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Ecological Debt:

Extractive Industries and Climate Change

INTRODUCTION

Contrary to rhetoric, Foreign Direct Investment does not 'flow' into Third World countries. Instead, 'capital "hops" over "unusable Africa," alighting only in mineral-rich enclaves that are starkly disconnected from their national societies. The result is not the formation of standardized national grids, but the emergence of huge areas of the continent that are effectively "off the grid,"' as James Ferguson argues.[1]

But Africa is sufficiently on the world grid for the purpose of not only mineral/petroleum extraction, but also abuse of the continent's 'ecological space' and capacity to use nature for economic development. But being on-grid for resource extraction and environmental exploitation is a curse. It gives rise to the argument that the Northern industrialized powers owe the non-industrial South – especially Africa - a formal *debt* for taking too much ecological space, and for ripping out non-renewable resources in an unsustainable manner.

According to the Ecuador-based advocacy 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.'[2] 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' and has evolved considerably to become crucial to the South-North resistance narratives.[3]

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).'[4]

ECONOMIC JUSTICE NETWORK of FOCCISA
Fellowship of Christian Councils in Southern Africa

How much is at stake?

The sums involved are potentially vast, to the point of incalculability, both in terms of extraction and ecological debt. 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.' [5] Leading ecofeminist Vandana Shiva[6] and former South Centre director Yash Tandon[7] 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.[8]

A partial ecological debt accounting was published by environmental scientists in early 2008, and counted $1.8 trillion in concrete damages over several decades.[9] 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.'[10] 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).[11] Notwithstanding the World Bank's conservative counting bias,[12] 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.

African countries' national wealth reduction, adjusted for extraction, 2000

	Income per capita ($)	Population growth rate (%)	Adjusted net saving per capita ($)	Change in wealth per capita ($)
Benin	360	2.6	14	-42
Botswana	2925	1.7	1021	814
Burkina Faso	230	2.5	15	-36
Burundi	97	1.9	-10	-37
Cameroon	548	2.2	-8	-152
Cape Verde	1195	2.7	43	-81
Chad	174	3.1	-8	-74
Comoros	367	2.5	-17	-73
Rep of Congo	660	3.2	-227	-727
Côte d'Ivoire	625	2.3	-5	-100
Ethiopia	101	2.4	-4	-27
Gabon	3370	2.3	-1183	-2241
The Gambia	305	3.4	-5	-45
Ghana	255	1.7	16	-18
Kenya	343	2.3	40	-11
Madagascar	245	3.1	9	-56
Malawi	162	2.1	-2	-29
Mali	221	2.4	20	-47
Mauritania	382	2.9	-30	-147
Mauritius	3697	1.1	645	514
Mozambique	195	2.2	15	-20
Namibia	1820	3.2	392	140
Niger	166	3.3	-10	-83
Nigeria	297	2.4	-97	-210
Rwanda	233	2.9	14	-60
Senegal	449	2.6	31	-27
Seychelles	7089	0.9	1162	904
South Africa	2837	2.5	246	-2
Swaziland	1375	2.5	129	8
Togo	285	4.0	-20	-88
Zambia	312	2.0	-13	-63
Zimbabwe	550	2.0	53	-4

Source: World Bank, *Where is the Wealth of Nations?*, p.66.

In part, minerals depletion and associated pollution costs are a function of expanded foreign direct investment. Even in South Africa, mineral depletion today disproportionately benefits overseas mining houses (especially given that some of the largest Johannesburg firms relisted their primary share residences to London after 1994). In addition, CO_2 emissions plus a great deal of other pollution (especially SO_2) are largely the result of energy consumption by metals smelters owned by large multinational corporations (Mittal Steel, BHP Billiton and the Anglo group). Any assessment of FDI, especially in oil and resource rich countries, must henceforth take into account its contribution to the net negative impact on national wealth, including the depletion and degradation of the resource base. Once such accounting is done, it is obvious that a great deal of mineral/petroleum extraction *does not make economic sense* when not counteracted with longer-term investments that balance an export-oriented economy with internal accumulation.

