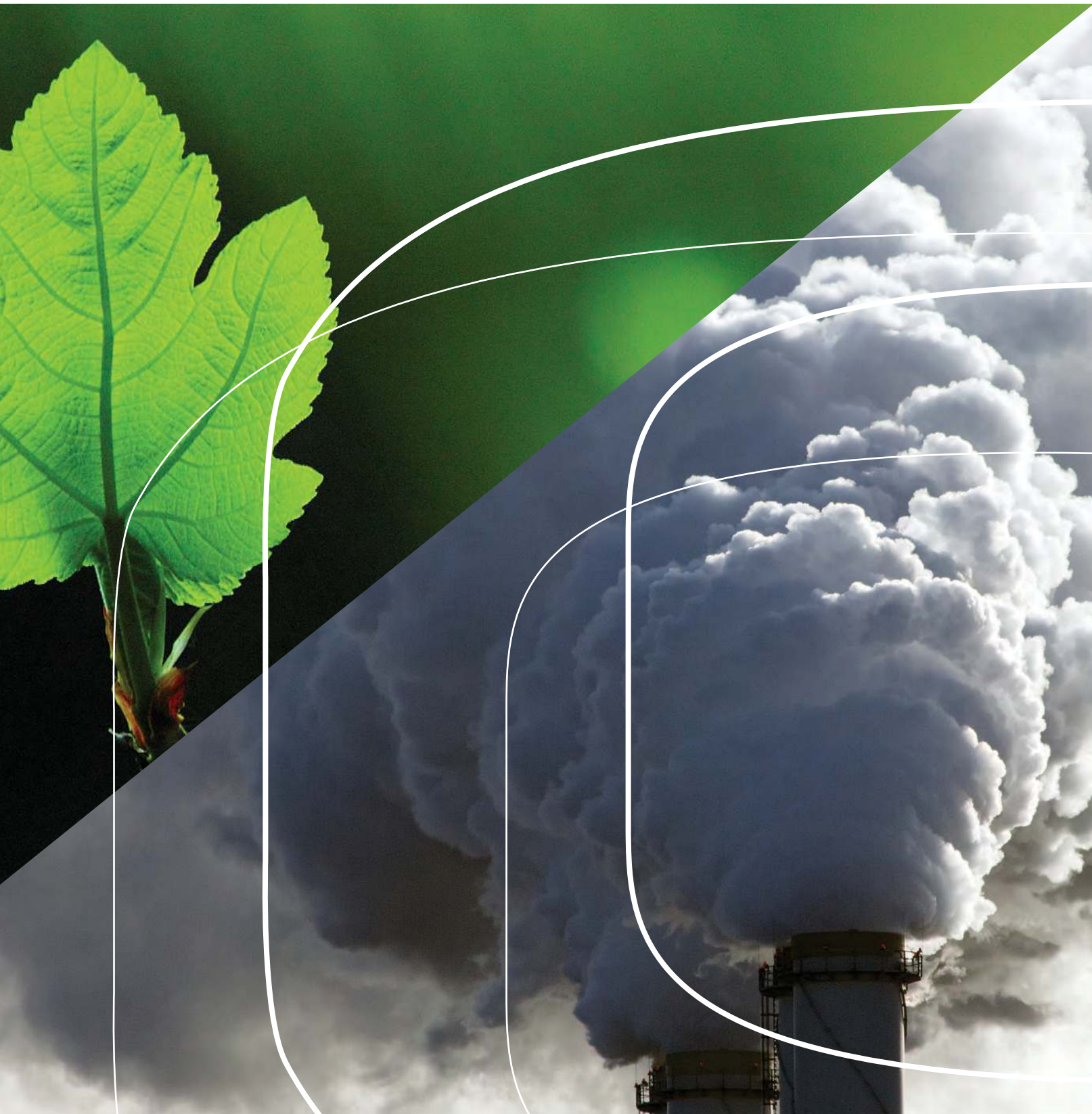


Equity and spectrum of mitigation commitments in the 2015 agreement





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Preface

Equity is a multifaceted concept and one of the core principles of the UN Framework Convention on Climate Change, under which Parties aim at agreeing on a new global climate agreement in 2015. In order to succeed in this task, the UNFCCC needs to draft an agreement that is ambitious and effective, and at the same time inclusive and equitable in a way, in which all Parties can consider the agreement fair enough. Applying the principle of equity, and the closely related principle of common but differentiated responsibilities and respective capabilities (CBDR/RC), should build the appropriate balance between the substantive elements in the new agreement, such as mitigation, adaptation and means of implementation. A spectrum of mitigation commitments ranging from absolute economy-wide emission targets to, for example, targets set on the basis of greenhouse gas emissions in relation to economic output, has been proposed as one of the ways to find such a balance. NOAK initiated this study to review relevant academic studies on equity, identify areas of convergence and divergence, to identify and analyse global indicators for equity and to find ways to operationalize equity in such a spectrum of mitigation commitments.

This year will be the key year in establishing the architecture for the new climate agreement. COP19 in Warsaw requested the ADP to identify by COP20 in Lima “the information that the Parties will provide when putting forward their contributions.” The contributions will be nationally determined and communicated “well in advance” of COP21 in Paris and “by the first quarter of 2015 by those Parties ready to do so.” The report gives several concrete suggestions for the way forward towards Lima and Paris.

The study has been carried out by Cicero for NOAK, a working group under the Nordic Council of Ministers. The aim of NOAK is to contribute to a global and comprehensive agreement on climate change with ambitious emission reduction commitments. To this end, the group prepares reports and studies, conducts meetings and organizes conferences supporting the Nordic negotiators in the UN climate negotiations.

Helsinki March 2014

Harri Laurikka

Chair of the Nordic Working Group for Global Climate Negotiations

1. Summary

To what extent and how can a spectrum of mitigation commitments provide an operational framework for writing broadly accepted principles of equity into the 2015 climate agreement?

We approach this question through a review of academic literature and an analysis of views expressed by the Parties themselves. The review of normative theory produces some good and some bad news. The good news is that the principle of common but differentiated responsibilities and respective capabilities (CBDR/RC) emerges as a broadly accepted framework of distributive fairness. More specifically, the search for distributive fairness criteria is an effort to combine two basic principles: equal treatment of equal cases (here: equality), and differential treatment of cases that differ significantly in important respects (here: equity). Differential treatment in turn relies on two principles that apply to different cases: *Proportionality* where differences are significant but not very large, and *exemption* from obligations for Parties that have no significant role in causing the problem, or have very limited capacity to contribute to mitigation.

The bad news is that the key concepts “responsibility” and “capacity” are subject to divergent interpretations, and that this divergence tends to reflect conflicts of interests. The implication is that search for a consensual and precise formula for effort-sharing in a new climate mitigation agreement is not likely to succeed. This finding points towards operationalizing equity through other means than an effort-sharing formula.

“Responsibility” can be operationalized in different ways. We consider two key issues. First, should the measure of responsibility include all greenhouse gases and related activities or be limited to some subset (e.g. CO₂ emissions from fossil fuels)? Second, for what time horizon should responsibility be estimated? The answer to the former question makes a truly significant difference for many Parties. Within the limitations suggested by normative theory, the time horizon issue becomes less important for most Parties.

“Capabilities” are usually measured as Parties’ ability to pay, indicated by their GDPs or GDPs per capita. We show that a wider conception of capabilities, e.g. including transformation capacity and natural resource

endowments, will significantly affect outcomes for many Parties. This applies particularly to natural resource endowments

Extant research on climate policy architectures has focused mainly on variants of top-down approaches or initiatives outside the UNFCCC framework. The limited literature addressing bottom-up approaches within the UNFCCC focuses on menu approaches and pledge-and-review systems. The spectrum of commitments is not a well-defined concept but can be seen as a type of menu approach, where Parties agree on a menu of types of commitments, from which each Party can choose. This differs from a pledge-and-review system where no menu of commitments needs to be agreed upfront.

The analysis of Parties' views relies on ADP submissions and statements, as well as interviews with some Parties. It shows that equity is strongly associated with other terms, including CBDR, Annex 1, historical responsibility, principles of the convention, equitable access to sustainable development, and several other terms. Parties choice of terms closely match what type of agreement they advocate. For instance, Annex 1 Parties use the term "fair" or "fairness" more frequently than "equity", and the term "national circumstances" more frequently than "CBDR." The opposite is true for the Like-Minded Developing Countries.

Based on the academic review and our analysis of Parties' views, we reflect on how equity can be operationalized in a spectrum of mitigation commitments. We argue that a potentially feasible and constructive way forward is a mutual recognition approach. This approach implies that parties should accept a set of norms, and a range of interpretations of these norms, as legitimate (i.e. as consistent with the CBDR/RC). Parties should also respect a principle of reciprocity, which means that any (interpretation of a) principle of fairness invoked by oneself can legitimately be invoked also by others.

Given that commitments will be nationally determined, equity indicators may facilitate a process of self-differentiation, through guiding commitment formulation and as part of *ex ante* review of intended commitments. Applying the mutual recognition approach to this specific issue, we propose a template of indicators approach, building on two critical components: *transparency* and *open, critical review* of Parties' pledges and justifications. The COP20 decision would encourage Parties to report their scores on quantified indicators relating to equity, along with their intended contributions. The figures must be presented so that they are reproducible to third parties. It would be useful if the decision specifies a template of indicators for which reporting is expected but not mandated. By making the refusal to report explicit, there is an incentive

for Parties to report in order to avoid the impression that they have reasons to withhold information. Absent agreement on a template of indicators, the decision should outline some more general principles, allowing Parties to freely choose indicators derived from those principles.

2. Introduction

Equity and ambition are two issues at the core of the UNFCCC negotiations, and they are inextricably linked. Ambition, in the sense of ensuring sufficient mitigation efforts to avoid dangerous interference with the climate system, is a necessary condition to avoid highly inequitable outcomes. Equity, in the sense of ensuring an agreement that is seen as fair by all parties, is a condition for Parties to accept and implement the agreement.

While the COP decision establishing the process towards the 2015 agreement does not explicitly mention equity, it states that the new agreement will be “under the Convention.”¹ Article 3 of the Convention sets out equity and “common but differentiated responsibilities and respective capabilities” (CBDR/RC) as principles, and states that “accordingly developed country Parties should take the lead in combating climate change and the adverse effects thereof.”² Annex I operationalizes the term “developed country” by listing then-OECD countries and Eastern European countries. COP1, which started the process leading to the adoption of the Kyoto Protocol, affirmed that the new agreement should “not introduce any new commitments for Parties not included in Annex I.”³ The Kyoto Protocol places quantified commitments only on these countries. The challenge lies in moving from the traditional operationalization of the CBDR/RC principle to the call in the Durban platform for an agreement “applicable to all countries”⁴ with the implications this has for equity and effort-sharing.

The traditional operationalization of equity as a static and dichotomous division between Annex I countries and non-Annex I countries suffers from two major deficiencies. First, it is, at best, a very crude representation of broadly accepted equity principles, including the CBDR/RC formula. No dichotomy can adequately capture the very wide range of variance observed in “responsibility” and “capabilities”. Moreover, static divisions are made for a static world. In global climate change,

¹ Decision 1/CP.17.

² UNFCCC, Article 3, paragraph 1.

³ Decision 1/CP.1.

⁴ Decision 1/CP.17.

many countries' levels of emissions and wealth have changed significantly since the dichotomy was established and will likely continue to change in the years to come. Second, the exemption of all non-Annex I countries has become increasingly hard to reconcile with high mitigation ambitions, such as the two degree target noted in the preamble of the Durban platform decision. A recent paper (Rogelj *et al.*, 2011) estimates that in order to have a likely (greater than 66%) chance of limiting warming to two degrees, global emissions should peak between 2010 and 2020, and be reduced to 45% below 1990 levels by 2050. As developing countries today account for around 60% of current global emission of CO₂ from fossil fuels and cement⁵ – and their aggregate share is increasing – the two degrees target cannot be achieved without their participation. If the 2015 agreement is to set us on a path towards meeting the two degrees target, we will need a more flexible approach to effort-sharing than the current dichotomy between commitment for some and exemption for a large majority.

One such approach that has gathered momentum recently is the idea of *a spectrum* of commitments; see for instance the UNFCCC submission by the EU on March 1 this year. The idea is that a spectrum of commitments (different types of commitments and different levels of ambition) is well suited to implement effort-sharing in a manner that respects the principle of common but differentiated responsibilities and also takes into account respective capabilities. This approach recognizes that social and economic conditions vary dramatically so that any international mitigation program must allow for, and preferably promote significant improvement of living conditions for very large groups of poor people, in other words, ensure equitable access to sustainable development. Moreover, this approach may include voluntary elements (combined with negotiated elements) and thus comes closer to the idea of starting with “what nations are willing and able to implement” (Victor 2011:6). In the research literature, the basic rationale for recommending such a bottom-up process based on voluntary elements rests on three assumptions: (1) most countries will in fact be willing and able to undertake *some* measures that contribute to mitigation; (2) in a world characterized by huge gaps in wealth and very wide ranges of variance in

⁵ Global Carbon Project (2012). Global Carbon Budget 2012. Available at: <http://www.globalcarbonproject.org/carbonbudget/12/files/CarbonBudget2012.pdf>

several other important variables, the *kind* of measures that countries will be willing and able to undertake will *vary* substantially; (3) the *aggregate* mitigation effect of a set of voluntary measures adapted to national “circumstances” – and perhaps undertaken largely for other reasons (such as cutting energy costs or abating local pollution) – will be *greater* than the results achieved through the Kyoto Protocol approach (see, e.g., Victor, 2011; Vervweij *et al.*, 2006). A key challenge is how to make sure such a process achieves a more ambitious aggregate outcome than what Parties would have achieved acting unilaterally.

Since the human impact on the global climate system comes largely as *side effects* of activities undertaken for other purposes (such as the production, distribution, and consumption of goods and services), climate policy is inextricably linked to almost all aspects of our economies. Moreover, we should recognize that the long-term benefits related to climate policy alone will probably not be sufficient to motivate and sustain an ambitious 2015 agreement. The prospects for a successful outcome can be significantly improved if the commitments are designed to align with positive incentives in other policy domains, such as energy efficiency, technological innovation, industrial restructuring, or public health. Thus, a country’s commitment may include energy efficiency targets, subsidies for technological innovation, or target measures with health co-benefits (such as replacing solid fuel cook stoves with less polluting alternatives).

Even with such alignments, most (if not all) countries’ willingness to contribute to mitigation will to some extent depend on what important others do. The concern with *relative* benefits and costs is amplified by stark the asymmetries existing between “North” and “South” and by strong competition in regional and global markets. International agreements will therefore be necessary to tap the full potential of *conditional* contributions. Moreover, the kind of agreements required will have to go beyond a simple collection of unilateral “pledge and review” commitments. To increase the overall level of ambition, contingent commitments must be permitted, the commitments made must be defined in ways that make them verifiable and comparable, and credible mechanisms for enforcing participation as well compliance must be established.

