What *climate justice* means for Southern Africa

And how it applies to climate debt, carbon trading and public finance

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1. Introduction

Climate finance has become a complicated field, full of acronyms and new institutions, mixing public and private sources as well as beneficiaries. All manner of scams have emerged. Hoped-for innovations – a $100 billion/year Green Climate Fund, well-functioning emissions markets and transparent offsets – have not materialized as anticipated.

This paper sums up the three basic political challenges associated with climate finance: the *debt that industrialized and high-emissions societies owe to Africa* for using too much greenhouse-gas emissions space; the attempt by wealthy governments and corporations to *trade their way out of the problem* in the emissions markets; and the opportunity for *new public and community finance strategies* to ensure victims of climate change are compensated, that appropriate mitigation efforts can be financed even in southern Africa, and that a transformed set of energy, transport, production, consumption, disposal and extraction systems are developed for a new age of human development not reliant upon fossil fuels.

First, consider a few seminal ideas about what is termed 'climate debt':

> 'The largest share of historical and current global emissions of greenhouse gases has originated in developed countries… [and should be redressed] on the basis of equity and in accordance with their common but differentiated responsibilities.' – United Nations Framework Convention on Climate Change, 1992
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> 'The sense of guilt or culpability or reparations – I just categorically reject that.' – Chief US climate negotiator Todd Stern on being asked about climate debt, December 2009 [1]
>
> 'We are not assigning guilt, merely responsibility. As they say in the US, if you break it, you buy it.' – Bolivian ambassador to the United Nations Pablo Solon, December 2009 [2]

There is just as much conflict over the trade in carbon, especially as it will affect Africa. In late March, 2011, the African Carbon Exchange launched to great fanfare in Nairobi, to lead "climate change business and sustainable development in the African continent." Grand expectations were raised about funding prospects, especially alongside the Green Climate Fund which a month later had its founding design meeting in Mexico City, where in absentia a co-chair was chosen from South Africa: National Planning Minister Trevor Manuel. In November 2010, Manuel had served on a United Nations panel that helped the Green Climate Fund fuse the $100 billion/year promise made by US Secretary of State Hillary Clinton at the 2009 Copenhagen climate summit, with the revival of market ideology in the 2010 Cancun climate

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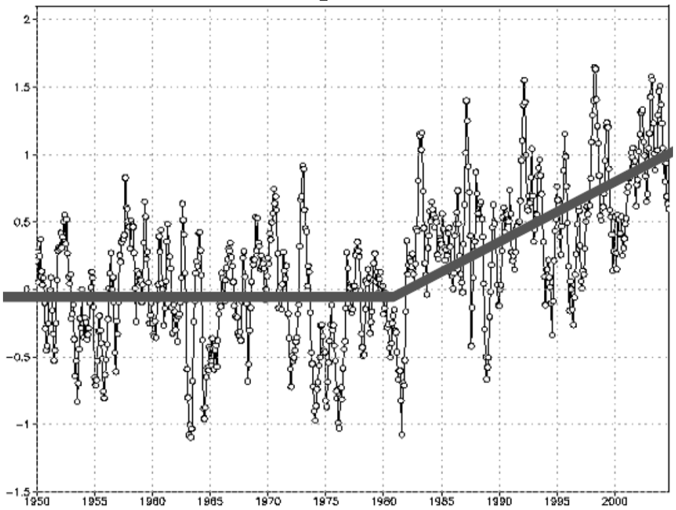
1. Spector, J. (2009), 'Todd Stern: US' Copenhagen good cop, bad cop, climate traffic cop', *New York Times,* 11 December.
2. Solon, P. (2009), 'Plurinational Government of Bolivia Press Release: Bolivia responds to US on climate debt: 'If you break it, you buy it.'', Copenhagen, 12 December.

summit. So while the Green Climate Fund is potentially a source of payments from North to South – 'if you break it, you buy it' – in reality it is another source of public subsidy to financial markets.

The contradictions between carbon trading and climate debt could not be more extreme, and yet the ability of UN bureaucrats and politicians from both North and South to muddle these divergent strategies has become a serious problem. The problems facing Africa represent damage on the scale of slavery and colonialism, and instead of 'the polluter pays' as the basis for a way forward, even some Africans of great stature (such as Manuel and Kenyan environmental icon Wangari Maathei) have convinced themselves that it is alright to *pay the polluter*, and to use financial markets that are demonstrably out of control.

2. Africa is owed

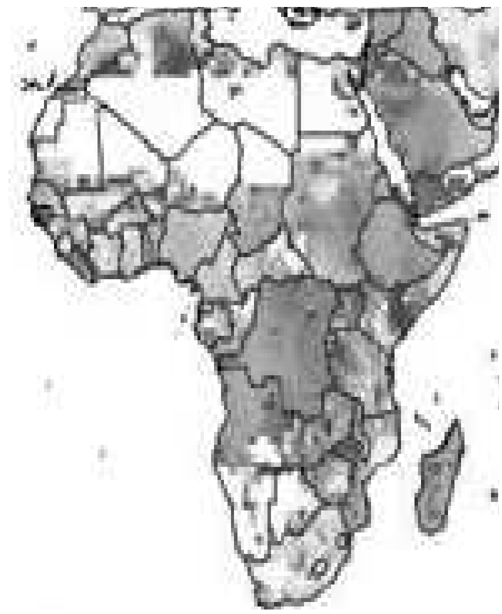
Southern African temperature rise, 1950-2005



Source: Mark Jury

Climate damage to Africa will include much more rapid desertification, more floods and droughts, worse water shortages, increased starvation, floods of climate refugees jamming shanty-packed megalopolises, and the spread of malarial and other diseases. Southern Africa has already witnessed a 1 degree rise, but the effects will be more extreme in coming decades. According to the director of the UN Intergovernmental Panel on Climate Change, R.K. Pachauri, 'In Africa, crop net revenues could fall by as much as 90% by 2100, with small-scale farmers being the most affected.' [3]

No area of Africa will be untouched (the white areas of the map on the right, including large parts of Angola, Namibia, Botswana and South Africa, are simply those with extremely low population densities). The darker the areas, the more subject to droughts, floods and extreme weather events. The regions likely to be most adversely affected are Central America, central South America, the Arabian Peninsula, Southeast Asia and much of Africa. The twenty countries anticipated to have the most extreme weather events include several in Africa: Djibouti, Kenya, Somalia, Mozambique, Ethiopia, Madagascar, Zambia and Zimbabwe. Many of these are also countries that are subject to extreme political instability, and although the World Bank's 2011 citation of 'fragile states' does not include obvious North African candidates, it is a marker of dangerous times ahead.



3. Pachauri, R.K. (2008), 'Summary of testimony provided to the House Select Committee on Energy Independence and Global Warming,' US Congress, Washington DC, globalwarming.house.gov/tools/assets/files/0342.pdf.

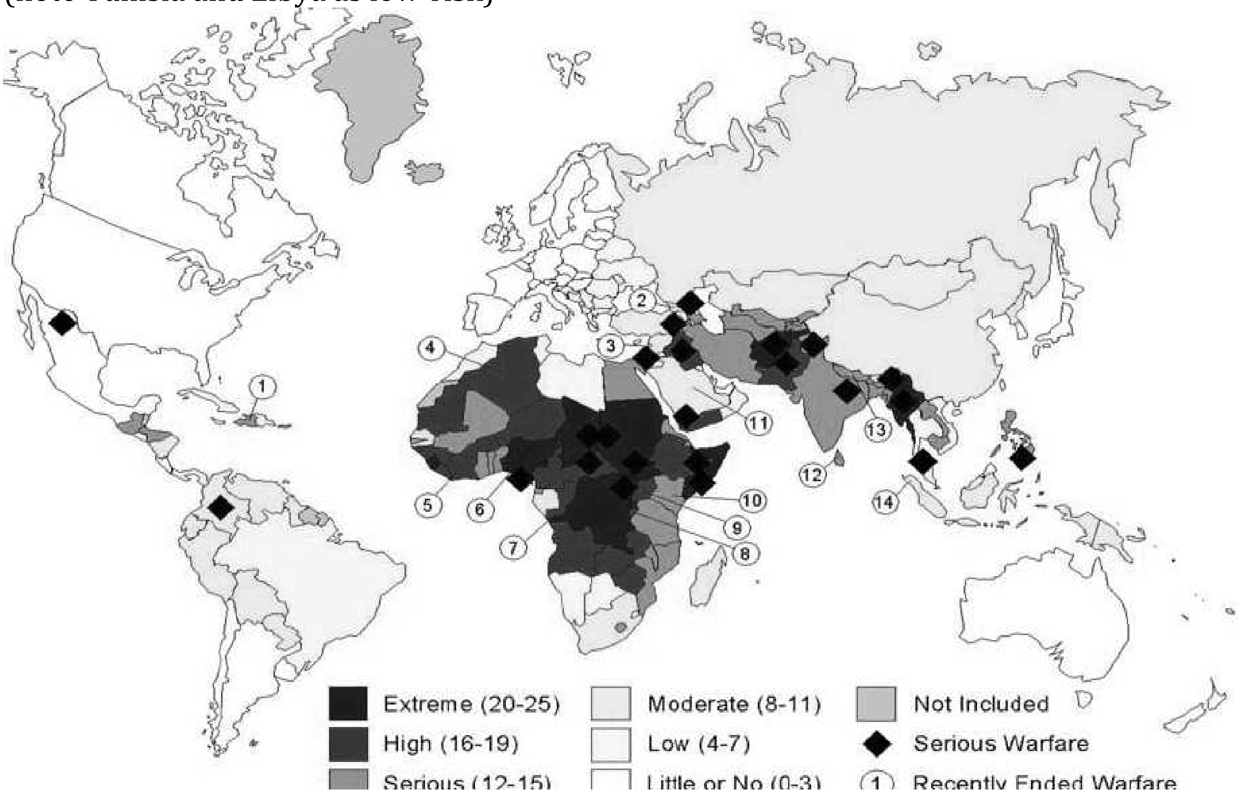
Countries to be most affected by extreme weather events in 2015

