discuss openly and constructively the reasoning behind national positions, explore areas of convergence, and identify potential areas of joint action.[154] It is convening at both a higher and a working level. Different from other groups which have convened over the years at the invitation of institutions such as the Pew Center on Global Climate Change or the Center

146. IEA, »About the IEA«, online at www.iea.org/about/index.asp; see also OECD, Decision of the Council Establishing an International Energy Agency of the Organisation, adopted by the Council at its 373rd Meeting on November 15, 1974, online at www.iea.org/about/docs/apendx4.pdf.

147. IEA, »Working at the IEA«, online at www.iea.org/about/job.asp.

148. Ibid.

149. For instance, the International Energy Program operated by the IEA is largely focused on securing security of energy – notably oil – supply; see Agreement on an International Energy Program, of November 18, 1974, as amended September 25, 2008, online at www.iea.org/about/docs/IEP.pdf.

150. See, for example, Michonski et al. (2010), p. 13.

151. See, for example, IEA (2010). It bears noting, however, that the IEA has been criticized for an excessively narrow focus on traditional energy sources – see Pearse (2009), p. 93 – as well as for being subject to participant country pressures, see Terry Macalister, Key Oil Figures were Distorted by US Pressure, Says Whistleblower, in: *The Guardian*, November 9, 2009, online at www.guardian.co.uk/environment/2009/nov/09/peak-oil-international-energy-agency.

152. For further information please refer to http://www.oecd.org/document/57/0,3343,en_2649_37465_45233017_1_1_1_37465,00.html.

153. Some countries have participated at some meetings, but not at others; countries include Antigua and Barbuda, Australia, Bangladesh, Belgium, Chile, Colombia, Costa Rica, Denmark, Dominican Republic, Ethiopia, France, Germany, Ghana, Guatemala, Indonesia, Malawi, Maldives, Marshall Islands, Mexico, Netherlands, New Zealand, Norway, Peru, Samoa, Rwanda, Samoa, Spain, Tanzania, Thailand, Timor-Leste, Uruguay, the United Kingdom, the UAE, and the European Commission.

154. See also Oberthür (2011).

for Clean Air Policy, this dialogue is driven by a group of country parties. Its focus is clearly and very much on the immediate challenges of the UN negotiations.

Knowing the difficult political arguments with respect to issues of inclusiveness and transparency, it is important to note that the Cartagena Dialogue is not a formal »group« and does not vote together. In this way, it is a new kind of development, different from groups such as the Umbrella Group or the Environmental Integrity Group (EIG). Similar to the latter, however, it assembles a mixture of developing and developed nations and works across regional groupings. It thus offers a particularly useful space to discuss key issues such as mitigation, financing and legal form »across lines« and to identify common ground or possible solutions.

During 2010, the Dialogue met three times outside the formal negotiation sessions and several times – also in thematic subgroups – during formal sessions, including also the Cancún summit. The same is expected for 2011. The first 2011 meeting took place in Malawi in March, with also the current and the incoming COP presidencies – Mexico and South Africa – present. For this year, the work can be expected to focus on core elements of the Cancún Agreements, while continuing the work on issues such as mitigation, financing, and legal form. The next meetings are planned for July in Samoa and October in Chile.

Participants in these meetings reaffirmed their collective desire for the negotiations to urgently deliver an integrated and ratifiable post-2012 legal regime, while emphasizing that substantial progress was necessary at the approaching Cancún summit in the form of a balanced package of decisions (and thus acknowledging that the new legally binding regime is not to be achieved in the short term, which was a lesson learnt by the global community in Copenhagen). The Dialogue worked on issues such as mitigation proposals and their anchoring within the UNFCCC process, the enhancement of MRV procedures, financing issues, and the overarching question of legal form.[155]

The Cartagena Dialogue, like the other informal initiatives described above, lacks a formal negotiating mandate and does not produce any public results. It has, however, quickly achieved an important role at the informal level and has helped to shape the course of the UN negotiations. Freed of the strategic considerations dominating the UNFCCC and other more formal arenas, participants in the Dialogue have been able to point out priorities and constraints, helping the other participants to better understand their respective negotiating positions. Fostering such appreciation can play a critical role in overcoming obstacles in the formal negotiations. Furthermore, it has instilled a spirit of ambition in the negotiations and has helped to shape an understanding of possible ways forward.

Although it must be admitted that the composition – which currently excludes a number of important, but less ambitious actors, such as the United States, Canada, Russia, the BASIC countries, and OPEC – prevents the forum from facilitating a dialogue between the nations arguably most responsible for much of the gridlock in international climate cooperation, it allows, maybe for the first time, countries with higher ambitions to look for suitable solutions to then lobby for them. It does have the power to spread new ideas and help to increase overall pressure for more ambition. This is all the more interesting because partners in the Dialogue can carry messages directly into almost all the major official groupings (for example, G77, EU, Umbrella Group, EIG). This can create a forceful positive political dynamic, although one must be aware that other important players, such as the BASIC group or the US, will have to show some degree of openness to allow such a dynamic to trigger results.

Overall, it can be expected that the composition of the group might change over time. Certain parties may want to join the group – to underline at national and international level their ambition and to be able to shape the dynamics also in this Dialogue. It will be interesting to see how the group deals with such requests, as it has an interest in having only ambitious countries on board, while, at the same time, every additional party might add to the political weight of the Dialogue. Some parties might want to end their participation in this forum depending on the dynamics and political views established in the Dialogue. One such party might be Australia, which may not share some of the more ambitious ideas voiced by, for example, the island states.

155. See, for example: Third Meeting of the Cartagena Dialogue for Progressive Action, October 31 to November 2, 2010, San Jose, Costa Rica, online at www.minae.go.cr/ejes_estrategicos/ambiente/Cambio%20Climatico/Tercera%20reunion%20del%20Dialogo%20de%20Cartagena/Chairman%20s%20Statement%20COSTA%20RICA.pdf.

4.2.4 Political Summits and Conferences

Directly following the summit in Copenhagen, a vacuum was felt. In the eyes of many, the future of the UN climate negotiations and the UNFCCC regime had been called into question. In this general mood of insecurity, some countries tried to set a »new« tone and to determine the future direction through high-level and high-profile – or at least large-scale – events. Although some of these events had already been planned – at least in broad strokes – before the Copenhagen summit, they acquired new political meaning and weight after the 2009 summit.

In this context, two important events with the highest political backing by the respective heads of state and government were the Petersberg Dialogue in Germany and the Cochabamba Conference in Bolivia. Both events exemplify how players have sought to use such events to pull international climate policy in different directions politically and structurally. If this »summit-culture« becomes permanent (as seems to be the intention of some), it might develop into an interesting engine for ideas and initiatives, as exemplified below. Again, depending on the respective goals and methods of the players involved, this might either confuse or deter concerted international efforts on mitigation or help in finding suitable solutions with broad international backing.

Admittedly, the idea of climate summits is not all that new. For example, Brazil and Japan have already held an annual high-level summit for the past several years. Also, the COP Presidencies have tended to convene high-level preparatory meetings prior to the formal UNFCCC summits. However, after the difficulties in Copenhagen, such summits have garnered greater political attention and ambition, as witnessed by the two examples highlighted below.

Another large upcoming summit with a potential effect on international mitigation efforts is the »Rio plus 20« conference. This summit and its possible role for the climate protection agenda are also briefly highlighted below.

Petersberg Climate Dialogue: High-level Driver for the UNFCCC Negotiations

In May 2010, Germany and Mexico (as the then COP presidency) hosted a two-and-a-half day meeting called the Petersberg Climate Dialogue on the Petersberg near Bonn.[156] To give it political weight, German Chancellor Angela Merkel and Mexican President Filipe Calderón opened the meeting.[157] The conference aimed at bringing together more than 40 states, representing all the important country groups (based on both geographical location and affiliation to important negotiating blocs of developed, developing and newly industrializing countries).

The German Federal Minister for the Environment, Norbert Röttgen, who hosted the conference and chaired the talks together with his Mexican colleague, explained the aims of the conference as follows: »At the Petersberg Dialogue, we want firstly to determine what form the different stages on the road to a new climate agreement must take. To supplement this, we want to present concrete climate initiatives, for the need to implement climate protection measures is more pressing than ever. We must have both: an ambitious UN climate agreement and the swiftest possible implementation of climate protection in practice.«[158]

After the »headache« following the Copenhagen summit, the Petersberg conference tried to help in the fostering of new ideas and advancing work with relevance to the UN process. In an informal framework, the participating environment and climate ministers discussed steps to be taken in the run-up to the Cancún summit, with the aim of contributing to an ambitious outcome in Cancún that defines and implements the decisions of Copenhagen. In convening this conference, Germany and Mexico wanted to develop ideas on how to achieve progress, and also to get a better understanding of the role the Copenhagen Accord could play in this context. By contrast to the Cochabamba Conference described below, however, the Petersberg conference did not aim to shift direction with respect to content.[159]

156. Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, General information: Petersberg Climate Dialogue, April 23, 2010, online at http://www.bmu.de/english/petersberg_conference/doc/45916.php.

157. Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Minister Röttgen: Petersberg Climate Dialogue will discuss steps towards an ambitious UN climate agreement, May 2, 2010, http://www.bmu.de/english/current_press_releases/pm/45958.php.

158. Ibid.

159. For more details on the specific issues discussed at the Petersberg summit, see: Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Minister Röttgen: Petersberg Climate Dialogue will discuss steps towards an ambitious UN climate agreement, May 2, 2010, http://www.bmu.de/english/current_press_releases/pm/45958.php.

While clearly linking itself to the UN negotiations, the Dialogue also launched and thus strengthened decentralized processes. It kicked off several new decentralized initiatives on specific issues, as described below. The new importance given to bottom-up approaches was also underlined by a whole range of countries presenting specific projects, for example initiatives to reduce deforestation or technology projects for more climate protection.[160] While no formal resolutions were planned or adopted, the out-come of the dialogue was intended to inform and facilitate the UN negotiations.