The report addresses the issues of equity and spectrum of commitments relying on two different approaches: a review of the academic literature on the two topics (section 2) and an analysis of parties’ views on the two topics (section 3). Finally, in section 4, we discuss how equity can be operationalized in a spectrum of mitigation commitments, with a

particular focus on the potential role of equity indicators. While the report does to some extent explore each issue in isolation, the main emphasis is placed on their interaction, in particular how equity can be operationalized in a spectrum of commitments-type of agreement.

3. Review of academic studies

In this brief review we distinguish between two main strands of research. One of these – anchored in philosophy but including contributions from several other disciplines – examines basic concepts and arguments as they apply to human beings and to social life generally. The other – with important contributions from law, political science, and economics – focuses specifically on global climate change and explores the implications of basic fairness principles for mitigation and/or adaptation policies. Since the latter is more pertinent to the task at hand, we will review the “applied” research literature more extensively. A brief look at the philosophical analysis of basic concepts and arguments is, however, appropriate. The specific fairness arguments made in the climate change negotiations seem often to invoke basic principles, and the normative clout of these arguments may somewhat depend on their consistency with principles broadly accepted as valid for social life generally.

In both strands we find that the terms “fairness”, “equity”, and “justice” often seem to be used interchangeably (Klinsky and Dowlatabadi 2009: 89). Following Soltau (2010: 141), we here use the term “fairness” for our most general conception of distributional norms and the term “equity” to refer to a particular subset of such norms.

3.1 Basic fairness principles

Four observations about the study of basic principles and supporting arguments seem particularly relevant to this report. First, broad consensus exists that a good society is one in which norms of fairness – including a procedural as well as a substantive dimension – play a significant role in guiding human behaviour and government policies. In this sense, some constraints on the pursuit of self-interest (narrowly defined) are seen as being advantageous to all, at least in the long run. Scholars diverge when it comes to specifying exactly what kinds of constraints qualify as “fair” or “just” (compare, for instance, Rawls 1971 and 1993; Barry 1996; and Nozick 1974), but they all agree that sound distributive fairness practices can enhance the quality of social life.

Second, despite a common belief in the importance of fairness, no single principle has emerged as *the* agreed formula of distributive fairness. Rather, even a cursory reading of the basic research literature suffices to bring out (a) the complexity of the distributive fairness notion itself, and (b) the sensitivity of the answers provided to the exact formulation of the question and to the relative weighting of “first principles,” notably those of equality and liberty.

Third, the search for “distributive fairness” may be seen as an effort to combine two requirements: equal treatment of equal cases (here: *equality*), and differential treatment of cases that differ significantly in normatively important respects (here: *equity*). Broad agreement seems to exist that all human beings are to be considered equal in certain fundamental respects inherent in their status as human beings (such as dignity, liberty, opportunity). At least in this fundamental sense, equality is the default principle. However, broad agreement also seems to exist that for individuals to enjoy their status as human beings, they must be free to pursue their own preferences and beliefs as long as doing so does not infringe on others’ liberty to pursue their preferences and beliefs. Individual liberty includes the right to enter into agreements with others, even to enter into agreements that involve unequal distribution of (non-fundamental) benefits or costs. Free individuals may, in other words, voluntarily and deliberately choose arrangements that, at least as effects accumulate over time, threaten the core value of equal opportunities ascribed to their equal status as human beings. This complex relationship between equality and liberty creates important dilemmas that scholars have tried to resolve through different approaches, and different approaches sometimes lead to divergent conclusions.

For example, observing that the present distribution of “holdings” (goods, positions, etc.) in a society has evolved over generations and left some better off than others, Nozick (1974) asked under what circumstances a person would be entitled to his or her *current* holdings. Recognizing the difficulties involved in deriving a substantive answer from first principles, he pointed to the *procedures* by which that person had come to obtain his or her holdings as the critical criterion. Only holdings that had been acquired (from “nature”) or transferred (from others) through “just” procedures could be considered entitlements. Any earlier instance(s) of injustice must have been correctly rectified. A “just” transfer procedure would involve some kind of voluntary transaction or exchange. A strong emphasis on (informed) consent can be found in many other seminal contributions, including Barry’s (1995) analysis of justice as “impartiality” and Franck’s (1995) interpretation of “legitimate” pro-

cedures. Barry (1995: 49–52) argued that to qualify as “just,” a principle must provide a reasonable basis for the unforced consent of those subject to that principle. Franck (1995: 26) similarly argued that rules made in accordance with a “right process” would be worthy of voluntary compliance. Common to all these contributions seems to be the assumption that fair procedures are, or at least come close to being, a necessary condition for fair outcomes.

A different approach is taken by Rawls (1971; 1993). He constructed a thought experiment asking which principles of social justice people who are free, rational, and self-interested would converge upon if they were to choose behind a “veil of ignorance,” that is, without knowledge about anyone’s natural abilities, place in society, or preferences for the good(s) to be allocated. This thought experiment takes us back to a hypothetical “original position” and asks us to come up with an abstract and generally valid formula. Assuming that under the conditions specified most of us would lean towards risk-averse behaviour, Rawls (1993: 5–6) inferred that people would agree that any deviance from the default principle of equality should meet two basic requirements. First, the deviance should be related to positions or offices open to all under conditions of fair equal opportunity. Second, the deviance should yield the greatest benefits to the least advantaged members of society.⁶ The “veil of ignorance” assumption is critical to the argument; rational persons motivated largely by self-interest would otherwise be expected to choose or design principles to their own advantage.

At least one of the differences between Nozick’s and Rawls’ approaches is highly relevant to the climate change negotiations. Nozick took existing realities as his point of departure and asked under which circumstances a person would be entitled to his or her current holdings. The climate change negotiations takes current and accumulated GHG emissions as its point of departure and asks who shall, by distributive fairness standards, have to contribute how much to cut global emissions to a “safe” level. This approach leads straight into very difficult questions about the extent to which current inequalities are products of “just” procedures. Moreover, it also raises questions about the responsibility of living generations for the behaviour of their ancestors. Rawls’ thought experiment had no reference to existing realities, and asked which gen-

⁶ Rawls here referred to benefits measured in *absolute* terms, while Franck made a similar argument framed in *relative* terms (reduce the gap). The latter version is the more demanding.

eral principles people would converge upon if they were to choose without knowledge about who would gain and who would lose from the implementation of a particular principle. The climate change negotiations' equivalent takes the default principle of human equality as its points of departure and translates this principle into demands for equal rights to (sustainable) development and to the global commons. To the extent that GHG emissions are hard-to-avoid consequences of economic development, the argument may be extended also to emission rights. Although the equal rights argument is not frequently pursued much further in the UNFCCC negotiations, its advocates would probably agree with Rawls that any deviance from that principle – more precisely, any deviance that is not inherent in positions or roles equally open to all – should most benefit the least advantaged members of the world community.

3.2 Distributive fairness in the global climate change negotiations

The research to be reviewed in this section ranges from efforts at applying general theory to the specific domain of climate change (e.g. Soltau 2010; Klinsky and Dowlatabadi 2009; Mattoo and Subramanian 2012) to empirical studies examining arguments made and proposals submitted by the Parties themselves (e.g. Torvanger and Godal 2004). Three general observations stand out. First, empirical research confirms that fairness *matters* (Dannenberg *et al.* 2010). The fact that some fairness principles are frequently invoked and rarely disputed (at least not explicitly) indicates that they have some normative “clout”. Second, relative priorities and operational interpretations of these principles tend to reflect national circumstances and material interests (Lange *et al.* 2010; Carlsson *et al.* 2013). Not surprisingly, G77 estimate “responsibility” retrospectively, while the United States focuses on trends and plausible emission trajectories. Ultimately, tangible material interests likely trump abstract fairness principles, but more important here is the fact that the two sets of premises seem to interact *synergistically*, particularly for the South. The (domestic) political costs of explicitly accepting an unfavourable agreement will be higher if the terms of that agreement are also considered unfair. Third, at first glance a reader may be overwhelmed by what seems to be a bewildering array of fairness criteria and arguments (e.g. Klinsky and Dowlatabadi 2009: 97–98). On closer inspection, however, we will find in the research literature considerable convergence on a limited set of fairness *principles*. At the level of *operational indicators*

used for deriving practical implications, more diversity appears. For the negotiators involved, reaching agreement on relative priorities and operational indicators will likely be a more demanding challenge than converging on a set of core principles is.

We proceed in two steps. First, we examine in the research literature the set of principles most often suggested for allocating obligations and/or rights in a global change regime. Next, we consider important issues pertaining to the further specification and interpretations of two of these principles.

3.2.1 *Distributive fairness as a multidimensional construct*

At the level of normative theory, fairness is often conceived of as a combination of two key requirements: equal treatment of equal cases (here: *equality*), and differential treatment of cases that differ significantly in important respects (here: *equity*). The latter requirement is most often translated into a more or less crude notion of *proportionality*. For example, in using accumulated “responsibility” for GHG emissions as a criterion for distributing obligations to mitigate, some notion of proportionality is most often suggested or at least implied. Sometimes, however, the range of variance is so wide that even a soft non-linear interpretation of proportionality would leave the poorest or weakest Parties with “unfair” burdens. In such cases, a more categorical rule of *exemption* is introduced, relieving (temporarily) a certain group of Parties of any substantive obligation involving costs for which its members are not adequately compensated.⁷ One important conclusion emerging from the research literature is that to qualify as fair, a climate change agreement must combine notions of equality, proportionality, and exemption, as indicated in Table 2.1 (Ringius *et al.* 2002).

⁷ The exact meaning of “adequate” in this context is a matter for discussion.

Table 2.1. Broadly accepted fairness principles and their respective validity domains

Fairness principle	Validity domain
Equality (equal treatment of equal cases)	Relevant differences not “significant”
Equity – proportionality	Relevant differences “significant” but not very large.
Equity – exemption (from costly obligations)	For Parties with no moral responsibility for damage and/or very low problem-solving capacity.

In the climate change negotiations as well as in the research literature, at least three more specific interpretations of *equity* are frequently invoked and rarely disputed (e.g. Matus and Subramanian 2012). These interpretations refer to a Party’s *responsibility* for causing damage, its *capacity* to contribute to problem solving, and its *need* for or *right* to the goods or benefits at stake (Tables 2.2 and 2.3). Responsibility is the backbone of the polluter pays principle, capacity is the key differential variable in schemes of progressive taxation, and need is the most important criterion in most social welfare programs. In the climate change literature, no clear ranking has been established among these criteria. However, a reasonable interpretation of this literature seems to be that insofar as needs/rights refer to *basic goods* or to *fundamental* human rights, the needs (rights) criterion trumps the others (e.g. Müller and Mahadeva 2013: 8). Moreover, responsibility arguably *precedes* capacity in the sense that capacity enters the equation directly only where a certain minimum of moral responsibility can be established. Even countries that qualify for exemption under the responsibility criterion may have the capacity to offer interesting contributions to a global mitigation program, but these countries may legitimately demand adequate compensation for any contribution involving (non-trivial) costs.⁸

The UNFCCC reference to “common but differentiated responsibilities and respective capabilities” is a fairly succinct expression of this three-pillar platform.

⁸ The exemption rule applies, though, to capacity as well as to responsibility; a very low score on *either* dimension qualifies for exemption.

Table 2.2. Common interpretations of equity

Focus on	Object to be allocated (distributed)	
	Costs (obligations)	Benefits (rights)
Causes of the problem	(Moral) <i>responsibility</i> (“guilt” in having caused the problem)	<i>Previous contributions</i> (to providing the benefits in focus) ⁹
Consequences of the solution (efforts)	<i>Capabilities</i> (capacity to contribute to problem solving)	<i>Need</i> for (or right to) the goods concerned

Table 2.3. Support for frequently invoked fairness principles

Fairness principle	Support balance (Very high/high minus low/none)
“Polluter pays” (responsibility/ “guilt”)	+ 69
“Poor losers” (exemption for the poor/poorest)	+ 57
“Ability to pay” (capabilities/capacity)	+ 37
“Egalitarian” (equal per capita emission rights)	-7
“Sovereignty” (equal relative cuts from emission levels in year t or from BAU)	-13

Based on Lange *et al.* (2007). The survey targeted respondents involved in the climate change negotiations. N = 230. Results are shown for a “short-term” perspective, ≤ 20 years.

Each of these principles calls for further specification. In this paper we will limit the analysis to the two principles that constitute the core of the Framework Convention’s CBDR/RC “formula,” viz. responsibility and capabilities (capacity).

3.2.2 Interpreting responsibility

Consider first the principle of *responsibility*. Normative theory distinguishes between a Party’s role in *causing* a certain damage and that Party’s moral responsibility (“guilt”) for the damage it has caused. A causal role is a necessary but not a sufficient condition for moral responsibility. To assign moral responsibility we must in addition prove that the Party (a) had, or at least could have obtained, effective control over the harmful activities for which it stands accused, *and* (b) knew – or at least had access to knowledge about – the (risk of) damage caused by these activi-

⁹ This interpretation may be seen as the flip side of the responsibility criterion and will not be further elaborated here. Credit for previous mitigation efforts has not frequently been claimed in the UNFCCC negotiations.

ties (e.g. Aristotle 1908; Müller *et al.* 2013). The control requirement limits the transferability of “guilt” across generations; our children and grandchildren cannot be held morally responsible for damage that their parents or grandparents have brought about. Insofar as responsibility is assigned to *states* or other permanent organizations, this limitation may be modified but not dismissed. The available knowledge requirement says that people cannot be held responsible for damage they could not know – by the best scientific evidence available at the time – would (likely) be caused by their behaviour. Applied to the climate change case, this requirement suggests that the historical backlog of moral responsibility cannot go back to the first industrial revolution (beginning around 1760), nor to the second (beginning a hundred years later). Most of the empirical research literature seems to agree that a sufficiently well-known scientific basis for suspecting human activities of being a significant driver of climate change did not exist before 1970 (e.g. Mattoo and Subramanian 2012: 1088); some even argue that 1990 – the year the first IPCC report was published – would be a more appropriate starting point for accumulating “guilt” (e.g. Parikh and Parikh 2009).

What may be traced back to these early periods of technological innovation and economic growth are accumulated (*competitive*) *advantages* enjoyed also by the current generation(s). Particularly relevant to the climate change negotiations are persistent advantages and benefits accumulated through free-of-cost use of Earth’s capacity to absorb GHG emissions. These “ecosystem services” have the status of global collective goods. So far these services have been exploited primarily by the rich North, to its own advantage. The world’s poor, many of whom are likely to find themselves as vulnerable victims of climate change, can make a strong case for equal opportunities or adequate compensation (Baer 2013). Thus, although arguably outside the responsibility principle’s scope of validity, advantages accumulated by previous generations enter the distributive fairness equation as integral elements of current generations’ *capabilities*.¹⁰

In applying the responsibility principle to climate change mitigation, further specification is required along at least three dimensions. First, to which GHGs and human activities should the principle be applied? Since human impact on the global climate system is a weighted aggregate of all

¹⁰ Moreover, to the extent that these advantages have been accumulated through “unjust” procedures, questions about “rectification” arise (see e.g. Nozick 1974).