For the bias thus introduced into African economies, a debt can be attributed to the beneficiaries in the North. There are, of course, also African elites who benefit from the extraction, as allies of Northern corporations. As demonstrated by the Open Society-backed campaign, 'Publish what you Pay', elites in Africa's oil producing countries - Angola, Chad, Congo, Equatorial Guinea, Gabon, Nigeria and Sudan - are amongst the world's least transparent.[13] Against these elites, diverse forces in society have moved away from considering oil merely a matter of private property, to be negotiated between corporations and governments, as was the case during much of the 20th century. Instead, these forces now treat oil as part of a general 'commons' of a national society's natural resource base.[14] From a September 2005 conference in Johannesburg organized by the South African NGO GroundWork, delegates petitioned the World Petroleum Congress:

> At every point in the fossil fuel production chain where your members 'add value' and make profit, ordinary people, workers and their environments are assaulted and impoverished. Where oil is drilled, pumped, processed and used, in Africa as elsewhere, ecological systems have been trashed, peoples' livelihoods have been destroyed and their democratic aspirations and their rights and cultures trampled.[15]

Some governments of the South – especially Bolivia – are introducing the concept, and some African governments have made preliminary steps toward demanding ecological debt, starting with the largest component, climate debt. But the state of advocacy remains extremely uneven.

Those most responsible for taking advantage of Africa's natural resources should pay reparations, according to the principle of 'polluters pay', 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.[16]

However, by 2010, 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). 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 CO_2 falling from €30 at peak to less than €9 – the question emerged whether CDMs were not fundamentally flawed as a strategy for climate financing.[17]

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.'[18]

To be sure, one wing of civil society – including a leading African, Wangari Maathai - still endorses carbon trading, in part perhaps because some major institutions and individuals suffer from substantial conflicts of interest as carbon-traders.[19] But increasingly, carbon trading appears as a 'false solution', in contrast to the alternative 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.

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 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. [20]

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. [21]

How have African governments reacted 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.[22] 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.'[23] 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 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'. [24]

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 ($145bn). Some of that would be subtracted from existing aid. The EU damage estimates were considered far too conservative, as China's mitigation and adaptation costs alone would be $438 billion annually by 2030, according to Beijing.[25]

Because the EU's 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.[26] 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.'[27]

Then on 17 December, US Secretary of State Hillary Rodham Clinton offered what appeared to be a major concession:

> … 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.[28]

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.

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"'.[29]

Against malevolent states and industries addicted to fossil fuels, there usually arises opposition from civil society. Instead of requesting more CDM carbon trading funds, many more civil society groups 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.'[30]

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.'[31] 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.'[32] 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 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. [33]

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.[34]

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. [35]

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

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.[36]

These demands were largely ignored (or explicitly rejected) by state officials. However, African civil society groups committed to climate debt found they had an extremely enthusiastic ally in the Bolivian government, whose 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.[37]

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.[38]

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.' [39] These documents were based upon visionary 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.

Conclusion: 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. [40] 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 export earnings.[41] 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.

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 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 moved a step closer to trial when she rejected the corporations' attempt to have it dismissed. [42]

Finally, there arises a question of how 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*, the village of Otjivero, Namibia is an exceptionally successful pilot for this form of income redistribution.[43] 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 place. The Namibian case has much to recommend it, in part because it amongst the driest sites in Africa.

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 - 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.

