Framing Future Commitments

A PILOT STUDY ON THE EVOLUTION OF THE UNFCCC GREENHOUSE GAS MITIGATION REGIME

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with contributions from

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Executive Summary

Many studies have been or are about to be published on options for structuring national emission commitments after the first Kyoto period,^{a,1} providing a large 'toolbox' for use if and as the world moves towards negotiations on future commitments.² The widespread assumption is that negotiations will rapidly extend to include quantified commitments for most, if not all, developing countries in the second period; indeed this is being more actively pursued by the Kyoto Annex I Parties as a way of 'getting the US back on board'. However, progress is highly implausible until the US first re-enters the global negotiations. The impasse at COP8 in Delhi and the long history of attempts to discuss developing-country commitments before it illustrate the need to explore the political process, and what lies beneath it, before ideas on the merits of different designs can find application in negotiations. This study considers these more fundamental questions.

Principles. Three kinds of arguments underlie the pressure to extend future commitments to more – including most developing – countries: the *environmental* argument that the problem cannot be solved without this; the *economic* argument that it would be inefficient to curtail emissions without this; and the *moral* argument that it would be unfair to expect industrialized countries to bear burdens that other countries do not, and to attract competitive disadvantages.

While all three arguments appear to have some plausibility, none is absolute. The atmosphere cannot be stabilized without widespread coverage, ultimately including all significant emissions. However, the recent decline of Chinese emissions³ and other factors imply a reduced environmental urgency with regard to including major developing countries in immediate post-2012 commitments. Efficiency concerns can be at least partially addressed through instruments such as the CDM, which support abatement in developing countries without imposing costs on them. Other routes can address genuine competitiveness concerns.

Certain basic principles indicate what might be both morally fair and politically realistic. The most relevant indices include per capita income (ability to pay) and per capita emissions (current contribution to the problem). Independent and joint indices of these measures illustrate the basis for the existing agreed 'common but differentiated responsibilities' between industrialized and developing countries, while also illustrating the imperfect nature of the bloc division for some countries. The highest per capita emitters (the US, Canada and Australia) are also projected to have the biggest absolute increases in per capita emissions from now to 2020 according to International Energy Agency (IEA) projections. These countries bear the strongest responsibility to lead action and it is neither morally defensible nor politically realistic to expect most developing countries to act before these countries have committed to and started to deliver real reductions. However, expectations for commitments could reasonably increase as countries approach world average responsibility and capability levels.

Realities in industrialized countries. Annex I countries face different problems. The situation in the United States has been described in Module Two of the Strategic Kyoto-Marrakech Assessment.⁴ Canada, despite having ratified Kyoto, shares many of these

^a Both footnotes (mostly for references) and endnotes (for additional material) are used in this study. The former are indexed with letters of the Latin alphabet, and the latter by Arabic numerals.

problems, though moderated by a more internationalist outlook. The situation is exacerbated by Canada's intense trade relationship with the US, making Canadian industry deeply concerned about the competitiveness impacts of abatement policies.

Australia shares a similar economic basis, but its much weaker target and more diverse trade dependence have led debate there (including in industry) to focus increasingly on the risks of being shut out of the Kyoto system. The Australian government's position reflects political solidarity with the US rather than intrinsic national interests and may be unstable.

The EU is in a far easier position, and has now *de facto* acquired leadership responsibility for the global regime, but its contribution varies widely between the three different leadership 'modes'. The EU has increased its *structural* leadership effort (resources). The success to date of the EU trading scheme offers a strong measure of *directional* leadership (leading by doing). But the ponderous internal complexities and ambiguities of the EU as an international actor cripple its ability to exert *instrumental* leadership. Its persistent inability to understand and negotiate effectively or efficiently with other Parties appears to be another geopolitical reality with which the regime will have to contend.

Japan finds itself under similar pressures from industry to those of its former Umbrella Group colleagues, with the particular features noted above, and it initially sought to link ratification with developing-country engagement. A recent draft Interim Report by a Japanese government agency accordingly places considerable emphasis on the need to ensure equity in sharing the burden on greenhouse gas mitigation.⁵ While the issue remains very important, Japan may take a more holistic view, considering how adaptation and technology transfer could help countries to move forward.

The Economies in Transition (EITs) are a diverse set of countries that have shared the difficult and often traumatic transitions from centrally planned towards market economies. The ten EITs that are set to join the EU in 2004 will focus on European emissions trading, and their international stance is likely to be increasingly aligned with the current EU in support of the Kyoto process. However, Russia and Ukraine dominate the economic and emission allowances 'weight' of the EITs. The ongoing delay in Russia points to internal complexities and reflects a complex set of issues⁶ and the final decision on Kyoto is likely to be a top-level decision based on geopolitical calculations, but for the longer term Russia perceives the issue primarily in terms of potential economic gains and deals between major powers – attitudes which unavoidably make for tension with developing countries.

Realities in developing countries. Given their economic and political limitations, developing countries have traditionally sought 'strength in numbers' through the Group of 77 (G77) and China coalition that now comprises 134 countries. The growth of membership from its initial 77 testifies to the attraction for its members of this grand coalition, but also amplifies its potential frailty as interests become ever more complex and diverse.

Distinct groups within the G77 comprise the Alliance of Small Island States (AOSIS), the Organization of Petroleum Exporting Countries (OPEC), the Least Developed Countries (LDCs), and some countries of the Environmental Integrity Group (EIG) which consists of countries at the margin of rich country groups. In terms of 'clout' within the G77, a

simple index of economic and demographic weight (biased towards the former) suggests that China and OPEC could be expected to have the greatest influence within the coalition, followed by Brazil, and then India, AOSIS and the LDC groups.

The EIG has clarified the likely preconditions for further action by advanced developing countries (ADCs), which include participation by *all* Annex I countries, and demonstrable progress towards their emission reduction commitments.⁷ Repeated statements by the biggest developing countries (China, India, Brazil, Indonesia) reaffirm their well-known common stance towards future commitments.

In addition to their far lower per capita emissions and wealth, most developing countries have much less negotiating capacity than their Northern counterparts. Their numerical attendance at COP meetings roughly correlates with their wealth, and many developing countries have at least some enduring delegates, but their relatively small delegation size, as well as their institutional location (often from meteorological ministries) put many of them at a significant disadvantage.

There are also some anomalies in participation. Brazil has a disproportionately large delegation, but with a very high fraction of NGOs and academics. Two OPEC members, Nigeria and Indonesia, are notable for their unexpectedly large delegations. The Saudi Arabian delegation, which tends to lead OPEC in the negotiations, is exceptional for its dominance by a single ministry (Petroleum and Mineral Resources). The interests of OPEC countries in general are much more diverse.⁸

NGO participation is notably skewed between North and South: 82% of NGOs accredited with the UNFCCC Secretariat are from Annex I countries (about half from the EU), and only 2% are from LDCs. Distributional studies testify to the complexity of capacity-building, possibly because of the relatively short-term engagement of such projects.⁹

Despite their diverse perspectives, there are common themes among developing-country concerns. There is fear and distrust about the agenda of 'new commitments' and a refusal at present even to open the door to anything that might lead in this direction. In contrast, ministerial statements from developing countries persistently refer to the key concern about climate impacts and call on industrialized countries, seen as responsible, for assistance with adaptation and impact management. Implicitly if not explicitly, there is a sense that industrialized countries should in some way be liable to help developing countries in coping with current and accumulating unavoided climatic impacts.

However, acknowledging this in industrialized countries is a taboo akin to its twin Southern taboo of developing country commitments. Resentment about pressure on developing-country commitments – and the fear about future impacts – is vastly amplified by the non-participation of the US. The absence of the world's biggest emitter and richest country currently precludes any constructive discussion with developing countries about future commitments.

Ways forward. To move forward, the issue of addressing climate change needs to be approached in its entirety – issues related to vulnerability, impact burdens, development, trade, adaptation and mitigation will all have to be the subject of discussions.

By far the most important prerequisite to continue the multilateral climate change effort is to re-engage Annex I non-Parties in the Kyoto process, and specifically the US. Entry into force of the Kyoto Protocol is the surest way to address US claims that the whole framework is unworkable. It would also reinforce the signal – particularly to the US business sector – that the issue of greenhouse gas (GHG) reductions is here to stay and the rest of the world will undertake this under the framework of Kyoto. Adjustments to the Kyoto instruments could be considered to address some specific US concerns, for example by allowing for emission allowance price caps.

To expand participation to new countries, the compromises for Turkey¹⁰ and Kazakhstan¹¹ may help set precedents for integrating other advanced developing countries into second period commitments. ADCs will be as much in need of a special Annex I status as Turkey, and as has previously been granted to the EITs.

There are ways to deepen the engagement of countries other than taking on emission reduction commitments. Options to address DC emissions without imposing economic costs on them include market-driven 'technology spill-over,' subsidized 'technology transfer', and the CDM. The CDM could be extended to include sectoral programmes, and/or a 'minimum demand quota' as part of industrialized country commitments. In short, there are various ways and means to address developing-country emissions in the near term without quantified commitments – and the concomitant costs – from them.

To be successful in the long term, these issues will have to be considered in parallel with the issue of sharing the burden of unavoided climate impacts which forms the priority for developing countries. The Indian proposal for an 'Adaptation Protocol' bears consideration, but in the short term – concurrent with the upcoming second commitment period negotiations – less ambitious measures, such as a reform of international natural disaster relief financing, may be more promising.

Procedural progress The current stand-off in the climate negotiations reflects not just substantive differences, but a general Southern distrust of the North combined with a lack of negotiating and analytic capacity that would enable the Southern delegates to meet their Northern colleagues on a level playing field: if one is unable to evaluate a proposal and does not trust its proponent, the natural response is rejection. Industrialized-country parties will benefit – along with everyone else – if they help to close the North–South 'negotiating capacity gap'. Capacity-building in a wider context may similarly have beneficial effects – for example, enhancing the capacity to absorb (and generate) cleaner technologies.

Priorities for capacity-building include the LDCs (which as a group are likely to be most directly vulnerable and comprise major populations), and the ADCs (which will be instrumental in the negotiations on second period commitments). For other developing countries, the key capacity-building task is to help the emergence of more effective – in the positive sense – negotiating coalitions, including the provision and growth of analytic capacity.

Executive Summary Endnotes

¹ Recent and Current Emission Allocation Studies (selection):

- IEA/AIE (2002), Beyond Kyoto: Energy Dynamics and Climate Stabilisation, Paris: OECD/IEA.
- Swedish Environmental Protection Agency (2002), *Kyoto and Beyond: Issues and Options in the Global Response to Climate Change*, Stockholm: Naturvårdsverket, <u>www.naturvardsverket.se</u>.
- Baumert, Kevin A. (ed.) (2002), *Building on the Kyoto Protocol: Options for Protecting the Climate*, Washington DC: WRI
- Evans, Alexander (2002), Fresh Air? Options for the Future Architecture of International Climate Change Policy, London: New Economics Foundation, www.neweconomics.org.
- Point Carbon (2002), 'Climate commitments after 2010: Implications for carbon prices', *The Carbon Market Analyst*, 17 July 2002, <u>www.pointcarbon.com</u>.
- RIVM (2002), *Climate Options for the Long Term* (COOL): *Global Dialogue Synthesis Report*, Bilthoven/NL: RIVM
- EcoFys (forthcoming 2003), *Evolution of commitments under the UNFCCC: Involving newly industrialized economies and developing countries*, Report for the German Federal Environmental Agency.
- M.G.J. den Elzen, M.M. Berk, P. Lucas, B. Eickhout, D.P. van Vuuren (forthcoming 2003), *Exploring Climate Regimes for Differentiation of Commitments to Achieve the EU Climate Target*, RIVM Report 728001023/2003, Bilthoven: RIVM

² These include proposals for distribution of straightforward national emission caps (e.g. contraction-andconvergence, 'Tryptique' proposals for sector-based convergence, and various evolution proposals), and wider variations including the use of national intensity targets, sectoral caps, or proposals focusing on specific policies and measures.

³ As well as arguments recently advanced by economists suggesting that developing-country emissions may be lower than previously projected in scenarios compiled by the International Panel on Climate Change (IPCC).

⁴ Tom Brewer, *US Engagement on Climate Change Issues: Determinants and Prospects*, June 2003 <u>http://www.iccept.ic.ac.uk/a5-1.html</u>.

⁵ 'An important task is to ensure equity in each country's commitment. This is because a system which imposes unevenly heavy burden to some countries will not be persuasive enough to the people of such countries bearing economic and daily burden.'[pp.54f. in METI (2003), *Perspectives and Actions to Construct a Future Sustainable Framework on Climate Change*, http://www.meti.go.in/onglish/information/data/aPubCom_CliChao.html

http://www.meti.go.jp/english/information/data/cPubCom CliChae.html]

⁶ Russia's geopolitical status, its ambiguous attitude to the UN, a sense of having been cheated by the US withdrawal and consequent scepticism about the ultimate benefits, as well as some continuing uncertainty about the science and how severe a threat climate change really poses to a large, cold country like Russia)

⁷ Others include recognition for action already taken by developing countries, flexible approaches and timeframes, and technology transfers in all sectors through the CDM in the first period.

⁸ For example, North African OPEC countries have expressed considerable concern about climate change impacts, Iran is rich in gas but not oil, and Indonesia and Venezuela are also diverse in their interests. The fact that conventional oil reserves are fully used in almost all scenarios, irrespective of climate policies, also suggests scope for engaging OPEC countries more positively at least in principle (M.Grubb, 'Who's Afraid of Atmospheric Stabilisation?', *Energy Policy*, September 2001).

⁹ Undertaken using the MARKAL energy model and disseminated under an IEA-led 'Outreach' programme. Of 21 non-Annex I MARKAL projects, only two (Taiwan and South Korea) remain 'active'.

¹⁰ Removal from Annex II, but retention in Annex I with the proviso that Turkey is to be recognized as being 'in a situation different from that of other Parties included in Annex I to the Convention'.

¹¹ Annex I for Kyoto Protocol purposes only, with a target to be negotiated in the future.

PART I

SETTING THE CONTEXT

Expectations of future emissions and views of what might be fair future emission constraints are both significantly influenced by current distributions. Countries differ hugely in their emissions of, say, carbon dioxide (CO₂), the main greenhouse gas. Figure 1.1 shows the global distribution of CO₂ emissions in terms of three major indices: emissions per capita (height of each block); population (width of each block); and total emissions (population × emissions per capita = area of block).



Figure 1.1: The Current Distribution of CO₂ Emissions

Per capita emissions in the industrialised countries are typically as much as ten times the average in developing countries, particularly Africa and the Indian subcontinent. Owing to a variety of factors, there are large differences among the industrialised countries, with per capita emissions in the EU and Japan at about half the levels in the United States and Australia.

At the same time, there are very large differences among the developing countries, with some of the Asian emerging industrial economies and oil producing countries^a now with per capita emissions comparable with those in Europe and Japan. Given the large population of the developing world, the Figure illustrates a huge potential for global emissions growth, if developing country per capita emissions were to climb towards anything like the present levels in the industrialised world. Indeed, in many projections, emissions from developing countries are typically projected to surpass those from the industrialised countries some time in the period 2010–20. And yet, some caution is advised in drawing policy conclusions from these projections.

^a For example, South Korea and Saudi Arabia (see Figure 2.2, Chapter 2).

The SRES Scenarios. In 2000, Working Group III of the Intergovernmental Panel on Climate Change (IPCC) published a very influential Special Report on Emissions Scenarios, known as 'SRES.' The SRES scenarios are grouped into four







Capita Income as Percentage of Annex I Figures

main families centred around different four 'narratives' ('A1', 'A2', 'B1', and 'B2'). Figure 1.2 illustrates the projected size of the total¹ non-Annex I CO₂ emissions relative to those of Annex I in four 'illustrative' or 'reference scenarios'. Under each of these projections, emissions from the developing world significantly surpass those of the industrialised world by a ratio of more than 2:1 in 2100. Indeed – as illustrated in the inset in Fig. 1.2 – linearly interpolated, all the scenarios (based on 1990 data) project emission parity between Annex I and non-Annex I by the end of the present decade. It would, of course, be unfair to the SRES modellers to fault their projections for not having taken into account a significant trend reversal in the relative growth of these emission shares (particularly for fossil fuel emissions²), given that the work was undertaken before this reversal became known. But there are issues which have some recently been raised amongst a heated exchange of opinions between some of the SRES authors and their critics³ that may be of significance here.

Emission projections in the scenarios are determined by assumptions about certain key 'drivers' such as population, GDP, and technology levels. The recent controversy is about the appropriateness of different types of GDP measures in modelling economic growth. The issue is of significance to the projected North–South distribution of emissions chiefly because the use of PPP (Purchasing Power Parity) figures tends to generate a smaller hemispheric wealth gap than the use of exchange-rate based GDP figures, thus requiring smaller economic growth differentials for the South to narrow the existing income gap. And while Nakicenovic and his collaborators are quite right in pointing out that – for reasons to do with Simon Kuznets' inverse-U-curve hypothesis⁴ – (relative) emission growth is not necessarily proportional to (relative) economic growth, looking at the Figs 1.2 and 1.3, a positive correlation between the two in any one of the scenarios depicted does seem to be more the norm than the exception. In other words, less optimistic assumptions about the speed at which the South is going to outgrow the North in order to reduce the existing income gap could have significant implications about the projected Southern emissions relative to those of the North.⁵

What is slightly bewildering is that these less agreeable economic outlooks have not been dealt with in SRES – or at least not as prominently as those in which the world is becoming a more equitable place. The reason given for this in SRES is that, in fairness to the South, SRES was to begin filling in a lacuna in the scenario literature which so far had failed to consider these more equitable outlooks.⁶

However, this desire to be fair to the South may inadvertently have back-fired. The projected significant overshadowing of Northern emissions by those originating in developing countries has arguably been one of the main reasons for a Northern insistence on developing countries taking on emission mitigation commitments, particularly since SRES was meant to cover all scenarios that could reasonably happen and 'exclude only outlying "surprise" or "disaster" scenarios in the literature'. It would be disastrous if the world were to become even less equitable than it already is, but to reject such a possibility as unthinkable would itself be wishful thinking, not without serious political implications.

Chinese and United States Emissions. The threat of developing country emissions nullifying one's own mitigation efforts has indeed been used again and again – particularly by opponents of the Kyoto Protocol in the US legislature – to demand 'meaningful participation' of developing countries. The one country that has regularly been referred to in this manner in the US context is China, and it is illuminating to keep in mind the history of this debate:^{a,7} On 19 June 1997 – in a hearing of the U.S. Senate Foreign Relations Committee on what became known as the 'Byrd-Hagel Resolution' – Senator Robert C. Byrd claimed that

China will surpass the United States in carbon emissions by the year 2015. ... if current proposals are adopted, under which we would reduce our carbon emissions to 1990 levels while imposing no requirements upon the developing world and China, China, all by itself, will greatly exceed the United States in metric tons of carbon emitted.^b

^a The remainder of this section is based on a presentation given at the World Bank Climate Change Day (Washington D.C., 14 June 2001); reproduced as Benito Müller, 'Fatally Flawed Inequity: Kyoto's Unfair Burden on the United States & the Chinese Challenge to American Emission Dominance', 2001, <u>www.OxfordClimatePolicy.org</u>

^b US Senate Report 105–54, Page 18.



Box 1.1. EIA International Energy Outlook 1998-2001. CO2 Emission Projections (MtC)





Each of the four most recent editions of the IEO has a 1990 estimate for Chinese CO₂ emissions (620MtC) and an estimate for a base-year: 1996 for both IEO98 and IEO99, 1997 for IEO00, and 1999 for IEO01 (together with an estimate for the preceding year). Projections are in five-yearly intervals. The '99 projections involved a significant reduction in projected 2020 emission levels from their IEO98 predecessor (reflected in a reduction of annual growth rates from 4.2 to 3.6, and from 4.1 to 3.4 percent for 1991–2000, and 2011–20, respectively), leading to a postponement of the projected China-US cross-over from 2015 to 2019 (US projections themselves remaining almost identical in IEO98-00). The projections published in 2000 were rather uneventful, the only difference to the preceding year being a reversal of the 1991-2000 growth reduction. The dramatic changes only occur in IEO01, where the 1991-2000 growth rates had to be slashed to less than one tenth from 4.4 to 0.4 percentage points. Yet this merely reflects an acknowledgement of empirical fact and not a change in exogenous modelling assumptions. The truly remarkable feature of the IEO01 projection is rather that, in light of this empirically imposed revision, growth rates for the subsequent decade are projected to be higher than ever before (4.5 percent). Simple extrapolation then leads to a projected cross-over in 2027.

Three years later – on 4 May 2001 – he re-iterated his claim, albeit in a slightly less quantified manner:

However, it should also be noted that China will soon surpass us as the largest emitter of greenhouse gases. The Chinese Government must stop blocking all forward movement on the question of developing country participation. The developing world is poorly served by the current level of Chinese intransigence.^a

What could have induced this changed wording of the prediction regarding the time when China's emissions are supposed to overtake those of the United States. The fact – according to the U.S. Department of Energy (DoE) Carbon Dioxide Information Analysis Center^b – is that China's CO₂ emissions from fossil fuel combustion peaked in 1996 at 912 MtC and by 1999 were reduced by 15 percent to around their 1993 level. In 1997, this was obviously not known and the projections of the DoE Energy Information Administration (EIA) were indeed for a 2015 cross-over of Chinese and US emissions (Box 1.1). By the time of Senator Byrd's second statement, the EIA projection had taken account of this reversal, but it was not taken to impinge on the earlier emission growth projections – leaving the *IEO2001* projection practically parallel to those of the preceding two years – so that the predicted cross-over was postponed to around 2027.

Yet not everyone shared this view. Jonathan Sinton and David Fridley of the Energy Analysis Department at the US Lawrence Berkeley National Laboratory (LBNL) have recently made a projection based on a detailed analysis^a of why



^a Senator Byrd, 4 May 2001. US Congressional Record, Page: S4394.

^b http://cdiac.esd.ornl.gov/ftp/trends/emissions/prc.dat

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Chinese emissions have undergone this quite unexpected reversal. They conclude, in particular, that 'even if energy use rises at the same rate that prevailed in the early 1990s, i.e., at half the speed of economic expansion, carbon dioxide emissions will not reach 1996 levels until after 2005'. And Figure 1.4 clearly shows that under the LBNL projection, Chinese and American emissions virtually run along parallel tracks, which – if Euclid is to be trusted – implies that we may have to wait rather longer than the near future before the former actually surpass the latter, if at all.^b

Brazil, India, Mexico, South Africa, and Turkey. A recent Report commissioned by the Pew Center on Global Climate Change^c has produced the following very interesting picture on current emission mitigation in the other key developing countries [pp.iiif]:^d

Brazil's annual emissions are 91 million tons, or 10 percent lower than they would be if not for aggressive biofuels and energy efficiency programs aimed at reducing energy imports and diversifying energy supplies. A tax incentive for buyers of cars with low-powered engines, adopted to make transportation more affordable for the middle class, accounted for nearly 2 million tons of carbon abatement in the year 2000. If alcohol fuels, renewable electricity, cogeneration, and energy efficiency are encouraged in the future, carbon emissions growth could be further cut by an estimated 45 million tons a year by 2020. Deforestation, however, produces almost twice as much carbon dioxide as the energy sector. Government policy, with few exceptions, indirectly encourages emissions growth in the forestry sector.

India's growth in energy-related carbon dioxide emissions was reduced over the last decade through economic restructuring, enforcement of existing clean air laws by the nation's highest court, and renewable energy programs.^[8] In 2000, energy policy initiatives reduced carbon emissions by 18 million tons—over 5 percent of India's gross carbon emissions. About 120 million tons of additional carbon mitigation could be achieved over the next decade at a cost ranging from 0-15 per ton. Major opportunities include improved efficiency in both energy supply and demand, fuel switching from coal to gas, power transmission improvements, and afforestation.

Mexico was the first large oil-producing nation to ratify the Kyoto Protocol. Major factors affecting Mexican greenhouse gas emissions are population growth, economic development, energy supply growth, technological change, and land use change. Mexico has begun to reduce deforestation rates, switch to natural gas, and save energy, reducing annual emissions growth over the last decade by 5 percent,

^a Sinton, Jonathan and David Fridley (2001), 'Hot Air and Cold Water: The Unexpected Fall in China's Energy Use,' *China Environmental Series*, Issue 4. Washington DC: Woodrow Wilson Center.

^b For a very recent assessment of the Chinese energy sector, see David Fridley, Jonathan Sinton, Joanna Lewis, Philip Andrews-Speed, and Loi Lei Lai, 'China,' *Oxford Energy Forum*, Issue 53, May 2003. <u>www.OxfordEnergy.org</u>

^c William Chandler, Thomas J. Secrest, Jeffrey Logan, Roberto Schaeffer, Alexandre Salem Szklo, Marcio Edgar Schuler, Zhou Dadi, Zhang Kejun, Zhu Yuezhong, Xu Huaqing, P.R. Shukla, Fernando Tudela, Ogunlade Davidson, Stanford Mwakasonda, Randal Spalding-Fecher, Harald Winkler, Pierre Mukheibir, and Sema Alpan-Atamer, *Climate Change Mitigation in Developing Counries: Brazil, China, India, Mexico, South Africa, and Turkey*, Washington D.C.: Pew Center on Global Climate Change, October 2002, <u>http://www.pewclimate.org/projects/dev_mitigation.cfm</u>

^d See also Kilaparti Ramakrishna, and Linda Jacobsen (eds), *Action Versus Words: Implementation of the UNFCCC by Select Developing Countries*, Woods Hole, MA, USA: Published The Woods Hole Research Center, February 2003. <u>http://www.whrc.org/pubaffair/ActionPDF/WHRC-ActionVsWords.pdf</u>

or 10 million tons of carbon per year. Mexican carbon dioxide emissions are projected to grow 69 percent by 2010, but alternative strategies could cut this growth by 45 percent.

South Africa's post-Apartheid government places its highest priority on development and meeting the needs of the poor. Over one-third of the nation's households are not even connected to a power grid. Yet, emissions growth could be reduced 3–4 percent a year by 2010 through efforts to reform the economy and improve energy efficiency. The government is already taking steps to phase out subsidies to its unusual, carbon-intensive coal liquefaction industry and to open the country to natural gas imports. As in many other developing countries, the absence of rigorous and publicly available studies of future energy use and greenhouse gas emissions remains an obstacle to future emissions mitigation.

Turkey's high rate of energy-related carbon emissions growth is expected to accelerate, with emissions climbing from 57 million tons in 2000 to almost 210 million tons in 2020. Carbon intensity in Turkey is higher than the western developed nation average. Energy-intensive, inefficient industries remain under government control with soft budget constraints, contributing to undisciplined energy use. Planned industrial privatizations may close the oldest and most inefficient operations and modernize surviving ones. Elimination of energy price subsidies could stimulate energy conservation, reducing energy and emissions growth below current projections.

Conclusions. In principle, developing countries have an enormous potential for future greenhouse gas emissions if they were to proceed by mimicking the path taken by the industrialised world over the course of the past century. But before jumping to conclusions regarding the necessity for developing countries to take on commitments because of such potential 'Business-as-Used-to-Be' (BUB) emissions, one must ascertain the likelihood of such a BUB. In particular one must factor in that considerable emission reductions have already been undertaken in developing countries even though they were without obligation to do so under the international regime. Indeed, according to the Pew Center study

actions taken by these countries [listed above] have reduced the growth of their combined annual greenhouse gas emissions over the past three decades by nearly 300 million tons a year. If not for these actions, the annual emissions of these six countries would likely be about 18 percent higher than they are today. To put these figures in perspective, if all developed countries were to meet the emission targets set by the Kyoto Protocol, they would have to reduce their emissions by an estimated 392 million tons from where they are projected to be in 2010.[p.iii]

One has to be very cautious in judging whether demands for further mitigation action by developing countries on grounds of environmental necessity are really justified.

Endnotes Chapter 1

¹ Total CO_2 = Fossil CO_2 + Land-use CO_2



³ This debate has been collated and published in *Energy & Environment*, Vol. 14, Nos 2&3 (2003), namely: Castles, Ian & David Henderson, 'The IPCC Emission Scenarios: An Economic Statistical Critique', pp. 159–85; and Nebojsa Nakicenovic, Arnulf Grübler, Stuart Gaffin, Tae Tong Jung, Tom Kram, Tsuneyuki Morita, Hugh Pitcher, Keywan Rihai, Michael Schlesinger, P.R. Shukla, Detlef van Vuuren, Ged Davis, Laurie Michaelis, Rob Swart and Nadia Victor, 'IPCC SRES Revisited: A Response', pp.187–214.

⁴ 'At each stage of development, different capital equipment and thereby technology is used. The search for patterns in the use of resources and the level of development goes back to studies of macroeconomic growth pioneered by Simon Kuznets in 1955 [S. Kuznets, 'Economic Growth and Income Inequality', *American Economic Review*, 45, March 1955, 1–28]. His hypothesis was that the distribution of income at first becomes less equitable as development proceeds, and does not improve until industry accounts for a rather large share of national income. Consequently, the income elasticity of capital use should decline with the level of national income, from above 1 to less than one. The relation between capital and output per capita can therefore be described by an inverse U-curve.' [Bartsch, Ulrich and Benito Müller, *Fossil Fuels in a Changing Climate*, Oxford: Oxford University Press, 2000:118]

⁵ Nakicenovic *et al.* (2003) point out correctly that in the last 40 years 'the highest sustained economical growth rates were experienced by Korea and Japan followed by Mexico with 7.6, 5.1 and 4.7 percent per year, respectively. Again, the SRES scenarios fall well within that range with the highest growth rates of 7.4 percent for the ASIA region between 1990 and 2030 and with at most 4.0 percent per year in the ALM region between 2030 and 2070.'[p.198] But the point is not whether the growth assumptions in the SRES have actually had any historic precedent whatsoever, but whether they are generally focusing on – not to say biased towards – high (relative) economic growth in the South. In other words, the issue here is not whether there are examples of (DC) individual economies that have grown at the sort of growth rates assumed for the DC regions in the SRES, but whether it is justifiable to focus on scenarios where these remarkable individual success stories are replicated in the whole developing world. Indeed, the SRES data set itself (see Table below) implies that over the last 40 years the income gap between Annex II and non-Annex I has steadily widened by 0.1 percent per year, which is why one might wonder about the assumption that non-Annex I will outgrow Annex II by significantly more than 1 percent per annum.

It is impossible 'to declare *ex cathedra*'[Nakicenovic *et al.* (2003):201] whether the more pessimistic world view would actually lead to smaller relative Southern emissions, but, as unpalatable as they are, these pessimistic scenarios are *not* unthinkable outliers and, no matter how undesirable, must be given equal prominence as the optimist ones. To be very clear, the objection here is not 'an attempt to socially construct, or rather *constrain* our collective visions of "thinkable"

futures' [Nakicenovic *et al.* (2003):201], it is merely a plea that *all* thinkable futures should be equally represented in order to avoid an imbalanced picture, no matter how well intended.

Source: SRES p.195f								
1. Per Capita Income (000 1990\$) 2. Annual Per Capita Income Growth (%)								
(a)	A1	A2	B1	B2	(a) A1 A2 B1 B2			
Annex II 1990	19.2	19.2	19.2	19.2	Annex II 1950-1990 2.8 2.8 2.8 2.8			
non-Annex I 1990	0.9	0.9	0.9	0.9	non-Annex I 1950-1990 2.7 2.7 2.7 2.7			
WORLD 1990	3.85	3.85	3.85	3.85	WORLD 1950-1990 2.2 2.2 2.2 2.2			
Annex II 2050	50.1	34.6	49.8	39.2	Annex II 1990-2050 1.6 1.1 1.5 1.2			
non-Annex I 2050	15.9	3.9	10.9	8.1	non-Annex I 1990-2050 4.9 2.4 4.2 3.8			
WORLD 2050	20.8	7.2	15.6	11.7	WORLD 1990-2050 2.8 1.1 2.3 1.8			
Annex II 2100	109.2	58.5	79.7	61	Annex II 1990-2100 1.6 1.1 1.2 1.1			
non-Annex I 2100	66.5	11	40.2	18	non-Annex I 1990-2100 4.0 2.2 3.5 2.8			
WORLD 2100	74.9	16.1	46.6	22.6	WORLD 1990-2100 2.7 1.3 2.2 1.6			
(b)					(b)			
Annex II/non-Annex I	A1	A2	B1	B2	Annex II – A1 A2 B1 B2			
1990	21.3	21.3	21.3	21.3	1950-1990 0.1 0.1 0.1 0.1			
2050	3.2	8.9	4.6	4.8	1990-2050 -3.3 -1.3 -2.7 -2.			
2100	1.6	5.3	2.0	3.4	1990-2100 -2.4 -1.1 -2.3 -1.1			

⁶ 'In an influential critique Parikh (1992) referred to the IS92 scenario series as being "unfair to the South," a point also taken up in the evaluation of the IS92 scenarios. Alcamo et al. (1995) concluded that new IPCC scenarios "will be needed for exploring a wide variety of economic development pathways, for example, a closing of the income gap between industrial and developing countries." With a few notable exceptions (e.g., the scenario developed by Lazarus et al. (1993) and the Case C scenarios presented in IIASA-World Energy Conference (WEC) (IIASA-WEC, 1995) and Nakicenovic et al. (1998a)), the challenge to explore conditions and pathways that close the income gap between developing and industrial regions appears to have been insufficiently taken up in the scenario literature, a gap this report aims to begin to fill. Chapter 4 describes two scenarios in which the ratios between regions of GDP/capita decline and the absolute differences increase.'[SRES:123]

⁷ Data Sources referred to

Energy Information Agency (US Dept of Energy)

ICDE International Carbon Dioxide Emissions from the Consumption and Flaring of Fossil Fuels Information, <u>http://www.eia.doe.gov/emeu/international/environm.html#IntlCarbon</u>

IEO98 International Energy Outlook 1998, http://www.eia.doe.gov/oiaf/archive/ieo98/

IEO99 International Energy Outlook 1999, http://www.eia.doe.gov/oiaf/archive/ieo99/

IEO00 International Energy Outlook 2000, http://www.eia.doe.gov/oiaf/archive/ieo00/

IEO01 International Energy Outlook 2001, http://www.eia.doe.gov/oiaf/ieo/

International Energy Agency (OECD)

*EFC00 CO*₂ *Emission from Fuel Combustion 1971 – 1998* (2000 edition), OECD/IEA 2000 WEO00 World Energy Outlook 2000, OECD/IEA 2000.

⁸ India serious about tackling problem of climate change: seminar

New Delhi, May 6, IRNA -- India's Minister of State for Power, Jayawanti Mehta, said on Monday that India is serious about tackling the problem of climate change. Mehta while speaking at a oneday seminar on Asian Regional Research Programme in Energy, Environment and Climate said that India has already initiated measures that have significant Green House gases mitigation impacts which include promotion of energy efficient technologies, harnessing of enormous potential of the renewable sources of energy have emerged as a viable option to achieve the goal of sustainable development in India and government is promoting various technologies like wind, solar, cogeneration and biogas plants. Such measures are essential even otherwise to make Indian industry globally competitive, to reduce production costs and to preserve the precious fossil fuels, she added. The seminar disseminated the findings of the Studies on mitigation of Green House Gas and environment emission in the fields of Power, Urban Transport, Biomass and Small and Medium Industries. The studies in the seminar revealed that hydro and combine cycle gas turbines are the least cost options considering the emission constraints, biomass integrated gasification combined cycle are most promising Clean Development Mechanism option and introduction of Decentralized Power Generation would reduce capacity addition and optimize capacity utilization. [http://www.irna.com/en/head/030506082322.ehe.shtml

2. Theoretical Considerations

A study of how a regime *should* evolve must take account of the ways in which it *could* evolve. Given the very large number of options this chapter focuses on a list of independent directions (called 'axes') that provide coordinates for describing these pathways of regime evolution in a concise and systematic manner. Generally, these axes roughly fall into two kinds – 'physical' on the one hand, and 'practical' (in the sense of 'having, or implying, value or consequence in relation to action'¹) on the other – spanning two 'scopes' of the regime. Addressing the potential evolution of the 'physical scope' is addressing (at least) two questions: *What?* and *Where (and when)?*, while an evolution of the 'practical scope' will minimally involve the questions *Who (and when)?*, and *How much?* Both kinds of issues are linked, indeed governed, by the most important question, namely *Why?*

2.1 FCCC Evolution: *Why?*

Why, indeed, should the present FCCC greenhouse gas *mitigation* regime evolve in any of its dimensions beyond the structure adopted in the Kyoto protocol and elaborated in the Marrakech Accords? In the final analysis, there can only be one answer, namely: to achieve the ultimate objective of the Convention as laid out in Art. 2^{2} Admittedly, this leaves a lot of room for argument, for it is not clear what this objective means. At present, the only certainty seems to be that it would entail (drastic) net-reductions of global greenhouse gas emissions. The ultimate aim of the FCCC, in other words, implies amongst others a mitigation objective, and it is essentially the spectre of failing to achieve this objective which lies at the heart of *FCCC-based* arguments for evolution proposals.³ There are (at least) three reasons that can in this context be advanced in defence of evolution proposals:

- The (purely) *environmental* reason: the mitigation objective cannot be achieved *tout court* without the proposed evolution.
- The *economic* reason: the mitigation objective cannot be achieved *in a cost effective manner* without the proposed evolution.
- The *moral* reason: the mitigation objective cannot be achieved *in a fair manner* without the proposed evolution.

While it is clear that the Kyoto Regime will have to evolve in some way or other to achieve the objective of drastically reducing global greenhouse gas emissions, it is not self-evident at all which particular directions such an evolution could justifiably take. A first step towards clarifying this issue is to take stock of what sort of mutually independent options of regime-evolution there are.

