

Climate Change and Global Development: Towards a Post-Kyoto Paradigm?

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Abstract

Climate change both reflects and transforms global development. Asymmetries of responsibility, impact and capacity reflect historical and current development hierarchies. At the same time, the imperative to reduce greenhouse gas emissions perversely empowers high-emitting newly industrialising countries. As inter-state negotiations enter a new post-Kyoto paradigm involving emissions reductions for 'all Parties' to the UN climate change convention, relations between industrial and industrialising countries, and more broadly between North and South, are re-orientated. This article charts these relations through two decades of United Nations climate negotiations, arguing the need to secure emissions reductions across the industrialising world opens up new possibilities for climate justice.

JEL Codes: O13; O29; Q54; Q56

Keywords

Climate change; development; ecological crisis; geopolitics; North-South relations; United Nations.

Introduction

Climate change expresses, on a world scale, the fundamental contradiction between capitalist development and ecological sustainability. The climate is a global commons — even the World Bank calls it a 'global public good' (World Bank 2006). Consumer capitalism and its rapacious appetite for commodification have critically undermined this foundation for human survival. As noted by key government players — from the Pentagon Report on abrupt climate change, to the British government's Stern report — climate change poses a profound challenge to the continued sustainability of capitalist accumulation (Schwartz and Randall 2003; Stern 2007). Stern for instance likened the impact of climate change to that of a third world war — at least as devastating as its predecessors (Stern 2007: 2). With the globe put on a war footing we sit on the cusp of a great restructuring that offers the possibility of an up-turning in North-South relations. As the old order crumbles we live in a hiatus, caught between one world and the next, where political strategy must apprehend the full dimensions of the contradictions we face.

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With the recent United Nations (UN) consensus for universal commitments to reduce Greenhouse Gas (GHG) emissions, the challenge to global political relations posed by climate change is only beginning to be felt. The 1992 United Nations Framework Convention on Climate Change (UNFCCC) had committed forty-one industrialised countries, those principally responsible for Greenhouse Gas (GHG) emissions, to legally-binding emissions-reduction. The Convention had drawn a strong distinction between these countries, listed in Annex 1 of the UNFCCC, and the rest of the world. Thirty-seven industrialised countries subsequently signed the 1997 Kyoto Protocol, and committed themselves to reduce emissions by 'at least five per cent' below 1990 levels by 2012 (United Nations 1998: article 3.1). In 2011, at the Seventeenth Conference of the Parties to the UNFCCC, held in Durban, a second Kyoto commitment period was agreed, for 2013–2017 (United Nations 2011a). At the same time, the 'Durban Platform for Enhanced Action' saw all countries commit to negotiations for a new agreement that would be 'applicable to all Parties' under the UNFCCC (United Nations 2011b: para 2). The new agreement would be negotiated and agreed by 2015, and come into force by 2020.

The UNFCCC Durban Platform creates a three-year window in which countries most affected by current climate change will be directly involved in negotiating a global deal to reduce GHG emissions. The new negotiating arrangement poses a series of strategic challenges. This article is designed as a scoping report to inform strategising. The arguments are schematic and directed at provoking debate rather than presenting fully-formed and rounded positions. It seeks to map the sheer magnitude of the transformations that are underway, and highlight some of the possible political implications. It begins by contrasting the structural logic of global social contradiction with the very different logic of climate contradiction as expressed first in the Kyoto process and now in the mooted post-Kyoto scenario. The argument that Southern agency is greatly enhanced in the context of climate change crisis is filled out with a discussion first of Southern engagement with the Rio and Kyoto process, and second with a discussion of models for the post-Kyoto world.

Structural Division — Social and Ecological

North-South relations are conditioned by the broader historical development of capitalism, and in particular by the societal contradictions and divisions that it creates. Contradictions arise from the process of capital accumulation and are profoundly destabilising — they produce crisis but also produce possibilities for transformation. Crises arise in the production process, reflecting the labor-capital contradiction, for instance where labour resists exploitation. Crises also arise in the conditions of production, where accumulation undermines the conditions on which capitalism depends (Smith 2006). Climate change reflects this latter form of crisis, and the nature-capital contradiction, writ large on a global scale (Foster-Carter 2002). O'Connor distinguishes these two types of contradiction, arguing that in the current period the 'second contradiction of capitalism', and

the crises it creates, has become dominant (O'Connor 1998: 158). The ecological contradiction now plays a central role in shaping the possibilities for existence, indeed for survival.

