

The North-South divide, equity and development – The need for trust-building for emergency mobilisation

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The impasse in the climate negotiations runs very deep, and is ultimately rooted in the nature and limits of the current development model. That said, there is a great deal that could be done to build momentum and prepare for the global emergency mobilisation that is needed. Up to this point, however, conflicts and tensions between the ‘North’ and the ‘South’ have held the negotiations in virtual stasis. These conflicts are longstanding, and will not be easily resolved. However, as the seriousness of the climate crisis becomes ever more obvious, it becomes equally obvious that a breakthrough is needed, that trust and cooperation are more important than ever.

Given the need to drive global carbon emissions to almost zero in a very short period of time, a number of pressing questions must be addressed. How should the remaining, shrinking, ‘atmospheric space’ – or ‘carbon budget’ – be divided among the world’s nations? How should the rich/poor divides between and within nations be taken into account as this is done? How should obligations be defined, and how can critical social and economic needs like poverty alleviation be taken into account when they are? In short, how ought the contested notions of equity and development be construed and what is their relevance for global climate politics?

These are not academic questions. At a time of mounting pressure to redefine the distinctions between ‘developed’ and ‘developing’ countries, the North seems to be either unable or unwilling to pursue this redefinition in a manner based on equity – or ‘equitable access to sustainable development’ in the delicately negotiated words of the Cancun

This article draws on previous work, notably “Discourses of the South” in the *Oxford Handbook of Climate Change and Society* (Kartha, 2011) and, *The Greenhouse Development Rights Framework: The right to development in a climate constrained world* (Baer et al., 2008).



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Agreements – one that would build trust and cooperation as stepping stones to a viable global regime. In this context, the old conflicts are unlikely to be left behind, and we're unlikely to find paths forward to the robust global cooperation that's necessary to drive an ambitious global transition.

This article discusses the North-South divide in climate politics, and how it affects the prospects for real and sufficient climate mobilisation. In particular, it discusses the abiding distrust that characterises the global climate discourse, and the deep resentment that both governments and civil society in the South feel towards the stances and behaviours of the Annex 1 countries. It also discusses the nature of equity in the climate regime, comments on equity as a gateway to increased ambition, presents an instructive, equity-based effort-sharing framework and, finally, offers a brief discussion of possible pathways forward.

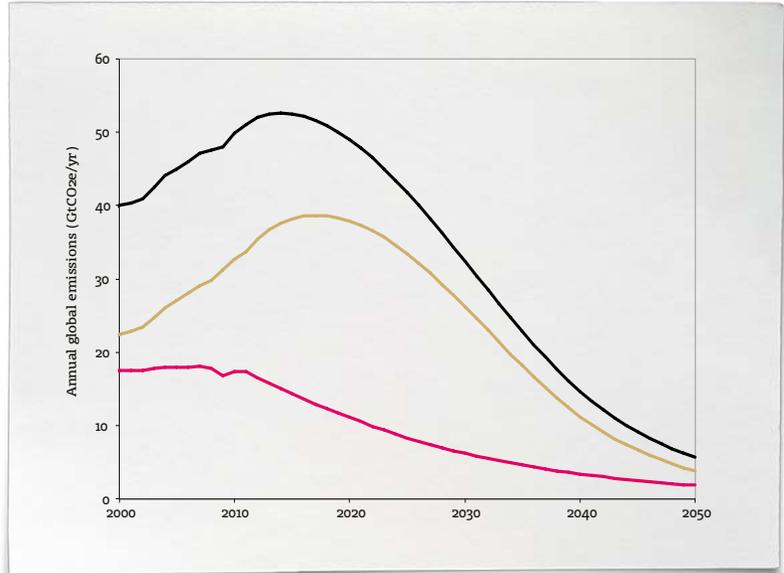
The right to development

Firmly embedded in Southern perspectives on the climate challenge is 'the right to development'. Indeed, if it can be said that the many Southern climate discourses share a core tenet, this would be it.

In both the North and the South, it is understood that climate disruption, if left unmitigated, is a challenge to fulfilment of the right to development. In the South, however, action against climate change is also felt to be a danger to this right. In many ways, it is this latter danger that is the more keenly felt.

Consider the following figure, which shows graphically the stark predicament facing the South. The figure shows a global emission pathway (black line) consistent with a reasonable probability of keeping warming below 2°C. (It assumes a budget of about 1,700 billion tonnes of carbon dioxide equivalent (GtCO₂e) for the first half of the 21st century, which still carries an unsettlingly high one-in-four chance that warming will exceed 2°C.) It also shows an Annex 1 emission pathway (red), with the Annex 1 countries undertaking ambitious mitigation actions, sufficient to drive emissions down by 40 per cent by 2020 and 90 per cent by 2050 (relative to 1990 emission levels). Having stipulated a global trajectory and an Annex 1 trajectory, simple subtraction reveals the carbon budget (shown in yellow) that would remain to support the South's development. Despite the apparent stringency of the Annex 1 trajectory, the atmospheric space remaining for developing countries would be alarmingly small. Developing country emissions would have to peak only a few years later than those in the North – still before 2020 – and then decline by nearly 90 per cent by 2050. And this would have to take

Figure 1: The South's dilemma. The black line shows a 2°C emergency pathway, in which global greenhouse gas emissions peak by 2015 and fall to about 90 per cent below current levels by 2050. The red line shows Annex 1 emissions declining to 90 per cent below 1990 levels in 2050. The yellow line shows, by subtraction, the emissions space that would remain for the developing countries. Obviously, a later peaking year means steeper subsequent reductions and lower emissions levels by 2050 in order to stay within the same carbon budget and thus the same probability of keeping within 2°C.



place while most of the South's citizens are still struggling to maintain or improve their livelihoods and raise their material living standards.

It's precisely this last point – one that's very poorly appreciated in the North – that animates Southern concerns about equity in the climate regime. The brutal bottom line here is that the only proven routes to 'development' – to water and food security, improved health care and education, secure livelihoods – involve expanding access to energy services, and, consequently, a seemingly inevitable increase in fossil fuel use and thus carbon emissions. Indeed, in the absence of climate constraints, the South's citizens would quite naturally seek to increase the use of conventional energy resources to fuel the expansion of their infrastructure and the improvement of the material well-being of their citizens. As numerous studies and reports underscore over and over again, access to energy services is fundamental to the fulfilment of any development goals.¹

None of this is to suggest that Southern discourses of 'development' are not fraught. Quite the contrary – the South, like the North, is dominated by proponents of the view that development is more or less equivalent to macroeconomic growth and material consumption (these include most states, and the political and economic elites with whom they are generally aligned). All else being equal, they would be altogether content if the South were to follow a development path that mirrored the North's. But, obviously, there also exist many different, alternative voices and views of 'development'. These range from indigenous and other grassroots movements to urban citizens to intellectuals

¹ See for example UNDP/WHO (2009).