GHG emissions generated by human activities, the default option – also consistent with the Framework Convention and the Kyoto Protocol – would be an equally comprehensive mitigation program (with some leeway for each Party to prioritize its own contributions according to national circumstances). An all-inclusive program does, however, raise complex questions of impact measurement and contributions accounting. A less ambitious and arguably more feasible option would be to target only one or a few particularly important gases and corresponding activities (for example, CO₂ emissions from energy production and consumption). In Table 2.4 (and in subsequent Tables 2.5–2.7) we provide relevant data for seven key actors in international climate policy. Table 2.4 shows that the choice between these (or similar) options will have significant implications for many countries’ relative responsibility scores. By comparing columns 6 and 7, we can see that, except for India and Brazil, the difference between obligations under a fully comprehensive program and one targeting CO₂ only is not much affected by the length of the historical backlog.

Table 2.4. Responsibility-based distributions: shares (in per cent) of world emissions of all GHGs from all activities and of CO₂ from fossil fuel combustion only

Actor	All GHGs 1850–2010	CO ₂ only 1850–2010	All GHGs 1990–2010	CO ₂ only 1990–2010	CO ₂ /all 1850–2010	CO ₂ /all 1990–2010
USA	18.6	27.6	15.6	22.1	1.48	1.42
EU (27)	17.1	24.8	12.4	16.1	1.45	1.30
Japan	2.8	4.2	3.3	4.8	1.50	1.45
Russia	7.2	8.0	6.5	6.9	1.11	1.06
Brazil	3.9	0.9	4.1	1.2	0.23	0.29
China	11.6	10.5	15.3	15.5	0.91	0.99
India	4.1	2.7	4.5	4.0	0.66	0.89

Note: Data for the 1850–2010 period are taken from den Elzen *et al.* (2013).

Second, who qualifies for exemption? The most common approach in extant research is to use an officially sanctioned “poverty line” for individuals as a general threshold, and to grant exemption to countries where the average income level lies below this poverty line (e.g. Müller and Mahadeva 2013).¹¹ For some countries at the margin, the exact specification of the poverty line can make a non-trivial difference. One attractive feature of this approach is that poverty is a fairly reliable indi-

¹¹ A similar approach is used in the Greenhouse Development Rights Framework to determine the “development threshold.” Baer *et al.* (2008) set this threshold at an annual income level of USD\$7,500 (about USD\$20 per day).

cator of low scores on both the responsibility and the capabilities dimensions (see also the subsection on capacity, below). Some have argued that its validity could be further enhanced by taking into account the domestic distribution of income or wealth. Since even poor countries have rich people and rich countries have poor people, the latter approach would give a more differentiated distribution of responsibility but – at least for the versions that we have seen – not significantly modify the overall pattern of stark asymmetry between the North and South.

Third, which time horizon should we use in estimating responsibility? If we accept the scope conditions of control and knowledge specified above, this issue becomes most critical for countries that have achieved high rates of economic growth (or suffered abrupt decline) over the past two to three decades. For most other Parties, the choice of time horizon will only marginally affect relative responsibility scores. Tracing emissions back to the middle of the 19th century will, however, leave most northern countries with significantly higher responsibility scores (see Tables 2.4 and 2.5).

Table 2.5: Responsibility-based distribution: CO₂ emissions (in per cent) of world totals over alternative time horizons

Actor	1850–2010	1990–2009	1971–2017	1971–2017/ 1850–2010	1971–2017/ 1990–2009
USA	27.6	22.1	22.1	0.80	1.00
EU (27)	24.8	16.1	15.9	0.64	0.99
Japan	4.2	4.8	4.5	1.07	0.94
Russia	8.0	6.9	6.2	0.78	0.90
Brazil	0.9	1.2	1.2	1.33	1.00
China	10.5	15.5	16.2	1.54	1.05
India	2.7	4.0	3.6	1.33	0.90

Note: See Table 2.4.

Assessing historical responsibilities also raises intriguing questions about intergenerational equity. In the research literature as well as in political debates two perspectives compete. One, often found in eco-philosophy and articulated by NGOs, focuses on the biophysical capacity of the Earth System and the duty of each generation to ensure equal (or better) opportunities for the next generation to benefit from the services of Earth’s life support systems. The equal-rights-to-global-commons argument is one expression of this line of reasoning. The other perspective conceives of sustainability in terms of (material) welfare and takes into account changes in income levels, available technologies and other human-made assets (such as knowledge more generally). Although dramatic setbacks in welfare can be found – most notably during the two world wars – the overall trend over the past few centuries has

been one of rising income levels and substantial technological innovation, providing each new generation with opportunities that no previous generation has enjoyed. This line of reasoning suggests that historical responsibility be “discounted” for technological progress (see e.g. den Elzen *et al.*, 2013) and/or rising income levels. Both of these lines of reasoning are internally consistent, and settling the dispute between them requires a choice of “first principle” (preservation of Earth’s life support system or preserving and preferably enhancing human welfare).

3.2.3 Interpreting capabilities

Strictly speaking, capabilities can be assessed only with reference to a specific task or function. A Party’s contributions to mitigating GHG emissions may take different forms – from preserving or establishing “sinks” to transforming high-carbon energy systems or enhancing energy efficiency – and the specific capabilities required will somewhat depend on the kind of contribution to be made. Confronted with such complexity, researchers have looked for a simple capabilities concept that can cover a wide range of tasks and functions. “Capacity to pay” seems to meet this requirement better than any other equally simple conceptualization, and GDP per capita is a commonly accepted indicator for which standardized data are available. Moreover, GDP per capita shows a fairly high positive correlation with several other potentially relevant measures. For these reasons, it still serves as the default operational measure of “respective capabilities.”

Of course, attempts at developing more refined measures have been made. Some of these attempts suggest multidimensional measures that offer a more inclusive understanding of relevant capabilities. One example is Winkler *et al.* (2013: 413), who point to the UNDP’s Human Development Index as a comprehensive and widely accepted measure that can at least serve as a “corrective factor to the GDP-based capability indicator.” Others stay largely within the “capacity to pay” framework but offer more refined conceptualizations and indicators. A good example is the Oxford Capabilities Measure (Müller and Mahadeva 2013) – a highly sophisticated attempt at combining both GDP and GDP per capita figures with an index of “poverty intensity” (based on the Multidimensional Poverty Index).¹² We see merits in both strands of refinement, but to

¹² Their Poverty Intensity Index shows *huge* variance within the group of developing countries, with scores ranging from 1.05 (for Brazil) to 1,325 (for Burundi).

indicate the wide spectrum of capability indicators relevant to climate change mitigation, we will briefly explore an alternative model that includes also renewable energy resource endowments – a factor important in determining countries’ energy policy options.

More specifically, this model consists of two main components. One is labelled “transformation capacity”, designed to measure countries’ economic and political capabilities to move towards low-carbon energy systems. Our transformation capacity index is a weighted aggregate of four factors: prosperity (GDP per capita), innovation capacity (taken from Porter *et al.*, not dated), capacity for governance (based on the Fund for Peace “Failed State Index”), and transparency (based on Transparency International’s corruption index). From Table 2.6 we can see that all transformation capacity indicators are positively correlated with each other (rank order correlations vary from .96 for GDP per capita–Innovation to .86 for GDP per capita–Transparency). Interestingly, however, the gaps to the United States are smaller for all other Parties in the aggregate index than they are when measured in terms of GDP per capita, and the poorest countries “advance” the most, thanks largely to their innovation capacity scores.

Table 2.6. Transformation capacity 2010–2012, with the United States as baseline (= 1.00)

Actor	GDP/cap (60%)	Innovation (20%)	Governance (10%)	Transparency (10%)	Aggregate (100%)
USA	1.00	1.00	1.00	1.00	1.00
EU (27)	0.68	0.84	0.97	0.85	0.76
Japan	0.73	0.94	0.87	1.13	0.83
Russia	0.43	0.71	0.35	0.34	0.47
Brazil	0.24	0.61	0.55	0.54	0.38
China	0.16	0.67	0.35	0.51	0.32
India	0.07	0.59	0.34	0.44	0.24

Note: This table builds on Underdal, Wei and Glomsrød (forthcoming).

The other component is labelled “renewable energy resource endowments” and is designed as a weighted aggregate of countries’ endowments of solar, wind, bio, and hydro resources (see Table 2.7). Here, a much more diverse picture emerges, indicating that countries differ widely in terms of the kind(s) of renewables available as well as in terms of their aggregate per capita assets. For aggregate per capita assets, the only clear pattern emerging from Table 7 is that sparsely populated countries (such as Russia) come out better than densely populated countries (such as Japan) do. This pattern is very different from that found for transformation capacity (and ability to pay). We are clearly dealing with two distinctly different capability components, both being integral elements of a country’s capacity to contribute to mitigation of GHG emissions.

Table 2.7. Renewable energy resource endowments – estimates of minimum technical potentials per capita, with the United States as baseline (= 1.00)

Actor	Solar (40%)	Wind (20%)	Biofuels (20%)	Hydro (20%)	Aggregate (100%)
USA	1.00	1.00	1.00	1.00	1.00
EU (27)	0.15	0.31	0.21*	0.21	0.21
Japan	0.01	0.09	0.04	0.25	0.08
Russia	1.27	3.57	1.60*	1.40	1.82
Brazil	0.43*	**	0.91*	1.00	[0.69]**
China	0.13*	0.11	0.25	0.42	0.21*
India	0.04*	0.01	0.17	0.14	0.08*

Note: * indicates that figures have been derived from estimates for larger regions. ** means that estimates are incongruent (also) in other respects. See also note to Table 2.6.

3.2.4 Mitigation costs

Above we have used different metrics to indicate how widely accepted principles of fairness would distribute obligations to contribute to a global mitigation program. In this subsection we translate these indicators into an overall estimate of the economic costs (or benefits) of alternative mitigation measures. We use CICERO’s GRACE model to estimate how much a certain mitigation program would change countries’ GDP levels from those of a business-as-usual trajectory by 2030. These estimates should be read as a crude first cut indicating orders of magnitude; a more extensive and refined analysis would be required to enhance precision and reliability.¹³

To estimate mitigation costs, we need assumptions about, inter alia, overall ambition levels and international regime properties. Here, we have adapted from Climate Action Tracker two mitigation scenarios, one significantly more ambitious than the other. Scenario 1 builds on mitigation proposals and national policies considered but not yet pledged in official international negotiations. Scenario 2 shows an emission reduction pathway likely to hold global warming below 2C. In both scenarios we assume that a new international agreement will provide for a global carbon market (or some functional equivalent), equalizing CO₂ prices for all actors. In Scenario 1, global CO₂ emissions from fossil fuel combustion stabilize at about 35 billion tons from 2023; in Scenario 2, global emissions peak around 2014 and decline to about 24 billion tons by 2030.

To estimate mitigation costs, we also must translate the fairness criteria of responsibility and capabilities into operational rules for distrib-

¹³ Note that these estimates do not include mitigation benefits in the form of climate change damage avoided.

uting obligations. To simplify, we distinguish three levels of responsibility. Countries with per capita emissions above the world average are assigned (proportional) responsibility for *all* own emissions. In our sample of key actors, the United States, the European Union, Japan, and Russia belong to this category. Actors with per capita emissions between 50% and 100% of the world average – here, China (and the “Rest of the World” category) – are assigned responsibility for own emissions *within* that interval only. Countries with emissions below 50% of the world average (here, Brazil and India) are *exempt* from any obligation to mitigate emissions (except when adequately compensated for the costs incurred). To represent capabilities we use our aggregate transformation capacity index (see Table 2.6) and allocate emission reduction obligations in direct proportion to actors’ scores on that index.¹⁴

The results are summarized in Table 2.8. Three conclusions stand out. First, for countries that do not – at least for part of their emissions – benefit from the exemption rule, mitigation costs rise steeply with overall ambition levels. Second, both scenarios indicate that the economic consequences of global mitigation programs vary substantially from one country to another. Most strikingly, the more ambitious scenario leads to a substantial redistribution of wealth from Russia and the OECD countries to India (and to other developing countries in similar situations). Within our sample, the poorest country (India) gains in both scenarios, while Russia pays a stiff price for the current fossil-fuel intensity of her economy.¹⁵ Third, obligations to contribute are only marginally affected by the choice between the two time horizons examined.

¹⁴ This implies that we have defined an exemption rule only for the *responsibility* principle.

¹⁵ India stands to gain even without the exemption rule. As we have seen in Table 2.7, Russia’s renewable energy resource endowments are by far the largest in our sample; so for Russia, an alternative energy future is possible.

Table 2.8. Mitigation costs measured as deviance in GDP levels from BAU trajectories in 2030 (in %). CO₂ emissions only

Actor	Scenario 1		Scenario 2	
	Responsib.	Transf. capacity	Responsib.	Transf. capacity
USA	-0.8	-0.5	-7.3, -7.6	-4.2
EU(27)	-0.4	-0.3	-4.4	-3.2
Japan	-0.4	-0.9	-4.6, -4.8	-10.7
Russia	-8.5, -8.6	-8.6	-42.6, -43.3	-44.0
Brazil	-0.6	-2.8	-2.2	-25.5
China	-0.1, -0.2	-0.1	+0.3, +0.9	+0.9
India	+1.8	+1.3	+16.4, +16.5	+7.5

Note: This table builds on Underdal *et al.*, forthcoming. For responsibility, two partly overlapping time horizons are examined (1971–2017 and 1990–2009) and any difference between the two is shown in the relevant columns.

3.3 Spectrum of commitments in the literature

In contrast to the copious literature on fairness principles, including the application of more general principles to climate policy, the academic literature on the spectrum of mitigation commitments is sparse because the idea has a relatively narrow range of application (compared to that of fairness principles) and a short history.

It seems the idea of a spectrum of (mitigation) commitments was first introduced in the academic literature by Frank Jotzo in 2007 in an article discussing options for international climate policy. The idea is introduced as follows: “one option for an effective future international climate policy framework that revolves around quantitative commitments may be to break down the dichotomy between countries with targets and those without, create a menu of different types of commitments, and allow for more flexibility in meeting them.” Jotzo argues that many post-2012 proposals have emissions targets and emissions trading at their core, but include a “sliding scale” of the type and degree of commitments to take account of countries’ stage of development and their national circumstances. This could make for a broad spectrum of commitments, with elements including: (Jotzo 2007)

- Intensity targets.
- Non-binding targets.
- Sectoral targets.
- Price caps.
- Policy-based commitments without fixed emission limits.
- Recognition of funding provided for technology development or for climate change adaptation in poorer countries.

There are potentially an infinite number of types of commitments. Briner and Prag (2013) classify the types of commitments currently in use in the UNFCCC as “annual GHG emissions”, “carbon neutrality”, “GHG emissions per unit GDP”, and “other quantitative metrics” (which include forest cover, share of renewable energy, and both GHG-related and non-GHG metrics).