On a global scale, social contradictions were entrenched under colonial imperialism, and continue to produce profound structural inequalities (see Held et al. 2007). These on-going divides express class division on a global scale, and are enforced by the post-colonial inter-state hierarchy. In the face of anti-imperialism, decolonisation and post-colonial national development very effectively managed and thus maintained global social contradictions (Biel 2000). Continuing demands for an end to neocolonial structural inequality were expressed for instance in the program for peaceful coexistence at Bandung in 1955 and in the call for a New International Economic Order at the United Nations in 1974. In the context of Cold War rivalry these demands were answered with development assistance, delivered as aid. By the 1980s limited Southern leverage was on the wane and development assistance became increasingly tied to globalist orthodoxies, and delivered with conditionalities (Gill 2002). By the 1990s assistance was reconfigured as 'facilitation', such as in the form of 'aid for trade', designed to enable the fruits of marketisation to be realised.

Anti-colonial struggles generated by global social contradictions clearly transformed the face of the globe. Since decolonisation contradictions have remained unmanageable, and intermittently they still radically destabilise capitalist heartlands — the East Asian financial crisis is an example (Bello 2002). But in recent years, in the face of globalist ideologies, transformative challenges from the South have been substantially weakened. Despite multiplying sites of volatility and the remarkable success of movements in slowing, even halting neoliberal agendas, there has been no imperative for structural transformation: hegemonic power relations have remain entrenched and structural inequalities have deepened (McMichael 2003; Pieterse 2004). In this context the responsibilities of the North to the South are defined primarily in normative terms. Whether understood through the lens of restorative justice, global social justice, or humanitarian obligation, there is no immediate unassailable imperative for the North to act for global development. The current wave of developmental implosions, for instance, has not created an agenda for global restructuring but rather has prompted a new wave of proto-imperial interventionisms (Harvey 2010).

Climate change creates a qualitatively different power nexus. Where Southern societies are at best able to exert limited and intermittent structural power under the global social development divide, under the global climate crisis their power may be significantly enhanced. The confrontation between capitalist development and ecological survival expressed in advancing climate change creates a new meta-imperative to live differently (Foster-Carter 2002; Kovel 2007). This imperative creates a new inter-dependency, where, essentially, all societies depend on each others willingness and capacity to shift from carbon-intensive accumulation. The advent of a genuinely reciprocal ecological inter-dependency between Northern and Southern societies contrasts dramatically with the logic of developmental dependency (Williams 1997; Parks and Roberts 2008). Rather than the South depending on the North, North and South now depend on each other.

Crucial in this nexus is the South's current capacity to exacerbate the climate crisis, which translates into Northern vulnerability to carbon-intensive Southern development. In 1990 the South accounted for approximately a quarter of all GHG emissions, and per-capita about a tenth of average emissions in the industrialised countries of the Organisation for Economic Cooperation and Development (OECD) (Jordan 1994). In 1992 climate change was assumed to be a Northern concern: Northern societies were the primary GHG emitters, both historically and at that time. Since 1992 the GHG emissions of many Southern countries have increased exponentially, posing much more starkly the question of Southern emissions. In 2004 per capita GHG emissions in non-Annex 1 countries stood at a quarter of Annex 1 countries' and in total, non-Annex 1 countries accounted for 54 per cent of world GHG emissions (Barker 2007). The continued sustainability, indeed survival, of Northern societies now depends on Southern willingness and capacity to adopt a low carbon development pathway.

In 2000 the Intergovernmental Panel on Climate Change (IPCC) sought to predict Southern and Northern GHG emissions, coming to the conclusion that even in the most optimistic scenario (option B1), without mitigation, Southern emissions would compensate for any reductions that Northern states could implement (Obasi and Topfer 2000; the scenario is summarised very clearly by EcoEquity 2007: 13, Fig 2). Since 2000, with Southern emissions rising faster than the IPCC predicted under the B1 scenario, the prospect of Southern emissions simply replicating Northern emissions by mid-century has become very real. As De Moor predicted a decade ago, Southern participation in a post-Kyoto mitigation is 'absolutely essential in the fight against climate change, as GHG emissions are expected to grow in developing countries in the future' (De Moor 2001).

Evidently there is great inequity. The corporate-sponsored World Resources Institute calculates that Annex 1 countries account for about twenty per cent of the world's population, but produce about fifty per cent of current emissions and since 1950 have accounted for about fifty per cent of global CO₂ emissions. Non-Annex 1 countries meanwhile account for about eighty per cent of the world's population, and about fifty per cent of emissions, both current and accumulated CO₂ since 1950 (WRI 2007). We may add these aggregated figures mask enormous inequities, both between countries and within them, with a carbon-intensive, transnationalised Global North accounting for the bulk of global emissions (Roberts and Parks 2006).