2.2 The 'Physical Axes': What? and Where and When?

The 'physical scope' of the greenhouse gas mitigation regime under the FCCC – indeed of any emission mitigation regime – is spanned by two axes, characterised by the questions: *What*? and *Where and when*?

• *The Technical Axis (What?).* The technical axis of the FCCC mitigation regime comprises the chemical, physical and socio-economic types of gas flows to be addressed by the regime; with 'physical type' covering the physical nature of the flows (i.e. sources versus sinks), and 'socio-economic' referring to the socio-economic categorisation of the activities generating the flows (i.e. different economic sectors). The current multilateral regime covers a basket of

gases of different chemical types (listed in Annex A to the Kyoto Protocol), and admits two physical types, namely emissions into the atmosphere (sources), and absorptions from the atmosphere (sinks).

• *The 'Spatio-Temporal Axis'* (*Where and When?*). Emissions (and absorptions) happen in a particular place at a particular time. It is thus possible to single out a physical 'extent' for the regime, i.e. a geographical region and a period as locus of the gas flows to be covered by the regime. Currently, this extent covers roughly the global atmosphere until 2012.⁴

It is unlikely that the regime is going to be significantly expanded along its technical axis (the 'Kyoto-Marrakech architecture')⁵ and it is certain that it will have to be extended time-wise beyond 2012 if it is to achieve the Convention's ultimate objective. The potential for controversy lays thus mainly in the evolution of the regime's 'practical scope' – spanned by its two 'practical axes': *Who (and when)?* and *How (much)?* – since any evolution in these action-oriented directions will typically be subject to moral, or 'practical' reasoning, as it used to be called.

2.3. First Practical Axis. *Who and When?*

Consider the following historic example: with the passing of the Byrd-Hagel resolution⁶ and the subsequent demand for 'meaningful participation' by the Clinton administration, there have been calls for the expansion of the present multilateral mitigation regime by assigning Quantified Emission Limitation and Reduction Obligations (QELROs) to developing countries on grounds of fairness, i.e. on grounds of what in Section 2.1 we referred to as the *moral* reason. Generally, these claims had the form of the following *R*elative Equity *P*roposition:

(REP) It would be unfair for X to be made to act (at t) without Y being made to act.

where the role of X was given, say, to the US or Annex I, and that of Y to China or (major) non-Annex I countries, respectively.

Comparing Emission Behaviour. The most prominent moral arguments for the need for such 'meaningful DC participation' have been based on the projected future emission behaviour of the parties involved. Thus it was argued that (REP) is true because 'China will soon surpass us as the largest emitter of greenhouse gases'⁷ or because 'Much of the projected increase in carbon dioxide emissions is expected to occur in the developing world, where emerging economies are expected to produce the largest increases in energy consumption. Developing countries alone account for 81 percent of the projected increment in carbon dioxide emissions between 1990 and 2010 and 76 percent between 1990 and 2020.²⁸

Both these statements were meant to demonstrate that what might be called the '(annual) emission behaviour' of China (the developing world) will soon be worse than that of the US (the developed world). And there is some intuitive justification that – *everything else being equal* – if Y behaves worse than X, then it would be unfair to ask X to mend his way without also asking Y to do likewise.

However – as has been argued at some length elsewhere⁹ – the EIA's use of percentage figures is at best misleading and the country-wide figures used in the China/US comparison are not adequate measures for (annual) emission behaviour.¹⁰ The only appropriate measure for making such behavioural comparisons are per capita figures,¹¹ and since they currently differ by an order of magnitude,¹² it is not

likely that the Chinese annual emission behaviour is soon going to eclipse that of the United States.

Only the Future Counts'. One way in which one might try to save the 'urgent need for meaningful participation' argument is by discounting *anything but* the future, i.e. by focusing just on the projected increment in the annual emission behaviour. Figure 2.1 shows the future near- to medium-term emission behaviour – in the per capita metric – of different FCCC Parties and groupings as projected in the 'Reference Case' in the US Energy Information Administration most recent (2002) WEPS model.¹³ In fact, the Figure represents the future additional differences to world average behaviour (as projected in the EIA reference scenario).¹⁴ It is thus not a measure for 'good' or 'bad' emission behaviour, but for 'better than' or 'worse than' world average behaviour.¹⁵ Moreover, it is also purely concerned with (projected) future



Data Source: EIA WEPS from World Average Per Capita Emissions (tC/cap)

In the EIA 'Reference' future, some Parties are projected to undergo worse changes in their emission behaviour than others. Of the ten individual countries listed in Fig. 2.1, only one is projected to consistently behave better than average over the 20-year time horizon. In 2020, for example, the ranking – in increasing order of deviation from the average behaviour – is: India with –60kgC/cap, China (+120), Germany (250), Japan (260), Brazil (310), UK (320), Canada (380), Mexico (550), USA (600), and topping this list, South Korea with an additional +680kgC/cap increment to the global average since 2000. Given only this information, parties would justifiably be aggrieved if they were asked to remedy their (projected) emission behaviour if worse culprits – i.e. those higher than them in the said ranking – were let off completely.

In short, *if* one were to ignore present differences and focus solely on projected future changes from the status quo (and this is a big 'if'), then the US could indeed justifiably be aggrieved by the prospect of being asked to take on QELROs while some non-Annex I countries are not being asked. *But* the 'offender' is not China, it is not Brazil, and certainly not India, but South Korea (possibly with some other Advanced Developing Countries). The fact is that given the refusal of the current US administration to adhere to the Kyoto Protocol there is only one 'offender', *even if present and past differences are ignored*: amongst all the Parties asked under the Protocol to act on their emissions, the United States is projected to continue as worst behaved emitter. Hence all other Annex B Parties could justifiably feel aggrieved even if only the future is taken into count.

Was Kyoto Unfair? This sample of an operational framework for deciding the justifiability of relative (in)equity claims of the form (REP) is clearly not perfect, not only because it denies the relevance of present and past parameter values, but also because it fails to take into account the multi-parameter character of the problem, explicitly recognised in Prime Minister Vajpayee's recent justification for rejecting DC mitigation commitments:

There have been suggestions recently that a process should commence to enhance commitments of developing countries on mitigating climate change beyond that included in the Convention. This suggestion is misplaced for several reasons.

First, our per capita Green House Gas emissions are only a fraction of the world average, and an order of magnitude below that of many developed countries. This situation will not change for several decades to come. ...

Second, our per capita incomes are again a small fraction of those in industrialized countries. Developing countries do not have adequate resources to meet their basic human needs. ...

While a full-blown analysis of how such a multi-parameter character could be adequately operationalised is beyond the scope of this pilot study, it may help to illustrate the general nature of the problem to consider the average indices depicted in Figure 2.2. Given 1997 indices for per capita PPP-GDP, say x_n , and per capita CO₂ emissions,¹⁶ say y_n – both calibrated relative to the US figures, i.e. $x_{us} = 100 = y_{us}$ – Fig. 2.1 illustrates the relationships established by combining these indices by way of different joint averages, namely an arithmetic and a geometric one:

(A)	$z_n = (x_n + y_n)/2$	Arithmetic Joint Index,
(G)	$z_n = \left(x_n \times y_n\right)^{\frac{1}{2}}$	Geometric Joint Index.

Using these joint indices of the 1997 emissions and wealth patterns,¹⁷ we can then ask whether the demands enshrined in the Kyoto Protocol in that year were unfair (in relative terms), i.e. whether any of the Parties asked to take on a mitigation obligation (included in Annex B) could justifiably claim (REP) that this is unfair because of some other Party not being asked (i.e. not being included in Annex B). Given our joint indices operationalisations represented in Fig. 2.2, the answer must be affirmative because the joint emission-and-wealth indices of Saudi Arabia and South Korea (non-Annex B) are greater than that of Russia (Annex B). Of course, our operationalisations do not take into account the fact that Russia actually did not sign up to an emission reduction target, which de facto takes it out of Annex B for the present deliberations about the relative fairness of being asked to take on an *emission mitigation burden*.



There are clearly other shortcomings of this particular method which a full analysis would have to address, such as the fact that there are still other parameters to be considered (e.g. historic performance), and the fact that it provides no direct answers regarding certain non-relational ('absolute') equity propositions, such as

(AEP) 'It is unfair that X should take on mitigation commitments at t'.

For the latter, at least, a proposal was implicitly put forward in Prime Minister Vajpayee's quotation, namely to interpret (AEP) as a claim relative to the world average value, i.e. to stipulate that (AEP) is true (justified) if and only if the relevant index of X is below that of the world as a whole. Applied to our 1997 parameter values (Fig. 2.2), this interpretation would have meant that the broad distinction between Annex B and non-Annex B countries – between countries who are asked to take on QELROs for the first commitment period (2008–12) and those who are not – was broadly speaking fair, the exception being South Korea, Saudi Arabia and

Mexico who, according to this global average interpretation of (AEP), should have been added to Annex B.

Conclusions for the Near-term Future. Who should take on QELROs in the second commitment period? This section has illustrated the type of methodology that could be used to provide *moral* answers to this question in the context of a *fair sharing of mitigation burdens*. Unavoidably, this illustration could not be more than a sketch which is why one has to be cautious in drawing premature conclusions. Nonetheless, the following rough picture does emerge.

There may well be a case that some Advanced Developing Countries (South Korea, Saudi Arabia, possibly Mexico) would not carry their fair burden if they continued to be exempted from taking on mitigation obligations while the countries in Annex B were asked to take on (stricter) ones. It is difficult to see how a similar claim could be sustained for Less Advanced Developed Countries (LADCs). The only thing which can be said almost with certainty is that it would be unfair for the USA not to take (drastic) action.¹⁸

Deciding whether a general distinction such as the one between Annex B and non-Annex B is fair within a particular moral context (such as the fair sharing of mitigation burdens), however, is not where the fairness question ends, for it says nothing about the fairness of the burdens allocated to those which should 'in all fairness' carry a share of the burden. It says nothing about *how much* of the burden the burden-sharing parties could in fairness be expected to carry, an issue which leads directly to the second 'practical axis' of mitigation regimes, that of 'emission limits,' of the question *How much*?

2.4. Second Practical Axis: Emission Limits (*How Much?*)

Emission mitigation regimes involve emission limits of some form that can be more or less explicit. The most familiar explicit targets are those setting absolute emission caps (e.g. 'Per Capita, or 'Grandfathering'). At the other end of the spectrum are mitigation regimes based on policy and measure targets, where the 'emission limits' are purely implicit, namely whatever is emitted under compliance.¹⁹ Somewhere in between are targets based on 'emission intensities' – emissions per unit of economic output (GDP) – where the implied emission limits are only known once one is in possession of the relevant GDP figures.

Whatever the nature of these limits, it is important to keep in mind that setting such targets, by itself, is *not* tantamount to allocating specific mitigation burdens, especially if this burden is interpreted as the economic cost of the required mitigation measures.²⁰ Emission limits in most cases impose economic burdens, but there are many more factors involved in determining the size of the burdens than just these limits. This means, in particular, that the setting of emission limits cannot be judged as concerns the issue of the fair sharing of mitigation burdens without further assumptions about the manner in which the limits will be achieved, and so on.

The conceptual difference highlighted here is more than merely an 'academic' issue, for it lies at the heart of a key dispute regarding the evolution of the FCCC mitigation regime. The point is that while it is possible to see the issue of allocation emission limitations purely as a necessary component in trying to share out a global emission mitigation burden, it can also legitimately be viewed from quite a different perspective, namely as an allocation of a (natural) resource.

As with the question about the nature of the climate change problem itself (see Section 5.2) there is a North-South divide as regards the nature of allocating QELROs. As exemplified in the discussion of the preceding section – which, after all, took its starting point from certain US objections to the Kyoto Protocol – the predominant view in the industrialised North (consistent with its overall conception of the climate change problem) is that of sharing out a global emission mitigation burden. A significant portion of the (less advanced) developing countries in the 'South', by contrast, seems to perceive the allocation of QELROs primarily as a resource allocation issue. Prime Minister Vajpayee's statement that 'we do not believe that the ethos of democracy can support any norm other than equal per capita rights to global environmental resources²¹ is not made *in vacuo*, but against the background of a long and very bitter history of North-South disputes over fair resource allocations. This is why one should not be surprised about the strength of the sentiment behind the position. It is thus difficult to see how DC QELROs could be acceptable from their vantage point without a substantial per capita component which, in the present condition is likely to lead to large numbers of surplus permits for many LADCs.

The Target Deadlock. Indeed, it is these surplus permits which lie at the heart of a deadlock in the debate on target allocation which has and could well continue to bedevil the multilateral regime for some time to come. The fact is that the sale of these surplus permits could well raise significant amounts of money, particularly relative to the otherwise rather meagre export earnings of some LADCs. From their perspective, such a sale is simply the sale of a legitimate national asset. However, from the burden sharing perspective it is morally objectionable,²² it is a form of profiteering from a global burden. And the indignation about this can easily be as strong as that in some developing countries who regard the denial of per capita entitlements as yet another Northern exploitation of the South.

In short, (one of) the key problem(s) regarding the global allocation of QELROs is not that we cannot, as it were, agree on how to play the game, but on what the game actually is in the first place, and that, given the views of the two camps, both of them appear to each other as morally rather questionable (exploiters and profiteers, respectively). The situation is hence rather precarious, for people tend to be less willing to enter into a compromise with counterparts they regard as "immoral" if not "evil".

Conclusions for the Future. There is one way in which the Target Deadlock mentioned above could, at least in principle, be overcome: if LADCs were only asked to help carry the mitigation burden once their per capita emissions (or some joint index) reaches the current global average at the time. After all, that would be fair according to the (AE) criterion implicitly alluded to by the Indian Prime Minister, and it would lead to an allocation of Assigned Amounts very close to the Per Capita solution favoured by him and others without generating a large amount of surplus permits. The problem with this scenario is, of course, that – given the weak leadership of some of the largest Northern emitters – a 'business-as-usual' emission growth in the South could very easily (some might say inevitably) lead to a convergence at a global per capita level incompatible with the overall objective of the Framework Convention. (NB. This would not just be due to Southern 'unfettered emission growth', but also because of a lack of sufficient abatement by the industrialised North.)

Does this mean that the ultimate objective of the convention is basically unattainable? Fortunately, it does not. For there is always the possibility that, having recognised the justifiability of the 'opposing view', some compromise (such as the 'Preference Score,'²³ or the 'Contraction and Convergence'²⁴ proposals²⁵) might become acceptable. If not, then the solution might well have to make use of what might be called the 'dimensional independence' of the questions *Where (and when)*?

2.5. Why 'Axes'? A Question of Independence

Anyone familiar with mathematical vector spaces will know that the defining feature of the concept 'dimension' is some sort of independence. In the present context, this is interpreted in terms of one type of specification ('concerning one dimension') having no effect on the possibilities of specifying values for the remaining ones. Take, for example, the relationship between what was referred to as 'spatio-temporal' and 'technical dimensions'. Whatever technical specification is adopted – say, carbon dioxide combustion emissions from transport activities or methane emissions from enteric fermentation – no logical or conceptual constraints will be imposed on the choice of how one wishes to specify the geographical range and the duration of the regime. The two types of decisions are conceptually independent which is why they are here referred to as two distinct dimensions of potential regime evolution.

While this may be self-evident, the independence of the 'practical dimensions' may not be quite as obvious. Indeed, there seems to be a widely-held implicit assumption that the 'obligation dimension' (*Who and when?*) depends on the 'spatio-temporal dimension' (*Where and when?*) by virtue of the principle of sovereignty: if a source is located in the territory of a sovereign nation, then it is that nation alone who has the right and the duty to address it. In other words, it is loosely speaking assumed that to set a target for a source is to set an obligation – be it legally binding or 'merely' moral – on the 'owner' of its location to take action to meet it. Whether the principle of sovereignty does or does not imply such a restriction is a matter of customary international law; the restriction itself however is not a matter of conceptual necessity, and it is useful to keep in mind the conceptual independence between this practical dimension and the spatio-temporal – as well as the technical – one when contemplating evolutions of the FCCC mitigation regime.

Chapter 6, in particular, will sketch a palette of measures by means of which DC emissions could be targeted (QELR-Targets) without imposing DC obligations (QELROs). Such an evolution of the FCCC mitigation regime – in conjunction with additional domestic Annex I mitigation efforts – could also help in overcoming the otherwise environmentally unacceptable consequences of the earlier mentioned Target Deadlock.²⁶

Endnotes Chapter 2

¹ Oxford English Dictionary.

² 'The ultimate objective of this Convention ... is to achieve, ... stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.'[Art 2 FCCC]

³ This is not to say that other types of arguments could not equally be put forward, e.g. based on the need for addressing local pollution problems.

⁴ Given that the emission caps listed in the Kyoto Protocol refer only to certain countries and to the (first) commitment period 2008 to 2012, this characterisation of the regime's extent may be puzzling. The reason for the given characterisation is simply the fact that through the Clean Development Mechanism, the regime is (1) spatially extended beyond the Annex B region to cover the whole globe, and (2) temporally extended prior to 2008 though with the possibility of early CDM credits.

⁵ A possible exception may be the introduction of further greenhouse gases to the existing basket.

⁶ A US Senate Resolution (S.R. 98) passed in July 1997 – five months before the Kyoto Conference – stipulated that the USA should not be a signatory to any protocol to the UN FCCC which would 'mandate new commitments to limit or reduce greenhouse gas emissions for the Annex I Parties, unless the protocol... also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for Developing Country Parties within the same compliance period.'

⁷ Senator Byrd, 4 May 2001. US Congressional Record, Page: S4394.

⁸ Energy Information Agency (US Dept of Energy), *International Energy Outlook 2001, Highlights*: p.6. <u>http://www.eia.doe.gov/oiaf/</u>

⁹ See Müller *Fatally Flawed Inequity*, pp. 3ff.

¹⁰ For more on this, see again Müller Fatally Flawed Inequity, pp. 3ff.

¹¹ To give an indication as to why such aggregate (i.e. country-or region-wide) totals may not be appropriate for comparing the 'behaviour' of countries, consider the case of comparing (daily) food consumption patterns, and the hypothetical situation where for some reason or other, global food consumption (measured in Calories per day) needs to be reduced. The fact is that in this context, the group of Least Developed Countries (LDCs) has already overtaken, say, the United States in absolute terms: in 1999 the total daily food provision was 1.1 TCal (Tera Calories = 10^{15} cal) for the US and 1.3 TCal for the group of LDCs. Under aggregate comparisons, one would hence have to conclude that it would be unfair towards the US if it were asked to reduce its 'calorie intake' without putting an equal if not stronger demand on the LDCs. In light of the average American consuming almost twice as much as the average inhabitant of the LDC region – namely 3,754Cal/cap (USA) as opposed to 2098Cal/cap (LDC) – this conclusion appears absurd.

¹² Note that what is measured here is *annual emission* behaviour, which is not necessarily the same as the 'common but differentiated responsibility' referred to in the Convention. Whereas the latter can be operationalised in many different ways – such as the ones suggested in the so-called Brazilian proposal (see, for example, Niklas Höhne, 'Comparing indicators for contributions to climate change: Contribution to phase II of the "Assessment of contributions to climate change", Cologne (Germany):ECOFYS energy & environment, <u>http://www.cru.uea.ac.uk/unfccc_assessment</u>) – there are only two possible measures for a country's 'annual emission behaviour': total annual emissions or annual per capita emissions.

¹³ The EIA 'Reference Scenario' assumes a world without (meaningful) climate change measures, reflected in, say the 2010 projections for the UK and Japan of 7.5 and 27.4 percent above 1990 levels, respectively.

¹⁴ If $e_n(t)$ and E(t) are the per capita emissions of Party *n* and the World (in period *t*), respectively, then the value for period *t* (Fig. 3.1) is = $[(e_n(t) - E(t)] - [e_n(2000) - E(2000)]$. Note that this is not the only way in which such behaviour could be measured. One alternative would be to compare the behaviour at the time with that in the base period, i.e. to look at $e_n(t) - e_n(2000)$.

¹⁵ Note that to behave 'better than average' by itself still does not imply that the behaviour is sustainable. After all, the average behaviour itself may be completely unsustainable.

¹⁶ There are, of course, other possible operationalisations of this concept, such as the Brazilian proposal i.e. Niklas Höhne, 'Comparing indicators for contributions to climate change: Contribution to phase II of the "Assessment of contributions to climate change", Cologne (Germany):ECOFYS energy & environment, <u>http://www.cru.uea.ac.uk/unfccc_assessment</u>.

¹⁷ Note that a thorough analysis would have to include a justification as to why either of these averages should be used for these purposes. However, since they are the most natural candidates and since they produce very similar rankings, either of them will do for the present illustrative purposes.

¹⁸ In the course of a recent workshop in Washington DC, my view that the current US administration does not intend to contribute constructively to solving the climate change problem (because the top people do not see it as a problem, they are hardened climate sceptics) was confirmed when I asked Harlan Watson whether the current US climate change policies would be considered a failure if they failed to reduce any emissions while still achieving the intensity target, and his answer implied that this would not be the case. In other words, as long as the intensity target is met, the policies will be kept even if they have no effect on absolute emission levels at all.

¹⁹ Note that since there may be different ways in which compliance can be achieved, this limit is not uniquely defined.

²⁰ For more on this distinction, see the section on 'Harmonising Types of Justice: Emission Allocations vs. Burden Distribution' in Benito Müller, 'Varieties of Distributive Justice in Climate Change' *Climatic Change*, 48:273–88, 2001.

²¹ Vajpayee, Atal Bihari (2002), Speech of Prime Minister Shri Atal Bihari Vajpayee at the High Level Segment of the Eighth Session of Conference of the Parties to the UN Framework Convention on Climate Change, New Delhi - 30 October, 2002, <u>http://unfccc.int/cop8/latest/ind_pm3010.pdf</u>

²² Witness the following passage from a recent (draft) Interim Report by an agency in Japan's METI which clearly regards having surplus permits as being unfair to others:

'In the negotiations up to the COP3, Japan, the U.S., Canada, Australia, etc., had continued to oppose the idea of the EU Bubble because: "the relations of commitments between EU and member countries are ambiguous; there are concerns about the transparency in the case where EU decides or changes the sharing of commitments with its member countries regarding the numerical targets and; allowing only a part of EU countries to increase their emissions by a wide margin lacks equity and impairs the motivation of developing countries to address the reductions in their emissions."

Moreover, EU's expansion scheduled in 2004 means that many of East European countries that have a large amount of surplus allowances would be integrated into EU. During the first commitment period, the scope of the EU Bubble is firmly limited to the present 15 countries and not allowed to expand. But, in considering the framework in and after 2013, the factor of these new member countries will have to be taken into account, too. The emissions of the ten new member countries are shown in Table 3 on the next page. If the EU Bubble that incorporates these countries is allowed, EU will gain a more advantageous factor under the future framework.'[p.29 in METI (2003), *Perspectives and Actions to Construct a Future Sustainable Framework on Climate Change*, Interim Report (Draft) by Global Environmental Subcommittee of the Environmental Committee of the Industrial Structure Council, June 2003, www.meti.go.jp/english/information/data/cPubComCliChae.html]

²³ See, for example, Benito Müller (2001), 'Varieties of Distributive Justice in Climate Change', *Climatic Change* (vol. 48, no. 2–3) February.

²⁴ See, for example, Aubrey Meyer (2000), *Contraction & Convergence: The Global Solution to Climate Change*, Schumacher Briefings No. 5 Dartington (UK): Green Books Ltd.

²⁵ For analyses of these and other allocation schemes, see for example, ·M.G.J. den Elzen, M.M. Berk, P. Lucas, B. Eickhout, D.P. van Vuuren (forthcoming 2003), 'Exploring Climate Regimes for Differentiation of Commitments to Achieve the EU Climate Target', RIVM Report 728001023/2003, Bilthoven: RIVM

'Benito Müller proposed a global compromise set of quotas under which each country is given an allocation between their present use and a per capita entitlement. This would reduce the cost of lowering global emissions and still permit many developing countries to benefit from selling their surplus rights.'

[http://www.publications.parliament.uk/pa/cm200102/cmselect/cmintdev/519/51907.htm#a32]

²⁶ Note also that Prime Minister Vajpayee's concern that 'Climate change mitigation will bring additional strain to the already fragile economies of the developing countries, and will affect our efforts to achieve higher GDP growth rates to eradicate poverty speedily' is only justified if it is assumed that the burden of mitigation emissions in DC is to be carried by DC.

PART II

REALITIES

The prospects for beginning a discussion on developing a global regime to address climate change in the post-2012 period appear bleak. COP8 at Delhi saw a new level of distrust between developed and developing countries, with negotiators finding themselves on the hopelessly simplistic negotiating see-saw of adaptation (a mostly Southern priority) versus mitigation (a mainly Northern one). Some Parties did their best to break through the paradigms – the EU, Canada, some AOSIS, Latin American and African representatives – but to no avail. With the US out of the Kyoto Protocol, the scope for developing a viable global regime post-2012 becomes all the more questionable, particularly given the Bush Administration's resolve not to review their stance prior to that date.

To move forward, it is critical that climate change be approached in its entirety – issues related to vulnerability, impacts, development, trade, adaptation and mitigation will *all* have to be discussed. And the discussions will need to encompass a huge diversity of views and constraints on the various Parties. Part II of this study explores in three chapters the relevant key realities. In Chapter 3, Michael Grubb and John Drexhage describe the realities relating to industrialised countries. The other two chapters, by the lead author, explain the developing country realities and analyse certain key issues in the 'North-South' divide that pervade the international discussion.

3. Realities of Annex I (Industrialised Countries)^a

3.1 Annex II Kyoto non-Parties

One issue on which all developed countries (here defined as the OECD and other more wealthy industrialised countries that take on financial obligations under Annex II of the Convention) formally agreed is their responsibility to assume leadership: the Framework Convention clearly requires developed countries to take the lead in developing domestic policies and measures that will show real and significant reductions in greenhouse gas emissions. They also see it as imperative that in making those reductions, countries' economies must continue to grow.

While most Annex II Parties – but not the US – regard establishing an effective global regime on climate change as a policy priority, each country carries its own sensitivities and hence preferences. One of the most prominent themes from the perspective of many OECD countries concerns the need to seek stronger action from developing countries, on the grounds of both environmental effectiveness and cost/equity-related competitiveness concerns (see Part I). The emphasis on this has been particularly strong in those countries that have refused to ratify the Kyoto Protocol. Yet, as most of the Annex II countries are not currently on track to fulfil their leadership obligations, it is difficult to see how developing countries could be persuaded to take stronger action without the pre-requisite domestic action in Annex II.

United States perspectives are covered in detail in Brewer (2003).^b US efforts to press for stronger developing country action was a core feature of the negotiations throughout the 1990s, and was initially a key reason cited by George W. Bush for rejecting Kyoto. However, recent developments have placed more emphasis on economic factors: at Delhi the US implied the main reason why it will not ratify the

^a By John Drexhage and Michael Grubb.

^b Tom Brewer, *US Engagement on Climate Change Issues: Determinants and Prospects*, June 2003 http://www.iccept.ic.ac.uk/a5-1.html.

Protocol is that Kyoto-type binding commitments would be bad for the US economy. The fact that developing countries have so far not taken on targets was portrayed as a merely factual observation rather than a reason for refusing to ratify, intimating that even if developing countries did take on targets, the US would still feel under no compulsion to do so themselves.

Australia, partly for reasons related to its trade profile and partly for internal political reasons has allied itself to the US position, particularly since the Bush Administration came to power. The government has refused to ratify the Kyoto Protocol - whilst saying that it does aim to achieve its Kyoto target. The Kyoto rejection reflects the 'hard core' of Australian industry that has strong influence with PM Howard's cabinet, as well as Howard's international political outlook; amongst other arguments, there is emphasis upon the lack of developing country commitments and Australia's unique exposure to Asian competitors outside the Kyoto commitments. However the promise to meet the target anyway reflects the strong influence of environmental concerns in the general population and the impossibility of being seen as doing nothing. At the very least, Australia insists, it cannot support ratification until such time that developing countries agree to begin discussions on what their future commitments might look like. However, the result arguably places Australia in the worst position possible, since it takes on the commitment but excludes itself from the emerging Kyoto market. This inconsistency reflects the potential instability of the Australian position, and recently the centre ground of Australian industry has called for ratification.

3.2 Annex II Kyoto Parties

Japan found itself under much the same sorts of pressures from its industry as its former Umbrella Group colleagues – and prior to ratification, they appeared to be having an effect. Japan made a number of clear statements linking ratification with developing country engagement. However, since ratification, the tone, if not necessarily the substance has changed appreciably. While the issue remains very much a priority for Japanese negotiators for COP9 and beyond, it also likely that they are willing to address the issue in a more holistic manner – open to considering how adaptation and technology transfer could be usefully addressed as a way of moving forward. Japan also has particular difficulties relating to the stance of much of its industry on the distinction between legally binding and aspirational targets.

Canada, continues to have its own set of problems, particularly after the Bush Administration's decision not to support the Protocol. Pressure remains internally from industry and central government agencies to address the issue of developing country engagement as expeditiously as possible, not least because, in the view of many Canadians, the US will not play a constructive role in the process until major developing countries, in particular, China, India, Brazil and the members of OPEC, begin to take on targets.

Despite these difficult circumstances, Canada's international orientation leads it to play a fairly constructive role in the debate on global engagement. It was among the first strongly to support adaptation decisions in the UNFCCC negotiations and has already explicitly acknowledged its support for a negotiating architecture that recognises adaptation and mitigation as two pillars for the future negotiations. For example, future development paths and adaptation capacity will clearly need to be identified and addressed for an effective future global climate change regime. The *European Union* – given its role in 2001–2 and the US withdrawal – is currently the main driving force behind the Kyoto regime: a key determinant will thus be the EU's own capacity to carry this forward. Analysts had earlier pointed out the weakness of the EU in respect of leadership, particularly concerning instrumental leadership (the kind of leadership required for the diplomatic aspects of regime design, development, and consensus-building).^a The EU had a poor record in this respect, having often adopted and clung to positions that were inflexible and based on a poor understanding of other countries' conditions, leading to numerous examples of the EU expending enormous time and energy on unworkable proposals.^b This in turn fostered and strengthened opposing coalitions (most notably the Umbrella Group), and its often uncompromising approach unquestionably helped to breed the conditions that culminated with the collapse of negotiations at The Hague in 2000.

The reasons for this are partly the enormous energy absorbed in the EU internal efforts to secure common positions. The remarkable successes in 2001–2 suggested that the EU might have learnt its lessons from the Hague and addressed its negotiating problems. However, this is doubtful in light of its stance at Delhi where it sought to push the issue of developing country commitments in part because of a belief that this was an essential prerequisite to getting the US back on board. In the event it became clear that the US would anyway not be persuaded by this; whilst developing countries were steadfast in their refusal to countenance such a fundamentally inequitable ordering of priorities. The result – which a deeper understanding of other Parties could easily have predicted – was a further alienation of both constituencies by the EU, with the resulting impasse observed. Also, at no time up to Delhi did the EU display much understanding of the fundamental importance of, and tenuous nature of, Canada's participation in Kyoto. The EU's continuing instrumental weakness thus appears to be a reality which must be seriously addressed as a component of moving the regime forward.

On the issue of developing country engagement, the EU continues to press the point that entering into discussions on the post-Kyoto period is in no way intended to prejudge the direction of mitigation commitments and by whom they are made. Instead, it simply tries to point out that it is time to begin a dialogue on how to prepare for the future so that we have a basis for discussions in 2005 as called for under the Protocol.

Within Europe, Germany, the UK and Denmark have been the most persistent on the issue of post-2012 commitments, while the Swedes and the French appear to be more relaxed about the possible timing and nature of developing country engagement. There are also many countries, particularly the cohesion states, which don't appear to have strong views one way or another and so are satisfied to let others take the lead.

At this stage most Annex II Parties agree that the discussion on a regime post 2012 cannot take real effect until the Protocol itself is finally in force. At that point, there may be regenerated efforts at developing a common basis for beginning discussions. We also believe that to raise the issue of liability would carry huge negative consequences both for the prospects and timing of a global Kyoto decision. OECD

^a The EU is at least potentially stronger regarding other forms of leadership. Gupta and Grubb (2000) explore the three different modes of leadership – instrumental, structural, and directional – and the functioning and potential of the EU in respect of each of these.

^b For example, regarding global carbon tax proposals and long lists of other proposed Policies and Measures; 'concrete ceilings' on trading; and many aspects of CDM design.

countries simply do not regard it as a legitimate negotiating issue.^a Adaptation, yes; vulnerability, yes; but liability is simply too politically loaded to be of any real use to negotiators.^b

3.3 Economies in Transition

The EITs are a diverse set of countries with a few common characteristics: they all experienced during the 1990s difficult and often traumatic transitions from centrally planned towards market economies; their emissions (with the sole exception of Slovenia) declined to well below their Kyoto first commitment period allowances, giving them potential surplus to sell; and most played a relatively small or quiescent role in the negotiations during the 1990s, treating climate change as a minor issue – a stance that started to change rapidly from the late 1990s onwards.

The majority of EITs, numerically speaking, are those in central and eastern Europe that are expecting to join the EU in 2004 or shortly thereafter. Their core interest now centres around the European emissions trading system, and their international stance is likely to be increasingly aligned with the existing EU in support of the Kyoto process. However, they are likely to be relatively more resistant to encouraging use of the CDM, and in particular may resist lax interpretations of additionality in the CDM, which would tend to be a direct competitor to JI and reduce the international carbon price. There may also be complex dynamics with respect to emissions trading (e.g. within the European sphere, where they would be prime sellers, as compared to general international trading) and rules for JI *vis-à-vis* the CDM and trading.

Russia and Ukraine dominate the economic and emission allowances 'weight' of the EITs. As of mid-2003, Ukraine is in the process of ratifying Kyoto, but the ongoing delay in Russia points to the internal complexities of that country. Its hesitance reflects a complex set of issues, with which the global regime will have to contend for many years beyond the ratification decision:

- a belief that Russia was never taken as seriously in the negotiating process as should have been accorded to the world's former 'other superpower' a status it seeks ultimately to regain in some form;
- an ambiguous attitude to the UN, split between recognition of the value of multilateral institutions against a 'unilateralist sovereignty' approach sceptical of the constraints of multilateral agreements in principle and their intrusion upon sovereign concerns (including the transparency requirements attitudes which also make Russia strongly resistant to being pushed into ratification by external pressures;
- a sense of having been cheated by the US withdrawal, compared to an original impression that Kyoto would offer a partial compensation for Russia's traumatic economic collapse;
- a low profile given to climate issues since the US withdrawal, reflecting that Russia still does not recognise climate change as a major geopolitical issue, and is also ambiguous about how severe a threat climate change really poses to a large, cold country like Russia.

The direct economic issues are reflected in Grubb (2003),^c which does illustrate a continuing Russian interest in Kyoto, albeit one slow to mature. But the broader

^a While recognising that a number of smaller states are considering taking large emitters to court, this is an issue of pro forma jurisprudence and we are not aware of any Party wishing to raise it as an issue for resolution in the negotiations.

^b For ways of addressing climate impacts without raising liability see Part III.

^c Michael Grubb, 'The real-world economics of the Kyoto-Marrakech system,' June 2003, www.iccept.ic.ac.uk

factors sketched illustrate an enduring feature with which the global regime will have to contend, namely a Russian belief that Kyoto is only potentially worth it for Russia in terms of economic gains, and is primarily about deals between major powers – attitudes which unavoidably make for tension with developing countries, whose interests almost directly oppose those of Russia.
4. Realities of non-Annex I (Developing Countries)

The aim of this chapter is to draw an analytic sketch of the realities that determine the role of non-Annex I ('developing', 'non-industrialised', 'Southern') Parties and coalitions in the FCCC negotiations, with a focus on their negotiating capacity. For this purpose we distinguish between 'political' and 'procedural' realities.

The *political realities* in question are: *coalitions, positions* (on issues), and *power relations*. The first two of these realities are relatively simple to describe, which cannot be said of the last one. While there can be no doubt that the personal skills of negotiators are of great importance in determining these power relations (*'political negotiating capacities'*), there are other, less subjective determinants – such as the population represented, the number of member countries (in case of coalitions), the wealth, and economic power – which our description will focus on.

Probably the least problematic aspect of discussing this political negotiating capacity is its intimate relation to – indeed dependency on – its procedural correlate, i.e. the capacity to form and evaluate positions and participate in the negotiation procedures. Chasek and Rajamani have correctly argued that 'broader and deeper participation of developing countries in multilateral negotiations ... would [not only] further the development of poor countries but that it is a necessity, not a charitable act, if there is to be firm consensus on global issues and strong commitment of all parties to the agreements reached. Yet the [procedural] negotiating capacity of developing countries is already stretched to the limit.^a

The second half of the chapter is therefore used to give a descriptive sketch of the *procedural (negotiating) capacity* of non-Annex I countries, both in its '*direct*' form as determined by issues such as delegation size and institutional memory of delegations, and in its '*indirect*' form, given by factors such as the domestic analytic capacity to form and evaluate relevant positions and policies. Anticipating the conclusion of Chapter 7 that the group of Least Developed Countries (LDCs) stands to benefit most from procedural capacity building, the focus here is on this group.

4.1 Political Realities: Coalitions and Positions

The Broad Coalition. Faced with the mentioned procedural handicaps, developing countries in multilateral negotiations have traditionally resorted to the strategy of coalition building, of 'finding strength in numbers'. In the United Nations context, the main coalition that emerged for the purpose of addressing the common development interests of non-industrialised countries is the broad coalition called Group of 77 and China (G77+China), whose membership has risen since 1964 from 77 to 134 UN members. If there is communality of interests, a broad coalition of this size can be remarkably successful, as witnessed in the negotiations concerning 'common but differentiated responsibilities', and 'right to sustainable development.'¹ The significant growth of the G77+China membership since its formation is testimony to the attraction of this broad developing country coalition, but it also increases its frailty: an increase in numbers may be an increase in strength, but only if 'the numbers pull in the same direction' – i.e. if a strong coincidence of interests is retained.