Building on the success of the Petersberg summit, Germany convened a second summit in July 2011 as part of its climate diplomacy efforts – this time in cooperation with the COP17 presidency held by South Africa.[161] The aim was to have an open and political exchange to prepare for the Durban summit at the end of 2011. Some 35 ministers and high-level officials convened in Berlin, and German Chancellor Angela Merkel spoke at the summit to underline its political importance. One of her main messages was the need for mitigation targets in line with the 2 °C goal, as well as the need for a common vision on the final outcome – or legal form – of the negotiations.[162] There seemed to be no disagreement on the fact that the current level of ambition is not sufficient. Accordingly, the mitigation challenge has to be a core issue for Durban – with linkages to issues such as financing, the legal form of a future regime, or the potential second commitment period under the KP.

In March 2011, moreover, the Mexican COP-16 presidency hosted a similar summit in Mexico City together with South Africa. A total of 38 countries attended this informal two-day ministerial dialogue on implementation of the Cancún Agreements.

Overall, this hybrid approach of contributing to the UNFCCC negotiations (and reporting to them despite not being a formal participant), while also launching separate bottom-up initiatives appears to have gained traction recently in a number of industrialized countries, as well as some emerging economies.

Cochabamba Conference: Alternative Visions

In April 2010, Bolivia hosted the World People's Conference on Climate Change and the Rights of Mother Earth in Cochabamba.[163] In contrast to the Petersberg summit discussed above, it was not a high-level political gathering behind closed doors, but a conference with a few thousand participants from all sorts of constituencies. The Conference linked its work closely to the UN climate negotiations, the »failure« of Copenhagen and the prospects for Cancún. It appears that Bolivia wanted its own proposals to be inspired and gain more weight and legitimacy by convening this meeting. In contrast to the Petersberg Climate Dialogue, it did not aim to identify common ground to advance the climate negotiations, but to start a new era with innovative, some might say revolutionary ideas.[164] It was planned to be the first of a number of Conferences, to be held once a year in Bolivia.

The conference had the highest-level political backing from President Evo Morales, who even sent an invitation

160. Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Minister Röttgen: New momentum for international climate negotiations, May 4, 2010, http://www.bmu.de/english/current_press_releases/pm/45968.php.

161. The official website can be accessed here: http://www.bmu.de/petersberger_konferenz/doc/47565.php.

162. Speech of Chancellor Merkel at the Petersberg Climate Dialogue II, 2011, online at http://www.bundeskanzlerin.de/nn_683608/Content/DE/Rede/2011/07/2011-07-03-bk-klimadialog-berlin.html.

163. For more information and a summary of the Cochabamba results, visit: http://pwccc.wordpress.com.

164. Key messages include the importance of the Rights of Mother Earth (next to a demand for a 50 percent emissions reduction under the Kyoto Protocol by 2017). One of the most important Cochabamba proposals was the »Universal Declaration of the Rights of Mother Earth« (next to a »People's Agreement of Cochabamba«, which also builds on the concept of Mother Earth and wants to contribute to building a »Global People's Movement for Mother Earth«). Another idea was the establishment of a »Climate Justice Tribunal« which was to have »the legally binding capacity to prevent, judge, and punish those states, companies, and individuals that pollute and cause climate change by their actions or omissions«. The court »should have the authority to judge, civilly and criminally, states, multilateral organizations, transnational corporations, and any legal person (…)«. The proposal also entailed a right to sue for non-state actors. Furthermore, the importance of »indigenous peoples« and their knowledge was given prominent attention. The outlined proposals were evidently much more far-reaching than any of the ideas potentially gaining broad support at the UN negotiations. For example, the ideas that Bolivia assembles in context of Mother Earth are certainly not acceptable to most players in the UN negotiations, as they, inter alia, have an anti-capitalist framing and are critical of markets. Although the term »Mother Earth« has found its way into the UN regime via the »Mother Earth Day« adopted via resolution of the UN General Assembly, it has not gained much traction since then. »Rights« were never accepted in this context (see UN General Assembly (GA), April 22, 2009, Resolution 63/278; see also UN GA resolution of December 2009, A/RES/64/196). The general idea of an international environmental court is not all that new. However, it has been a left-wing idea pushed more from the NGO side than by nation-parties. Already the existing KP-compliance regime is viewed as »punitive« by some UNFCCC parties. It is almost impossible to imagine that a Climate Tribunal of the suggested kind would gain political support at the international negotiations.

letter to the UN General Assembly (GA).[165] Although it remained somewhat unclear how the final conference documents – including the People's Agreement of Cochabamba – were arrived at, Bolivia introduced the results into the UN climate negotiations. As Bolivia itself described it: »Bolivia came to Cancún with concrete proposals that we believed would bring hope for the future. These proposals were agreed by 35,000 people in an historic World People's Conference at Cochabamba in April 2010. They seek just solutions to the climate crisis and address its root causes.«[166] In its submission to the AWG LCA of April 26, 2010, Bolivia states: »This submission is based on the outcome of the (…) Conference (…) held in Cochabamba (…) This submission incorporates and develops the main content of the ›Peoples Agreement‹ and the draft proposal for a ›Universal Declaration of Mother Earth's Rights‹ that were adopted at that Conference (…) The Peoples Agreement and the draft proposal for a Universal Declaration of Mother Earth's Rights are attached to the present submission and constitute part of it.«[167] In that way, the Cochabamba Conference differs from the Petersberg Climate Dialogue, which did not produce any official resolutions or tangible results to be directly fed into the UNFCCC negotiations.

Bolivia was pressing hard to see the Cochabamba results reflected in the official decision language of Cancún. However, it remained politically isolated – as became evident on the last evening of the summit, when it was the only country trying to block consensus and was overruled by the COP Presidency.

Rio Plus 20 Conference

On December 24, 2009 – in the immediate wake of the Copenhagen summit – the UN General Assembly passed a resolution to convene a sustainable development meeting in Brazil in 2012.[168] This summit is to mark the 20-year anniversary of the United Nations Conference on Environment and Development (UNCED) of 1992, more widely known as the Rio Earth Summit. This summit provided, inter alia, the basis for the UNFCCC. A decade later, in 2002, the global community gathered in Johannesburg, South Africa, for the United Nations World Summit on Sustainable Development (WSSD), or »Rio plus 10«. The summit left many participants disappointed.[169] Tangible results were lacking, let alone a new framework treaty; progress also proved elusive on climate change, which was an important topic at the summit and found entrance into the main summit document, the Johannesburg Plan of Implementation (JPoI).[170] Nevertheless, the absence of a major impulse also meant a failure to inspire new, more transparent or more ambitious efforts on climate protection and governance.

Currently, countries and stakeholders are preparing for the »Rio plus 20« summit or, officially, the United Nations Conference on Sustainable Development (UNCSD). In contrast to the previous summit, the Rio plus 10 conference, parties have decided to narrow their focus this time around. The following two thematic areas will shape the agenda: the institutional framework for sustainable development (a theme related to global environmental governance) and the green economy in the context of sustainable development and poverty eradication. The intended outcome of the conference is a focused political document.

It is as yet unclear what the conference will contribute to climate change mitigation. Some have referred to the upcoming summit as a »post-Copenhagen reality check«[171] drawing a clear connection to the climate agenda. Evidently, the governance debate and the issue of green growth are also at the heart of the UN climate protection regime. But Rio plus 20 will not be a climate summit. While some issues relevant for climate protection (for example, avoiding deforestation) might find some traction, emission reduction needs as a whole will probably not advance in Rio. And after the 2002 experience, it might be advisable in any case not to let expectations run too high. Moreover, some have even argued that this finally offers an opportunity to turn to other important environmental issues which have been overshadowed for the past several years by the dominant climate debate.

165. A/64/627.

166. See http://pwccc.wordpress.com.

167. The document is available online at: http://unfccc.int/resource/docs/2010/awglca10/eng/misc02.pdf.

168. UN GA resolution 64/236, A/RES/64/236, 21 March 2010.

169. Simon (2010), pp. 18, 24.

170. A PDF version of the plan can be accessed online at: http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanImpl.pdf.

171. Kennedy (2010), p. 6.

However, observers have described it as an encouraging sign for international environmental governance that the UN General Assembly agreed to hold such a summit in the first place.[172] This decision is seen as a confirmation of the will to act together and address global environmental challenges, overcoming current obstacles *inter alia* in the climate negotiations (while »agreeing on a summit« and »being willing to overcome obstacles« is not the same thing and, furthermore and again, the climate negotiations are not at the core of the summit's agenda). It is too early to tell whether such expectations will be met. Admittedly, however, the timing of the conference is politically interesting, given that it marks a year with several important landmarks in climate cooperation, for instance the end of the first commitment period under the Kyoto Protocol, the Durban climate summit, and the US presidential elections.

4.2.5 Sectoral and Technical Initiatives

In a parallel process to the climate negotiations under the UNFCCC, a number of initiatives have emerged on specific sectoral and technical dimensions of the climate challenge. The importance of such decentralized initiatives for the UNFCCC process is underlined by the fact that parties report back on such initiatives to the COP plenary, notwithstanding the fact that the initiatives were not mandated by the COP. This also underlines the close link of many major initiatives to the UNFCCC, although not necessarily a formal one. The following text outlines two of the more prominent initiatives with relevance for mitigation efforts and, afterwards, probably the most recent initiative. All these initiatives have in common that they were launched with a specific focus by partners from both developing countries (typically emerging economies) and developed countries. A number of additional initiatives have emerged in this area over time, many of which are also certainly of relevance for the achievement of mitigation objectives.[173] However, given their substantial number and often narrower technical or geographic focus, they cannot all be addressed in detail here, with the following initiatives instead serving as a proxy for the potential and the limitations of similar efforts in other settings.[174]

International Partnership for Mitigation and MRV

One of the results of the Petersberg Climate Dialogue (see above, Chapter 4.2.3) were the decentralized initiatives launched at this meeting. One was the so-called »International Partnership for Mitigation and MRV«. This is a joint initiative of Germany, South Africa (which will, as holder of the COP Presidency, host the climate summit in Durban, end of 2011) and South Korea. Overall, about 25 countries are engaged in this partnership, including developing countries such as China, Chile, Brazil, India, Indonesia, Mexico, and Costa Rica, and developed countries such as the United Kingdom, France, the US, Australia, Canada, Japan, and Norway.