Northern societies continue to bear primary responsibility for climate change, and thus for resolving it, but without a parallel reorientation of Southern societies there can be no possibility of averting large-scale global climate crisis. An important dimension of this new geopolitics of climate change is its zero-sum character: barring a capacity to directly manipulate the global climate, there is no possibility of simply managing the advancing crisis. Despite a remarkable continuing belief in the possibility of 'adaptation' to climate change, to enable what the World Bank calls 'climate-resilient development', it is clear that only mitigation measures can offer any long-term, or even medium-term, prospects (see Möhner and Klein 2007). Only a capacity to address the causes of the

problem, rather than its symptoms, will avert the inevitable. In this respect the South, for the first time it may be argued, and one might say unavoidably, has structural power over the North.

1992: The First Historic Compromise on Climate Change

The necessity for Northern assistance to enable the South to move to a sustainable development model was recognised in 'Our Common Future' in 1987 (World Commission on Environment and Development 1987). The Report distinguished between 'voluntary' sources of assistance, mainly in the form of bilateral Official Development Assistance (ODA), 'assessed' sources that were then funding multilateral agencies such as the United Nations Development Programme (UNDP), and 'automatic' revenue-raising sources, such as taxes and charges associated with a particular regulatory framework. The Commission strongly favoured the latter approach, as a means of establishing a reliable flow of resources from North to South to underpin reorientation (World Commission on Environment and Development 1987). This was said to have been one of the most controversial issues at the Rio UN Conference on Environment and Development (UNCED) in 1992: Southern delegates insisted that additional and automatic financial transfers from North to South were required as a precondition of their support for the proposed climate change convention (Jordan 1994). As a result, under the rubric of a 'common but differentiated responsibility' to mitigate and adapt to global climate change, the Rio Declaration and the UNFCCC established limited funding for Southern restructuring, with Northern signatories of the Convention required to make contributions to the Fund.

In 1992 it was the OECD countries, along with island states, that were most committed to addressing climate change, but even at this time it was clear the main costs of inaction would be borne by the South, not the North. Nonetheless, most Southern countries did not see climate change as a priority issue: they refused to compromise their development sovereignty to solve problems created by Northern mal-development while requiring North-to-South transfers to address the adaptation costs as a precondition for signing onto to a new convention. These countries, 128 in all, presented their demands through the Group of 77 immediately prior to the 1992 UNCED conference, stating:

We have not come here to negotiate away our permanent sovereignty over our natural resources ... Those who have come to these negotiations to make arrangements for a free ride on developing countries should therefore reexamine their positions ... [we call for] a clear differentiation between the actions required to be taken by the developed countries and those to be taken by developing countries, in accordance with their differentiated responsibilities. (Kufour 1992)

There was much talk of 'Greenmail' (environmental blackmail), with the journal, *South*, declaring, 'The cold war is over, the Green war has begun' (Jordan 1994). Despite the rhetoric, the bargaining power of the Southern group was relatively weak and could only be exercised in the form of a threatened veto (Paterson and Grub 1992).

Observers commented that the tactic was at best high-risk, posing the possibility of inadequate action on climate change (Jordan 1994). Southern refusal to accept a global responsibility for GHG emissions weakened the rationale for strong Northern commitments, and allowed Southern emissions to grow unchecked. Meanwhile, the desired financial transfers were never made automatic nor were they additional to existing ODA, and never materialised to any significant extent. In 1994 Jordan argued that ‘the South runs the risk of being hoist by its own petard’: we may say in part that risk has been realised (Jordan 1994: 18).

The Convention on Climate Change and the subsequent Kyoto process was built on a very passively-defined principle of restorative justice: as noted, the so-called Annex 1 countries, the principal perpetrators of climate change, were the first to be required to address it. Under the Kyoto process non-Annex 1 countries were encouraged to seek alternatives to a carbon-intensive development pathway, but there was only the most limited in-built financing to enable this to happen. The 1992 Framework Convention committed Annex 1 countries to providing funds to help non-Annex 1 countries adapt to the adverse effects of climate change. The ‘Global Environment Facility’ (GEF) was established in 1995, and has served as an umbrella for a range of adaptation funding mechanisms under the Kyoto process. Unlike ODA which is by definition a voluntary commitment for donor countries, contributions to GEF funds are an obligation for Annex 1 Kyoto signatories (Möhner and Klein 2007). As such the GEF instituted a treaty-bound linkage between Northern mitigation and Southern adaptation. The link though, was at best symbolic: the funds are minimal, amounting to at most \$300 and \$700 million a year, and in practice only reached \$182 million in 2007 (Walker 2007).