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who raise issues of distributive justice and critique the fixation on development-as-usual to the exclusion of broader and more sustainable approaches to well-being and empowerment. Many assert that just and sustainable development is entirely inconsistent with capitalism and the current economic order, and that a *completely different* understanding of ‘development’ is needed (People’s Agreement, 2010). Nevertheless, and notwithstanding these different conceptions of ‘development’, it is difficult if not impossible to identify a vision in which lives improve significantly, especially for the impoverished majorities, that does not entail dramatic expansion of access to energy services.

Given all this, it is not at all surprising that, while the people of the South are deeply concerned about climate disruption, they are also profoundly worried about the imposition of an unfair climate regime that unfairly hobbles their development prospects.

The bottom line here, one that cannot be overstated, is that in the South, climate action can never be divorced from the problem of development. Nor is this in any way surprising. The development crisis is not merely a challenge but an intractable crisis, badly in need of greater resources and political attention. To make matters worse, the impacts of climate change are now disproportionately and directly affecting the world’s poor, not as some abstract future threat, but as a tangible force undermining food security, water security and livelihoods. The climate-related cataclysms of the last few years have, moreover, made this entirely obvious. And as the political atmosphere of the post-financial-crisis world has settled into extremely worrying patterns, with conflict for markets and resources taking clear priority over underfunded initiatives for Millennium Development Goals, the South has little reason to assume that the North would not willingly allow the exigencies of the climate crisis to eclipse the poverty crisis.

Thankfully, the conflict between climate protection and the right to development is not irreconcilable. After all, clean energy alternatives do exist – but the point here is that they still, for the most part, exist only as potentialities, as ‘alternatives’ that haven’t been seriously pursued. The North has not led the world in developing them, and instead continues to lead the world in pursuing measures that inhibit their development and further entrench conventional options (through, for example, subsidies to fossil fuel exploitation). It’s not surprising that the South is rushing headlong into a fossil future. The alternatives are simply not yet available at scale, and are often too costly for the poor.

With respect to the negotiations and the politics surrounding them, the key point is that sustainable development is not merely an ethical priority. It is also, fundamentally, a non-negotiable foundation of greenhouse-age geopolitical realism. Unless the global climate deal explicitly preserves viable development paths for the countries that were left behind during the great fossil expansion, they may quite justifiably conclude that they have more to lose than to gain from any truly robust engagement with a global climate regime that, after all, must significantly curtail access to the energy sources and technologies that historically enabled those in the industrialised world to realise their development.

Equality in access to the global commons

A second persistent element of Southern discourses is, not surprisingly, equality. It has been framed in various ways, perhaps none more influential than the seminal (1990) publication by Anil Agarwal and Sunita Narain, *Global Warming in an Unequal World*, which pioneered the argument for equal per-capita emission rights. The global climate system is, after all, a public commons, as is the atmosphere into which our emissions flow. The privilege of using the finite atmospheric commons, they argued, must be shared equally among all people.

One can measure the atmospheric commons in terms of its total capacity, over time, to absorb our carbon dioxide emissions – starting from the dawn of the industrial age (say 1850, when fossil fuel burning began in earnest) and ending in, say, the mid-21st century (by which time the fossil era must be essentially ending). Based on a path that maintains a reasonable chance of holding the warming below 2°C (the same path used in Figure 1), the total available global emissions budget, over this entire period, provides for somewhat less than 2,700 gigatonnes of fossil-fuel carbon dioxide (GtCO₂). When Agarwal and Narain made their argument back in 1991, less than one-third of the atmospheric commons had already been appropriated. As two-thirds remained, they could, and did, propose that equally shared access to the remaining space could reasonably be advocated as a fair enough way to share the overall atmospheric commons.

Over the intervening years, the depletion of the atmospheric commons has not slowed, as Agarwal and Narain had optimistically proposed; rather, it has accelerated. It took nearly 150 years to consume less than one-third of the atmospheric commons, but the next third will have been consumed in barely 30 years. If these past two decades had been spent weaning our societies off fossil fuels, all would be different. But they were not. We remain as dependent on fossil fuels as we were when Agarwal and Narain wrote their seminal piece advocating equal access to the atmospheric commons. Yet, Annex 1 per capita emissions remain more than twice

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non-Annex 1 emissions. Moreover, the urgency of the climate problem has become only more firmly supported by the scientific evidence, suggesting that the overall carbon budget is smaller than was hoped. It was thought until recently that climate protection could be achieved by stabilising temperatures at 2°C and atmospheric carbon dioxide concentrations in the 450–500 ppm range (see, for example, Stern, 2006). Now, we realise that we have already imposed ‘dangerous anthropogenic interference with the climate system’, and that we must keep further warming as low as possible. Today, the need for target concentrations below 350 ppm is increasingly cited by scientists (Hansen, 2008; Pachauri, 2009), Parties to the UN Framework Convention on Climate Change (UNFCCC) (AOSIS/LDCs, 2009), and civil society (350.org, WCC, 2009). It’s not only that we’re consuming the remaining atmospheric space, it’s that our previous estimates of its size were over-optimistic.

For these reasons, many in the South are now arguing that Agarwal and Narain’s notion of equality is no longer fair enough. In its place has arisen the notion that equality means an equal sharing of the *entire cumulative atmospheric commons*, both the remaining portion (as Agarwal and Narain proposed) and the portion that has already been consumed. Such an approach, of course, draws attention to past and ongoing over-consumption of the industrialised nations. From this vantage point, the North has consumed atmospheric space at a per-capita level that is 10 times greater than that in the South, and has thus accrued a large and still growing ‘carbon debt’. (See the further discussion of carbon debt by Matthew Stilwell in this volume.)