The focus of this international partnership is cooperation on the development of emission reduction strategies and ideas for MRV of actions and emissions. It wishes to support efforts by developing countries, strengthen institutional and technical capacities, remove fears and reservations through practical cooperation, and support the UN negotiations by analyzing practical experiences gained and creating a framework for discussion.[175] Accordingly, the partnership aims to support the practical exchange of ideas and opinions between developed and developing countries on the following:

- ways of developing efficient mitigation measures in the context of green growth plans and ways of mobilizing resources to support the planning and implementation of such measures;
- needs in all countries with respect to MRV of mitigation measures, and ways of strengthening capacities and institutions in developing countries;
- practical ways of ensuring transparency of implementation of measures and compliance with obligations.

Underlying the foregoing priorities is the idea that progress on these and related questions could contribute substantially to the success of the international negotiations and help advance the development of international guidelines and rules. The exchange it fosters is also expected to help formulate a realistic assessment of what is needed in practice, and how this can be implemented in the various countries.

172. Simon (2010), pp. 18, 24.

173. Such initiatives include the Global Methane Initiative, the Carbon Sequestration Leadership Forum, and the International Renewable Energy Agency (IRENA).

174. For a more detailed analysis, see de Coninck et al. (2008).

175. Schreyögg (2011), slide 6.

The following concrete steps are designed to further this goal:

1. Assessment of the existing international initiative in the relevant areas (mitigation planning and implementation, green growth) with the aim of better coordinating such an initiative, all with a view to avoiding duplication of work and closing potential gaps.

2. Facilitation of the exchange of representatives from different countries who are responsible for the aforementioned topics to enable an exchange of knowledge. The exchange is aimed in particular at understanding how MRV systems can be strengthened further to enhance the effectiveness of mitigation strategies.

3. Financial and technical support from developed countries to help developing countries implement mitigation measures in the context of green growth strategies, including MRV capacities.

4. The introduction into the political debate (UNFCCC negotiations) of proposals for important elements of the international guidelines, inter alia by way of ministerial consultations.

Over the course of 2010 and 2011, the MRV partnership has met several times. In a first step, the initiative first clarified conceptually what it wants to achieve and how it can contribute adequately to the international (UNFCCC) debate (no drafting of text or formal proposals; focus on implementation and practical details; exchange of information and experience as anchor to identify possibilities for cooperation; project work, for example, on low carbon development plans, national communications, and so on). In a next step, various measures concerning core issues of the partnership were presented and discussed. Enhanced exchange of experiences and methods was seen as useful to increase overall efficiency. Therefore, the initiative has taken on the task to compile relevant programs and initiatives in the partnering countries, for example, on MRV capacity-building. Issues such as »Low Carbon Strategies«, »Nationally Appropriate Mitigation Actions (NAMA) design«, and »MRV capacity building« are in the focus of the partnership. For 2011, the initiative plans to compile an overview of relevant activities, create a central contact point for information, strengthen the political visibility of efforts made by different countries, coordinate cooperation projects, and conduct in-depth exchanges on low carbon development strategies, NAMA design, and MRV capacity-building.[176] The results of the partnership's work are intended to contribute to the UNFCCC process.

REDD+ Partnership

On May 27, 2010, representatives of more than 50 countries and key stakeholders convened at the Oslo Climate and Forest Conference to launch a REDD+ Partnership aimed at supporting developing countries in their efforts to reduce forest loss. While reaching an agreement under the UNFCCC to reduce GHG emissions from deforestation and forest degradation in developing countries (REDD) would remain the highest priority, participants at this meeting agreed that the negotiations would take time and benefit from the Partnership as a platform and action track to supplement the UNFCCC negotiations. To date, 71 countries have joined the partnership, with funds in excess of US$ 4 billion pledged for the period from 2010 to 2012 to scale up REDD activities.

An interesting approach has been chosen to tie this partnership into the UNFCCC climate process: from the outset, the REDD+ Partnership has been considered an interim platform with the expectation that it will be replaced by, or folded into, a UNFCCC mechanism including REDD+ once this has been established and agreed upon by the parties. Initially, the Partnership will focus on establishing a database of REDD+ financing, actions, and results, assessing financing gaps and overlaps, discussing the effectiveness of multilateral REDD+ initiatives and sharing lessons and best practices, as well as promoting and facilitating cooperation among partners. Additionally, the REDD+ Partnership will seek to assess options and priorities for future institutional arrangements under the UNFCCC. Specifically, the current work program lists a number of detailed actions in five thematic areas:

1. facilitating readiness activities;
2. facilitating demonstration activities;
3. facilitating results-based actions;
4. facilitating the scaling up of finance and actions; and
5. promoting transparency.

176. Schreyögg (2011), slide 6.

From the outset, the REDD+ Partnership has been clearly designed to complement, not compete with, the UNFCCC negotiations: as the Partnership Agreement states, the initiative »should not prejudge but support and contribute to the UNFCCC process«.[177] In doing so, the partners have acknowledged the tension between prioritizing the UNFCCC negotiations and nonetheless retaining the ability to move forward with important preparatory work when those negotiations are stalled or progress is slow. As a result, the REDD+ Partnership offers some tentative insights concerning the advantages and disadvantages of such a two-tier approach.

Undeniably, in an area as complex as REDD, the availability of a platform for testing and improving methodologies and building experience is of great value, on the basis of which action on a larger scale can be implemented with significantly reduced lead-in time, once formally decided under the UNFCCC. As such, the REDD+ Partnership is supposed to harness many of the benefits ascribed to bottom-up cooperation outside the formal negotiations: free from the constraints imposed by the traditional diplomatic process, countries willing to engage in REDD activities can flexibly explore options without fear of commitment, building capacity in the process and offering valuable lessons for the eventual implementation of REDD on a global scale. Especially where REDD projects are to be linked with financial support or market mechanisms, demonstrated readiness and the creation of domestic structures for MRV and administration of projects will be vital.

However, while these expected benefits undoubtedly exemplify the promise of additional venues and initiatives emerging alongside the formal UNFCCC negotiations, practical experience with the REDD+ Partnership has also highlighted some of the potential risks. An opaque and restrictive approach to stakeholder involvement has given rise to a widely held perception that discussions under the Partnership are even more secretive and closed to the public than the formal UNFCCC negotiations; this has arguably already undermined the legitimacy of the process, at least in the perception of representatives from civil society, resulting in strong criticism and protest.[178] Perhaps even more worrisome is a second phenomenon critics have highlighted within the framework of a lack of progress under the REDD+ negotiations in both the UNFCCC and the REDD+ Partnership, namely that each forum might be holding off and waiting for the other to act first.[179] A similar development has also been apparent within the formal negotiations, with certain interdependent issues under the UNFCCC and the Kyoto Protocol tracks resulting in each track making progress depending on certain decisions in the other track. If this criticism of the REDD+ partnership indeed has any merit, it would illustrate a significant risk of parallel initiatives that are sufficiently close to the formal negotiation process to have mutual repercussions. While these may have the highest potential to aid and support the negotiations, they could also become an alternate battleground for the same issues, thereby stalling the formal negotiations and merely transposing the obstacles and challenges to a new forum.

French-Kenyan Clean Energy Initiative

Very new and therefore less well known and established is the French-Kenyan Clean Energy Initiative.[180] The Kenyan Prime Minister and France's Minister for Ecology, Sustainable Development, Transport and Housing announced the launch of this initiative at the Cancún summit in 2010. Its aim is to accelerate the delivery of fast-start financing for clean energy, more specifically to ensure – and maximize – the flow of funds to finance the generation, transmission, and connectivity of clean energy to countries most vulnerable to climate change, including in Africa.

This »new Global Partnership«[181] seeks to:

1. create country-specific strategy white papers on access to energy for 100 percent of the populations in the most vulnerable countries, by 2030;

2. mobilize fast-start funding by establishing a register of fast-start funds and actions, for adaptation and mitigation, and by identifying gaps and avoiding double accounting;

177. See: http://www.oslocfc2010.no/pop.cfm?FuseAction=Doc&pAction=View&pDocumentId=25019.

178. See: http://www.redd-monitor.org/2010/07/15/civil-society-excluded-from-interim-redd-partnership-meeting-in-brasilia.

179. See: http://blogs.climatenetwork.org/?p=799.

180. For details see: http://www.ambafrance-ke.org/france_kenya/spip.php?article1980.

181. Ibid.

3. work towards establishing innovative funding for access to clean energy;

4. share experiences and best operational practices.[182]

The initiative will gather together volunteer countries in concrete projects, mobilizing all economic, industrial and major donors, to ensure that African countries will have easier access to clean energy.[183] A first Ministerial International Conference to be co-chaired by Kenya and France is scheduled for April 21, 2011, in Paris.[184] Whether this initiative will be able to gain traction remains to seen.

5. Many Venues, Few Achievements, Dire Prospects?

5.1 Necessary Conditions for a Breakthrough

After the momentous Copenhagen summit, many stakeholders and media reports suggested changing the political forum to address climate change and the mitigation challenge. For them, the UN process had become too cumbersome, with too many parties in the room stalling an already arduous decision-making process. A change of venue, they argued, would circumvent these problems and offer better prospects to address climate change.[185]

Indeed, while the international community has agreed in several contexts that it wants to limit global warming to below 2 °C above preindustrial levels, it is clearly far from reaching this objective. While the Cancún summit was able to create a positive dynamic and produce some results, it did not deliver on mitigation targets adequate to prevent dangerous climate change.

Current emission trends suggest that only a limited number of countries – the major present and future emitters from the developed and the developing world – are needed to successfully protect the climate. While acknowledging that other countries might be able and willing to contribute to collective mitigation efforts, in the final analysis, success will hinge on these major emitters. Which emitters eventually have to be on board can vary, depending on who is willing to contribute what level of emission reductions. But despite a limited margin or »gray area«, the 15 to 20 parties that must be on board can be easily identified.[186]

From a practical point of view, one might thus argue that a forum can successfully tackle climate change mitigation if it, at the minimum, fulfills at least the following criteria:

- all major current and future emitters are participants;
- it has sufficient resources, time and expertise to deal with the complex issues at hand;
- it is able to ensure transparency, both procedurally, but also with regard to efforts and emissions;
- it can facilitate agreement on mitigation (including commitments or pledges) and take relevant decisions (such as mechanisms to incentivize compliance);
- it has a firm political will to act swiftly to achieve the 2 °C goal; and
- it reflects a common vision on *how* this should be achieved.