Vieweg *et al.* (2013) categorize commitments as either “behaviour-based” or “outcome-based”, which they, respectively, define as “what countries are supposed to do” and “what they are supposed to achieve.” As potential behaviour-based commitments, they list emission price commitments, technology-oriented agreements, packages of policies and measures, and individual actions and projects. As potential outcome-based commitments they list economy-wide GHG emission limitation targets (absolute or relative), sectoral emission limitation targets (absolute or relative), and targets for intermediate outcomes (e.g. energy intensity, emissions intensity of energy supply, specific technologies). The report by Vieweg *et al.* (2013) also assesses the main advantages and disadvantages of the different types of commitments in terms of environmental effectiveness, cost effectiveness, distributional considerations, and institutional feasibility. In their discussion, the authors add that “guidance could be developed on what information would be necessary when countries report their proposals.” This information could take various forms, including indicators – as discussed later in our report.

More recently, Spencer (2011) addressed the issue of a spectrum of commitments in a working paper on the legal form for proposals for Durban and beyond. The paper mentions that there might be room for a spectrum of commitments that relates to the stringency of commitments, and the strength of commitments – the extent to which commitments are backed by (incentives for) implementation. The commitments could include “mandatory commitments for developed countries; mandatory nationally appropriate policy packages towards their emissions objectives for developing countries; differentiated mechanisms of implementation, evolving over time; and long-term low-carbon development strategies for developed countries to create a stronger international normative context for their commitments” (Spencer 2011).

To complete the overview of the very sparse literature addressing the concept of a spectrum of commitments, the concept is mentioned, but not substantially elaborated upon, by Bruyninckx *et al.* (2013), Cameron *et al.* (2013), Larragán (2011, 2012), and Prag *et al.* (2013).

3.3.1 *Related studies*

Much of the literature on alternative policy architectures for international climate policy has focused on variants of top-down architectures based on quantified emissions reductions commitments (e.g. Clarke *et al.* 2009; Jaffe *et al.* 2009; Nordhaus 2006). Until the mid-2000s there is almost no research addressing bottom-up approaches within the UNFCCC. Most of the literature is instead focused on variants of top-down approaches or initiatives outside the UNFCCC framework.

There is, however, an emerging acknowledgement that while climate change is a global problem, the solution will not necessarily be a top-down global climate agreement with quantified emission reduction commitments. Falkner *et al.* (2010) provide an explanation of, and a justification for, the need to shift the approach to international climate policy. They argue that the “global deal strategy”, of which the Montreal Protocol is the prime example, is producing diminishing returns for climate policy, and that COP15 in Copenhagen marked this turning point. They argue that a new approach, which “develops different elements of climate governance in an incremental fashion and embeds them in an international political framework” offers a better hope of breaking the diplomatic stalemate.

Falkner *et al.* (2010) argue that the main obstacles to a global climate deal include that “some major emitters lack the necessary domestic support or have yet to create domestic policies as the basis for meaningful international commitments”, as well as “structural shifts in the international political economy” that have “complicated the search for a global deal by strengthening the veto power of certain laggard countries.” The question then is, which alternatives exist to the “global deal” approach?

As already noted, the term “spectrum of commitments” is not widely used in the academic literature. There is, however, a broader discussion of approaches to international climate policy that includes closely related concepts. These include “menu approaches” and “pledge-based” approaches.

With a menu approach, the parties would agree on a menu of types of commitments, from which countries can choose (Bodansky and Diring 2007). The commitments could, for instance, take the form of common automobile efficiency standards or a defined level of financial commitment as a percentage of GDP. The General Agreement on Trade in Services operates in this way by laying out a number of rules for free trade in services, which apply only if a country opts in (Bodansky and Diring 2007).

The menu approach is probably the idea most closely related to a spectrum of commitments. A spectrum of commitments approach could take

the form of a menu approach, but the former is not yet sufficiently well defined to allow a discussion of to what extent the two approaches differ.

A pledge-based approach gives states even more flexibility than does a menu approach, “allowing them not merely to pick among various multilaterally defined alternatives, but to define their commitments themselves” (Bodansky *et al.* 2004). The Copenhagen Accord has been described as a “pledge and review” agreement (Bodansky 2010). Pizer (2006) describes the approach as drawing on the experience that domestic responses emerge before significant global institutions are created, and argues that “the first step is for countries to pursue domestic climate policies consistent with domestic pressures, reinforced by an international agreement that prods without constraining.” Barrett (2007) is more explicit about the role of the review: It is an enforcement mechanism that relies on moral suasion and naming and shaming in the international arena.

4. Analysis of Parties' views

This section draws on submissions¹⁶ under the Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP), those oral statements to ADP1 and ADP2 that were provided in writing on the FCCC website, all Earth Negotiations Bulletin (ENB) newsletters from ADP sessions, observations at COP17, COP18, and COP19, and interviews with the delegations of Colombia, Ethiopia, the Maldives, New Zealand, and Vietnam. The interviews were conducted via e-mail. A quantitative component of the analysis utilizes submissions and statements only, while a qualitative discussion draws on all sources.

COP19 is analysed particularly at the end, but statements published online from this session are included also in the quantitative analysis throughout.

4.1 Equity

All Parties agree that equity is a fundamental principle of the Convention and that equity and fairness are desirable attributes of the 2015 agreement. Nevertheless, there are striking differences in how different Parties refer to the terms. While non-Annex I (NAI) countries and groups have used the words “equity” or “equitable” 120 times in their submissions, Annex I (AI) countries and groups have used them only 15 times.¹⁷ On the other hand, the overarching principle of fairness is referred to more times by AI Parties (42) than by NAI countries (30). This divergence suggests that the term “equity” has taken on specific connotations in the negotiations, and that some countries try to distance themselves from those connotations, while not objecting to the content of the principle in general.

The reason behind the divergence is that equity is firmly embedded in the Convention, while fair/fairness is not mentioned. The Convention

¹⁶ All submissions are included except those addressing only Workstream 2.

¹⁷ The EIG and their members that include both AI and NAI countries referred to “equity”/“equitable” 12 times and 2 “fair”/“fairness” 5 times.

closely associates equity with the principle of CBDR/RC, which to date has been operationalized as binary differentiation based on Annexes I and II – the so-called firewall. Equity, CBDR/RC, and the Annexes are progressively controversial terms. Much discussion on equity in the ADP can be reduced to a debate on the Annexes’ role in the 2015 agreement.

Parties opposed to the firewall stress the need for a dynamic approach to equity, and highlight “national circumstances” more than responsibilities. They emphasize that the mandate for the ADP comes from decision 1/CP.17 from Durban, which states that the new agreement should be “applicable to all Parties” and does not explicitly refer to equity, CBDR/RC, or the principles of the Convention.

Parties supporting the firewall emphasize the principles of the Convention – especially CBDR – and oppose rewriting or reinterpreting the Convention – including its Annexes. Since the new agreement shall be “under the Convention” (1/CP.17), they argue that all the Convention’s principles apply. They secured a strengthened reference in 2/CP.18, stating that the work of the ADP “shall be guided by the principles of the Convention.”

Our interviews included a question on the role of the principles – in particular CBDR/RC – in the new agreement. All Parties except New Zealand replied the principles should form the basis for the agreement. New Zealand said they should apply “to the extent they are relevant,” elaborating that all countries should contribute “to the extent their national circumstances allow” and that commitments should be domestically determined.

4.1.1 Emerging alliances

The analysis reveals that positions do not follow the AI distinction perfectly – a more fragmented picture is emerging. Opponents of the firewall include the Independent Alliance of Latin America and the Caribbean (AILAC) group¹⁸ of NAI countries, in addition to AI countries and the Environmental Integrity Group (EIG).¹⁹ Russia and the other non-EU economies in transition in AI, as well as the United States, are most explicitly opposed. The strongest proponents are countries in the Like-Minded Developing Countries on Climate Change (LMDC) group.²⁰ Par-

¹⁸ Chile, Colombia, Costa Rica, Guatemala, Panama, and Peru. Sometimes supported by the Dominican Republic.

¹⁹ Mexico, Monaco, Korea, Liechtenstein, and Switzerland.

²⁰ The membership of this group is not clearly defined. We include the following countries, which have been associated with at least one LMDC submission or statement: Algeria, Argentina, Bahrain, Bolivia, Comoros,

ties with high vulnerability and low capabilities are found in the partly overlapping constellations of the Alliance of Small Island States (AOSIS), the Least Developed Countries (LDC) group, and the African group. Several of these Parties are members of the Climate Vulnerable Forum. These groups are somewhat less wedded to the firewall, and AOSIS and LDCs joined forces with the EU in Durban. An exception is Singapore, who stands out from AOSIS both in level of development and in rhetoric, and will therefore not be analysed as part of this group. Remaining NAI countries who contribute to the discussion are Brazil, Indonesia, and Honduras. These Parties will be put into the group “other NAI” in this report. The BASIC group is not a unit of analysis because it has made no written submissions, but it does make oral statements in ADP.

The interview with the Colombian delegation gave a perspective on alliances fairly consistent with the above categorization, identifying AOSIS, some LDCs, and some EU countries as having positions most similar to their own AILAC group, and the LMDC group as having the most different positions. The Maldives gave a more traditional account, identifying some AI countries as most different to Small Island Developing States (SIDS) and LDCs. The rest declined to comment on alliances.

4.1.2 *What other terms are associated with equity in submissions?*

The term “equity” is closely associated with certain other key terms in the negotiations. Table 3.1 shows the correlation coefficients between the number of times Parties refer to “equity” or “equitable” and the number of times they use certain other phrases. These correlations are all very strong and significant at every conventional confidence level. Each of the terms is also highly correlated with every other term in this table. The complete set of pairwise correlation coefficients is reported in Table A1 in the Appendix.

China, Cuba, Democratic Republic of Congo, Dominica, Djibouti, Ecuador, Egypt, El Salvador, Ghana, India, Iran, Iraq, Kuwait, Lebanon, Libya, Malaysia, Mali, Mauritania, Morocco, Nicaragua, Oman, Palestine, Pakistan, Paraguay, Philippines, Saudi Arabia, Somalia, Sri Lanka, Sudan, Syria, Thailand, Tunisia, United Arab Emirates, Venezuela, and Yemen. We also include ALBA group submissions.

Table 3.1: Correlation coefficients for “equity”/“equitable” and the most closely associated other terms

Term	Correlation with “equity”
CBDR	0.95
Equitable access to sustainable development	0.95
Means of implementation	0.92
Poverty (alleviation)	0.92
ADP should not rewrite or reinterpret the Convention	0.91
Historic	0.90
Bali (Action Plan / Road Map)	0.89
Developed countries must lead	0.88
Annex I or Annex II	0.87
Right to (sustainable) development	0.87
Adaptation	0.85
Principles of the Convention	0.84
Loss and damage	0.82

The input data for the correlation analysis has been summarized at group level in Table A2 in the Appendix. That table will also be used directly in the discussion to follow. While reference to a term does not always imply support of it, and lack of reference does not always imply opposition to it, the pattern of reference to key terms shows clear differences in Parties’ priorities and negotiating positions.

4.1.3 Article 3 of the Convention

Equity is mentioned only once in the Convention, under Article 3 on principles, which sets out that “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 [...].” This quote helps explain some of the associations mentioned above and why some Parties are fonder of the term “equity” than others are. The LMDC group insist that the principles of the Convention should apply to the 2015 agreement, referring to the “principles” 46 times in their submissions. India, for example, holds that “The phrase ‘under the Convention’ implicitly reaffirms and recognizes all the principles and provisions of the Convention, including, in particular the principles of ‘equity’ and ‘common’ but differentiated responsibilities.”²¹ China uses similar arguments. While AI countries do refer to the “principles” 23 times too, they typically stress that the principles must be applied to current and evol-

²¹ adp_india_workstream_1_20130309.

ing realities. The United States argues that “because the principles are therefore means to an end, not an end in themselves, we need to apply them in such a way that they promote ambition.”²² Differences are even clearer on the term “common but differentiated responsibilities” (CBDR), to which the LMDC countries refer 81 times and AI countries only 8 times. Moreover, while the former countries drop “respective capabilities” (RC) most times, the latter countries include that term almost always. The EIG countries refer to CBDR 30 times, arguing that it should be reflected in the agreement, but call for a dynamic approach and an agreement applicable to all.

4.1.4 Historical responsibility

The Convention refers to the historical emissions of developed countries, and the term “historical responsibility” has been central to burden-sharing discussions at least since the 1997 Brazilian proposal. A central goal of LMDC Parties is to uphold this principle, and they use “historic(al)” 30 times in their submissions. Contrary to the content of Article 3, the group sometimes present “historical responsibility” as one of the principles of the Convention, for example listing the following as a guiding principle for the ADP: “Art. 3 principles are reflected, including equity, CBDR, vulnerability, right to sustainable development, historical responsibility.”²³ They also appear to view historical responsibility as rather static: “These historical responsibility considerations continue to be as valid today as they were in 1992 when the Convention was adopted, because the underlying economic and emissions conditions among Parties have not substantially changed.”²⁴ On historical responsibility, the LMDC group is supported by the vulnerable countries, which use “historic(al)” 12 times. In contrast, AI countries have not used those terms at all.

4.1.5 Annex I vs. a dynamic approach

The Convention operationalizes equity and CBDR/RC through Annexes I and II, a distinction further cemented through the Berlin mandate. What role the Annexes should play in the 2015 agreement is a core fault line. India says that “the distinction enshrined in the Convention between

²² adp_United States_workstream_1_20130312.

²³ adp_lmecs_workstream_1_20130531.

²⁴ adp_lmec_workstream_1_20130313.

Annex I and non-Annex I Parties must be maintained,”²⁵ and an LMDC statement says the negotiations must adhere to “the objective, principles, provisions and structure of the Convention, including its annexes.”²⁶ The vulnerable countries make most frequent explicit reference to the Annexes, but take a different position from the LMDC Parties. Ethiopia says, “it will no longer be sufficient to leave mitigation requirements to the Annex I Parties identified 1992, and it may even no longer be sufficient to assign financial support requirements to the Annex II Parties identified as rich in 1992” and that “both Annex I and Annex II of the UNFCCC need to be reviewed at 5-year intervals.”²⁷ The African group underlines that “The social and economic situation of the world has considerably evolved over the past 20 years, leading to changes of differences between Parties included in the current annexes of the Convention”²⁸ and the Marshall Islands have suggested that the “binary division” between countries under the AWG-KP could be replaced by a number of lists with a more differentiated middle ground.²⁹ AI Parties, the EIG, and AILAC also emphasize that the Annexes are outdated, as expressed, for example, by Turkey: “The current regime which is based on the Annexes does not reflect the realities of today which are completely different from those of 1992.”³⁰ These countries stress the need for a dynamic approach to effort sharing, capturing evolving realities. AI Parties use the term “dynamic” 26 times, while LMDC countries use it only once, and then they object to “‘dynamic interpretation’ deviating from the principles of the Convention.” The term is used to describe both the principles of the Convention and the new agreement. For example, “Japan notes that the principles of the UNFCCC are dynamic concepts and their interpretation can evolve along with changes of the international community.”³¹ Australia says the new agreement must be capable of evolving over time, and Norway calls for “dynamic differentiation.”³²

Interviewed Parties’ responses diverged when we asked “Do you support continued differentiation based on current versions of the Annexes? If not, do you have a suggestion for an alternative basis for differ-

²⁵ adp_allParties_ws1_20120430.