^a Chasek, Pamela and Lavanya Rajamani (2003), 'Steps toward Enhanced Parity: Negotiating Capacity and Strategies of Developing Countries', in Inge Kaul *et al.* (eds), *Providing Global Public Goods: Managing Globalization*, Oxford: OUP, for UNDP:245.

Narrow Coalitions. In the climate change context, the G77+China has been put under particular strain due to diametrically opposed interests within the coalition.² As Chasek and Rajamani put it:

At one end of the ideological spectrum lie the small island states and countries with low-lying coastal areas. These countries, members of the Alliance of Small Island States (AOSIS), are particularly vulnerable to climate change because a rise in sea level could destroy or render uninhabitable all or part of their territory. They have therefore endeavored to act as the "global conscience" in the negotiations on climate change. At the other end of the spectrum lie the members of the Organization of Petroleum Exporting Countries (OPEC), which stand to lose substantial revenue from measures to avert climate change. A common G-77 position has to take all these interests into account.^a

The third officially recognised country grouping within $G77+China^{3,4}$ – the group of Least Developed Countries (LDCs) – does not appear in this account, indeed Chasek and Rajamani only allude to it once in passing,⁵ a fact which may well reflect a lack of bargaining power/negotiating capacity of that group.

Positions

Environmental Integrity Group (EIG). Manuel Estrada, Climate Change Director at the Ministry of Environment and Natural Resources of Mexico – itself a leading Party in the EIG – recently summarised the 'likely preconditions for further action by Advanced Developing Countries'^b in the following five points:

- Demonstrable progress by all Annex I countries in terms of emissions reductions and technology/resources transfer
- Participation by all Annex I countries
- Recognition for actions already undertaken by developing countries
- Flexible/voluntary approaches/timeframes to Limit Emissions no absolute emissions caps
- Effective transfer/promotion of clean development alternatives in *all* sectors through the CDM during the first commitment period.

G77+China. As chair, Venezuela expressed the view of the group⁶ on additional developing country commitments. Having noted that most Annex II countries have not returned their emissions to 1990 levels and that the Kyoto Protocol is still not in force, Venezuela stated in the initial round of the Ministerial Round Table that,

it would be totally absurd to start talking about what might happen after the entry into force of the Kyoto Protocol, after the conclusion of the first commitment period. It is as if we were talking about the third or fourth obstacle in a race when we have not even gone over the first or the second one. So we have to respect the Berlin Mandate. The delegation of Venezuela strongly supports the position of G77 and China that we do not wish to hold any dialogue in which we talk about new commitments by developing countries in this session of the COP.^c

In the concluding Round, this sentiment was re-iterated in no uncertain terms:

^a Chasek and Rajamani (2003):254.

^b Presented (by Andres Akerberg) at The Royal Institute of International Affairs and Climate Strategies Conference on *Climate Policy for the Longer Term: From here to where?* London: RIIA, November 2002.

^c Venezuela, Ministerial Round Tables, 1st Round, 30 October 2002 (from FCCC Webcast, simultaneous translation)

Mr President, I speak on behalf of the Group of 77 and China when I reaffirm that our Group will not be held hostage. The way to progress in achieving sustainable development consists in compliance by Annex I countries with their obligations under the Convention and the Marrakech Accords to transfer resources for adaptation, capacity building and the transfer of technology. [...] We specifically and clearly refuse to open at this time any dialogue or process or indeed any wording that could be in any way interpreted as accepting to open discussions on new commitments on non-Annex I countries.^a

China's position, as expressed in the intervention at the first round table, was that the Convention, and particularly the principle of common but differentiated responsibility, have to be adhered to, that Annex II countries have largely failed to deliver their mitigation commitment under the Convention (i.e. return to 1990 levels by 2000), and that adaptation has hitherto not been given adequate attention which is why the focus of future negotiations regarding DC involvement must be to help developing countries increase their adaptive capacities.

India's stance, as host of COP8, was forcefully summarised in Prime Minister Vajpayee's High Level Segment opening address:

India's contribution – indeed, the contribution of all the developing countries – to greenhouse gas concentrations in the atmosphere is very little, compared to that of the industrialized countries. This will be the case for several decades to come. Tragically, however, developing countries will bear a disproportionate burden of the adverse impacts of climate change. Hence, it follows that there is a need to pay adequate attention to the concerns of developing countries on vulnerability and adaptation issues in the Convention process.

Food and nutritional well being are priority issues for all of us. Agricultural sustainability is one of the key areas related to adaptation. Water conservation is another. Weather-related economic losses and deaths have grown significantly over the last few decades. There is a need for strengthening the capacity of developing countries in coping with extreme weather events, which are increasing in frequency and severity due to climate change.

There have been suggestions recently that a process should commence to enhance commitments of developing countries on mitigating climate change beyond that included in the Convention. This suggestion is misplaced for several reasons.

- First, our per capita Green House Gas emissions are only a fraction of the world average, and an order of magnitude below that of many developed countries. This situation will not change for several decades to come. We do not believe that the ethos of democracy can support any norm other than equal per capita rights to global environmental resources.
- Second, our per capita incomes are again a small fraction of those in industrialized countries. Developing countries do not have adequate resources to meet their basic human needs. Climate change mitigation will bring additional strain to the already fragile economies of the developing countries, and will affect our efforts to achieve higher GDP growth rates to eradicate poverty speedily.
- Third, the GHG intensity of our economies at purchasing power parity is low and, in any case, not higher than that of industrialized countries. Thus, the

^a Venezuela, on behalf of G77+China, 3rd Session of Ministerial Round Tables.

assertion that developing countries generate GHG emissions, which are unnecessary for their economies, is not based on facts.^a

Brazil. The discussion about the future has as a fundamental starting point the entry into force of the Kyoto Protocol and the fulfilling of targets and commitments by Annex I countries. [...] The provisions of UNFCCC, the Kyoto Protocol, and the Marrakech Accords give practical sense to the principle of common but differentiated responsibilities by establishing emission reductions for Annex I parties and by recognising that the first and overriding priority for developing countries is poverty eradication and economic and social development, as established in Article 4.7 of the Convention. The discussion on the future of the international regime on climate change must include an evaluation of the capacity of developing countries to face the risks posed by climate change. Therefore measures relating to the vulnerability and adaptation, in particular concrete measures to enhance national capacities, to provide financial resources, and to transfer technologies should be highlighted. It is not possible to discuss commitments for the second period without a previous solution to methodological challenges within SBSTA, including through the consideration of the Brazilian proposal tabled during COP3 for assigning historical responsibilities for anthropogenic contributions to the increase of the planet's temperature.^b

Group of Least Developed Countries (LDC). LDCs did not make a group statement during the Ministerial Round Tables. As holder of the presidency of the group of African environment ministers – and given its avowed leadership in international environmental negotiations⁷ – Uganda seems to be a reasonable candidate for reflecting the LDC views. During the first session of the Ministerial Round Tables at COP8, Uganda stressed the need for the Kyoto Protocol to come into force and it cited the UK as an example that it is possible to cut emissions without suffering economic decline. It then went on to impress that 'the commitments on adaptation measures, transfer of technology and capacity building by the Annex I countries fall far below what would be expected. And we from the developing countries [...] want to call upon the developed countries to be more committed in fulfilling commitments that are supposed to be provided by them.'

AOSIS. As concerns the issue of DC mitigation commitments, the *Alliance of Small Island States* does seem to be at odds with the position of G77+China and its key members when it demands that 'we should ensure that all countries commit to take action against climate change and we believe that the Kyoto Protocol is the appropriate process that will bring about effective collaborative action to address climate change. [...] We should find effective and equitable means whereby all countries can take action to mitigate greenhouse gas emissions.^{20,8}

The Organization of the Petroleum Exporting Countries (OPEC) reminded the COP 'of the need to [implement the Kyoto Protocol] in a way which avoids a net detrimental impact on fossil fuel producers — in accordance with Article 4.8 of the Framework Convention and Articles 2.3 and 3.14 of the Kyoto Protocol.'^d Indeed, one of the main achievements at COP8 overall was the strengthening of the linkage

^b Brazil, First Session of Ministerial Round Tables

^d OPEC Statement to the High-level Segment of COP8,

^a Vajpayee, Atal Bihari (2002), Speech of Prime Minister Shri Atal Bihari Vajpayee at the High Level Segment of the Eighth Session of Conference of the Parties to the UN Framework Convention on Climate Change, New Delhi, 30 October 2002, <u>http://unfccc.int/cop8/latest/ind_pm3010.pdf</u>

^c Tonga on behalf of AOSIS, Ministerial Round Tables, 1st Round, 30 October 2002

http://www.opec.org/NewsInfo/COP_Statements/ COP8_2001.htm.

between this issue of 'adverse impacts of response measures' with other issues, such as adaptation and climate impacts^{9,10} accomplished by Saudi Arabia, a key OPEC member. The Gulf Corporation Council (GCC) – although not itself a recognised FCCC grouping – is a sub-coalition of OPEC with a key role in the organisation's FCCC negotiations (and beyond). A leading GCC member recently hosted a conference that led to a statement (the 'Abu Dhabi Declaration on Environment and Energy'^a) which is of importance in the present context. Apart from some apparent internal inconsistencies – affirming scepticism about climate change,¹¹ on the one hand, and asking for increased assistance for adaptation,¹² on the other – the Declaration coherently re-affirms well-known OPEC positions, such as the rejection of DC commitments,¹³ and the need to minimise adverse effects of response measures.¹⁴ Rather unusual for recent times is the non-euphemistic demand for *compensation* from industrialised countries for loss of oil revenues.^{15,16}

^a http://www.erwda.gov.ae/eng/pages/resources/documents/Abu_Dhabi_Declaration_FINAL.doc

4.2 Political Negotiating Capacity: A Numerical Analysis

The number of Parties united behind a negotiating position – its 'share of the sovereign vote', as it were – is without doubt of importance. And yet, when it comes to negotiating capacity – i.e. the ability to put forward positions (procedural capacity) and the 'clout' to see them through (political capacity) – not all numbers are equal. The share of the vote – particularly in consensus-based bargaining situations – is only one of a number of factors that determine these capacities. In this context it is illuminating to consider some¹⁷ of the 'objective' parameters that are likely to have an influence in determining (relative) negotiating capacities – namely

- sovereign strength (the share of 'votes' within the group)
- representational strength (the share of the group-population)
- economic clout (the share in the group's economic wealth)
- analytic capacity (reflecting the ability to carry out or fund analytic work)

The epithet 'objective' is used here simply to distinguish these determinants from the more subjective factors that also determine the negotiating capacity of a country, in particular the negotiating skills of the individual members of its delegation.¹⁸ Unlike these subjective factors, it is quite straightforward (see below) to quantify their objective counterparts, which in turn allows for the construction of simple numerical (index number) models.

An Index Number Model: Why and How? Anecdotal evidence by the protagonists and their intuitions are, no doubt, crucial to any analysis of these subjective factors and they may also be the only way of testing the adequacy of such numerical models based on the 'objective' ones. Where intuition – let alone anecdotal evidence – is not helpful is in evaluating future scenarios that do not rely on any particular individuals from the present. Or, put differently, in decision contexts where options need to be evaluated that cannot sensibly rely on assumptions about the particular characteristics of delegation members we referred to as 'subjective' factors.

One such context is that of deciding where and how to build negotiating capacity. If the country chosen for capacity building happens to have particularly talented negotiators, all the better. But having such a delegation cannot be a criterion in deciding who should benefit from capacity building. This decision, if it is to have a lasting effect, must be made on the assumption of averagely talented delegations and rely on less subjective decision parameters, such as the ones in our (incomplete!) list of 'objective' factors.

This section introduces a very simple index number model of (political) negotiating capacity based on these more objective factors, to be used mainly in Chapter 7 concerning the 'Options for Building Procedural Capacities'. Whether or not the index number model proposed here is adequate for this purpose will have to remain open for future investigation. However, it is hoped that the usefulness of such a modelling exercise will become clear from the applications in Chapter 7.

The Model. Table 4.1 lists values of these parameters for the FCCC as a whole, for the FCCC Parties in G77+China, and in OPEC, respectively. The measurement of membership and population shares is self-evident. Economic clout (within the relevant grouping) is more controversial. For the present purposes, the arithmetic average between constant price (1995\$) and purchasing power parity GDP measures will have to suffice. As measure for analytic capacities we have chosen a GDP/capita Index, specified as the members' per capita (average) GDP divided by that of the

Table 4.1: FCCC Coalition and Group Characteristics										
			Demo-		GDP	Ь	Analytic	Economic	CO.	Round
	Member-	Popu-	cratic			1	Capacity	Capacity	Emis-	Table
	ship "	lation ^v	Capacity	1995\$	S PPP	Aver-	Index ^a	Index ^e	sions ^b	Inter-
			Index ^{0, e}			uge	(ACI)	(ECI)		ventions"
			FC	<i>CCC</i> (f	or mor	e see 20				
Annex II	12%	14%	0.13	76%	53%	65%	4.5	1.7	43%	25%
USA	0.5%	5%	0.02	26%	21%	24%	5.0	1.1	22%	1.1%
EU	8%	6%	0.07	28%	20%	24%	3.8	1.0	12%	16%
G77+China	69%	74%	0.71	15%	34%	25%	0.3	0.3	34%	62%
EIG	2%	3%	0.02	3%	4%	4%	1.5	0.2	3%	3%
FCCC	100%	100%	1.00	100%	100%	100%	1.0	1.0	100%	100%
FCCC G77+China										
Brazil	0.8%	4%	0.02	15%	9%	12%	2.8	0.58	4%	4%
China	0.8%	29%	0.05	18%	31%	25%	1.0	0.49	40%	4%
OPEC	8%	11%	0.09	14%	12%	13%	1.2	0.38	16%	17%
India	0.8%	22%	0.04	9%	15%	12%	0.6	0.27	13%	4%
AOSIS	26% ^f	1%	0.05	3%	1%	2%	1.9	0.20	2%	18%
LDC	36% ^f	14%	0.22	3%	4%	3%	0.3	0.10	1%	28%
G77+China	100%	100%	1.00	100%	100%	100%	1.0	1.0	100%	100%
FCCC OPEC										
GCC ^g	44%	5%	0.15	34%	19%	26%	4.53	1.1	35%	55%
Saudi Arabia	11%	4%	0.07	20%	13%	17%	3.7	0.8	21%	22%
Indonesia	11%	45%	0.22	30%	36%	33%	0.8	0.5	18%	11%
Iran	11%	15%	0.13	15%	21%	18%	1.3	0.5	22%	11%
Venezuela	11%	5%	0.08	12%	9%	11%	1.9	0.5	12%	0% ^h
Algeria	11%	6%	0.08	7%	9%	8%	1.3	0.3	8%	11%
Nigeria	11%	24%	0.16	5%	6%	5%	0.2	0.1	6%	11%
OPEC	100%	100%	1.00	100%	100%	100%	1.0	1.0	100%	100%

whole group, noting that other measures, such as UNDP's Human Development Indicators might equally be chosen to serve this purpose.¹⁹

Data Sources: WRI Earthtrends (http://earthtrends.wri.org) and http://maindb.unfccc.int/webcast/ (interventions)

^{a)} 2003. ^{b)} 1998. ^{c)} (membership share × population share)^½.

^{d)} Per capita Average-GDP relative to Group average. ^{e)} (Average-GDP share \times GDP/cap Index)^{1/2}.

^{f)} Not all members also in G77+China.

^{g)} Gulf Cooperation Council OPEC members: Saudi Arabia, Kuwait, Qatar, UEA (<u>http://www.gcc-sg.org/</u>).

^{h)} Venezuela's two interventions were as Chair of G77+China.

Democratic Capacity. If the outcomes of the negotiations were determined by voting, the sovereign strength of a grouping – its (potential²¹) share of the vote – would arguably be the key determinant of the ability to have one's position accepted. In such a 'sovereign world,' G77+China would have the strength of an absolute majority in the overall negotiations, while a coalition between AOSIS and LDCs would have the same power within G77+China. Yet, as things are, decisions are not taken in this manner but are based on consensus processes, and other factors than this 'sovereign ability' – the ability to muster a certain number of sovereign voices behind one's position – may be of equal, indeed greater strength in determining political negotiating capacities.

One such factor – related to this 'sovereign ability' – is the (moral) clout of 'representational' or 'popular' strength. The opinions of more populous groups and Parties in fairness ought to, and often do, carry additional strength over those of the less populous ones. In terms of this representational strength, G77+China dominates

the overall picture even more than in the purely sovereign case. The main difference occurs within the two sub-groups considered: with respect to popular representation, the strongest (most populous) Parties within G77+China are China (29%), followed by India (22%) and LDC (14%), while in OPEC it is Indonesia (45%), followed by Nigeria (24%) and Iran (15%).

Both of these demographic factors are, as it were, imbued with "democratic legitimacy," as reflected in two-chamber voting systems with a sovereign vote and a popular vote. The third column in Table 4.1 features a combined 'Democratic Capacity Index' (*DCI*) – the geometric mean of the two factors²² – indicating, in a sense, the potential strength that coalitions and Parties *ought* to have according to the principles of democracy. Not surprisingly, a unified G77+China would have by far the most clout in the overall FCCC context, while the LDCs – equal in overall 'democratic capacity' to Annex II²³ – would be the strongest player within G77+China, and Indonesia within OPEC. It would no doubt be wrong to say that none of the FCCC negotiation has ever reflected these democratic negotiating capacities in their outcomes. But anecdotal evidence suggests that this is not generally the case, which is why other parameters need to be considered as (general) key determinants of the negotiating capacities in these other and (unfortunately) more frequent contexts.

Economic Capacity. For the sake of simplicity - as required for this type of expository analysis - we have chosen to consider two economic measures for this purpose:

- (a) for procedural capacities i.e. for the (domestic) analytic ability and the (domestic) ability to pay for analytic work, the level of economic wealth measured in per capita GDP terms, and
- (b) for the economic 'clout' within the group in question, the shares in group GDP, as a proxy for the ability to exert direct or indirect economic pressure in favour of one's position.

Table 4.2: FCCC. EIG and its Members, with and without Analytic Capacity Building (ACB)									
	Demo-					Analytic	Economic	ECI Change	
	Member ship	-Popu- lation	cratic Capacity Index	DCI Change	age GDP	Capacity Index (ACI)	Capacity Index (ECI)	without ACB	with ACB
Switzerland	0.5%	0.2%	0.003	+615%	0.6%	4.18	0.16	+45%	+142%
South Korea	0.5%	0.8%	0.006	+213%	1.6%	2.10	0.19	+28%	+114%
Mexico	0.5%	1.6%	0.009	+117%	1.5%	0.95	0.12	+99%	+233%
EIG	1.6%	2.6%	0.020		3.8%	1.49	0.24		
EIG with ACB	1.6%	2.6%	0.020	0%	3.8%	4.18	0.40		+67%
^{a)} Analytic capacity building modelled by using the highest ACI in the group for the group.									

On its own, neither of these parameters is likely to reflect the pre-analytic (anecdotal) picture of negotiating capacities. Take, on the one hand, Switzerland. Even though it has an FCCC Analytic Capacity Index of 4.18 (see Table 4.2), greater than that of the EU, it still lacks the EU's economic negotiating capacity. This is arguably because the EU's share in the FCCC (average) GDP is almost 40 times larger. G77+China, on the other hand, does not generally have the negotiating capacity of the USA or the EU, even though their (average) GDP shares are roughly equal (Table 4.1). To combine both the measure for economic wealth and economic clout, a joint 'Economic

Capacity Index' (ECI) is defined as the geometric mean of the two component parameters.

By entering a coalition – known as 'Environmental Integrity Group' EIG – with Mexico and South Korea, Switzerland improved the relevant Economic Capacity Index from 0.16 to 0.24 (+45%), and (possibly more importantly) the Democratic Capacity Index from 0.003 to 0.02 (on a par with the US). However, by way of capacity transfer, Switzerland could – according to this admittedly very simple



model²⁴ – increase the economic capacity of the EIG by two-thirds, and boost its own coalition capacity gain from 45% to 142% (see Table 4.2).

Negotiating Capacity. The issue of negotiating capacity building – particularly for DC coalitions - will be taken up in Chapter 7. To conclude the present analytic sketch of political negotiating capacities, let us consider a simple proposal for representing the fact that generally, negotiating capacities will not be determined exclusively by either democratic or economic factors, but rather by 'mixtures' of both. The most straightforward representation of such mixtures in our simple model is by way of weighted geometric means of the democratic and economic indices (say DCI_{μ} and ECI_k , respectively), i.e. by defining a Negotiating Capacity Index (NCI) of entity k as: $NCI_{k}(p) =_{df} DCI_{k}^{p} \times ECI_{k}^{(1-p)}$, where p is the 'percentage' of democratic capacity in the 'mixture'.²⁵

Figure 4.1 shows the changes in the negotiating capacity ranking as represented by this mixed index under different mixtures. Assuming a general bias towards economic capacities, say as represented by $n_k(75\%)$ – i.e the mixture of one quarter democratic and three quarters economic capacity (see Box A, Fig. 4.1) – we find China and OPEC practically on a par on the top rung, followed by Brazil as close third while India, AOSIS and LDC follow at some distance, which

seems to conform to anecdotal evidence from the G77+China negotiations at COP8, particularly with respect to the strength of OPEC.^{26,27}

4.3 Procedural Realities^a

An understanding of the political realities of non-Annex I and, for that matter, of the wider global realities (Chapter 5) is impossible without explicit reference to the procedural realities of non-Annex I Parties and their coalitions in the FCCC negotiations. The problem – as identified by Chasek and Rajamani on a more general level – is that

More often than not developing countries today enter multilateral negotiations at a disadvantage. They are either underrepresented or unrepresented in a number of international fora. This can result in agreements and regimes that do not fully reflect the policy priorities of developing countries. As a consequence there have been numerous calls for broader and deeper participation of developing countries in multilateral negotiations.^a

Stage 1	Purpose	Role of Negotiators	
		J	Who has the power?
Issue definition	 To bring the issue to the attention of the international community To reach general agreement on the desirability of multilateral negotiations To set the international policy agenda 	 To present evidence that there is a problem and a feasible solution to it To convince other states of the need to negotiate an agreement 	 Countries that have policy analysis and design capacity "First movers" that bring the issue to the table
Fact finding	• To build consensus on the precise nature of the problem and on the most appropriate international cooperation actions to address it	 To establish the scope and seriousness of the problem To examine possible policy options and the net benefits to be derived from an agreement To explore negotiating coalitions 	• Countries whose delegations include technical and political experts
Bargaining	 To assess alternative draft agreements in light of key criteria To achieve, if desirable, consensus on a final agreement 	 To evaluate options for the text of the agreement against the original bargaining position and in other comparative terms To ensure that as far as possible and desirable, national or other relevant interests are reflected in the text 	 Countries whose delegations include appropriate substantive depth Countries skilled in both the art of negotiation and the issues
Strengthening of agreement	 To elaborate and make more precise particular dimensions To adjust stipulations in the light of new evidence 	• To identify, assess, and negotiate needed or proposed amendments, annexes, or protocols to the agreement	 Countries with policy analysis and design capacity Countries with strong delegations

^a This Section is based on Chasek, Pamela and Lavanya Rajamani (2003), 'Steps toward Enhanced Parity: Negotiating Capacity and Strategies of Developing Countries', in Inge Kaul *et al.* (eds), *Providing Global Public Goods: Managing Globalization*, Oxford: OUP, for UNDP:245–62; Page, Sheila (2003), *Developing Countries: Victims or Participants (Their Changing Role in International Negotiations)*, London: Overseas Development Institute (Globalisation and Poverty Programme), and Gupta, Joyeeta (1997), *The Climate Change Convention and Developing countries: From Conflict to Consensus*, Dordrecht, NL: Kluwer.

Table 4.3 – put together by these authors from different sources – offers a taxonomy for the stages of multilateral negotiations and provides a list of criteria concerning procedural capacities ('Who has the power?'), which can roughly be divided into 'direct' and 'indirect' ones. The former refers to the capacity of direct participation in the negotiations, shaped by factors such as the size and the expertise of the participating delegations. Indirect procedural capacities are those which delegations rely on outside the direct negotiations, such as 'national policy analysis, design, and management capacity'

According to Sheila Page, most developing countries in the FCCC context suffer from 'small and inexperienced delegations, lack of national research support, lack of familiarity with how negotiations are done' and many of them have still not identified a strong interest in the outcome of climate change negotiations, and therefore choose to devote few resources to them, while there is little pressure on them to meet climate objectives: they are marginal to the major commitments being made on greenhouse gases.^{vb,28} Problems, Page maintains, 'also arise from the inexperience of individual negotiators. The senior developed country negotiators have had experience as junior negotiators and are usually in stable positions. There are also more of them, so that they can specialise and have support from others. In developing countries, many are facing their countries' first negotiations.^c

A. Direct Procedural Capacities

In the following pages, we provide a sketch of a (numerical) analysis of some of these assertions concerning direct procedural capacities by looking at the numerical size and the composition of the participating Party delegations in the context of the last three Sessions of the Conference of the Parties to the UNFCCC.²⁹

Delegation Size. As illustrated in Figure 4.2a,³⁰ the distribution of the delegation average size over this three-year period³¹ has been very uneven: while 80% of the delegations participated on average with less than 10 delegates (3.4 average), the rest manages to muster up to 86 delegates (28.1 average). The reason for focusing on merely (the last) three Conferences is simply a matter of maximising available resources. Three periods are the minimum required to eliminate any 'outliers' – such as 'inflated' delegations of host-countries (which have been deflated for the present purposes)³² – but there is little doubt that a longer time series would be desirable. For example, the fact that the size of the US delegation over the past three periods was between 36 (COP6bis) and 45 (COP8) might mislead one into thinking that the resulting average of 40 has a significance beyond the three conferences considered when, in fact, it is symptomatic only of the US participation under the Bush administration. At COP6 in The Hague, for example, the US delegation – still under the aegis of the Clinton administration – was with 99 members double that size.³³

Apart from the obvious inequalities implied by these three-year average delegation size figures, little can be concluded without establishing some correlation to other parameters. In his case-study on Zimbabwe and the UNFCCC, Peter Frost mentions 'at least two reasons for the small size of developing country delegations. It is costly

^a Chasek and Rajamani (2003):245.

^b Page (2003):7.

^c Page (2003):8





Party	(A)	(B)	Party	(A)	(B)	Party	(A)	(B)	
Box	(①		Box (D cont.		Box ③ cont			
Germany*	55.0	11%	Netherlands	32.0	+14%	Philippines	9.7	-4%	
France	48.3	15%	Sweden	26.0	+14%	South Africa	13.7	-12%	
UK	41.3	10%	Austria	21.3	-9%	India [*]	13.0	-14%	
Вох	(2		Australia	22.7	-18%	Peru	7.7	-15%	
Brazil	38.7	+71%	Bo	x 3		Venezuela	9.0	-17%	
Finland	33.0	+70%	Iran	15.0	+28%	Egypt	7.3	-17%	
Mexico	29.3	+54%	Tunisia	9.3	+28%	Kuwait	8.3	-18%	
Russia	27.0	+44%	Ukraine	9.7	+17%	UAE	10.3	-19%	
Denmark	31.0	+40%	Thailand	14.3	+15%	Ireland	11.7	-28%	
China	28.3	+28%	Kazakhstan	7.7	+10%	Poland	10.3	-29%	
Norway	26.3	+22%	Malaysia	13.0	+4%	Chile	8.0	-33%	
South Korea	29.7	+19%	Portugal	16.0	-1%	Greece	10.7	-34%	
Spain	33.3	+17%	Saudi Arabia	14.7	-4%	Hungary	7.3	-36%	
(A) Average del	(A) Average delegation size. (B) Deviation from 'expected size'. * Host country adjustment								

to send delegates to the Conference of Parties and [...] the shortage of people with the relevant knowledge and skills to function effectively at these meetings.^{2a,34}

To give an idea of the sort of analyses that can be carried out on the basis of such participant statistics, consider the correlation between these three-year averages and an index reflecting the first of these two reasons, namely the wealth of a Party (measured in terms of per capita GDP) and the size of its population, as a proxy for the size of its administration. The idea is simply that poorer countries are less able to send larger delegations for a lack of money, and countries with small administrations for a lack of people (the knowledge and skills shortage will be looked at later on in this chapter). As it turns out, there is a statistically significant linear correlation between these average delegation sizes and this joint index,³⁵ with a trend-line (depicted in Fig. 4.2b) that can be interpreted as indicating the 'expected' delegation size as a function of the socio-economic characteristics represented by this joint index. Given this interpretation, the task then becomes to interpret significant deviations from this 'expected' pattern.

Take the case of the US delegation. Under the Bush administration, it had, on average, half the strength expected by this trend analysis. By contrast, had it remained at the level of COP6, it would have lived up almost exactly (+5%) to its expected size. Given the ambivalent, if not hostile, position of the current US administration towards some of the key issues negotiated during the period under consideration – as reflected in the Bonn Agreement and the Marrakech Accords – it stands to reason that the significantly lower than expected participation of the US during the last three years reflects the attitude of its current administration.³⁶ To be sure, even if this explanation holds up, it clearly cannot be generalised to all deviations from the expected value,³⁷ but it does seem to fit the anecdotal evidence in at least some cases.

Take the (remainder) of the so-called Umbrella Group.³⁸ Canada's delegation, with an average size of 58.3, is +82% larger than expected by our trend analysis, followed by New Zealand (19, +37%), Norway (26.3; +22%) and Australia (22.7, -18%), which, apart from the US, is thus the only Umbrella country whose delegation was (on average) below the expected numerical strength. Given the extensive popular interest in the Kyoto Protocol in Canada, the anti-Kyoto alliance between Australia and the USA, and indeed the relevant ratification pattern, it is not unreasonable to assume that deviations from the said expected trend values do reflect the relative interest and importance given by the Parties to these negotiations.

The delegation sizes of most EU member countries – apart from Belgium (51.3;+107%) and Luxemburg (4; -68%) – have deviations of less than 50% from the expected value. The three EU 'heavy weights' – i.e. Germany, France, and the UK (Box ①, Fig. 4.2b) – in particular, concur with these trend expectations.³⁹ As for the rest of Annex I, the most conspicuous fact is that Economies in Transition (EITs) – with the exception of Russia (27.0; +44%) and Ukraine (9.7; +17%) – are mostly under-represented compared to our trend expectations.

A second cluster – framed in Fig. 4.2b by Box ② – contains the large non-Annex I delegations (for the purpose of comparison with the other Parties and clusters, it is important to keep in mind the logarithmic scales of Fig. 4.2b⁴⁰). The two main advanced developing countires – Mexico (29.3; +54%), South Korea (29.7; +19%) –

^a Frost, Peter G.H. (2001), *Zimbabwe And United Nations Framework Convention On Climate Change*, London: Overseas Development Institute:70.

as well as China (28.3, +28%) have been represented by almost the same number of delegates. Mexico, however, does stand out by having sent in excess of half as many more delegates than our trend analysis suggests.⁴¹ Indeed, nominally, Brazil tops Mexico and all other developing countries – both in absolute (38.7) and in relative terms (+71%) – but this, as we shall see, may be misleading: as it happens, almost half of the Brazilian delegation were from NGOs and academic institutions who are unlikely to be part of the negotiating, let alone policy-making team. If the nominal Brazilian figure is accordingly reduced, the average size of the effective Brazilian delegation (20.1) is actually 11% below expectations. India, with an average delegation of 13 people (excluding COP8 which it was hosting) was also slightly under-represented, with the expected trend value at 15.1. And yet, even at this expected strength, India would still remain part of the third cluster (Box ③) highlighted in Fig. 4.2b as 'habitat' of most OPEC countries.⁴²

Turning to this third cluster, and to OPEC countries, two facts stand out clearly from the pattern presented in Fig. 4.2. While most of the OPEC members are represented by delegations of pretty much the expected size, there are two whose presence is significantly higher than expected, namely Nigeria (15.3; +205%) and Indonesia (28; +136%).⁴³ The second feature which stands out is the relative dominance of all these large DC delegations by the joint delegation of the Gulf Corporation Council, with an average size of 40 delegates.⁴⁴ Comparing coalitions with individual sovereign Parties in this manner is problematic, particularly if the coalitions comprise a large number of (potentially disunited) members. Yet with only six Parties, the size of the coalition's membership – represented in Fig. 4.2b in the size of the coalition symbol – is sufficiently small, and more importantly, the GCC is well-disciplined with a unified policy, to be regarded for the present comparisons as a quasi sovereign entity.

Indeed, Fig. 4.2b illustrates nicely the fact that potential gains in direct procedural capacity from the number of delegates present at negotiations can be reduced, if not nullified, by the number of Parties in the coalition with its potential for policy disunity (otherwise the US, even under 'Clinton strength' delegations, would never have had a chance facing the EU, let alone G77+China)

Finally, let us turn to the group of Least Developed Countries (LDCs). Overall, 41% of the Parties depicted in Fig. 4.2 have sent delegations larger than expected (above the trend line), the same proportion as G77+China (39%) and AOSIS (40%). With 64% of its members sending larger than expected delegations, the LDC group however deviates significantly from this overall pattern (as does the EU with 60%). While the magnitude of the deviation from the trend of some of the LDC delegation sizes may, in part, simply reflect the very small sizes of these delegations (where an additional person can be a 100% increase in size⁴⁵), the fact that, contrary to the overall pattern, three-quarters of the delegation were on average better represented than expected does seem to contradict the perception that they are not (or at least not as much as Annex I) interested in the FCCC issues.

Since 'at present, the UNFCCC supports two delegates from each non-Annex I Party to attend the Conference of Parties,' it follows that for 'countries with only one or two delegates, ... governments are providing almost no support'.^a Accordingly it would be wrong to equate positive deviations from the trend value of delegations with an average size smaller than two as an indication of above average government interest in climate change.⁴⁶ As it happens, there is no need for such an interpretation.

^a Frost (2001):70.

However, there are a number of developing country delegations (with negative deviations from their trend value) of less than the two people supported by the FCCC. This fact would have to be considered in more detail in further analyses of the subject.⁴⁷

At this stage it will have to suffice that case studies, such as the ones mentioned by Page (2003), lend support for our rough interpretation of relative deviations from trend values: in Guyana, for example (with 1 delegate and a deviation of -64% from the expected value, see (5) in Fig 4.2b) 'participation in climate change negotiations



faced even less public or policy-making interest than trade'.48 In Zimbabwe (3; -39%; 6)'there are still no clear policy goals in climate change,⁴⁹ while Bolivia (4.6; +10%; ④), 'with an exceptionally vulnerable position, but also good prospects for cash gains under the Clean Development Mechanism ..., participates actively'.50

Assuming therefore (as working hypothesis) that deviation from the trend established in this analytic sketch does, at least to a significant degree, reflect the level of interest in climate change issues by the Parties in question, we can thus conclude that the distribution⁵¹ of interest in climate change issues within non-Annex I does not differ significantly from that displayed by Annex I. However, there appears to be a significant above-average level of interest within the group of LDCs, which is itself of importance in the context of building negotiating capacity.⁵²



Institutional Memory.^a Another issue often raised in the context of direct procedural capacities of DC delegations is that of the 'institutional memory' of their delegations. As implied by the above-quoted claim bv Page (2003:8), the perception of DC is often delegation one of significant transience. Whereas in the North, negotiators are meant to be regular participants in the negotiations, thus ensuring direct institutional memory. DC delegations are thought to be constantly changing, made up by newcomers who turn out to be 'one-timers,' i.e. attending only one negotiating session, and, as unable contribute such to institutional negotiating memory.

While it is difficult to draw any robust conclusions about 'regular' attendance from only three negotiating sessions, the fact is that, at least for the group of LDCs, this precept does not seem to hold. As illustrated in Fig. 4.3, the vast majority (78%) of LDC delegations comprised (on average) at least one 'regular,'⁵³ while one-fifth had two or more. These percentage shares of 'regulars' in the delegations give an indication of their transience, but they are not an adequate proxy for 'institutional memory'. Assuming again averagely talented delegates, this purpose is arguably better served by a measure based on the actual number of 'regulars' in the delegation. Given the generally very small delegations of LDC countries, the truth remains that –



^a Due to the constraints of this pilot study, this and the following sections concerned with the issue of direct procedural capacity will have to be even shorter than this analytic sketch of delegation sizes.

even though relatively intransient in their composition – LDC delegations, on their own, can generally not compete with the institutional memory represented in the much larger delegations of Northern countries.

The operative phrase here, it turns out, is: 'on their own'. The fact depicted in Fig. 4.4 is that, as a group, 86 of the LDC delegates attending COP6bis, COP7, or COP8 were 'regulars' and 36 'old hands' (attending all three). The relevant figures for Germany, one of the largest single delegations – namely 43 'regulars' and 18 'old hands' – would have been surpassed by a coalition of the top 9 LDC members listed in Fig. 4.3 alone.⁵⁴ This suggests that, for the group of LDC countries, the problem of direct negotiating capacity is not so much the transience of their negotiating teams as the lack of long-term group-wide coordination and division of labour.

Sectoral Composition. A third factor that may affect the direct negotiating capacity of delegations – in conjunction with delegation size and transience/institutional memory – is the *type* of expertise represented in them, their 'sectoral composition', as it were. A classification of the delegates into 11 categories⁵⁵ – ranging from government departments to intergovernmental organisation staff and NGO members – reveals a surprising North-South uniformity in the sectoral composition of the delegations from the OECD and the G77+China, as illustrated in Fig. 4.5. However, this 'similarity in the average' should not mislead one into thinking that the Parties have somehow come to a consensus of what constitutes the 'right' mix of types of expertise to be represented in delegations at these negotiations. As it happens, there are large deviations from this 'average pattern' among the Parties.