ODA commitments, where they exist, have likewise been focused primarily on Southern adaptation, ostensibly increasing the capacity of vulnerable low-income countries to adapt to climate change. Mitigation, in terms of support for renewables, figures only at the margins. Most ODA still finances marketisation and is primarily directed at stimulating economic growth, which in the current context means carbon-intensive growth. Both bilateral and multilateral agencies still support carbon-intensive development projects, such as coal-fired power stations in Southern countries. In 2007 for instance the World Bank was still financing new coal power projects, despite a 2001 internal review advocating phase-out of fossil-fuel energy projects (Pasternak 2007).

The Kyoto process was primarily directed at Northern climate change culprits, and at reducing their GHG emissions. The effect of that effort has been minimal — securing at best a one per cent reduction in overall anticipated global GHG emissions from 1992 levels (Christoff 2006). Importantly, the process signals the extent to which even this relatively low level of restructuring can be displaced from North to South. The Kyoto process established obligations for Northern countries to reduce net GHG emissions, as an increase in emissions in one sector could be ‘offset’ by a reduction in emissions in another. This could happen at the national level: in Australia for instance the Government argued that a slow-down in the destruction of carbon sinks through a reduction in

land clearing compensated for the increase in emissions from the economy as a whole (Crowley 2007). At the international level carbon offsets allow Northern companies and governments to offset their increased emissions by funding a reduction in emissions in another country. With the advent of carbon trading under Kyoto it became possible to buy and sell offsets and a new international market in privately-owned carbon credits was created, effectively privatising carbon emissions (Okereke 2008). Companies and governments could now pay to emit, displacing the required structural transformations from one sector to another, and from one country to another.

Driven by the North's failure to initiate structural change, and thus its continued reliance on carbon intensive development, the offsets market has spilled over into the South (Paterson and Newell 2010). A panoply of 'clean development' projects have been funded under offset trading, both through the UN and through private offset companies. The UN's 'Clean Development Mechanism' (CDM) for instance, certifies development projects that offset for rising GHG emissions in Northern Annex 1 countries. By 2007 CDM had certified about 800 projects, and was being criticised for facilitating profiteering, with at best questionable impact. All such projects operate to displace Northern adjustment costs, re-gearing Southern developmentalism to Northern needs. Driven by external financial imperatives rather than local ecological or developmental needs, their principal effect, as Carbon Trade Watch documents, is to disrupt and distort Southern societies, to support GHG polluters in the North, and to create windfall profits for speculative carbon traders (see Lohmann 2006).

In parallel with carbon trading, a perhaps more significant side-effect of the Northern adjustment failure is the growth in demand for transition fuels, most notably biofuels. The transition to biofuels reduces GHG emissions and, like carbon trading, enables minimal change in Northern societies. Its key impact is felt not in the North but in the South, where rising commodity prices — an anticipated doubling of wheat prices in twenty years — penalise poor consumers, while subsistence farmers and forests are cleared to make way for large-scale biofuel plantations. The UN now identifies biofuel plantations as the primary driver of global deforestation and a major threat to food security in the South (United Nations 2007a). The imperative for Northern transition fuel, ostensibly to address climate change, overrides Southern needs, local land rights and, ironically enough, efforts to prevent deforestation. Transition fuels enable the continued intensification of energy consumption, a continued 'business as usual' solution to climate change and to growing energy insecurity under 'peak oil' (Mutt 2007).

At the same time the failure of Northern adjustment has intensified the scramble for oil and gas reserves, and for coal supplies. In multiple dimensions the political salience of resource dependency, and resultant insecurities, have magnified. With deepening resource exhaustion, especially in terms of 'peak oil', there is now a direct link between national security and energy markets. As Northern states have sought to gain more easy access to Southern-based resources, energy insecurity has lent an added impetus to free trade agreements that marketise national energy markets, to gain access to energy supplies and

consumers (Institute for Policy Studies 2003). Trade policy, in terms of marketisation, is routinely linked to 'energy security': trade negotiations such as between the US and Latin America, between Indonesia and Japan, between Australia and China, and at the Asia-Pacific Economic Cooperation (APEC), are now linked to energy supply agreements. Concerns at the environmental level and climate impacts of increased market access and increased resource flows are trumped by the drive for secure supplies. As policy is geared to maintaining and enhancing energy supply in what is seen as an increasingly volatile and unpredictable context, economic growth is more than ever assumed to require increased access to fossil fuels. In this respect the insecurity of fossil fuel supplies generates an impulse to carbon security, not a leap to renewables.