²⁶ adp2_lmhc_29042013.

²⁷ adp_ethiopia_workstream1_18022013.

²⁸ adp_ldcs_20130903.

²⁹ Enb Vol. 12 No. 551.

³⁰ adp_turkey_workstream_1_20130829.

³¹ adp_allParties_ws1_20120430.

³² Enb12550.

entiation?” The Maldives expressed support for the status quo. Ethiopia suggested a review every 5 years. New Zealand said the Annexes should not determine action by Parties; instead, differentiation could be reflected in domestically determined commitments. Colombia acknowledged that it is not currently feasible to change the Annexes. Instead, they suggested that “further conceptual layers could be added in order to make differentiation dynamic and responsive to the changes in the world’s realities, and to take into account differences with much more detail than just the two annexes.”

4.1.6 “Applicable to all”

The opponents of the firewall (AI, EIG, and AILAC) emphasize the phrase “applicable to all” from 1/CP.17, in total 47 times. The LMDC Parties refer to the phrase 20 times, but with a different connotation, denying that it implies new differentiation. India is particularly vocal: “The term ‘applicable to all Parties’ does not signal a dilution of differentiation, or a move away from the balance of responsibilities as established in the Convention.”³³ This view is shared by China: “The outcome of Durban Platform process shall be ‘applicable to all Parties’ in the same manner as the Convention and its Kyoto Protocol, which shall by no means suggest or imply uniformity of responsibilities and obligations for all Parties in terms of nature, content and magnitude.”³⁴ Pakistan states explicitly that “the term ‘applicable to all Parties’ cannot and should not override the principle of common but differentiated responsibilities and the notion of equity.”³⁵ Notably, LDCs, AOSIS, and the African group refer to the phrase 11 times without questioning it. This includes one reference each by South Africa and Brazil. The LDC group elaborates on the issue: “The common but differentiated responsibility; countries” different and evolving capabilities; equity; historical, current and future trend of emissions; all need to be addressed in a meaningful and constructive manner, and not hold back the discussions, but assess what is the fair contribution by all to a regime that is applicable to all and that can achieve the goal of limiting warming below 1.5 °C.”³⁶

³³ adp_india_workstream_1_20130309.

³⁴ adp_china_workstream_1_20130305.

³⁵ adp_pakistan_workstream_1_20130301.

³⁶ adp_ldc_18082012.

4.1.7 *Rewriting, revising, or reinterpreting the Convention*

Objecting to rewriting, revising, or reinterpreting the Convention is another proxy for saying that the firewall should be maintained. LMDC Parties make such references 18 times. China, for example, says that the ADP process “is by no means to renegotiate, rewrite or reinterpret the Convention nor its principles and provisions.”³⁷ India drives home the message: “Under the Convention’ means consistency with, adherence to, and reflection of all the principles and provisions of the Convention, with no reinterpretation of the Convention, neither of its principles nor its Annexes. Accordingly, an arrangement ‘under the Convention’ may not in any way, explicit or implicit, reinterpret or rewrite the Convention, neither can it re-case the Annexes provided in the Convention.”³⁸ For the United States, in contrast, it is rather an issue of not rewriting the Durban mandate. After 2/CP.18 had been gavelled through with its strengthened preambular reference to the principles of the Convention, the United States stated, for the record, that it “will reject any attempt to invoke this provision as having any relevance to [the mandate from Durban].”³⁹ Several other AI countries expressed similar concerns during informal consultations in Doha. A possible compromise is suggested by South Africa: “It will not be useful to renegotiate the annexes to the Convention. Equity and appropriate differentiation can be better and more meaningfully be [*sic*] advanced through designing effective commitments and actions, taking into account the context of historical responsibility, current and emerging capability, and development needs.”

4.1.8 *Balance between mitigation and other elements*

Divergences also appear in the weight put on different elements of the new agreement. While not objecting that the new agreement should include all the familiar elements listed in the Durban decision, the United States,⁴⁰ the EU,⁴¹ Russia,⁴² Japan,⁴³ and Norway⁴⁴ all stress that mitiga-

³⁷ adp_china_workstream1and2_21112012.

³⁸ india_workstream_1_20130309.

³⁹ Verbal statement at COP18 Closing Plenary.

⁴⁰ adp_United States_workstream_1_20130312.

⁴¹ Enb12549.

⁴² Enb12568.

⁴³ Enb12568.

⁴⁴ Enb12568.

tion must be at its centre. While references to adaptation are spread fairly evenly across groups, systematic differences appear in references to means of implementation. The most references to finance, technology transfer, and capacity building are made by the LMDC (80), followed by the most vulnerable countries (51) and AI Parties (45). LMDC Parties also refer to “loss and damage” 16 times, an issue to which the most vulnerable countries refer four times and AI Parties only twice. The same pattern is found for references to Bali, for which the numbers of references are 30, 10, and 0, respectively. For example, India says that “unresolved issues relating to the [AWG-LCA] mandate must be transferred seamlessly to the ADP. In this way, the work of the ADP should be seen to be a logical evolution of the work of the Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA).”⁴⁵ The Bali Action Plan is more elaborate on non-mitigation items than the Durban Platform is. In addition, it more explicitly recognizes the principles of the Convention, and therefore signals continuation of the traditional differentiation. The interview results are consistent with this picture of how different Parties emphasize different elements. The Maldives said priority should be given to means of implementation, which they held up as a pre-requisite for mitigation and adaptation, and as a key to providing equitable access to sustainable development. When asked about the main lines of conflict in the negotiations, it replied “enhancing commitments on finance and ambitions for mitigation.” Colombia said mitigation, adaptation, and means of implementation are equally important, and that the legally binding agreement should contain commitments for all three. New Zealand stressed that new mitigation commitments are required to have any chance of achieving the Convention’s ultimate objective.

4.1.9 National circumstances

The Convention’s Article 4 establishes “national circumstances” as a basis for commitments, alongside CBDR. References to the former term are distributed relatively evenly across Parties, compared with the other provisions of the Convention. Most Parties seem to agree that national circumstances should inform effort sharing. Notably, AI Parties make the most frequent use of the term (42 times). Also notable is that countries

⁴⁵ adp_allParties_ws1_20120430.

such as Saudi Arabia,⁴⁶ United Arab Emirates,⁴⁷ and Singapore⁴⁸ advocate this notion too. LMDC Parties refer to “national circumstances” eight times, but this includes only one reference by India,⁴⁹ none by China, and none in group statements. During informal consultations in Doha, one developing country Party expressed concerns that “national circumstances” was becoming an excuse for losing focus on CBDR, and another advocated reference to “the principles of the Convention” rather than to “national circumstances.” One explanation is that national circumstances evolve faster than historical responsibility, implying a greater effort by countries that have experienced substantial economic growth since 1992. The term might also be interpreted to include elements beyond responsibilities and capabilities, such as abatement costs and political constraints.

4.1.10 Needs, poverty eradication, and equitable access to sustainable development

The NAI Parties seem more concerned with the principle of needs than AI countries are. For example, the LMDC Parties refer to poverty eradication 23 times, compared with six references by AI Parties. LDCs and the African group also refer to the term, but far from as frequently as the LMDC Parties do (8 times in total). The principle of rights is also invoked almost exclusively by NAI Parties, for example the right to (sustainable) development (established in Article 3 of the Convention). The issue of rights to equitable access to sustainable development (EASD) was introduced in the Cancun Agreement and reiterated in subsequent decisions under AWG-LCA but not in the Durban mandate. Whereas all countries have the right to sustainable development, EASD embodies the idea that some countries have not had the chance to develop yet, and therefore have additional rights to emit carbon. Related concepts are atmospheric space and carbon budgets. EASD is mentioned 11 times by LMDC Parties, three times by the most vulnerable Parties, and zero times by other Parties. It is advocated in a BASIC expert paper from 2011.⁵⁰ Our interview asked directly whether EASD should form an important element of the

⁴⁶ Enb12553.

⁴⁷ adp_uae_workstream1and2_21112012.

⁴⁸ Enb12553.

⁴⁹ adp_allParties_ws1_20120430.

⁵⁰ <http://gdrights.org/wp-content/uploads/2011/12/EASD-final.pdf>

2015 agreement. All Parties except New Zealand gave a clear “yes.” The Maldives elaborated that it should be an integral part of any legal instrument under the Convention, and that it is the main principle of all Rio Conventions. New Zealand said “no.” While acknowledging that the concept may guide Parties in their assessment of what constitutes a fair contribution, they said the negotiations should not seek to define it.

4.1.11 Equity Reference Framework

During the ADP session in June, the concept of an Equity Reference Framework (ERF) was discussed both inside and outside the negotiations. The concept has been outlined in a Climate Action Network (CAN) discussion paper⁵¹ as a way to operationalize CBDR/RC in the 2015 agreement. The idea is to define a basket of quantifiable and dynamic equity indicators, including national responsibility, capabilities, development, and adaptive capacity. The Parties should agree to a common minimum set of simplified indicators, which then determines what are fair national shares of the required global effort. This set is envisioned to guide Parties in formulating commitments – for both mitigation and financial support – and to help other Parties and observers evaluate the fairness of commitments. Independent experts are to play a role both in proposing indicators and in an equity review of commitments. Suggested potential indicators are measures of per capita income, per capita emissions, standard of living, historical responsibility, poverty, vulnerability, and intranational income inequality.

Gambia, for the LDC group, introduced the ERF concept at an ADP Roundtable. It was defined as an envelope of historical responsibility and adaptation costs and needs, integrating both metric and non-metric approaches. Specific indicators mentioned were measures of historical responsibility, current capabilities, future sustainable development needs, and vulnerabilities. Technical work on methodologies was requested.

South Africa supported Gambia’s intervention. He envisioned an ex-ante non-binding framework where Parties put forward their own commitments that are subject to ex-ante assessment. He said the ERF would bring adaptation to the centre. Kenya also supported an ERF.

The latest submission by the African group proposes a reference framework where equity indicators are included. The first of three steps

⁵¹ <http://gdrights.org/wp-content/uploads/2013/06/CAN-ERF-discussion-paper.pdf>

is to determine the necessary global effort for mitigation, adaptation, and finance and technology support. The second step is to determine the fair efforts in the three domains by each Party based on an ensemble of metrics. The third step is an *ex-ante* assessment of nationally determined commitments in terms of adequacy and fairness. The group proposes an agenda item under SBSTA at COP19 on this matter.

The latest EU submission suggests that commitments should be accompanied by an outline of how they represent a fair contribution based on the Party's responsibilities (past, current, and future) and capabilities. According to the EU, many Parties agree that objective indicators could play a role in reviewing commitments in terms of fairness and adequacy if used in a non-prescriptive way.

Singapore cautioned against creating a new equity reference framework, arguing the Convention itself is the ultimate equity reference framework. He expressed concern that creating such a framework could lead to a rewriting or revision of the Convention. He further argued that equity cannot be distilled into indicators, pointing to the experience with the KP as a reason for caution and saying that the Convention's principles are the indicators we need. Political judgment, not technical work, is what will serve the process. The concerns are reiterated in Singapore's submission dated 2/9/2013.

The United States expressed concern that indicators undermine ambition, arguing that each country will pick indicators favourable to themselves as a justification for doing less. He also emphasized that indicators ignore geographic variation in costs of action.

We asked interviewed Parties for their views on the ERF as presented in Bonn. Only New Zealand expressed a clear position, holding that it is not useful to narrow the concept of equity to a fixed definition or to reduce it to a formula.

4.1.12 The Brazilian proposal

In Bonn, several developing countries called for a reconsideration of the 1997 proposal for burden sharing among AI countries according to historic contributions to temperature increase. Brazil presented the proposal and said they were working closely with the expert who helped them develop the proposal, and called for methodological work by experts under the Subsidiary Body for Scientific and Technological Advice (SBSTA). New Zealand called attention to the 2008 conclusion by the SBSTA work programme on the original proposal, which inter alia highlighted uncertainties in historical emissions data. The proposal makes it

clear that Brazil favours domestically determined commitments, but that “each Party should have as reference its historical responsibilities for climate change” since 1850. It suggests the IPCC be invited to develop a methodology, and suggests an expert group to undertake the calculations based on data provided by Parties.

At COP19, informal consultations on the proposal were held under SBSTA. The G77 and China gave their endorsement to the proposal, whereas many AI Parties opposed it, and Parties were unable to reach consensus. The EU and Switzerland called for a broader set of indicators.

4.2 Spectrum of commitments

The idea of a spectrum of commitments approach is advocated by the EU, the Umbrella Group (in particular Australia and New Zealand), Indonesia, AILAC, and the EIG. The LDC Group⁵² and the African Group⁵³ have also called for different commitments for different categories of Parties, and South Africa has suggested a fixed menu of obligations. Russia also accepts that the content of commitments from developed and developing countries may differ.⁵⁴ The idea is presented as a way to combine participation by all with fairness: “Differentiation between all Parties according to the principles of the Convention is necessary to ensure fairness and equity in Parties’ commitments.”⁵⁵

Only a few Parties reject the idea outright. The Bolivarian Alliance for the Peoples of Our Americas (ALBA) maintains that the only criterion for differentiation is Annex I, and Singapore has stated that “the notion of a spectrum of commitments is not consistent with the Convention’s principles,”⁵⁶ arguing instead for an approach based on purely nationally determined actions. However, the scant opposition might be because the idea is still not clearly defined, which leaves it open to divergent interpretations. Also noteworthy is the lack of reference to a spectrum of commitments by countries in the LMDC Group. All interviewed Parties said they support the approach, but the Maldives highlighted that it must

⁵²adp_ldc_group_workstream_1_20130303.

⁵³adp_african_group_workstream_1_20131008.

⁵⁴adp_russian_federation_20130903.

⁵⁵adp_eig_workstream_1_20130923.

⁵⁶Enb 12568.

accommodate ambition, Parties' responsibility and capacity, and measurability.