The criteria applied in this paper are explicitly based not on specific schools of thought in a specific discipline, such as international relations theory, but on the observed characteristics of the different venues and institutions described in Section 4, and their ability to impact the practical achievement of the mitigation objectives outlined in Section 2 of this paper.[187]

None of the venues analyzed fulfills all the above mentioned criteria.

Alternatively, then, one might rely on an even more limited group of countries – which then would have to be highly influential – to come to a common understanding

182. Ibid.

183. See: http://www.ecoseed.org/en/politics/climate-change/article/31-climate-change/8644-france-guarantees-fast-start-climate-financing-for-africa.

184. See: http://www.mfa.go.ke/index.php?option=com_content&view=article&id=247:the-nairobi-paris-climate-initiative-clean-energy-for-all-ministers-meeting-paris-21st-april-2011&catid=35:news.

185. See also Bodansky (2011), p. 18; Keohane et al. (2010), p. 25; Michonski/Levi (2010), pp. 1-3.

186. See supra, Section 2.2.

187. Other, more theoretical criteria for the assessment and classification of international climate policy frameworks have been proposed by Aldy et al. (2003), Bosetti et al. (2008), Bodansky (2004), and Keohane and Victor (2010).

and then create sufficient political dynamics for spillover effects. If, for example, cooperation between China and the United States were to solidify, as occasionally proposed, creating a more formal Group of Two (G2), any agreement by these two powerful nations to meet the mitigation challenge might be able to trigger a landslide within the broader international community. The emergence of such a group pushing mitigation ambition is, however, currently not in sight. But pushing the agenda by forming strong alliances across boundaries might still be a strategy worth considering in the future.

5.2 Why Different Venues Are Needed, and Associated Risks

Evidently, the UN climate process fulfills almost all the criteria mentioned above. With regard to the difficulties of consensus decision-making in a forum representing almost every country, Cancún has shown that the UN climate regime might be able to deal with this challenge more easily than some observers thought (although Bolivia, admittedly, made it clear that this controversial issue is not yet settled). And yet, the UN regime has also shown the limits of its capabilities, most of all its questionable capacity to act swiftly. What seems to be lacking is political will in some quarters, and also a common vision on the way forward.

But the UN regime is evidently not the only game in town. Recent years have seen the emergence of a multitude of venues addressing – to a greater or lesser extent – the challenge of mitigation. This is as much a product of the complexities and far-reaching implications of climate change, as it is a reflection of different powers seeking to curb or accelerate progress within the UN climate regime. In a sense, this fragmentation of governance structures follows a similar trend in the broader context of international cooperation, where competing policy architectures operate side by side on a broad range of issue areas. Drawing on experience in the global marketplace for goods and services, competition and specialization might be seen as beneficial, helping to promote an issue and deliver faster, more efficient and ultimately more effective solutions.

However, while some degree of differentiation may appear inevitable and even useful, the existence of different fora to address what essentially remains one connected challenge does not automatically translate into improved cooperation and stronger mitigation. Overlap of mandates and activities can lead to redundancies, tensions, or even inconsistencies, along with an inefficient use of already scarce resources. Initiatives with similar objectives can even undermine each other in their work – especially when they are instrumentalized for that specific purpose.

Fortunately, it no longer appears that any of the major international fora addressing climate mitigation are directly counteracting each other. Earlier, that diagnosis may have been less tenable, when groups such as the MEM and the APP were initially seen as attempts by the previous US administration to create a counterbalance to the UN climate negotiations. However, any such attempts largely ceased as a result of international pressure and changing political leadership, and possibly also due to the fact that the mainstream climate negotiations have changed in nature and approach, as discussed earlier. While this may not preclude renewed attempts to undermine an ongoing process, for the time being, no such efforts are apparent.

But even where such conscious efforts to frustrate the operation of rival regimes are not apparent, the existence of alternative fora may give rise to »forum shopping«, with parties favoring whichever venue is most likely to further their priorities and interests. Furthermore, too many venues might undermine each other due to the constraints imposed on public budgets and the limited time of decision-makers. This has already been in evidence, with high-level meetings scheduled too close to each other time-wise, but too far from each other geographically, preventing some ministers from attending. Such risks arising from regime fragmentation suggest an additional and potentially important benefit of a common framework for climate cooperation, such as the one currently maintained by the UN climate regime.

Aside from the UN climate treaties and the Montreal Protocol, none of the initiatives mentioned above has a mandate for formal negotiations on emission reduction objectives, let alone a new climate treaty; nor are they likely to be given one anytime soon. Indeed, depending on how they are framed, their practical value may lie more in:

- providing an arena for less formal interaction between large emitters that have often diametrically op-

posed positions in the formal negotiations – for instance, such states can take advantage of the informal setting of such alternative fora to explore contentious issues without the pressure of needing to advocate rigid diplomatic positions;

- moving the climate issues to a higher political level in order to obtain guidance and support for the respective common approaches;

- assembling a group of parties who share certain values and characteristics to develop common ideas, visions or projects;

- advancing certain – primarily technical – issues more quickly to provide practical examples and lighthouse projects.

The numerous initiatives shaping international climate policy can be characterized by virtue of their scope and mandate. Such initiatives can be assigned to two categories: initiatives that are explicitly focused on climate change, and initiatives addressing climate change as only one among many issues in their substantive portfolio. In both cases, a forum may address the entire breadth of climate change mitigation, or only individual aspects. Many initiatives allow for a group of interested parties which share a certain set of common values to come together, while excluding or limiting participation by particularly difficult actors.

5.3 Climate-specific Initiatives and Their Contributions

Venues focused on the climate challenge can again be subdivided into **those which specifically aim to inform the UN climate process**, such as the MRV initiative or the Petersberg summit, **and those which seek to address the issue without relating themselves to the UNFCCC or the KP**, such as the former APP. Among the larger initiatives, those contributing to the UN negotiations outweigh those which do not specifically link their work to that of the UN. Attempts to divert attention away from the UN climate regime, such as the earlier MEM, or steer it in another direction, such as the Cochabamba Conference, have not succeeded in gaining sufficient political weight to shape the climate agenda. This shows that a majority of countries agree on the general direction of the UN climate negotiations, and that they are willing to invest political capital and resources to defend the UN climate regime against attempts to sideline it. While this willingness might have lessened somewhat after the Copenhagen summit, it generally still seems to prevail.

A second line of distinction relates to the **scope of efforts**. Climate initiatives contributing to the UN climate negotiations can be differentiated into broader approaches, often at the highest political level, which cover a comprehensive range of issues and seek to further the debate and understanding of the UN process more generally (for instance, the MEF or the Petersberg Summit); and more technical approaches – partly emerging from the former – which tackle, often at an expert level, specific technical issues and aim to become a platform to test strategies and instruments in an isolated issue area (such as REDD+ and MRV). The Cartagena Dialogue seems to integrate both such aspects while being composed of likeminded parties only.

Often, **achieving broad acceptance** on mitigation-related issues is a critical and difficult challenge within the UN climate regime. This applies all the more in the wake of the Copenhagen summit, where many parties felt that they had not been heard adequately. Success in helping to identify robust policy approaches while avoiding a situation in which individual parties block results or impulses from such initiatives will remain a sensitive issue. The Petersberg Summit has sought to address this issue, for example, by inviting a limited group of countries to represent the interests of all UNFCCC parties, and at the same time remaining open to other parties in case these explicitly request participation. The Cartagena Dialogue, on the other hand, while more restrictive in its membership, has instead underlined its informal character.

Overall, key players are likely to continue their engagement in such broad initiatives, as can be seen with the Mexican COP Presidency inviting major emitters to Mexico City in March 2011 for a summit similar to the 2010 Petersberg Climate Dialogue, and Germany – together with the incoming South African COP presidency – inviting parties to a second Petersberg Summit in July 2011, the US planning an MEF meeting during the second half of 2011, and the Cartagena Dialogue continuing to meet.

Some of the more **technical initiatives can be seen as a bottom-up approach** to contribute to the UN climate process, which is still largely top-down in nature. They provide a space for experts to convene without being encumbered by diplomatic considerations, and afford an opportunity to share and build knowledge and elaborate common understandings or even standards where formal negotiations on the same issues are momentarily stalled for political reasons. Some of these initiatives are also bolstered by the putting at their disposal of considerable financial resources, for instance in the case of the REDD+ Partnership. With availability of financing and often significant political support, these initiatives can develop a dynamic of their own. One – not necessarily desirable – effect may be the creation of path dependencies and constituencies with intrinsic interests. While such initiatives would still contribute to the UN climate process, their work might become influenced by new and independent institutional considerations, and may also reduce the openness of actors to engage in alternative routes. At the broader level of climate negotiations, moreover, these initiatives will inevitably be more aligned with the interests of some countries than others; their support may thus become perceived as a political bargaining chip. In the end, therefore, technical initiatives may not remain entirely free from politics, and hence carry the risk of becoming encumbered by the same impasses that characterize the formal negotiations. At worst, they may even divert attention and resources away from the latter.

For now, however, this risk has not materialized, and it remains to be seen whether the international community can successfully confront it. On balance, cooperation on technical issues alongside the UNFCCC and its Kyoto Protocol negotiations is more likely to help further the cause of mitigation and achieving the 2 °C objective than to detract from it. Indeed, given the urgency of mitigation and the often long lead times of different abatement options, any initiative that facilitates the exploration of options and pilot projects, even if only involving a smaller group of participants and without a formalized, central governance structure, has great potential utility as an instrument to accelerate subsequent action on a larger scale. Informal cooperation may also prove instrumental in establishing bridges between developed and developing countries, building trust and a deeper understanding of the issues at hand. For certain technical issues, these initiatives may thus offer a way to circumvent the cumbersome decision-making process under the UN climate regime, while not abandoning the process as such. By aligning themselves with the formal negotiations and their respective topics, they retain a degree of legitimacy that other fora might not be able to muster. Accordingly, if venues such as the REDD+ or MRV partnerships prove successful, the future will likely bring an increase in the number and political significance of these initiatives.