Figure 4.6: Selected Delegations. Average Sectoral Composition. COP6bis – COP8

Some countries have a rather less than average diversity in their sectoral mix. Apart from Brazil, with its very large share of NGO members and academics (on average 48%,⁵⁶ that when discounted leaves a Brazilian delegation with almost half its members from the Ministry of Science and Technology), there is, for example, Saudi Arabia where two-thirds of the delegation hail from the Ministry of Petroleum and Mineral Resources (Fig. 4.6). Other countries are much more diversified. Over the

three years in question Japan's delegation was dominated by three ministries, the Ministry of Environment (36%), the Ministry of Economy, Trade and Industry (METI, 21%), and the Ministry of Foreign Affairs (20%). However, this diversified approach was not confined to the Northern hemisphere. China, for example, was clearly 'bucking the trend', not only by a relatively even spread between the top three participating ministries (also the case for Russia and Japan), but by relegating the environment into the 'second league,' while the 'first league' is headed by the economy (State Development Planning Commission, Ministry of Finance etc.)



Returning to the situation in LDCs, it would be difficult to say which of these different patterns of sectoral mixes might best serve their interests. But it does stand to reason that the present mix of the combined delegations (Fig. 4.7), which – with two-thirds of 'regular' delegates representing the environment sector or meteorological units diametrically opposite to the Chinese approach – may not necessarily represent the best mix of expertise to participate successfully in the FCCC negotiations. The almost complete lack of delegates representing government economics, science and development agencies is something which capacity building for LDC will have to look into.

B. Indirect Procedural Capacities

Having introduced a distinction between 'direct' and 'indirect' procedural capacity, it must be emphasised that the two are clearly not independent. The pattern of ministries and government agencies directly represented at the negotiations, for example, may

well reflect a phenomenon regarding negotiating capacities of the 'indirect' kind, namely the degree to which these agencies are interested or even informed about the issues at stake at the negotiations. Yet there is one type of negotiating capacity which clearly is of the 'indirect' kind and which has generally been recognised as one of the key problem areas for DCs,^{57,58} namely their analytic capacity to generate and evaluate policy options. To get an adequate picture of the existing analytic capacities in the developing world in general – and in LDCs in particular – would require a number of country studies which are beyond this pilot study. However, there is some evidence from previous attempts at building analytic capacity which may provide an illustrative sketch of the present realities.

One such initiative has been the MARKAL project,⁵⁹ developed in a multinational project over a period of almost two decades by the Energy Technology Systems



Analysis Programme (ETSAP) of the International Energy Agency, which promises: ^a

- A proven process of multinational cooperation
- An international network of analysts
- A methodology for energy and environmental policy analysis
- A basic standard model that finds least-cost solutions for directly comparable national results
- A set of national energy technology databases that are current and consistent
- A track record of transferring its soft technology to new users.

Although the number of users of the MARKAL model has multiplied to 79 institutions in 38 countries (see Fig. 4.8), the ETSAP 'Outreach' programme, meant to



support projects in non-OECD countries has not been particularly successful, particularly as concerns non-Annex I partnerships: of the 21 non-Annex I MARKAL projects, only two were 'active', one in Taiwan and one in South Korea. One reason for this may have been a rather short-term vision of capacity building which some of these projects seem to have had (for example, a representative of the Bangladesh Institute of Development Studies summarised his capacity building experience as 'Received 2 weeks of training at Brookhaven supplemented only by occasional fax or email assistance.'⁶⁰

Of the 21 non-Annex I institutions listed as partners in the MARKAL programme,⁶¹ nine were governmental agencies and nine NGOs (incl. academic institutions), which supports the idea that 'a growing number of nonstate actors are becoming involved in multilateral negotiations. Nonstate actors can bring important resources and expertise to the negotiating process. Building strategic alliances with nonstate actors is yet another strategy developing country delegations employ to strengthen their negotiating capacity, create a level playing field, and thereby ensure more equitable and progressive outcomes in international environmental negotiations.^{'a} Figure 4.9 illustrates the North-South disparity in the distribution of such non-governmental actors.

For example, of the 539 NGOs accredited with the UNFCCC Secretariat (Fig. 4.9a), 82% are from Annex I countries (roughly half of which hail from the EU). With only 11 NGOs (2%), the NGO representation of LDCs is clearly disproportionately low relative to their number and population, although it tallies quite nicely with their economic capacity.⁶²

Fig. 4.9b represents the membership of the Climate Action Network (CAN). It also illustrates another phenomenon, apart from the North-South discrepancy, namely the fact that as in the official delegations, climate change in this network is predominantly identified as an issue of environmental concern as opposed to a development issue,⁶³ a fact which may become problematic if the network intends to be even-handed in its advocacy with respect to Northern and Southern concerns.

This sketch of the procedural realities of non-Annex I countries is bound to leave unanswered a multitude of questions that will have to be addressed in more detail before one can draw any concrete conclusions concerning the issue of increasing DC negotiating capacities. This, however, will have to be left to future research. In the present pilot study, our attention must now turn to the 'broader picture,' the global long-term obstacles facing the international climate change negotiations.

^a Chasek and Rajamani (2003):257.

Endnotes Chapter 4

¹ 'For example, the G-77 and China are united in arguing that environmental rules should not hinder their ability to develop. [...] Moreover, during the climate change negotiations the G-77 and China have maintained that the historical responsibility for climate change lies with industrial countries and that these countries should bear the main responsibility for correcting the problem.'[Chasek and Rajamani (2003):255]

² The initial negotiations on the Clean Development Mechanism (CDM), the only mechanism of the three under the Kyoto Protocol that opens up a channel of interaction between industrial and developing countries, provide a telling example of diverging positions among the G-77 members and China. China and India wanted the CDM to include nuclear energy projects; AOSIS and OPEC were strongly opposed to their inclusion. While China and India believe that nuclear power will help meet the energy needs of their large populations, AOSIS members have negative historical associations with nuclear testing and OPEC does not wish to support non-fossil fuel energy sources. Meanwhile, Africa argued that the CDM should be designed to reward projects that avoid emissions and promote sustainable socio-economic development using clean technologies, since Africa consumes less than 2–3 percent of global energy resources and therefore has few potential opportunities for CDM projects that reduce emissions from existing sources. As a result of these diverging interests, the G-77–China position papers on the CDM were phrased to leave these fundamental questions open.[Chasek and Rajamani (2003):254]

³ For list of officially recognised groupings, see UNFCCC Secretariat (2002) *A Guide To the Climate Change Convention Process*, (preliminary 2nd edition). <u>http://unfccc.int/resource/process/guideprocess-p.pdf</u>.

⁴ Kiribati and Tuvalu are members of both AOSIS and the LDC Group, but not of G77+China.

⁵ 'Yet another is the group of least developed countries (LDCs).' [Chasek and Rajamani (2003):255]

⁶ As groups were not meant to make statements during the Round Table discussions, Venezuela prefaced its intervention during the first round by adding that its views are identical with that of the group as a whole.

⁷ 'Uganda to Negotiate for Environment

http://allafrica.com/stories/200303070016.html

New Vision (Kampala) March 7, 2003 by Gerald Tenywa And Edris Kisambira Kampala

UGANDA will lead Africa in international negotiations for the protection of the environment, the state minister for environment, Kezimbira Miyingo, has said. He was launching the Greater Horn of Africa Climate Forum in Entebbe on Tuesday. Miyingo said there was an urgent need for Africa to address the threat of global warming through the Kyoto Protocol. "When we meet as Africa we should lobby so that we have the Kyoto Protocol to reduce green house gases," he said.'

⁸ Notable, in this context, is also an intervention by Samoa at the COP8 Ministerial Round Table: "As to future actions, my country identifies closely with the well-known position of the developing countries. But I would need to say that we cannot just sit through meeting after meeting, year after year, with one side of the room saying we cannot act alone and the other side saying we cannot accept new obligations. The problem is long ranging, serious, and we need to move forward for the future. I also need to draw attention to the Convention's responsibility that lies with ALL Parties to review the adequacy of Article 4.2(a) and (b). If and when we overcome the difficulties that prevent us from even looking at them, we need to deal with issues of Annex I leadership and the contributions they seek from other Parties. Certainly, we would also need to deal with the very substantial position of developing countries based on their equities. In these words it seems to my delegation that the provisions of the Convention, including Art. 2, provide the basis for a process for a long-term plan – a plan that must, in

our view, be premised on the fulfilment of Annex I Party's obligations now and global action for the future.'

⁹ 'Article 4.8 of the Convention is extremely important to us in Saudi Arabia. It requires the Parties to give full consideration to the adverse effects of climate change *and also* to the impacts on developing countries of the implementation of response measures taken by the Parties. Article 4.8 is especially important because it specifically lists impacts of response measures on countries such as mine whose economies are highly dependent on income generated from the production, processing, and export of fossil fuels. Madame Chairperson, when we take stock of that particular provision of the convention, we see that no progress has been made in its implementation. [...] There has been no demonstration that the developed countries care about the adverse socio-economic impacts of their measures on developing countries that depend on fossil fuel exports. [...] I ask our Annex I colleagues: Will you begin to pay attention to your contractual obligation on the subject?'[Intervention by A. al Naimi, Minister for Petroleum and Mineral Resources, Saudi Arabia, at the first round of the Ministerial Round Tables, 30 October 2002]

¹⁰ 'We said since the first day that it is the time of the implementation of the Convention [...] Annex I countries are not doing enough, and on average they are increasing emissions rather than stabilising them at 1990 levels. So I think we need to concentrate on adaptation. But adaptation also has two parts – and this should be very clear! – adaptation to the impacts of climate change and adaptation to the impacts of response measures. [...] Mr Chairman, we are ready to participate in the global effort to combat climate change, but we cannot accept to pay more than our fair share in the process.'[M. al Sabban on behalf of Saudi Arabia, 3rd Round of Ministerial Round Tables, 31 October 2003]

¹¹ 'Noting that there is still scientific uncertainty related to the phenomenon of climate change and its results, and that there is no scientific confirmation that this phenomenon is primarily a result of emissions resulting from the consumption of hydrocarbon, and further noting that such unfounded allegations and doubts would make victims of the oil and gas sector and may result in a recession in world demand, thus harming the interests of producers; [p.2]

¹² 'Assistance to Arab countries to mobilise adequate resources to adapt themselves to the harmful effects of climate change and harsh weather conditions, the rise of sea level and weather fluctuations, and assisting them to formulate national strategies to deal with climate change, and programmes to reduce the harmful effects of climate change in accordance with the UNFCCC.'[p.4]

¹³ 'Recognition of the importance of working with and co-ordinating with other developing countries so as not to accept the imposition of commitments involving quantitative commitments and commitments with relation to time on countries for the reduction of their emissions of global warming gases within the framework of UN Treaty for Climate Change.'[p.5]

¹⁴ 'Following, with anxiety the growing trends to enforce biased limitations on oil usage on the pretext of environmental protection, such trends having the capacity to have a negative effect upon revenues arising from oil exports by the producing countries and, therefore, affecting adversely local and related-regional development opportunities;'[2]

'Reaffirming the necessity of promoting financial and political support to achieve the required balance for development of renewable energies on one hand and conventional energy on the other hand, encouraging the adoption of cleaner fossil energy technologies to contribute in supporting sustainable development and avoiding any negative impact on the economies of the countries whose income depend on oil and gas;'[2f]

'Urging industrialised countries to adopt policies leading to reduction of differences in energy markets, in particular policies treatment to avoid any discriminatory by consumer countries on oil and gas, through the imposition of taxation or the introduction of any unfair support for other sources and types of energy, which would lead to a reduction in demand for oil and gas and harm the revenues of producing countries and their development;'[4]

'Urging of industrial countries to restructure their tax systems to reflect the carbon content of the fossil energy sources, and the damages resulting from atomic energy, and abolishing all aspects of subsidies provided to coal and atomic energy.'[5]

¹⁵ Calling upon the industrialised countries to provide compensation with regard to the economic and social damage to and losses of the Arab countries whose economies depend primarily on oil and gas production and export revenues, such damage and losses arising as a result of the measures taken by these countries within the framework of the commitments of the UNFCCC and the Kyoto Protocol;[6]

¹⁶ Potential for Constructive Engagement with OAPEC/GCC

Stimulation of efforts by scientific research institutes, so as to accelerate the development of cleaner production technologies for fossil energy in the Arab region and worldwide, and the development of technologies to reduce emissions related to energy use, the cessation of gas flaring associated with the production and manufacturing of crude oil, the giving of maximum strategic priority to the development of technologies to dispose of carbon dioxide gas, and taking the initiative by the delineation of a strategy for the development of technologies appropriate for cleaner fossil energy production, including the following:

- Supporting Arab and world scientific research centres.
- Establishment of regional and world partnerships.
- Guaranteeing mechanisms to provide adequate funds.
- Co-ordination between scientific centres

¹⁷ The list is obviously not meant to be exhaustive. For one it omits what might be called 'problem strength' reflecting the need to be involved in a problem solution.

¹⁸ Some practitioners of the trade might be reluctant to accept that the strength of a country in negotiations depends on anything other than their particular negotiating talents, but it does seem implausible that what we called 'objective determinants' should not have an impact on the relative strength of the countries. To think that the relative strength of, say, the US in bilaterals is *purely* due to the superior talents of its negotiators is a proposition which is difficult to accept, without wishing to denigrate the talents of US, or any other rich and large country delegates.

¹⁹ For an example of HDI-based 'Socio-economic Capacity Indices', see Table 4.2A in the Endnotes.

1 able 4.2	Table 4.2A: FCCC Coantion and Group Characteristics							
	Member- ship ^a	Popu- lation ^b	Demo- cratic Capacity index ^c	GDP ^d (average)	HDI ^e (relative)	Socio- economic Capacity Index ^f	GDP/cap Index ^a	Economic Capacity Index ^b
Shares of F	CCC Tota	ls						
Annex II	12%	14%	13%	65%	1.29	0.91	4.47	1.70
USA	1%	5%	2%	24%	1.3	0.55	4.97	1.08
EU	8%	6%	7%	24%	n/a	n/a	3.77	0.95
G77+China	69%	74%	72%	25%	0.91	0.47	0.34	0.29
EIG	2%	3%	2%	4%	n/a	n/a	1.49	0.24
SKorea	1%	1%	1%	2%	1.22	n/a	2.10	0.19
Switzerland	1%	0%	0%	1%	1.29	0.09	4.18	0.16
Brazil	1%	3%	1%	3%	1.05	0.17	0.95	0.16
China	1%	21%	3%	7%	1.01	0.26	0.33	0.15
Mexico	1%	2%	1%	1%	1.10	n/a	0.95	0.12
OPEC	5%	8%	6%	3%	n/a	n/a	0.40	0.11
India	1%	17%	3%	3%	0.8	0.16	0.21	0.08
AOSIS	21%	1%	4%	0%	n/a	n/a	0.66	0.05
LDC	26%	10%	16%	1%	0.62	0.07	0.09	0.03
FCCC	100%	100%	1.00	100%	1.00	1.00	1.00	1.00

²⁰ Table 4.2A: FCCC Coalition and Group Characteristics

Data Sources: WRI Earthtrends (<u>http://earthtrends.wri.org</u>) and <u>http://hdr.undp.org/reports/global/2002</u> (HDI) ^{a)} 2003. ^{b)} 1998. ^{c)} Geom. mean of membership and population. ^{d)} 1998, average of PPP and constant price (1995\$).

⁽²⁾ UNDP 2000 Human Development Indicator (relative to world figure). ^(h) Geom. mean of average-GDP and relative HDI. Per Capita average-GDP relative to world level. ^(h) (Average-GDP share× GDP/Cap Index)^{1/2}



Socio-economic- and Economic Capacity Indices (see Table 4.2A above)

²¹ Key here is, of course, the assumption of a certain voting discipline, i.e. that the members of the group would vote the same way.

²² The choice of geometric mean (i.e. square root of the product of the two factors) for the purpose of 'measuring' this democratic (negotiating) capacity ought to be further investigated. At present it will have to suffice that it converges to zero with each of its components and that it is not additive (both features which seem to be appropriate in the given context). There may also be reasons for using a weighted geometric mean (for more on these measurement issues, see, for example, Benito Müller, *Justice in Global Warming Negotiations: How to Obtain a Procedurally Fair Compromise*, Oxford: OIES, second, revised ed. 1999 (ISBN 1 901795 08 X).

²³ See Table 4.2A in Endnotes.

²⁴ Given that, in the model, the contribution to the (group-relative) negotiating capacity from domestic analytic ability is represented by the GDP/cap *Index*, a transfer of such analytic abilities, or a building up of these domestic abilities, will be reflected in the model by an exogenous change of the GDP/cap index values (thus decoupling it from its original determinants, in particular from the actual GDP figures).

²⁵ Note: (a) $n_k(0\%) = d_k$, $n_k(50\%) = \sqrt{d_k \times e_k}$, and $n_k(100\%) = e_k$, and (b) that the order between the coalitions remains unchanged under similarity transformations of the base indices ('stretching of the left or right value axis').

²⁶ Note, however, that the parameters of the model are not climate change specific. If they represent anything, they represent the negotiation capacity within G77+China quite generally, independent of the subject matter. The parity of China and OPEC as strongest actors in G77+China in what was considered to be generally the more likely mixture of capacity components may therefore be of significance quite independent of the negotiations under the FCCC.

²⁷ 'Interestingly, in recent years several smaller coalitions have emerged, focusing on specific interests of selected countries. While supporting positions of G-77 and China, these coalitions have assumed growing visibility in multilateral negotiations. One such coalition is AOSIS. Another is the Group of Independent Latin American Countries (GRILA), an informal group of 16 Latin American countries that coalesced primarily to ensure that forests are included in the mechanisms foreseen under the Kyoto

Protocol. Yet another is the group of least developed countries (LDCs). These and similar examples show that while forming broad coalitions and broadly shared positions can be a powerful strategy for advancing developing country interests, creating smaller, issue-based coalitions can often be an important complement. Multiple memberships in both broad coalitions and small ones appear to confer greater leverage: while the small, issue-focused groups help define, voice, and protect the shared interests of its members, the broad coalitions may offer more general support. This observation is significant, as most leverage theorists believe that in environmental negotiations, for example, the real leverage among developing countries rests with India, China, and, in some cases, Brazil.'[Chasek and Rajamani (2003):255]

²⁸ Note the preconception that interest could only arise in the context of having to share greenhouse gas mitigation burdens, without consideration of the possibility that potential impact burdens might actually be an equally strong motive for active participation.

²⁹ COP6bis, Bonn July 2001. COP7, Marrakech Nov. 2001, and COP8 New Delhi, October 2002.

³⁰ Due to a lack of readily available data, the analytic sketch presented here is based on only 165 out of the current 191 Parties to the FCCC.

³¹ While desirable, it was not possible to extend the temporal horizon of this analytic sketch beyond these three COPs. Should it become possible to pursue these lines of investigation, it might also be desirable to repeat the analysis by excluding 'one-off' delegates ('one-timers') from the data set and consider only the 'regular' participants.



³² Figure N.4.2: COP6bis-COP8. Size of Selected Delegations

The fact that 'inflation' of host-country delegation is a global phenomenon is exemplified by Germany (host of COP6bis) and India (COP8), as well as Morocco (COP7, not depicted).

³³ A more thorough analysis of the size and nature of the FCCC delegations would not only have to rely on a longer, if possible complete time series of the relevant data, but it would have to use more sophisticated tools (such as panel data analyses), and different data sub-sets (e.g. only the data pertaining to 'regular' participants). However, such analyses are beyond the scope of this study, if only because the data are not publicly available in data-base format. ³⁴ 'There are at least two reasons for the small size of developing country delegations. It is costly to send delegates to the Conference of Parties and meetings of the subsidiary bodies, and most governments do not have, or will not commit, the resources to allow for a larger delegation. [...] The second reason is the shortage of people with the relevant knowledge and skills to function effectively at these meetings. Whereas this limitation could be addressed by introducing an appropriate capacity building programme, it first requires identifying what skills are needed, preferably in relation to a planned strategy of engagement on the basis of a well-defined national policy and objectives.' [Frost, Peter G.H. (2001), *Zimbabwe And United Nations Framework Convention On Climate Change*, London: Overseas Development Institute,

<http://www.odi.org.uk/iedg/participation_in_negotiations/zim_un_climate.pdf>]

³⁵ The index in question is again a weighted geometric mean of the two base parameters, i.e. GDP/cap and population size. The weighting was chosen such as to maximise the linear correlation, achieved under a mixture of two-thirds GDP/cap and one-third population size (with a resulting R²-value of 0.76), normalised relative to the US value (i.e. US =_{def} 1000).

³⁶ Note, in this context, the increase of the US delegation size from 36 (COP6bis), 39 (COP7) to 45 (COP8), which may reflect an increased interest in the negotiations.

 37 The large 'under-representation' of Argentina (-72%), for example, is likely to be due to the lag of the economic data used in calculating the index, which thus fails to reflect the recent collapse of the Argentine economy.

³⁸ "JUSSCANZ" and the "Umbrella Group"

The Umbrella Group is an informal variation of what used to be known as the JUSSCANZ coalition (i.e. Japan, the USA, Switzerland, Canada, Australia, Norway and New Zealand) which emerged after the adoption of the Kyoto Protocol. Since the withdrawal of the US from the Protocol, and the formation of the Environmental Integrity Group (Switzerland, Mexico, and the Republic of Korea), the delineation of the Umbrella has become even more fuzzy than before.

³⁹ Indeed, had the US kept its COP6 delegation strength of 99 members, then the correlation with the relevant trend would have been even better, namely US(+6%), France (-2%), Germany (-5%), and UK (-6%).

⁴⁰ Figure 4.2b in non-log scale axes:



⁴¹ If our previous interpretation of these deviations from the trend value is applicable here then it stands to reason that Mexico does take the FCCC process very seriously, and would hence be fertile ground for capacity building.

⁴² In terms of 'domestic' capacity (as 'extrapolated' by our simple trend analysis) India therefore seems the prime candidate for capacity building amongst the 'Big Three' within G77 and China. Note incidentally, that with the adjustment of the Brazilian nominal figure, the proportions of the Big Three delegation sizes have a close fit with the 25%–75% G77+China negotiating capacity mixture highlighted in Figure 4.1 (For OPEC, the proportionality is closer to the ECI ranking)



⁴³ This may be of importance in the context of forging capacity building partnerships within OPEC.

⁴⁴ The omission of a reference to a deviation from a trend value here is deliberate, for the trend has been based exclusively on the data for individual ('sovereign') Parties. The GCC, which is arguably quite united in its climate change policy objectives, could have been used as a substitute for its member countries in establishing this 'sovereign' trend values. But mixing coalitions, sub-coalitions and individual members in establishing a single trend line would have been misleading.

⁴⁵ The fact is that, obviously, delegation sizes only vary in discreet units. It can thus be misleading to make inferences from relative percentage changes of very different sized bases. It is probably more significant as concerns the interest of a country if its delegation changes from 100 to 50 than from 2 to 1. However, the problem of small delegation size can be overcome if one considers averages over longer time series than in the present three-period analytic sketch.

⁴⁶ Another factor which needs to be taken into account when interpreting the relation of actual delegation size to our expected value in terms of government interest is that the costs of delegates can also be borne by non-government sources other than the FCCC. 'This is currently the case for Zimbabwe. The third delegate to COP 6, the Coordinator of the Climate Change Office, was supported by project funds.' [Frost (2001):70]

⁴⁷ Note that of the LDCs considered in this numerical sketch, only Eritrea (1.3, -36%, \bigcirc in Fig 4.2b) falls below the FCCC supported number of delegates.

⁴⁸ 'In Guyana, however, although there is clear public interest and debate on trade issues, this has not been translated into effective mechanisms. Participation in climate change negotiations faced even less public or policy-making interest than trade. There are still few procedures. The low profile in public policy is due to the lack of an apparent link to more immediate socio-economic needs. All segments of the population are aware of the susceptibility of the coast to flooding but (in contrast to the mobilisation of concern about vulnerability to drought in Bolivia) this does not translate into a strong awareness of the perils of climate change/sea level rise. Other aspects of climate change (effects on fish breeding grounds, possible declines in agricultural yields etc.) are even further from the minds of the average citizen. Unless government can be convinced that a deeper engagement in climate change issues will result in significant increases in assistance, more resources will be not be put into the negotiations.'[Page (2003):7f]

⁴⁹ 'Among the smaller developing countries Zimbabwe has been relatively prominent. This has not been wholly by chance. Although Zimbabwe also complains that there is lack of political will and appreciation of the importance of trade issues by Government Ministers and that there are still no clear policy goals in climate change, it has been able to secure the injection of funds, know-how and opportunities for developing local capacity in various fields. Zimbabwe has attracted one of the pilot climate change projects, and another is being planned. Although most of these activities have been initiated externally, rather than being planned from inside the country in relation to national priorities, and many have been one-offs, Zimbabwe may have developed a sustainable system for policy. After the Uruguay Round, Zimbabwe established various consultative mechanisms, a Standing Committee on Trade Policy as well as ad hoc committees and consultations. There has been an improvement in the availability and distribution of information. Countries were starting to build a policy-making system.'[Page (2003):8]

⁵⁰ 'Bolivia, with an exceptionally vulnerable position, but also good prospects for cash gains under the Clean Development Mechanism (CDM-CER), which would allow polluting countries to 'buy' carbon sinks from non-polluting, participates actively. It has serious climatic concerns and a strategy. It has prepared adequately for the CDM market and it has performed well in the annual negotiations. It has developed a clear agenda, consulting the private sector, and found allies among countries with similar interests to pursue specific objectives. A major objective (and achievement) has been to attract funds for CDM projects. Other indicators of successful intervention are that its positions were supported by other countries and some of its ideas are reflected in the final documents. Bolivia has set up consultative groups for both trade and climate change negotiators, although intra-governmental groups remain more important. The Bolivian experience (especially the performance climate change which contrasts with weak performance on trade) suggests that a strongly felt national interest can help to overcome the disadvantages of poor resources.'[Page (2003):7]

⁵¹ 'Distribution' here simply refers to the number of Parties above and that below the trend line. Note that the trend-line has the character of a (geometric) mean which is why the distribution, in this sense, even of the complete set of data need not be even (reflecting, in essence the difference between the mean and the median).

⁵² Whether these findings stand up to more rigorous scrutiny than possible in the present context or not, the fact is that there is a need for a methodology to compare the levels of interest in climate change of different Parties, and such a methodology is bound to involve some trend measure ('expected value') or other.

⁵³ The term 'regular' is here used as antonym to 'one-timer', i.e. it refers to delegates who attended two or all of the three COP sessions under consideration.

54	Reg.	O.H.		Reg.	O.H.
Senegal	9	7	Benin	4	2
Samoa	6	2	Togo	4	2
Uganda	5	3	Tanzania	4	1
Niger	4	3	Bhutan	4	1
Gambia	4	2	Total	44	23

• Embassy Staff (excluded from the data)	International Development
Foreign Affairs	• Science, Research, Technology
Environment	Meteorology
Climate Change Unit	• Other (Names)
• Energy/Petroleum/ Natural Resources/ Mines etc.	Intergovernmental Agency Staff
Economics Finance, Industry	NGO, Academia etc

Brazil Foreign Affais 6% Environment 9% Science, etc 24%

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Frontline

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For climate justice

by C.E. Karunakaran

'The lack of sufficient data and research on the impacts of climate change has prevented India, and other developing countries, from playing an assertive role in global negotiations. India cannot hope to make the kind of investment that the U.S. has made. (Two national laboratories in the U.S. have launched a \$20 million project, with 1.5 teraflops of computing power, to evaluate scientifically the policy options on climate change.) Also, the 'expert' advice India gets on policy matters is less than neutral. In a briefing paper sent by the Centre for Science and Environment to the Members of Parliament in India before The Hague conference, the late Anil Agarwal pointed out that Bill Clinton's principal environmental adviser Kathleen McGinty stationed herself at the Tata Energy Research Institute in Delhi for a year and went round the country to paint an alluring picture of the CDM, without pointing out its inequity in the absence of established entitlements. According to him, the Confederation of Indian Industry (CII) was among those who fell for her argument. It is only to be expected that private industry everywhere will be short-term-oriented.'

⁵⁸ 'But some are straightforward resource constraints. Compared to the delegations of leading industrialised countries, developing negotiating teams have fewer delegates, are underpaid, and enjoy inferior technical support before and during meetings. Other weaknesses can only be remedied by training: on the issues, in negotiating procedures, even in languages. Improving the effectiveness of developing country participation would not only assist them: improving countries' ability to participate may lead to a more efficient outcome to negotiations and more legitimate outcomes.'[Page (2003):8]

⁵⁹ MARKAL is a generic model tailored by the input data to represent the evolution over a period of usually 40 to 50 years of a specific energy system at the national, regional, state or province, or community level.

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BANGLADESH (Source: http://www.ecn.nl/unit_bs/etsap/develop/examples/main.html#bangla)					
1. COUNTRY	Bangladesh				
2. LOCAL COUNTERPART	Organisation: Bangladesh Institute Contactperson: Dr. M. Asaduzza	of man	Development	Studies	

3. ETSAP COUNTERPART	Organisation: Brookhaven Systems Contactperson:Ann E-mail: reisman@ipd	Na Analysis .dat.bnl.gov	tional and	Lat 1	ooratory Modeling		(<u>BNL)</u> Group Reisman
5. PROJECT OUTLINE	Scope, objectives Received 2 weeks of assistance.	, main training at i	activities, <mark>Brookhaven su</mark>	expected pplemented	results, only by occa	time asional	schedule: <mark>fax or email</mark>
8. ADDITIONAL INFORMATION	Under Round 2 of the as part of the ALGAS	e U.S. Count S project	ry Studies Prog	gram. Receiv	ed further su	pport fr	om ABARE

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MARKAL. non-Annex I. Active (2), Governmental (9), non-governmental (9), or no information (3)

BANGLADESH	KUWAIT
Ministry of Environment and Forest	Institute for Scientific Research
BRAZIL	NEPAL
Universidade Federal do Rio de Janeiro	Ministry of Water Resources, Dept. of Hydrology and Meteorology
CHINA	NIGERIA
China Institute for Nuclear Industry Economics	Centre for Energy Research and Development
EMSD, Hongkong	PHILIPPINES
COLOMBIA	Department of Energy
Ministry of Energy & Mines	SOUTH KOREA
University of Los Andes	Korea Institute of Energy Research (KIER)
National University of Medellin	SRI LANKA
ETHIOPIA	University of Peradeniya
Ethiopia Energy Studies and Research Center	TAIWAN
INDONESIA	Industrial Technology and Research Institute
Badan Pengkajian Dan Penerapan Teknologi	TUNISIA
INDIA	Energy Agency
Indian Institute of Management, Ahmedabad	TURKEY
Tata Energy Research Institute (TERI)	Kocaeli University
	ZAMBIA
	Department of Energy

⁶² See Table 4.2A in Endnotes.

 63 81% of CAN members have an ecology and clean energy focus, and only 16% (of those with an identifiable focus) were concerned with development issues.

5. Long-Term Global Reality: The Twin Taboos of Climate Change

There are a host of problems regarding the relation between developed and developing world which negotiators will sooner or later have to address to safeguard the success not only of the international regime but of the global effort to tackle the climate change problem. At one end of the time scale, there is the need for entry into force of the Kyoto Protocol which ought to happen in the very near term. Then there is the self-exile of the key protagonist – the United States of America – and the issue of a level playing field for the participants in these negotiations that will have to be addressed and resolved in the near to medium term. In the medium to long term, however, the greatest challenges to substantive progress in the negotiations regarding the future of the FCCC regime are two taboos – two issues avoided by some or other at almost all cost.

5.1 The Taboos ...

The better known and widely publicised of these has been the issue of 'developing country commitments,' an issue which is taboo to many if not most of the developing country (non-Annex I) Parties of the Convention. To be more precise, it is the issue – euphemistically called 'meaningful participation' by the last US administration – of emission mitigation obligations on developing countries.

Southern Taboo. Arguably the most important recent manifestation of this 'Southern taboo' – apart from a reluctance to discuss anything which could remotely be interpreted as leading to DC targets (such as DC national communications)¹ – has been the rejection of the call for discussing the issue as 'misplaced'² by the Indian Prime Minister in his key note address at the opening session of the COP8 high level segment. The reluctance of DCs to enter into 'commitment discussions' is a well-known fact, as witnessed in Thomas Schelling's³ contention that 'there is no likelihood that China, India, Indonesia, Brazil, or Nigeria will fully participate in any greenhouse-gas regime for the next few decades. They have done their best to make that point clear, and it serves no purpose to disbelieve them.'^a But, more importantly, it has been recognised – and arguably legitimised⁴ – by COP in the Convention,⁵ the Protocol,^{6,7} and the Berlin Mandate.^{8,9}

Northern Taboo. The second taboo may be less well publicised but is at least as strongly felt as the refusal of DCs to discuss DC mitigation obligations. It is the refusal by industrialised countries to entertain anything that could remotely be interpreted as an admission of climate impact liability.¹⁰ It is symptomatic that – even in the presence of an explicit acknowledgement of the principle of common but differentiated responsibility¹¹ – most, if not all of the funding procedures adopted under the Convention (e.g. GEF and IPCC funding) are based on the FCCC or similar wealth-related scale, reflecting not responsibility but ability to pay, even though a responsibility-based scheme would be significantly less costly for Annex II.¹² Another manifestation was arguably the fate of the 1991 AOSIS proposal for an International Insurance Pool¹³ 'to compensate the most vulnerable small island and low-lying coastal developing countries for loss and damage resulting from sea level rise'(Art. 1.5). The proposed contribution scheme was introduced as being 'modelled on the 1963 Brussels Supplementary Convention on Third Party Liability in the field of Nuclear Energy'¹⁴ which, it stands to reason, has been a key factor why (until

^a Schelling, Thomas C. (2002), 'What Makes Greenhouse Sense? Time to rethink the Kyoto Protocol?', *Foreign Affairs*, 81(3):3

recently¹⁵) the proposal had been sunk with almost no trace (except for the inclusion of the word 'insurance' in Art. 4.8 FCCC.¹⁶).

5.2 ... as Key Issues

In certain situations it may be best policy simply to avoid taboo topics. And there is no reason why mutual respect for each other's taboos could not lead to peaceful and harmonious co-existence – except when the one's taboo happens to be the other's key issue. Unfortunately this is precisely the situation facing the FCCC negotiations.

Northern Key Issue. Having recently ratified the Kyoto Protocol, the European Union, in particular, at COP8¹⁷ signalled that their priority is to have an early start on the negotiations concerning the second commitment period envisaged in the Protocol.¹⁸ While intended 'mostly as a call on developed countries,' this was interpreted by many – not least in the developing world – as broaching the topic of developing country commitments,¹⁹ particularly in light of the current US administration's intransigence regarding their refusal to return to the Kyoto regime.²⁰ However, a demand for DC commitments from the North has been prominent at least since the (arguably illegitimate²¹) Byrd-Hagel resolution²² of the US Senate just before COP3 at Kyoto. The lack of 'meaningful participation', specifically by Brazil, China, and India, has since been repeatedly cited by President Bush as a key reason for withdrawing from the Kyoto Protocol, which is why some felt unease with a statement²³ by the US delegation at COP8, seen²⁴ as an encouragement to DCs not to take on mitigation targets.²⁵

Southern Key Issue. A study^a undertaken at the Oxford Institute for Energy Studies in the wake of COP7 at Marrakech has highlighted the fact that for the developing world, climate change is first and foremost an issue of climate impact burdens and their inequitable distribution with respect to the differentiated causal responsibilities. This prominence became even more apparent at COP8 in New Delhi where 'the issue of adaptation was given major significance by Indian Prime Minister Atal Behari Vajpayee in his inaugural address as well as in the final Delhi Declaration. As a result of all this attention in Delhi, COP8 was being referred to (unofficially) as the "Adaptation COP"'.^b Contrary to disappointments expressed by certain Northern and NGO stakeholders,²⁶ COP8 may indeed prove to be a turning point in the climate change negotiations towards more of a balance between the key concerns of North (mitigation) and South (impacts/adaptation) – although it would be somewhat premature to assume with Joke Waller-Hunter, executive secretary of the FCCC, that at COP8 'adaptation has been brought on a equal footing with mitigation'.^c

It could be argued that – while there is little doubt of climate impact liability being a taboo issue in industrialised country delegations and governments (a 'complete non-starter) – it is not really a key issue for developing countries, if only because it has rarely been mentioned explicitly in the negotiations. However, given that DC delegations are as aware as anyone else of the constraints of *Realpolitik*, one has to be careful in drawing conclusions about their interests from their hesitation to table a Northern 'complete non-starter issue'.

^a Benito Müller, *Equity in Climate Change: The Great Divide*. Oxford: OIES, 2002.

^b Saleemul Huq, 'The Adaptation COP', Dhaka: *The Daily Star*, 15 Nov. 2002, <u>www.dailystarnews.</u> <u>com/200211/15/n2111509.htm#BODY3</u>77

^c Reported in: Rajiv Tikoo, 'Climate Meet Boils Down To Lukewarm Response,' Bombay: *The Financial Express*, 3 Nov. 2002, <u>www.financialexpress.com</u>

The fact is, the issue has implicitly been raised in and outside the negotiations many times. As shown in the Figure 5.1 concerning the Ministerial Statements delivered at COP7 in Marrakech (reproduced from Müller 2002:16), it is not as if the issue of climate impacts and the inequitable burden (with respect to the differentiated responsibilities) they are and will be inflicting on developing countries – particularly the least developed ones – had not been raised at the Conference of Parties. And in some examples, such as the statement by Benin, this was done in very explicit terms:

Certes, les pays développés, qui ont accédé à la prosperité aux dépens de l'environnement et du climat, sont économiquement bien armés pour faire face aux calamités naturelles de tout genre. ... A l'inverse, les pays en développement, et singulièrement les pays les moins avancés, moralement très peu responsable des émissions de gas a effet de serre, sont malhereusement et injustement très vulnérables aux conséquences de l'évolution négative du climat.