(source: David Wheeler, Center for Global Development, 'Quantifying Vulnerability to Climate Change)

	Vulnerability: Probability of Extreme Weather Impact (Per 100,000 Population)						Percent Contribution to Vulnerability Change, 2008-2015			
Country	Rank 2008	Rank 2015	2008	2015 Climate Only	2015 Climate + Income	2015 Climate + Income + Urbanization + Regulation	Climate	Income	Urbanization + Regulation	2015 Risk % Due to Climate Change (2008-2015)
China	3	1	6,772	25,072	19,933	17,720	71.3	20.0	8.6	61.78
Djibouti	1	2	13,709	14,281	14,167	14,331	67.3	13.4	19.3	4.34
India	7	3	2,599	11,704	9,531	9,153	78.1	18.6	3.2	71.61
Kenya	2	4	6,807	7,752	7,620	7,617	87.5	12.3	0.2	10.64
Somalia	8	5	2,382	4,011	3,807	5,482	46.4	5.8	47.7	56.55
Mozambique	4	6	4,576	5,133	5,028	5,269	61.6	11.7	26.7	13.14
Philippines	10	7	2,134	5,161	4,607	5,102	74.2	13.6	12.2	58.18
Bangladesh	19	8	823	5,487	4,611	4,844	80.8	15.2	4.0	83.01
Sri Lanka	6	9	3,458	4,304	4,072	4,558	54.1	14.8	31.1	24.12
Ethiopia	5	10	3,791	4,892	4,747	4,540	75.8	10.0	14.2	16.51
Vietnam	11	11	1,904	4,696	4,121	3,834	76.4	15.7	7.9	50.33
Bolivia	21	12	638	1,508	1,362	3,573	27.0	4.5	68.5	82.14
Hong Kong (China)	17	13	1,251	3,877	3,147	2,413	64.2	17.8	18.0	48.13
Cuba	9	14	2,190	2,221	2,213	2,227	59.0	15.2	25.8	1.63
Madagascar	14	15	1,314	2,203	2,076	2,122	83.6	12.0	4.4	38.09
Honduras	18	16	1,237	2,303	2,148	2,104	84.2	12.2	3.5	41.19
Thailand	16	17	1,271	1,996	1,813	1,863	75.7	19.1	5.2	31.77
Zambia	12	18	1,718	1,877	1,847	1,853	81.5	15.3	3.2	7.32
Colombia	15	19	1,299	2,026	1,892	1,781	74.8	13.8	11.4	27.08
Zimbabwe	13	20	1,692	1,714	1,709	1,721	55.3	13.2	31.5	1.69

Fragile states according to the World Bank's 2011 *Africa Regional Strategy*

(note Tunisia and Libya as low-risk)



There is no question that those most responsible should pay reparations, now that there is near-universal awareness of the damage being done by rising greenhouse gas emissions, and by the ongoing stubborn refusal by the rich to cut back. In 1997 at the Kyoto Protocol negotiations, the Global North offered to assist Africa financially through 'Clean Development Mechanism' (CDM) projects, in a context of declining overseas development aid associated with the end of the Cold War. Many African elites agreed, along with once reluctant environmental groups. Popular movements were unaware and uninvolved, and expert opinion was mixed about the efficacy and moral implications. The proponents of carbon trading argued that this would be the least painful – and least resisted – means of capping greenhouse gas emissions and allowing economies to adapt to new carbon constraints.[4]

However, by 2011, prospects were not good for the broader carbon markets into which CDMs fit as a small sideline (worth roughly 6.5% of the $125 billion in 2008 trades, a ratio that probably grew slightly on flat trading volume in 2009-11). And the share of CDM financing to Africa continued to be disproportionately low, around 3% of all CDM projects (and mostly emanating from South Africa, with its huge emissions and large cadre of environmental technical specialists). Given the dubious prospects for carbon trading already evident in myriad European Union Emissions Trading Scheme credibility crises and price volatility problems – with the 2008-09 'value' of a tonne of CO2 falling from €30 at peak to less than €9 – the question emerged in Africa in 2009: how to get the North to pay its fair share of the costs of Africa's adaptation bill?

2. The choice of carbon trading versus climate debt

Two answers emerged: stick with CDMs, or shift to climate debt demands. (These are not necessarily mutually exclusive, but do reflect a distinct divergence in analyses, strategies, tactics and alliances.) The first answer has been most vociferously articulated by two high-profile Africans, former Kenyan deputy environment minister and Nobel Peace Prize laureate Wangari Maathai, and former South African environment minister Marthinus van Schalkwyk. They assumed that the CDM and similar 'market-based mechanisms' for financing climate adaptation would continue to underpin global climate policy in the post-Kyoto period. Maathei promoted this position through her own Greenbelt Movement in the expectation that CDMs and emerging proposals for 'Reducing Emissions from Deforestation and Forest Degradation in Developing Countries' would reward tree-planting (both her indigenous strategy as well as monocultural timber plantations). She was also the leading proponent of the document 'Africa speaks up on Climate Change', which fed into the 'African Climate Appeal', which insists upon more CDM finance with fewer strings attached, especially for afforestation, as discussed in more detail below.[5]

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4. Market mechanisms – especially carbon trading and offsets – allow corporations and governments generating greenhouse gases to seemingly reduce their net emissions. They can do this, thanks to the Kyoto Protocol, by trading for others' 'certified emissions reductions' (e.g. CDM projects in the Third World) or emissions rights (e.g. Eastern Europe's 'hot air' that followed the 1990s economic collapse). The pro-trading rationale is that once property rights are granted to polluters for these emissions, even if given not auctioned (hence granting a generous giveaway), a 'cap' can be put on a country's or the world's total emissions. It will then be progressively lowered, if there is political will. So as to minimize adverse economic impact, corporations can stay within the cap even by emitting way above it, by buying others' rights to pollute. But this would lead to a more efficient adaptation of economies to pressures associated with a carbon tax.
5. Maathei's main institutional allies and funders were the Forum for Environment, Ethiopia and the Heinrich Boell Foundation (Ethiopia).

Van Schalkwyk has just as passionately promoted carbon trading, noting in 2006 that 'The 17 CDM projects in the pipeline in Sub-Sahara Africa account for only 1.7 per cent of the total of 990 projects worldwide. To build faith in the carbon market and to ensure that everyone shares in its benefits, we must address the obstacles that African countries face.' A year later, at the International Emissions Trading Association Forum in Washington, he argued, 'An all-encompassing global carbon market regime which includes all developed countries is the first and ultimate aim.' Van Schalkwyk was nominated by South Africa to be the replacement to Yvo de Boer as UNFCCC director in early 2010, but his candidacy failed, as Costa Rican Christina Figueras got the job.[6]

Instead, a different answer was to depart from the CDM approach, to criticize market-based strategies as inadequate, and to demand direct compensation. In mid-2009, the Ethiopian leader of the African Union's climate team, Meles Zenawi, began to pursue the latter strategy, insisting on at least $67 billion/year from the North to Africa to compensate for anticipated damages to Africa alone.

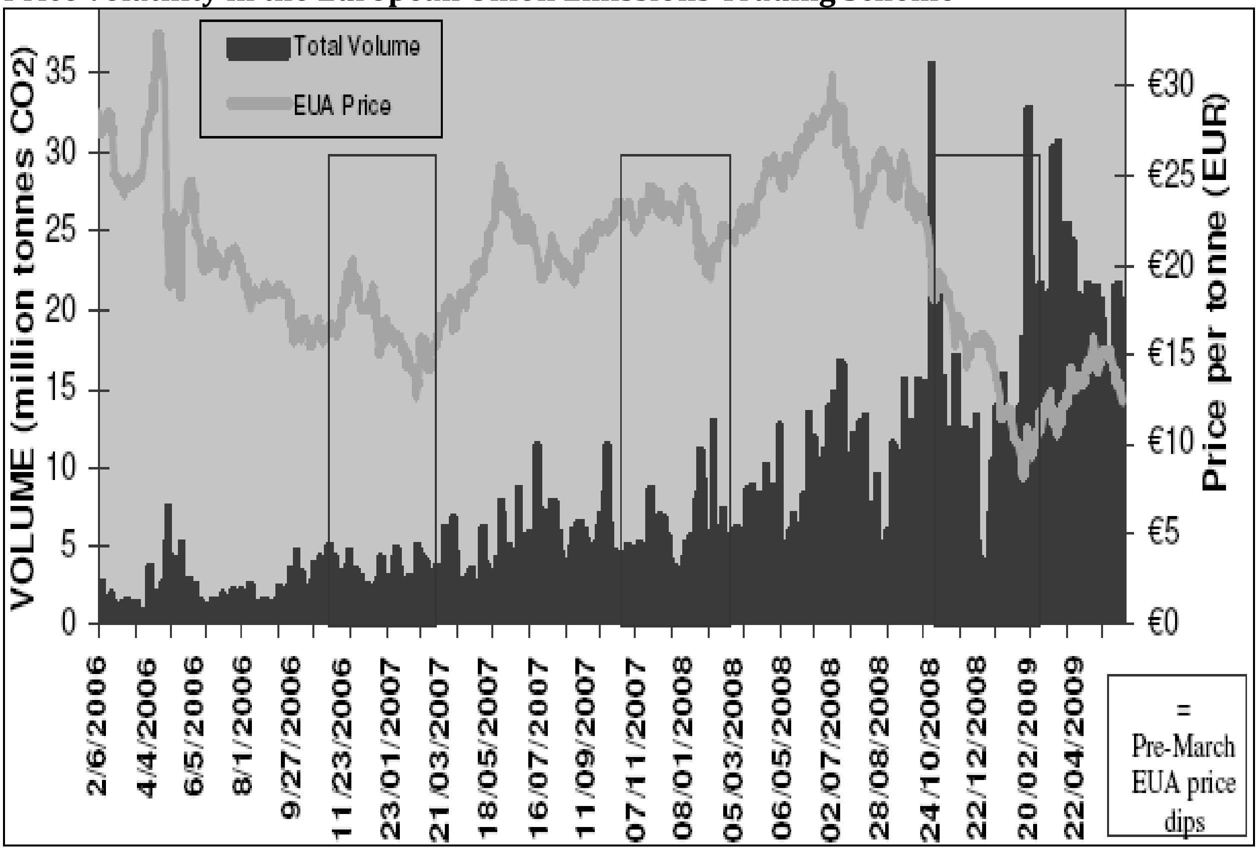
Critics of emissions trading argue that Zenawi was correct to seek a different route, for the carbon market isn't working:

- the idea of inventing a property right to pollute is effectively the 'privatization of the air', a moral problem given the vast and growing differentials in wealth inequalities;
- greenhouse gases are complex and their rising production creates a non-linear impact which cannot be reduced to a commodity exchange relationship (a tonne of $CO2$ produced in one place accommodated by reducing a tonne in another, as is the premise of the emissions trade);
- the corporations most guilty of pollution and the World Bank – which is most responsible for fossil fuel financing – are the driving forces behind the market, and can be expected to engage in systemic corruption to attract money into the market even if this prevents genuine emissions reductions;
- many of the offsetting projects – such as monocultural timber plantations, forest 'protection' and landfill methane-electricity projects – have devastating impacts on local communities and ecologies, and have been hotly contested in part because the carbon sequestered is far more temporary (since trees die) than the carbon emitted;
- the price of carbon determined in these markets is haywire, having crashed by half in a short period in April 2006 and by two-thirds in 2008, thus making mockery of the idea that there will be an effective market mechanism to make renewable energy a cost-effective investment;

6. Van Schalkwyk, M. (2007a), 'Minister of Environmental Affairs and Tourism M van Schalkwyk spells out SA's 'Climate Roadmap' for 2007 and beyond,' Pretoria, 14 March; Van Schalkwyk, M. (2007b), 'Keynote Adress', International Emissions Trading Association Forum, Washington, DC, 26 September. It must be acknowledged that van Schalkwyk's political skills are legendary, allowing him to overcome serious controversies: his role as apartheid spy in his youth, his leadership of the apartheid-era National Party (and then, to widespread derision, his dissolution of it into the ruling African National Congress party after the 2004 election in exchange for a junior ministry), his failure to make any statement against vastly expanded coal-fired power plants designed during his reign as environment/tourism minister, and his 2009 downgrading to merely tourism minister. Concerns about van Schalkwyk's suitability extend to South Africa's leading climate scientist, Richard Fuggle, who used his 2006 University of Cape Town retirement speech to describe van Schalkwyk as a 'political lightweight' who is 'unable to press for environmental considerations to take precedence of 'development''. Fuggle, R. (2006), 'We are still indifferent about the state of our environment', *Cape Times*, 6 December.

- there is a serious potential for carbon markets to become an out-of-control, multi-trillion dollar speculative bubble, similar to exotic financial instruments associated with Enron's 2002 collapse (indeed, many Enron employees populate the carbon markets);
- as a 'false solution' to climate change, carbon trading encourages merely small, incremental shifts, and thus distracts us from a wide range of transformative changes we need to make in materials extraction, production, distribution, consumption and disposal; and
- the idea of market solutions to market failure ('externalities') is an ideology that rarely makes sense, and especially not following the world's worst-ever financial market failure, and especially not when the very idea of derivatives – a financial asset whose underlying value is several degrees removed and also subject to extreme variability – was thrown into question.[7]

Price volatility in the European Union Emissions Trading Scheme



7. The analysis generated by Larry Lohmann is probably the most sophisticated, e.g., Lohmann, L. (2006), *Carbon Trading,* special issue of *Development Dialogue,* Dag Hammarskjold Foundation, http://www.dhf.uu.se/pdffiler/DD2006_48_carbon_trading/carbon_trading_web_HQ.pdf and more recently, Lohmann, L. (2010), 'Uncertainty markets and carbon markets: Variations on Polanyian themes', *New Political Economy;* Lohmann, L. (2009a), 'Climate as investment', *Development and Change;* Lohann, L. (2009b), 'Neoliberalism and the calculable world: The rise of carbon trading', in K. Birch, V.Mykhnenko and K.Trebeck (Eds.), *The Rise and Fall of Neoliberalism: The Collapse of an Economic Order*?, London, Zed Books; Lohmann, L. (2009c), 'Regulatory challenges for financial and carbon markets,' *Carbon & Climate Law Review*, 3, 2; and Lohmann, L. (2009d), 'Toward a different debate in environmental accounting: The cases of carbon and cost-benefit', *Accounting, Organisations and Society,* 34, 3-4. In addition, I have written about the choice between carbon markets and climate debt in Bond, P. (2009), 'Repaying Africa for Climate Crisis: Ecological Debt as Development Finance Alternative to Carbon Trading', in S. Böhm and S. Dabhi (Eds), *Upsetting the Offset: The Political Economy of Carbon Markets*, London, MayFlyBooks.

The apparent demise of carbon trading in the 2009-10 legislative session of the US Senate made this strategy a losing proposition not only for Africa but also at the global scale. Even without the expected Washington gridlock (mainly as a result of sabotage by powerful fossil fuel interests), carbon trading had crashed on its own terms by March 2010. 'The concept is in wide disrepute', reported the *New York Times* (25 March 2010), with US Senator Maria Cantwell explaining that 'cap and trade' (the US description) was 'discredited by the Wall Street crisis, the Enron scandal and the rocky start to a carbon credits trading system in Europe that has been subject to dizzying price fluctuations and widespread fraud.'[8]

To be sure, one wing of civil society still endorses carbon trading, in part perhaps because some major institutions and individuals suffer from substantial conflicts of interest as carbon-traders.[9] But increasingly, carbon trading appears as a 'false solution', in contrast to the alterative financing source for climate damage: the North's payment of its climate debt to the South for excess use of environmental space and for the problems caused in many ecosystems already, and in future when vast eco-social crises are anticipated especially in Africa. What, then, is the character of the 'ecological debt', especially the climate debt?

3. Demanding ecological and climate debt repayment

According to the Quito group Accion Ecologica: 'ecological debt is the debt accumulated by Northern, industrial countries toward Third World countries on account of resource plundering, environmental damages, and the free occupation of environmental space to deposit wastes, such as greenhouse gases, from the industrial countries.'[10] The term came into professional use in 1992 at the Earth Summit of the United Nations in Rio de Janeiro of 1992, with NGOs promoting the concept through an 'Alternative Treaty'.

An initial voice was the Institute of Political Ecology in Santiago, Chile, and contributed to world consciousness about ChloroFluoroCarbon damage to the ozone layer. A Colombian lawyer, José María Borrero, wrote a 1994 book on the topic, and further research and advocacy was provided by the Foundation for Research on the Protection of the Environment, and then Jubilee South. By 1999 Friends of the Earth International and Christian Aid agreed to campaign against Ecological Debt, especially in relation to climate damage. In Africa, amongst the main advocates of Ecological Debt repayment were churches, especially the Economic Justice

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8. But neither was Cantwell's own alternative 'cap and dividend' legislation sufficiently strong on making cuts or committing to pay carbon debt for it to gain genuine traction amongst environmental advocates. Most scientists insist that at least an 80% drop in emissions will be necessary within four decades, with the major cuts before 2020. To achieve this, carbon markets won't work, as the leading US climate scientist, James Hansen, concluded in leading the intellectual opposition to US president Barack Obama's cap and trade scheme. Obama's legislation – the Waxman-Markey bill that passed the US House of Representatives in June 2009 (with similar Senate legislation on hold in 2010) – was so profoundly flawed that the more ambitious wing of environmental civil society argued it should be scrapped, not only because of its orientation to carbon markets, but simultaneously its destruction of Environmental Protection Agency powers to regulate carbon pollution, plus the legislation's subsidization of fossil fuels and offsets. See Annie Leonard's film 'Story of Cap and Trade' at http://www.storyofstuff.org and analyses by, e.g, the groups Center for Biological Diversity, Climate SOS and the Sustainable Energy and Economy Network, at http://www.biologicaldiversity.org/action/toolbox/ACESA/sign-on_letter.html, http://www.climatesos.org and http://www.seen.org .

9. Bond, P. (2009a), 'A timely death?', *New Internationalist,* January, http://www.newint.org/features/2009/01/01/climate-justice-false-solutions/ According to Michael Dorsey, professor of political ecology at the US's Dartmouth College, 'After more than a decade of failed politicking [on behalf of carbon trading], many NGO types... are only partially jumping off the sinking ship – so as to work for industries driving the problem. Unfortunately, many continue to influence NGO policy from their current positions, while failing to admit to or even understand obvious conflicts of interest'.

