PAYMENT FOR ECOSYSTEM SERVICES VERSUS ECOLOGICAL REPARATIONS: THE 'GREEN ECONOMY,' LITIGATION AND A REDISTRIBUTIVE ECO-DEBT GRANT

KHADIJA SHARIFE* AND PATRICK BOND**

ABSTRACT

Since the December 2011 United Nations Framework Convention on Climate Change Conference of the Parties 17 in Durban and the Rio+20 Summit on Sustainable Development, attention has turned to whether the 'Green Economy', the concept of 'natural capital' and 'Payment for Ecosystem Services' together facilitate the management of new environmentally-financialised markets whose aim is to price nature and its pollution, so as to achieve maximally efficient exploitation of resources (an example of which is carbon trading). Alternatively, if there are flaws in such markets, should society instead move towards retributive payments for 'ecological debt' based on both 'loss and damage' accounting (introduced at the UNFCCC COP18 in Doha) and environmental justice, in order that the valuing of nature is limited to fines for damages and then prohibitions on further pollution. These two countervailing philosophies play out in high-profile projects and pilot social-policy schemes in southern Africa, in ways that will teach the world foundational concepts surrounding ecological reparations.

Keywords: ecological debt, ecosystem services, reparations, Basic Income Grant (BIG)

I INTRODUCTION

According to Achim Steiner, director of the United Nations (UN) Environment Programme, until the value of what he terms 'ecosystem services' are acknowledged, ecological free-riding will never be slowed: 'An intact hectare of mangroves in a country like Thailand is worth more than US$1,000. Converted into intensive farming, the value drops to an estimated US$200 a hectare and the same for aquaculture.'[1] By extending the logic of capitalism from money and labour to oceans and forests, promoters of the 'Green Economy' such as the World Wide Fund for Nature (WWF), the Organisation for Economic Cooperation and Development (OECD), Conservation International and the World Bank hope that nature can finally 'invoice' natural capital users. As

* Post-graduate law student, investigative journalist, Africa Fellow at the World Policy Institute, and commissioning editor at the Forum for African Investigative Reporters (FAIR); coordinator of the South African branch of the global Environmental Justice Trade and Liabilities (EJOLT) initiative.

** School of Built Environment and Development Studies, University of KwaZulu-Natal Centre for Civil Society (CCS).

1 K Sharife 'What is the Real Value of Africa's Wealth?' *African Business* (May 2012).

WWF president Yolanda Kakakabadse argued, 'Until now, natural wealth or capital has been considered as global commons and therefore treated as a free good … WWF supports multilateral, corporate and academic entities as a force behind the valuation of natural capital …'.[2] Added Serge Tomasi, deputy director of the OECD's Development Co-operation Directorate, 'Carbon markets and other market instruments could help to fix the right price to the natural resources, and to integrate environmental degradation externalities into decision making processes'.[3] In May 2012, ten African governments endorsed the Gaborone Declaration, where proper accounting of natural capital was declared to underpin sustainability, growth and poverty reduction.[4]

But there are crucial questions: will this framing form the basis for effective campaigning to 'make the polluter pay' from the standpoint of juridical accountability? Who does the invoicing on behalf of nature? Should nature be invoiced at all, or is pricing inherently misguided, eliding intrinsic value? Who defines 'intrinsic'? Are there specific instances in which nature values can be assessed as prices in order to achieve restorative environmental justice? If monetized, can conversions from values to prices be determined by those on the frontline of climate change, whose very right to life is threatened, and who are owed an 'ecological debt' to compensate for the destruction – as of December 2012 termed 'loss and damage' in the UN climate negotiations – that they have suffered? Or will the design come from those seeking 'payment for ecosystem services' such that nature becomes fully commodified and subject to financial market whims? To what extent would the inclusion of those suffering loss and damage be located in a nominal manner, empowered only enough to legitimate capitalist calculative entities? Should ecological debt be monetized as one complementary vehicle towards reparation, or does it fall squarely within the financialisation trap to 'make markets'? How are markets in nature – such as carbon trading – working at present? And if there are consistent failures, what practical alternatives are there for halting ecological destruction (especially climate change) and compensating victims, outside the realm of the market?

The answers to these questions are becoming urgent, for the stakes could not be higher. In 2006, Christian Aid estimated that 182-million Africans were at risk of premature death due to climate change this century.[5] Seven years later, much more dire predictions about climate change are usually offered by scientists. The way that both mitigation and adaptation narratives are unfolding poses a great threat to the victims, since the valuation of life and planetary ecology through market mechanisms will punish those without market access

2 Interview with K Sharife, Rio de Janeiro, Brazil *The Africa Report* (June 2012).

3 Ibid.

4 Conservation International 'Gaborone Declaration Pioneers Commitment to Value Natural Capital' (May 2012) <http://www.conservation.org/newsroom/pressreleases/Pages/Gaborone-Declaration-Pioneers-Commitment-to-Value-Natural-Capital-.aspx>.