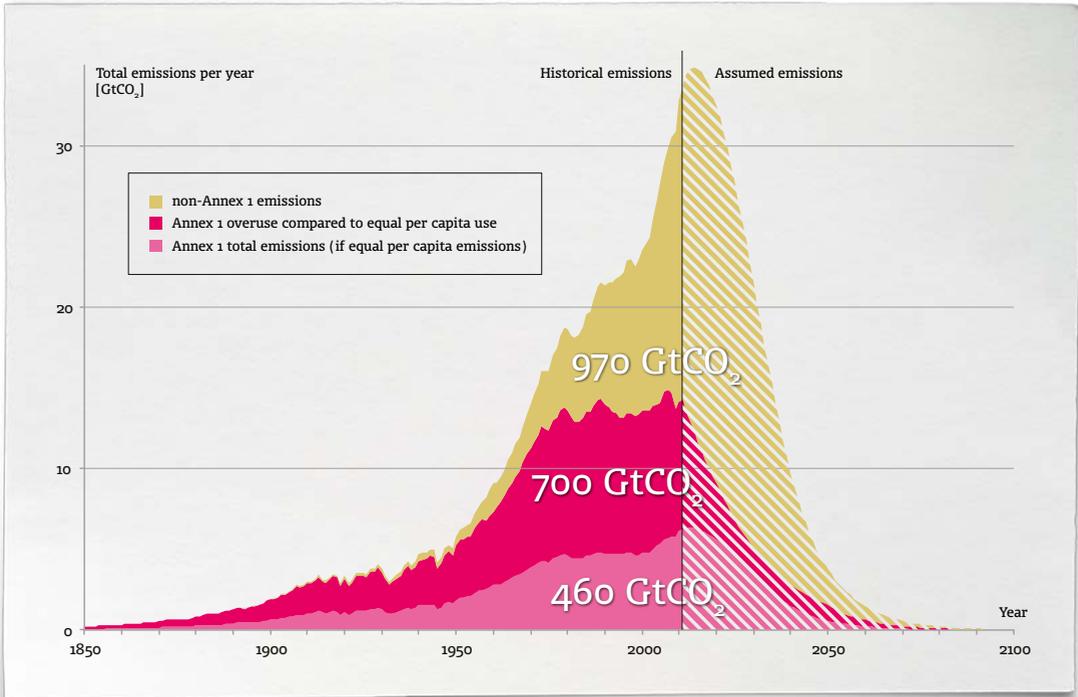


Figure 2 shows Annex 1 overuse of atmospheric space (red area) up to the present day and into the future compared to an equal per capita sharing of the global carbon budget. Even under ambitious Northern emissions cuts (40 per cent by 2020 and 90 per cent by 2050), large enough to leave the majority of the remaining emission budget to the South, total Northern overuse continues to accumulate all the way to 2050.²

Figure 2 illustrates the extent of this overuse. Assuming the same rapid reduction in emissions shown in Figure 1, the pink area in Figure 2 shows what the North would have emitted if, throughout the 250-year period shown, it had kept within its equal per-capita share of global emissions. In actual fact, the North has over time emitted far more than its per-capita share, as is shown here by the pink area plus the red area. Conversely, the South’s actual emissions (the yellow area) are much smaller than they would be with equal per-capita shares (the yellow area plus the red area). The red area thus shows us how much of the atmospheric commons the North has taken – and would continue to take – from the South in a world where each resident had an equal share of the global budget (about 700 GtCO₂e). It is a significant amount – Northern excess consumption is more than two-thirds of total Southern consumption. And this is all true even though there is only one resident of the North for every five in the South.

2 Figure 2 historical emissions are compiled from data from the Carbon Dioxide Information Analysis Center (CDIAC, 2009) of the US Department of Energy, which compiles for all nations’ emissions of CO₂ from all fossil fuel combustion, as well as cement production and natural gas flaring, which together comprise the majority of greenhouse gas emissions. If CO₂ from land-use change and non-CO₂ gases are included (as they are in Figure 1), the budget is correspondingly larger. The emissions budget here is defined to be consistent with the official position of the AOSIS Ministers, which calls for a peak in global emissions by 2015 and reductions of more than 85% by 2050 (relative to 1990 emission levels). The calculation of areas with equal per capita shares (pink for Annex 1 countries and red + yellow for Non-annex 1 countries) is based on the relative share of global population in each year, which varies over the 250-year span.

It is for this reason, ultimately, that the UNFCCC acknowledges the historic emissions of the developed countries, and that Southern climate diplomats and civil society have drawn so much attention to the responsibility that they have thus accrued. Which is not to say that the North should now hasten to deploy massive geoengineering schemes to extract all its excess carbon dioxide back from the atmosphere. Nor is it simply to demand reparations for a historical injustice, which would only further entrench North-South antagonisms. The intent of the attention, rather, is to underscore the foundational reality of the current situation: the North has gained its wealth by depleting a common resource that is therefore no longer available to others. And, critically, a proper accounting of historical emissions provides a further justification for, and perhaps a means of quantifying,³ the North's obligation to provide the technological and financial resources that the South needs to survive and develop within the limited remaining atmospheric space. The salient point is that, by developing as if in an open world, the wealthy gained the financial and technological wherewithal to drive the entire global energy transition.

An effort-sharing approach: Greenhouse Development Rights

Keeping the imperatives of the 'right to development' and 'equal access to the global commons' in mind, what could a fair and yet stringent future international climate regime look like? The establishment of a principled, transparent framework for determining different countries' fair share represents an obvious and critical challenge to the global effort to address climate change.

In the lead-up to the Copenhagen climate summit, we as a small group of researchers⁴ developed the Greenhouse Development Rights (GDRs) framework. The framework, which gained considerable attention and traction around the Copenhagen summit, presents one possible 'effort-sharing' approach in which *responsibility* (in terms of emissions) and *capacity* (in terms of ability to afford mitigation and adaptation measures), are defined and quantified in a manner that seeks explicitly to safeguard a right to development and to account for the vast disparities found not only between but also *within* countries. These measures are then used to calculate a country's fair share of the efforts needed to combat climate change.

³ Several analysts have used an equal per capita access to the full atmospheric space as a basis for quantifying obligations under a global climate regime: Bode (2003), Pan (2009), Kanitkar (2010).

⁴ Sivan Kartha and Eric Kemp-Benedict of the Stockholm Environment Institute, and Tom Athanasiou and Paul Baer of the independent think tank EcoEquity.



There needs to be a period of genuine trust-building between North and South, and nothing has yet occurred to suggest we have entered such a period. Trust-building was the biggest task for the Copenhagen summit, and unfortunately it remains so.

While we are not in any way claiming GDRs to be the only interesting *fair-shares reference framework*, its structure and its results may helpfully illuminate the nature of climate equity. This is particularly useful now, given the post-Durban drive by Annex 1 countries to redefine equity in the global climate regime by eliminating the ‘firewall’ between Annex 1 and non-Annex 1 countries. Whatever the motivation for this drive – a genuine desire to make the regime more equitable, a pragmatic attempt to break the negotiating deadlock, a cynical intention to dodge responsibilities and shift more of the climate burden to the South – the GDRs framework can usefully clarify the situation.

While widely discussed, the GDRs framework has not been adopted by the UNFCCC, nor has any other principle-based framework, and this for obvious reasons. It is simply not possible to move into such a principled effort-sharing framework in one step, given the contested global climate politics and lack of trust that continue to dominate the negotiations. Following a summary of the key features of the GDR framework, we will therefore review our arguments about the path to an ambitious and fair effort-sharing framework, be it something akin to GDRs or something entirely different. Essentially, as many have long maintained, there needs to be a period of genuine trust-building between North and South, and nothing has yet occurred to suggest we have entered such a period. Trust-building was the biggest task for the Copenhagen summit, and unfortunately it remains so.

The ‘development threshold’

The GDRs framework is designed to protect the right to sustainable human development, even as it drives rapid global emission reductions. It thus proceeds in the only viable way, by operationalising the official principles of the UNFCCC, according to which states commit themselves to ‘protect the climate system...on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities’. This oft-quoted principle of ‘CBDR’ is itself a reference to the more explicit text of the 1992 Rio Declaration: ‘In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit to sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.’