10. Accion Ecologica (2000), 'Trade, climate change and the ecological debt,' Unpublished paper, Quito.

Network of Southern Africa led by Malcolm Damon and Francis Ng'ambi. Other regional initiatives continued, moving to the global stage by 2009. The World Development Movement and Jubilee Debt Campaign (UK) produced a major campaign document in late 2009,[11] at the same time as an influential article by Canadian journalist/campaigner Naomi Klein in *Rolling Stone* magazine.[12]

The leading scientist in the field, Autonomous University of Barcelona's Joan Martinez-Alier, calculates ecological debt in many forms: 'nutrients in exports including virtual water, the oil and minerals no longer available, the biodiversity destroyed, sulfur dioxide emitted by copper smelters, the mine tailings, the harms to health from flower exports, the pollution of water by mining, the commercial use of information and knowledge on genetic resources, when they have been appropriated gratis ('biopiracy'), and agricultural genetic resources.' As for the North's 'lack of payment for environmental services or for the disproportionate use of Environmental Space,' Martinez-Alier criticizes 'imports of solid or liquid toxic waste, and free disposal of gas residues (carbon dioxide, CFCs, etc).' According to Martinez-Alier:

> The notion of an Ecological Debt is not particularly radical. Think of the environmental liabilities incurred by firms (under the United States Superfund legislation), or of the engineering field called 'restoration ecology', or the proposals by the Swedish government in the early 1990s to calculate the country's environmental debt.[13]

The sums involved are potentially vast. As Martinez-Alier puts it, 'tropical rainforests used for wood exports have an extraordinary past we will never know and ongoing biodiversity whose destruction we cannot begin to value.' However, 'although it is not possible to make an exact accounting, it is necessary to establish the principal categories and certain orders of magnitude in order to stimulate discussion… If we take the present human-made emissions of carbon, [this represents] a total annual subsidy of $75 billion is forthcoming from South to North.'[14] Leading ecofeminist Vandana Shiva[15] and former South Centre director Yash Tandon[16] estimate that wild seed varieties alone account for $66 billion in annual biopiracy benefits to the US. There are dozens of examples of biopiracy in Africa, according to a 2005 study commissioned by the Edmonds Institute and African Centre for Biosafety.[17]

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11. World Development Movement and Jubilee Debt Campaign (2009), 'The climate debt crisis: Why paying our dues is essential for tackling climate change', London, November, http://www.wdm.org.uk/climatedebtreport/
12. Klein, N. (2009), 'Climate rage', *Rolling Stone,* 11 November.
13. Martinez-Alier, J. (2003), 'Marxism, Social Metabolism and Ecologically Unequal Exchange', Paper presented at Lund University Conference on World Systems Theory and the Environment, 19-22 September.
14. Ibid.
15. Shiva, V. (2005), 'Beyond the WTO Ministerial in Hong Kong', ZNet Commentary, 26 December.
16. http://www.globalpolicy.org/socecon/develop/devthry/well-being/2000/tandon.htm
17. They include:

- three dozen cases of African resources – worth $billions – captured by firms for resale without adequate 'Access and Benefit Sharing' agreements between producers and the people who first used the natural products;
- diabetes drug produced by a Kenyan microbe and Libyan/Ethiopian treatment;
- antibiotics from Gambian termite hill and giant West African land snails;
- antifungal from Namibian giraffe and nematocidal fungi from Burkina Faso;
- infection-fighting amoeba from Mauritius;
- Congo (Brazzaville) treatment for impotence;
- vaccines from Egyptian microbes;
- South African and Namibian indigenous appetite suppressant Hoodia;
- drug addiction treatments, multipurpose kombo butter from Central, W.Africa;
- beauty, healing treatment from Okoumé resin in Central Africa;

A partial ecological debt accounting was published by environmental scientists in early 2008, and counted $1.8 trillion in concrete damages over several decades.[18] According to co-author Richard Norgaard, ecological economist at the University of California, Berkeley, generated a crucial finding: 'At least to some extent, the rich nations have developed at the expense of the poor, and, in effect, there is a debt to the poor.'[19] The study included factors such as greenhouse gas emissions, ozone layer depletion, agriculture, deforestation, overfishing, and the conversion of mangrove swamps into shrimp farms, but did not (so far) succeed in calculating other damages, e.g. excessive freshwater withdrawals, destruction of coral reefs, bio-diversity loss, invasive species, and war.

Another route into the intellectual challenge of calculating ecological debt was taken by the World Bank in its estimates of tangible wealth (in the 2006 book *Where is the Wealth of Nations?*). In addition to resource depletion and rent outflows, there are also other subsoil assets, timber resources, nontimber forest resources, protected areas, cropland and pastureland to account for. The 'produced capital' normally captured in GDP accounting is added to the tangible wealth, but the result of a 'genuine wealth' accounting leaves vast negative adjustments to every African country. With the sole exceptions of Botswana, Mauritius, Namibia, Seychelles and Swaziland, all others have explicitly negative net year-on-year changes once environmental corrections to GDP are made (using 2000 as a sample year).[20] In sum, notwithstanding the World Bank's conservative counting bias,[21] Africa shows evidence of net per capita 'wealth' reduction, largely traceable to the extraction of nonrenewable resources that is not counterbalanced by capital investment from firms doing the extraction.

In this context of systemized looting of resources (as even acknowledged by the World Bank), Bolivia at least began the process of making climate debt a concept more broadly understood within the international discourse. That country's submission to the UNFCCC in 2009 made the demand explicitly:

> The climate debt of developed countries must be repaid, and this payment must begin with the outcomes to be agreed in Copenhagen. Developing countries are not seeking economic handouts to solve a problem we did not cause. What we call for is full payment of the debt owed to us by developed countries for threatening the integrity of the Earth's climate

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- skin and hair care from the argan tree in Morocco, Egyptian 'Pharaoh's Wheat', bambara groundnut and 'resurrection plant';
- endophytes and improved fescues from Algeria and Morocco;
- groundnuts from Malawi, Senegal, Mozambique, Sudan and Nigeria;
- Tanzanian impatiens; and
- molluscicides from the Horn of Africa.

McGown, J. (2006), 'Out of Africa: Mysteries of Access and Benefit Sharing', Edmonds Washington, the Edmonds Institute and Johannesburg, the African Centre for Biosafety.

18. Srinivasan, U., S.Carey, E.Hallstein, P.Higgins, A.Ker, L.Koteen, A.Smith, R.Watson, J.Harte and R.Norgaard (2008), 'The debt of nations and the distribution of ecological impacts from human activities', *Proceedings of the National Academy of Sciences of the United States of America*, 105, 5, http://www.pnas.org/content/105/5/1768.

19. *Guardian* (2008), 'Rich countries owe poor a huge environmental debt', 21 January, http://www.guardian.co.uk/science/2008/jan/21/environmental.debt1.

20. World Bank (2006), *Where is the Wealth of Nations?,* Washington, DC, p.66.

21. The Bank's estimates are conservative for at least three reasons: a minimalist definition based upon international pricing in 2000 (not potential future values when scarcity becomes a more crucial factor, especially in the oil industry); the partial calculation of damages to the local environment, to workers' health/safety, and especially to women in communities around mines; and the Bank's use of average – not marginal – cost resource rents also probably leads to underestimations of the depletion costs.

> system, for over-consuming a shared resource that belongs fairly and equally to all people, and for maintaining lifestyles that continue to threaten the lives and livelihoods of the poor majority of the planet's population… Any solution that does not ensure an equitable distribution of the Earth's limited capacity to absorb greenhouse gases, as well as the costs of mitigating and adapting to climate change, is destined to fail.[22]

In addition to Bolivia, the Cumana Declaration was signed by Cuba, Dominica, Honduras (prior to the coup), Nicaragua and Venezuela, and included the argument that

> developed countries are in an environmental debt to the world because they are responsible for 70% of historical carbon emissions into the atmosphere since 1750. Developed countries should pay off their debt to humankind and the planet; they should provide significant resources to a fund so that developing countries can embark upon a growth model which does not repeat the serious impacts of the capitalist industrialization.[23]

4. Africa united then divided on climate debt

How did African governments react to the new narrative around ecological debt? In general, with a few exceptions, the post-colonial leadership of African states has cooperated with those institutions doing the resource extraction and over-utilizing Africa's ecological space, in spite of persistent complaints by exploited communities, by workers subject to safety/health violations and exploitation, by environmentalists and by patriotic nationalists. However, finally in mid-2009, the African Union's leadership on climate issues became a force to be reckoned with.

One impulse came in a statement by Lesotho, chair of the LDC group, at the Bonn negotiations in June 2009: 'Failure to combat climate change will increase poverty and hardship in our nations, and increase the debts owed to us for excessive emissions by the developed countries.' Within a few weeks, the same arguments were being very vocally articulated by Zenawi, who also chaired the New Partnership for Africa's Development and thus was invited to G20 gatherings along with the South African government. Zenawi's record of service to US security interests, ideological zigzagging, contradictory signaling and repression of local civil society activists suggested that it might ultimately be counterproductive for Zenawi to lead the climate debt campaign.[24] Still, someone from Africa was compelled to express the extreme costs to the continent of the debt, so prior to December 2009, Zenawi played that role.

The African elites could marshal an implied threat: repeating their performance in Seattle in 1999 and Cancun in 2003, when denial of consent in World Trade Organisation negotiations were the proximate cause of the summits' collapse on both occasions. On September 3, 2009, Zenawi issued a strong threat from Addis Ababa about the upcoming Copenhagen conference: 'If need be we are prepared to walk out of any negotiations that threatens to be another rape of our continent.'[25] To gather sufficient power, Zenawi established the Conference of African Heads of State and Government on Climate Change: chairpersons of the AU and the AU

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22. Republic of Bolivia (2009), 'Submission to the Ad Hoc Working Group on Long-term Cooperative Action under the UN Framework Convention on Climate Change,' La Paz, April.
23. Heads of State of Bolivia, Cuba, Dominica, Honduras, Nicaragua and Venezuela (2009), 'Declaration', Cumana.
24. McLure, J. (2009), 'Ethiopian leader chosen to represent Africa at climate summit,' Addis Ababa, 1 September.
25. Ashine, A. (2009), 'Africa threatens withdrawal from climate talks', *The Nation,* 3 September.