5 Christian Aid 'Developing Countries Demand Compensation for Climate Change' (2008) <http://www.christianaid.org.uk/pressoffice/pressreleases/august2008/climate_change_talks_accra.aspx>.

many times over. This is especially true in Africa where resource-curse mechanisms leave those with political power closely overlapped with those whose extractive economic interests are opposed to environmental justice. That means that even when court-based justice is sought, in the form of an ecological debt payment, the danger emerges that political elites and other rentiers will capture the adaptation funding. The alternative is that the funds go directly to victims of ecological damage, in the form of a Basic Income Grant (BIG) piloted in Namibia. Before making this case, we first consider why current trends in *pricing* of nature have set the stage for systemic denial of eco-social rights.

II Values versus Prices at the Rio+20 Earth Summit

The idea of 'pricing' human and ecological life has been present in one form or another ever since slavery, and the origins of systems such as insurance and tort law. The value of one European was the equivalent of ten Chinese in a 1994 Intergovernmental Panel on Climate Change (Working Group 3) report, which led India's minister for Environment, Kamal Nath, to vehemently reject the 'absurd and discriminatory global cost-benefit analysis procedures propounded by the economists'.[6] Valorising people and the planet became more important for capital after the world economic crisis worsened after 2008. The turn to 'Green Economy' rhetoric looms as 'accumulation through dispossession', in the words of David Harvey.[7] This attempt to rationalise environmental management (also known as 'ecological modernisation') represents a potential saviour for footloose financial capital, and is particularly welcome to those corporations panicking at market chaos in the topsy-turvy fossil-fuel, water, infrastructure construction, technology and agriculture sectors.

As we see in more detail below, the Rio+20 Earth Summit of June 2012 provided a renewed official faith in market mechanisms, following the logic of two South African precedents: the 2002 World Summit on Sustainable Development in Johannesburg (Rio+10) and the December 2011 Durban Conference of the Parties 17 (COP17) climate summit.[8] At all three sites, the chance to begin urgent environmental planning to reverse ecosystem destruction was ignored and instead, big- and medium-governments' negotiators acted on behalf of their countries' corporations, with resulting increased pollution and privatisation of nature.

To illustrate, Durban's main winners appeared to be those from Washington who had come intent on halting progress. 'The Durban Platform was promising because of what it did not say,' remarked Trevor Houser, a former top aide to

6 C Okereke *Global Justice and Neoliberal Environmental Justice: Ethics, Sustainable Development and International Co-Operation* (2008) 108.

7 D Harvey 'The "New" Imperialism: Accumulation by Dispossession' in L Panitch & C Leys (eds) *Socialist Register 2009* (2009) <http://socialistregister.com/index.php/srv/article/view/5811>.

8 See P Bond *Unsustainable South Africa: Environment, Development and Social* Protest (2002); and P Bond *Politics of Climate Justice* (2012).

chief US State Department climate negotiator Todd Stern. Speaking to *The New York Times* a few weeks later at the Davos World Economic Forum in Switzerland, Houser bragged, 'There is no mention of historic responsibility or per capita emissions. There is no mention of economic development as the priority for developing countries. There is no mention of a difference between developed and developing country action'.[9]

The attitude of Washington powerbrokers really has not changed in 20 years, as we can ascertain by tracing back to the most infamous statement of US self-interest in global ecological governance, by Larry Summers. He was, at the time, World Bank chief economist, but soon would become a top-ranking Clinton administration official, rising to finance minister status until the 2000 'election' in Florida ended Democratic Party control of the White House. In December 1991, as the World Bank prepared to take over financing major functions related to the Rio Earth Summit, chief economist Summers signed a bizarre memo to his closest Bank colleagues suggesting, in effect, that nature be privatised, to better assess costs and benefits of Bank ecological intervention. As he put it, 'I've always though (sic) that under-populated countries in Africa are vastly UNDER-polluted'.[10] Though extremist, such ideology was endorsed by *The Economist* magazine, which leaked the memo in early 1992. The underlying philosophy informed a great deal of Bank and even UN policy ever since. The bottom line was US president George Bush Sr's pronouncement at the Rio Earth Summit: 'The American way of life is not negotiable.'[11] This paved the way for Rio+10 in Johannesburg. At that 2002 World Summit on Sustainable Development, ever more aspects of nature would be seen as 'economic goods'. For example, water commodification by then was the subject of intense conflict, especially over municipal commercialisation. Soweto was one of the world's most publicised water wars, with the Anti-Privatisation Forum's community activists regularly destroying pre-payment meters and demanding a doubling of the Free Basic Water supply. In Johannesburg, the huge Paris water company Suez found the going tough and instead of managing outsourced municipal services for an anticipated 30 years, left after just five, in 2006. Simultaneously, Suez was in deep trouble across the Third World, losing all its Argentine revenue when activists pressured its leaders to default on profit repatriation agreements in 2002.[12]

Notwithstanding such concrete difficulties in 'neo-liberalising nature', as this process is increasingly termed, global climate policy debates have not shifted much since 1997, when US vice-president Al Gore went to Japan's COP3 in Kyoto, promising that Washington would sign the climate Protocol if it included carbon markets as an escape hatch for companies that polluted

9 M Levi 'Another Perspective on the Durban Climate Talks' (2011) <http://blogs.cfr.org/levi/2011/12/16/another-perspective-on-the-durban-climate-talks/>.

10 L Summers 'The Bank Memo' (1991) <http://www.whirledbank.org/ourwords/summers.html>.

11 J Vidal 'Rio+20: Earth Summit Dawns with Stormier Clouds than in 1992' (19 June 2012) <http://www.guardian.co.uk/environment/2012/jun/19/rio-20-earth-summit-1992-2012>.