As a first step, the GDRs framework codifies the right to development by way of a ‘development threshold’ – a level of welfare below which people are not expected to share the costs of the climate transition. This

threshold is emphatically not an ‘extreme poverty’ line, which is typically defined to be so low (US\$1 or US\$2 a day) as to be more properly called a ‘destitution line’. Rather, it is set to be higher than the ‘global poverty line,’ to reflect a level of welfare that is beyond basic needs but well short of today’s levels of ‘affluent’ consumption.

People below this threshold are taken as having development as their proper priority. As they struggle for better lives, they are not similarly obligated to labour to keep society as a whole within its sharply limited global carbon budget. In any event, they have little responsibility for the climate problem (the approximately 70 per cent of the population that lives below the development threshold is responsible for only about 15 per cent of all cumulative emissions) and little capacity to invest in solving it. People above the threshold, on the other hand, are taken as having realised their right to development and as bearing the responsibility to preserve that right for others. They must, as their incomes rise, gradually assume a greater fraction of the costs of curbing the emissions associated with their own consumption, as well as the costs of ensuring that, as those below the threshold rise towards and then above it, they are able to do so along sustainable, low-emission paths. Moreover, and critically, these obligations are taken to belong to all those above the development threshold, whether they happen to live in the North or in the South.

The level where a development threshold would best be set is clearly a matter for debate. We argue that it should be at least modestly higher than a global poverty line, which is itself about US\$18 per day per person (PPP adjusted, US\$2010). This figure derives from an empirical analysis of the income levels at which the classic plagues of poverty – malnutrition, high infant mortality, low educational attainment, high relative food expenditures – begin to disappear, or at least become exceptions to the rule. So, taking a figure of 25 per cent above this global poverty line, we do our ‘indicative’ calculations relative to a development threshold of US\$23 per person per day (US\$8,500 per person per year)⁵. This income also reflects the level at which the Southern ‘middle class’ begins to emerge.

National obligations and the ‘Responsibility Capacity Index’

Once a development threshold has been defined, logical and usefully precise (though still rough) definitions of capacity and responsibility follow, and these can then be used to estimate the fraction of the

⁵ Note that these figures are about 13 per cent higher than they were in previous GDRs publications. This is due to conversion to the 2010 base year.

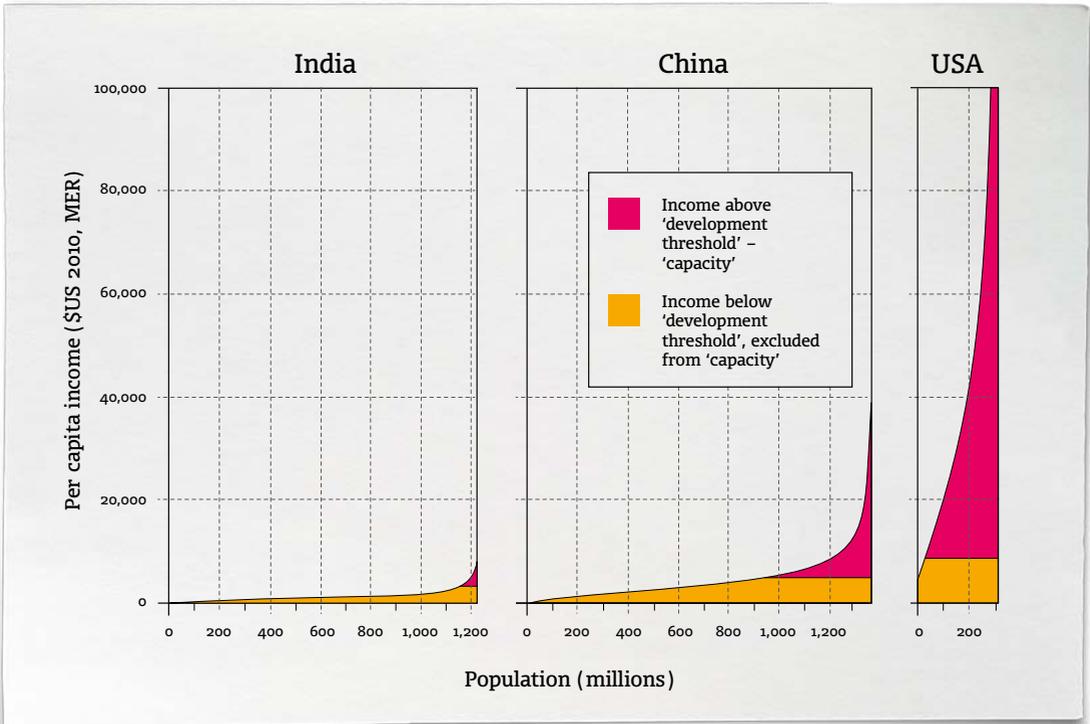


Figure 3: In the GDRs framework, a country's aggregate 'capacity to act' is defined as the sum of all individual incomes, excluding all income below the 'development threshold' (US\$23 per person per day, US\$8500 per person per year in PPP terms). In this figure it is clear that all countries have middle classes and elites with incomes above this threshold (red areas), but the share of total national income that goes to these fractions of the population differs widely between countries. While in the US almost all of the population contributes to national 'capacity' to act, in India only a small proportion of people do so.⁶

global climate burden that should fall to any given country. This is true, moreover, however large that global climate burden may be, and however it is conceived: an obligation to invest in a low-carbon transition, a responsibility to support resilience-building among vulnerable communities, a liability to compensate for climate damages.

Capacity – by which we mean income not demanded by the necessities of daily life, and thus available to be 'taxed' for investment in climate mitigation and adaptation – can be straightforwardly interpreted as total income, excluding income below the development threshold. This is illustrated in Figure 3, which shows the development threshold (a horizontal line at US\$8,500, PPP adjusted) as it crosses the national income distribution lines and splits their populations into a poorer portion (lightly shaded, to the lower left) and a wealthier portion (darkly shaded, to the upper right). This crossing makes it easy to compare both the heights of wealth and the depths of poverty in different countries,

⁶ Because the development threshold is calculated in Purchasing Power Parity (PPP) dollars rather than Market Exchange Rate (MER) dollars, the adjusted threshold is different in each country. Chart widths are scaled to population, so the capacity areas are correctly sized in relation to each other in terms of MER GDP. These numbers are based on projected 2010 data.

and also graphically conveys each country's capacity (the darkly shaded area), which we define as the income that the wealthier portion of the population has above the development threshold.

A nation's aggregate capacity, then, is defined as the sum of all individual income, excluding income below the threshold. Responsibility, by which we mean contribution to the climate problem, is similarly defined as cumulative emissions since the 'responsibility start date' (which we default to 1990⁷), excluding emissions that correspond to consumption below the development threshold. Such emissions, like income below the development threshold, do not contribute to a country's obligation to act to address the climate problem.