Commission, representatives of Ethiopia, Algeria, the Democratic Republic of Congo, Kenya, Mauritius, Mozambique, Nigeria, Uganda, Chairpersons of the African Ministerial Conference on Environment and Technical Negotiators on climate change from all member states. They met at the AU Summit in Sirte, Libya in July 2009, agreeing that Africa would have a sole delegation to Copenhagen with a united front and demands for compensation. According to AU official Abebe Hailegabriel, 'Trillions of dollars might not be enough in compensation. Thus there must be an assessment of the impact before the figure.' Added AU head Jean Ping, 'Africa's development aspirations are at stake unless urgent steps are taken to address the problems of climate change. Climate change will fundamentally affect productivity, increase the prevalence of disease and poverty... and trigger conflict and war'. [26]

The most important African negotiator – and largest CO2 emitter (responsible for more than 40% of the continent's CO2) – is South Africa. [27] Aside from ostensibly preventing climate change that could have an especially devastating impact in South Africa, Pretoria's climate negotiators have two conflicting agendas: increasing Northern payments to Africa (a longstanding objective of the New Partnership for Africa's Development, which unsuccessfully requested $64 billion per annum in aid and investment concessions during the early 2000s); and increasing South Africa's own rates of CO2 outputs through around 2030-35, when the Long-Term Mitigation Scenario – South Africa's official (albeit non-binding) climate strategy – would come into effect. Only then are absolute emissions declines offered as a scenario. In the meantime, Pretoria has earmarked more than $100 billion for emissions-intensive coal and nuclear fired electricity generation plants due to be constructed during 2010-15, which would amplify Africa's climate crisis, requiring more resources from the North for adaptation.

Thus far, South Africa does not, officially, see itself as a climate creditor, in spite of strong climate debt advocacy by the new Climate Justice Now! South Africa movement, especially in February-April 2010 when the World Bank considered and then granted a $3.75 billion loan to Eskom primarily for the construction of the world's fourth-largest coal-fired power plant. As explained by environment minister Buyelwa Sonjica in September 2009: 'We expect money. We need money to be made available... we need money as of yesterday for adaptation and mitigation.'[28] South African negotiators also lead the G77, and are on record from August 2009 demanding that 'at least 1% of global GDP should be set aside by rich nations' so as, according to one report, to

> help developing countries conduct research, improve flood control, protect their coastlines, create seed banks and take other steps to cope with the severe storms and droughts linked to climate change. The money also could help poor countries obtain technology to reduce their carbon emissions. Alf Wills, a top South African environmental official, summed up the position going into Copenhagen: 'No money, no deal.' [29]

The effect of this rhetoric appeared to entail some immediate concessions. In September 2009, the European Union announced it would begin paying its climate debt, but only up to $22 billion annually to fund adaptation, roughly 1/7th of what EU environment commissioner Stavros Dimas observed would be required by 2020 ($145 bn). Some of that would be subtracted from existing aid. The EU damage estimates were considered far too conservative,

26. Bond, P. (2009b), 'Don't play games with humanity's future', *The Mercury,* 2 September.
27. Bond, P., R.Dada and G.Erion (2009), *Climate Change, Carbon Trading and Civil Society,* Pietermaritzburg, University of KwaZulu-Natal Press.
28. Sapa (2009a), 'SA not 'compromising anything' at climate change negotiations' – Sonjica,' 15 September.
29. Sapa (2009b), 'SA on climate change: 'No money, no deal'', 5 August.

as China's mitigation and adaptation costs alone would be $438 billion annually by 2030, according to Beijing. According to one report, the EU view is that emissions trading should be the basis of 'much of the shortfall': 'The international carbon market, if designed properly, will create an increasing financial flow to developing countries and could potentially deliver as much as €38bn per year in 2020.' [30]

Because this offer was widely judged as inadequate, Zenawi carried out a trial run of his walk-out threat just prior to Copenhagen, in November 2009 at a Barcelona UNFCCC meeting. Sufficient concessions were not on the table, so his technical negotiators registered a protest. But at the crucial moment in Copenhagen, during the final week when heads of state would arrive to negotiate a new protocol, Zenawi diverted his own flight from Addis Ababa via Paris, where he met French premier Nicolas Sarkozy. Shortly thereafter, he announced the halving of Africa's climate debt demands.[31] According to Mithika Mwenda of the Pan African Climate Justice Alliance, this act had the effect of 'undermining the bold positions of our negotiators and ministers represented here, and threatening the very future of Africa… Meles wants to sell out the lives and hopes of Africans for a pittance. Every other African country has committed to policy based on the science.'[32]

Then on 17 December, US Secretary of State Hillary Rodham Clinton made an offer:

> … in the context of a strong accord in which all major economies stand behind meaningful mitigation actions and provide full transparency as to their implementation, the United States is prepared to work with other countries toward a goal of jointly mobilizing $100 billion a year by 2020 to address the climate change needs of developing countries. We expect this funding will come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance.[33]

Yet there was no firm line-item in the US budget to this end, just a promise (the US had regularly broken similar aid promises in the past, and at the same time Obama was cutting back AIDS medicines funding to Africa). The private sources of finances alone could easily exceed $100 billion, with CDMs at the time in excess of 6% of the $125 billion emissions markets. If, as predicted, the size of the 2020 carbon market reached $3 trillion, it would take just 3.3% dedicated to CDMs to reach the $100 billion target. So given the private sourcing and likelihoods of loans not grants, Clinton's offer could readily be rejected as meaningless.

The following day, US President Barack Obama arrived and at the end of a long negotiating period, persuaded leaders of the BASIC countries – Brazil, South Africa, India and China – to sign the Copenhagen Accord at literally the climate summit's last minute. The December 18 deal followed extremely harsh police repression against nonviolent protesters outside the Bella Center. Inside, Denmark's conservative ruling party leaders set up a 'Green Room' process where 26 countries were cherry-picked to represent the world. When even that small group deadlocked – allegedly due to Chinese intransigence and the overall weak parameters set by the US, the five leaders – Obama, Lula da Silva, Zuma, Manmohan Singh, and Wen Jiabao – attempted a face-saving last gasp.

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30. Chaffin, J. and E. Crooks (2009), 'EU sets out €15bn climate aid plan', *Financial Times,* 8 September.
31. Vidal, J. 'Copenhagen: Head of African bloc calls on poorer nations to compromise over climate funding,' *The Guardian*, December 16, 2009.
32. Reddy, T. (2009), 'From African Walk Out to Sell Out,' *Climate Chronicle*, 18 December.
33. Clinton, H.R. (2009), 'Secretary of State Hillary Rodham Clinton at the United Nations Framework Convention on Climate Change', US State Department, 17 December, Copenhagen.

The Copenhagen Accord, 18 December 2009

Instead of 350 parts per million (ppm) of carbon in the atmosphere as 'required by science' (as the popular advocacy phrase goes), the Copenhagen Accord signatories promised 15 percent emissions cuts from 1990 levels by 2020, which could translate into a 10 percent increase once carbon trading and offset loopholes are factored in. The result would be 770 ppm by century's end, at least a 3.5 C increase, which scientists say will certainly destroy the planet. Moreover, there were no clear sources of financing nor explicit commitments to pay the North's climate debt, which by then was being estimated at $400 billion per year by 2020.[34] Moreover, the Accord departed from Kyoto Protocol and Bali Action Plan principles, which set out much more ambitious targets for richer countries than poorer countries. And the Accord contains no legally binding components or compliance mechanisms.

Most significant was Obama's refusal to lead the North to make 45 percent emissions cuts and offer payment of the climate debt, and instead engage in a process of leadership so flawed that 350.org leader Bill McKibben charged that 'he blew up the United Nations.'[35] Economist Jeffrey Sachs also accused Obama of abandoning 'the UN framework, because it was proving nettlesome to U.S. power and domestic politics. Obama's decision to declare a phony negotiating victory undermines the UN process by signaling that rich countries will do what they want and must no longer listen to the 'pesky' concerns of many smaller and poorer countries.' The idea that the UN is too unwieldy for climate talks surfaced repeatedly in subsequent weeks. The Accord is 'insincere, inconsistent, and unconvincing,' Sachs continued, 'unlikely to accomplish anything real. It is non-binding and will probably strengthen the forces of opposition to emissions reductions.' Moreover, Clinton's 'announcements about money a decade from now are mostly empty words. They do not bind the rich countries at all.'[36]

As Naomi Klein summed up, the Accord is 'nothing more than a grubby pact between the world's biggest emitters: I'll pretend that you are doing something about climate change if you pretend that I am too. Deal? Deal.'[37] George Monbiot compared Copenhagen in 2009 to the 1884-85 Berlin negotiations known as the 'Scramble for Africa,' which divided and conquered

34. World Development Movement (2009), 'Facts Behind the Climate Finance Figures,' December 18, 2009, online at: http://www.wdm.org.uk/facts-behind-climate-finance-figures.
35. McKibben, B. (2009) 'With Climate Agreement, Obama Guts Progressive Values, argues McKibben,' 18 December, http://www.grist.org/article/2009-12-18-with-climate-agreement-obama-guts-progressive-values/#comments.
36. Sachs, J. (2009), 'Obama as Climate Change Villain,' 21 December, http://www.project-syndicate.org/commentary/sachs161
37. Klein, N. (2009), 'For Obama, no opportunity too big to blow,' *The Nation*, 21 December.

the continent.[38] The African Union was twisted and u-turned to support Zuma's capitulation by Zenawi. Even on its own terms, the Copenhagen Accord failed, as the first target date – January 31st 2010 for signing on and declaring cuts for carbon emissions – was missed by dozens of countries, leaving UN climate chief de Boer to concede that deadlines were 'soft.'[39]

Several countries had insisted on climate debt as a negotiating framework even before Copenhagen, including Venezuela, Paraguay, Malaysia and Sri Lanka. But in Africa, only Sudan stood out, partly because its UN Ambassador, Lumumba di-Aping, had such a visible role as G77 chief negotiator. At one point, when briefing civil society a week before the fatal Copenhagen Accord deal, he 'sat silently, tears rolling down his face,' according to a report, and then said, simply, 'We have been asked to sign a suicide pact.' For much of the continent, said Di-Aping, 2 degrees C globally meant 3.5 degrees C: 'certain death for Africa', a type of 'climate fascism' imposed on Africa by polluters, in exchange for which the Third World would get a measly $10 billion per year in 'fast track' funding, although '$10 billion is not enough to buy us coffins'. Agreeing with leading US climate scientist James Hansen, the Copenhagen deal on offer was 'worse than no deal', said Di-Aping, concluding, 'I would rather die with my dignity than sign a deal that will channel my people into a furnace.' As for the main negotiator, he had this prophesy: 'What is Obama going to tell his daughters? That their [Kenyan] relatives' lives are not worth anything? It is unfortunate that after 500 years-plus of interaction with the West we [Africans] are still considered "disposables".'[40]