5.4 Broader Initiatives and Their Future Role

A number of important venues have brought climate mitigation into their broader agendas, and can be expected to continue doing so in the future, including the G8, the G8+5, and the G20. In the past, these high-level fora – and especially the G8 – have proven useful to reaffirm positions and allow discussion of relevant climate issues at the highest political level in groups of influential countries. In the event that a corresponding political will emerges, these venues – and especially the G20, with its broader membership – could even drive the global agenda by agreeing on some of the more controversial issues with respect to climate protection.

Lacking a specific climate focus, however, and the resources and technical expertise to address complex mitigation issues in great depth, such fora are not suited to governing technical details or providing specific guidance on issues such as the carbon market. Moreover, due to numerous factors relating to how agendas are defined and decisions are made, the role of these venues – and especially the G20 – in climate policy has not yet become sufficiently established to afford them the status of a reliable and stable forum for climate protection. Likewise, while specialized agencies such as the OECD and the IEA possess significant technical expertise, their lack of an explicit mandate for climate cooperation also precludes an advanced role as a forum for concerted mitigation.

In the case of the **G8**, for instance, the 2008 presidency assigned climate mitigation a distinctly lower priority than previous presidencies. Based on the outcomes of the latest summits, the G8 and its extended formation, the G8+5, have at best played a flanking role in mobilizing political will for actual mitigation commitments. Limited to political declarations that do not provide much of an operational roadmap, the main benefit of these fora lies in their ability to foster discussion and awareness of the

mitigation challenge. However, they cannot establish the institutional framework or provide the in-depth technical outcomes needed to operationalize and implement political visions. Considering its institutional setup, with a focus on the industrialized world and a broad mandate which does not prioritize climate change, it is unlikely that the G8 – even in the G8+5 formation – will be able to create a major breakthrough for global mitigation efforts. This applies all the more given the G8's declining importance relative to the rapidly emerging economies and the fact that it does not comprise all major emitters.

Given its composition and increased political weight, however, there is the potential for a growing role for the **G20**. Unlike the G8, the G20 has established a track record of more specific objectives and activities, most recently in the area of fossil fuel subsidy reform. Again, this body is limited to political outcomes without direct legal effect, and its activities so far have focused strongly on global financial challenges. Although the G20 with its current mandate can thus make an important contribution to specific aspects of the mitigation challenge, it is unlikely to drive broader mitigation efforts in the near future. If, however, the G20 acquires greater political weight and if key players invest political capital into moving mitigation further into the focus of its activities – something that is not apparent at this time – the G20 could become an important player in the medium term. To what extent and under what conditions a country such as China, which has so far shown a preference for negotiating within the G77 block and under the auspices of the UN rather than in smaller fora (let alone a G2 setting), would be willing to embrace such an approach remains to be seen.

At any rate, a stronger role for the G20 would also require that some internal governance questions be addressed, such as the issue of agenda setting for summits, the need for more formal outcomes, and extended internal support structures. At this point, there are clear indications that some developed and some developing countries are reluctant to endow the G20 with further institutional resources and a broader mandate. Developments in this regard might depend, *inter alia*, on how the UN climate negotiations progress in the coming years, and how much of a political vacuum might be felt in the area of mitigation. Considering the resources and capacity concentrated in the UN climate regime – including the expert support provided by roughly 500 staff at the UNFCCC secretariat – it seems unlikely that the G20 will be able to address all the issues dealt with in the UN process any time soon; also, while any progress on mitigation is likely to attract support in the broader international community, it still may invite questions of legitimacy if an informal forum with 20 participants takes on a central role on an issue – climate change – affecting the entire international community, and particularly impacting many of the countries not participating in the G20. It is more likely that the G20 would choose to focus on very specific aspects of mitigation – especially questions with a financial dimension, such as climate finance or tax issues – and promote the international agenda in that way.

5.5 The Future of the UN Climate Regime

After suffering a serious **legitimacy crisis** in recent years,[188] the UN climate regime appears to have recovered some confidence and support in the international community, despite the fact that reform of its cumbersome voting rules remains unlikely, if not impossible. Its increased **politicization** in recent years is reflected in the appointment by both Mexico and South Africa of their respective foreign minister as president of the COP. It remains to be seen whether this will help to avoid clashes between parties, as witnessed in Copenhagen. In any case, it underlines a new set of interests and dynamics driving the climate process.

The UN climate regime has long been described as »having no alternative«, in large part due to the perception of legitimacy instilled by the nearly universal membership of the UNFCCC. Following the problematic conduct and outcome of the Copenhagen climate summit in 2009, critics of the UNFCCC process had a unique opportunity to call for a fundamental departure from the paradigm it represents.[189] However, by the end of the climate summit in Cancún one year later, that very process was described as **revitalized**. In terms of the ability to legitimize policy decisions, foster better understanding of global emissions trends, define necessary action, and ensure its implementation, there is currently indeed no alternative to what the UN climate process can deliver. Its highly developed regime for the measuring, reporting, and verification of

188. See Vihma (2011).

189. See, for instance, the discussion by Stavins (2010).

emissions from industrialized countries, now complemented by the emergence of more stringent processes for developing-country emissions, are ample evidence of this **institutional capacity**. It is also probably the only forum able to ensure some degree of transparency with regard to global emission trends and reduction ambitions. And no other existing forum could bring similar infrastructure, expertise, and broad support to bear on the climate challenge. Given the urgency of swift progress on mitigation, moreover, it stands to reason that political capital and financial resources should not be invested in establishing entirely new institutions or building up the capacity of alternative institutions at record speed, but rather to draw and build on the demonstrated capacities of the existing UN regime.[190] It follows that the UN climate regime will remain the centerpiece of climate cooperation for the foreseeable future, and will probably play a critical role in taking forward the global mitigation effort.

Nevertheless, the UN climate regime also has a number of important limitations. With regard to mitigation, it has proven too slow and cumbersome to live up to the urgency of the issue. At the Cancún summit, some of the most challenging issues – including long-term emission reduction targets, the inflection point for GHG emissions, the specific distribution of mitigation efforts, and the legal nature of any related commitments – have once more been deferred to future negotiations. As a result, the rifts in multilateral cooperation that became apparent in Copenhagen may manifest themselves again in Durban in late 2011.

Furthermore, there seems to be a trend to turn away from the top-down approach with binding targets and a strong compliance regime. Instead, a more informal, bottom-up »pledge-and-review« approach has emerged and has been strengthened by the Copenhagen Accord, as well as by the Cancún Agreements. Development of a new compliance regime under the UNFCCC, with elements of facilitation and enforcement, is not yet in sight. While the last word on this matter has yet to be spoken, and some important actors – including the EU – are still advocating a future regime in the tradition of the KP, current trends point in another direction. Coupled with the timing challenge, political realities in a number of important states indicate that the UN climate regime is not suited, or at least not sufficient, to deal with the mitigation challenge on its own.

190. Michonski/Levi (2010), p. 3.

Going forward, thus, the UN regime may again fall prey to unrealistic expectations, which ultimately could undermine support.[191] Unlike any of the other fora mentioned above, the UN climate regime has to live up to the exceedingly high expectations of stakeholders – including many parties – and the broader public. While it is important to acknowledge that the UN climate regime is currently the only forum with potential to deliver a comprehensive and robust policy framework with an adequate compliance regime, it would also be unrealistic to hope for a sweeping breakthrough on these challenges anytime soon.

Instead, the near- and mid-term focus will probably have to be limited to a **step-by-step process**, with openness to »soft« bottom-up elements such as mitigation pledges, slowly creating fertile ground for the longer term vision expounded by climate scientists.[192] Only the future can show how ambitious these steps will be. Positive developments, such as the announcement by several Latin American parties that they intend to strengthen their current mitigation pledges, are offset by negative signals from major industrialized emitters resisting a second commitment period under the Kyoto Protocol. The latest formal negotiations in Bonn in June 2011 have given no reason to hope for unexpected breakthroughs at the upcoming climate summit in Durban in December 2011.

If the expectations revived after Cancún are again disappointed, the debate about the appropriate institutional venue will gain new momentum; but, as yet, **no natural successor could simply replace the political credibility and institutional resources provided by the UN climate regime**, underscoring the importance of careful expectation management.[193] Given the scientific imperative of prompt and steadily rising mitigation efforts, parties will have to balance realism and ambition to identify creative solutions.

Frontrunners may be needed to exemplify progress on emissions mitigation without sacrificing other interests, such as economic stability or prosperity, and successful regional and national initiatives could help to inspire global action and create a positive dynamic for political will and

191. See Houser (2011).

192. Bodansky (2011); Bodansky et al. (2010); Michonski/Levi (2010); Keohane et al. (2010).

193. Houser (2011).

ambition. For many actors, however, the ultimate objective remains a **legally binding instrument** that involves all major economies and allows for the pursuit of the 2 °C goal – and under the current circumstances, this objective **can be achieved only within the UN climate regime**.

6. Conclusion: What Does All This Add Up To?

Clearly, the proliferation of negotiation and cooperation venues alone will not help solve the climate challenge. It may be tempting, therefore, to conclude that more is not automatically better. But, as so often, the reality is more complex. Trade-offs do exist between the characteristics of different fora. Greater inclusiveness, for instance, may increase legitimacy, but it will also typically reduce the pace and flexibility of negotiation processes; more formal engagement and legally binding outcomes may solidify expectations and instill trust, but they may moderate the level of ambition participants are willing to commit to; and the list goes on.