12 P Bond *Talk Left, Walk Right* (2006).

too much and then wanted the right to buy other companies' pollution permits. The markets were granted, but the US senate voted 95-0 against endorsing Kyoto. As we argue below, the results of the emissions trading experiment have been extremely disappointing.

In preparation for Rio+20, the April 2012 World Bank report, *Inclusive Green Growth,* argues, 'Care must be taken to ensure that cities and roads, factories, and farms are designed, managed, and regulated as efficiently as possible to wisely use natural resources while supporting the robust growth developing countries still need'.[13] Bank staff led by Inger Andersen and Rachel Kyte aim to move the economy 'away from suboptimalities and increase efficiency – and hence contribute to short-term growth – while protecting the environment'. In this narrative, certain uses of resources are off limits for polite discussion, as Bank staff dare not question financiers' commodity speculation, export-led growth or the irrationality of so much international trade, including wasted bunker fuel for shipping, not to mention truck freight. Yet the Bank cannot help but momentarily inject a power variable into its technicist analysis:

> That so much pricing is currently inefficient suggests complex political economy considerations. Whether it takes the form of preferential access to land and credit or access to cheap energy and resources, every subsidy creates its own lobby. Large enterprises (both state owned and private) have political power and lobbying capacity. Energy-intensive export industries, for example, will lobby for subsidies to maintain their competitiveness.[14]

Would the Bank practice what it preaches about ending 'inefficient' subsidisation, given how it amplifies irrational power relations when maintaining the world's largest fossil-fuel financing portfolio? When *Inclusive Green Growth* argues that 'Governments need to focus on the wider social benefits of reforms and need to be willing to stand up to lobby groups',[15] South Africans cannot forget the Bank's own largest-ever project credit, granted in April 2010. The US$3.75-billion loan for a 4800 MW coal-fired power plant at Medupi was, according to former Bank president Robert Zoellick and his colleagues, aimed at helping poor South Africans. In reality the benefits are overwhelmingly to mining houses, which get the world's cheapest electricity (less than US$0.02 per kiloWatt hour). The costs of Medupi and its successor Kusile are borne not just by all who will suffer from climate change. All South Africans are losing access to electricity through disconnections, and as a result, engaging in world-leading rates of community protest because to pay for Medupi and Kusile, price increases exceeded 130 per cent between 2008 and 2012 (to US$0.15 per kiloWatt hour).[16]

The Bank's *Inclusive Green Growth* arguments always return to profit incentives: 'If the environment is considered as productive capital, it makes sense to invest in it, and environmental policies can be considered as

13 World Bank *Inclusive Green Growth* (2012) 49.
14 Ibid.
15 Ibid.
16 P Bond (ed) *Durban's Climate Gamble* (2011).

investment.'[17] Facing up to pollution externalities is deceptively simple within the Bank's pre-existing neoliberal narrative, of fixing a market problem with a market solution. For example, 'Lack of property rights in the sea has led to overfishing – in some cases with devastating results. The use of individual transferable quotas can correct this market failure, increasing both output and employment in the fishing industry'.[18] The Bank's reversion to transferable 'cap-and-trade' quotas is most extreme in the greenhouse gas (GHG) markets, where its writers fail to acknowledge profound flaws that have crashed the price of a tonne of carbon from €35 to €7 these last six years. The Bank, which subsidises carbon trading, mentions only a few allegedly-fixable European Union (EU) Emissions Trading Scheme design problems, but ignores the deeper critique of carbon markets.

Likewise, the UN Environment Programme came to view 'the sustainability crisis as the biggest-ever "market failure"'. The directors of the Barcelona-based Environmental Justice Organisations Liabilities and Trade project, Joan Martinez-Alier and Joachim Spangenberg, issued a statement about the Green Economy at Rio, 'Describing it this way reveals a specific kind of thinking: a market failure means that the market failed to deliver what in principle it could have delivered, and once the bug is fixed the market will solve the problem'. They reverse this logic: '[U]nsustainable development is not a *market failure* to be fixed but a *market system failure*: expecting results from the market that it cannot deliver, like long-term thinking, environmental consciousness and social responsibility.'[19]

Under the rubric of the Green Economy, corporations are seeking new technological 'False Solutions' to the climate and other environmental crises, including dirty forms of 'clean energy' (nuclear, so-called 'clean coal', fracking 'natural gas', hydropower, hydrogen, biofuels, biomass and biochar, carbon capture and storage experiments) and other geoengineering strategies such as Genetically Modified trees as plantations to sequester carbon, sulfates in the air to shut out the sun, iron filings in the sea to create algae blooms, and large-scale solar reflection such as industrial-scale plastic-wrap for deserts.

III From African 'Natural Capital' to Pricing to Markets

These dubious tactics aside, the philosophical underpinning of the Green Economy needs wider questioning. The precise wording is terribly important, as Africans began to understand after the Gaborone Declaration. In May 2012, Botswana's president Ian Khama brought together leaders from nine other African countries – Gabon, Ghana, Kenya, Liberia, Mozambique, Namibia, Rwanda, South Africa and Tanzania – to 'quantify and integrate

17 S Hallegatte, G Heal, M Fay & D Tréguer 'From Growth to Green growth' VOX (24 March 2012) <http://www.voxeu.org/article/growth-green-growth>.