The crystallizing idea is to allow for different types of commitments by different Parties. A list of admissible types of commitments could be specified up-front, so countries would not be free to submit just any kind of commitment as they did in Copenhagen. New Zealand uses the term "bounded flexibility": flexibility to build on own national circumstances within some agreed limitations.⁵⁷ The spectrum approach has been suggested as a way to reflect the CBDR/RC principle, and to maintain flexibility regarding national circumstances. The spectrum approach is an alternative to using a single formula approach to derive commitments, an approach many Parties recognize will not work. Only Ethiopia has submitted a mathematic formula for specifying commitments in the 2015 agreement.⁵⁸

Types of commitments mentioned include economy-wide quantified emission reductions targets; emissions intensity targets; targets relative to business-as-usual; sector-specific targets; per capita emissions targets; policies, measures, or actions with quantified emissions reductions; and targets in the form of other parameters of sustainable development – like energy mix or land use – with quantifiable emissions reductions. In interviews, both the Maldives and New Zealand said a minimum requirement is that commitments be quantifiable.

It is apparent from Parties' views that no consensus exists for how countries would be matched with commitments. The United States suggests countries would choose freely from the spectrum: "While there would be a common commitment to come forward with mitigation contributions, self-identification of measures would result in self-differentiation consistent with national circumstances, capabilities, etc."⁵⁹ In contrast, Australia argues that "All major economies could reduce or limit emissions across their economies; developed countries & countries with greatest capacity make absolute economy-wide reductions; others take on quantified efforts in line with capacity."⁶⁰ The EU also argues that countries with the greatest responsibility and capabilities must be expected to take on absolute, economy-wide targets, and

⁵⁷ adp_new_zealand_workstream_1_20131015.

⁵⁸ adp_ethiopia_workstream1_18022013.

⁵⁹ adp_United States_workstream_1_20130312.

⁶⁰ adp_australia_workstream_1_20130326.

that all Parties should aspire to have such targets eventually.⁶¹ South Africa argues that only developed countries should have binding absolute emissions reductions targets, while developing countries should have relative emissions reductions targets. Similarly, the African group argues NAI Parties should commit to actions that support a deviation from BAU.⁶² Brazil suggests that “Annex I and non-Annex I countries’ pledges should be presented in different ways.”⁶³ The LDC group maintains that Annex I countries should not be allowed to take relative targets “as they have all agreed to take absolute targets in 1997 under the Kyoto Protocol.”⁶⁴ The interviews revealed some divergence on this issue. New Zealand said economy-wide absolute emissions limitations should not be mandatory for anyone. Colombia said that there should be no scaling back by countries that currently have such commitments, and that major emitters without them should take them on. Ethiopia held that such targets should be mandatory for Parties with above-median responsibility and capacity. The Maldives said AI countries should have absolute targets, while NAI should have intensity targets. We also asked which Parties should be exempted for commitments for which they are not compensated. New Zealand replied, “none,” Ethiopia said, “those with below median GDP per capita”, and the Maldives replied, “LDCs and SIDS.”

Clarity, comparability, MRV, and accounting are stressed by all the proponents of the approach. Norway argues that the spectrum of commitments must be tied together in a common accounting framework. *Ex-ante* review of commitments is also stressed by many Parties. The United States proposes a “consultative period” of three to six months, during which Parties can scrutinize each other’s measures. The EU says the review should assess whether commitments are i) sufficiently transparent, quantifiable, and comparable; ii) ambitious enough; and iii) fair and in accordance with the principles of the Convention. Importantly, it should assess the adequacy of commitments in aggregate to achieve the 2°C target. To facilitate *ex-ante* review, the EU has suggested a list of information that must accompany commitments.⁶⁵ Each type of commitment would necessitate a specific set of defining parameters (timeframe, baseline, etc.). It has also proposed a timeline for the pro-

⁶¹ adp_eu_workstream_1_mitigation_20130916.

⁶² adp_african_group_workstream_1_20131008.

⁶³ Enb Vol. 12 No. 575.

⁶⁴ adp_ldcs_20130903.

⁶⁵ adp_eu_workstream_1_20130527 and adp_eu_workstream_1_mitigation_20130916.

cess, shown in Figure 3.1.⁶⁶ Colombia also supports ex-ante review, saying in the interview that it should play a fundamental role in ensuring commitments are equitable and aggregate to produce environmental integrity. Comparability of commitments is opposed by the United Arab Emirates, who proposes that each Party provide an explanation of its commitment using its own yardstick.⁶⁷ Saudi Arabia says only developed countries' commitments should be assessed *ex-ante*.⁶⁸

Figure 3.1: Timeline for a stepwise approach to formulating commitments, as proposed by the EU⁶⁹

Define up front information requirements	Parties to formulate and propose commitments	International assessment of proposed commitments	Inscription of commitments in the 2015 Agreement
2013	2014	2014/2015	2015

The question of how to assign commitments to Parties links to the debate on negotiated (top-down) versus nationally determined (bottom-up) commitments. Parties recognize that while the top-down approach of the Kyoto Protocol has failed to attract widespread participation, the bottom-up approach formalized in the Cancun agreement has not added up to sufficient ambition. The US position is furthest in the direction of a bottom-up approach, while the EU, AILAC, New Zealand, and Australia present their idea as a hybrid between the two. Brazil advocates domestic self-definition of commitments, but with a reference to historical responsibilities.⁷⁰ Ethiopia suggests AI Parties should be subject to top-down commitments determined through a formula, whereas a bottom-up approach would apply to others.⁷¹ The environmental integrity of a purely bottom-up approach has been questioned in particular by the EU, the LDC group, Gambia, and Tuvalu. Convergence seems to be emerging on the need for a hybrid approach. However, designing a scheme that combines widespread participation with sufficient ambition remains an unresolved challenge.

⁶⁶ South Africa proposes that initial targets be submitted by 2015 to be inscribed by 2017 (adp_south_africa_workstream_1_mitigation_20130930).

⁶⁷ Enb Vol. 12 No. 571.

⁶⁸ Enb Vol. 12 No. 575.

⁶⁹ adp_eu_workstream_1_mitigation_20130916.

⁷⁰ adp_brazil_workstream_1_brazilian_proposal_20130912.

⁷¹ Enb Vol. 12 No. 568.

The need to provide incentives for participation has been highlighted by many Parties, but proposals on how to do it are fewer. Including “means of implementation” in the new agreement has been suggested as one way to incentivize participation. Access to the new market mechanism has been suggested by both the LDCs and the EU. New Zealand makes a cautious reference to the trade restrictions included in the Montreal Protocol. Trade restrictions are, however, a contentious issue in the UNFCCC, potentially conflicting with Article 3, Paragraph 5 of the Convention. The LMDC Group proposed a more explicit abolition during an AWG-LCA informal meeting⁷² before Durban, meeting opposition from the EU, the United States, Australia, and Singapore.

4.2.1 Legal form

The EU, New Zealand, Australia, Norway, and the EIG all stress that all commitments must have the same legal form. Australia states it most clearly: “Differentiation must not extend to the legal form of commitments. All countries’ efforts must be on the same legal platform and share the same degree of bindingness.”⁷³ Brazil, in contrast, calls for continued legal distinction of commitments between AI and NAI Parties.⁷⁴ In the interviews, Ethiopia supported Brazil, saying NAI Parties’ legal obligations should be conditional on support. New Zealand, on the other hand, said it was agreed in Durban that all commitments should have the same legal form. Colombia and the Maldives also supported universality of legal form. (Vietnam did not answer this question.)

While advocates of the spectrum approach agree that the legal form should be universal, they disagree on what that legal form should be. The EU supports a protocol, one which is internationally legally binding, whereas New Zealand suggests commitments should be nationally legally binding.⁷⁵

Legal form is a contentious issue to other key actors. India – who spearheaded the opposition to strong language on legal form in the Durban decision – demands a guarantee that there be no punitive consequences for shortfall of developing countries’ commitments.⁷⁶ India also

⁷² TWN Panama News Update 9, 4 October 2011.

⁷³ adp_australia_workstream_1_20130326.

⁷⁴ adp_brazil_workstream_1_brazilian_proposal_20130912>.

⁷⁵ adp_new_zealand_workstream_1_20131015>.

⁷⁶ adp_allParties_ws1_20120430.

advocates a watered-down interpretation of “agreed outcome with legal force.”⁷⁷ China says legal form cannot be determined before the agreement’s substance is determined.⁷⁸ A notable development is that South Africa broke ranks with the other BASIC countries, stating that “The future agreement should be a legally binding protocol under the Convention.”⁷⁹ The United States has expressed some flexibility on this issue, stating, “we are open-minded on the name/international legal form of the instrument, for example, whether it is a ‘protocol’, ‘agreement’, or ‘implementing agreement’,”⁸⁰ and that “a legal experts group should be established to address legal issues and drafting matters that arise in the course of developing a protocol, legal instrument, or agreed outcome with legal force.”⁸¹ However, recent statements by Todd Stern, the US special envoy for climate change, signal more caution against a legally binding outcome: “An agreement that is animated by the progressive development of norms and expectations rather than the hard edge of law, compliance and penalty has a much better chance of working;” and, “Insisting that only one way can work, such as an agreement that is internationally legally binding in all respects, could put that prize out of reach.”⁸²

4.3 COP19 outcome

The tensions over the firewall between AI Parties and the LMDC group reached new levels of prominence at ADP 2–3 in Warsaw, and the negotiations on the issue lasted 48 hours after the ADP closing plenary was supposed to have ended. While avoiding a complete breakdown, the decision did not resolve the matter in any sense, and provided, at best, modest progress towards the 2015 agreement. Notably, both the BASIC and G77+China groups appeared more united than in the last couple of years – with positions in line with the LMDC group’s position.

The closing plenary saw an attempt led by India and China to introduce a distinction between AI and NAI Parties into the decision, arguing that when “commitments” and “all parties” are mentioned in the same

⁷⁷ adp_india_workstream_1_20130309.

⁷⁸ china_workstream_1_20130305.

⁷⁹ adp_south_africa_workstream_1_20130427.

⁸⁰ adp_United States_workstream_1_20130312.

⁸¹ adp_allParties_ws1_20120430.

⁸² ClimateWire 22/10/2013. Available at

<http://www.eenews.net/climatewire/2013/10/22/stories/1059989181>

sentence, some context needs to be given. A BASIC proposal for providing such context was to refer to paragraph 4 of the Convention, which clearly differentiates between developed and developing countries, and refers to CBDR (without RC). China later provided a moderated proposal referring to “the provisions of the Convention.” The United States reacted with astonishment to China’s argument that commitments apply only to developed countries, saying, “That’s Bali [...] we did something quite different when we agreed to the Durban Platform.” He further expressed surprise that China seemed to suggest that it will not assume commitments in the new agreement.

Tensions between the EU and the LMDC group became public when Connie Hedegaard told the media, “There is still a group of like-minded, who think differently, who tries [*sic*] to reinstall the firewall.”⁸³ In response, Venezuela accused her of starting a blame game through the media.

The final decision postponed the thorny issue of the firewall by replacing “commitments” with “contributions”. Afterward, India’s minister said, “The firewall exists and it will continue to exist,” and US special envoy Todd Stern said, “This is now the major fault line at the talks, and [the countries’ insistence] on deciding who does what in a new agreement based on unchanging 1992 categories is more pronounced than at Durban and poses the biggest challenge to the negotiations over the next two years.”⁸⁴

References to equity are notably absent from the final decision and conclusions. LMDC Parties ensured the deletion from the first draft of a call for transparency of commitments “to enable consideration of the adequacy, equity, and fairness of commitments.”⁸⁵ India ensured that also a request for a workshop on methodological issues of equity and adequacy (proposed by South Africa) was deleted from draft conclusions (version 3).⁸⁶ Notwithstanding, India at the COP closing plenary highlighted equity as an absolute and inalienable right that “cannot be equated with, and is far beyond, fairness.”⁸⁷

Those working for a clear road map to Paris achieved an invitation to “all Parties to initiate or intensify domestic preparations for their in-

⁸³ European Commission Audiovisual Services. Available at <http://ec.europa.eu/avservices/video/player.cfm?ref=1083928>

⁸⁴ *The Guardian* 25/11/2013. Available at <http://www.theguardian.com/environment/2013/nov/25/warsaw-climate-talks-end-cop19-2015>

⁸⁵ ECO 10, COP19.

⁸⁶ ECO 11, COP19.

⁸⁷ ENB Vol. 12 No. 594.

tended nationally determined contributions [...] and to communicate them well in advance of the twenty-first session of the Conference of the Parties (by the first quarter of 2015 by those Parties ready to do so) in a manner that facilitates the clarity, transparency and understanding of the intended contributions.” On ambition, the decision refers to the objective of the Convention. On the other hand, there is no mention of ex-ante review or assessment, which are central to the EU’s stepwise approach. The LMDC group opposed review of commitments by developing countries.⁸⁸ The decision furthermore postpones to COP20 to identify the information that should accompany contributions. This postponement means that, in practice, domestic processes will start without any international guidelines. The time available for any ex-ante review before COP21 is also short.

The decision makes it clear that commitments will be nationally determined, but does not give any guidance on what types of commitments are admissible, and how Parties and types of commitments should be matched. To the contrary, clarity is reduced by replacing “commitments” with the vaguer term “contributions”. The issues of legal form and legal differentiation were also explicitly avoided by inserting the term “without prejudice to the legal nature of the contributions” – twice in one sentence – on the BASIC group’s insistence.

Within the ranks fighting for the firewall, cohesion seemed on the increase, as illustrated by the G77+China endorsing the Brazilian proposal for a methodology on historical responsibility. Brazil’s rhetoric was more similar to that of India and China than previously, calling for a clear distinction between AI and NAI Parties.⁸⁹ The LDCs also moved away from their partners in the Durban Alliance – EU and AOSIS – towards the LMDCs. For example, they supported the LMDCs’ argument for transparency requirements to be differentiated between developed and developing countries, an argument also supported by the African group.⁹⁰

⁸⁸ ADP opening plenary,

⁸⁹ ADP informal consultations November 13.

⁹⁰ ADP informal consultations November 15.

5. Operationalizing equity in a spectrum of mitigation commitments

Can the Parties build on what seems to be fairly broad agreement at the level of basic principles without triggering mechanisms that increase the risk of deadlock over the *specification* and *application* of these principles? In this section, we outline an approach that may help policy-makers and diplomats operationalize equity in a practical way that should avoid a repeat of some of the most difficult and politicized debates. We will first present the “mutual recognition approach” that applies to the UNFCCC process in general, and then further operationalize the ideas into a “template of indicators approach” that applies specifically to a “spectrum of commitments” process.

5.1 A “mutual recognition” approach

We use the label “mutual recognition” to indicate that this approach takes global diversity as a given parameter and searches for ways in which Parties can build international agreements on that basis. We premise this approach on two principal insights of social science research. One, pioneered by Simon (1947), says that in dealing with complex problems decision-makers usually adopt a technique of (sequential) satisficing rather than (synoptic) optimizing. Since this finding has emerged partly through evidence from the world of business and industry, where computational models for optimizing profits are available, it seems all the more plausible as a description of international negotiations about climate policy arrangements. The other important insight says that concerns with fairness and legitimacy may apply not merely to the outcome but also to procedure and behaviour. Mutual trust and respect must sometimes be *grown* and that can take years of patient and careful cultivation. Combining these two findings, we abandon – at least at this stage – the search for an integrated formula that can “optimize”

equity.⁹¹ Instead, we offer a small set of behavioural rules that may help Parties *narrow* at least some of the gaps that severely impede progress.