As a result, different initiatives can play important roles in their own right and will ideally complement each other, but no single forum will prove a panacea for the mitigation challenge. Ultimately, the outcomes of climate cooperation will only be as good as the willingness of parties to act. Regardless of which venue emerges as the main arena of mitigation efforts, and of whether the future climate architecture is driven more by bottom-up or top-down approaches, if the level of ambition is insufficient, the international community will fail to achieve the 2 °C objective. Given the realities outlined earlier, the UN climate regime might not be able to fully deliver on the mitigation challenge.[194] However, for many reasons also described throughout this study, **none of the existing alternatives are currently in a position to meet the challenge by themselves. Nevertheless, if harnessed correctly, they may contribute to defining suitable pathways**, finding solutions, and increasing the ambition to achieve the 2 °C goal.

Assuming that all the venues discussed in this paper remain active in the area of climate change, they can undeniably contribute in the short term to mitigation at different levels: some with respect to the political will of leaders of selected countries (for example, the G8), others with regard to the evaluation and elaboration of technical solutions for specific issues (for example, MRV Partnership). Furthermore, while certain fora assemble actors with very controversial opinions (for example, G20), others are based on a symmetry of political objectives and expectations (for example, the Cartagena Dialogue). Accordingly, while a venue such as the G20 can help to bridge differences, the Cartagena Dialogue can be an engine for more ambitious efforts. It seems likely that particularly ambitious countries will increasingly form alliances to establish themselves as frontrunners, spearheading mitigation efforts and showcasing opportunities.[195]

When it comes to providing a comprehensive framework for climate change mitigation, however, the UN climate regime is currently the only realistic option. If the UN climate negotiations were to collapse altogether, the burden of mitigation may be shifted to other high-profile venues, such as the G20. But such a transition would need to be accompanied by substantial governance changes under strong political pressure and extreme time constraints. What is more, the loss of institutional resources may indeed be one of the most consequential setbacks entailed by a failure of the UN climate regime. If failure in the UN climate regime occurs more gradually, the burden may be distributed in a more systematic manner between different complementary venues, such as the Montreal Protocol, the G20, and various technical initiatives.[196] Regardless of which forum is ultimately favored by the international community, success on such a complex challenge will not come overnight. However, it would be premature to anticipate a failure of the UN climate regime.

Indeed, achieving the required mitigation efforts would currently appear to be less a matter of the venue or institution; rather, the diversity of interests among major emitters – irrespective of the forum they are engaged in – is what is currently stalling significant progress. While different institutions can provide for more or less cumbersome rules on decision-making, advocate different levels of ambition, or address relevant issues at the level

194. Aware of this very real possibility, the UN climate regime has already decided to launch a comprehensive review, starting in 2013 and set to conclude by 2015, the year when global emissions should peak.

195. Leading by example will also be an issue relevant to the political discussion within the EU, which is currently reflected in the debate on the -30 percent emission reduction target for 2020.

196. With this implication Stavins (2010).

of experts or of heads of state and government, none will be able to eradicate the current divisions among major players. In the end, it does not matter which forum is chosen to address the mitigation challenge if parties do not bring with them sufficient will to act; and even the best regime design will not achieve the necessary mitigation levels if it is not followed up with robust implementation. Both aspects are strongly contingent on the domestic politics of parties. But that also means that national leaders with a strong vision and a will to act have a unique opportunity to advance our collective efforts on one of the most complex challenges ever to face humankind.

Table 1: Role and Mandates of Major Cooperative Venues

Forum or initiative[197]	**Participation** *Scope*	*Participants*	*ICs*[198]	*Emerging economies*[199]	*Other DCs*[200]	**Level of engagement**	**Timeline (frequency of meetings)**	**Focus on climate mitigation**	**Types of outcomes**	**Designated Staff**	**Operational Funds**[201]
UN Climate Regime: **UNFCCC**	Near universal	194 parties	Yes	Yes	Yes	Mixed: high-level and expert level	Frequent – twice a year with extra sessions – usually 1 »Conference of the Parties« per year				
Kyoto Protocol	Near universal	193 parties (w/out US)	Yes	Yes	Yes			Strong, political, technical and legal in nature	Formal (decisions/ treaty text)	High (secretariat with staff of approx. 500)	High (2010 budget approx. 45.3 million euros)[202]
Montreal Protocol	Near universal	196 parties	Yes	Yes	Yes	Mainly expert level	Frequent; twice a year[203]; 1 »Conference of the Parties« per year	Intermediate, political in nature	Formal (decisions/ treaty text)	Low (secretariat with staff of approx. 20)	Medium
Major Economies Forum on Energy and Climate Change (MEF)		17 countries with advanced economies and large emissions profiles	Yes	Yes	Yes	High-level	Several times a year according to need and political will	Strong, political in nature	Informal (declarations, technology action plans)	None (»Secretariat« staffed by US State Department)[204]	None
Group of Eight (G8)	Limited	8 Countries w/advanced economies	Yes	No	No	High-level	Frequent – 1 summit / year + preparatory sessions at ministerial level	Limited, political in nature	Informal (declarations)	Limited (no permanent staff)	None
Expanded Group of Eight (G8+5)	Limited	13 Countries w/advanced and emerging economies	Yes	Yes	No	High-level	Somewhat frequent	Limited, political in nature	Informal (declarations)	Limited (no permanent staff)	None
Group of Twenty (G20)	Intermediate	20 countries w/major economies	Yes	Yes	Yes	High-level	Infrequent	Limited, Political in nature	Informal (Declarations)	Limited (no permanent staff)	None
Organisation for Economic Co-operation and Development (OECD) and International Energy Agency (IEA)	Intermediate	34 countries w/major economies (IEA: 28 countries with major economies)	Yes	Yes	No	High-level in Ministerial Council; Low-level in ongoing technical work	Frequent (annual Ministerial Council meeting)	Intermediate technical in nature	Mostly informal (recommendations, declarations), with possibility of formal outcome (decision, agreement)	High (secretariat with staff of approx. 2500, IEA with 200)	High (annual budget approximately 342 million euros)
Asia-Pacific Partnership on Clean Development and Climate (AP7)	Limited	7 Countries	Yes	Yes	Yes	Mid-level	Infrequent	Strong, Technical in nature	Informal (guidelines, communiqués)	Limited (»Administrative Support Group« staffed by US State Department)[205]	Limited

197. Another interesting table comparing different initiatives can be found here: McGee Jeffrey Scott, Taplin Ros, »The Role of the Asia Pacific Partnership in Discursive Contestation of the International Climate Regime«, *International Environmental Agreements: Politics, Law and Economics*, 9 (2009), p. 229.

198. Industrialized Countries.

199. Mainly to be understood as Brazil, China, India, Mexico, and South Africa.

200. Developing countries.

201. Limited to financial resources for operating the regime, as opposed to funds for investment in, or financial transfer to, certain stakeholders and groups of countries.

202. See: http://unfccc.int/resource/docs/2009/sbi/eng/02.pdf.

203. One meeting of the Conference of the Parties and one of the Open-ended Working Group of the Parties to the Montreal Protocol.

204. See http://www.majoreconomiesforum.org/articles/contact-us.html.

205. See http://www.asiapacificpartnership.org/english/organization.aspx.

Cochabamba-Conference	Intermediate	Diverse, with broad civil society participation	Yes	Yes	Yes	High-level political backing; open non-high-level participation	Too early to assess – potentially once a year	Strong political in nature	Informal (declaration, political agreement)	None	None
Petersberg Climate Dialogue	Intermediate	>40 countries representing all major country groups	Yes	Yes	Yes	High-level	Too early to assess – potentially once year	Strong, political in nature	Informal (political guidance)	None	None
Rio plus 20 Summit	Near universal	Diverse, with broad civil society and business participation	Yes	Yes	Yes	High-level	Single event (in the past: once a decade)	Intermediate (necessary part of a broader debate)	Unclear yet – minimum: political declaration	Limited	Limited
International Partnership for Mitigation and MRV	Intermediate	>20 countries representing all major country groups	Yes	Yes	Yes	Mid-level	Frequent	Strong, technical in nature (MRV)	Semi-formal (programs, initiatives)	Limited	Limited
REDD + Partnership	Intermediate	>70 countries representing all major country groups	Yes	Yes	Yes	Mid-level	Frequent	Strong, technical in nature (REDD+)	Semi-formal (Work programs, partnership actions)	Limited (secretariat composed of World Bank and UN staff)[206]	High
French-Kenyan Clean Energy Initiative	Intermediate	Still unclear – focus on African and other vulnerable countries	Yes	Yes	Yes	High-level political backing (France and Kenya)	Too early to assess – potentially once year	Strong, political in nature	Semi-formal (strategy white papers)	None	None

206. http://reddpluspartnership.org/65232/en.