2012: A New Post-Kyoto Historic Compromise?

Kyoto's model of restorative justice enabled Southern countries to intensify emissions while at the same time creating only the most minimal of constraints for their Northern counterparts. Kyoto essentially accorded Southern countries a breathing space, allowing them to deepen carbon-intensive development. With very limited positive mitigation in the North, and a generalised negative mitigation in the South, the Kyoto process has left the world with a growing problem. But, in an ironic twist, this new scenario may give Southern countries important new leverage in the geopolitics of climate change.

Much of the controversy about the Kyoto process centred on its historic compromise between Annex 1 countries and the rest (Parks and Roberts 2008). The shape of the post-Kyoto framework remains unclear, but given the current and projected GHG emissions of Southern countries, it may present new opportunities for the South. These opportunities essentially translate into potential preconditions for Southern participation in the new Climate Change Convention. Southern countries are now essential players at the centre of the new model. Rather than simply threatening to exit, as they did at the Rio UNCED, Southern countries acting as a bloc can have a transformative influence on the process. The only question is how they can translate this new potential bargaining power into meaningful commitments.

Undoubtedly the geopolitics of Rio and Kyoto overshadow scenarios for the new global climate dispensation. As noted, Southern assertion played a key role in shaping the Rio and then Kyoto model. The same may be possible as Southern countries now enter negotiations over the new post-2015 global package deal. What possibilities may be emerging from the evident failures of the Rio model? The key legacy of Kyoto is the failure of Northern mitigation. Any new agreement must secure extensive restructuring of Northern societies and must prevent the displacement of adjustment costs to the South. At the same time there is a clear necessity for Southern restructuring to reduce Southern emissions. This requires a new deal recognising the historic responsibility of Northern states to underwrite a low-emissions development model in the South. The NGO Carbon Trade Watch puts it this way:

Effective climate action starts with addressing the fact that big cuts need to be made in the disproportionate share of emissions that the North is responsible for, and recognising that it also controls a disproportionate share of global wealth and technological resources. These should be shared if the North is to support the development of the low-carbon economy in the South in a non-colonialist fashion. (Carbon Trade Watch 2007: 56)

The impacts on the South are now predicted to be disproportionate and catastrophic. In April 2007, a Report issued by the Intergovernmental Panel on Climate Change, 'Climate Change 2007: Impacts, Adaptation and Vulnerability', stated that it is in the South, where urbanisation and industrialisation are already putting pressure on resources and where adaptation capacity is relatively weak, that climate change will have its most immediate negative impact (Parry et al. 2007; see also UNDP 2008). The Report predicted major water shortages due to climate change, with a potential halving in agricultural production in some regions of Africa by 2020, and a one-third reduction in yields in Central and South Asia by 2050, as well as inundation of the densely populated mega-deltas of South and South-East Asia due to rising sea levels. Adaptation to these pressures was unavoidable but insufficient:

Even the most stringent mitigation efforts cannot avoid further impacts of climate change in the next few decades, which makes adaptation essential, particularly in addressing near-term impacts. Unmitigated climate change would, in the long term, be likely to exceed the capacity of natural, managed and human systems to adapt. (Parry et al 2007: para 20.7)

But this question of Southern mitigation is strangely absent from much of the Southern climate policy agenda. Debate has centred on issues of Southern adaptation rather than Southern mitigation, thus on managing the crisis rather than on resolving it.

A relatively early exchange between UN agencies and the Group of 77 developing countries, in anticipation of post-Kyoto scenarios, illustrates some of these themes (see also O'Riordan and Jordan 1997). In September 2007 the United Nations Secretary-General hosted a day-conference on climate change in preparation for the December 2007 UNFCCC conference in Bali. The Chair's statement summarising the event asserted the need to address climate change as a precondition for socio-economic development. The Chair claimed support for public-private partnerships and for 'an enhanced carbon market' and, in a clear case of wishful thinking, action on climate change was not seen as compromising economic development. The meeting called for an 'Adaptation Fund' additional to current ODA commitments, along with equitable means of achieving mitigation. This required developed countries to take the lead but also involved Southern action for 'less emission intensive growth' with 'further incentives ... to ensure the active engagement of these countries in a future climate change regime' (United Nations 2007b: 2).