Figure 5.1: COP7. Ministerial Statements. (Unfair) Climate Change Impacts on Developing Countries

The same point was again emphasised by the prime minister of the host of COP8, India (see Chapter 4). The fact that the term 'liability' was not used for reasons of diplomatic sensitivity does not mean that the underlying issue of an unjust imposition of impact burdens by one group of countries on another is not a key concern. Nor does it mean that sooner or later (depending on how soon unavoided impacts will start to become unbearable) the issue will not be tabled explicitly. Indeed, the time may be sooner than might be expected^{27,28} as the development of National Action Plans for Adaptation is bound to raise the prominence of unavoided impacts and their inequity.

As a matter of fact, addressing the issue of climate impact liability in the international negotiations may prove to be very much in the self-interest of countries with litigation cultures as mature as the one in the US, in order to protect themselves with a statute of limitation against *unlimited* liability claims, particularly if recent indications concerning the possibility of 'attribution' prove to be correct.²⁹ A 'Protocol on Adaptation' – as tabled by India during COP8³⁰ – may thus ultimately prove to be in everyone's interest.

Endnotes Chapter 5

¹ National communications by developing countries

'Formulating guidelines to help developing countries prepare their national inventory of emissions was a sticky issue at CoP-8. It was linked to discussion on commitments by developing countries to reduce emissions in future. Industrialised countries wanted more detailed guidelines. But developing countries were wary that stringent guidelines would force them to provide data on greenhouse gas emissions, which could then be used to force commitments on them.' ['Thrust and Parry', *Down to Earth*, Vol. 11, No 13 (November 30), New Delhi: Centre for Science and Environment (2002):2].

² 'There have been suggestions recently that a process should commence to enhance commitments of developing countries on mitigating climate change beyond that included in the Convention. This suggestion is misplaced for several reasons.' Vajpayee, Atal Bihari (2002), Speech of Prime Minister Shri Atal Bihari Vajpayee at the High Level Segment of the Eighth Session of Conference of the Parties to the UN Framework Convention on Climate Change, New Delhi, 30 October 2002, http://unfccc.int/cop8/latest/ind_pm3010.pdf

³ Maryland School of Public Affairs, formerly John F. Kennedy School of Government.

⁴ The legitimacy – in the sense of being 'justifiable; proper' [OED] – is based on Art. 3.1 UNFCCC, Art. 2 Decision 1/CP.1 ('Berlin Mandate'), and 3.9 KP, Art 3, and depends, in particular, on whether developed country Parties have shown sufficient leadership, and – possibly less contentiously – on whether the process of negotiating a second commitment period still falls under the Berlin Mandate which in Art 2 mandated 'a process that will ... set quantified limitation and reduction objectives within specified time-frames, such as 2005, 2010, *and 2020*'. For the same article explicitly mandates that such a process will 'Not introduce any new commitments for Parties not included in Annex I.'

⁵ Art 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.

⁶ **Art 3.9 Kyoto Protocol** Commitments for subsequent periods for Parties included in Annex I shall be established in amendments to Annex B to this Protocol, which shall be adopted in accordance with the provisions of Article 21, paragraph 7. The Conference of the Parties serving as the meeting of the Parties to this Protocol shall initiate the consideration of such commitments at least seven years before the end of the first commitment period referred to in paragraph 1 above.

⁷ However, as pointed out by Niklas Hoene in a personal communication: 'For future negotiations on the Kyoto Protocol often 3.9 is mentioned, which calls for commitments for subsequent commitment periods for Annex I only, and that as of 2005. But there is also Article 9.1 and 9.2:

Article 9.1: "The Conference of the Parties serving as the meeting of the Parties to this Protocol shall periodically review this Protocol in the light of the best available scientific information and assessments on climate change and its impacts, as well as relevant technical, social and economic information. Such reviews shall be coordinated with pertinent reviews under the Convention, in particular those required by Article 4, paragraph 2(d), and Article 7, paragraph 2(a), of the Convention. Based on these reviews, the Conference of the Parties serving as the meeting of the Parties to this Protocol shall take appropriate action."

Article 9.2: "The first review shall take place at the second session of the Conference of the Parties serving as the meeting of the Parties to this Protocol. Further reviews shall take place at regular intervals and in a timely manner."

In my interpretation that includes commitments for developing countries'

⁸ In the **Berlin Mandate** (Decision 1/CP.1) the COP agreed in Art 2 to begin a process that will:

(a) Aim, ... for developed country/other Parties included in Annex I, both to elaborate policies and measures, as well as to set quantified limitation and reduction objectives within specified time-frames, such as 2005, 2010 and 2020, for their anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol

(b) Not introduce any new commitments for Parties not included in Annex I.

⁹ Brazil, however, explicitly acknowledged in its contribution to the first session of the Ministerial Round Tables at COP8 that 'COP7 in Marrakech has completed the cycle of negotiations based on the Berlin Mandate of COP1 in 1995'.

¹⁰ Grubb and Drexhage's assessment at the end of Section 3.2 reflects precisely the taboo nature of the issue.

¹¹ Ambiguities in 'Differentiated Responsibilities'?

The ambiguity created in the notion of CBDR due to the differing terms of FCCC Article 3 and Rio Principle 7 has resulted in contradictory views in the international legal community. Bettina Kellersman in a recent treatise on CBDR states:

The concept of common but differentiated responsibilities has to be, however, distinguished from the polluter-pays principle by the fact that the respective unequal treatment is *not based on the different measure of responsibility* of the respective group of states for the deterioration of the given environmental situation; on the contrary *it is based on the differences that exist with regard to the level of economic development*.

In stark contrast the International Law Association finds:

The rationale for the [notion of common but differentiated responsibilities] lies in the *differing contributions to global environmental degradation* and *not* in *different levels of development*.

In truth, Rio Principle 7 and FCCC Article 3 reinforce each other. The terms of Principle 7 (and the dynamic of the discourse at Rio) emphasize both the enhanced contribution of industrial countries to environmental degradation as well as the developmental challenges faced by developing countries. FCCC Article 3 refers to "common but differentiated responsibilities and respective capabilities." If CBDR, as some argue, refers to differentiation based on capability the use of the term "respective capabilities" would be superfluous. One can gauge from this that the negotiated agreement intended to highlight differentiation based on two different markers – one based on capability and the other, drawing from Rio Principle 7 which contains the authoritative definition of CBDR, based on contribution to environmental harm. The continuing relevance of Rio Principle 7 is evidenced by the fact that the Johannesburg Plan of Implementation privileges it by quoting it in its entirety in the section on "Means of Implementation."[Rajamani, Lavania, 'Chapter 2: The Doctrinal Basis For Differential Treatment In International Environmental Law: The Contours Of The Principle Of Common But Differentiated Responsibility', D.Phil Thesis. 2003.]

¹² The contribution share of Annex II (= OECD 1990) countries under the FCCC indicative scale [see FCCC/CP/2001//13/Add.4] is 72 percent, while according to latest (June 2002) UNFCCC assessments [see Niklas Höhne, 'Comparing indicators for contributions to climate change: Contribution to phase II of the "Assessment of contributions to climate change", Cologne (Germany):ECOFYS energy & environment, <u>http://www.cru.uea.ac.uk/unfccc_assessment</u>] it all gas contribution to climate change vary from between 34 and 44 percent depending on the indicators (45 to 60 percent for CO₂ only). It would thus be much cheaper for Annex II to contribute according to such a responsibility scale than according to their ability to pay, were it not for the fact that a use of the former could be interpreted as an admission of liability.

¹³ A/AC.237/WG.II/CRP.8. Submitted by Vanuatu on behalf of AOSIS to the Intergovernmental Negotiating Committee for a Framework Convention on Climate change Working Group II, at its 4th session, Geneva 17 December 1991.

¹⁴ Art 3.4: The contributions [from Group 2 countries] shall be calculated according to a formula modelled on the 1963 Brussels Supplementary Convention on Third Party Liability in the field of Nuclear Energy as follows:

- (a) As to 50%, on the basis of the ratio between the gross national product at current prices of each Group 2 country and the total of the gross national products of all Group 2 countries in the year prior to the year in which the contribution was levied ("the contribution year");
- (b) as to 50% on the basis of the ratio between the total emissions of CO₂ of each Group 2 country and the total CO₂ emissions of all Group 2 countries in the year prior to the contribution year'[A/AC.237/WG.II/CRP.8].
¹⁵ In the 2001 Bonn Agreement, the COP agreed 'to consider, at its eighth session, the implementation of insurance-related actions to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change'.

[Annex to Decision 5/CP.6: VI.1.2; FCCC/CP/2001/5, p.40]

¹⁶ **Art 4.8 FCCC:** 'In the implementation of the commitments in this Article, the Parties shall give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change and/or the impact of the implementation of response measures,'

¹⁷ The following account of the events at COP8 is from 'Warning Signs from Delhi. Troubled Waters Ahead for Global Climate Policy' by Hermann E. Ott (forthcoming as "Global Climate" in Yearbook of International Environmental Law Vol.13 (2002), Oxford University Press 2003, <u>http://www.wupperinst.org/download/Warning-Signs-Ott.pdf</u>). (Note the concluding paragraph which fails to draw in the need to talk about impacts and adaptation and, in typically Northern fashion – see Müller *Equity in Climate Change: The Great Divide* – considers the equity issue at heart to be one of 'the worldwide allocation of emission rights'):

'The second possibly dangerous development is the widening of the gap between the EU and G-77 countries. There have always more or less difficult times for this fragile alliance, but the present atmospheric turbulences seem to indicate a new quality of alienation. In New Delhi, this process was fuelled by strategies on both sides that were rational per se but evolved into a lethal logic of two colliding trains. India and the G-77 were trying to put developing country issues to the fore, after the Kyoto process and the subsequent Marrakesh negotiations were primarily concerned with quantitative commitments for industrialized countries. There is a legitimate concern that preparations for adaptation to the impacts of climate change are inadequate, not only in developing countries, but especially in these poorly equipped societies. Therefore research on these impacts as well as capacity building and the provision of adequate financial resources are urgently needed. There are furthermore good reasons to insist on action by industrialised countries before taking on substantial obligations.

However, some of the language used before and at the conference could give the impression that the emphasis of the G-77 on developing country priorities might be used as an early, preemptive defence against demands for substantial commitments. This in turn triggered an alarmed reaction by the European Union, whose Member States sought to preserve what they perceived as the fundamental basis of the climate regime – the focus on mitigating climate change. Furthermore, the Union demanded the initiation of steps for the further evolution of the regime out of fear that precious momentum might get lost while waiting for the Russian ratification. This is a legitimate concern as well, although the timing appears to have been problematic. Instead of an instinctive counter-reaction, the EU might have been better advised to remain calm and to allow COP 8 being turned into a forum for developing country concerns without, however, compromising on the substance of the issues.

The logic of these two colliding trains was fuelled by activities of supporters on both sides. The EU was not alone in its demand to embark on a process to discuss post-2012 perspectives. This call was echoed and strengthened by the environmental community, for similar and well-intentioned reasons. The rather uncompromising attitude of the G-77, on the other hand, was in part due to the fact that it gave in to many demands of OPEC countries and to a large extent disregarded the concerns of small island states (AOSIS). The US meanwhile played the devil's advocate, supported the G-77 refusal to start thinking about the post-2012 evolution of the regime and provided Saudi Arabia and other OPEC countries with language and arguments. In the end, crucial momentum for climate policy was lost and the frustration on both sides in New Delhi high.

[...] There is thus good reason for concern and the difficulties in communication between the European Union and developing countries should serve as a warning. Evidence is growing that the intricate questions of "equity in climate policy" can no longer be ignored. There is also good reason to believe that the issues of mitigation, adequacy of commitments and climate justice will be inextricably linked in future negotiations. In other words: further advances in the protection of the global climate system demand decisions on the worldwide allocation of emission rights. A number of scientific research projects have already been devoted to this issue, but concrete attempts to reconcile the conflicting views in science as well as on the political level have been missing so far. This should be initiated now

in order to foster mutual understanding between South and North and to arrive at a common basis for negotiations.'

¹⁸ EU press briefing 24/10

'It is a priority for the European Union that the Delhi meeting – preferably also the ministerial declaration from the Delhi meeting – announces that we have to think about the so-called 'second commitment period': which commitments, for who, and how much?

When we say this in the European Union – I'd like to underline this very much – we see this mostly as a call on developed countries, on Annex I countries, who will inevitably have to take upon them yet an even larger burden than in the first commitment period at the second one. So perhaps we distance ourselves a little there from some other developed countries, because we do not think that this can be done only by including targets for developing countries. The largest part will still have to be on the shoulders of the richer part of the world.'[Thomas Becker, Danish Presidency, EU press briefing 24/10, transcript from UNFCCC Webcast, <<u>http://unfccc.int/press/webcast/index.html</u>>]

¹⁹ Adequacy of commitments/developing country commitments

The 1992 UNFCCC text calls for a review of how adequately industrialised countries are dealing with climate change. This provision was inserted to address the concerns of (primarily G-77) countries that felt the commitments asked of industrialised countries were insufficient.

The issue has always led to controversy, and much ducking under the negotiating table. For the adequacy question is semantically tricky: does inadequacy imply industrialised countries have failed to fulfil their commitments? Or should the adequacy question be interpreted as opening up discussion on commitments for developing countries? The review was to take place in 1998, but was bundled out of sight.

According to the rules, an resolved issue automatically passes on to the next round of negotiations for discussions. This ensured the hidden bundle rolled on, passing untouched through each conference since 1998. Till it reached CoP-8. Adequately enough for developed countries, discussions on the issue were again postponed. Inadequately for developing countries, informal discussions continued on their future commitments.

The EU was particularly keen that developing countries start thinking on how to share the emissions burden after 2012 (when the first commitment period of the Kyoto Protocol comes to an end). Australia was also blunt: "What was needed was a 50–60 per cent reduction by the end of the century, and for this all countries need to take action, including developing countries."

On the other hand, developing countries insisted that future commitments were irrelevant to their interests. Industrialised countries had to first fulfil their existing obligations. "They (industrialised countries) have increased emissions. Now they want us to join them. Join in what - in failing commitments? No, we want to meet commitments if we have any," said Saudi Arabia. A group of developing countries mainly consisting of small island states wanted to initiate a process to include developing countries.

Throughout CoP-8, industrialised countries kept up intense pressure, especially in the round table discussions during the high-level segment. But developed countries stood their ground, ensuring that the issue wasn't mentioned in the Delhi Declaration.'['Thrust and Parry', *Down to Earth*, Vol. 11, No 13 (November 30), New Delhi: Centre for Science and Environment (2002):2.]

²⁰ US Press Briefing 24 October, COP8

At a press briefing by the US delegation on 24 October at COP8, Harlan Watson not only confirmed that since the US would only participate as an observer at COP/MOP (Art. 13.2, KP) it would not participate in the negotiations regarding the second commitment period scheduled to start in 2005, but replied with characteristic candour to the question whether the US would sign the Kyoto process in 2012 with

'No, we will not sign in 2012! ... under the terms of the protocol itself, there is a process set up to begin discussions in 2005 on the second commitment period, you know, one does not know how successful that's going to be. ... I would say that any instrument that talks about hard targets and timetables on emissions levels without recognition for the need of economic growth ... would be very difficult for the United States to enter into.'[Harlan Watson, US Press Briefing 24 Oct. 2002: UNFCCC COP8 Webcast: 17min. 40sec. <<u>http://unfccc.int/press/webcast/index.html</u>>]

'Review Progress Toward Goal and Take Additional Action if Necessary. If, in 2012, we find that we are not on track toward meeting our goal, and sound science justifies further policy action, the United

States will respond with additional measures that may include a broad, market-based program as well as additional incentives and voluntary measures designed to accelerate technology development and deployment.'[Executive Summary, *US Global Climate Change Plan*, Feb 14, 2002]

²¹ The issue of 'legitimacy' here is, naturally, closely related to the one referred to in the section on the 'Southern Taboo'. However, as concerns the Byrd-Hagel resolution, there can be no doubt that at the time, the governing principles of the process were ruled by the Berlin Mandate.

 22 A US Senate Resolution (S.R. 98) passed in July 1997 – five months before the Kyoto Conference – stipulating USA should not be a signatory to any protocol to the UN FCCC which would 'mandate new commitments to limit or reduce greenhouse gas emissions for the Annex I Parties, unless the protocol ... also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for Developing Country Parties within the same compliance period'.

 23 'It is then, in this broader context that we see our efforts to address climate change. Both climate change and sustainable development are complex, long-term challenges that will require sustained commitment and focus on the part of the nations of the world. Our choice of approaches to address climate change, if they are to be effective in the long run, must recognize that the hope of growth and opportunity and prosperity is universal – that it is the dream and right of every society on our globe. And we must also recognize that it would be unfair – indeed, counterproductive – to condemn developing nations to slow growth or no growth by insisting that they take on impractical and unrealistic greenhouse gas targets.' [Harlan Watson, 2nd meeting of COP8, 25 October 2002, transcript from UNFCCC Webcast, http://unfccc.int/press/webcast/index.html]

²⁴ 'The first prize for today's Fossil of the Day award is jointly presented to the United States, Saudi Arabia and Nigeria for their interventions during the informal discussions on the Delhi Declaration yesterday. They polarised discussions being carried out in good faith into a North and South issue. By stating it would not be fair for the Declaration to include commitments for developing countries, the US brought the issue on to the table, and was promptly supported by Saudi Arabia and Nigeria. Anyone who may get the impression the United States is displaying empathy for developing countries should not be misled with its hypocritical statement. After all, it has repeatedly stated it will not make any commitments to reduce its greenhouse gases until developing countries take on commitments as well. It was raising a fake issue.'[Saturday, 26 October 2002, *Fossil of the Day Awards at CoP8!*, http://www.fossil-of-the-day.org/Cop8 start.html]

²⁵ Demanding 'meaningful participation' by DCs as pre-requisite to ratifying a multilateral treaty, and at the same time encouraging DCs not to participate, of course, does not imply an inconsistency in one's belief system. It merely ensures that one can continue in refusing to ratify such a treaty (and blame someone else).

²⁶ 'While the high level ministerial delegation at the Eighth Conference of the Parties (COP-8) of the United Nations Framework Convention on Climate Change (UNFCCC) unanimously endorsed the Delhi Declaration, green activists underscored that the environment is the loser. Even the European Union (EU) expressed disappointment with the end results, saying that the text lacks action and a vision for the future. The EU acknowledged the forward looking technical results, though. [...]

Not everybody is buying everything, though. The green lobby is the most upset of the lot. Said Jennifer Morgan, director of climate change programme at the World Wildlife Fund (WWF), "We are quite disappointed. The document lacks urgency to grapple with long term challenges of climate change. It's not a step backwards, but there is nothing forward looking either." Added her colleague Liam Salter, a climate change officer at WWF, "The Delhi Declaration is pretty weak. Most of it is recycled text. It does not move the process forward. There is no significant improvement. There has been progress on technical issues, though." There seems to be a unanimous consensus amongst green groups. Steve Sawyer, climate policy director at Greenpeace, also added, "The document does not amount to much. They did manage to get the language right to some extent by getting in Kyoto Protocol, but it's not a forward looking document. It's missed opportunity." The fossil fuel lobby gets most of the flak for it. Kate Hampton, international coordinator of climate change campaign at Friends of the Earth, said: "It's frightening that fossil fuel interests have hijacked the conference. They are the most powerful vested interest group in the world." Of course, one can blame it on the pressure of getting results with

a consensus as well. Said K S Gurmit Singh, executive director of a Malaysian NGO called CETDEM, "There is fatigue. The political pressures have gone off. We just had the World Summit on Sustainable Development. Reaching a consensus is not easy." [Rajiv Tikoo, 'Climate Meet Boils Down To Lukewarm Response,' *The Financial Express*, 3 Nov. 2002, <u>www.financialexpress.com</u>]

²⁷ CLIMATE CHANGE: IPCC Assessment Could Ease Lawsuits, Experts Say

<u>BBC</u> reports today that individuals, organizations and countries may soon be seeking compensation for damage attributed to global climate change – floods, droughts, forest fires – through legal action. Some experts cited by BBC said the <u>Intergovernmental Panel on Climate Change</u>'s most recent global assessment could help pave the way for such suits.

The IPCC's 2001 report indicates the likelihood that human activities are behind global warming is greater than two in three. Lawyers cited by BBC called the quantification a major step toward the emergence of compensation claims. Peter Roddick, a lawyer who has worked with <u>Friends of the Earth</u>, said the "next decade is going to see quite a lot of climate change cases around the world."

"It's not a question we could stand up and survive in a court of law at the moment, but it's the sort of question we should be working towards scientifically," said <u>University of Oxford</u> physicist Myles Allen, who has worked with IPCC. "Some of it might be down to things you'd have trouble suing, like the sun, so you obviously need to work how particularly human influence has contributed to the overall change in risk," he said. "But once you've done that, then we as scientists can essentially hand the problem over to the lawyers, for them to assess whether the change in risk is enough for the courts to decide that a settlement could be made."

<u>International Policy Network</u> environmental specialist Julian Morris expressed scepticism about whether the possibility is practical. "Who is responsible?" Morris asked. "Even if you actually attributed it to humanity, then you've got the problem of saying, 'Well, who was it?' ... Who is going to be compensated? Is it going to be the 6 billion who are now supposedly at risk from the change in the climate?" (BBC Online, April 3).'

[http://www.unfoundation.org/unwire/util/display_stories.asp?objid=32988

²⁸ 'CLIMATE CHANGE: Firms, Investors Fret Over Costs, Liability

Amid damaged confidence stemming from corporate accounting scandals in the United States, investors are beginning to worry about the possible costs to firms of climate change and of compliance with associated regulations, the <u>New York Times</u> reported yesterday.

Citing warnings such as last week's **U.N. Environment Program** report on the "Asian brown cloud" and charges that global warming is in part responsible for flooding in Europe, the *Times* reported that companies are likely to face huge costs from climate change and could be sued by governments, investors and others if they fail to protect themselves against warming-related risks.

German insurance company <u>Munich Re</u> estimates that climate change could by 2050 cost \$300 billion yearly in weather damage, pollution, industrial and agricultural losses and other expenses. Companies could also incur expenses related to compliance with coming regulations, fines, taxes and caps on products relevant to warming. The <u>World Resources Institute</u> last month said oil and gas shareholders could lose 6 percent or more of the value of their investments because of regulation and other anti-warming efforts.

Oil, gas and utility companies are likely to feel direct effects, real estate companies stand to suffer from drought and flooding, and, according to warnings cited by the *Times*, nearly all industries face some risk. The *Times* cited regulatory compliance and damage to the reputations of companies that contribute to global warming as areas of particular concern. According to the newspaper, most risks and potential costs go unreported, and few provisions on environmental disclosure exist, in part because of the difficulty of calculating such risks.

Companies such as <u>DuPont</u>, <u>BP</u> and <u>Ford</u> have begun addressing climate change risk in annual reports and U.S. Securities and Exchange Commission filings, and <u>Dow</u> says it is set to release a social responsibility report in which it charts its greenhouse gas emissions reductions for the first time. The *Times* reports that <u>Swiss Re</u> is considering denying coverage to firms that do not address the problem, and <u>Rose Foundation</u> head **Tim Little** said his group sees "environmental disclosure as the next big corporate accounting scandal out there" (Amy Cortese, *New York Times*, Aug. 18).'[<u>http://www.</u> unfoundation.org/unwire/util/display_stories.asp?objid=28420 ²⁹ See, for example, Myles Allen, 'Liability for climate change', *Nature* **421**, 891–2, (2003). <u>http://www.nature.com/cgi-taf/DynaPage.taf?file=/nature/journal/v421/n6926/full/421891a_fs.html</u>

³⁰ '2) To initiate further action necessary for global, regional and sub-national assessment of adverse effects and steps to facilitate implementation of adaptation measures. Such action should include the adoption of a Protocol on Adaptation;'[Draft of the Delhi Declaration tabled within G-77 and China at COP8 on 26 October 2003]

PART III

THE WAY FORWARD: Innovative Steps Building on Existing Achievements

6. Surmounting Substantive Obstacles

6.1 Facing the Taboos: A Confidence-building Dual Strategy

Metaphorically speaking, Chapter 5 ('The Twin Taboos') has shown the two hemispheric camps in the climate change negotiations – the 'North' (Annex I, industrialised world) and the 'South' (non-Annex I, developing world) – to be more or less openly locked in stalemate in two arenas, one of mitigation and one of impacts and adaptation.¹ The question of this chapter is whether there might be a way of overcoming the (potential) deadlock arising from the seemingly irreconcilable differences regarding these two taboos. In the search for possible answers, consider first another question: *why* is it that the two camps find themselves facing each other in that manner?

The Mitigation Arena. As mentioned in the introduction to Chapter 2 ('Theoretical Considerations'), there are at least three types of reasons which can be put forward for evolving a mitigation regime: (purely) environmental, economic and moral ones. All three types have been put forward in arguments by Northern stakeholders as to why developing countries should take on mitigation commitments:

Why key?

- (a.1) *moral reason*: in light of the *common* responsibility for the problem, it is unfair that the North alone should be bearing the mitigation burden, particularly since this is going to put the North at a competitive disadvantage.
- (a.2) *economic reason*: the FCCC objective can only be achieved in a cost efficient manner if DCs take on mitigation obligations
- (a.3) *environmental reason*: the overall objective of the FCCC cannot be achieved without DCs taking on mitigation obligations.

Given the arena's stalemate, it is not surprising that reasons of the same type have equally been used in arguments by Southern participants as to why a discussion of DC mitigation commitments is out of the question:

Why taboo?

- (b.1) *moral reason*: in light of the *different* responsibilities for the problem and the existing capabilities for dealing with it, it is not fair that DCs should be asked to shoulder the burden of remedial action.
- (b.2) *economic reason*: sharing the burden of emission mitigation would put an undue strain on much needed economic growth (although economic growth has also been named as one of the key motivations for the considerable mitigation efforts² already undertaken by DCs^3).
- (b.3) *legal reason*: calling for DC mitigation commitments (at this stage) is reneging on existing agreements.⁴
- (b.4) *procedural reason*: lack of analytical capacity makes it difficult for many if not most DCs to even think of taking on such commitments.

The Impact Arena. The types of reasons listed in Section 2.1 are concerned with mitigation and not impact management regimes. This is why not all of them will necessarily apply to the issue of sharing the burden of (liabilities for) unacceptable climate impacts. However, arguments involving the two general types – i.e. those of economic and moral reasons – have also been used both by advocates and opponents of the impact burden sharing/liability issue:

Why taboo?

- (c.1) *economic reason*: fear of unleashing an uncontrollable flood of exorbitant demands for compensatory and even punitive damages.
- (c.2) *moral reason*: in light of the *common* responsibility for the problem, it is unfair that the North alone should be bearing the impact burden.

Why key?

- (d.1) *economic reason*: socio-economic climate impacts are the key worry in the climate change concerns of the developing world.^{5, 6}
- (d.2) *moral reason*: in light of the *different* responsibilities for the problem and the existing capabilities for dealing with it, it is not fair that DCs should be asked to shoulder the brunt of the burden to manage the expected climate impacts.

Before turning to evaluate these descriptions with a view to devising tactics for surmounting the deadlocks in question, one needs to take a step back to consider the bigger 'strategic' picture, as it were.

Dual Strategy. The first thing to note on either side of the hemispheric divide is that the strength of the opposing views on both the mitigation and the impact fronts are considerable. And while one may be naturally inclined to avoid one's taboos while pushing one's key issues, it is important to keep in mind that others may have reversed priorities. Indeed, it stands to reason that neither the mitigation nor the impact deadlock could be loosened – let alone broken – in isolation, that is to say without analogue concessions by the opposing camp on the other front: 'I will begin talking about some issues related to my taboo, but only if you begin to talk seriously about some issues related to yours.' In particular, it is at best fanciful to think that non-Annex I countries will give up their opposition to taking on a share in the mitigation burden without any movement on part of the Annex I countries to talk about the sharing of impact burdens (and vice versa).

However, given the strength of feelings involved, it would be equally fanciful to think that either of the two camps would be willing to begin such a 'de-tabooing' process with 'irretraceable steps'. What is needed is a series of parallel (hence 'Dual track' strategy) confidence building moves that broach the taboos retraceably – i.e. without initial commitment to lifting them – in the way in which prudent soldiers first test the air by raising their helmets before they raise their heads over the parapet. Are there such manoeuvres?

Mitigation Strategy. The deadlock in the equity dispute in the mitigation arena – (a.1) and (b.1) – has been discussed in some detail in Chapter 2. It was concluded that, in fairness, certain more advanced countries outside the present Annex I group – for example South Korea, Turkey, and possibly Mexico, henceforth referred to as 'Advanced Developing Countries' (ADCs) – ought to take on some mitigation obligations, *provided* that the 'Annex I non-Parties' – i.e. the Annex I Parties which have chosen not to participate in the multilateral regime set out in the Kyoto Protocol – also 'participate meaningfully'. Should these measures fail to allay Northern environmental concerns about DC emissions (a.3) then, it was argued that, given the existing differences in responsibilities and capabilities, the fair way to proceed at this stage would be for Annex I to take on the obligation to address (to 'target') the

emissions of the Less Advanced Developing Countries (LADCs, see Section 6.4)⁷ without imposing additional (economic) burdens on them (b.2).⁸

The issue of how to create conditions for re-integration of Annex I non-Parties and the integration of ADCs is taken up in Sections 6.3 and 6.4, respectively. Section 6.5, in turn, discusses a palette of policies and measures that might lend themselves as confidence building tools in the mitigation arena, i.e. as tools for addressing the emissions of LADCs without imposing additional (economic) burdens on them. They include 'unilateral hemispheric tools' that can be adopted by the countries of the Northern hemisphere on their own (such as the decarbonisation of their automotive sectors) and 'bilateral' ones (such as the introduction of Annex I CER-obligations for the CDM), requiring some degree of collaboration from the Southern hemisphere.

6.2 Climate Impact Strategy

Given the twin-arenas of the current climate change debate, even a study ostensibly concerned solely with the 'Evolution of the UNFCCC Greenhouse Gas Mitigation Regime' must provide at least a cursory sketch of the steps that might lead to a successful climate impact arm of such a dual strategy.

Development First? It has long been recognised that climate change activities – mitigation and adaptation – are intimately linked to development . Sustainable development policies are important in determining future greenhouse gas emissions and the potential and costs of climate change mitigation policies. *Vice versa*, climate change policies have a number of impacts on sustainable development policy objectives. As Markandya and Halsnaes (2002) testify,^a considerable effort has been devoted to assessing the sustainable development impacts of GHG mitigation projects.

The past couple of years have seen the emergence of a school of thought emphasising that acute poverty is one of the root causes of developing country vulnerability to climate change.^b This 'Development First' school thus promotes poverty eradication as the first and foremost tool in climate change policy concerning the developing world. There can be no question about the desirability of poverty reduction. Given the unimpressive past record in this area, the only question is: will it be wise to put all one's vulnerability reduction eggs in the poverty eradication basket?

Be that as it may, one thing is clear: the fair sharing of impact *response* burdens (relief, recovery, and rehabilitation) cannot be addressed through the 'Development First' approach. Even the US – arguably the most developed and least vulnerable of all countries – is not immune to climate impacts and will have to face the longer-term consequences (see below). Reducing poverty and sustainable development are the most important challenges for the world this century. But poverty eradication is no substitute for a fair sharing of the burdens of unavoided climate impacts which must not be brushed under the carpet of sustainable development.

Near-term Confidence Building. As in the mitigation arena, the first steps towards a resolution of the 'climate impacts deadlock' – of the fact that burdens/liabilities for envisaged climate impacts are a key concern of the South that the North is refusing to

^a Markandya, Anil and Kirsten Halsnaes (eds) *Climate Change and Sustainable Development: Prospects for Developing Countries.* Earthscan, London and Sterling VA, 2002.

^b See Thomas, Jean Philippe and Youba Sokona, "Development first" as the pre-requisite for a sustainable world, *The Future is Now*, vol. 3, Chapter 8, IIED, 2002.

discuss – have to be 'retraceable': while addressing the issue of climate impact burdens, they should not automatically imply an admission of liability if they are to be politically acceptable. Are there tools that could be used on the climate impact front in this confidence building manner?

An existing tool that could easily be adapted to serve this purpose, particularly in the context of enhancing the climate impact *reduction* efforts ('proactive adaptation,' 'vulnerability reduction'), is the Global Environment Facility (GEF) which has recently been given the operating authority over the three adaptation-focused Marrakech funds (LDC Fund, Special Climate Change Fund, Adaptation Fund). 'All' that would be required is to ensure sufficient and predictable funding.⁹

A recently proposed tool addresses the arguably more sensitive issue¹⁰ of climate impact *response* measures ('reactive adaptation') and is concerned with international relief efforts. In *Equity in Climate Change: The Great Divide*, Müller (2002) argues at some length that an existing neglect of impact response in general, and impact relief in particular has to be redressed, particularly in light of the rising trend¹¹ of people – almost all in DCs – affected by weather-related disasters (Figure 6.1).^a His solution is

'to create a Climate Impact Relief (CIR) Fund – based on the tried and tested models of the OCHA^[12] Trust Fund for Disaster Relief and the Disaster Relief Emergency Fund of the International Federation of Red Cross/Red Crescent Societies – under the Framework Convention to cover the expenditures for international weather-related disaster relief and preparedness. To resolve some of the key problems in the current system, such a Fund would have to be replenished regularly on an up-front basis, and rely on existing institutional infrastructures. The latter could, for example, be achieved by having the fund administered by the UN Office for the Coordination of Humanitarian Affairs (OCHA) under the guidance of the FCCC COP and the UN Under-Secretary-General for Humanitarian Affairs in collaboration with IASC agencies.^[13] Assuming the international community intends to continue providing an international disaster relief system, the envisaged significant improvement that could be achieved by creating the proposed CIR-Fund is a realistic option, both politically and economically, for its key characteristics are:

• No new money.¹⁴ • No new institutions. • Merely more efficient funding.¹⁵

Another notion concerning impact response measures has recently resurfaced in FCCC negotiations, namely that of 'insurance.' Last elaborated in a 1991 AOSIS



^a See also Benito Müller, 'We need to plan a response to climate change impacts', Climate Change Dossier, *Science and Development Network*, June 2003. <u>http://www.scidev.net/dossiers/</u>

proposal on compensation for damages due to sea-level rise (Section 5.1), it was left untouched in its single occurrence in Art. 4.8 FCCC until it re-entered the debate in July 2001 when – as part of the Bonn Agreement – the COP agreed 'to consider, at its eighth session, the implementation of insurance-related actions to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change'.^{16,17} The importance of these tools for the medium to long term cannot be over-estimated. The discussion of 'insurance-related actions,' in particular, has the potential to lead the way towards a long-term solution to the climate impact stalemate.¹⁸

The Longer-term Needs. At some stage in the not too distant future, the FCCC regime will have to face climate impacts, and not just the issue of preventing or reducing them, but how to respond to the ones which have not been and will not be prevented or sufficiently reduced to cause unacceptable damage: 'When an environmental damage [...] occurs, the question inevitably arises of "who should foot the bill?". The principle according to which the polluter should pay is at the root of [...] environmental policy; it shows that in many cases the operator who causes damage should be held liable, i.e. be financially responsible."^{19,20}

This will have to be done in a manner at least as systematic as the way in which the regime dealt with emission mitigation under the Kyoto Protocol.²¹ Indeed, it seems unlikely that anything short of a legal instrument under the Convention – be it an 'Adaptation Protocol' (as put forward by the Indian delegation at $COP8^{22}$) or an 'Impact Response Instrument'²³ – could deliver the break-through ultimately required to overcome the impact deadlock. Why? It is only this sort of legal framework which can provide the assurances and the security of law required by either side of the debate to come to a compromise.

To explain this, consider the instrument that was meant to govern the insurance instrument proposed by AOSIS in 1991. Art 2 of the proposal stipulates five main points to be considered in the formulation of the envisaged International Insurance Pool (IIP), namely:

- Methods of funding an IIP;
- Classification of the types of loss to be covered by the IIP;
- Criteria for establishing entitlements to claim against the IIP;
- Methods of evaluating loss resulting from sea level rise;
- Limitations on the amount of compensation payable by the IIP.

The intention behind these points was clearly two-fold: on the one hand, they were meant to ensure that parties who suffered damages had recourse to some compensation; on the other they were meant to protect parties who are responsible from the prospect of facing unlimited damage claims. And it is precisely such dual guarantees that are required to overcome the climate impact deadlock in the longer term, for the South is unlikely to be satisfied unless there are some binding commitments to sharing the burden of climate impacts, while the North is unlikely to enter such commitments if they are they are unlimited. *Only a legal instrument such as an 'Adaptation and Impacts Protocol' can provide both commitments and statute of limitation*. But why should the North enter even such limited liabilities, if instead it can simply refuse to discuss the issue?

We have mentioned already that a successful resolution of the climate impact deadlock is likely *sine qua non* to a resolution of the mitigation deadlock. Having said

that, it is true that there may be Northern countries for which this may not be sufficient reason to participate in such a dual strategy. However, the benefits – particularly to those countries such as the US with a mature domestic litigation culture – go beyond the mentioned dual strategy. Litigation for impact damages need not wait for the North to start talking about them in the international negotiations. Indeed, some AOSIS members have already been considering taking their case for compensation to the courts.²⁴ Even though this may not raise concern at this stage,²⁵ the threat of damage claims, indeed of punitive damages for negligence – particularly between entities at the sub-national level – will not disappear just because governments are unwilling to discuss the issue.