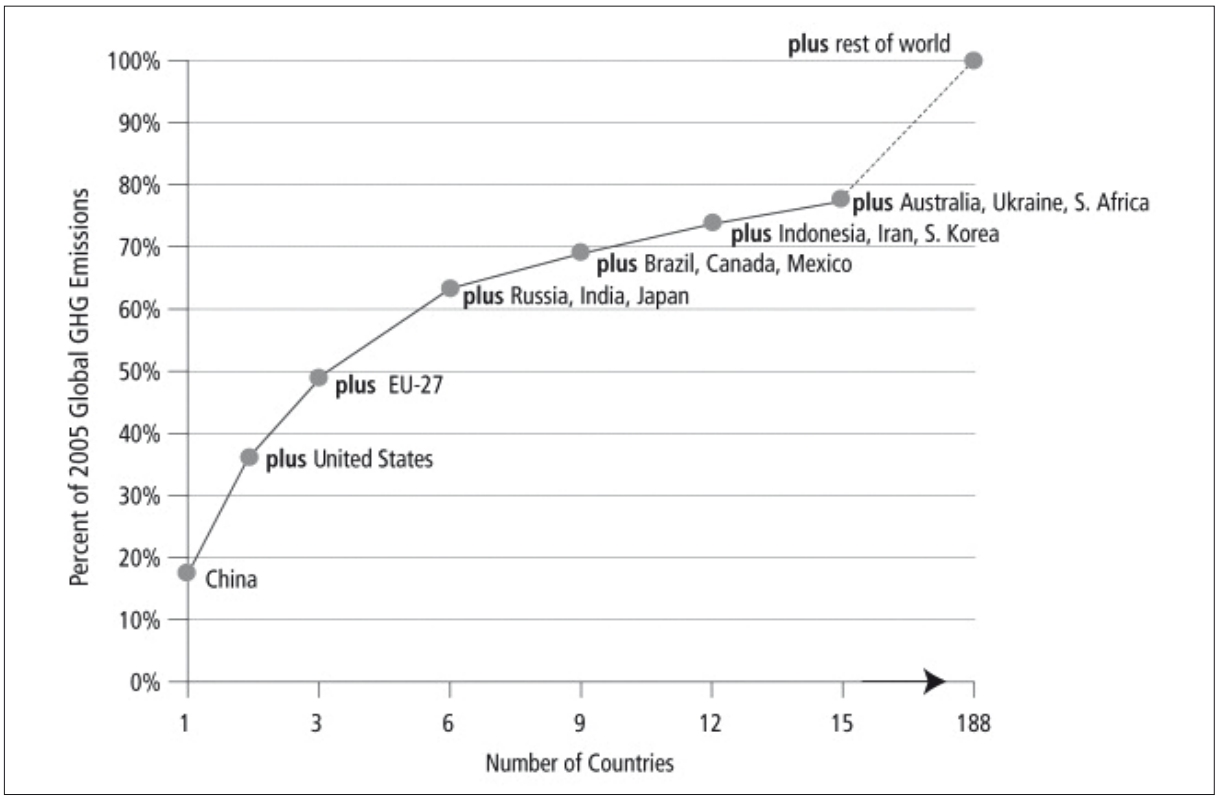
Annex

Mingling Science and Politics: The Allocation of Mitigation Efforts

Different countries have very different views on the right approach to mitigating emissions and dividing the burden, based on strongly diverging assumptions and criteria. However, most positions link their line of argument at least in part to past, current or future emissions. In order to improve the understanding of country positions, the following passages outline some of the most decisive facts on these issues.

Fifteen countries (counting the Member States of the European Union as one) are responsible for about 80 percent of annual global GHG emissions.[207] Most of these nations also rank among the most populous countries, have the largest economies, or both. The group of the largest emitters includes almost an equal number of developed and developing countries.

Figure 1: Aggregate Contributions of Major GHG Emitting Countries

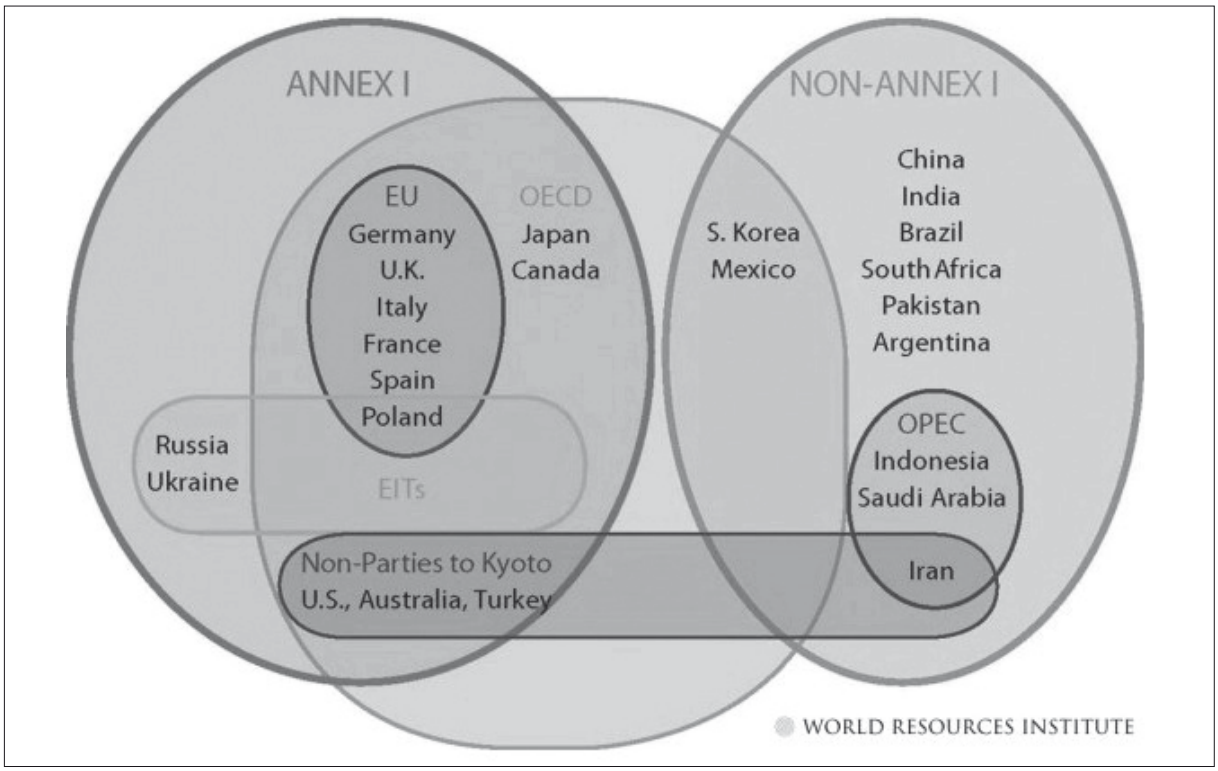


Source: Baumert/Herzog/Pershing, Navigating the Numbers – Greenhouse Gas Data and International Climate Policy, WRI, 2005, p. 13.

207. See, for example, charts of aggregate emissions, World Resources Institute, http://www.wri.org/chart/aggregate-contributions-major-ghg-emitting-countries-2005.

Although emission trends change and therefore also the position of individual countries in the list of the largest emitters, the following overview provides a good impression of who the large emitters are, and where they come from:[208]

Figure 2: Top 25 Greenhouse Gas Emitters by Region and Organization



Source: Baumert/Herzog/Pershing, Navigating the Numbers – Greenhouse Gas Data and International Climate Policy, WRI, 2005, p. 13.

Looking at these charts, it is evident that meeting the mitigation challenge requires efforts by the industrialized world and some developing countries, as well as all emerging economies.

Emission Trends for Annex I Parties

Emission trends for industrialized countries listed in Annex I to the Kyoto Protocol[209] – as aggregated by the UNFCCC Secretariat for the period from 1990 to 2008 using the national GHG inventory submissions from these parties – show a decline in emissions until the mid-1990s, then a slight increase, followed by a decline in 2008. In total, GHG emissions, excluding emissions and removals from land use, land-use change and forestry (LULUCF), decreased for all Annex I Parties by 6.1 percent relative to 1990 levels (or by 10.4 percent including LULUCF).[210] However, from 2000 to 2008, emissions excluding LULUCF increased by 0.8 percent (while GHG emissions including LULUCF decreased by 1.1 percent). Thus, one can deduce that between 2007 and 2008 emissions decreased by 2.1 percent (excluding LULUCF) and by 5.1 percent (including LULUCF). However, considering the need for far more radical reductions, as well as the trends over the past decade, this partial success is not sufficient to instill confidence that all Annex I countries are already on track with respect to the mitigation challenge outlined above.

208. It bears noting that the chart is somewhat outdated, as countries such as Australia, Iran and Turkey have joined the Kyoto Protocol in the meantime; however, the message conveyed by this chart remains as relevant as ever.

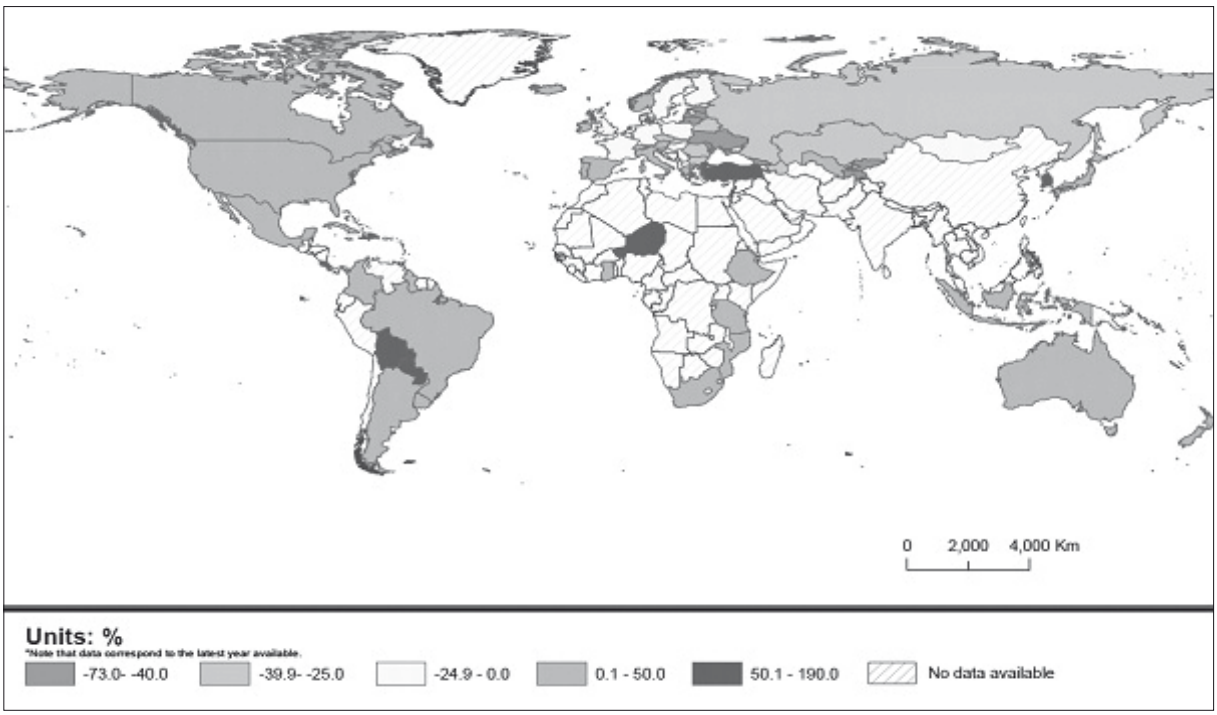
209. Annex I parties include the industrialized countries that were members of the Organisation for Economic Cooperation and Development (OECD) in 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European states.