The model of Northern mitigation and Southern adaptation was also promoted by the Group of 77 countries. In September 2007, it restated the original Rio UNCED formula of ‘common but differentiated responsibilities’, defining sustainable development in terms of balancing economic growth, social development and environmental protection. The priority was to achieve ‘sustainable development and sustained economic growth of the developing countries and the universal elimination of poverty, hunger and disease’, including the Millennium Development Goals (Group of 77 2007a: 3). Mitigation had to be led by developed countries, which also had to support developing countries ‘to adapt an environment-friendly path to development and growth by providing additional and substantial financial and technological assistance ... over and above the long standing 0.7 ODA target ...’ (Group of 77 2007a: 4). The Group emphasised that ‘without effective mitigation, all efforts to address climate change will remain fruitless’, stressing mitigation was the responsibility of developed countries (Group of 77 2007a: 4). The Group concluded the Kyoto Protocol needed to be implemented by all Annex 1 countries, and that an Adaptation Fund and Least Developed Countries Fund needed to be put in place (Group of 77 2007b).

The issue of Southern mitigation was addressed more directly by the World Bank in its 2006 paper on ‘clean energy and development’ that argued that markets would deliver Southern mitigation. The Bank argued that marketisation of the energy services market, and trade flows, including emissions trading, would enable Southern countries to reduce their carbon intensity (World Bank 2006). It stated that the energy sector, and especially electricity, was drastically underfunded, pointing to the need for new North-South flows of private finance to meet energy needs, secured through the deregulation of Southern energy sectors, the removal of subsidies and promotion of an ‘efficient trading system’. As for adaptation, the Bank recognised an urgent need for financial support, estimating Southern adaptation needs at \$10–\$40 billion per year (dwarfing the existing commitment to adaptation funding).

The Bank’s preferred policy mix — market-based mitigation and aid-based adaptation — is highly revealing. Climate change and the need for mitigation was effectively being used as a Trojan horse to lever open Southern energy markets, valued at approximately \$160b per year. In this context, the commitment to adaptation funding could be interpreted as primarily a facilitating payment for marketised ‘mitigation’. The fact that the adaptation funds were presented as a means of ‘climate-proofing’ development, highly questionable given IPCC predictions, is suggestive of this sub-agenda. The Bank’s commitment to clean energy and adaptation did not signal a commitment either to addressing climate change or to moving away from carbon intensive development: the 2006 paper had itself been re-badged and re-focused away from climate change concerns to ‘clean energy’ issues.

Climate justice, for development NGOs, has also been centred on Northern mitigation and on meeting Southern adaptation costs. Adaptation is assumed to be feasible and finite, while Southern mitigation problems are de-prioritised. In 2004 an alliance of environment and development NGOs, led by the New Economics Foundation, Oxfam International and the International Institute for

Environmental and Development, published *Up in Smoke*, a report on climate change and development that strongly promoted the need for 'climate proofing' of development strategy (Simms, Magrath and Reid 2004). While acknowledging the need for global mitigation to 'stop and reverse global warming' the overwhelming focus of the Report was on the Northern obligation to provide for Southern adaptation. Interestingly, the Report argued Northern subsidies for fossil fuel energy, estimated at \$73 billion, could fund Southern adaptation, begging the question of how mitigation, Northern or Southern, was to be funded (De Moor 2001 also proposed this as an option). At the 2007 anti-G8 protests the NGO coalition, 'Global Call to Action Against Poverty' posed climate change as the most fundamental threat to anti-poverty initiatives (Nduru 2007). This should, first and foremost, pose the question of mitigation.

An important intervention, but along much the same lines, came from Oxfam International in May 2007 with its 'Adapting to climate change' proposal (Raworth 2007). This repeated the formula established under the UNFCCC, that the North should 'stop harming' through mitigation, and 'start helping' by financing Southern adaptation. The need for additional 'adaptation financing' was asserted, to be built-in as an automatic requirement of any new global deal, with payments correlated to responsibility for the problem and capacity to pay. Like the World Bank, Oxfam estimated the additional costs to be substantially higher than existing commitments, slightly bidding-up the Bank to \$50b per year. Remarkably, though, the Oxfam Report shared the World Bank's optimism that adaptation could literally 'climate proof' development.

In practice, hopes for Southern mitigation are vested in the energy services market. The IPCC itself stated as much in its 2007 report on mitigation, which made no proposal as to how the enormous task of Southern mitigation can be achieved other than through the market (Metz et al. 2007). It recognised that technology transfer to assist mitigation relies on public transfers, but notes these have all-but dried up with public funds halving from 1980 to 2004. Despite noting that the financial flows through the CDM have been limited and uneven, much faith is put in financial flows to developing countries through the Mechanism, based on the estimation that it has 'the potential to reach levels of the order of several billions US\$ per year' (Metz et al. 2007: 21). No other mechanism is proposed to address this central issue, despite manifold evidence of the problems of emissions trading, and of the effectiveness of non-market policy tools in environmental regulation (Carbon Trade Watch 2007).