Notes

1. James Ferguson, 'Seeing Like an Oil Company: Space, Security and Global Capital in Neoliberal Africa', *American Anthropologist*, 107, 3, 2005, p.381.
2. Accion Ecologica (2000), 'Trade, climate change and the ecological debt,' Unpublished paper, Quito.
3. 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 Network of Southern Africa. 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, at the same time as an influential article by Canadian journalist/campaigner Naomi Klein in *Rolling Stone* magazine. See, e.g., 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/, Klein, N. (2009), 'Climate rage', *Rolling Stone,* 11 November.
4. 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.
5. *Ibid.*
6. Shiva, V. (2005), 'Beyond the WTO Ministerial in Hong Kong', ZNet Commentary, 26 December.
7. http://www.globalpolicy.org/socecon/develop/devthry/well-being/2000/tandon.htm
8. 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;
    - 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.

9. 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. See 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.
10. *Guardian* (2008), 'Rich countries owe poor a huge environmental debt', 21 January, http://www.guardian.co.uk/science/2008/jan/21/environmental.debt1.
11. World Bank (2006), *Where is the Wealth of Nations?,* Washington, DC, p.66.
12. 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.
13. www.opensociety.org
14. George Caffentzis, 'The Petroleum Commons: Local, Islamic and Global', *The Progress Report*, 2004, http://www.progress.org/2004/water26.htm.
15. www.groundwork.org.za
16. 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.
17. 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 CO_2 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;
- 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 radical 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.

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.

18. See Annie Leonard's film 'Story of Cap and Trade' at http://www.storyofstuff.org and analyses of Washington legislative options 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 .

19. 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'.

20. 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.

21. Heads of State of Bolivia, Cuba, Dominica, Honduras, Nicaragua and Venezuela (2009), 'Declaration', Cumana.

22. McLure, J. (2009), 'Ethiopian leader chosen to represent Africa at climate summit,' Addis Ababa, 1 September.
23. Ashine, A. (2009), 'Africa threatens withdrawal from climate talks', *The Nation,* 3 September.
24. Bond, P. (2009b), 'Don't play games with humanity's future', *The Mercury,* 2 September.
25. Chaffin, J. and E. Crooks (2009), 'EU sets out €15bn climate aid plan', *Financial Times,* 8 September.
26. Vidal, J. 'Copenhagen: Head of African bloc calls on poorer nations to compromise over climate funding,' *The Guardian*, December 16, 2009.
27. Reddy, T. (2009), 'From African Walk Out to Sell Out,' *Climate Chronicle*, 18 December.
28. 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.
29. Welz, A. (2009), 'Emotional scenes at Copenhagen', adamwelz.wordpress.com/.../emotional-scenes-at-copenhagen-lumumba-di-aping-africa-civil-society-meeting-8-dec-2009/.
30. Bond, P. and D.Brutus (2008), 'Ecological debt and our centre's survival', ZCommentaries, 21 August, http://www.zcommunications.org/zspace/commentaries/3594.
31. Indigenous Peoples' Global Summit on Climate Change (2009), 'Anchorage Declaration', Anchorage, Alaska, 24 April.
32. Trade Union Conference of the Americas (2009), 'Statement'.
33. PanAfrican Climate Justice Alliance (2009), 'Statement', Nairobi.
34. Africa Peoples Movement on Climate Change (2009), 'Confronting the Climate Crisis: Preparing for Copenhagen and Beyond', Nairobi, 30 August, http://www.iboninternational.org
35. World Council of Churches Central Committee (2009), 'Statement on eco-justice and ecological debt,' Geneva, 2 September.
36. http://www.climate-justice-now.org/category/reports_and_publications/climate-debt/
37. 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.
38. 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.

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.

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.

39. *Ibid.*

40. Action Aid (2005), *Real Aid: An Agenda for Making Aid Work,* Johannesburg.

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

42. Bond, P. and K.Sharife (2009), 'Apartheid reparations and the contestation of corporate power in Africa', *Review of African Political Economy,* 119.

43. Krahe, D. (2009), 'A new approach to aid: How a Basic Income Program saved a Namibian Village', *Der Spiegel International,* 10 August.

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Bond, P. (2010) *Ecological Debt: Extractive Industries and Climate Change*. Economic Justice Network, Cape Town.

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