210. National greenhouse gas inventory data for the period 1990-2008, Note by the Secretariat, 2010, FCCC/SBI/2010/18, pp. 1, 9.

Within the group of Annex I parties, emission trends differ considerably. For example, Turkey has increased its emissions in parallel with its booming economy, resulting in a 96 percent increase in GHG emissions between 1990 and 2008. At the other extreme, Latvia decreased its emissions by 55.6 percent over the same period.[211] Furthermore, it warrants taking a separate look at Annex I countries with »economies in transition« (EIT).[212] These saw a steep decline in their emissions after 1990 following the breakdown of their economies as a result of the fall of the Iron Curtain. Although their emissions started to grow again – together with their economies – around the turn of the century, overall the emission decrease since 1990 remains considerable. Not counting LULUCF activities, EITs reduced their emissions by 36.8 percent between 1990 and 2008, and including LULUCF, the reduction amounts to 48.5 percent. However, this decrease was due only to a very limited extent to active mitigation efforts, and the economies of many EITs still tend to be highly energy intensive, including such »heavyweights« as Russia and Ukraine.[213]

Other Annex I countries saw an increase in emissions from 1990 to 2004, then stabilization, followed by a decline.[214] In aggregate, GHG emissions from Annex I parties increased by 7.9 percent for that period if one excludes emissions from LULUCF, and even by 8.3 percent including LULUCF. As regards general trends, the European Union has outperformed many other Annex I parties in reducing emissions (and this holds true not only for the EITs which are Member States of the European Union), but there is still room for further improvement. Although the following graphic should be read with caution, as it draws on numbers from the 1990s for some countries (such as the Bahamas, Barbados or Brazil), it can give a general impression of changes in GHG emissions:

Figure 3: Change of Greenhouse Gas Emissions since 1990



Source: UNFCCC/UNGIWG, July 2010

211. National greenhouse gas inventory data for the period 1990-2008, Note by the Secretariat, 2010, FCCC/SBI/2010/18, p. 11.

212. For a comprehensive list of countries considered EITs under the Kyoto Protocol, please refer to Annex B of the Kyoto Protocol.

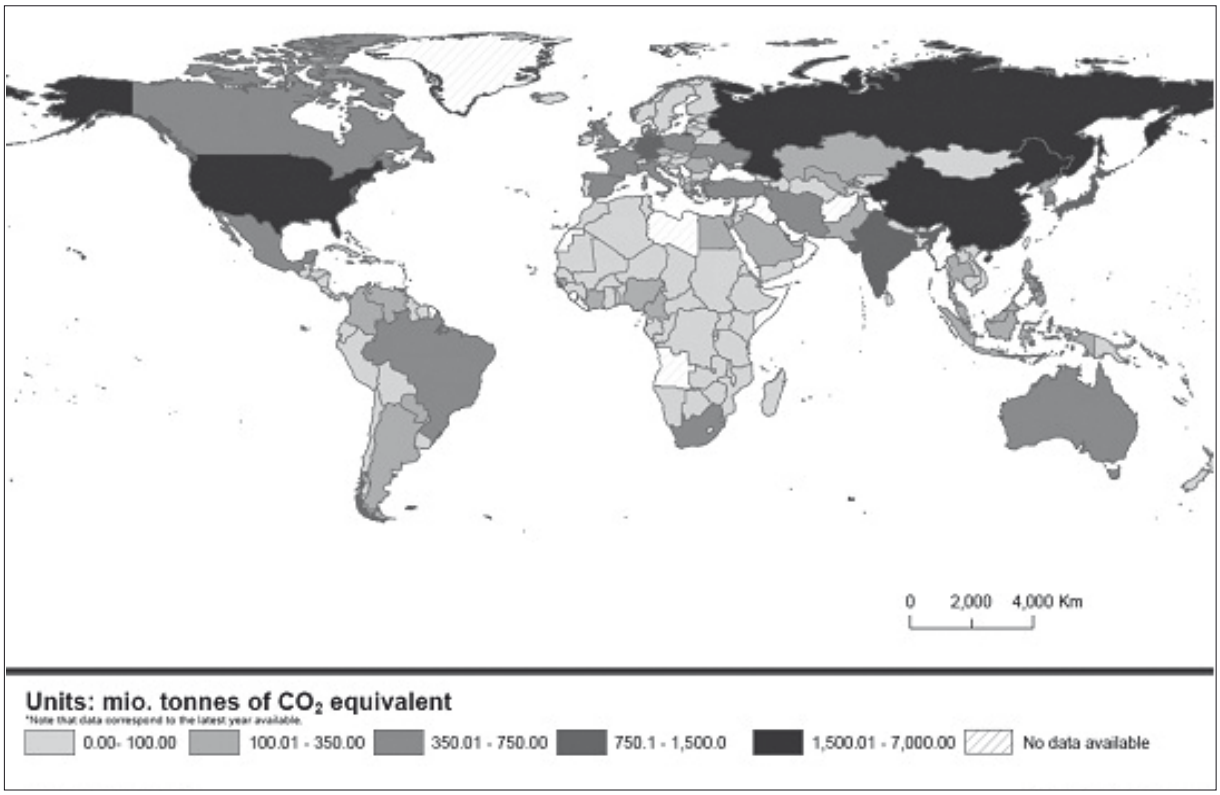
213. For details on individual countries, see Höhne et al., Factors underpinning future action – country fact sheets, 2008 update, 2008.

214. Greenhouse Gas Emission Trends excluding LULUCF, http://unfccc.int/files/inc/graphics/image/jpeg/trends_excluding_2010.jpg.

Emission Trends for Non-Annex I Parties

The UNFCCC secretariat is not mandated with analyzing emission trends for Non-Annex I parties in the same way as it does for Annex I parties. Thus, the underlying numbers are less transparent. However, an analysis by the United Nations Statistics Division clearly shows that the majority (although not all) developing countries rank low on the ladder of emitters, with Africa trailing the field. Again, however, it bears noting that the data of some parties still originate from the 1990s.

Figure 4: Total Greenhouse Gas Emissions in 2010



Source: UNFCCC/UNGIWG, July 2010

Furthermore, this work of the Statistical Divisions exemplifies the lack of data for coherent interpretation, especially regarding data from the past) (see Figure 3: Change of Greenhouse Gas Emissions since 1990).

Per Capita Emissions

Absolute emissions are an important benchmark for comparing the contributions of different states or groups of states to climate change. However, there is also another important way of looking at emissions which sidesteps the focus on countries as political entities, and instead breaks emissions down to the populations of these countries: per capita emissions. Using per capita emissions makes it easier to compare countries with very different population sizes. Also, examining per capita emission trends nullifies the effect of population growth.

Only a handful of the countries with the largest total emissions also rank among those with the highest per capita emissions.[215] In this group, countries such as Australia, Canada and the US have the highest per capita emissions, many

215. For more information, see Baumert/Herzog/Pershing, Navigating the Numbers – Greenhouse Gas Data and International Climate Policy, WRI, 2005, p. 21 sqq.

times more than the global average or, for example, China, which in turn has more than double the per capita emissions of India. However, these numbers are rapidly changing, with the Chinese, for instance, emitting only about two-thirds of the global average of per capita CO_2 emissions in 1998, a figure that, by 2006, had already risen above the global average.[216]

When assessing per capita emissions, there is no easy story to tell. Although per capita emissions are generally higher in wealthier countries, there are notable and diverse exceptions. Some middle-income developing countries, for instance, have per capita emission levels similar to those of richer industrialized economies.[217] Some small-island states are industrialized with high per capita emissions (and partly energy-intensive exports). The Gulf States tend to rank high because of their production of highly GHG intensive commodities for export. Likewise, several EITs depend on fossil fuels as the basis of their economies, which in turn drives their per capita emissions.

The average per capita GHG emissions for Annex I parties was 14.31 tCO_{2eq}/cap in 2006, and for Non-Annex-I-Parties parties 3.67 tCO_{2eq}/cap. Globally, per capita emissions averaged 5.83 tCO_{2eq}/cap, with a minimum of 0.83 tCO_{2eq}/cap and a maximum of 24.05 tCO_{2eq}/cap.[218]

Cumulative Emissions

Aside from GHG emissions per capita, there is also an additional dimension of emissions which many countries insist be considered for reasons of equity: the temporal dimension, accounting for cumulative emissions over time. Most of the largest current emitters also rank among the largest historical emitters, with the developed world generally contributing a larger share of cumulative emissions. A country's historical contribution may differ substantially depending on the time period assessed and whether or not LULUCF is included in the calculation.[219]

Although there are some challenges involved in finding accurate and reliable data for historical emissions, calculations of cumulative emissions certainly identify a trend. Cumulative per capita emissions for the period from 1900 to 2006 add up to an average of 7.9 tCO_{2eq}/cap/year for Annex I countries, and 1.0 tCO_{2eq}/cap/year for Non-Annex I countries. The global average is 2.4 tCO_{2eq}/cap/year, with a minimum of 0.3 tCO_{2eq}/cap/year and a maximum of 12.6 tCO_{2eq}/cap/year.[220]

This difference between the cumulative emissions of Annex I and Non-Annex I countries, or between countries that have been industrialized for a long time and countries that are not yet, or have just recently become, industrialized has triggered the debate about »historical responsibility«. Some countries argue that the industrialized world has had a »free ride« in emitting GHGs in the past, and that countries just now beginning to industrialize should enjoy the same freedom.

216. See World Bank, World Development Indicators, CO_2 Emissions (metric tons per capita), http://data.worldbank.org/data-catalog/world-development-indicators?cid=GPD_WDI.

217. For more information see: Baumert/Herzog/Pershing, Navigating the Numbers – Greenhouse Gas Data and International Climate Policy, WRI, 2005.

218. Höhne et al., Factors underpinning future action – country fact sheets, 2008 update, 2008, p. 8.

219. For more information, see: Baumert/Herzog/Pershing, Navigating the Numbers – Greenhouse Gas Data and International Climate Policy, WRI, 2005.

220. Höhne et al., Factors underpinning future action – country fact sheets, 2008 update, 2008, p. 8.

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