5. Civil society ups the ante

Against malevolent states and industries addicted to fossil fuels, there usually arises opposition from civil society. But between a relatively small number of environmental NGOs and other organizations, there are important strategic divisions on how to tackle climate change, whether to address climate debt and what to do about carbon trading. For example, the network headed by Wangari Maathai (based in Nairobi and Addis Ababa) offered a supportive statement on reform of CDMs and did not mention climate debt in a mid-2009 document:

> African governments should ensure that there is equity in geographical distribution of CDM projects and that this is entrenched in the international policy process. They should negotiate for the requirement of up front funding of CDM projects to be waived for many African countries who cannot afford it. The appeal calls upon African countries to embark on the development of CDM capacities and projects including capacity building and development of centers of incubation for CDM projects. African governments should explore possibilities of accessing grants to provide upfront funding for CDM projects and also project development and financing through bilateral arrangements. [41]

Maathei criticized three existing funds – the Special Climate Change Fund, the Least Developed Countries Fund and the Bali Adaptation Fund – because

38. Monbiot, G. (2009), 'Scramble for the atmosphere,' *The Guardian*, 19 December.
39. As *New York Times* reporters remarked, 'Just a month after world leaders fashioned a tentative and nonbinding agreement at the climate change summit meeting in Copenhagen, the deal already appears at risk of coming undone.' John Broder and Elisabeth Rosenthal, 'U.N. Official Says Climate Deal is at Risk,' *The New York Times*, January 20, 2010.
40. Welz, A. (2009), 'Emotional scenes at Copenhagen', adamwelz.wordpress.com/.../emotional-scenes-at-copenhagen-lumumba-di-aping-africa-civil-society-meeting-8-dec-2009/.
41. Matthei, W. (2009), 'African climate change appeal', Nairobi, http://www.ecobuild-africa.com.

> these funds have not been able to address concerns of African countries on adaptation, namely: access, adequacy and equitable geographical distribution. The funds are largely inadequate and inappropriately structured; currently relying on a 2% levy on CDM projects. Access to the funds has been made difficult, among others, by bureaucratic bottlenecks of the Global Environmental Fund and the World Bank. This problem has been diagnosed but the position of African governments on their preferred way forward remains vague. Lastly, the funds are structured in a way that replicates many structural problems manifest in the CDM resulting in eschewed access in favour of stronger economies from developing countries. [42]

Instead of requesting more CDM carbon trading funds, many more civil society groups instead insisted on raising climate debt as the optimal financing route. In August 2008, Africa chapters of Jubilee South converged in Nairobi to debunk limited 'debt relief' by Northern powers and to plan the next stage of financial campaigning. Nairobi-based Africa Jubilee South co-coordinator Njoki Njehu concluded, 'Africa and the rest of the Global South are owed a huge historical and ecological debt for slavery, colonialism, and centuries of exploitation.'[43]

In subsequent months, across the world, increasing numbers of social movements led by indigenous peoples explicitly demanded climate debt repayment. The Anchorage Declaration by indigenous people from the Arctic, North America, Asia, Pacific, Latin America, Africa, the Caribbean and Russia issued a statement calling 'on the UNFCCC to recognize the historical and ecological debt of the Annex 1 countries in contributing to greenhouse gas emissions. We call on these countries to pay this historical debt.' [44] A major Trade Union Conference of the Americas (albeit without participation from the US and Canada) insisted that 'Climate justice will only be reached when the Rich States of the North recognize this environmental debt, which also entails a drastic and urgent reduction of their contaminating emissions, the provision of funds for poor countries for climate change mitigation and adaptation processes, and the transfer of 'clean' technologies to the global south for the development of environmentally sustainable productive processes.' [45] And in Kenya, the Pan African Climate Justice Alliance of 63 NGOs argued,

> For their disproportionate contribution to the causes of climate change – denying developing countries their fair share of atmospheric space – the developed countries have run up an 'emissions debt'. These excessive emissions, in turn, are the principal cause of the current adverse effects experienced by developing countries, particularly in Africa. For their disproportionate contribution to the effects of climate change – causing rising costs and damage in our countries that must now adapt to climate change – the developed countries have run up an 'adaptation debt'. Together the sum of these debts – emissions debt and adaptation debt – constitutes the climate debt. Proposals by developed countries in the climate negotiations, on both mitigation and adaptation, are inadequate. They seek to pass on the costs of adaptation and mitigation, avoiding their responsibility to finance climate change response efforts in Africa. They also seek to write-off rather than reduce their emissions and continue their high per-capita emissions. This would deepen their debt

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42. Ibid.
43. Bond, P. and D.Brutus (2008), 'Ecological debt and our centre's survival', ZCommentaries, 21 August, http://www.zcommunications.org/zspace/commentaries/3594.
44. Indigenous Peoples' Global Summit on Climate Change (2009), 'Anchorage Declaration', Anchorage, Alaska, 24 April.
45. Trade Union Conference of the Americas (2009), 'Statement'.

> and deny atmospheric space to the developing countries like ours, which would be asked to crowd into a small and shrinking remainder. We therefore call on developed countries to fully, effectively and immediately repay the climate debt they owe to African countries. [46]

Also in Nairobi at the same time, the Africa Peoples Movement on Climate Change pronounced:

> … The people of Africa, as well as other developing nations are creditors of a massive ecological debt;
> This ecological debt continues to accrue today through the continued plunder and exploitation of Africa's resources, its people, labor, and economies;
> … We reject the principle and application of Carbon Trading, which is a false solution based on inventing a perverse property right to pollute. A property right to air;
> … We support the call by African leaders for reparations on Climate Change and support the initiative of the upcoming AU ministers of environment meeting and call for African governments to embrace more people centered alternatives for the African peoples.[47]

Another node of ecological debt organizing was the World Council of Churches (WCC), whose Central Committee was lobbied for years by a senior staffer (and former Tanzanian Council of Churches secretary) Rogate Mshana, and finally adopted a formal statement in September 2009 on the North's 'deep moral obligation to promote ecological justice by addressing our debts to peoples most affected by ecological destruction and to the earth itself.' It is useful to consider the WCC's analysis because it does not stop at the debt, but attacks the mode of production itself:

> We call for the recognition, repayment and restitution of ecological debt in various ways, including non-market ways of compensation and reparation, that go beyond the market's limited ability to measure and distribute... This warrants a re-ordering of economic paradigms from consumerist, exploitive models to models that are respectful of localized economies, indigenous cultures and spiritualities, the earth's reproductive limits, as well as the right of other life forms to blossom. And this begins with the recognition of ecological debt. [48]

The most extensive statement from civil society had more than 230 supporters, and was circulated by Action Aid, Africa Action and the Third World Network during 2009. Excerpts included these demands:

> For their disproportionate contribution to the causes and consequences of climate change, developed countries owe a two-fold climate debt to the poor majority:
> For their excessive historical and current per person emissions – denying developing countries their fair share of atmospheric space – they have run up an 'emissions debt' to developing countries; and

46. PanAfrican Climate Justice Alliance (2009), 'Statement', Nairobi.
47. Africa Peoples Movement on Climate Change (2009), 'Confronting the Climate Crisis: Preparing for Copenhagen and Beyond', Nairobi, 30 August, http://www.iboninternational.org
48. World Council of Churches Central Committee (2009), 'Statement on eco-justice and ecological debt,' Geneva, 2 September.

For their disproportionate contribution to the effects of climate change – requiring developing countries to adapt to rising climate impacts and damage – they have run up an 'adaptation debt' to developing countries.

Together the sum of these debts – emissions debt and adaptation debt – constitutes their climate debt, which is part of a larger ecological, social and economic debt owed by the rich industrialized world to the poor majority.

Honoring these obligations is not only right; it is the basis of a fair and effective solution to climate change. Those who benefited most in the course of causing climate change must compensate those who contributed least but bear its adverse effects. They must compensate developing countries for the two-fold barrier to their development – mitigating and adapting to climate change – which were not present for developed countries during the course of their development but which they have caused…

As the basis of a fair and effective climate outcome we therefore call on developed countries to acknowledge and repay the full measure of their climate debt to developing countries commencing in Copenhagen. We demand they:

Repay their adaptation debt to developing countries by committing to full financing and compensation for the adverse effects of climate change on all affected countries, groups and people;

Repay their emissions debt to developing countries through the deepest possible domestic reductions, and by committing to assigned amounts of emissions that reflect the full measure of their historical and continued excessive contributions to climate change; and

Make available to developing countries the financing and technology required to cover the additional costs of mitigating and adapting to climate change, in accordance with the Climate Convention.[49]

These demands were largely ignored (or explicitly rejected) by state officials, of course, as epitomized by Todd Stern's reaction (see above). Hence the Copenhagen Summit's delegitimised Accord was, from many of the civil society groups' perspective, not actually a disastrous outcome, since they arrived with no viable expectations of progress on either emissions cuts, decommissioning the carbon markets or achieving climate debt repayments. Instead, it represented a chance to firm up demands for future negotiations, including bilaterals. The process of civil society consolidation also entailed making a distinct break from the emerging market economies whose own fossil-fuel expansion strategies would challenge the physical limits of carbon sinks.