The first and most basic rule calls upon Parties to accept a certain *set* of basic fairness norms, and a certain *range* of interpretations of each of these norms, as *legitimate* premises for an international agreement. “Legitimate” here means broadly consistent with (a) the UNFCCC CBDR/RC platform, which has been formally accepted by 195 Parties, and (b) the three more specific principles elaborated in section 2.2. Taken *together*, this set of norms and interpretations may serve as a common framework for negotiations about the specifics of a new international climate agreement.

Second, in determining which norms and interpretations to consider legitimate, Parties apply a standard of *reciprocity*. In this context, reciprocity implies (a) acceptance that any principle of fairness – and any interpretation of such a principle – that a Party advocates may legitimately be invoked by any other Party, and (b) a recognition of any other principle or interpretation that a Party may well have supported had it found itself in circumstances similar to those of the Party invoking that principle or interpretation. According to requirement (a), anyone claiming, for example, a “right to development” must grant the same right to all others, including previous generations. According to (b), Parties have to admit that their own conceptions of fairness are to some extent tainted by self-interest and allow others to be similarly “biased” (see Lange *et al.* 2010). Acknowledging one’s own bias may well be difficult but it can help foster mutual respect and facilitate constructive negotiations, particularly if combined with credible efforts to learn from criticism.

Third, normative principles and interpretations that qualify as legitimate by these procedures serve as *filters* that a new agreement will have to pass. In the climate change negotiations, Parties use different filters to screen policy options, and some of these filters seem so tight and incongruent that no policy option can pass them all. Effective negotiations can, however, *create* a settlement range through processes of (mutual) adjustment, discovery, and innovation (see e.g. Zartman and Berman, 1982). Parties’ conceptions of distributive fairness can be adjusted and refined. Similarly, policy options can be modified or invented

⁹¹ We do recognize that at least one such formula, the so-called Triptych approach, helped EU decision-makers develop a common climate change policy, at least in the early stages (Den Elzen *et al.* 2008). The prospects for an integrated formula approach tend, however, to decline with group size and heterogeneity and with weaker institutional capacity. For a somewhat more upbeat assessment, see Groenenberg *et al.* 2001.

through creative reformulation of articles and paragraphs, coupling and de-coupling of issues (and perhaps of Parties), and through innovative reframing of the problem itself and of available solutions.

Fourth, since some Parties' scores on key variables change significantly over time, a *dynamic* agreement including provisions for regular updating will have significant advantages over static arrangements. Whatever its merits at the time of its invention, the frozen dichotomy between Annex I countries and the rest of the world has become increasingly inadequate as an expression of variance in responsibility, capacity, and need.

Finally, in assessing and developing alternative conceptions of distributive fairness, Parties recognize that they all operate under *feasibility constraints* – political as well as technical and economic. Only measures that pass all these feasibility constraints can be implemented. Consequently, Parties face an ever more pressing dilemma between fairness and effectiveness: insisting on “perfect” equity will almost certainly lead to GHG emissions well above the threshold IPCC considers prudent to avoid “dangerous anthropogenic interference in the climate.”

5.2 A “template of indicators approach”

We have identified two different sets of proposals on the table for how to operationalize equity in a process where commitments are domestically determined and then subjected to international review. The first consists of the ERF and the revised Brazilian proposal, which have been described in section 3.1. The other approach is to request Parties to outline how their commitments represent a fair contribution based on responsibilities and capabilities, but leaves it up to the Parties to choose which indicators or criteria to use. The most recent submissions by the EU and New Zealand advocate the latter approach.

We believe it is not realistic that Parties will agree to a set of indicators for all to report, as suggested in the ERF. On the other hand, we think there should be limits on what criteria or indicators to use. Bounded flexibility is the concept underlying the “spectrum of commitments” approach, and we believe it could also represent a compromise for how to incorporate equity into the “spectrum.” The idea is to have a finite, official list of indicators, but to allow each Party to decide which of these indicators to disclose. This idea addresses the key issue with the ERF. As the CAN proposal recognizes, agreeing to a set of indicators will be difficult, because “recalcitrant Parties will not want to agree to any standard-

ized framework that allows their commitments to be meaningfully compared” and will want the freedom to pick the indicators to report.

As in the CAN proposal, an expert group under the UNFCCC may play a useful role. Such a group would need a clear mandate from a COP, and its establishment and proceedings will require precious time. The group is, however, not a necessary element of the approach.

Our proposal gives Parties the freedom not to report all indicators, but refusal to include an indicator will be explicit and hence carry an audience cost. Failure to report an indicator may also signal that the Party has something to hide, which creates an incentive to report it.

For each indicator in the list, Parties would be given either two or four options (depending on whether an expert group is formed): 1) Report the indicator (according to guidelines and in a reproducible manner), 2) Provide domestic data for the experts to calculate the indicator, 3) Allow the expert group to calculate the indicator based on available data, or 4) Decline official reporting for their country.

The indicators should be of a format that facilitates comparison between a Party’s commitment and its responsibility and capacity. Hence, the equity indicators should facilitate comparison with other indicators that will be required for the purposes of clarity and of comparability of commitments (the EU has suggested some specific indicators for these purposes).⁹² It may aid the review if an expert group translates each commitment into the share of aggregate commitments (relative to current emissions and relative to BAU), and into the share of the global effort needed for a path towards the 2-degree target.

5.2.1 Defining the list of indicators

The “mutual recognition” approach calls upon Parties to accept a certain *set* of basic fairness norms, and a certain *range* of interpretations of each of these norms, as *legitimate* premises for an international agreement. Those interpretations are indicators Parties should accept as legitimate for others to report. Some Parties may not accept all indicators as criteria for assessing the fairness of their own commitment, but they would not be required to do so either.

Agreeing on a finite set of indicators will nevertheless be a challenge in practice. CAN’s proposal suggests an expert process, constituted by

⁹² adp_eu_workstream_1_20130527 and adp_eu_workstream_1_mitigation_20130916.

the COP. This process could be complemented by requesting Parties to submit indicators for consideration, perhaps with a guarantee that at least one suggestion by each Party will be included (subject to data availability). We expect the result to contain multiple indicators for each norm, but inclusiveness must be balanced against keeping the list manageable. Data availability and uncertainty will likely limit the number of possible indicators considerably.

The review of the academic literature has identified a range of candidates (see section 2), and we provided data on some key potential indicators (section 4). We also asked the interviewed delegations to list the most important indicators for measuring responsibility and capability. The results are presented in Table 4.1.

5.2.2 What if agreement on a common list of indicators fails?

Reaching agreement on a template of indicators may take up precious negotiation time. An alternative is to seek a common set at the more general level of equity principles, which will likely make reaching agreement easier. The EU has proposed that Parties “should include an outline of how their proposed commitments represent a fair contribution based on their responsibilities (past, current and future) and capabilities” (ibid). This would make the information presented less comparable. For example, historic responsibilities can be quantified in many ways, whereas an indicator would narrow the range. Even a vaguely specified indicator like cumulative emissions would rule out some interpretations – such as that of the Brazilian proposal (contributions to temperature increase).

Table 4.1.: Responses to the question “What indicators are most important for measuring responsibilities/capabilities?”

Country	Responsibilities	Capabilities
Colombia ⁹³	Absolute, aggregated tons of GHG emissions (CO2 equivalent)	GDP
	Percentage of global emissions	GDP per capita
	Deviation of emissions a baseline. This baseline should be reviewed internationally	GINI coefficient
	GHG emissions in relation to GDP	Unsatisfied Basic Needs Index
	Energy efficiency of the economy	Multidimensional Poverty Index
	Fossil fuel consumption	Vulnerability to the impacts of climate change
	Fossil fuel subsidies in place	Mitigation potential
Ethiopia	The cumulative emissions of Parties as sovereign states as recorded starting in 1751, added up until now and divided by the present-day population to give us annual per capita emissions	Present-day per capita GDP excluding Parties with small population sizes, say below 1 million
Maldives	Historic emissions per capita	GDP per capita
	Cumulative emissions	Human Development Index
		Number of R&D institutes
		Vulnerability index (least vulnerable = most capable)

Vietnam replied only, “An approach to global differentiation that is adequate to the complexities of the emerging world system. The participation of all Parties is the key point.” Regarding responsibilities, New Zealand replied, “An approach to global differentiation that is adequate to the complexities of the emerging world system. The participation of all Parties is the key point.” On capabilities, New Zealand replied, “There is no single indicator that will accurately convey capability for all countries. For New Zealand, mitigation potential and the cost of abatement provide a good insight to capability.”

5.3 Concrete suggestions for Lima

The decision in Warsaw calls for COP20 to identify the information to accompany Parties’ contributions. The importance of establishing some architecture for the new agreement before pledges are put on the table is stressed by Müller and Höhne (2013), who argue that doing so will

⁹³ “Many can be used, and there is not a single answer to this question. The Colombian delegation does not have an agreed single list of indicators that could be used for this. Some indicators that could be used, among others, are: ...”

reduce the risk of Parties trying to game the pledge and review process by discounting initial pledges, and the risk of locking in to this lower level of ambition. Hence, 2014 will be a key year for establishing architecture. However, the time constraint means that the negotiations over details must be minimized, and the modest progress made in Warsaw provides a sobering message regarding what can realistically be agreed. We therefore suggest the COP decision to focus on reproducibility of information, rather than specifying *ex ante* the exact format of information. Equity principles form a key part of the architecture that will guide Parties in formulating pledges, and this will include accompanying information, potentially in the form of indicators. Even though Parties might need to start domestic processes on initial pledges before Lima, negotiations towards a decision on guidelines in Lima will contribute to forming Parties' expectations that their pledges must be justified relative to equity indicators in some way. Moreover, if followed, the guidelines would likely make an *ex ante* review or assessment more constructive.

5.3.1 Defining the spectrum

Negotiations over what types of pledges are admissible may well be difficult, and may not alter the set of pledges Parties end up proposing. We believe that the transaction costs of trying to formulate restrictions on what Parties may pledge are likely to offset potential gains. A more promising approach would involve a requirement that Parties enclose an assessment of the pledge's effect on emissions. For example a pledge to reduce carbon intensity by 40% by 2030 must be translated into tons of CO₂ equivalent cumulative emissions between 2020 and 2030. Importantly, the translation does not constitute a binding commitment in any sense, and would not have the same legal status as the pledge itself.

5.3.2 Transparency

The pledge must be accompanied with sufficient information for a third party to reproduce the estimated effect on emission. Information requirements may pertain to the gases and sectors covered, the global warming potential figures utilized, assumptions about GDP growth, etc. Any Party or Observer organization may request from another Party the information necessary to reproduce a figure presented by the second Party.

5.3.3 Equity

With good preparations, COP20 may be able to come up with a list of equity-related indicators on which Parties are invited (but not mandated) to report their score. Alternatively, if agreement at the level of indicators cannot be reached, the Conference could converge on a list of widely accepted equity *principles*. Parties could then be encouraged to use quantified indicators of their own choosing indicate how their contributions reflect and serve those principles. In either case, we think it is not realistic to negotiate specific guidelines for how indicators or principles should be quantified. Instead, the above transparency requirement would be apply also to equity indicators: There must be sufficient information for third parties to reproduce the figures. It will then be up to Parties and civil society to judge whether the intended contributions are individually and collectively fair/equitable.

5.3.4 The critical requirements

A template of indicators approach may certainly involve other specific arrangements than those suggested above. The approach itself does, however, build on two critical requirements: *transparency* and *open, critical review* of Parties' pledges and justifications. The former is a precondition for the latter.

6. References

- Aldy, J.E., S. Barrett and R.N. Stavins (2013). Thirteen plus one: a comparison of global climate policy architectures. *Climate Policy* 3 (4), 373–397.
- Aristotle (1908). *Nicomachean Ethics*. Oxford: Clarendon Press.
- Baer, P. (2013). The greenhouse development rights framework for global burden-sharing: reflection on principles and prospects. *WIREs Climate Change* 4, 61–71.
- Baer, P. (2008). The greenhouse development rights framework for global burden sharing: reflection on principles and prospects. *WIREs Climate Change* 4, 61–71.
- Barrett, S. (2007). *Barrett proposal: A multitrack climate treaty system*. Harvard Project on International Climate Agreements – Policy Brief, Harvard Kennedy School.
- Barry, B. (1995). *Justice as Impartiality*. Oxford: Oxford University Press.
- Bodansky, D. S. Chou and C. Jorge-Tresolini (2004). International climate efforts beyond 2012: a survey of approaches. Pew Center on Global Climate Change.
- Bodansky, D., and E. Diringer (2007). *Towards an integrated multi-track climate framework*. Pew Center on Global Climate Change.
- Bodansky, D. (2010). The Copenhagen Climate Change Conference: A Postmortem. *The American Journal of International Law* 104 (2), 230–240.
- Briner, G. and A. Prag (2013). *Establishing and understanding Post-2020 climate change mitigation commitments*. Climate Change Expert Group Paper No. 2013(3), OECD/IEA.
- Bruyninckx, H., Q. Ye, N.Q. Thuan and D. Belis (2013). *The governance of climate relations between Europe and Asia*. Edward Elgar, Cheltenham.
- Cameron, E., T. Shine, and W. Bevins (2013). *Climate justice: equity and justice informing a new climate agreement*. Working paper. World Resources Institute, Mary Robinson Foundation.
- Carlsson, F., M. Kataria, A. Krupnick, E. Lampi, Å. Löfgren, P. Qin, and T. Sterner (2013). A Fair Share: Burden-sharing preferences in the United States and China. *Resource and Energy Economics* 35, 1–17.
- Clarke, L., J. Edmonds, V. Krey, R. Richels, S. Rose and M. Tavoni (2009). International climate policy architectures: overview of the EMF 22 international scenarios. *Energy Economics* 31 (s2), 264–s81.
- Dannenberg, A., B. Sturm, and C. Vogt (2010). Do Equity Preferences Matter for Climate Negotiators? An Experimental Investigation. *Environmental Resources Economics* 47, 91–109.
- Den Elzen, M.G.J., J.G.J. Olivier, N. Höhne, and G. Janssens-Maenhout (2013). Countries contributions to climate change: effect of accounting for all greenhouse gases, recent trends, basic needs and technological progress. *Climatic Change*, DOI 10.1007/s10584-0865-6.
- Den Elzen, M., N. Höhne, and S. Moltmann (2008). The Triptych approach revisited: A staged sectoral approach for climate mitigation. *Energy Policy* 36(3), 1107–1124.
- Falkner, R., H. Stephan and J. Vogler (2010). International climate policy after Copenhagen: towards a “building blocks” approach. *Global Policy* 1 (3), 252–262.