The issue of Southern mitigation most sharply poses the problem of development rights in the context of climate change, and this may help explain why it appears to be so marginal to the mainstream debate. This is ironic given there appears to be strong public support for Northern funding of Southern mitigation. In 2006, for instance, pollsters in seventeen countries found strong public support for 'substantial' North-South aid flows to enable Southern countries to limit GHG emissions. This included seventy-nine per cent polled in China, forty-eight per cent in India, and sixty-four per cent in the US (Chicago Council on Global Affairs 2007).

A New Mitigation Paradigm?

The need for a new paradigm that addresses mitigation in Southern as well as Northern contexts has been acknowledged by some. The Report, *High Stakes*, published in 2006 by the Institute for Public Policy Research in the UK for instance, stated that convergence to a low-carbon global development model would have a direct impact on economic development prospects in developing countries. In signing up to such a model these countries will need to forego the option of carbon-intensive development, and this will require significant funds. The IPPR stated that developed countries ‘almost certainly’ need to ‘prepare to pay for the bulk of climate mitigation’ in the South, adding ‘it might reasonably be assumed that developed countries will need to make deeper reductions in emissions than developing ones, to allow for a greater degree of equity in levels of per capita emissions over time’ (Baer and Mastrandrea 2006: 5)

The implications of North-South mitigation equity are more clearly highlighted in the model for ‘Greenhouse Development Rights’ from the US-based non-government research group *Ecoequity*. The model both seeks to safeguard development rights and avert climate change, arguing there is no choice but to square the two imperatives. Rising GHG emissions from the industrialising countries of the South requires a comprehensive framework, and this can only be achieved if development rights are safeguarded. The model then,

... must slash the emissions of the already wealthy and, at the same time, prevent the unbounded emissions growth of those rising out of poverty, *and it must do so without stifling their development aspirations.* (Ecoequity 2007: 5, italics in original)

Essentially, Ecoequity proposed to do this through North-to-South wealth transfers of about 1 per cent of world product per year (US\$611 billion at 2005 prices). Under the model Northern countries that bear relatively more responsibility and also have higher capacity to fund mitigation acquire ‘international mitigation obligations’ on top of their national obligations. Southern countries then acquire internationally funded reductions in GHG emissions, in the form of a transfer of funds from Northern counterparts. Southern development rights are safeguarded up to a predetermined threshold, and Southern as well as Northern mitigation is assured.

There are certainly limits to this model of redistributive justice, especially in terms of the extent to which it fails to recognise the specific challenges of the current crisis. While Greenhouse Development Rights address issues of equity, they fail to address the underlying problem of growth-dependence. As with the Stern report, it is assumed that if societies invest in alternative technologies then at some stage economic growth will be reconciled with static GHG emissions (Stern 2007). The assumption that ecological modernisation is bankable, must surely itself be questioned. For a more grounded approach, equitable measures have to be embedded in initiatives for sufficiency, rather than for growth. Here, the required model must part company with growth-addicted political and economic elites, both in the North and the South, and actively engage with the lessons of low-carbon emitting subsistence and eco-sufficient societies. It is here,

across the mass of humanity, mostly in Southern countries accounting for approximately two-thirds of the world's population, that we find the lowest GHG emissions footprint. As Salleh documents, powerful lessons for the future are already enacted in these Southern contexts, especially amongst Southern women, both urban and rural (Salleh 2010).

Against eco-sufficiency pressures, the continued domination of debate on climate change by growth-orientated approaches such as adaptation and technological mitigation, highlights the ideological power of growth-based consumerism. To think of a low-growth or no-growth economy is to think the near unthinkable. This should not be surprising — capitalism after all relies on growth to sustain accumulation: like a bicycle, the more it slows the more it is susceptible to falling over (Anderson 2006). Partly because of its marginality, the vision offered by the eco-sufficiency model is less able to be translated into a program for action. Nevertheless, the notion of sufficiency, as against excess, has a resonance and is a practical reality outside of elite institutions, and especially outside the North. It offers hope for a future lived with rather than against living environments, a hope that has universal appeal as a way of living that is responsible to future generations.