Yet at this stage the paramount objective has to be to build the trust required to even begin negotiating such a climate impact instrument by way of the trust building measures of the climate impact strategy mentioned at the beginning of this section, in conjunction with those of the mitigation strategy which we shall now turn to discuss in some more detail.

6.3 Mitigation Strategy One: Addressing Less Advanced DC Emissions

The aim of this section is to sketch some examples of how emissions of Less Advanced Developing Countries (LADCs²⁶) can be addressed without imposing new obligations on them. The list of examples chosen is by no means exhaustive, nor are the items listed meant to be singled out as superior over others. All of the examples chosen involve some sort of market and the only reason for choosing the particular items on the list is to exemplify certain differences concerning the degree of (Northern) market intervention. We begin with the phenomenon with probably the least (possible) intervention by the North in its (market) transactions with the South, namely 'technology spill-over,' i.e. the pure market diffusion of technology. We then turn to the well-known but ambiguous concept of 'technology transfer.' The third instrument for addressing LADC emissions without imposing LADC emission commitments on our list is the export credit and insurance system, involving a significant degree of intervention in North-South market transactions. The idea of introducing a minimum level of CDM activity as an obligation on Annex B countries, finally, is an example of a very explicit but also narrow market intervention to address LADC emissions.

Technology Spill-over

Technology Spill-over' in the present context refers to the North-South diffusion of technology through market forces (for a general analysis, see Grubb, Hope, and Fouquet $(2002)^{a,27}$). Our focus for these illustrative purposes is on an economic sector where such spill-over effects could have significant impacts on DC emission, namely road transport, particularly if some recent projections of the US Department of Commerce regarding 'skyrocketing' DC automotive demand for the foreseeable future turn out to be correct.²⁸



^a M. Grubb, C. Hope, and R. Fouquet 'Climatic implications of the Kyoto Protocol: the contribution of international spillover', *Climatic Change*, Volume 54, 2002:11–28.

Currently,^a 16 percent of global carbon dioxide emissions $(4MtCO_2)$ originates in domestic road transport, 71 percent of which $(2.8GtCO_2)$ is in the industrialised world (Fig. 6.2). Indeed, 60 percent of current global (domestic) road transport emissions originates in the United States (34%), the European Union (19%) and Japan (6%), which is also where most of the worldwide automobile sector activities take place (Fig. 6.3).

Developing country road transport emissions $(1.1GtCO_2)$ are 13 percent of their CO₂ emission total, and – as depicted in Fig. 6.3-1 – make up 29 percent of the sectoral global total. Mitigating road transport emissions in developing countries could thus amount to a significant reduction in their overall greenhouse gas emissions, particularly in light of the projected sectoral emission growth. Whether this might be feasible through technology spill-over depends on the global structure of the industry providing the technology for road transportation, i.e. the global automobile sector.



^a 1998; Source: http://earthtrends.wri.org/

The Global Automobile Sector. Over 80 percent of motor vehicles are currently produced in Annex I countries (Fig. 6.3c), almost exactly the same as the share in volume produced by the top ten car manufacturers (Fig. 6.3a). Possibly even more important in the present context may be the fact that again 80 percent of all cars globally are sold in Annex I countries (Fig. 6.3b), for it stands to reason that these car manufacturers – like any other producers of this size – will tailor their products according to the demands of the largest markets. And if – for whatever reason (change in regulations and/or customer preferences) – these largest (Northern) markets cease to demand vehicles powered by internal combustion engines, then car manufacturers will change their products accordingly.

The critical factor concerning transport technology spill-over is the fact that car manufacturing is viable only on a very big scale, and it is unlikely that the global automobile industry would continue to produce fossil fuel powered vehicles for the South once it is convinced that the days of the internal combustion engine in the North are numbered. It would make no economic sense to do so, particularly since the Southern hemisphere is essentially a captive market relying either on imports or licensed production: for example, almost nine-tenths of the roughly 600,000 passenger cars sold in India during the last financial year were produced domestically. Most (85%) of the domestic production was carried out under licence, with the lion's share (62%) going to Maruti Udyog Ltd. producing since 1983 under licence from the Suzuki Motor Company of Japan.²⁹ Given the highly concentrated structure of the sector (Fig. 6.3a), such changes can be surprisingly quick, as exemplified in the rapid diffusion of catalytic converter technologies in the US during the 1970s (see below). Indeed, the US is not only a large part of the problem, it also has the potential to serve as catalyst for such a change and thus be part of the solution.

The United States: The Problem and the Solution. Given that one-third of the world's road transport emissions emanate from its territory, the US is clearly part of the problem in this context. But it may well also prove to be (a significant) part of the solution. A recent bill in the State Assembly of California, for example, could have far-reaching consequences despite the rather reluctant position of the current Federal Administration in Washington D.C. The bill (AB 1058) grants the California Air Resources Board power to set 'maximum' but 'economically feasible' emissions standards for gases such as carbon dioxide, to be set by 2005 and implemented in automobiles sold by 2009.^{30, 31}

The potential consequences of this legislation are multi layered. For one, California, with 10 percent of the US car sales, is a sufficiently big market not to be ignored by the (US) car manufacturing sector.³² Second, since California has introduced these standards, other States have now the right to follow suit,³³ even against the will of the Federal administration.³⁴ In short, the decision of the California legislature may have a similar effect on automobile design as did their lead in the introduction of catalytic converters in the 1970s.^{35, 36}

The California Assembly Bill is not the only decision that has recently been taken regarding the future of the (US) automobile sector. Indeed, in his 2003 State of the Union Address, President Bush proposed '\$1.2 billion in research funding so that America can lead the world in developing clean, hydrogen-powered automobiles,'^{a, 37} and most, if not all of the global top ten car manufacturers have themselves begun to invest 'voluntarily' in low or no carbon vehicle R&D.³⁸

^a <u>http://www.whitehouse.gov/news/releases/2003/01/20030128-19.html</u>

Key to whether these measures will bring about the desired sort of technology spillover is a sufficiently speedy diffusion of the environmentally sustainable technology in the North itself. Contrary to the view of the current US administration,³⁹ we do not believe that this can be achieved by 'voluntary' measures alone,⁴⁰ which is why the California decision has the potential to be critical in this context.

The reason why such a speedy diffusion in the North is of the essence with regard to the effectiveness of transport technology spill-over as a means of addressing DC emission is simple: technology spill-over is not restricted to sustainable technologies. Nor is it something which has not happened before. Indeed, as recognised in the 1996 Department of Commerce study on the 21st Century Challenges for the US Automobile Manufacturing Industry,⁴¹ there is already a significant spill-over of current (high carbon) automotive technology, and 'all of the major players seem to be seeking to craft a global strategy aimed at the developing world, and these areas will be critical battlegrounds in the coming decade.²⁴

In short, at present and – in the absence of counter measures – for the foreseeable future, technology spill-over may actually exasperate rather than mitigate DC emissions. Indeed, it may lead to the unpalatable situation of creating an environmentally unsustainable infrastructure in the South just at the time when it becomes clear that it will be discontinued in the North, at which time the South will ultimately have no choice but to discard the now obsolete technology and infrastructure and buy its replacement from the only available source: the North. As mentioned above, arguably one of the most effective countermeasures to this Southern double jeopardy scenario would be a rapid Northern transition to the sustainable technology. But there are others (albeit not necessarily as effective), two of which – technology transfer and export credit – we shall now briefly turn to.

Technology Transfer: Donations or Exports?

The Framework Convention and its subsidiary instruments (Kyoto Protocol, Marrakech Accords) put considerable emphasis on the notion of 'technology transfer'. Like other phrases ('sustainable development', 'capacity building'), 'technology transfer' has taken on a variety of – often mutually contradictory – meanings across the North-South divide. Probably the biggest semantic North-South division is about the meaning of this 'transfer.' In the South, such transfers are often interpreted as technology *donations* by the North reflecting the differences in ability to pay and/or the difference of responsibility in causing the problem.

In the North, the prevailing – although not always publicised – interpretation is essentially that of subsidised technology spill-over, i.e. subsidised *export* of (hopefully) sustainable technologies. A telling example of this interpretation was recently provided by the Bush administration. The most significant amount budgeted in the U.S. Climate Change Strategy^b to be spent in connection with developing countries is \$155m for the United States Agency for International Development (USAID), serving 'as a critical vehicle for transferring American energy and sequestration technologies to developing countries to promote sustainable development and minimize their GHG emissions growth'.⁴² Clearly, this amount would not buy a lot of technology for transferral to the developing world, but it is not

^a DoC (1996):24.

^b 'U.S. Climate Change Strategy: A New Approach' <u>http://www.whitehouse.gov/news/releases/</u>2002/02/climatechange.html

actually intended to. It is to be used to 'promote the export of climate-friendly, clean energy technology'^a as stated earlier in less euphemistic terms in the Initial Report of the Cabinet-level US climate change policy review.

While the Convention seems to lean towards the donation meaning, the Kyoto Protocol includes both. FCCC Art. 4.3,⁴³ for example, requires the North (Annex II) to provide the financial resources, 'including for the transfer of technology' for the incremental cost incurred by DC (non-Annex I) Parties in complying with the commitments set out in Art 4.1, as agreed by them and the Global Environmental Facility (GEF), *qua* executive entity of the FCCC Financial Mechanism. And FCCC Art. 4.1 clearly distinguishes between technology transfer and technology diffusion.⁴⁴ The Kyoto Protocol, by contrast, also includes a reference to creating 'an enabling environment for the private sector, to promote and enhance the transfer of, and access to, environmentally sound technologies'.⁴⁵

The main instrument for 'donation transfer' under the current international regime is the GEF with projects such as the recently launched Chinese fuel-cell bus project for trials of fuel-cell buses in Beijing and Shanghai.⁴⁶ During the last decade, the GEF approved on average \$270m financing per annum, a figure which increases to around \$0.5bn if additional government and implementing agency funds as well as private sector financing are factored in.^b However, even this figure is dwarfed by the financing of projects in DCs leveraged through another technology transfer instrument, namely export credit and insurance agencies (ECAs), to which we shall now briefly turn.

Export Credit Agency Reform^c

During the 1990s, ECA financing through loans, project guarantees, and investment insurance averaged around \$90 billion per annum, almost twice the average level of official development assistance during the same period. Unlike the GEF, ECAs are financial institutions explicitly created by governments to promote exports and facilitate investments in riskier overseas markets. To the extent they are involved in technology transfer, they clearly fall under the 'export meaning' of the term. By the end of the last decade, almost a third of all the long-term financing received by developing countries was done under the auspices of bilateral banks, made up largely of ECAs.

ECAs and DC Emissions. In the second half of the 1990s, three-fifths of project and trade finance destined for developing countries (\$216.6 billion out of \$376 billion) supported energy-intensive exports or investments: fossil-fuel power plants, oil and gas development, energy-intensive manufacturing (chemicals, iron and steel, pulp and paper), transportation infrastructure, and aircraft. According to a study cited in Maurer (2000),⁴⁷ 'thermal power, and oil and gas projects in developing countries that received support from the Export-Import Bank of the United States (Ex-Im Bank) and the Overseas Private Investment Corporation (OPIC) between 1992 and 1998 [...] will release 29.3 billion tons of carbon dioxide (CO₂) over their lifetimes, an amount roughly equal to global CO₂ emissions in 1996.'d

^a <u>http://www.whitehouse.gov/news/releases/2001/06/climatechange.pdf</u>

^b Source: Maurer (2000).

^c This Section is largely based on Crescencia Maurer (with Ruchi Bhandari), 'The Climate of Export Credit Agencies,' in *WRI Climate Notes*, Washington D.C.: World Resources Institute, May 2000.

^d Maurer (2000):4f.

The problem with ECA financing, according to Maurer, is the fact that 'rather than decelerating developing countries' dependence on fossil fuels, ECAs appear to be investing heavily in their long-term consumption and ultimately the associated greenhouse gas emissions'.^a

In the past couple of years, there has been a growing demand for change in ECA rules with regard to environmental sustainability (and other issues such as corruption and human rights) in the NGO community and beyond. The 'Jakarta Declaration' – May 2000, endorsed by 347 NGOs from 45 countries – for example contains the demand for:

Binding common environmental and social guidelines and standards no lower and less rigorous than existing international procedures and standards for public international finance such as those of the World Bank Group and OECD Development Assistance Committee. [...] ECAs must conduct full, transparent accounting for climate change impacts and move to increase investments in sustainable renewable energy.^b

However, it must also be pointed out that – as acknowledged by $Maurer^{48}$ – such proposals for changes in ECA rules, especially with regard to energy projects, are not uniformly welcomed by DC governments and other stakeholders. Indeed, WRI, Maurer's home institution, has been the target of some strong Southern criticism as promoter of yet another scheme to subvert the sovereign decision-making capacity of DCs.^{49,50}

Certified Emission Reduction Obligations^c

The concept of *Certified Emission Reduction Obligations* (CEROs) – first introduced in a theme-contribution to the 2002/03 edition of the *Yearbook of International Cooperation on Environment and Development*^d – is our final example of instruments and measures with which to address emissions of less advanced DCs without imposing additional economic burdens on them. The Clean Development Mechanism (CDM), one of the three Kyoto Protocol mechanisms, allows Annex I countries to credit emission reductions in developing countries towards their emission targets. Developing countries can even unilaterally generate Certified Emission Reductions (CERs) and sell them on the international greenhouse gas permit markets. The stronger the use of the CDM, the more mitigation action happens in developing countries and the stronger their active participation in the Kyoto regime. A flourishing CDM would thus pave the way for global mitigation action without imposing additional burdens on the developing world.

Hot air and US absence – risks to the CDM. By withdrawing from the Kyoto Protocol, the US Administration has caused a significant reduction in the likelihood of developing country participation. US non-participation leads to a massive decline of the demand for emission permits. All current modelling exercises show that the residual demand would be lower than the supply of "hot air", surplus emissions allowances (AAUs⁵¹) from Russia and Ukraine. As this "hot air" has zero costs, it can always undercut offers of CDM credits. Russia thus has the key of the global

^a ibid.

^b http://www.eca-watch.org/goals/jakartadec.html

^c by Axel Michaelowa

^d Müller, Benito, 'The Global Climate Change Regime: Taking Stock and Looking Ahead' in Olav Schram Stokke and Øystein B. Thommessen (eds), *Yearbook of International Co-operation on Environment and Development 2002/2003*. London: Earthscan, 2002:pp. 27–38. E-print: www.OxfordClimatePolicy.org, February 2002.



greenhouse gas market and can kill the CDM at will. Obviously, economically rational behaviour would mean that Russia and Ukraine restrict their sales to enhance revenues and thus give the CDM some breathing space. Still, Russia would be the swing producer and jeopardise long-term CDM investments due to the risk of sudden price collapses. Given the perilous state of institutions in these countries, a non-rational sell-out is definitely probable and indeed first offers of Russian AAUs at rock-bottom prices have been made.

CERO – guaranteeing a CDM market. Given the risk that the CDM could be completely eliminated or be subject to wild swings in demand, a steady CDM demand could be brought about by introducing a *CER Obligation* (CERO). This would be similar to the renewables portfolio standards that have been introduced in several countries. Under a CERO regime Annex B countries would have to buy a minimum amount of CERs to achieve compliance with their target. This would guarantee CER suppliers a minimum amount of demand. However, the impact of a CERO system on overall CDM revenue strongly depends on the shape of the marginal cost functions of the different supply options in the international greenhouse gas market.

Possible impacts of CEROs on CDM revenues. In a situation of unlimited hot air sales, the effect of a CERO on CDM volumes and revenues will be substantial (Fig. 6.4a). Under a free market, the hot air crowds out the entire CDM. The CERO thus is essential in getting the CDM started and leads to a substantial differential in price between CERs and AAUs/ERUs,⁵² but the price of AAUs/ERUs is only marginally influenced. If hot air sellers form a cartel, two situations can be envisaged (Fig. 6.4b). In the first situation, the cartel price allows a certain quantity of CDM projects to compete. However, the CERO is higher and thus allows an additional quantity of CDM projects in. The volume effect of the CERO and the price differential are lower than in the free market case

In the second situation, the cartel price is so high that the CDM quantity surpasses the CERO – which thus has no effect at all. This situation is however unlikely as either the cartel supply or the CERO volume is too low. Overall, the CERO creates a price differential that depends on the marginal abatement costs of the CDM and the supply curve of hot air.

Effects of the likely shape of CDM marginal abatement costs. The CDM rules applied by the Executive Board will have a strong impact on the marginal cost curve of the CDM. The following cases are possible: if transaction costs are high and additionality is interpreted in a stringent way, the cost curve starts from a high level and has a high



slope (Fig. 6.5a). If transaction costs are low and additionality is not checked, the curve has a long flat element (Fig. 6.5b).

Empirical evidence points to a combination of high transaction costs and no additionality. Cartelisation of CDM seems highly unlikely due to the high number of suppliers. There are no cases of a functioning cartel involving a high number of





developing countries. All attempts to form a coffee, cocoa or rubber cartel failed. The most likely scenario for hot air and CDM supply thus looks as follows (Fig. 6.5):

Depending on the transaction cost level and the hot air cartel price of the CDM, the CERO either has a very strong or no impact. Generally speaking, the more effective CEROs are, the higher the price differential between CERs and other permits and the higher the transfers from Annex B to developing countries.

While there is some anxiety in DCs about the competitive prospects of the CDM in the context of "hot air,"⁵³ it is not necessarily the case that such CEROs would be welcomed unreservedly in DCs. Certain objections which have been raised in conversation include, for example, the fact that CEROs would constitute a differentiation between the three Kyoto mechanisms, something which has previously been rejected in the negotiations, or that CEROs would only work if they were coupled with an obligation to sell on DCs.

Indeed, of the measures, mechanisms and instruments used here to exemplify the potential of addressing DC emissions without imposing DC obligations, the least controversial in the developing world would probably be that of technology spill-over/transfer, if only because it paradigmatically follows their call for developed country leadership, and as it only involves intervention aimed at improving the environmental sustainability of domestic Northern economies, it is not likely to be subject to valid climate change related moral arguments.⁵⁴

6.4 Mitigation Strategy Two: Integrating Advanced non-Annex I Parties

Who is 'Advanced'? A critical point not raised in the preceding Section on emissions of Less Advanced Developing Countries is, of course: who are they? Who is a 'Less Advanced', as opposed to an 'Advanced' Developing Country (ADC), the topic of this Section?

In section 2.3, an attempt was made to operationalise the idea that the fairness of being asked to take on mitigation burdens should be judged on the basis of the principles of common but differentiated responsibilities and respective capabilities enshrined in FCCC Art. 3.1.55 It is important to get an operationalisation of the question of that Section (Who and when?) that is convincing - at least for those willing in principle to support the multilateral regime 56 – not only because perceived unfairness is unlikely to lead to participation, but also to avoid the experiences of the 'Argentinean experiment,' where Argentina broke rank with the rest of G77+China by adopting a voluntary target during COP8 in Buenos Aires, a move seen by many as the result of pressures by the Clinton administration for US domestic reasons.⁵⁷ The 'Argentinean experiment' has reinforced the perception in many DCs – including those who are likely to be deemed 'advanced' in their responsibilities and capabilities - that the way to safeguard their interests is not by introducing a multitude of 'personalised' target formulae for DCs, but by adopting a rational and systematic framework, encompassing criteria concerning the question of who and when?⁵⁸ As concerns China and, particularly, India no such framework is likely to prove acceptable in the absence of a significant per capita component in the distribution formula. Given the current differences in both per capita emissions and per capita wealth, it is as unlikely that Northern Parties would actively contemplate such a per capita related framework as it is for India and China to consider demands for emission reduction targets as anything but morally outrageous.

Who in non-Annex I could possibly be sufficiently 'advanced' to take on some mitigation commitment in the second commitment period? As it happens, two of the DC Parties which according to our preliminary analysis (Section 2.3) might be sufficiently advanced in this sense, namely South Korea and Mexico, already supported a draft article submitted at COP3 in Kyoto regarding the possibility of DC participation in all the (Kyoto) mechanisms in return for adopting a voluntary target. The article was deleted after strong opposition by India and China who questioned the legality of introducing a new category of Parties under the Convention, and it is unlikely that the opposition by China and India to voluntary ('Argentina style') targets has shifted.

In Section 5.1 we mentioned a number of likely preconditions to further action by ADCs listed recently by a member of the Mexican administration. Apart from an insistence on 'flexible/voluntary approaches', the key demand concerning the architecture under which further action might be possible is that of an effective promotion of the CDM in *all* sectors during the first commitment period. Indeed, 'access to *all* flexibility mechanisms' was mentioned as one of the key incentives by which ADCs might be persuaded to take on commitments. In our opinion the way to address the worries about mitigation costs underlying the demand for flexible/voluntary approaches could be by way of introducing a price cap⁵⁹ and/or by way of the sort of measures for addressing DC emissions described in the preceding section (e.g. by using CERO-type Annex II commitments to help the ADCs in achieving their targets). Interestingly, most of the other key incentives mentioned

were not about the architecture of the future regime, but about the sort of issues we shall turn to in Chapter 7, i.e. about 'effective access to *additional* funding/resources for [...] macroeconomic assessments, mitigation studies, capacity building. In light of Mexico's and South Korea's membership of the Organisation for Economic Co-Operation and Development, this should be possible under the aegis of, for example, the OECD's International Energy Agency (IEA). As no one will (or should) sign up willingly to something they believe they do not sufficiently understand, this capacity building within OECD is vital to extending the regime to ADCs, whatever form such an extension might have.

The one precondition that was presented as an absolute *sine qua non*, however, the participation by *all* Annex I countries, leads us directly to the last, but definitely not least 'mitigation strategy' for the second commitment period, namely the reintegration of the USA.

6.5 Mitigation Strategy Three: Re-engaging the United States of America^a

Re-engaging the US is a fundamental element of moving towards future commitments. The present US administration has made it plain that it has no intention of changing its position on Kyoto. What are the prospects and strategies that could change the situation and bring the US back into the international framework? To achieve this, three conditions have to be met, in addition to the Kyoto process continuing:

- i) Domestic action on emissions in the US;
- ii) Willingness in the US to re-engage internationally;
- iii) The Kyoto framework must be adjusted to address core US concerns and/or provide political cover for the re-entry.

First, there must be sufficient domestic action in the US to start to get its emissions under control. Studies of the US (indeed, the biggest countries more generally) show that international regimes have to accommodate what such countries are willing and able to deliver, not the other way round. In this respect, Brewer (2003)^b is encouraging by charting a strong domestic reaction to President Bush's actions, and the global response, of 2001–2, albeit principally at the level of individual states and other non-federal actors. The result is more action on climate change, at more levels, than ever before.

These developments are *politically* significant for three reasons: they reveal that many politicians from both political parties in many regions of the country think that action on climate change is popular, they put increased pressure on the national administration to do more, and they are creating a patchwork of diverse regulations that corporations are beginning to find worrisome because of the increased regulatory complexity and uncertainty that they create. Many corporations would rather manage with a single national regulatory framework.

However, the *tangible* effects of these numerous and diverse sub-national policies on GHG emissions are uncertain and in any case not likely to have a significant impact on aggregate national emissions within the next few years. The potentially most significant could include the state of California law that mandates (as yet unspecified) carbon dioxide limits on new automobiles sold in that state (especially if the state of

^a By Michael Grubb

^b Brewer, Thomas L., 'US Business Perspectives and Participation in Policymaking on Climate Change Issues,' Module 3 of the Kyoto Marrakech Assessment Project. (2003)

New York follows with similar legislation); and the cap-and-trade proposals for New York and the north-east states; but their quantitative impact is difficult to assess until the form of the legislation is clear.

Second, the US domestic political debate needs to create a willingness, or desire, to re-engage in the international arena, and to discuss national emission limits (even if these do amount in the first instance to not much more than an aggregation of existing state level actions). The prospects here are more ambiguous and potentially even more politicised than domestic action, given the current attitudes of the Administration. It is also dependent upon forces outside the climate sphere, and could be significantly influenced by the long-term fallout from the Iraq war.

Various scenarios could lead to a desire to re-engage in the global UN-based framework. A change of Administration in 2004 offers one such possibility. Of course, a change in 2008 is also possible and could be soon enough in principle to enable closure on second period negotiations, but it is hard to see how such negotiations could realistically start without active US participation. Perhaps most interesting to explore is the forces that could lead to change of position in the next Presidential term whoever is in office.

Brewer (2003) presents a strong case that whilst the Administration will definitely not change its position before the next elections, there is a lot of potential for things to change after that. Domestic actions are cumulating. There is clear evidence that the Administration is out of step with the public on multilateral issues in general, including climate change. The impetus to change might come from two sources, probably in combination: a recognition within the Administration that its unilateralist approach is simply untenable as an approach to solving the major global issues of our time; and a fear about the domestic political consequences of failing to re-engage. Impetus for the latter could come from losses in the mid-term elections of 2006. This could set the scene for a radical change in policy, carried through with more political authority than a Democratic administration might be able to muster. And there are of course several precedents for Republican administrations making radical policy reversals during second terms, Nixon's China policy being the most oft-cited example.

Some of the potential trends and influences with respect to climate change are sketched in Brewer (2003). It is not hard to see how an extreme climate event, coupled with growing pressure from diverse groups in US society including church and many multinational companies, could create overwhelming political pressures for change. If Kyoto were by then in force, operating reasonably effectively, and with other countries successfully starting to implement the low carbon agenda, the only place left for the US administration to go would be to try and find a way back in.

Third, the way back in might involve some modifications to or development of the Kyoto framework, not least to provide some political cover for the Administration to claim that it had secured concessions. The most obvious scenario would involve US entry into negotiations on second period commitments that extended beyond Annex I. Inclusion of Mexico and South Korea, and perhaps some other recent OECD countries (such as Turkey) should not be difficult, though it is doubtful whether this could be enough.

Adjustments might also require attention to the other main US concern, namely costs. One main approach being advocated in the US academic community and consistent with the Administration's 'Clear Skies' announcement would be to frame future commitments in terms of intensity targets – emissions per unit of GDP. This approach has important political advantages for the US, not least the ability to present targets in terms of reductions whilst absolute emissions are increasing. Analysts also suggest it reduces the economic risks due to uncertain economic growth rates, though this is not certain. However, though this approach is likely to be strongly pushed, it has several serious drawbacks: it is potentially regressive, in that poorer countries tend to have higher emission intensities and allowed emissions would reduce for countries already in recession; it contains arbitrary components that would make the target conditional upon monetary fluctuations; and it is complex to make intensity targets compatible with legally binding commitments and emissions trading.⁶⁰ Nor in practice does it very effectively address the core concern with costs. A far more promising approach is likely to address the cost concern directly, in terms of a 'price capping' approach that would set a limit on the maximum price of international emissions trading.^a One proposal would also link price capping to the incorporation of avoided deforestation into the Kyoto system (Schlamadinger *et al.*, 2001).^t

Finally, it is worth noting that the volume of potential surplus allowances in the Kyoto first period may be comparable to the gap between US emissions during the first period and its original Kyoto commitment. Grubb (2003)^c concluded that surplus allowances will lie in the range 100–550MtC/yr, and most likely in the range 250–400MtC/yr. US emissions in the year 2000 were 300MtC above their Kyoto allowance. Even allowing for some growth, therefore, providing that domestic action (and structural change) does start to get emissions growth under control, there is a reasonable prospect that it would be technically feasible for the US to re-enter Kyoto on the basis of its original commitment if Russia and Ukraine in particular reached some deal whereby the bulk of their surplus was transferred to the US. The terms of such a deal could be purely economic, but more probably would involve a significant geopolitical component.

Whilst such an outcome does not look likely at present, it would have two huge advantages. First, it would resolve the problems that the EIT surplus would otherwise create for second period negotiations. Second, it would enable the industrialised world to claim that it – now including the US – was fulfilling the criteria for

(http://web.mit.edu/globalchange/www/MITJPSPGC_Rpt83.pdf).

^a See, for example,

IEA, 2002, Beyond Kyoto, Energy Dynamics and Climate Stabilisation, IEA, Paris.

Jacoby H.D. & A.D. Ellerman, 2002, 'The "Safety Valve" and Climate Policy,' MIT Joint Program on the Science and Policy of Global Change, MIT, Cambridge, MA, February,

Morgenstern R.D., 2002, Reducing Carbon Emissions and Limiting Costs, Resources for the Future, February, (<u>http://www.rff.org/climatechangemorgenstern.pdf</u>).

Pizer, W.A., 2001, 'Combining Price and Quantity Control to Mitigate Global Climate Change,' *Journal of Public Economics*, vol.85, n°3.

^b Bernhard Schlamadinger, Michael Obersteiner, Axel Michaelowa, Michael Grubb, Christian Azar, Yoshiki Yamagata, Donald Goldberg, Peter Read, Miko U.F. Kirschbaum, Philip M. Fearnside, Taishi Sugiyama, Ewald Rametsteiner, and Klaus Böswald; 'Capping the Cost of Compliance with the Kyoto Protocol and Recycling Revenues into Land-Use Projects,' *The Scientific World* (2001) 1, 271-280, ISSN 1532-2246, www.thescientificworld.com

^c Grubb, Michael, 'The Real-world Economics of the Kyoto-Marrakech System,' Module 1 of the Kyoto Marrakech Assessment Project, (2003).

leadership by industrialised countries, that have already been agreed in the UNFCCC (ratified under George H. Bush) as the precondition for expecting developing countries to become more engaged. In other words, it would vastly improve the prospects for including a wider range of countries in second commitment period negotiations. These advantages seem big enough for the possibilities to deserve further scrutiny.

Endnotes Chapter 6

¹ The fact that the issue of impacts has been much less prominent in the official negotiations than that of DC commitments should not mislead one into thinking that the issue is of less importance in attempting to make genuine progress in the current multilateral regime. It may simply reflect a North-South imbalance in the ability to set the agenda of the negotiations: just because I do not allow something to be discussed, as it were, does not warrant the conclusion that this something is not of importance to others discussants.

² 'The analysis presented here demonstrates that actions taken by these countries to achieve these and other goals have reduced the growth of their combined annual greenhouse gas emissions over the past three decades by nearly 300 million tons a year. If not for these actions, the annual emissions of these six countries would likely be about 18 percent higher than they are today. To put these figures in perspective, if all developed countries were to meet the emission targets set by the Kyoto Protocol, they would have to reduce their emissions by an estimated 392 million tons from where they are projected to be in 2010.'[*Climate change mitigation in developing countries: Brazil, China, India, Mexico, South Africa, and Turkey*, Washington DC: Pew Center on Global Climate Change, October 2002:iii]

³ 'While their circumstances vary widely, these countries share common concerns that have motivated actions resulting in reduced greenhouse gas emissions growth. Primary among these concerns are economic growth, energy security, and improved air quality.' [*Climate change mitigation in developing countries: Brazil, China, India, Mexico, South Africa, and Turkey*, Washington DC: Pew Center on Global Climate Change, October 2002:iii]

⁴ See Endnote 4, Section 5.1.

⁵ Supporting evidence for this claim can be found in Part I of Benito Müller, *Equity in Climate Change: The Great Divide*. Oxford: OIES, 2002, <u>www.OxfordClimatePolicy.org</u>

⁶ At the time of writing, this concern was evident in a number of newspaper articles:

China:

English www-compilation of Shanghai Daily (http://english.eastday.com)

North suffers warmer climate

Xinhua News 25 March 2003

China's northwestern, northern and northeastern areas have experienced the most evident climate warming in the country for the past century, which, in turn, has worsened the aridity in northern China. [...] the populous middle-latitude areas may experience increasingly dry weather, [...].

North China entered an arid period in 1956, and the warming and drying trend has not been changed even when the region was showered with comparatively rich rainfall for several years.

People's Daily Online (<u>http://english.peopledaily.com.cn</u>)

Global Warming Affects China's Water Security: Meteorologists 24 March 2003

Meteorologists warned Sunday that global warming will bring changes to surface runoff, the frequency of droughts and floods and the water quality in some areas of China, thus exacerbating the uncertainty of the country's water resources and contradictions between demand and supply.

People's Daily Online (<u>http://english.peopledaily.com.cn/</u>)

Changes in Climate to Trigger Health Problems: Meteorologists 24 March 2003

Global warming could greatly threaten people's health and daily life in the future, meteorologists said Sunday, which was World Meteorological Day. They noted that 40 to 50 percent of the world's population might be affected by some insect-transmitted diseases such as malaria and dengue fever in the future as the climate turns warmer. Global warming may bring rise to more plant diseases and insect pests in hot and humid areas, where people's health would be under great threat, especially in densely-populated areas, meteorologists said. "Changes in temperature and rainfall might probably change thoroughly the distribution of infectious diseases and viruses and enable them to extend to highlatitude areas and influence more people," said Zhu Changhan, chief research fellow on climate effects with China's National Climate Center. Professor Ding Yihui, special adviser on climate changes with the China Meteorological Administration (CMA), shared a similar perspective with Zhu. "The discomfort brought to human beings by climate changes will also encourage the spread of some diseases, or even lead to death," Ding said. Analysts said people in developing countries will be subject to greater health threats in time of warming, considering their lack of medical facilities and medicines. "Global warming would bring its most negative consequences to the health of those living in impoverished areas," Ding added.

India:

Economic Times (Times of India Group) http://economictimes.indiatimes.com

H2Oh! India faces a big water disaster

5 March 2003

NEW DELHI: Not only is the water you drink poor in terms of quality, it is also fast depleting. Inertia at the top will see the global water crisis reach unprecedented levels in the coming years, with "growing per capita scarcity of water in many parts of the developing world," according to a United Nations report released on Tuesday. [...]The World Water Development report — Water for People, Water for Life brought out on the eve of the Third World Water Forum to be held in Kyoto, Japan between March 16 and 23 says that water resources will steadily decline because of population growth, pollution and expected climate changes.

Tanzania:

The Guardian (London) <u>http://www.ippmedia.com/guardian</u> Global warming causing floods, drought

24 March 2003

by Sharon Sauwa

Tanzanians should brace for more floods, drought, climate extremes and increase in malaria cases in highlands caused by the global warming, the Deputy Minister for Communications and Transport, Dr. Maua Daftari, has cautioned. Speaking in a ceremony to mark the World Meteorological Day in Dar es Salaam yesterday, she said such adverse effects of global warming had actually began and would last for a long time. [...] She also said the changes would have an adverse effect on farm production, water sources, tourist destinations and on beaches. She said that there would be an increase in typhoons, cyclones and other disasters associated with weather changes. She called for concerted efforts in the exchange of expertise before facing the challenges associated with the weather changes.

Kenya:

Kenya Broadcasting Corporation (Nairobi) http://www.kbc.co.ke

Minister stresses the need to curb global warming

24 March 2003

by Anthony Makokha

Africa has been named as the most vulnerable continent from the impact of climatic changes brought about by global warming. The Minister for Environment Dr. Newton Kulunda said [...] more than 70% of natural disasters in the world are related [to] climate and weather.

Sri Lanka

Daily News (Colombo) http://www.dailynews.lk

Developing countries vulnerable to climate change - Experts

10 March 2003

by Florence Wickramage

The three-day International Expert Conference on "Climate Change and Sustainable Development" of the Intergovernmental Panel on Climate Change (IPCC) [...] noted that poorer developing countries would suffer more from the impacts of extreme weather events and that developing countries like Sri Lanka was highly vulnerable to the consequences of climate change.

Concerns about climate change not confined to science and technology - Minister

12 March 2003

S. M. Jiffrey Abdeen

My concerns about climate change are not only confined to science and technology. I represent an electorate in Central Part of Sri Lanka and I have shared the frustrations of our people when they lose their harvest due to unpredictable weather patterns. I have shared even greater miseries of people, which are indirectly caused by changes in climate such as flash floods and landslides, which are

becoming more and more common in some parts of my electorate said the Minister of Science and Technology Keheliya Rambukwella.

He added as a layman to this deep and important subject, he wishes to inform that Sri Lanka too have been in the forefront of problems due to climate change. Long drought periods, gusty winds, heavy rains, flash floods, coastal erosion, bleaching of corals are all beginning to plague our country and its people and in turn their lives. The green mantle that provided a buffer between us the living organisms and adverse effects of climate changes have gradually dwindled down leaving us totally exposed and vulnerable to the naked blasts and ill effect of climate change. Climate change was coming for along time.

Minister Rambukwella also said in the past we did not take it very seriously. It has now come to a point that we cannot ignore it any longer as it has now reached alarming and unacceptable limits. It has unfortunately started affecting us at a time when we are also making serious efforts to deal with other aspects of our civil society which are also equally important.

Bangladesh:

The Daily Star (Dhaka) http://www.dailystarnews.com

Bangladesh to be worst victim of climate change

9 March 2003

Environment and Forest Minister Shajahan Siraj yesterday said developing countries would be the worst victims of natural calamity caused by global warming. "These agriculture-based countries will be affected more although they are hardly responsible for global warming," he said this while he was inaugurating a workshop on "Clean Development Mechanism (CDM): Bangladesh Power Sector Project Facilities". The minister said poor countries like Bangladesh would be [more] badly affected by greenhouse effect than the developed countries, which are mainly responsible for emission of greenhouse gases. The rate of greenhouse gas emission is 6 tons in the developed countries while in Bangladesh it is only 0.2 ton, he said. Referring to last year's unprecedented flood in Europe and unusual change in temperature in Canada, Siraj said it has proved that climate change is taking place worldwide and its affects spread from the world's one part to the other.

⁷ Note that the distinction between ADCs and LADCs is meant to be based on a combination of the responsibilities and capabilities (see Section 2.3 for a possible operationalisation of these concepts). It is not to be confused with the distinction introduced by the UN category of Least Developed Countries (LDCs). Depending on the operationalisation chosen, the LADC category is likely to extend considerably beyond LDCs.