- Franck, T. M. (1995). *Fairness in International Law and Institutions*. Oxford: Clarendon Press.
- Groenenberg, H., D. Phylipsen, and K. Blok (2001). Differentiating commitments world wide: global differentiation of GHG emissions reductions based on the Triptych approach – a preliminary assessment. *Energy Policy* 29(12), 1007–1030.
- Jaffe, J., M. Ranson and R.N. Stavins (2009). Linking tradable permit systems: a key element of emerging international climate policy architecture. *Ecology Law Quarterly* 36,789–808.
- Jotzo, F. (2007). Climate policy: where to and how? *Agenda* 14 (1), 17–34.
- Klinsky, S., and H. Dowlatabadi (2009). Conceptualizations of justice in climate policy. *Climate Policy* 9(1), 88–108.
- Lange, A., A. Löschel, C. Vogt, and A. Ziegler (2010). On the self-interested use of equity in international climate negotiations. *European Economic Review* 54, 359–375.
- Lange, A., C. Vogt, and A. Ziegler (2007). On the importance of equity in international climate policy: An empirical analysis. *Energy Economics* 29, 545–562.
- Larragán, J.D.C. (2011). Tying the knot on energy security and climate change mitigation: a tale of solidarity? *Yearbook of International Environmental Law* 22 (1), 76–109.
- Larragán, J.D.C. (2012). The future of international climate change law: a scenario-based perspective. *Climate Policy* 12, 6–27.
- Mattoo, A., and A. Subramanian (2012). Equity in Climate Change: An Analytical Review. *World Development* 40(6), 1083–1097.
- Müller, B., and N. Höhne (2013). *A staged approach: The sequencing of mitigation commitments in the post-2020 ADP negotiations*. Available at: <http://jusharma.wordpress.com/2013/11/06/a-staged-approach-the-sequencing-of-mitigation-commitments-in-the-post-2020-adp-negotiations-2/>
- Müller, B., and L. Mahadeva (2013). *The Oxford Approach: Operationalizing “Respective Capabilities.”* Oxford: European Capacity Building Initiative (www.eurocapacity.org).
- Müller, b., N. Höhne, and C. Ellermann (2009). Differentiating (historic) responsibilities for climate change. *Climate Policy* 9(6), 593–611.
- Nordhaus, W.D. (2006), After Kyoto: alternative mechanisms to control global warming. *American Economic Review* 96 (2), 31–34.
- Nozick, R. (1974). *Anarchy, State, and Utopia*. New York: Basic Books.
- Pizer, W.A. (2006). The evolution of a global climate change agreement. *American Economic Review* 96 (2), 26–30.
- Porter, M.E., and S. Stern (not dated). *National Innovation Capacity*. (www.isc.hbs.edu/Innov_9211.pdf).
- Prag, A., C. Hood, P.M. Barata (2013). *Made to measure: options for emissions accounting under the UNFCCC*. Climate Change Expert Group Paper No. 2013(1). OECD/IEA.
- Rawls, J. (1993). *Political Liberalism*. New York: Columbia University Press.
- Rawls, J. (1971). *A Theory of Justice*. Cambridge, MA: Harvard University Press.
- Ringius, L., A. Torvanger, and A. Underdal (2002). Burden sharing and fairness principles in international climate policy. *International Environmental Agreements* 2(1), 1–22.
- Simon, H.A. (1947). *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations*. New York: Basic Books.
- Soltau, F. (2010). *Fairness in International Climate Change Law and Politics*. Cambridge: Cambridge University Press.

- Spencer, T. (2011). *A legal form proposal for Durban and beyond*. IDDRI Working Paper 21. Institut du développement durable et des relations internationales.
- Torvanger, A., and O. Godal (2004). An evaluation of pre-Kyoto differentiation proposals for national greenhouse gas abatement targets. *International Environmental Agreements* 4(1), 65–91.
- Underdal, A., T. Wei, and S. Glomsrød (forthcoming). Distributive fairness: A mutual recognition approach.
- Torvanger, A., and O. Godal (2002). Criteria for evaluating burden-sharing rules in international climate policy. *International Environmental Agreements* 2(2), 221–235.
- Verweij, M., M. Douglas, R. Ellis, F. Hendriks, S. Lohmann, S. Ney, S. Rayner, and M. Thompson (2006). Clumsy solutions for a complex world: the case of climate change. *Public Administration Review* 84(4), 817–843.
- Victor, D. G. (2011). *Global Warming Gridlock: Creating More Effective Strategies for Protecting the Planet*. Cambridge: Cambridge University Press.
- Vieweg, M., W. Sterk, M. Hagemann, H. Fekete, V. Duscha, M. Cames, N. Höhne, B. Hare, M. Rocha and H. Schmole (2013). Squaring the circle of mitigation adequacy and equity: options and perspectives. Draft for public comment. Wuppertal Institute for Climate, Environment and Energy. URL: http://wupperinst.org/uploads/tx_wupperinst/Mitigation_Adequacy_draft.pdf
- Winkler, H., T. Letete, and A. Marquard (2013). Equitable access to sustainable development: operationalizing key criteria. *Climate Policy* 13(4), 411–432.

7. Sammanfattning

I vilken utsträckning och på vilket sätt kan ett spektrum av minskningsåtaganden utgöra en operativ ram för att skriva in allmänt accepterade principer om rättvisa i 2015 års klimatavtal?

Vi tar oss an denna fråga genom en genomgång av akademisk litteratur och en analys av ståndpunkter som har uttryckts av parterna själva. En genomgång av normativ teori ger både goda och dåliga nyheter. De goda nyheterna är att principen om gemensamt men differentierat ansvar och insatser efter förmåga (CBDR/RC) framstår som ett allmänt accepterat ramverk för rättvis fördelning. Närmare bestämt är sökandet efter kriterier för rättvis fördelning ett försök att kombinera två grundläggande principer: lika behandling av lika fall (här: likställdhet), och olika behandling av fall som skiljer sig avsevärt i viktiga avseenden (här: rättvisa). Olika behandling vilar i sin tur på två principer som gäller olika fall: *proportionalitet*, där skillnaderna är viktiga men inte särskilt omfattande, och *undantag* från skyldigheter för parter som inte har en viktig roll när det gäller att orsaka problemet eller har mycket begränsad förmåga att bidra till minskning.

De dåliga nyheterna är att nyckelbegreppen "ansvar" och "förmåga" tolkas olika och att denna skiljaktighet tenderar att återspegla intressekonflikter. Konsekvensen är att sökandet efter en exakt samförståndsformel för gemensamma insatser i ett nytt avtal om begränsning av klimatförändringar har mycket små chanser att lyckas. Detta resultat pekar mot förverkligande av rättvisa med andra metoder än med en formel för gemensamma insatser.

"Ansvar" kan förverkligas på olika sätt. Vi funderar över två huvudfrågor. För det första, bör ansvar omfatta alla växthusgaser och därmed förknippade verksamheter eller begränsas till vissa delar (t.ex. koldioxidutsläpp från fossila bränslen)? För det andra, för vilken tidshorisont bör ansvar uppskattas? Svaret på förra frågan gör en mycket viktig skillnad för många parter. Med de begränsningar som normativ teori föreslår blir frågan om tidshorisont mindre avgörande för de flesta parter.

"Resurser" beräknas vanligtvis som parternas förmåga att betala, angivet som deras BNP eller BNP per capita. Vi visar att ett vidare begrepp av resurser, som t.ex. inbegriper omställningsförmåga och naturresurs-

tillgångar, avsevärt kommer att påverka utfallet för många parter. Detta gäller särskilt naturresurstillgångar.

Befintlig forskning om strukturer för klimatpolitik har huvudsakligen fokuserat på varianter av top-down-strategier eller initiativ utanför UNFCCC (FN:s ramkonvention om klimatförändringar). Den begränsade litteratur som inriktar sig på bottom-up-strategier inom UNFCCC fokuserar på à la carte-metoder och åtagande- och översynssystem. Spektrumet av åtaganden är inte ett väldefinierat koncept utan kan betraktas som en typ av à la carte-metod där parterna kommer överens om en meny av typer av åtaganden som parterna kan välja från. Denna skiljer sig från ett åtagande- och översynssystem där man inte behöver enas om en meny av åtaganden i förväg.

Analysen av parternas ståndpunkter bygger på insända handlingar och uttalanden till ADP (Ad Hoc Working Group on the Durban Platform for Enhanced Action) samt intervjuer med några parter. Den visar att rättvisa är starkt förknippad med andra uttryck, däribland gemensamt men differentierat ansvar, Annex 1, historiskt ansvar, konventionens principer, rättvis tillgång till hållbar utveckling och många andra uttryck. Parternas val av uttryck följer till stor del vilken typ av avtal de förespråkar. Annex 1-parter exempelvis använder oftare uttrycket "fair" eller "fairness" än "equity" för "rättvisa", och uttrycket "nationella förhållanden" oftare än "gemensamt men differentierat ansvar." Motsatsen gäller för likasinnade utvecklingsländer.

Med utgångspunkt från genomgången av den akademiska litteraturen och vår analys av parternas ståndpunkter reflekterar vi över hur rättvisa kan förverkligas genom ett spektrum av minskningsåtaganden. Vi hävdar att en eventuellt möjlig och konstruktiv väg framåt är principen om ömsesidigt erkännande. Denna princip innebär att parter ska acceptera en uppsättning normer och en rad tolkningar av dessa normer som legitima (dvs. förenliga med gemensamt men differentierat ansvar och insatser efter förmåga). Parter ska också respektera en ömsesidighetsprincip som innebär att varje (tolkning av en) princip om rättvisa som man själv åberopar är legitim att åberopas av andra.

Under förutsättning att åtaganden kommer att fastställas nationellt kan rättviseindikatorer underlätta en självdifferentieringsprocess genom styrning av utformning av åtaganden och som en del av en förhandskontroll av tänkta åtaganden. Vid tillämpning av principen om ömsesidigt erkännande på denna specifika fråga föreslår vi en metod med en indikatormall som bygger på två kritiska komponenter: *transparens* och *öppen, kritisk granskning* av parternas utfästelser och motiveringar. Beslutet från COP 20 skulle uppmuntra parterna att rapportera

sina resultat via kvantifierade rättviseindikatorer tillsammans med sina planerade bidrag. Siffrorna ska presenteras så att de kan återges till tredje parter. Det vore lämpligt om det i beslutet anges en indikatormall med hjälp av vilken rapportering förväntas men som inte är obligatorisk. Genom att tydliggöra vägran att rapportera finns det ett incitament för parter att rapportera för att undvika att ge intryck av att de har anledningar att undanhålla information. Om det saknas en överenskommelse om en indikatormall bör det i beslutet formuleras några mer allmänna principer som gör det möjligt för parter att fritt välja indikatorer som härrör från dessa principer.

8. Appendix

Table A1: Correlation coefficient between all terms discussed in section 3

	Adaptation	Annex	Applicable to all	Bali	CBDR	Developed countries must lead	Dynamic	EASD	Equity	Fair	Historic	Loss and damage	Means of implementation	National circumstances	Poverty	Convention principles	RC	Rewrite or reinterpret or renegotiate	Right to develop	
Adaptation	1,00																			
Annex	0,90	1,00																		
Applicable to all	0,83	0,80	1,00																	
Bali	0,88	0,93	0,81	1,00																
CBDR	0,86	0,92	0,85	0,96	1,00															
Developed countries must lead	0,80	0,87	0,82	0,90	0,97	1,00														
Dynamic	0,19	0,04	0,37	0,00	0,01	-0,01	1,00													
EASD	0,89	0,93	0,81	0,99	0,97	0,91	0,03	1,00												
Equity	0,92	0,94	0,85	0,97	0,97	0,93	0,08	0,97	1,00											
Fair	0,48	0,32	0,43	0,23	0,18	0,09	0,71	0,24	0,32	1,00										
Historic	0,86	0,93	0,80	0,92	0,97	0,95	0,00	0,93	0,96	0,24	1,00									
Loss and damage	0,82	0,81	0,76	0,80	0,87	0,92	0,02	0,81	0,86	0,13	0,87	1,00								
Means of implementation	0,97	0,95	0,87	0,95	0,93	0,88	0,13	0,95	0,97	0,41	0,92	0,85	1,00							
National circumstances	0,43	0,34	0,57	0,30	0,34	0,29	0,42	0,32	0,37	0,54	0,34	0,25	0,38	1,00						
Poverty	0,91	0,90	0,82	0,92	0,96	0,93	0,12	0,93	0,97	0,34	0,96	0,88	0,93	0,36	1,00					
Convention principles	0,87	0,88	0,89	0,93	0,96	0,93	0,10	0,93	0,93	0,23	0,89	0,87	0,94	0,37	0,91	1,00				
RC	0,91	0,89	0,78	0,88	0,87	0,78	0,09	0,88	0,92	0,46	0,90	0,72	0,92	0,40	0,88	0,83	1,00			
Rewrite or reinterpret or renegotiate	0,84	0,89	0,82	0,94	0,98	0,96	0,06	0,95	0,96	0,18	0,94	0,86	0,90	0,33	0,95	0,92	0,82	1,00		
Right to develop	0,85	0,89	0,78	0,89	0,93	0,93	0,02	0,90	0,94	0,24	0,96	0,89	0,89	0,32	0,95	0,88	0,84	0,94	1,00	

Table A2: Number of references to different terms by Parties in different group

	Adaptation	Annex	Applicable to all	Bali	CBDR	Developed countries must lead	Dynamic	EASD	Equity	Fair	Historic	Loss and damage	Means of implementation	National circumstances	Poverty	Convention principles	RC	Rewrite or reinterpret or renegotiate	Right to develop
Annex I	68	25	36	0	8	0	34	0	15	42	0	2	45	42	6	0	7	2	0
EIF	24	3	9	1	30	1	12	0	15	5	1	1	20	21	0	0	33	0	0
AILAC	20	3	2	0	3	0	1	0	2	0	1	2	11	3	1	0	3	0	0
LDCs, AOSIS, Africa	56	33	11	10	18	4	4	3	31	21	12	7	51	13	8	2	16	2	3
LMDC	71	60	20	30	81	24	13	11	72	5	30	16	80	8	23	1	17	18	8
Other NAI	24	13	11	3	19	4	0	0	15	4	9	1	29	16	3	0	11	1	0
Sum NAI	171	109	44	43	121	32	18	14	120	30	52	26	171	40	35	3	47	21	11



Equity and spectrum of mitigation commitments in the 2015 agreement

To what extent and how can equity be operationalized in a spectrum of mitigation commitments? We approach this question through academic literature review and analysis of Parties' submissions and statements. We argue that a potentially feasible and constructive way forward is a mutual recognition approach. This approach implies that parties should accept a set of norms, and a range of interpretations of these norms, as legitimate. Parties should also respect a principle of reciprocity, which means that any (interpretation of a) principle of fairness invoked by oneself can legitimately be invoked also by others. We apply this approach to the issue of equity indicators, and propose a non-coercive template of indicators approach, building on two critical components: transparency and open, critical review of Parties' pledges and justifications thereof.