18 *Inclusive Green Growth* (note 13 above) 38.

19 Environmental Justice Organisations Liabilities and Trade 'No Green Economy without Environmental Justice!' (June 2012) <http://www.ejolt.org/2012/06/no-green-economy-without-environmental-justice/>.

into development and business practice' what ordinary people consider to be the innate *value* of nature. But these leaders and their conference sponsor Conservation International mean something else, devoid of eco-systemic, spiritual, aesthetic, and intrinsic qualities. The Declaration insists:

> Watersheds, forests, fisheries, coral reefs, soils, and all natural resources, ecosystems and biodiversity constitute our vital natural capital and are central to long-term human well-being, and therefore must be protected from overuse and degradation and, where necessary, must be restored and enhanced.[20]

By relegating the environment to mere natural capital, the next step is to convert value into *price* and then sell nature on the market. All manner of financialisation strategies have emerged to securitise ecosystem services, most obviously in carbon markets which continue failing miserably to deliver investor funds to slow climate change, as discussed below. But environmentally-oriented bankers are not deterred. Explained City of London investor Simon Greenspan, whose firm Tullett Brown won *World Finance* magazine's 'Western European Commodities Broker of the Year' award in March 2012:

> At Tullett Brown we've only ever invested in areas of the market that have truly stood the test of time, such as gold and silver and property. When our analysts were looking for the next great area of growth it was fairly obvious to them. It was the planet, it was the environment.[21] (Just days later, British financial authorities forced Tullett Brown into provisional liquidation followed by litigation regarding commercial fraud.)

Reacting to the Gaborone Declaration, Nnimmo Bassey from the Niger Delta non-governmental organisation (NGO) Environmental Rights Action and Friends of the Earth International warned, 'The bait of revenue from natural capital is simply a cover for continued rape of African natural resources'. Thanks to inadequate protection against market abuse, he adds, 'The declaration will help corporate interests in Rio while impoverishing already disadvantaged populations, exacerbate land grabs and displace the poor from their territories'.[22] And to further illustrate the pernicious way markets undermine nature, Zimbabwe's president Robert Mugabe would say of the rhino and elephant in 1997, 'The species must pay to stay' – which in turn allowed him and wealthy (white) game farm owners to offer rich overseas hunters the opportunity to shoot big game at high prices.[23] The dilemma about hunt marketing is that it doesn't stop there: black markets in rhino horns and elephant tusks are the incentive for poachers to invade not just poorly defended game parks north of the Limpopo River, but also now in South Africa where in 2013 the prospect of formal markets in rhino

20 Conservation International (note 4 above).

21 C Lang 'Carvier Limited: "3 Million Units Available!!" from Brazil – the Ethical Alternative to Carbon Credits?' (6 June 2012) <http://www.redd-monitor.org/2012/06/06/carvier-limited-3-million-units-available-from-brazil-the-ethical-alternative-to-carbon-credits/>.

22 P Bond 'At Rio+20: Values versus Prices' (2012) <http://roadlogs.rio20.net/at-rio20-values-versus-prices/>.

23 F Macleod 'Africa must Pay for its Wildlife' *Mail & Guardian* (26 September 1997) <http://mg.co.za/article/1997-09-26-africa-must-pay-for-its-wildlife>.

horns and elephant tusks re-emerged. The alternative strategy would have been to tighten the Convention on International Trade in Endangered Species' (CITES) restrictions against trade in ivory. But because South Africa's game-farm owners and free-market proponents influenced Pretoria to press for relaxation of CITES' ban, hundreds of elephant and rhino corpses denuded of horns and tusks now litter the bush each year.

At best, the Gaborone Declaration commits the ten countries to 'reducing poverty by transitioning agriculture, extractive industries, fisheries and other natural capital uses to practices that promote sustainable employment, food security, sustainable energy and the protection of natural capital through protected areas and other mechanisms'.[24] How, though, is the crucial question, for the system relies upon intrinsic nature as applicable to saving, sustaining and protection of the environment but only when converted into capital.

Boiling down a complex argument about how to properly value people and nature from her book *Eco-Sufficiency & Global Justice*, University of Sydney-based political ecologist Ariel Salleh observes how a triple externalisation of costs 'takes the form of an extraction of surpluses, both economic and thermodynamic: (1) a social debt to inadequately paid workers; (2) an embodied debt to women family caregivers; and (3) an ecological debt drawn on nature at large'.[25] At minimum, addressing these problems requires full-fledged re-accounting to toss out the fatally-flawed gross domestic product (GDP) indicator, and to internalise environment and society in the ways we assess costs and benefits.

Of course, this exercise would logically both precede and catalyse a full-fledged transformation of financing, extraction, production, transport and distribution, consumption and disposal systems. Indeed, if one makes just four simple corrections to GDP, as does the World Bank in *The Changing Wealth of Nations,* there suddenly emerges an unintended consequence of neo-liberalised nature. While three of these factors are relatively minor – depreciation of fixed capital, education spending and pollution – the fourth is foundational in its ideological implications: calculating the lost 'natural capital' in the form of non-renewable resource depletion associated with extractive industries.