⁸ The one mitigation concern not addressed by this proposal is the Northern worry about competitive disadvantages. Arguably, this problem can only be overcome by demonstrating that these worries are exaggerated. (See also the module on the economic realities of Kyoto, in particular the competitiveness issue within Annex I).

⁹ The discretionary nature of the funding for the LDC and the Special Climate Change Fund is unlikely to bring about the necessary predictability of the funding. And the same is true for the market-based funding of the Adaptations Fund through a levy on CDM activities (unless there is a minimum predictable volume for these activities as envisaged in Section 6.5.

¹⁰ Impact reduction measures, by definition, will be undertaken before the event, i.e. before the occurrence of damages. Impact response measures, by contrast, are measures designed to react to inflicted impact damages. As such, they are obviously more closely linked to the issue of liability than the former.

¹¹ 'Over the past three decades, the proportion of the global population affected by weather-related disasters has doubled in linear trend rising from roughly 2% in 1975 to 4% in 2001. In absolute numbers, these trend figures have almost quadrupled over this period, rising from 70 to 250 million people. Under 'Business-as-Usual' (BaU) conditions, this trend is highly likely to continue over the next three decades.

• The BaU trend projection generates with 95%-confidence an estimate for 2030 of between 6% and 8% of global population. Given some recent population projections, this means that we can with very high confidence project the BaU *trend* of the number of people affected by

weather-related disasters – the most likely expected number – for 2030 to lie between 460 and 630 million, roughly double its present value.

• The BaU projection also suggests that the 2030 proportion of people affected globally will with 95%-confidence be between 3% and 11%. In absolute figures we can thus be very confident that – under BaU conditions – the number of people affected by weather-related disasters in 2030 would be somewhere between 220 and 860 million in the worst case, i.e. twice the worst recorded figure (417m in 1987) in the past three decades' [Müller (2002):67f]

¹² UN Office for the Coordination of Humanitarian Affairs.

¹³ The Office of the United Nations High Commissioner for Refugees (UNHCR); The World Food Programme (WFP); The United Nations Children's Fund (UNICEF); The United Nations Development Programme (UNDP); The Food and Agriculture Organization of the United Nations (FAO); The World Health Organization (WHO); The Office of the United Nations High Commissioner for Human Rights (UNHCHR); The International Organization for Migration (IOM); The International Committee of the Red Cross (ICRC); The International Federation of Red Cross and Red Crescent Societies (IFRCS); The Secretary-General's Representative on Internally Displaced Persons; Three international NGO consortia: InterAction, the International Council of Voluntary Agencies, and the Steering Committee for Humanitarian Response.

¹⁴ Provisions for disaster relief are already budgeted in all OECD countries. The issue is not to add money from other sources, but simply to introduce a more efficient way of spending it.

¹⁵ Benito Müller, Equity in Climate Change: The Great Divide, Oxford: OIES, 2002:5.

¹⁶ Annex to Decision 5/CP.6: VI.1.2; FCCC/CP/2001/5, p.40.

¹⁷ At the time of writing (Jan. 2003), the requested 'Workshop on insurance related actions (Article 4, paragraphs 8 and 9)' was still waiting to be scheduled.

¹⁸ See also: *Die Zeit,* 13 Feb. 2003, 'Wer soll das bezahlen? Finanziellen Schutz vor den Folgen des Klimawandels können Versicherungen nicht allein gewährleisten' ('Who should pay this? Insurance alone cannot guarantee financial protection from the consequences of climate change'), by Carlo C. Jaeger, Detlef F. Sprinz and Klaus Hasselmann, <u>http://www.zeit.de/2003/08/Klimasch_8aden_neuneu</u>, in particular the section 'Verursacher zur Kasse bitten' ('Those responsible are being asked to pay')

¹⁹ Commission of the European Communities, 'Proposal for a Directive of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage', Brussels, 23.1.2002, COM(2002) 17 final:2.

²⁰ This affirmation of the 'polluter pays principle' concerning environmental liabilities is by no means the only one in the 'domestic' context of Annex II countries. Indeed, Federal Law in the US has very strict liability regimes such as the one of the *Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)* of 1980. For more on this see Benito Müller, 'Contingent Valuation and Environmental Compensation: American Experiences', *The Journal of Energy Literature* III. 1, 1997:3–28.

²¹ A genuine resolution of the current stalemate on the climate impacts front is only possible once both key concerns are treated with equal seriousness. At present, emission management has an array of very sophisticated tools – including legally binding commitments' – at its disposal, while impact management has to make do with a patchwork of rather *ad hoc* (mostly) voluntary funds.

²² India for the first time introduced the idea of such an adaptation protocol during G77 negotiations at COP8. The original proposal for the text of the Delhi Declaration that was negotiated within G-77 and China on 26 October contained the following language: '2) To initiate further action necessary for global, regional and sub-national assessment of adverse effects and steps to facilitate implementation of adaptation measures. Such action should include the adoption of a Protocol on adaptation;' The reason why the adoption of such an adaptation protocol was not put forward as a G77 and China position were

objections by AOSIS that negotiations for such a protocol would be used by Annex I Parties to distract from discussing the (in)adequacy of their mitigation commitments.

²³ See, for example, Benito Müller, 'An FCCC Impact Response Instrument as part of a Balanced Global Climate Change Regime'; June 2002, <<u>www.OxfordClimatePolicy.org</u>>, and Benito Müller, 'A New Delhi Mandate?,' *Climate Policy* 2, 2002:241–2.

²⁴ Tuvalu ponders global warming case

28/01/2002 4:05:34 AM | ABC Radio Australia News

'The South Pacific island nation of Tuvalu is considering taking legal action against the industrialised nations of the world for causing global warming. Some researchers predict Tuvalu will be one of the first countries in the world to disappear under rising sea levels as a result of pollution-induced global warming. However, the Pacific Sea Level Rise Monitoring project says the tidal gauge installed in Tuvalu in 1993, has shown a net sea level rise of zero. Prime Minister Koloa Talake has suggested he may want to recruit other low-lying countries to join Tuvalu in the case to share costs.'

Tuvalu warns against rising sea levels at Commonwealth summit

COOLUM, March 3, Kyodo

'Tuvalu is also considering taking legal action against corporations and countries, including Australia, in the International Court of Justice in The Hague over the issue of climate change and pollution, Talake said.'

Disasters waiting to happen

Andrew Simms, Wednesday June 19, 2002, The Guardian

'There has been no global assessment of the number likely to be displaced by a rise in sea level of half a metre to one metre, both possible in the foreseeable future. Following such a rise, millions would be displaced in countries across the developing world such as Bangladesh, Nigeria, Egypt and Guyana. At least five island nations would become uninhabitable. These include the Maldives, the Marshall Islands and Tuvalu, which, frustrated by international inaction, are seeking legal assistance to take the world's biggest polluters to court.'

²⁵ U.S. FEELS SAFE FROM ANY TRADE THREATS OVER KYOTO

Yahoo! News, Wed Oct 9,11:20 AM ET, By Robin Pomeroy

'[U.S. Senior Climate Negotiator Harlan] Watson said he was even less concerned by legal challenges already launched against the United States, which emits around one quarter of the world's man-made "greenhouse gases" blamed by some scientists for blocking heat in the atmosphere. The tiny Pacific island of Tuvalu – which faces annihilation from rising sea levels that some scientists think are a result of global warming – has threatened the United States with a lawsuit.'

²⁶ The notion of an 'LADC' is meant to refer to the complement of 'Advanced Developing Country' (ADC) as discussed in Section 6.4.

²⁷ The Grubb-Hope Spill-Over Scenarios



The reference case: IPPC SRES A2 scenario, modified by the Kyoto targets for industrialised country emissions, followed a decline by 1%/yr thereafter. Emissions from developing countries are not curtailed. The spill-over parameter comprises three broad components: $\sigma = \sigma_s + \sigma_t + \sigma_p$, where σ_s is the spill-over due to economic *substitution* effects; σ_t is the spill-over due to the diffusion of *technological* improvements; σ_p is the spill-over due to *policy and political* influence of industrialised country action upon developing country actions. The spill-over parameter $\sigma = 0$ represents the simplified case in which intensities in one region are completely independent of those in another (there is no spill-over or other effect), whilst $\sigma = 1$ represents a case in which aggregate emission intensity in the developing world converges to the same level as in the Annex I countries by the end of the century. The Figure above depicts the projected global emission trajectories from the different spill-over scenarios:

²⁸ DoC (1996), Meeting the Challenge: U.S. Industry Faces the 21st Century – The U.S. Automobile Manufacturing Industry, U.S. Department of Commerce, Office of Technology Policy, December 1996, <u>http://www.ta.doc.gov/Reports/autos/auto.pdf</u>

²⁹ Source: <u>http://www.cybersteering.com/pulmain/motoring/bulletin/2020503.html</u>. The import figure may actually be overstated as it includes the number of roll-over sales (imports from last year, as it were). Assuming that the percentage of roll-over models remains about the same year on year, this potential discrepancy can be ignored.

³⁰ Environmental News Service ENS

http://ens-news.com/ens/feb2002/2002L-02-01-06.html *California Plans Cuts in Vehicle CO2 Emissions* By Cat Lazaroff

SACRAMENTO, California, February 1, 2002 (ENS) -

The California Assembly voted 42-24 along party lines to pass AB 1058 by Democratic Assembly member Fran Pavley. Forty-one votes were required to pass the bill.

If the measure becomes law, state regulators will draft rules aimed at achieving "the maximum feasible reduction" of carbon dioxide emitted by California's passenger vehicles and light duty trucks, including sport utility vehicles. The regulations would need to be in place by January 2004, but auto manufacturers would be given flexibility in deciding how to achieve the new standards.

The Board would be required to provide a report about the proposed program to the California Legislature by 2003, and the Legislature would then have one year to review the regulations. [...]

Under a provision of the federal Clean Air Act, if California adopts AB 1058, other states will be able to follow suit, matching the new emissions limits with laws of their own.

³¹ washingtonpost.com

Calif. Takes Lead on Auto Emissions

Gov. Davis to Sign Law On Pollution That May Affect All U.S. Drivers By William Booth

Monday, July 22, 2002; Page A01

LOS ANGELES -- California today will enact legislation that for the first time will reduce the amount of greenhouse gases coming from the tailpipes of all passenger vehicles sold in the state, even the beloved SUV, in a move that could change the kinds of cars Americans drive in coming years. [...]

The law grants the California Air Resources Board power to set "maximum" but "economically feasible" emissions standards for gases such as carbon dioxide. Those standards will be set by 2005 and must be in automobiles sold by 2009. [...]

³² William Booth, *Washington Post*, Monday, July 22, 2002; Page A01:

Although the new regulations will grant engineers wide latitude for design solutions, the new greenhouse gas emission standards for California will affect drivers nationwide, because California, with its 35 million residents – more than Canada – represents 10 percent of the national car market. "You can't make one car for California and another car for Washington, D.C.," said Eron Shosteck, a spokesman for the Alliance of Automobile Manufacturers. [...]

³³ 'US state and local initiatives including California legislation to establish state regulation of GHG emissions by motor vehicles has become law. This is be the first state-level effort to restrict vehicle GHG – and a potentially significant one since Californians buy about 10% of the new autos sold in the US each year. Governor Pataki of New York has suggested that his state also adopt CO2 emissions standards for motor vehicles. It is politically significant that the two largest states, on opposite coasts, and with governors of opposite parties, have both begun to move toward such limits.'[KMA Module 3: Thomas L. Brewer, *US Engagement on Climate Change Issues: Determinants and Prospects*]

³⁴ William Booth, *Washington Post*, Monday, July 22, 2002; Page A01:

California is the only state that is allowed, under a 1967 law, to set its own, tougher regulations for emissions, a loophole that exists because of the previously extreme levels of smog around Los Angeles. [...] Once California increases its standards, other states are allowed to adopt the state's stricter rules. Regardless, domestic and foreign automakers will have to create California cars that reduce the amount of gases such as carbon dioxide, the signal product of internal combustion engines.

³⁵ William Booth, *Washington Post*, Monday, July 22, 2002; Page A01:

"California led the nation with the introduction of the catalytic converter, unleaded gasoline, hybrid vehicles, and now we will lead on global warming," said Russell Long, executive director of the Bluewater Network, a San Francisco-based environmental advocacy group that helped craft the legislation. Long emphasized that California is the fifth-largest economy in the world, and "we've proven time after time that protecting the environment is consistent with protecting the economy, and we believe other states will adopt the California standards and the impact will be enormous."

³⁶ State's air law to steer nation

Automakers fear spread of car emissions policy Mark Martin, Chronicle Sacramento Bureau Sunday, July 21, 2002 ©2002 San Francisco Chronicle. URL: http://www.sfgate.com/cgi-bin/article.cgi?file=/c/a/2002/07/21/MN233977.DTL

"We'll show leadership, we'll test technologies in the marketplace and we'll set examples that others are sure to follow," said Winston Hickox, secretary of the California Environmental Protection Agency, noting that past California regulations ushered in national standardization of everything from unleaded gasoline to the catalytic converter.

³⁷ US Energy Dept gives details on hydrogen car research

Reuters (at http://www.planetark.org/), 31/1/2003

WASHINGTON - The Energy Department said this week that President George W. Bush's plan to spend \$1.2 billion of government funds to help develop a hydrogen-fuel car won't all be new money.

In a briefing with reporters this week, Energy Secretary Spencer Abraham said \$720 million will be new funding, spread over the next five years, to develop the infrastructure needed to produce, store and distribute hydrogen for use in fuel cells and electricity generation.

Another \$500 million was from a program announced last year, which will spend the money over the same five-year period on the administration's "Freedom Car" program to build vehicles that would be fueled by hydrogen.

³⁸ Key carmakers to work together on fuel cells - paper

Reuters (at http://www.planetark.org/), 14/1/2003

TOKYO - A group of top automakers aims to jointly develop technology to allow fuel cell cars to cover similar distances as gasoline engine cars, a Japanese newspaper reported yesterday.

The group of car and car parts makers will aim to develop by the end of 2005 fuel tanks which can hold 40 percent more high-pressure hydrogen than current fuel cells, Nikkei added.

Developing such tanks single-handedly would be costly for one firm, and if the autoparts manufacturers can standardise specifications, it will save them the need to supply each of the car makers with different tanks and allow for mass production, the paper said.

Toyota, Honda, and General Motors have fuel-cell prototypes in operation today.

³⁹ 'In this century, the greatest environmental progress will come about not through endless lawsuits or command-and-control regulations, but through technology and innovation.'[George W. Bush. 'State of the Union Address, 2003]

⁴⁰ Many of the current US administration's *National Energy Policy Recommendations* and ingredients of the *National Climate Change Technology Initiative* are, if not identical, at least very similar to the provisions in the *Climate Change Technology Initiative* (CCTI) of the Clinton administration. The latter was scrutinised by Energy Information Administration (EIA) to evaluate (i) 'the impact of specific policies on the reduction of carbon emissions and their impact on U.S. energy use and prices . . . in the 2008-2012 time frame,' and (ii) 'the impact of the President's Climate Change Technology Initiative, as defined for the 2000 budget, on reducing carbon emissions from the levels forecast in the Annual Energy Outlook 1999 reference case.' The results of the EIA *Analysis of The Climate Change Technology Initiative: Fiscal Year 2001* (released April 2000), are sobering. The estimated CO₂ emission reduction in 2010 due to the tax-incentives and accelerated efficiency standards envisaged under the CCTI was 8.4MtC or 0.47 percent of the 2010 AEO2000 'business-as-usual' projection

⁴¹ Meeting the Challenge: U.S. Industry Faces the 21st Century

The U.S. Automobile Manufacturing Industry <u>http://www.ta.doc.gov/Reports/autos/auto.pdf</u> U.S. Department of Commerce

Office of Technology Policy December 1996

Investment in Developing Countries

In the foreseeable future, most automotive demand in the United States, Japan, and Western Europe will be for replacement vehicles. Demand will be flat or grow slowly. In the developing world, however, demand is skyrocketing, and many governments are requiring the establishment of domestic production to satisfy this demand. As a result, the world's major multinational auto companies are pouring significant fractions of their investment funds into capacity in China, India, South America, and Southeast Asia. For example, Ford is spending approximately \$1 billion to set up factories in China and Southeast Asia. General Motors (GM) has invested heavily in building up China's part-making facilities. Last fall, GM pledged a fresh \$130 million for three parts facilities in Shanghai. Overall, GM has agreed to set up 25 components-making ventures valued in hundreds of millions of dollars in China. GM also has been chosen to participate in a \$1 billion deal to make luxury cars in China and has announced a \$1 billion assembly plant investment in Thailand.

In Southeast Asia, the Japanese have a huge lead and are likely to continue dominating that market. India and China are still wide open, with GM, Chrysler, Peugeot-Citroën (PSA), Isuzu, and Volkswagen having early status in China. The Europeans and Americans are probably stronger in Latin America than the Japanese. All of these markets are in early stages of development, however, and significant change should be expected. All of the major players seem to be seeking to craft a global strategy aimed at the developing world, and these areas will be critical battlegrounds in the coming decade.

⁴² 'USAID is working with partners in Brazil, Egypt, Mexico, the Philippines, and Southern Africa to implement projects and activities designed to encourage the accelerated adoption of energy efficiency and renewable energy technologies and practices in several key sectors.'[21]

⁴³ **FCCC Art.4.3.** The developed country Parties and other developed Parties included in Annex II shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1. They shall also provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures that are covered by paragraph 1 of this Article and that are agreed between a developing country Party and the international entity or entities referred to in Article 11 [Financial Mechanism], in accordance with that Article. The implementation of these commitments shall take into account the need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country Parties.

⁴⁴ **FCCC Art. 4.1 (c)** Promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic

emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors;

⁴⁵ **KP Art. 10 (c)** Cooperate in the promotion of effective modalities for the development, application and diffusion of, and take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies, know-how, practices and processes pertinent to climate change, in particular to developing countries, including the formulation of policies and programmes for the effective transfer of environmentally sound technologies that are publicly owned or in the public domain and the creation of an enabling environment for the private sector, to promote and enhance the transfer of, and access to, environmentally sound technologies;

⁴⁶ CHINA: Government, U.N. Launch Fuel-Cell Bus Project

http://unfoundation.org/unwire/current.asp#32869

China yesterday launched a \$32 million project to reduce the cost of fuel-cell bus technology, a method for developing emission-free public transportation. The five-year project, jointly funded by China's Ministry of Science and Technology, the Global Environment Facility and the U.N. Development Program, will lead to trials of fuel-cell buses in Beijing and Shanghai.

The project, part of a global GEF strategy, will enable technology suppliers to identify cost reduction opportunities and transit operators to prepare for larger fuel-cell bus fleets, said Vice Minister of Science and Technology Ma Songde. The ministry also said that requests for fuel-cell bus proposals for the two cities were expected in the fall.

According to Fan Boyuan, vice mayor of Beijing, a reduction in exhaust emissions resulting from the city's tougher administrative measures is one of the major reasons behind improved air quality, with about 60 percent of days last year considered as having "fine" air quality.

"Beijing is steadily replacing petrol with clean energy such as liquefied petroleum gas in its public transit system," said Fan, adding that "we hope many FCBs are on the roads during the 2008 Olympic Games for the sake of better air quality" (Tang Min, China Daily, March 28 2003).

⁴⁷ Institute for Policy Studies, Friends of the Earth-US, and the International Trade Information Service. *OPIC, Ex-Im, and Climate Change: Business as Usual?* (Washington, D.C., April 1999)

⁴⁸ 'Developing country governments and civil society groups will have different perspectives on the implications of this wave of ECA-supported investments from the north. Some developing country delegations and negotiators under the UNFCCC may emphasize the importance of aligning these flows with industrialized countries' commitments to support technology transfer and leapfrogging in developing countries. Civil society groups in developing countries are likely to stress the importance of reducing the contradiction between these flows and a number of international commitments made by governments since the 1992 Earth Summit in Rio de Janeiro, Brazil. But policymakers in other arenas, particularly trade and economic planning ministries, are likely to perceive any initiative to redirect ECA financing as limiting their own latitude for policy and decisionmaking.'[Maurer (2000):6]

⁴⁹ Problem for the Export Credit Agency Approach *Frontline*Volume 19 - Issue 15, July 20 - August 02, 2002 C.E. KARUNAKARAN

The government and the politicians too have little incentive to take a long-term view. In fact, the subject gets very low priority and the public awareness of the issues involved is also abysmally low as compared to the awareness levels in the industrialised countries. Besides, when push comes to shove, the only superpower of the world will not hesitate to apply open pressure on national governments, using its leverage. In fact, some non-governmental organisations (NGOs) in the North, such as the World Resources Institute in Washington D.C., want international financial institutions to use aid, loan and trade to pressure developing countries to adopt climate-friendly, and obviously costly, technologies. Thus one cannot assume that the Indian government will automatically act in such a way as to protect the long-term interests of the people.

⁵⁰ There has been a heated North-South debate about the legitimacy of such ECA reforms. Anju Sharma, for one, sees the proposal as an instance of gross ('carbon') hypocrisy by Northern actors and, particularly, Northern NGOs:

'Hypocrisy number 1: Rather than critiquing this retrograde, undemocratic and iniquitous position taken by their government and industry, US NGOs in particular (but some European NGOs as well) seem to have taken it upon [themselves] to deliver developing country participation to the US senate by hook or by crook.

Hypocrisy number 2: Northern groups are advocating the use of unfair and undemocratic measures to force developing country participation. They are aiding and abetting the use of aid and loans as a means of forcing developing countries into taking action against climate change, even though they currently have no commitments to do so.

Hypocrisy number 3: By forcing developing countries to stop using fossil fuel technologies without providing a framework for the world to move towards a renewable energy future, Northern groups are denying these countries the right to development.'[Anju Sharma, 'Whose carbon hypocrisy? Should Northern groups be pushing international financial institutions to stop funding fossil fuel projects in the South?', Down to Earth, Vol 9, No 10 October 15, 2000, http://www.downtoearth.org.in/]

⁵¹ AAU = Assigned Amount Unit, the unit of transaction of international emissions trading (IET)

⁵² ERU = Emission Reduction Unit, transaction unit of the Joint Implementation (JI) mechanism.

⁵³ Gao Feng, head of Chinese Delegation at COP8: "I have doubts about the possibility of an international market to trade carbon emissions. If there is trading, in the real sense of a carbon market, then it is likely to be among Annex I countries, for example 'hot air' trading with Russia. If there is any trading of carbon emissions reductions credits between Annex I countries and developing countries, it would not be a real market, but a political market.".[*Equity Watch*, Special Edition 2, UNFCCC/COP8, 25 October 2002, p. 5, <u>http://www.cseindia.org/html/cmp/climate/ew/pdf/edition02.pdf</u>]

⁵⁴ Not that such arguments have not been put forward in the climate change negotiations, particularly in the context of the concerns of oil-exporting countries with regard to 'adverse effects of response measures' where the 'effects' are on oil revenues of developing countries, and the 'response measures' are chiefly the measures taken by Northern (Annex B) governments to reduce the emissions domestically.

⁵⁵ Whether or not these principles are the only ones that should be taken into account must be postponed for further analysis because it is beyond the scope of this pilot study (and the same holds for the question concerning the adequacy of the chosen operationalisation).

⁵⁶ According to the 'Equity Index' introduced in Section 2 (see Fig. 2.2) it would be unfair to ask South Korea, let alone Mexico, to take on mitigation obligations without asking Saudi Arabia, but it is extremely unlikely that Saudi would enter a coalition with the purpose of taking on such obligations.

⁵⁷ 'The topic [=developing country commitments], however, was to reappear in its voluntary guise at COP4 in 1998 in Buenos Aires. While the issue was deleted from the provisional agenda put forward by the host, Argentina, at the instance of the G77, it resurfaced in the second week with the President of Argentina's announcement that it would undertake a voluntary abatement commitment at COP5. In what looked rather like an orchestrated move, the United States signed the Kyoto Protocol less than 24 hours after this declaration, stating that 'as the first developing country to make this pledge, Argentina demonstrates great leadership, real courage, and a deep appreciation that climate change is a truly global challenge that demands a truly global solution'. In contrast to the declarations by Mexico and South Korea at Kyoto, this statement of intent to adopt voluntary targets – and indeed the similar one issued by Kazakhstan – were of greater significance to the G77, for the simple reason that they came from within its own membership.'[Ulrich Bartsch and Benito Müller, *Fossil Fuels in a Changing Climate*, Oxford University Press, 2000:250f.]

⁵⁸ 'Another draft text, tabled by New Zealand, called for "progressive engagement of developing countries according to relative levels of development" under which a process to set binding non-Annex I targets for future commitment periods was to be established by 2002. It was also rejected, not only by the G77 but also by the EU, mainly for not being helpful to the negotiations at hand. In accordance with the Berlin Mandate, the Kyoto Protocol was consequently adopted without any further reference

to non-Annex I targets, voluntary or not.' [Ulrich Bartsch and Benito Müller, *Fossil Fuels in a Changing Climate*, Oxford: Oxford University Press, 2000:248ff.]

⁵⁹ Ottawa offers to cap Kyoto costs

By Steven Chase

The Globe and Mail (Toronto, Canada) Monday, 9 December 2002

Ottawa — Ottawa is offering to cap the amount that business would have to spend to meet Kyoto Protocol targets, and the taxpayer would cover any costs above that, sources say. The move, designed to calm corporate investor fears that their costs might jump if the treaty is ratified, would cap business exposure at \$15 per tonne of greenhouse gas emissions. It represents a bet by the federal government that the costs of implementing the international accord will be far less than the figures its opponents cite, and that taxpayers will not be left with a high tab. Under Ottawa's "price-certainty" assurance, the federal government would assume the risk and pay the tab if the cost of emissions reductions soared above \$15 per tonne of greenhouse gas. [...]The new price cap sends a message to businesses that they can plan to spend no more than \$15 per tonne on emission-reduction measures. They can find cheaper measures themselves or buy credits that they are being assured will not cost them more than \$15 per tonne of gas reductions.

⁶⁰ During the period from 1990 to 2000, the level of US carbon dioxide emissions increased by 13.6%, while the 'intensity' decreased by 15.8%. (Global Environmental Change Report, XV, 4, March 2003: 4–5). The Clear Skies target of 18% reduction in emissions intensity is associated with expected absolute emissions growth of well over 20% over the corresponding period (1990–2010).
7. Building Negotiating Capacity: *Who? How? and What?*

As witnessed in a recent Memorandum by the UK Secretary of State for International Development^a in reply to a parliamentary report on 'Global Climate Change and Sustainable Development,' there is growing recognition in the North of the problems resulting from the imbalance in (FCCC) negotiating capacities – such as a North-South polarisation of the debate¹ – and of the urgent need for remedial action.² While some funding exists for the purpose of building FCCC negotiating capacities,³ and more is about to be made available,⁴ it is not clear whether this will be sufficient, nor is it self-evident how the money is best spent, and – given the inevitable resource constraints – who should benefit. The aim of this Chapter is to bring together some of the relevant results of the previous analysis and draw some preliminary conclusions from them.

How? While it seems to be customary to interpret 'negotiating capacity' as procedural in nature, it may be worth pointing at some of the determinants of what we referred to as 'political negotiating capacity' (see Section 4.2). After all, probably the cheapest way of enhancing the ability of developing countries to carry their proposals in the negotiations would be to enhance their 'democratic capacity,' say by switching from the present consensus decisions to voting procedures.

Of course, if one has no positions, then even the most democratic regime will not be able to ensure that one's interests are being adequately represented. Procedural capacity in general, and analytic capacity in particular, are *sine qua non* to ensure adequate negotiating capacity. While it would be desirable to generate such increased domestic analytic capacity – and increased economic clout – indirectly through poverty reduction, this would not address the urgency of the problem, for the fact is that – even in the best of all possible economic worlds (such as the one underlying the SRES scenarios) – capacity building through poverty reduction would take at least half a century to have significant effects. What is needed are direct interventions. They, however, have to be tailor-made which is why we first need to ask whom these capacity building efforts ought to benefit.

Who? Given the crucial role in the upcoming second commitment period negotiations ascribed to Advanced Developing Countries – such as Mexico, South Korea, and Turkey – in Section 6.1, and the fact that one of them, Mexico, has made it quite clear that it will not be able to sign-up to mitigation commitments without the ability to evaluate what it is actually signing-up to (Section 4.1), it follows that one of the key areas in near-term (analytic) capacity building must be to ensure that Mexico and the other ADCs feel able to take well-informed decisions in this context. As to the 'donor' of such capacity, it would seem that since all three of the mentioned ADCs are, in fact, members of OECD, that organisation would seem to be a 'natural' candidate for providing the desired capacity. Given furthermore that two of the three are members of the Environmental Integrity Group (EIG) – with its unusual (and welcome) character of bridging the North-South Divide – another appropriate capacity building agent could be Switzerland, the EIG's leading Annex II member.⁵

^a UK Department for International Development (DfID), *Global Climate Change and Sustainable Development: Government Response to the Committee's Third Report of Session 2001-02*, Fourth Special Report, 4 November 2002 (HC 1270 ISBN 0 21 500612 7) http://www.publications.parliament.uk/pa/cm200102/cmselect/cmintdev/1270/127002.htm

transfers in question are most likely North to South,⁶ let us consider the less advanced

developing countries (LADCs) represented by G77+China.



Figure 7.1: LADC (G77+China). Negotiating Capacity Indices.

Table 7.1: G77+China. LDC with and without Analytic Capacity Building (ACB)						
	Member- ship	Popu- lation	Average GDP	Analytic Capacity Index	Economic Capacity Index	Democratic Capacity Index
Brazil	0.8%	3.8%	12.0%	2.76	0.58	0.02
China	0.8%	28.5%	24.8%	0.97	0.49	0.05
LDC+ACB	35.9%	13.8%	3.4%	4.47 ^{<i>a</i>}	0.39	0.22
OPEC	7.6%	10.6%	12.7%	1.16	0.38	0.09
AOSIS+ACB	26.0%	0.9%	2.2%	4.47 ^{<i>a</i>}	0.31	0.05
India	0.8%	22.2%	12.0%	0.61	0.27	0.04
AOSIS	26.0%	0.9%	2.2%	1.92	0.20	0.05
LDC	35.9%	13.8%	3.4%	0.27	0.10	0.22
^{a)} = FCCC Analytic Capacity Index of Annex II						

١	With and	Without	Analytic	Capacity	Building	(ACB)	

Table 7.1 illustrates the effects on negotiating capacities within G77+China – as modelled by our negotiating capacity indices – of analytic capacity building scenarios involving a capacity transfer from Annex II to AOSIS and to the LDC group (obviously, our model is not restricted to these examples but can equally be applied to other coalitions). Fig. 7.1 depicts the *Negotiating Capacity Indices* (NCI) for the different LADC coalitions and key Parties acting within the G77+China as function of the involved mixture between *Democratic Capacity Indices* (DCI) and *Economic Capacity Indices* (ECI)

Keeping in mind the *caveats* concerning the use and interpretation of such model results, they indicate an interesting re-alignment in the negotiating capacities within G77-China: instead of maintaining a predominant position for around 40 percent of the mixtures that make up the NCIs – after which it is overtaken by OPEC (see ①, Fig 7.1a), ending up at the bottom of the capacity ladder – the Least Developed Country (LDC) group with significant capacity building retains its leading position for around 80 percent of the mixtures, after which it is overtaken only by Brazil and China (②, Fig. 7.1b). Raising AOSIS to the same level of analytic capacity would entail a reshuffle, but not as dramatic, as it would only involve an overtaking of India in about 40 percent of the mixtures. According to this simple model, significant analytic capacity building for the LDC group manages, in particular to catapult it from the bottom (Box A in Fig. 7.1a) to the top (Box B, Fig. 7.1b) of the hierarchy in what we earlier (Section 4.1) identified as the likely general negotiating capacities.

In short, our model suggests that in the face of resource constraints, a priority recipient of capacity building efforts within G77+China should be the LDC group,⁷ rather than, say, AOSIS. Whatever the merits of the methodology used to arrive at this conclusion, it does concur with evidence given at the above-mentioned House of Commons Committee hearings:

81. The International Institute for Environment and Development told us that small island states were well organised and had formed the Alliance of Small Island States (AOSIS). AOSIS has obtained legal and technical advice to help it in negotiations. The least developed countries (LDCs) were less well organised in climate change negotiations than they were in other fora, such as the World Trade Organisation (WTO). LDCs need access to scientific and legal advice, either by boosting their own capacity or from independent sources.^a

What? The sort of model based on very general parameters may be useful in helping to prioritise *who* should receive additional procedural capacities, but it definitely cannot provide any information on what sort of capacity building may be most appropriate for the identified group(s). To get some indication on this, it is necessary to consider parameters which are more specific to the issue at hand, such as the ones that were used in our statistical sketch of 'direct-' and 'indirect procedural capacities' (Section 4.3). Regarding LDCs our preliminary findings can be summarised as follows:

- Contrary to a common preconception, LDCs in general have significantly larger FCCC delegations than could be expected (which may be interpreted as a sign of above-average interest), and their delegations are generally less transient than those of many OECD countries.
- The pattern of government agencies currently represented in the LDC group is very concentrated (environment and meteorology)

^a UK House of Commons Select Committee on International Development (SCID), *Global Climate Change and Sustainable Development*, Third Report of Session 2001-02 http://www.publications.parliament.uk/pa/cm200102/cmselect/cmintdev/519/51907.htm#a32

• As concerns analytic capacity, indications are that LDCs, like most other developing countries, have a significant handicap.

There are different ways in which one could react to these findings. For example, one could try to remedy what we consider to be an insufficiently broad-based sectoral representation at the country level. However, we believe it to be more effective to support the group effort, i.e. to help create the conditions under which the group can not only arrive at common policy positions but also harness the synergies of direct negotiating capacities by delegating different negotiating tasks to different sub-groups or members (with particular expertise in the area).⁸ The institutional⁹ and financial requirements for this sort of capacity building would have to be carefully considered.¹⁰ All we hope to have conveyed here is an indication of the sort of analyses that could be employed to inform decision-making on capacity building over and above what can be done on the basis of anecdotal evidence alone.

Endnotes Chapter 7

¹ '4.1 We agree with conclusion (32) regarding the imbalance in negotiating capacity. This is an issue common to many international negotiating processes and has in part contributed to the unfortunate north south polarisation of many negotiations, which should be global in nature.'[DFID (2002)]

 2 '80. Climate change does not attract the same levels of international attention as other policy issues. There is a marked imbalance between the international institutions dealing with trade and those dealing with the environment or sustainable development.[238] Similarly there is an imbalance in the negotiating capacity that developed and developing countries can bring to international negotiations. Benito Müller told us that at the Bonn Conference of Parties (CoP-5), where the negotiations had continued for three days without interruption, the US had 120 official delegates while India had seven, and some countries only one.[239] Developing countries often lack the capacity or resources to play a full part in international negotiations, even to the extent of having the resources or capacity to field a team able to cope with the demands of successive all-night negotiations. It is of little surprise then that the results emerging from such negotiations do not fully address the needs or concerns of developing countries. [...] We find the huge imbalance in the negotiating capacity between developed and developing countries alarming. The best way to bring about fairness and equity will be to ensure developing countries can shape and implement agreements effectively. Institutional capacities will have to be strengthened and negotiating capacity developed. DFID could make an important contribution towards helping developing countries play a more significant part in international negotiations, as it does for trade negotiations.[240]'[UK House of Commons Select Committee on International Development (SCID), Global Climate Change and Sustainable Development, Third Report of Session 2001-02

http://www.publications.parliament.uk/pa/cm200102/cmselect/cmintdev/519/51907.htm#a32

³ 'Pooling resources in larger groupings, such as the G77 and China bloc, could help but the internal politics of such groupings sometimes undermines their effectiveness. Some funding is available to help developing countries participate in international meetings. A trust fund was established by the UNFCCC to support the participation of representatives from developing countries, especially least developed countries, small island states and economies in transition. Additional funding and programme-specific budgets were made available to support participation in workshops and expert group meetings. This is all welcome but does little to address the huge imbalance in the negotiating and scientific capacity between north and south.'[UK House of Commons Select Committee on International Development, *Global Climate Change and Sustainable Development*, Third Report of Session 2001-02

http://www.publications.parliament.uk/pa/cm200102/cmselect/cmintdev/519/51907.htm#a32]

⁴ For example, '4.2 In the 2000 International White Paper, [the UK] government made a commitment to, "build a stronger, more open and accountable international system, in which poor people and countries have a more effective voice." This clearly includes the important multilateral environmental agreements (MEAs), including the United Nations Framework Convention on Climate Change (UNFCCC). To this end, DFID is considering a programme of assistance to support developing countries to participate more effectively in the major MEAs including the UNFCCC. This would most efficiently be done with other countries. Subject to the scheme's approval, we anticipate that this could come on stream in 2003/4.'[DFID (2002)]

⁵ This is, of course, not meant to imply that other Annex B Parties cannot contribute and rely, in particular, on Switzerland's longstanding tradition of offering good services. The point to keep in mind is that, for the purposes of keeping a multilateral regime beyond the first commitment period, it is essential that this support be provided in the manner suggested in order to balance the inevitable attempts by the current US administration to impose a regional (NAFTA) regime.

⁶ Having said this, one should not ignore the need of Economies in Transition in this context!

⁷ India, which was not considered in this analytic sketch, may also be in the running for such priority capacity building.