Thus, both capacity and responsibility are defined in individual terms, and in a manner that takes explicit account of the unequal distribution of income within countries. This is a critical and long-overdue move, because the usual practice of relying on national per-capita averages fails to capture either the true depth of a country's developmental need or the actual extent of its wealth. If one looks

7 Our decision to assign the 'responsibility start date' a default value of 1990 does not have the effect of 'writing off' wealthy-world obligations that derive from earlier emissions. Rather, our choice of 1990 reflects our considered belief that obligations rooted in long-past actions are better captured as present-day capacities, which in the GDRs framework are combined with responsibilities to determine overall national obligations.

For example, the emissions that were generated in the US during the 19th century construction of its national railroads are embodied in these railroads themselves (which continue to exist, in improved form) and in the wealth (and thus capacity) that they have generated, and continue to generate. Note that these capacities are present-day phenomena, and thus are not subject to non-trivial objections (e.g. 'people didn't know they were doing anything wrong') that can be levied against responsibility-based calculations that begin far in the past.

The responsibility start date is only one of the key tunable parameters in the GDRs framework. Its default value was carefully chosen, but is certainly not unimpeachable. Other key tunable parameters are the 'development threshold,' and the weighting of capacity relative to responsibility, and the 'emissions embodied in trade' parameter, which in the standard case is set to take the typical production-side view of embodied emissions (assigning China, for example, all responsibility for the emissions embodied in the goods it produces and then exports to Europe) rather than, say, opting for consumption-side accounting (in which the nations that consume China's exports would take responsibility for the emissions that are embodied in them), or some mix of the two approaches. And there are other tunable parameters as well.

In general, we have tried to choose values for the key parameters that seem balanced and ethically justifiable. Still, it's easy to make an ethically credible case for alternative values that would result in larger obligations for wealthy countries, and hard to make such a case for shifting obligations to developing countries. In particular, an earlier historic start date, a lower development threshold, and the weighting of capacity higher than responsibility are all justifiable changes that would increase the obligations of wealthy countries, relative to our standard case. To see the entire set of tunable parameters, and to experiment with alternative settings, see the GDRs "online calculator" at <http://gdrights.org/calculator/>.

only as far as a national average, then the richer, higher-emitting minority lies hidden behind the poorer, lower-emitting majority. Paradoxically, that same 'hidden' richer minority itself obscures the plight of the poor, as its overall significance is magnified by the disproportionate media attention it attracts. Only an objective look at the cold data can sort fact from perception and equitably account for a nation's actual responsibility and capacity.

These measures of capacity and responsibility can then be straightforwardly combined into a single indicator of obligation, in a 'Responsibility Capacity Index' (RCI). This calculation has been done for all Parties to the UNFCCC, based on country-specific income, income distribution and emissions data.⁸ The precise numerical results depend, of course, on the particular values chosen for key parameters, such as the year in which national emissions begin to count towards responsibility (we use 1990 in the default, but a different start date such as 1950 or 1750 can certainly be defended) and, especially, the choice of development threshold. The results are also dynamic, in that they change over time – as the following table shows, the global balance of obligation in 2020, or 2030, can be expected to differ (perhaps significantly) from that which exists today, as some economies grow more rapidly than others.

What's key in all this is that the GDRs framework lays out a straightforward operationalisation of the UN's official differentiation principles, and that it does so in a way that protects the poor from the burdens of climate mobilisation. Beyond that, the values of specific parameters can be easily adjusted and should certainly be debated; all of them, of course, would have to be negotiated.

Still, for all that, our indicative calculations are chosen to be instructive. The 2010 numbers, for example, show that the United States, with its exceptionally large share of the global population of people with incomes above – and generally far above – the US\$8,500 per year development threshold (capacity), as well as the world's largest share of cumulative emissions since 1990 (responsibility), is the nation with the largest share (29 per cent) of the global RCI. The European Union follows, with a 26 per cent share; China, despite being relatively poor, has a 5 per cent global share; India, also large but much poorer, falls far behind China with a mere 0.3 per cent share of the global RCI in 2010.

8 Additional documentation of data sources and calculations are available on the Greenhouse Development Rights website, <http://gdrights.org>.

	Population (% of global)	Income (US\$ MER)	Income (US\$ PPP / capita)	Capacity (% of global)	Respon- sibility (% of global)	RCI (% of global)	RCI (% of global)	RCI (% of global)
	2010					2020	2030	
United States	4.6	45,922	45,922	29.7	29.2	29.4	26.3	21.8
EU 27	7.3	33,040	32,101	30.9	21.2	26.0	22.2	17.6
EU 15	5.8	38,419	35,407	29.1	17.8	23.4	19.9	15.6
EU 12+	1.5	12,122	19,243	1.8	3.4	2.6	2.3	2.1
Japan	1.8	42,985	33,874	10.2	5.0	7.6	6.3	4.7
Russia	2.0	10,543	20,036	2.3	9.4	5.8	5.4	5.0
China	19.6	4,542	7,794	4.8	5.4	5.1	12.2	21.6
India	17.6	1,422	3,454	0.2	0.3	0.3	0.9	2.8
Brazil	2.8	10,684	11,183	2.6	3.1	2.8	2.8	2.7
South Africa	0.7	7,203	10,465	0.4	1.3	0.9	0.9	0.9
High income	15.1	40,317	38,970	81.9	65.5	73.7	65.5	53.9
LDCs	11.4	767	1,585	0.1	0.5	0.3	0.3	0.3
World	100.0	9,088	11,086	100	100	100	100	100

Table 1: Percentage shares of total global population, GDP, capacity, responsibility and RCI for selected countries and groups of countries based on projected emissions and income for 2010, 2020 and 2030. (High-income country categories are based on World Bank definitions as of 2010. Projections based on McKinsey and Company (2010) and Sheehan et al. (2008).

As the table above shows, the global balance of obligation changes over time, as differing rates of national growth change the global income structure. The results are most evident in the projected change in China's share of the total RCI, which – reflecting its rapid growth and the increasing number of Chinese people who are projected to earn incomes above the development threshold – is likely to quadruple in the two decades from 2010 to 2030 (from 5 per cent in 2010 to 12 per cent in 2020 to 21 per cent in 2030). India would increase its RCI almost tenfold but in absolute terms still only account for 2.8 per cent of the global share in 2030. The RCI of the US and the EU would gradually decrease but still remain very significant at 22 and 18 per cent respectively by 2030.

These figures, again, illustrate the application of the GDRs framework by way of a particular choice of key parameters. Note that also, in this indicative calculation, we have made the rather conservative assumption that all income (and all emissions) above the development threshold count equally towards the calculation of an individual's RCI. This amounts to a 'flat tax' on capacity and responsibility. However, it might be more consistent with widely shared notions of fairness for the RCI to be defined in manner that is more 'progressive' with respect to income. That is, an individual's millionth dollar of income might contribute more to their RCI than their ten-thousandth dollar of income, as is the case with tax schedules virtually worldwide. A more progres-

sive formulation of RCI would shift more of the global obligation to wealthy individuals and wealthy countries.