This indeed is the critical point. When non-renewable resources are dug out of the soil, there should logically be a permanent *debit* against genuine national savings (due to the consequent decline in a country's natural resources); instead national income accounting provides a *credit* to GDP. Thus in many situations, once the calculations are made, *it becomes logical to leave resources in the ground.* This is especially true in sub-Saharan Africa, because since the commodity boom began in the early 2000s, according to *The Changing Wealth of Nations,* Africa has suffered negative genuine savings mainly because of non-renewable resource decay in the context of resource-cursed neo-colonial politics. Such resource decay would be calculated at an

24 Conservation International (note 4 above).
25 A Salleh 'Women, Food Sovereignty and Green Jobs in China' (2012) <http://www.foe.org.au/women-food-sovereignty-and-green-jobs-china>.

even greater rate if such reports would take into account the illicit flight of resource revenue. Even without that critical additional factor this stripping of African wealth – seen via 'adjusted net savings' year on year – had reached six per cent of gross national income by 2008, according to the Bank.[26]

But there is a need for measurement and valuation. In their seminal *Ecological Economics* article, Mathis Wackernagel et al write:

> To translate the strong sustainability criterion into concrete numbers and to examine whether society lives within its ecological capacity, a first overview needs to account for natural capital and its uses at the national and global level … Ecological footprint calculations are based on two simple facts: first, we can keep track of most of the resources we consume and many of the wastes we generate; and second, most of these resource and waste flows can be converted to a biologically productive area necessary to provide these functions. Thus, ecological footprints show us how much nature nations use.[27]

The report widely credited with putting 'natural capital' on the negotiating table is the UN Environment Programme study, *The Economics of Ecosystems and Biodiversity* (TEEB), led by former Deutsche Bank official Pavan Sukhdev:

> Nature comprises around 45-90 per cent of the GDP of the poor in some developing countries. By assigning economic values to the services flowing from nature to people, policy makers and the global economy can start to account for the costs of biodiversity loss, as well as reward responsible custodians for the benefits that natural ecosystems provide.[28]

Sukhdev acknowledged that valuation was a human system and that intrinsic value would not necessarily be included.

IV Carbon Capital

It should now be morally obvious that a vast debt is owed Africa, in view of this process of what might be considered 'looting'.[29] Moreover, Africa's odious debt has been structurally tied to the looting of resources. But instead of being properly compensated for social, economic and environmental damage, Africa is being drawn into an environmental policy framework and climate finance regime based in part upon failing financial markets that have mainly enriched speculators and impoverished the continent's poor people. In the wake of South Africa's unsuccessful hosting of the December 2011 Durban COP17 climate summit, where negotiators again postponed decisions to save the planet from catastrophic warming and ever more extreme weather events, the newest signals from the UN, World Bank and EU suggest that rising fears of carbon markets in Africa are well grounded.

Instead, those who followed the Durban UN Framework Convention on Climate Change (FCCC) COP17 in December 2011 heard that the solution to climate crisis must centre on markets, in order to 'price pollution' and

26 World Bank *The Changing Wealth of Nations* (2011).

27 M Wackernagel, L Onisto, P Bello, A Linares, I Falfan, J Garcia, A Guerrero & G Guerrero 'National Natural Capital Accounting with the Ecological Footprint Concept' (1999) 29 *Ecological Economics* 375 <http://www.sciencedirect.com/science/article/pii/S0921800998900635>.

28 K Sharife 'Who Should Pay for Climate Damage?' *African Business* (March 2013).

29 *Changing Wealth of Nations* (note 26 above).

simultaneously cut the costs associated with mitigating GHGs. Moreover, say proponents, these markets are vital for funding not only innovative carbon-cutting projects in Africa, but also for supplying a future guaranteed revenue stream to the Green Climate Fund (GCF), whose design team co-chair, Trevor Manuel (South Africa's planning minister), argued as early as November 2010 that up to half of the GCF revenues would logically flow from carbon markets.

If we take this logic seriously, of most interest for Africans is one small but important component of the emissions market, the Clean Development Mechanism (CDM). The CDM's size as a percentage of total carbon trading volume has been around just five per cent, and the vast bulk of financing has gone to just four countries, none in Africa. The strategy was established within the Kyoto Protocol in 1997. It aims to facilitate innovative carbon-mitigation and alternative development projects by drawing in funds from northern GHG emitters in exchange for permitting their continuing pollution. CDMs generate Certified Emissions Reductions (CERs) that act as another asset class to be bought, sold and hedged in the market. The EU's Emissions Trading Scheme (ETS) is the main site of trading, following a failed attempt at a carbon tax in Europe prior to 1997, due to intensive lobbying from resistant companies.

CDMs were created to allow wealthier countries classified as 'industrialised' – or Annex 1 – to engage in emissions reductions initiatives in poor and middle-income countries, as a way of eliding direct emissions reductions. Put simply: the owner of a major polluting vehicle in Europe can pay an African country to not pollute in some way, so that the owner of the vehicle is allowed to continue emitting. In the process, developing countries are, in theory, benefiting from sustainable energy projects. The use of such 'market solutions' will, supporters argue, lower the business costs of transitioning to a post-carbon world. In a cap and trade system, after a cap is placed on total emissions, the high-polluting corporations and governments can buy ever more costly carbon permits from those polluters who do not need so many, or from those willing to part with the permits for a higher price than the profits they make in high-pollution production, energy-generation, agriculture, consumption, disposal or transport. The intent is to remove the 'real seat' of origin, and thus legitimately negate accountability, through financial transaction based on what could arguably be called (speculative) futures markets.