⁸ 'Several initiatives are under way to bring delegates to meetings and ensure that they are briefed shortly before or sometimes even at the meetings. Capacity building efforts would be more effective if

they were focused instead at the country level. They could help domestic researchers and policy think tanks undertake studies in time for national policy debates preceding international negotiations, allowing developing countries to prepare policy positions and consult strategic partners inside and outside the country. Capacity could also be built by providing support for better networking among concerned groups of (or all) developing country delegations before, between, and after negotiating sessions. Enhancing capacity in both respects would enable developing country negotiators to receive fuller briefs and enter negotiations with a stronger mandate-and thus a better bargaining position. This goal could be achieved by creating an independently administered or self-administered participation fund for developing countries, as suggested by Kaul, Grunberg, and Stern (1999). Rather than solely support participation in larger conferences, as similar initiatives do today, the fund could sponsor more regional and preparatory meetings among developing countries. The policy coordination that would develop through these meetings would help developing countries change the negotiating dynamics and influence agenda setting. The fund could also be used to improve access to the latest communication technology (computers, the Internet, and the like), to strengthen coordination among countries before meetings. Finally, the fund could be used for providing issue-specific training; for acquiring environmental, trade-related, or other expertise; or for building national, regional, or joint capacity.'[Chasek and Rajamani (2003):257]

⁹ It would seem rational to involve existing institutions such as the recent LDC Expert Group in such a group capacity building effort. At the same time it may be instructive to consider the success of AOSIS, particularly in relation to the London-based Foundation for International Law and Development <<u>http://www.field.org.uk/</u>>, members of which made up a substantial number of the 'regulars' in the Delegation of Samoa (a member of both AOSIS and LDC)

Samoan Delegation. COP6bis to COP8

Delegate	#	Designation
Slade	3	UN Ambassador
Lefèvere	3	FIELD
Sila	2	Foreign Affairs
Volentras, Andrea Olav Bing	2	Advisor, Environmental Legal Officer South Pacific Regional
		Environment Programme (SPREP) Samoa
Werksman	2	FIELD
Yamin	2	FIELD

¹⁰ There are some 'neutral' (but poorly resourced) agencies. The Commonwealth Secretariat, working for governments, but without negotiating roles or interests of its own, provides both general advice and an adviser in Geneva. Academic institutions and NGOs especially in Geneva provide some information (although some also take positions). The main growth in assistance is by bilateral donors, but, as is increasingly recognised, this is a sensitive area, where the commercial interests of countries (which are themselves major participants in trade negotiations) may be in conflict with the development objective of building up the negotiating strength of 'the opposition', while developing countries are very conscious of the potential relation between aid and support in negotiations. Some distance or buffer between helpers who are also traders and donors and their clients seems useful.[Page (2003):9]

8. Most Promising Steps Towards the Second Commitment Period

The task of this study was to consider ways in which current international climate change efforts under the FCCC – particularly the mitigation regime established by its subsidiary instruments (Kyoto Protocol and Marrakech Accords) – could be successfully extended beyond its current time horizon at the end of the first commitment period in 2012. Yet before turning to a 'most promising' scenario for this task, a brief word as to why it is of importance to retain an international regime in the first place.

For one, the multilateral approach is by far the preferred option in many, if not most Developing Countries (DCs).¹ They see it as the only way to counter the age old divide-and-rule tactics by Northern countries in (bilateral) dealings with the South. If it is indeed of importance to engage DCs in combating climate change – as many believe it is (Section 4.3) – it will be easier to overcome the current climate of distrust and to obtain long-term cooperation from the South within a multilateral setting (the stronger one's position, the easier to give trust).

While it may be possible for a significant reduction in global greenhouse gas emissions to be attained in the context of regional regimes² – along the lines of the 'Hemispheric Solution' proposed by the current US administration – it is impossible to address the key Southern issue of climate impacts and their inequitable burdens adequately in anything but a truly global regime. The problem is that while the causes of climate change might be susceptible to a regionalised treatment, its effects are not only non-domestic, but they are not even 'trans-boundary' in the traditional pollution related sense of the word. They are truly global in that the 'pollution' is not restricted to any geographical region, with the consequence that each 'polluter' will be answerable to every other country in the world. Instead of an exponential proliferation of bilateral agreements, the multilateral route seems to be much more effective, and in practice the only way in which a fair solution can be found.

As it is difficult to see how a global adaptation and impacts regime could survive a Balkanisation of mitigation efforts, we believe it is vital to find solutions to the current problems within the global framework established under the UN Framework Convention on Climate Change.

8.1 Substantive Progress

Integrating non-Parties

Together with entry into force of the Kyoto Protocol, by far the most important prerequisite for a successful continuation of the multilateral climate change efforts in the near term is the re-engagement of Annex I non-Parties in the Kyoto process, and specifically the re-engagement of the United States of America.

Entry into force of the Kyoto Protocol itself will serve as a potent reinforcement of a signal, particularly to the US business sector, that the issue of greenhouse gas emission reductions is here to stay, originally sent by the refusal of the UNFCCC to accept the Bush administration's death certificate for the Protocol by adopting the Bonn Agreements at COP6bis in July 2001.³

Indeed, engaging the US business sector will be decisive for a successful reengagement of the US in the multilateral regime. Entry into force of the Kyoto Protocol is just one among a number of tools that can be employed to persuade business to take action 'voluntarily' i.e. without mandatory government regulation. Another one is to make use of market forces and market constraints. To give an example, it stands to reason that if the EU and Japan start to impose serious carbon constraints on road transport, then sooner rather than later there will be technology spill-over effects on the US transport sector and its considerable CO_2 emissions.^a Another tool is to form coalitions and partnerships with the progressive forces in the US at local, state and federal level, both in government and the business sector. Such "coalitions of the progressive" could play a key role in getting the as yet unbridled growth of US emissions under some control, a near-term precondition to any realistic re-engagement of the United States in the multilateral mitigation regime.

As to the actual format of such a re-engagement, it may be necessary to adapt the 'Kyoto formula' somewhat, say by introducing emission permit price caps, to alleviate US concerns about adverse economic impacts of mitigation measures. Yet again, the best way of alleviating these worries is for the Kyoto Parties to implement the Protocol and to show by example that this can be done without plunging one's economy into "deep freeze".

The Role of Developing Countries

Advanced Developing Countries (ADCs). The 1992 UN Framework Convention on Climate Change introduced some fundamental distinctions between Parties in the form of two lists known as 'Annex I' and 'Annex II'. Annex II comprises the then European Economic Community and the members of the Organisation for Economic Co-operation and Development (OECD) at the time. As such it is interpreted as the group of countries sufficiently *advanced* in economic *capability* to help carry the financial burden to less developed countries from commitments in the Convention and its subsidiary instruments.^{4'5} Annex I, in turn, covers Annex II plus the former socialist economies known since the collapse of the Soviet Union as 'economies in transition'.⁶ The countries in this list are grouped together because they are industrialised, and thus carry a larger (more 'advanced') responsibility for the climate change problem than countries that have not undergone an industrial revolution. In short, the Convention recognises industrialised and/or rich Parties as having an advanced level of 'differentiated responsibilities and respective capabilities' as referred to in Art. 3.1.

The specification of these lists in terms of membership in some existing coalition – as opposed to by reference to some set of substantive criteria – may have been politically expedient at the time, but it has led to problems that may plague the process for some time to come, as witnessed, for example, by the case of Turkey.⁷ Having been included in Annex II – and *a fortiori* Annex I – purely on grounds of its OECD membership at the time, Turkey felt aggrieved for not really being sufficiently 'advanced' in the aforementioned sense to be included in either category. Accordingly it refused to sign or accede to the Convention – together with only five other countries in the world⁸ – until a compromise was found in the running up to COP7 in Marrakech.⁹

While institutional membership is not necessarily an adequate criterion as to who should take on mitigation burdens, there are grounds for arguing that some of the post '92 OECD entrants such as South Korea and Mexico might be sufficiently 'advanced' to take such responsibilities in the second commitment period (Section 2.3). To be

^a For more on technology spill-over, see Section 6.3.

absolutely clear: this will not happen in the absence of certain other Parties (OECD or not) who are equally if not more 'advanced' – in particular the most 'advanced' of them all: the United States.

The Turkish compromise – removal from Annex II, but retention in Annex I with the proviso that as a Party, Turkey is to be recognised as being 'in a situation different from that of other Parties included in Annex I to the Convention'¹⁰ – and the case of Kazakhstan (Annex I for Kyoto Protocol purposes only), may turn out to be of considerable significance in attempts to integrate these ADCs into the second commitment period mitigation regime. The negotiations about Turkey's Annex I status – which will have to happen regardless of second commitment period considerations – could be key to a second period integration of ADCs.¹¹ As expressed in Section 6.4, ADCs will be as much in need of a special Annex I status as Turkey is,¹² and as has previously been granted to the EITs. In such a context, it might be possible to heed some ADC demands regarding mechanisms and target flexibility (such as price caps, see Section 4.1) which could equally benefit Turkey's Annex I membership status.

As indicated in our discussion of procedural problems (Chapters 4 and 7), a country like Turkey may actually be well-advised to join like-minded coalitions in order to enhance its negotiating position. In its case, the Environmental Integrity Group would seem to be the most appropriate of the existing recognised FCCC groupings. By joining this group, Turkey may benefit from the procedural capacity building efforts which Annex II countries will have to provide for EIG's ADC members – particularly Mexico – if these are to join Annex I in the second commitment period.

Less Advanced Developing Countries (LADCs). If the question of which Parties (morally) ought to adopt some form of quantified emission limitation obligation in the second commitment period is interpreted in terms of their level of 'differentiated responsibilities and respective capabilities' – as opposed to their membership in some organisation or other, be it OECD or G77+China – then the key issue is how these responsibilities and capabilities are to be operationalised. In Chapter 2, an 'equity index' based on per capita emissions and per capita GDP (as rough proxies for responsibility and capability) was used for this purpose. No doubt the results thus derived are in need of refinement, but it is not easy to see how such refinements could significantly alter the fact that both China and India – the two countries most frequently cited in 'lack-of-meaningful-participation' arguments – fall significantly short in their capability and responsibility when compared to the current world average, let alone that of Annex I/II.

Moreover it is politically highly unlikely that consensus could be reached about emission limitation targets for the two countries. India, in particular, will not accept any target that does not significantly reflect the size of its population, something which – given the present North-South discrepancies in per capita emissions – would result in North-South surplus permit trading at levels not acceptable to many in the Northern hemisphere. Integrating China and, particularly, India into a regime of emission limitation obligations, in short, will have to wait until their per capita emissions and those in the North are on a more equal footing.

The danger is, of course, that such a *rapprochement* of per capita emissions might occur at an environmentally unsustainable level. To be sure, this is not just a matter of below average emitters catching up with the rest, but equally – and some might argue more importantly – of above average emitters not putting enough effort into reducing

their emissions. However, it could be - and many in the countries that have taken on emission reduction obligations believe it is the case - that the emissions of the (key) Southern Parties have to be reduced in the near term for purely environmental reasons, that the overall objective of the regime cannot be achieved without such nearterm reductions, regardless of these equity considerations, as it were.

While it is not completely clear whether these worries about a lack of near-term DC emission reduction efforts are justified (see Chapter 1), there are fortunately ways to address the issue without creating a conflict between environmental and moral principles. The fact is that emissions can be *addressed* (limited, reduced) without putting the *burden* of such remedial action on the emitter. Section 6.3 lists a number of ways in which this could be achieved, ranging from the purely market driven phenomenon of 'technology spill-over' and subsidised 'technology transfer' to demand side interventions in project-based emission trading instruments known as the Clean Development Mechanism.

Technology spill-over and technology transfer – i.e. the diffusion of (Northern^b) technology to the South – will only have the desired effect of addressing Southern emissions if the technology in question is environmentally and economically sustainable in Southern contexts. The key driver of these market-based mechanisms is the timely decarbonisation of Northern markets. In other words, one way in which the industrialised world can address DC emissions is by being serious about their own mitigation efforts. The example involving the more specific context of the Clean Development Mechanism involves the setting of a minimum demand quota as part of Northern commitments, i.e. the introduction of (Annex B) Certified Emission Reduction Obligations (CEROs). This would ensure a specified reduction in emissions from DCs, again without imposing an additional burden on them. In short, there are a variety of ways and means to address DC emissions in the near term apart from demanding that they take on mitigation commitments and concomitant mitigation costs.

Impact Management. The aim of this study was to consider ways in which the multilateral emission mitigation regime established with the Kyoto Protocol under the Framework Convention could successfully be extended beyond its first commitment period. The measures suggested in this chapter so far are what we consider to be the most promising near-term steps in this direction. However, the study also took a step back to consider 'the broader picture' of political realities surrounding the mitigation issues in question. The reason for this was the realisation that even these "most promising" steps will not succeed in establishing a successful global *climate change* regime, simply because they fail to address a range of problems which are becoming more and more an issue for the majority of the Parties in the FCCC, the issues of adaptation, vulnerability and unavoided *climate* impacts and the profound sense of inequity in the South about the distribution of the inevitable associated burdens.

The conclusion drawn here is that these issues will have to be considered in parallel with the mitigation issues for the process to be successful in the long term. And while it may in the medium to long term turn out to be desirable for both the South and the North to follow up a suggestion by the Indian government during COP8 concerning an 'Adaptation Protocol,' the study concludes that in the short term – i.e. concurrent with the upcoming second commitment period negotiations – other less ambitious

^b See in this context the paragraph on R&D capacity building in Section 8.2.

measures such as a reform of international natural disaster relief financing may be more promising (Section 6.2).

8.2 Procedural Progress

The current stand-off in the FCCC negotiations is not just the result of substantive differences between Northern and Southern protagonists. It is also significantly due to a general Southern distrust of the North combined with a lack of negotiating and analytic capacity that would enable the Southern delegates to meet their Northern colleagues on a level playing field. To put it in somewhat personalised terms, the fact is that if I am unable to evaluate a proposal by someone I do not trust, then there is only one thing I can do: apply the precautionary principle and reject it. The proponent may be powerful enough to force me to change my mind, but if the situation requires genuine collaboration – as climate change does – the only way forward is to enable me to participate on equal terms in the negotiations, say by giving me the capacity to evaluate proposals put to me, and put forward counter proposals of my own.

Contrary to '(neo-) realist' – i.e. narrowly self-interested – precepts, Northern Parties will benefit (with everyone else) if they help to close the North-South "negotiating capacity gap". Indeed, capacity building in a wider context may have similar beneficial effects. For example, enhancing the South's R&D capacity for technology would enable it to develop its own environmentally sustainable technologies as opposed to being forced to buy/choose from technologies which may not be adequate simply because of having been developed for quite different markets. As concerns negotiating capacity building proper, the study has identified two priority groups of FCCC Parties, namely Advanced Developing Countries (ADCs) – key among them South Korea, Mexico and (albeit Annex I) Turkey – and the Group of Least Developed Countries (LDCs).

Advanced Developing Countries will be instrumental in the near-term negotiations concerning the second commitment period envisaged under the Kyoto Protocol. In the most recent negotiating rounds, these ADCs have participated with a significant number of delegates,¹³ and their main capacity building needs seem to be in the field of analytic capacity, i.e. to analyse emission limitation proposals from their own perspective. Two *fora* that may be best suited to help in this context are the Environmental Integrity Group and the OECD, with its International Energy Agency (IEA).

Contrary to some widely held views, we found that LDC delegations – though frequently very small – are not more transient in their composition than those of other Parties, and that the 'old hands' in LDC delegations collectively form a sizable group. The key capacity building task – according to our preliminary findings – is to transform this group into an effective negotiating coalition. This will require the provision and transfer of analytic capacity, but also the provision of a permanent infrastructure to allow crucial group activities – such as the division of negotiating tasks within the group – to take place. This may be no small task, but if the countries involved see their common interest, then it is perfectly possible, as has been shown by the example of another DC coalition, the Alliance of Small Island States (AOSIS).

Endnotes Chapter 8

¹ Gao Feng's (head of Chinese Delegation at COP8) view of the US administration's position in the climate negotiations: 'It is not satisfactory at all. Their approach to climate change is one thing, their "unilateralism" is quite another. We are open to discuss their approach with regard to their economy. But we believe that multilateralism is the best way to address climate change and its international character. The US refusal to ratify the Kyoto Protocol is a mark of unilateralism. But we have to remember that the US is still a signatory to the convention.'[*Equity Watch*, Special Edition 2, 25 October 2002, p. 5, http://www.cseindia.org/html/cmp/climate/ew/pdf/edition02.pdf]

² It is not unknown for neighbouring countries to have similar socio-economic circumstances which could make bilateral CC mitigation arrangements between them less difficult to achieve than a fully fledged global deal.

³ See, for example, Benito Müller, 'The Resurrection of a Protocol' <u>www.OxfordClimatePolicy.org</u>, August 2001.

⁴ FCCCC Art 4.3. The developed country Parties and other developed Parties [i.e. EU] included in Annex II shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1. They shall also provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures that are covered by paragraph 1 of this Article and that are agreed between a developing country Party and the international entity or entities referred to in Article 11, in accordance with that Article.

⁵ **'Annex II Parties** - The rich countries listed in this annex to the Convention have a special obligation to help developing countries with financial and technological resources. They include the 24 original OECD members plus the European Union.'[http://unfccc.int/siteinfo/glossary.html]

⁶ **Annex I Parties** - The industrialized countries listed in this annex to the Convention are trying to return their greenhouse gas emissions to 1990 levels by the year 2000 as per Article 4.2(a) and (b). They have also accepted emission targets for the period 2008-12 as per Article 3 and Annex B of the Kyoto Protocol. They include the 24 original OECD members, the European Union, and 14 countries with economies in transition (Croatia, Liechtenstein, Monaco and Slovenia joined at COP-3, and the Czech Republic and Slovakia replaced Czechoslovakia).'[http://unfccc.int/siteinfo/glossary.html]

⁷ 'Upon negotiations at the meeting of the UNFCCC Intergovernmental Negotiation Committee at New York in May 1992, Turkey was included in the Annex I list, with OECD member countries and countries with economies in transition, and also in the Annex II list along with the OECD countries. Through this inclusion in both annexes, Turkey was considered among industrialized countries, and thus, it was obliged to fulfil all the commitments of industrialized countries. Turkey did not sign the Convention at the Rio Conference in June 1992 and has not become a Party, because of the difficulty for Turkey to stabilize emissions of greenhouse gases, particularly energy-related CO₂ emissions, to their 1990 levels by the year 2000, and to provide financial and technical assistance to developing country Parties.

The Seventh Conference of the Parties convened in Marrakech on October 29–November 6, 2001 adopted a decision that amended the Annex II list to the Convention by deleting Turkey and invited the Parties to recognise the special circumstances of Turkey, which, effective upon becoming a Party, placing Turkey in a situation different from the other Parties included in the Annex I of the Convention. Thus, it is expected that Turkey will become a Party to the Convention after ratification at the Turkish Grand National Assembly in 2003.'[Turkish National Programme on Environment and Develoment, 'Position Of Turkey At The United Nations Framework Convention On Climate Change, envir@ttnet.net.tr]

⁸ As of 17 February, the list of countries which have neither ratified not acceded to the UNFCCC was: Andorra, Brunei, Holy See, Iraq, Somalia, and Turkey.

⁹ Strictly speaking, the expression was made to the Subsidiary Body for Implementation at its concurrent fifteenth session. See FCCC/SBI/2001/L.8, 3 November 2001

¹⁰ FCCC/SBI/2001/L.8, 3 November 2001

¹¹ See Section 6.4.

¹² 'For long years, Turkey requested to be excluded from both of the Annexes. However this was not accepted. Thus, starting from COP6, Turkey developed a different alternative and the decision was reached at COP7, that Turkey will be party to the UNFCCC as an Annex-I Party but due to her unique circumstances, her position will be evaluated in a manner different than other Annex-I Parties. Now, it is Turkey's responsibility to define and convince the rest of international community to the nature and extent of these special circumstances and the content of the uniqueness that will differentiate her position from other parties. Basically speaking, I believe this could be somehow similar to the privileges that EIT Countries have been favoured.'[Private communication by Yunus Arikan (Deputy Programme Manager, Turkish National Programme on Environment and Development), April 2003]

¹³ During the last three COP Sessions (COP6bis to COP8), both the Mexican and South Korean delegations averaged 30 members, while Turkey, as observer state, participated with an average of seven delegates.

APPENDICES: REVIEW CONTRIBUTIONS

Appendix 1: A Southern Critique

by Anju Sharma¹

Brief Summary of the Paper. The Framing of Future Emission Limitation Commitments suggests that trust building is needed to move forward in the climate negotiations, and this involves addressing two major taboos: developing country commitments to emissions reduction (a Southern taboo), and impacts of climate change (a Northern taboo). It suggests that the former can be addressed by adding countries that have the capacity and responsibility to Annex I (South Korea and Mexico) and by indirectly addressing developing country emissions through technology transfer, technology spill over, CDM/CEROs and reform of export credit agencies (ECAs). The latter can be addressed in the short term through a climate change relief fund along the lines of existing disaster relief funds, insurance and the GEF funds, and in the long term through a more detailed adaptation protocol.

Comments. I agree with the basis of most of the arguments made in the paper, but feel that it does not go beyond what are today perceived to be the limits of what will be generally acceptable to industrialised and developing country governments – particularly the former. It is too quick to suggest compromises to controversial issues. Many issues (not just developing country commitments and impacts – also technology transfer for instance) will need solutions beyond what is today considered acceptable, for the negotiations to go forward in any meaningful way, and to be perceived as fair. Industrialised countries, which have had the benefit of years of unrestricted development, will have to take more responsibility and show a lot more leadership than they have done so far. Particularly in the climate negotiations, which touch the heart of the environment and development debate, and will in many ways form a model for future negotiations in sharing the limited capacities of the Earth in ways that ensure global security.

Trust Building and the Twin Taboos. Confidence building is indeed important at this stage in the climate negotiations, and in fact in this stage in history, when epitaphs are being written for multilateralism. Trust between the North and South is particularly low in the aftermath of the Iraq war, and the deadlock on the WTO negotiations on the issue of Northern subsidies in sectors that matter to developing countries (not to mention the list of global negotiations that have ended in failure or stagnation over the recent years).

Many, if not most, positions taken by industrialised country governments in global trade and environment negotiations reflect only national concerns. They lack a global vision. This may seem 'pragmatic', but consider the message it sends out to developing countries: "Good governance, rights and equity are good for national policy-making (in fact, a must and you'd better do it or we will have to use trade and aid sanctions to make you democratic). But don't expect the same rules to apply to global policy-making".

The climate negotiations have to be seen in this larger context of current trends in global relations. The deadlock is unlikely to be solved through hesitant give and take on the two taboos mentioned in the paper alone, without acknowledging underlying principles. Even if it does, the bridge will at best be temporary. Developing countries

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may not have an option but to accept compromises, but their resentment will continue to grow until they perceive an overall change in the attitude of industrialised countries, reflecting a genuine desire to solve global problems with the same level of justice that national problems are addressed in democratic countries, and based on the principles of equity. Unless the regime is built on the foundation of clear principles where similar rules apply to all, it will continue to founder and end in uncomfortable compromises.

The suggestions for integration of South Korea and Mexico are based on responsibility and capacity, the evolution of this suggestion into an equitable formula that could apply to all countries would take care of that other "taboo"– when will countries like India, China and Brazil take on commitments? While this has become an extremely sensitive issue thanks mostly to the ham-handed attitude of the US to developing country participation in the past, it is actually in the best interests of these developing countries to negotiate and know in advance the triggers for their participation in emission reduction. This will allow them to plan their future energy investments better and avoid adopting technology that they will have to phase out its lifetime, and to be more discerning about the quality of technology that is transferred through mechanisms such as CDM.

Why Incrementalism is a Problem for Developing Countries. Similarly, the paper does look at the issue of liability with regard to climate change impacts, but immediately carries on to suggest an incremental step, a short term compromise, to address impacts, through existing mechanisms.

Frankly, developing countries have no reason to trust that if they accept half-measures today, the industrialised countries will be willing to discuss a more holistic solution that applies the polluter pays principle later. If past negotiations are any indication, it is likely that the incremental step will be seen as the final solution by industrialised countries, and it will become very difficult for developing countries to negotiate the long term agreement based on the principle of liability.

Moreover, having to revisit an issue repeatedly not only means additional cost to the global community, but it also puts a strain on the already limited negotiating capacity of developing countries. As the paper elaborates, this is already a serious problem, one that further erodes trust as many developing countries are unable to fully analyse the impact of the 'creative accounting' that they are constantly asked to agree to.

Technology Spill-over and Transfer to Address Developing Country Emissions. Undoubtedly, if better technology is developed in the industrialised countries, it can help reduce developing country emissions – *if the best available technology is made available as it is developed.* Unfortunately, this is not the case, and is unlikely unless there is a dramatic change in the approach to the technology transfer debate. To begin with, the premise that technology spill over will take place is slightly optimistic – under normal circumstances, it takes years for technology improvements to filter down to the South. Take the example of the catalytic converter, mentioned in the paper. First used in the US in the 1970s, it came to be used in cars in India only as late as 1995, and that too after considerable public pressure on the government to address local pollution problems.

Part of the reason for the slow rate of technology transfer is the issue of IPR and patents, which has never been discussed seriously despite the long stand-off between the North and South on technology transfer. This makes the technologies too

expensive for developing countries to access. The Montreal Protocol provides an excellent example of the priorities in technology transfer, where the focus was more on providing Northern companies markets for their technologies. Environmental negotiations actually become a wonderful way to new create markets for industrialised country industries. A World Bank study documented that all producers of HFC 134a, an important substitute for air conditioning and refrigeration, held at least one worldwide patent for the production and purification process. The expiry dates of the patents were well after 2010, the date when developing countries will have to complete their phase out of CFCs.

The Montreal Protocol had in effect created a compulsory market for the firms holding the patents to the alternate technologies, and these firms were free to charge prohibitive rates, which are not covered by the funding mechanism of the protocol. In the experience of one Indian firm, for example, the price of technology quoted by an MNC producer of HFC134a was US \$25 million, whereas estimates place its actual cost at no more than US \$8 million. MNCs were also free to lay down conditions before providing the technology – in some cases, domestically owned firms had to give up their majority equity holdings through joint ventures, or agree to export restrictions before access to the technology.²

Unless governments intervene to confront the issue of patents and facilitate technology transfer for "global benefit", it is unlikely to take place at the rate that is needed to address the climate change problem. An expert group on technology transfer was set up in 2002 under the UNFCCC, and it remains to be seen whether the discussions cover any new ground.

The paper suggests providing funds for R&D in the South. This will also need a change in outlook – the multilateral fund of the Montreal Protocol does not fund research and development to enable developing countries to develop their own technology, unless they sign an agreement never to seek money from the fund for that particular technology even if their research fails. This is a subtle way of ensuring that the money is only used to buy technology off Northern companies.

CDM/CEROs. One more lesson that we can learn from the Montreal Protocol with regard to technology transfer is that the cost of changeover for developing countries can be reduced if care is taken not to encourage only incremental changes in technology, but to encourage a genuine "leapfrog". Developing countries cannot afford to invest in too many changes in technology (for instance, to invest now in technology that is only slightly better than what they have, and then to phase that out when they have commitments and invest in slightly better technology and so on). The industrialised countries have to ensure that they reduce the cost of "leapfrogging" for the developing countries.

Industrialised countries will have to give unprecedented support to developing countries in making renewable energy technologies available to them, and allowing them to leapfrog, instead of going through the incremental stages of environmental management that the Western world has been through. This will be to ensure that the developing countries do not have to bear an additional burden, simply because a

² Jayshree Watal 2000, India: The issue of technology transfer in the context of the Montreal Protocol, in Veena Jha and Ulrich Hoffmann (eds), *Achieving Objectives Of Multilateral Environmental Agreements: A Package Of Trade Measures And Positive Measures* United Nations Publications New

Agreements: A Package Of Trade Measures And Positive Measures, United Nations Publications, New York, April, p.69.

common resource (the global atmosphere) that could be used freely in the past by industrialising countries, has become scarce, and its use restricted. They will be taking an alternate, and possibly more expensive, path to development for global benefit and it is only fair that the costs are borne by all.

In the Montreal Protocol, companies largely responsible for the problem of ozone depletion were actually rewarded by the protocol and handed a global market for CFC alternatives, even though these alternatives were known to be ozone depleting, only less so than CFCs. Meanwhile, developing countries will have to bear the cost of technological change more than once under the provisions of the protocol – once to an interim technology (HCFCs) and then to HFCs or hydrocarbons – but are eligible for financial help from the multilateral fund for only one change.

As mentioned in the study, there is a danger that the same thing may happen in the case of climate change. Manufacturers in industrialised country will rake in profits first by selling interim technologies to developing countries in the name of incremental improvements in emissions. The large investment will be in energy technologies, which have a long life -30 to 50 years. Developing countries will come under increasing pressure to take on reduction targets well before this. They will therefore have to junk these technologies before their lifetime is over, and not realise the full benefit of their investments.

The key problem with CDM has been that without a framework that defines the space available to developing countries to grow, it encourages incremental changes – the priority for developing countries is to attract as many CDM projects as possible, without having to worry about the kind of technology the projects are bringing in. It provides the wrong market incentives. And with a low cost, CDM is most likely to focus on cheap options – fossil fuel technologies, hydro and sinks projects. It seems extremely unlikely that even CEROs will drive up the costs of CERs to a point where a significant technological change takes place in developing countries.

ECA Reform. As mentioned in the paper, the Centre for Science and Environment has been very critical of efforts to influence investments in developing countries to bring about change. Our key criticism has been that financial levers should not be used to make developing countries make changes that industrialised countries are not willing to make themselves. This is undemocratic, since similar levers of power are not available for developing countries to force such change on the industrialised countries. Such decisions have been taken multilaterally. Particularly since the change will impose a financial burden on developing countries (since better technologies are more expensive, and there insufficient funds made available for this change).³

Moreover, lending institutions and donors are slowly learning that such top-down approaches and conditionalities rarely work and end up doing more harm than good. Part of the process of global negotiations is also to spark off debate and discussion within countries on the way forward, and strengthening civil society participation. The focus needs to be on making this debate more democratic through the input of information while providing the right global incentives – not to undermine this national process by short-circuiting it and giving into the temptation of using financial muscle to inflict global decisions that countries have not willingly signed up to.

³ Anju Sharma 2000, Whose carbon hypocrisy? in *Down To Earth*, Vol 9, No 10, October 15.

Capacity Building. On the issue of capacity building, I agree that indirect capacity to deal with the complex nature for the climate negotiations will matter as much as negotiating capacity of government officials. A key handicap in developing countries today is that there are not enough professionals looking at problems like climate change from, for instance, economic, legal, health and social perspectives. Capacity building of professionals to understand the complexities of climate change will be very helpful, and will hopefully increase their participation in the formulation of national positions. Similarly, enhancing the capacity of non-government organisations to understand the impact of the global negotiations on their local concerns (by providing a lot more information on local impacts, for instance) will perhaps build pressure on developing country governments to go better prepared to these negotiations. Unfortunately, the problem in developing countries sometimes (as in India) is not always that the capacity is not available, but rather that the negotiations are not seen as important enough; or that the governments (who feel no pressure at home to perform better) make no effort to involve available experts.

Free Riders and Compliance. Finally, a key bone of contention with the developing countries is US non-participation. Environmental agreements so far have used carrots and sticks to solve the problem of free riders, and ensure compliance. These, however, work only where developing countries have been defaulters, as in the case of the Convention on International Trade in Endangered Species (CITES) and even the Montreal Protocol. The climate convention poses a particularly difficult problem – what happens when the biggest free rider is also the most powerful nation on Earth, and carrots and sticks don't work? The situation very clearly shows up the one-sided and unfair nature of the compliance mechanisms in other environmental conventions.

In fact, even finding an effective compliance mechanism for the Kyoto Protocol has proved difficult, given that most of the action has to come from industrialised countries, and they are unwilling to allow any sticks to be used. The solution for a democratic compliance regime for the climate change conventions and also for the other environmental treaties lies beyond trade and financial sanctions – for instance, in the establishment of an institutional structure that can provide democratic and multilateral redressal to rich and poor countries alike. This will go a long way in trust building between the industrialised and developing countries.

Appendix 2: A Northern Critique

by John Drexhage⁴

'Development First' as an Alternative

Dr Müller's central proposal is that the only way for the negotiations to make any progress is by all Parties facing the 'twin taboos' of liability and mitigation commitments. This reviewer strongly disagrees with such an approach, for the following reasons. First of all, by so closely linking liability with adaptation, such an approach carries the real risk of slowing any support on adaptation. If developed countries believe that addressing adaptation, globally, intimates formal liability on their part, the prospects for any serious progress on the critical issue of impacts and adaptation will likely come to a complete standstill. Secondly, asking Parties to face the imponderable issues immediately as a way of breaking stalemate can only work if a fairly healthy level of trust exists between the two sides. The way to build that trust is by identifying areas of mutual concern/interest, even if marginal, and should success be reached on those issues, slowly build a framework in which all sides have a developed a sense of ownership.

What might that area of mutual interest be? I would suggest development and why climate change does make a difference for countries' development choices. The Intergovernmental Panel on Climate Change (IPCC) and the UNFCCC have reiterated that strong and inclusive global co-operation will be critical in ensuring that deep global reductions in greenhouse gas emissions will be necessary in order to effectively address the threat of climate change over the long term. In addition, it is also clear that LDCs are likely to be the most severely impacted by the changes brought on by global warming. Yet, in the years since the establishment of the UNFCCC in 1992, North-South cooperation on climate change has, at best, made little headway and in fact one could make the case that relations between the two sides in the climate change debate have become increasingly polarized, culminating in the difficult negotiations at CoP 9 in New Delhi.

Reasons for this serious impasse include the fact that, from developing countries' perspective (and they are accurate in my opinion), the international negotiations have not adequately addressed their priorities for sustainable development, support for adaptation activities, aid assistance and technology transfer. In addition, climate change is, understandably, not a politically important focus of economic or development policy in developing countries. In other words, climate change remains marginal to their pressing development needs, including poverty eradication, food security, health and energy needs and access.

Within the context of the UNFCCC and Kyoto negotiations, current cooperation efforts and analyses of climate change policy are driven almost exclusively from the perspective of a climate change framework. For example, while related ancillary benefits, such as energy efficiency and improved urban air quality may be significant, they are usually considered only as a positive side effect of secondary importance. In addition, policies to address climate change are often regarded as inimical to

⁴ Director, Climate Change and Energy, International Institute for Sustainable Development. With thanks to the work of the 'Development First' project proponents, comprising some 12 research institutes, and coordinated by RIVM and UNEP-Risoe. (Any conclusions drawn in this piece are the sole responsibility of this author.)

development priorities – how, for example, can we talk about decreasing energy use when fully 2 billion people in the South do not even have access to rudimentary electrical power?

At the same time, it is becoming increasingly appreciated that development policies can only be effective should they address economic growth, social equity and environmental security in an integrated manner. Hence, price reform, sustainable forestry and agricultural practices, energy sector restructuring – all undertaken without any specific reference to climate change – can mitigate environmental risks while they enhance economic development and social equity.

The challenge for sustainable development in the context of climate change is the practical question of how to identify, choose and stay on a path that minimises the local and global environmental costs of poverty relief, providing adequate food and improving access to electricity and transportation infrastructure. To reframe the global climate change debate as deriving from and complementing development priorities means that global collaboration on climate change should be approached on multiple levels and from various perspectives that show how actions taken to address global environmental issues work to support development priorities.

Approaching climate change at multiple levels calls for a response that focuses on vulnerabilities and then developing strategies to minimise those vulnerabilities. In some cases (such as urban air pollution) an effective response would focus on mitigating ghg emissions. In other cases (such as coastal erosion) an effective response would focus on developing adaptation strategies that would work to best protect locally affected populations.

It should be noted that the collaboration mechanisms and the contents of climate change regime based on such an 'upturned' framework have yet to be defined. As a first step then, Parties should, with the help of outside constituencies (including the growing research community) explore, on the ground, why climate change makes a difference for development (particularly in the areas of food, water and energy security) and why development is and will make a significant difference for climate change. While identifying those elements, countries should also could think about what such a 'development first' approach will signify for the evolution of a viable international climate change regime, inside and outside the formal UN framework.

A few additional critical points follow. The proposal by Dr. Müller simply does not address the private sector concerns on competitiveness to any satisfactory degree. This is accentuated in his suggestion that reductions can and should begin in developing countries, now, but that the North should pay for all such investments. The issue of competitiveness simply must be addressed if industrialised countries will agree to significant new and additional reductions beyond Kyoto. Might there be a role, for example, for sector wide commitments, as for example in the airline or cement industry? How to account for a situation where a commitment in Canada to reduce ghg emissions may mean lowering one's fossil fuel generation capacity only to find another country (such as Venezuela) increase its production levels, leaving the global emissions unchanged, but with clear competitiveness impacts on Canadian industry?

The claim that the North has adamantly refused to consider or negotiate on the issue of liability, while probably accurate in its intent, is not factually the case. At least in my experience in the negotiations, the issues of impacts and adaptation have certainly

been raised, but not, formally, liability. I would also strongly disagree with the call for an Adaptation Protocol. Such a decision would effectively marginalise funding for this critical area – much more effective would be a response that was integrated into the mainstream development priorities of aid agencies, multilateral and regional banks and developing countries.

On the proposal for CEROs, in which Annex B Parties would have to purchase a minimum number of CERs in order to meet their Kyoto targets, while interesting, it is not clear how such a proposal could be squared with Annex B Parties taking the lead and taking on as many domestic reductions as possible. International offsets will clearly be required by a number of Annex B Parties, so maybe another way of reframing the proposal, is that Annex B Parties, should they make international offsets, commit to a certain percentage in the Clean Development Mechanism.

The paper is much too dismissive of the interesting travails of the Argentinean experiment – in fact, there needs to be much more serious attention paid to the use of nationally grounded, but not internationally binding, targets as a way of building confidence in a global climate change regime. In that respect, the role of emissions trading as an incentive in that direction also warrants further attention. Finally, the Kazakhstan experience, in which it indicated that it intended, on ratification, to register as an Annex B Party under the UNFCCC, also bears some careful analysis.