However, regardless of the particulars of any given quantification, the GDRs framework – or any dynamic approach to differentiating national obligations that is designed to ensure a meaningful right to development – would be a real game changer. For one thing, it would allow us objectively and quantitatively to estimate national obligations to bear the efforts of climate protection (adaptation as well as mitigation), to meaningfully compare obligations even between wealthy and developing countries, and to do so even as countries develop and the structure of the global economy evolves, and without being forced to renegotiate the membership of any given ‘Annexes.’ Using the terminology of the Bali Road Map, it would allow us to gauge the ‘comparability of effort’ across countries.

Admittedly, this will be seen as a dangerous idea. It betokens a world beyond the Annex I/non-Annex I divide, in which debates about, say, whether Singapore or South Korea should ‘graduate to Annex I’ would no longer be relevant. Both would simply be countries that, along with all other countries, had obligations of an appropriate scale, as specified by their RCIs. But it is also a liberating idea. It defines and quantifies national obligations in a way that explicitly safeguards a meaningful right to development. It accepts the developing-country negotiators’ claim that they can only accept a regime that protects development, and just as importantly it tests the willingness of the industrialised countries to accept such a regime.

Action, trust-building and differentiation

The GDRs framework, we believe, is enough to give us a sense of destination. Please be clear about this claim. We do not presume that our particular quantitative results – relying as they do on the limited data sets now available, and the assumptions we consider most defensible – are in any sense the last word. But we do argue that a principle-based framework for quantified differentiation is unavoidable, and that such a framework will be needed if we are to avert a protracted series of more or less ad hoc agreements that assign countries semi-arbitrary and inadequate obligations that ultimately fail ever to really get out of the impasse that prevents global emergency mobilisation.

But a sense of the destination is not enough. We also need a way forward. For while ad hoc, tactical incrementalism would be a losing strategy, incrementalism of some sort is unavoidable. The divide between today’s temporising and tomorrow’s mobilisation will not be bridged in a single

step. The climate negotiations problem is, in some essential sense, a sequencing problem. The question, simply put, is what comes next.

What we know is that history follows a complex and varied course. Obligations, capacities and responsibilities cannot be fully captured by any top-down, principle-based scheme such as GDRs, which is ultimately and inevitably ahistorical. Given this, it is no surprise that the analysis above understates the politics that got us to this impasse, and the political accommodations that will be required to get us beyond it. It neglects, in particular, the trust deficit that plagues North-South relations – a deficit so large and deep-rooted that it effectively rules out the simplest and most attractive way forward, in which all countries – in the North and in the South and in between – would straightforwardly commit to carrying their ‘fair share’ of the global climate burden.

But that, again, is only our destination. The question is how the North and the South could together find a way forward, one that builds immediate ambition, momentum and trust, one that opens the doors to global emergency mobilisation before it is too late.

The challenges are daunting on both sides.

How, in the North, could anything like this ever be possible? How, given the madness that has come upon the wealthy countries, one in which ideologues and elites have cast a mythology of ‘debt crisis’ and ‘bitter medicine’ and ‘austerity’ over all claims to the commonwealth, could the North ever accept the necessity of large-scale financial and technological investments in a climate mobilisation, including massive support to the South? How, given the United States’ refusal of ‘top down’ obligations and its insistence on ‘flexibility,’ could any sort of principle- and indicator-driven framework come to guide the negotiations? How, given the North’s fear of a rising Asia, and its stubborn insistence that the South is both unwilling and unable to restrain its own emissions, will the North ever come to see the implacability of the logic – the fear of a foreclosed future – which most deeply animates the South’s negotiators? And how, given that the North’s blindness on these points is an almost perfect, ready-made excuse for its own continued free-riding, can there be any path to rapidly increased global ambition that does not begin in the North?

One brutal truth must be very clearly stated. There is very little reason to believe that the international technological and financial flows of the necessary scale would ever be forthcoming in any regime in which only countries of the North have quantified commitments. The well-off citizens of the North, faced with demanding obligations, will demand



Fossil fuels have driven development to this point, and the countries of the South are not about to sign away their right to follow along this, the only proven, pathway, not without the North's demonstrated willingness to help chart out, and indeed pioneer, an alternative course.

in turn that their well-off Southern counterparts (and they do exist) face parallel, 'fair share' efforts of their own, and they will make such parallelism a condition of their own full participation in any climate stabilisation regime. This is, if not a fact, a hypothesis of such obvious and powerful resonance that it can almost be taken as a fundamental axiom of global climate politics.

Moreover, and critically, the South is – at least at the moment – unlikely to accept such parallelism, even if national obligations are defined in a rigorously principle-based way that genuinely safeguards its right to development. This may change, but at the moment it can be taken as axiomatic that the distrust that pervades the developing world will not easily yield to even the crushing necessities of the climate crisis. For one thing, the South's distrust is not groundless. It is rooted in the North's repeated failure to meet its UNFCCC and Kyoto commitments to provide technological and financial support for both mitigation and adaptation, and beyond these, its protracted history of self-interested and even bad-faith negotiations in all sorts of other multilateral regimes (the trade and intellectual property negotiations come particularly to mind). The South fears, in particular, that if it were to accept its fair share of the climate burden, the North's negotiators would simply and immediately take unfair advantage of its flexibility, holding it hostage to its newly made commitments while continuing to dodge their own. This is simply too big a risk to expect the South's leaders to take easily. Fossil fuels have driven development to this point, and the countries of the South are not about to sign away their right to follow along this, the only proven, pathway, not without the North's demonstrated willingness to help chart out, and indeed pioneer, an alternative course.

A trust-building period

We have little choice but to think in terms of an interim period in which (1) mitigation action is maximised while, simultaneously, (2) the foundation of trust on which broader cooperation can be based is hammered into place. One can call this a 'trust-building' period, though the term should not be taken to imply any further delay in concrete action. So, to be absolutely clear, action and preparation for further action are the only viable foundations for meaningful trust-building, and in any case this transition period should be as short as we can possibly manage.

What the North must do to build trust

The trust we need won't come easily, and both North and South will have to take bold steps before it comes at all. The North, in particular, must demonstrate that it honestly seeks to act, at scale, in a global effort to protect the climate. Under the present circumstances (the US, Europe

and Japan are all in crisis, and the US in particular is besieged by a far-right radicalism that is deliberately, strategically contemptuous of science) this is not going to be easy. Nevertheless, the North's leaders must find ways to demonstrate their readiness to reduce their domestic emissions, and to otherwise 'take the lead'. After having entirely neglected its Rio promise to stabilise emissions at 1990 levels by the year 2000, and after a long decade of temporising and half-efforts in the face of its Kyoto commitments, the North will have to step up its efforts before it can reasonably expect others to do the same. In particular, it must demonstrate a willingness to go well beyond no-regrets abatement measures, and to ramp up mitigation efforts at a rate that will converge rapidly on a genuine emergency emission stabilisation pathway.