Instead of providing an appropriate flow of climate finance for such transformation, or for projects related to GHG mitigation, the CDM has benefited large corporations (both South and North) and the governments they influence and often control. Many sites of emissions in Africa – for example, methane from rotting rubbish in landfills, flaring of gas from oil extraction, coal-burning electricity generation, coal-to-liquid and gas-to-liquid petroleum refining, deforestation, decomposed vegetation in tropical dams – require urgent attention, as do the proliferation of 'false solutions' to the climate crisis such as mega-hydro power, tree plantations and biofuels. Across Africa, the CDM subsidises all these dangerous for-profit activities, making them yet more advantageous to multinational corporations, which are mostly based in Europe, the United States (US) or South Africa. In turn, these same corporations – and others just as ecologically irresponsible – can continue to pollute beyond the bounds set by politicians especially in Europe, because the ETS forgives increasing pollution in the North if it is offset by dubious projects in the South. But because communities, workers and local environments have been harmed in the process, various kinds of social resistances have emerged, and in some cases met with repression or cooptation through 'divide-and-rule' strategies, as documented in a 2012 study by researchers at the University of KwaZulu-Natal (UKZN) and Dartmouth College.[30]

Durban's COP17 failed to gain commitments for the vital GHG emissions cuts of 50 per cent by 2020, for ensuring the North's climate debt to the South covers the sorts of damages Kofi Annan specified under a 'polluter pays' logic, and for establishing a transition path to a post-carbon society and economy. Even within the very limited, flawed strategy of carbon markets, there were mixed outcomes from the Durban COP17. In spite of Trevor Manuel's efforts to bring emissions trading into the GCF, where it does not belong, and in spite of the UN CDM executive board's decision to allow 'Carbon Capture and Storage' experiments to qualify for funding, the most profound flaw in the existing market was not addressed. Without an ever-lowering cap on emissions, the incentive to increase prices and raise trading volumes disappears. Worse, in a context of economic stagnation in Annex 1 countries, financial volatility and shrinking demand for emissions reduction credits, the world faces increasing sources of carbon credit supply in an already glutted market.

Durban left the world's stuttering carbon markets without a renewed framework for a global emissions trading scheme. Durban turned the Kyoto Protocol – which is now applicable to only 14 per cent of world GHG emissions – into a 'Zombie' (walking-dead) because its heart, soul and brain (binding emissions cuts) all died, as former Bolivian ambassador Pablo Solon put it.[31] All that appears to be moving is the stumbling and indeed crashing commitment to CDMs. These markets can be expected to die completely given the failure at Qatar's COP18 to generate more commitments to legally-binding emissions cuts. And judging by Washington's threat, it won't be until 2020 – the COP26 – when the US will review its own targets: the Copenhagen Accord's meaningless three per cent cuts offered from 1990 to 2020. By then it will be too late, because the Kyoto Protocol's mistaken reliance on financial markets means that the period 1997 to 2011 will be seen as the lost years of inaction and misguided financial quackery – when we urgently need the period going forward from 2012 to be defined as an era in which humanity took charge of its future and ensured planetary survival.

30 UKZN CCS and Dartmouth College Climate Justice Project. 'CDMs Cannot Deliver the Money' (April 2012) <http://cdmscannotdeliver.wordpress.com/>.

31 P Solon 'Wolpe Lecture at the University of KwaZulu-Natal, Durban' (2 December 2011) <http://ccs.ukzn.ac.za>.

Unlike soft and hard tangible commodities such as corn or gold, the carbon credits exist purely on the basis of 'authorisation' on the part of national governments. If 'deauthorised', the entire credit market – and the justification of hundreds of billions of dollars worth of carbon trades – becomes pure fiction. Chances are that methane – yet another consistently named gas – will also soon become a junk asset. To be sure, the fact that the Kyoto Protocol was nominally extended a few years means that CDMs will continue to be traded, even though from 2007 to 2010 the volume of activity fell by 80 per cent. Jonathan Grant, director of carbon markets and climate policy at PricewaterhouseCoopers stated:

> Thanks to Durban, the CDM will live to see another day, but demand for credits for these projects is lacklustre. Carbon markets are expected to stay in the doldrums, because of oversupply in the (European carbon) market as a result of the recession.[32]

According to Barclays Capital's lead carbon researcher, Trevor Sikorski, there are vast surpluses of credits – at least a billion carbon credits.[33]

That problem will be exacerbated by pressure on the voluntary markets from new Reducing Emissions through Deforestation and Forest Degradation (REDD) offsets as well as by the UN executive board's decision to include Carbon Capture and Storage experimentation in CDMs. Together, these factors have wrecked the European market for CDMs. In the words of emissions trading lawyer Rutger de Witt Wijnen in April 2012, 'We all know there are too many [carbon] allowances around, too many credits, too few emissions, too few market players who are willing to make the market'. And worse, he continued, 'People and companies are leaving the markets; companies are closing their carbon trading desks, the same for law firms and advisors'.[34]