As a result, the BASIC climate signatories soon faced opposition from within. For example in India, Centre for Science and Environment director Sunita Narain argues that her government's negotiators

are the same people who would stymie any real action on environmental improvement in the country. They will oppose fuel efficiency standards, tax on big cars, or tough penalties for polluters. But they will still talk glibly about low-carbon economies. They will of course, dismiss out of hand, any discussion on the need for 'radical' and out-of-the-box solutions for equity and sustainability. These, they will tell you, are mere evangelical thoughts of some fringe activists. The men think and act differently. These are the promoters of the Accord in India. And I believe they do so, because for them, firstly, the Accord provides the perfect solution – talk big about change, but do little at home. The U.S. has provided a perfect

49. http://www.climate-justice-now.org/category/reports_and_publications/climate-debt/

> formula – it promises us the right to pollute, because it wants to legitimize its own pollution. Secondly, it promises that we can get a place on the high table of polluters. And as powerful conspirators this will mean that we need to do little ourselves, but instead push the price of change on the less favored – the poor of India or the poor anywhere else in the world. It's an open offer to protect, not our right to development as we have been demanding – the rich countries pay for our transition to low-carbon economies. But a simpler proposition: we give you the right to pollute (at least for now). The other proposition is equally seductive. To the countries, which are not yet polluters (from Ethiopia to Maldives), the Copenhagen Accord says we will give money to keep you pliant and agreeable. This is why the Accord promises some fictional money to poor vulnerable countries. It's a perfect formula, designed to please all. There is only one hitch: we will all have to forget the climate change crisis and the hazards and impacts that will grow.[50]

South African critics such as groundWork and Earthlife Africa made similar statements about Pretoria's delegation. The crucial conflict was over South Africa's vaguely-promised 34% emissions cut below anticipated 2020 levels, even though the Long-Term Mitigation Scenario (LTMS) acknowledged that absolute decline would only begin after 2030. Tristen Taylor of Earthlife Africa requested details and after two weeks of delays, learned that the 34% cut promise was from a 'Growth Without Constraint' (GWC) scenario within the LTMS. According to Taylor, 'GWC is fantasy, essentially an academic exercise to see how much carbon South Africa would produce given unlimited resources and cheap energy prices.' Officials who authored the LTMS had already conceded that GWC was 'neither robust nor plausible' eighteen months earlier. This led Taylor to conclude, 'The SA government has pulled a public relations stunt.'[51]

In contrast to the BASIC countries and the erratic African Union, civil society groups committed to climate debt found they had an extremely enthusiastic ally in the Bolivian government. Evo Morales insisted, to widespraud applause, that two additional factors be added to the existing three components of climate debt calculations (the costs of emissions, of foregone development and of adaptation to climate damage): the notions of a 'migration debt' and a debt to nature. This, as Nicola Bullard recounts,

> would be compensated by dropping restrictive migration practices and treating all humans with dignity, and finally, the debt to Mother Earth… Ultimately, the only way that the debt can be repaid is by ensuring that the historic relations of inequality are broken once and for all and that no 'new' debt will accumulate. This requires system change, both in the North and in the South. That's why climate debt is such a subversive idea.[52]

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50. Narain, S. (2010), 'Move over boys and girls, the men are here: The future of climate negotiations and why India wants the Accord,' *India Environment Portal blog*, 12 January, online at: http://www.indiaenvironmentportal.org.in/blog/move-over-boys-and-girls-men-are-here-future-climate-negotiations-and-why-india-wants-accord.
51. EarthlifeAfrica (2009), 'Press Release: South Africa's Emissions Offer', Johannesburg, 10 December. Other agencies were more circumspect, maintaining good relations. For example, in early December a leading official of the World Wildlife Fund called Sonjica's Copenhagen strategy 'very progressive' and Greenpeace – so effective with direct action protests involving pranks and aesthetically gripping imagery (instead of grassroots organizing) – actually termed SA the 'star' of Copenhagen, prior to the Copenhagen Accord. Even a month after the Accord was signed, according to Themba Linden of Greenpeace Africa, 'The BASIC countries have to lead the world in light of no leadership from developed world.'
52. Bullard, N. (2010), 'Por un nuevo amanecer para la Madre Tierra', *América Latina en Movimiento,* 454 Abril.

The Bolivians' main proposals were a 'Universal Declaration of Mother Earth Rights' (with a binding 'Climate Justice Tribunal' to punish violators), a formal compensation mechanism for climate debt, and a 'World People's Referendum on Climate Change' to short-circuit the multilateral fora which were clearly dysfunctional. Some of the details subsequently worked out in conjunction with civil society in late April 2010 drove the debate forward in significant ways. The Working Group on Climate Debt argued as follows:

> Climate debt is an obligation of compensation that is generated because of the damage done to Mother Earth by the irrational emissions of greenhouse gases. The primary responsible for these irrational emissions are the so-called 'developed countries ', inhabited by only 20% of the world population, and which emitted 75% of historical emissions of greenhouse gases.
>
> These states, which stimulated the capitalist development model, are responsible for climate debt, but we shouldn't forget that within these states, there live poor and indigenous peoples which are also affected by this debt…
>
> The responsibility for the climate debt of each developed country is established in relation to the level of emissions, taking into account the historically emitted amount of tons of carbon per capita.[53]

The Working Group made suggestions for payment as follows:

- The re-absorption [of emissions] and cleaning the atmosphere by developed countries
- Payment in technology (eliminating patents) and in knowledge according to our worldview for both clean development and for adaptation to developing countries
- Financing
- Changes in immigration laws that allow us to offer a new home for all climate migrants
- The adoption of the Declaration on the Mother Earth's Rights.

An additional Working Group on Climate Finance provided a document with further details and even more audacious demands:

> The scale of existing financial resources currently allocated to developing countries parties for addressing climate change plus the Copenhagen Accord proposal to mobilize (US$10 billion per year between 2010 and 2012, and up to US$100 billion by 2020 annually – which represents only 0.8% to 8% of developed countries' national defense budgets, respectively) is grossly inadequate.
>
> Developed country parties must commit at least 6% of their annual GDP for climate finance in developing countries. The viability of mobilizing this amount of finance is evident –developed countries spend an equivalent amount each year on national defense. In addition, developed countries have mobilized trillions of dollars (equivalent to 5 times the 6% GDP proposed) to bail out failed banks and speculators. This is a question of political will, and the priority given to effectively combating climate change and protecting Mother Earth.
>
> The finance required must be provided from public sources, and must be new and additional to ODA, to bilateral assistance, and to funds flowing outside the UNFCCC. Any funding provided outside the UNFCCC will not be regarded as meeting the commitments of developed country parties under the Convention.

53. Working Group on Climate Debt (2009), 'We demand the enforcement of the payment of climate debt', World Conference of Peoples on Climate Change and the Rights of Mother Earth', April, Cochabamba.

> The carbon market shall be eliminated as source of financing, because its capitalist logic promotes the paradox that those actors who will benefit most, are the same actors who have most harmed the environment. In addition, market mechanisms allow developed countries to evade their commitments to reduce emissions, while at the same time benefitting economically from the climate crisis. Moreover, this model impedes the equitable distribution of resources, can not guarantee a predictability flow of resources at scale, nor the timely availability or direct access to financing for those most affected.
>
> Financing for climate change must be delivered as grants, understood as a part of the reparations for climate debt between parties. Loans cannot be considered as fulfillment of financial commitments. In the same way climate financing does not signify a donor/recipient relationship between developed and developing countries.
>
> All Annex 1 funding allocated to military purposes and subsidies for fossil fuel producers shall be redirected to climate change.[54]

The Working Group also called for funding to be routed through the UNFCCC, 'replacing the Global Environment Facility and its intermediaries such as the World Bank and the Regional Development Banks.' A further suggestion was that 'The financial mechanism must respect the sovereign control of each country to determine the definition, design, implementation of policy and programmatic approaches to climate change.' As for timing, 'The financial mechanism shall be defined and approved at COP16, and be made operational at COP17.' [55]

These documents were based upon visionary, radical civil society demands that had emerged over the prior months and years. Some earlier, very ambitious demands – such as the end of apartheid or access to AIDS medicines – were only won after years of struggle, after initially appearing equally audacious and unrealistic. The short term, however, did not offer any genuine potential for the North paying its climate debt. Moreover, because of the influence of big capital and pro-market ideology on Northern governments in the Kyoto process to date, not only will emissions continue rising, carbon trading will not be dropped as a central EU and US strategy. As a result, critique of establishment strategies will become more common, and in turn will force serious advocates of environmental justice to raise important strategic issues about how to get the North to repay the climate debt.

6. Repaying the debt?

Assuming it was possible to wring a commitment from wealthier states, existing North-South redistributive processes have proven to be ineffectual. Northern foreign aid to the South goes only a small way towards ecological debt repayment. It is a far lower sum (and falling) than military spending (which is rising), and in any case 60% is 'phantom aid', according to the Johannesburg-based agency Action Aid. [56] Aid is also a tool of imperialism. Other North-South payments to Africa are yet more dubious, including the debt relief promised in 2005. In spite of enormous hype at the Gleneagles G8 meeting, the International Monetary Fund calculates that while lowest-income African countries' debt stock fell in recent years, their actual debt repayments remained stable from 2006-08 and then increased 50% in 2009 as a percentage of

54. Working Group on Climate Finance (2009), 'Document debated and approved in the working group on Climate Finance, during the World Conference of Peoples on Climate Change and the Rights of Mother Earth', April, Cochabamba.
55. *Ibid.*
56. Action Aid (2005), Real Aid: An Agenda for Making Aid Work, Johannesburg.

export earnings.[57] So although there was a bit of debt cancellation, it was on debt that could be considered unrepayable. Meanwhile, debilitating debt servicing charges for low-income African countries still prevented both local capital accumulation and provision of social services, much less financing for climate change adaptation.

There are important debates about who should pay what share. But in general, it is important to note that ecological debt results from the unsustainable production and consumption systems adopted by elites in the Northern countries, which are to some extent generalized across the Northern populations. Hence even poor and working-class people in the North, often through no fault of their own, are tied into systems of auto-centric transport or conspicuous consumption, which mean that they consume far more of the Earth's resources than do working-class people of the South.