Second, international technological and financial support is essential. There's much to be said here, and there are many options, including a variety of 'creative finance' mechanisms from bunker and aviation taxes to financial transactions taxes to subsidy reform. In all these cases, equity is a major issue; in all of them, pragmatism is in order. Again, the citizens of the North must be honest about the scale of the necessary effort. For one thing, the Clean Development Mechanism (CDM) is not even remotely sufficient or appropriate in this regard, and further carries its own fundamental problems. (The CDM is discussed elsewhere in this volume.) Nor will any degree of creativity entirely obviate the need for direct government-to-government transfers. The overall challenge is simply too great. Investments in renewable energy and reducing emissions from deforestation and land degradation, flexibility on climate-related intellectual property rights (IPRs), institutional capacity-building and policy support are all desperately needed. Through such measures, the North must demonstrate – by unambiguous and practical action – that it will in fact support Southern countries as they launch and accelerate their own transitions to low-carbon development, and it must do so in a manner that can be monitored, reported and verified.

Third, the North will have to deliver – and in more than token ways – on its lingering promises from Rio (especially Article 4 of the UNFCCC) to provide developing countries with adaptation funding that is both 'new and additional' and 'predictable and adequate'. The North has almost entirely ignored these commitments – and in some cases actively obstructed their fulfilment – and this has been a source of well-justified bitterness on the part of the South, a bitterness which has only grown as the need for active, ambitiously scaled adaptation efforts has become more evident. If the North fails to start mobilising resources to support the most urgent of the South's adaptation needs, it will be an extremely dark portent, an almost certain sign of failure to come.

Fourth, the North must help to create a more transparent and less procedurally unequal negotiating environment. The South's reluctance to negotiate more proactively – assuming instead the defensive posture of indefinitely waiting for the North to 'take the lead' – is in no small measure due to the fear that, were it to engage seriously, it would then be outmanoeuvred or, even worse, defeated with strong-arm tactics. The priority given to the maintenance of solidarity in the G77/China, despite the obvious divergence of interests, is ample evidence of this fear. Thus, the North must help to launch a new era of good faith negotiations, for example by investing to help the negotiating teams of the South build their analytical and negotiating capacity. And beyond this, Northern negotiators must realise that the US's fixation on ad-hoc, bottom-up models of 'flexibility' is almost sure to provoke mistrust, and they must isolate rather than support the US's efforts in this regard. As we move into the post-Durban negotiations, principle-based approaches to 'objective' indicators of capacity and responsibility will be essential if we are to have any real chance of moving into a new period of global cooperation.

Finally, and as a matter of realism, the North must realise that the South cannot afford to see the climate negotiations in a vacuum. This, actually, is an opportunity – if ever the North genuinely seeks to cut quickly through Southern cynicism, it can always supplement its climate-related overtures with action in linked realms that are traditionally seen as 'non-climate-related'. Long-standing Southern concerns – such as those related to trade barriers and subsidies, or odious foreign debt – would be good places to look for dramatic unilateral measures by which the North could quickly build trust.

What the South must do to build trust

The South, too, must act dramatically to overcome the trust deficit. This is the case not only in affluent Southern countries like Singapore and South Korea, but also, and particularly, in China, which – though suffering a relatively low average per-capita income – nevertheless has, and is known to have, a significant capacity to act. Such countries must act, and be seen to act. Unless they do, no attempt to embark on an international trust-building period can possibly succeed. The question is how they must act, and here we're compelled to say that – at least in the next few years – transparency and comparability will be far more important than legal form.

We say this despite even our own calculations, which suggest that an RCI-based reckoning of the South's obligation is sizable, amounting to perhaps one-quarter of the global total. We do so for the obvious reason that a successful trust-building process simply cannot push legally

binding mitigation commitments onto the non-Annex I countries. The course of the negotiations thus far, and the failure of the North demonstrably to 'take the lead,' has made this a simple fact of life. Indeed, the depth of the North/South impasse – a call to realism if ever there was one – compels us to note that developing countries cannot be legitimately pressured to accept legally-binding targets. Nor is this what is asked of them by the Bali Agreement, which calls only for 'nationally appropriate mitigation actions by developing-country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner'.

Still, for all this, we can reasonably ask most developing countries to put real mitigation measures into effect, and – in countries with significant responsibility and capacity – we can ask that these be of a significant scale. Further, the developing world must demonstrate that it is both willing and able to undertake measuring, reporting and verification (MRV) of the technological and financial support that it receives from the North. The countries of the North, after all, will be both unwilling and unable to commit to major finance and technology transfer to Southern partners, unless they can also demonstrate – to themselves and to their inevitable domestic opponents of such 'giveaways' – that it will be effective. This will entail much more than the minimal sorts of efforts that the South has had to make to host CDM projects. Rather, it will require the South to demonstrate concretely its willingness to engage effectively with MRV support, to move – quickly, comprehensively, efficiently and transparently – to utilise such support effectively, and to scale up this engagement as needed, as early efforts expand into the much more challenging North-South cooperation that will soon be needed.

Second, we believe that trust-building will require some developing countries to act beyond the scope of MRV support. These actions would have to be voluntary, and would focus primarily on identifying and exploiting no-regrets (zero or net-negative cost) options, and on measures that have significant sustainable development co-benefits. But this is not to say that they should not go further, towards additional measures motivated primarily by climate mitigation. Expectations in this regard, however, should be carefully tempered, and must be attuned to each country's responsibility and capacity. And again, such expectations can only be calibrated to the North's own efforts, which will be closely scrutinised by the developing countries and taken as clear markers of the North's seriousness. The critical point is that, while the South's short-term efforts might not measure up to a strict, RCI-derived accounting of its share of the required global obligation, they

might well accomplish a great deal. The South can achieve quite a lot while pursuing its sustainable development objectives, with or without sufficient Northern support.

Finally, the South must demonstrate that it is serious in its oft-professed desire to prioritise poverty eradication and sustainable human development. In this regard, it's important to emphasise that the South's efforts during the trust-building period – no-regrets mitigation, further voluntary mitigation in rough proportion to responsibility and capacity, additional supported mitigation, and of course, a variety of adaptation initiatives – can and should be pursued in a manner that draws no resources whatsoever from citizens living below the development threshold, and indeed benefits them. Which is to say that developing countries can act without compromising any sustainable development priorities, providing only that they're willing to pass on the costs to their consuming classes, rather than their poor. Countries that prove unwilling to do just this cannot expect to be taken seriously, if they subsequently insist that 'development comes first'.