Prospects: Three Scenarios

The on-going debate on how to address climate change can be thought of as generating three contrasting scenarios. First is the adaptation approach. As noted, much ODA falls into this category, as does the Pentagon 'Abrupt Climate Change' Report, that called for the US to close its borders against anticipated waves of climate refugees (Schwartz and Randall 2003). This approach treats the symptoms not the causes of climate change and may lead to some significant transfers to Southern countries, especially to minimise spillover effects such as mass migration. The position was implicit in the Kyoto model, which fails to address the causes of climate change in the South, while providing very limited support to assist Southern states to address the resulting impacts. It is also reflected in the dominant approach of development NGOs, insofar as they focus on adaptation rather than mitigation.

From this perspective it is possible to maintain a development project in the face of accelerating climate change provided there is sufficient funding to pay for 'adaptation'. Climate change is accepted as inevitable: the priority is to fund a new model of development that is 'climate-resilient'. Clearly, though, even if local adaptation funds are urgently needed, these are ultimately doomed to failure if there is no reduction in global emissions. It makes no sense, for instance, to advocate for global funds for climate adaptation while at the same time defending and promoting funding to promote economic growth and international trade.

Second is technological mitigation, essentially the ecological modernisation model, which itself divides into two pathways, one seeking to adapt non-renewables (such as through biofuels, carbon sequestration or nuclear power), the other seeking to promote renewables. Whether renewables or non-renewables are favoured, the approach implies and requires significant transfers of resources from North to South in order to under-write a new global low-

emissions model of development. This model is increasingly on the agenda as the post-Kyoto, post 2012, scenario unfolds. For some, the required transfers can be achieved by marketising energy services and GHG emissions, for others the model requires relatively large-scale transfers of wealth for instance through a new Greenhouse Development Rights facility. Southern leverage is central in determining the outcome of this debate — both in terms of the scope and mechanism of redistribution.

The third approach is the eco-sufficiency approach, which calls for a reduction in energy consumption and increased conservation as the principal means of reducing GHG emissions (see Salleh 2004). It may be said this approach most directly addresses the crisis: it is not in any way reliant on a mediating technology and in this respect would certainly be the most effective. But where adaptation may rest on a belief in climate proofing, and mitigation may rest on a blind faith in the capacity to produce a technological fix to the emissions problem, eco-sufficiency puts its faith in public deliberation. If a society is to shift from consumer capitalism to eco-sufficiency, and if that shift is to be democratically achievable, there must be a widespread apprehension of the dangers of failing to act, and willingness to pursue climate justice and sufficiency as the solution (Dorsey 2007).

There is little in the way of institutional support for the third option, at least outside academia, but there is some indication that the climate change crisis can produce radical rejection of developmentalist ideology (see Goodman 2009). In the North it has generated a profound sense of personal responsibility, and a variety of anti-consumerist impulses. These are expressed in climate justice campaigns that are the backbone for climate action (Roberts and Parks 2006). In the South, a myriad of movements reject neo-liberal developmentalism as having eroded living environments (Bello 2007). The issue of climate security offers a meta-frame for these environmental justice movements, from anti-dam and anti-nuclear movements, to movements for subsistence farming, to urban poor movements, there is an emergent framework of interpretation and action.

If mitigation is the South's key bargaining chip then the focus for research and action must be on developing models for how that could be achieved in a way that does not serve as a trojan horse for Northern players. How can the model pursued by the South break with marketisation and instead deploy tools that strengthen Southern autonomy, while at the same time build on the demands for eco-sufficiency? To put it another way, how can a Southern mitigation regime pursue Southern development rights embedded in eco-sufficiency? An important first step is to strengthen the critique of market-based mitigation. In the IPCC and World Bank models, private financing of energy services and emissions trading are figured as the central mechanisms for Southern mitigation. These models rest on the shaky assumption that privatisation, carbon trading and market access will reduce GHG emissions. A second step would be to demonstrate the already-existing models of eco-sufficiency and the effectiveness of alternative, more conventional, policy tools including fiscal policy and

direct regulation as against carbon trading. A third element could be to outline a model for achieving consistency between development rights and mitigation, embedded in eco-sufficiency.

As argued here, climate change now has the potential to transform North-South relations. In a recent survey of the issues in the run-up to a post-Kyoto framework Christoff highlighted two important changes post 1992, namely the exhaustion of fossil fuels and increased climate 'blow-back', with both seen as producing new wider constituencies for stronger action on climate change (Christoff 2006). To these two factors we can add a third and a fourth, namely the increased importance of Southern emissions, and awareness of disproportionate Southern impacts. If it is the case that political, corporate and policy-making elites are now taking climate change much more seriously, then today this necessarily means engaging much more seriously with Southern concerns. The extent to which this translates into marketised mechanisms to further displace restructuring Southwards, or into measures that secure climate justice and safeguard eco-sufficiency, will very much depend upon the strategy developed by Southern countries.

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