Concerns about the carbon markets have been expressed for many years by civil society opponents of carbon trading. Frustration with CDMs in Africa reached a critical mass as early as 2004 when the Durban Group for Climate Justice gathered for an historic meeting. A global civil society network, the Durban Group[35] was formed to oppose carbon trading in 2004. The critique can be summed up in eight points: (1) the idea of inventing a property right to pollute is effectively the 'privatisation of the air', a moral problem given vast, growing differentials in wealth inequalities; (2) GHGs 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 is accommodated by reducing a tonne in another, as is the premise of the emissions trade); (3) 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

32 Reuters 'Carbon Markets Still on Life Support after Climate Deal' (12 December 2011) <http://www.reuters.com/article/2011/12/12/us-climate-carbon-idUSTRE7BB0QT20111212>.
33 Ibid.
34 FS Insight 'Global Uncertainties Denting the Carbon Market' (13 April 2012) <http://fsinsight.org/insights/detail/global-uncertainties-denting-the-carbon-market>.
35 See <http://www.durbanclimatejustice.org/>.

to attract money into the market even if this prevents genuine emissions reductions; (4) many of the offsetting projects – such as mono-cultural 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; (5) 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, by another 50 per cent during 2011, and yet further in 2012, thus making a mockery of the idea that there will be an effective market mechanism to make renewable energy a cost-effective investment; (6) there is 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 former Enron employees populate the carbon markets); (7) 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 (8) 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.[36]

V Towards Litigative Justice for Ecological Crimes?

What legal strategies might be deployed to evade the policy trap of carbon trading? Since 1972 when the first UN environmental conference was held in Stockholm, the war for ecological accountability has raged between the 'Global North' and 'Global South', distinctly rooted in the processes, and consequences, of imperialism and colonialism. During the 1980s and 1990s, the South fought for the UN, as a global political platform, to mediate the ecological crisis, while the North lobbied for technical bodies such as the Intergovernmental Panel on Climate Change (IPCC). The latter proclaimed the crisis as a 'universal' and technical issue, requiring regulation; while the South felt that those who caused the problem must shoulder the political and economic costs of the solution.[37] In their book, *International Relations Theory and Political Thought*, Eric Laferrier and Peter Stoett insisted that while:

> the prospect of increased co-operation on environmental issues through institutional design and growth may please many environmentalists, it may be coming as part of a package deal

36 See, for example, L Lohmann 'Carbon Trading: a Critical Conversation on Climate Change, Privatisation and Power' (2006) 48 *Development Dialogue* <http://www.dhf.uu.se/pdffiler/DD2006_48_carbon_trading/carbon_trading_web_HQ.pdf>.

37 M Friman 'Historical Responsibility in the UNFCCC' (2007) Centre for Climate Science and Policy Research Report 8(4) *Climate Policy*.

> that in fact decreases heterogeneity, increases extractive activity, and emphasises technocratic problem solving to what are in essence political and even, philosophical dilemmas.[38]

This global condition of environmental degradation, asserts Wouter Achterberg,[39] demands that, 'the ethical basis and forms of global governance' are scrutinised, in what has become a 'singular grand narrative' of environmental ethics.[40]

As far back as the first Rio Earth Summit, the UN allocated responsibility to the primary polluters. '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,' stated the UNFCCC. Beijing's 1991 Ministerial Declaration on Environment and Development declared, 'Responsibility for the emissions of greenhouse gases should be viewed in both historical and cumulative terms, and in terms of current emissions. On the basis of equity, those countries who have contaminated most, must contribute more'.[41] Brazil's 1997 submission to the Kyoto negotiations, called for accountability on the basis of cumulative historical emissions dating from 1840.[42] Other dates range from the early 1900s to 1960s, connected to critical periods in history.

Still, the concept of ecological debt remains largely undeveloped in legal terms. It has been fundamentally opposed by the US and United Kingdom (UK), whose fossil-fuel intensive political economies remain inherently intertwined with the primary causes. As chief US climate negotiator Todd Stern stated at the Copenhagen COP15 in 2009, 'The sense of guilt or culpability or reparations – I just categorically reject that'. Since 1990, the US's EPA concedes domestic emissions have increased by at least ten per cent, a figure that excludes sites of pollution created by US government and corporate investment abroad, in the outsourcing of emissions-related economic activity (finished products are imported but it is China that is blamed for the emissions that go into production and transport).[43] Moreover, the lack of congressional action on climate in spite of intense pressure in the period 2007 to 2009,[44] confirms that there is no intention to reduce emissions. Conversely, the US-Canada tar-sand pipeline proves the opposite.

38 E Laferriere & PJ Stoett *International Relations Theory and Ecological Thought: Towards a Synthesis* (1999) 107–8.

39 W Achterberg 'Environmental Justice and Global Democracy' in B Gleeson & N Low *Governing for the Environment: Global Problems Ethics and Democracy* (2001).

40 B Gleeson & N Low 'The Challenge of Ethical Environmental Governance, in Gleeson & Low ibid.

41 A Gosseries 'Historical Emissions and Free-Riding' (2004) 11 *Ethical Perspectives*.

42 Ibid.

43 EPA 'US Greenhouse Gas Inventory Report' (April 2012) <http://www.epa.gov/climatechange/ghgemissions/usinventoryreport.html>.