'Comparability of effort'



From here on, and ready or not, countries will be judged not only by the opportunities they offer their citizens, and by the strengths of their democracies, and by the vibrancies of their cultures; they will also be judged by whether they carry their proper share of the global climate burden.

The trust-building period, whatever form it takes, will be tense. During it, both the North and South will have to make more than token efforts to limit their emissions, and both will have to adapt to the rapidly emerging political realities of a climate-constrained world. From here on, and ready or not, countries will be judged not only by the opportunities they offer their citizens, and by the strengths of their democracies, and by the vibrancies of their cultures; they will also be judged by whether they carry their proper share of the global climate burden.

The equity principles by which such judgments can be made are now on the agenda. The UNFCCC's workshop on 'Equitable Access to Sustainable Development', held in Bonn during the May 2012 inter-sessional negotiations, proved this in detailed and quite clear terms.⁹ More particularly, there is now a widespread, extremely watchful expectation that countries contribute in rough accordance with their responsibility and capacity, defined in globally acceptable terms, and there is an increasingly obvious need to measure this 'comparability of effort' in a coherent and transparent manner. After all, weak action on the part of countries that should be taking strong action would be extremely corrosive. It would be seen by all as evidence that the consensus for

⁹ See Tom Athanasiou, 'Global Climate Justice gets its 15 Minutes: The UN workshop on 'Equitable Access to Sustainable Development,' at <http://www.ecoequity.org/2012/06/global-climate-justice-gets-its-15-minutes/> for a detailed discussion of the workshop and a host of related pointers.

a global solution is failing to materialise. As such, it would harden the natural inclination, shared by all countries, to invest in their own short-term interests rather than in the preservation of the global commons. Which is to say that the great shift we now need – from ‘What is in it for us?’ to ‘How can we help?’ – will only be possible in a world where, implicitly or explicitly, the shared background of the negotiations is that fairness is the common goal.

It is not too much to assert that it has become critical to lay the groundwork for a common global understanding of the ‘comparability of effort’ problem.¹⁰ Which is to say that, after years of loose and largely academic debate about fair global effort-sharing frameworks, we must now become serious. In fact, during any meaningful trust-building period, practical ways of understanding, assessing and explaining comparability of effort will have to emerge visibly and publically, and be recognised as foundational elements of the future regime. In particular, framework proposals such as Greenhouse Development Rights, which are based on the UNFCCC’s official equity principles, will have to be developed, deliberated and vetted to the point where they can effectively and legitimately be used as guides to comparability.

We would go so far as to claim that even a rough consensus on principle-based measures of effort (such as the GDRs RCI introduced above), as *reference indicators* that usefully inform the negotiations and civil society, would have to be counted as an important indicator of success. We would also claim that if the negotiations are succeeding, we will know this in part because coherent debate about ‘fair shares’ of the global effort will come into greater prominence, and give credence to explicit quantitative indicators for assessing performance with respect to national ‘fair shares’.

Such assessments will have to be approximate. In particular, they will have to accommodate a variety of types of commitments – some of them softer and more implicit than we might perhaps wish. Among the Annex I countries, of course, commitments should take the clear, unambiguous form of legally binding, quantified emission targets. But for the developing world a considerable amount of flexibility will be needed, certainly in the near term. We’ll have to accept a variety of voluntary efforts – from South Africa’s emission targets, to China’s efficiency targets, to India’s solar production targets – as legitimate contributions towards a common ‘fair shares’ effort. While the accounting challenges posed by the need to

¹⁰ We say ‘global’ with the full knowledge that the Bali Action Plan applies the phrase only to Annex I. We do not intend to imply otherwise, but we must insist that comparability of effort is exactly what is needed, and that we’ll all have to take it much more seriously than we have in the past.

monitor, report and verify such diverse efforts would no doubt be greater than those posed by a regime in which there were similar, legally binding emission targets all around, the final outcome in terms of actual emission reductions could be just as robust. Indeed, it could be far more robust, because unlike the formal, legally binding alternative, a more flexible approach might actually be embraced by the South.

Though flexible in form, developing-country efforts must also reflect some meaningful kind of differentiation within the developing world. Nor would this be an unprecedented step. Such differentiation is already suggested by the Bali Action Plan, in terms such as ‘nationally appropriate’ and ‘in the context of sustainable development’. Note also that it can also be *de facto* rather than *de jure*. As much as some Annex I countries may wish for a strict system in which developing countries graduate into Kyoto-style quantified emission targets, it is not actually necessary.

What is necessary is that differentiation manifests itself in bottom-line reductions that developing countries ultimately achieve via nationally appropriate mitigation actions. Because, ultimately, a key measure of the success of a trust-building period will be whether the efforts of the key developing countries – voluntary though they may be – bear a defensible relationship to their legitimate share of the global effort, and are in rough proportion to their responsibility and capacity.

The key words here are ‘rough proportion’. During the trust-building period, we cannot expect any quantified gauge of effort to be applied with the force of law. At the same time, the actions of the relatively wealthy and high-emitting countries of the South will be watched very closely indeed. If South Korea, Singapore and the United Arab Emirates do not appear to be doing at least as much as – or indeed, more than – the much poorer countries of Annex I, such as Ukraine and Belarus, they would obviously be free-riding. By so doing, they would undermine any claim that ‘the South’ supports a principle-based approach to differentiation as an important ingredient of a robust global effort-sharing agreement. And they would fatally undermine their own claim that the wealthy Annex I countries must finally accept their large but appropriate share of the global obligation to act.

All this has implications. It means, particularly, that the citizens of the North must somehow be brought to understand that the economic division between rich and poor that defines our times has decisive implications for the ultimate prospects of a successful global climate response. In particular, if flexible participation with *de facto* differentiation is to be the vehicle by which the developing countries enter the climate regime,

then this must be understood – across nations and classes and even in the United States – as being just and proper. It is action, and not legal commitments, that matter, and people must learn to make the necessary distinctions. Brave sorts of education campaigns will be essential, campaigns that link climate obligation to development and inequality.

At this point, if any nation from which the global community can reasonably expect resolute action continues to temporise, and if – even within a critical, last-ditch international trust-building period – it still refuses to make good-faith efforts to meet its fair share, then there must be consequences, and even sanctions against it. There is no longer any latitude for denial or apology.



Adopt A Negotiator

The situation is fraught and time is very short. Global emission curves must soon be bent sharply downward and then enter a rapid and sustainable decline.

All of which leaves us with a paradox. We call for ‘emergency mobilisation’ but argue that a ‘trust-building period’ must come first. Is this not a contradiction? We do not believe that it is, for – along with many others – we have concluded that true mobilisation can only begin with a concerted effort to build solidarity and resolve. Still, the situation is fraught and time is very short. The global emission curves must soon be bent sharply downward and then enter a rapid and sustainable decline. Given this, we only have one last chance to get things right. Failure is not an option.

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