As a result, some (including the Heinrich Boell Stiftung of Germany's Green Party) have called for 'Greenhouse Development Rights' (GDRs) as a solution, including a per capita 'right to pollute' (and to trade pollution rights). The bigger questions which GDRs pose are whether environmental justice can be measured merely in terms of formal 'equality'; whether environmental justice is instead historical, political-economic, and grounded in social struggles of those adversely affected; and in turn, whether environmental justice should not aim higher, for a broader, deeper eco-social transformation? The GDR approach may foreclose these questions by reducing the challenge to incremental reformism. When it comes specifically to GDRs as a methodology for calculating debt liabilities and beneficiaries, Larry Lohmann of The Cornerhouse (a British development institute) critiques the model's

> tacit endorsement of a long-discredited concept of 'development' that condescendingly sees 'resilience' as 'far beyond the grasp of the billions of people that are still mired in poverty', and that singles out for special climate blame 'subsistence farming, fuel wood harvesting, grazing, and timber extraction' by 'poor communities' awaiting Northern tutelage in capital flows, social networking, carbon trading and methods for holding policymakers accountable. [58]

Is a rights-based approach to environmental services preferable, as a strategy for demanding and properly redistributing ecological debt payments from North to South? South Africa's promises of 'Free Basic Services' (including water and electricity) were not delivered, contributing to the country's standing as having amongst the highest per capita social unrest in the world. Attempts to gain justice for Soweto residents deprived of water, via taking water pricing through the court system (as high as the Constitutional Court in September 2009) proved extremely frustrating.[59]

Juridical approaches to ecological debt may not be optimal, although interesting precedents have emerged. In November 2008 a San Francisco court began considering an ecological debt and reparations lawsuit – under the Alien Tort Claims Act – filed by Larry Bowoto and the Ilaje people of the Niger Delta against Chevron for involvement in 1998 murders reminiscent of those that took the life of Ken Saro-Wiwa and eight other Ogoni leaders on November 10, 1995. The first judgments went against Bowoto et al but appeals are in process. In June 2009, Shell

57. International Monetary Fund (2009), 'The implications of global financial crisis for low-income countries', Washington, DC.

58. Lohmann, L. (2009), personal correspondence. pdf

59. Bond, P. (2010), 'South Africa's 'rights culture' of water consumption: Breaking out of the liberal box and into the commons?', forthcoming in B.Johnston, L.Hiwasaki, I.Klaver, and V.Strang (Eds), *Water, Cultural Diversity & Global Environmental Change: Emerging Trends, Sustainable Futures?,* Paris, UNESCO.

Oil agreed in a similar lawsuit to an out-of-court settlement with reparations payments of $15.5 million. Although representing just four hours' worth of Shell profits, it was considered a crucial step in establishing liability and disincentivising corporate exploitation of people and nature. In late 2009, further reparations lawsuits were expected in the New York Second District Court by victims of apartheid who initially requested $400 billion in damages from US corporations which profited from South African operations during the same period. Supreme Court justices had so many investments in these companies that in 2008 they bounced the case back to a lower New York court to decide, effectively throwing out an earlier judgment against the plaintiffs: the Jubilee anti-debt movement, the Khulumani Support Group for apartheid victims, and 17 000 other black South Africans. When Judge Clara Scheindlin replaced the late John Sprizzo, the case suddenly was taken seriously and in March 2009 moved a step closer to trial when she rejected the corporations' attempt to have it dismissed. [60]

Beyond these kinds of tort actions, will courts start declaring climate-related ecological debt a valid concept? Environmental rights to protection from climate change were explored in a court case filed by Friends of the Earth, Greenpeace and the cities of Boulder, Colorado, Arcata, Santa Monica and Oakland in California, against the US Export– Import Bank and Overseas Private Investment Corporation, which had invested, loaned or insured $32 billion in fossil fuel projects from 1990–2003 without regard to the US National Environmental Policy Act (NEPA). At present, only US cities have formal standing to sue for damages from climate change under NEPA, in the wake of a 2005 federal ruling. The out-of-court-settlement in February 2009 meant that the defendants will in future incorporate CO2 emissions into planning, but there are prospects for further suits that extend into identification and payment of damages.[61]

There are quite obvious limits to prospects for court relief under the Alien Tort Claims Act or NEPA, the two most advanced areas. Hence it would be consistent for climate justice activists to also proceed with more immediate strategies and tactics. As Al Gore expressed it in 2007, 'I can't understand why there aren't rings of young people blocking bulldozers and preventing them from constructing coal-fired power plants'.[62] Arguing that 'Protest and direct action could be the only way to tackle soaring carbon emissions,' the US National Aeronautic and Space Administration's leading climate scientist, James Hansen, 'The democratic process is supposed to be one person one vote, but it turns out that money is talking louder than the votes. So, I'm not surprised that people are getting frustrated. I think that peaceful demonstration is not out of order, because we're running out of time.'[63] Hansen himself participate in direct action in 2009, demonstrating at coal-fired power plants in Coventry, England and West Virginia (where at the latter site he was arrested), as well as at a pro-coal and pro-carbon trading environmental NGO in late 2009.

But the most effective examples of direct action come from the Global South, especially the Niger Delta. In January 2007, at the World Social Forum in Nairobi, many other groups became aware of this movement thanks to eloquent activists from the Delta, including the Port Harcourt NGO Environmental Rights Action (ERA). In separate disruptions of production (including armed interventions), the Movement for the Emancipation of the Niger Delta prevented roughly 80% of the country's oil from being extracted, although a cease-fire was

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60. Bond, P. and K.Sharife (2009), 'Apartheid reparations and the contestation of corporate power in Africa', *Review of African Political Economy,* 119.
61. Friends of the Earth (2009), 'Landmark global warming lawsuit settled', Washington, DC, 6 February.
62. Kristoff, N. (2007), 'The big melt', *New York Times,* 16 August.
63. Adam, D. (2009), 'Leading Climate Scientist: 'Democratic Process Isn't Working'', *The Guardian,* 18 March.

called in mid-2009.[64] The strategy is consistent with the grassroots, coalface and fenceline demands of civil society activists in the Oilwatch network (headquartered at ERA) to *leave the oil in the soil, the coal in the hole, the tar sand in the land.* Activists from Accion Ecologica popularized this approach in their struggle to halt exploitation of the oil beneath the Yasuni park in the Ecuadoran Amazon. The German state development agency GTZ conceded to a $50 mn/year grant (although Yasuni may become a pilot carbon trading case unless Ecuadoran environmental and indigenous rights activists can resist).[65]

Finally, there arises a question of how, if such direct action pressure permits climate debt to become part of Northern elite climate concessions, the debt repayments might be best distributed. It became clear to many civil society groups in recent decades that post-colonial African governments were too easily corrupted, just as were United Nations and aid (and even International NGO) bureaucracies.

One solution to the payment distribution problem appeared in 2009: the idea of simply passing along a monthly grant – universal in amount and access, with no means-testing or other qualifications – to each African citizen via an individual 'Basic Income Program' payment. According to *Der Spiegel* correspondent Dialika Krahe, the village of Otjivero, Namibia is an exceptionally successful pilot for this form of redistribution:

> It sounds like a communist utopia, but a basic income program pioneered by German aid workers has helped alleviate poverty in a Nambian village. Crime is down and children can finally attend school. Only the local white farmers are unhappy…
>
> 'This country is a time bomb,' says Dirk Haarmann, reaching for his black laptop. 'There is no time to lose,' he says, opening documents that contain numbers he hopes will support his case. Haarmann and his wife Claudia, both of them economists and theologians from Mettmann in western Germany, were the ones who calculated the basic income for Namibia. And both are convinced that 'this is the only way out of poverty.' …
>
> 'The basic income scheme,' says Haarmann, 'doesn't work like charity, but like a constitutional right.' Under the plan, every citizen, rich or poor, would be entitled to it starting at birth. There would be no poverty test, no conditions and, therefore, no social bureaucracy. And no one would be told what he or she is permitted to do with the money.
>
> The concept is being discussed in many countries of the world. In Germany, it has gained the support of politicians across the political spectrum, including Dieter Althaus, the conservative governor of the eastern state of Thuringia, and businessmen like drugstore chain owner Götz Werner. More than 50,000 German citizens have signed a petition to the German parliament, the Bundestag.
>
> In a country like Namibia, says Haarmann, a basic income would achieve what conventional development aid could never do: provide a broad basis for human development, both personal and economic. [66]

First priority would be to supply a Basic Income Program to Africans who live in areas most adversely affected by droughts, floods or other extreme weather events. Logistically, the use of Post Office Savings Banks or rapidly-introduced Automated Teller Machines would be sensible, although currency distortions, security and other such challenges would differ from place to

64. Mistilis, K. (2009), 'Niger Delta standoff', *Pambazuka News,* 442, 16 July, http://pambazuka.org/en/category/comment/57769.
65. Gallagher, K. (2009), 'Paying to keep oil in the ground', *The Guardian,* 7 August.
66. Krahe, D. (2009), 'A new approach to aid: How a Basic Income Program saved a Namibian Village', *Der Spiegel International,* 10 August.

place. The Namibian case has much to recommend it, in part because it amongst the driest sites in Africa.

7. Conclusion

Such a strategy would be just an emergency salve on a burning problem: how to ensure that the greenhouse gas 'polluters pay' in a manner that first, compensates their climate change victims; that second, permits transformation of African energy, transport, extraction, production, distribution, consumption and disposal systems; and that third, in the process assures the 'right to development' for Africa in a future world economy constrained by emissions caps. Extremely radical changes will be required in all these activities in order not only to ensure the safety of the species and planet, but also that Africans are at the front of the queue for long-overdue ecological and economic compensation, given the North's direct role in Africa's environmental damage. The contemporary argument for climate debt to be paid is simply the first step in a long process, akin to decolonization, in which the master – the polluting Global North (South Africa included) – must know that not only is it time to halt the reliance on fossil fuels, but having 'broken' the climate, it is his responsibility to foot the clean-up bill.