44 Climate Change Insights 'Watch what Happens: Top 5 US Climate and Energy Questions in 2012' (30 December 2011) <http://www.climatechangeinsights.com/2011/12/articles/us-policy/watch-what-happens-top-5-us-climate-energy-questions-in-2012/>.

Most developed governments proclaim individual, and collective, innocence on the basis of the several criteria, including ignorance (if I did not know, I/we cannot be responsible); powerlessness (if I was not in charge, I/we cannot be responsible); historical emissions ignorance (if I was not alive, I/we cannot be responsible) etc. However, from a justice-based legal perspective, current and historical emissions remain a directly causal link to global and local ecological crisis. These emissions do necessitate moral, structural and material accountability where collectives or individuals (also including governments) were informed of past or current exploitation, and once informed, and having benefitted from the system, took no action to compensate.

These groups are even more accountable where the system was maintained for continuation of benefit. In terms of structural accountability for governments and companies designing energy policy, the last three decades – among the most relevant in pollutive activity, have provided ample knowledge. The question then is whether those in the political seats of power, extending to multilateral entities, did know, and did not act, due to vested interests or indifference, while engaging in free-riding or parasitical behaviour. Meanwhile, as Stephen DeCanio notes:

> In opposition, the developing countries feared institutionalization of something like current emissions levels (or ratios) that would condemn them to permanent economic inferiority because of the advantages the rich countries had derived from their historic reliance on fossil fuels to power the industrial revolution.[45]

But there is evidence of climate justice accountability being successfully pursued in US courts. Environmentally destructive activities impacting on human health have been successfully prosecuted in EU courts, as violating enforceable human rights. Moreover, reparation is a normalised and justifiable prosecutable platform. The same concept is, after all, recognised across society as a basis of 'justice in law' – hence, even the description of prisons as places where criminals, 'pay their debt to society'. The International Criminal Court, for example, intends reparations for victims, as 'relieving the suffering and affording justice to victims not only through the conviction of the perpetrator by this Court, but also by attempting to redress the consequences …'.[46] The case for reparations is further embedded in the institutional landscape of rights when taking into account the expanded universe of victims – via the Victim's Trust Fund – eligible for reparations as those impacted by human rights violations, rather than simply those who were victims of convicted criminals.[47] This argument steers away from the 'confrontational model', enabling an objective duty for tort reparations to be found for injured victims. This feeds into the idea of a system capable of facilitating reparations, including in financial form, rather than market mechanisms based on generating profit.

45 S DeCanio *Economic Models of Climatic Change – A Critique* (2003).

46 L Keller 'Seeking Reparations at the ICC: Victim's Reparations' (2007) <http://b6.b7.85ae.static.theplanet.com/files/faculty/Keller_reparations_ICC_final.pdf>.

47 Ibid.

Some advocates base their hopes for such a strategy upon the GCF. The GCF is an operating entity of the financial mechanism of the UNFCCC, designed to transfer money from developed polluting countries to developing countries. The amount promised by US secretary of state, Hillary Clinton, in 2009 was US$100-billion annually starting in 2020. But in the wake of Durban's COP17 and Doha's COP18, the sources of funding were defined as from 'a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance'. These have yet to be clarified in terms of how and when resources would be mobilised, as well as the relative share of each developed nation.

The GCF was also proposed to provide a more equal voice for developing countries in terms of the form of climate finance (whether loans or grants; for adaptation or mitigation), and potential direct access, allowing for national institutions to shape the use and outcome. But within the GCF – which has yet to identify public sources of funding – the concept of a private sector facility within the GCF, has been prioritised as a central objective for 2013, enabling 'it to directly and indirectly finance private sector mitigation and adaptation activities at the national, regional and international levels'. It is claimed that the GCF will act as a scale-up tool for private-sector funding. This bears similarity to the Bank's claims that for every US$1 invested from the Global Environmental Facility, US$4 has been attracted via co-financing.[48] Or that the Bank's private-sector lending arm, the International Finance Corporation (IFC), addresses poverty. In reality, assessments of IFC investments found less than 29 per cent flowed to the poorest countries; with almost 40 per cent to Brazil, India, Russia, China and Turkey. The Bank's own Independent Evaluation Group found that just 13 per cent of IFC investments had an 'explicit focus on the poor'.[49]

Hence as even the African Development Bank admits, while adaptation is the main concern for many low-income countries subject to extreme climate threat, mitigation received 100 per cent of private-sector funding, constituting more than 50 per cent of all climate funding.[50] Mitigation can often be a profit-rich sector insofar as vast expenditures are required to transform economies from high to low carbon. 'Offsets' were also entirely directly invested in mitigation, while just three per cent of GCF and multilateral value flowed to

48 Sharife (note 28 above).

49 Ibid.

50 The use of financial intermediaries (FIF) as leveraging vehicles for the private sector – many located in tax havens – remains a threat, though it is ardently backed by the EU. For example, Norway is seen as one of Africa's most vocal climate supporters. Yet, of the 35 funds invested in, 29 are based in tax havens, such as primarily Mauritius, followed by the Cayman Islands, Delaware (US), Luxembourg, and Panama. The same can be applied to others, including seven of 12 funds belonging to the European Investment Bank (EIB). Once donors disburse funds, the pledge is considered 'fulfilled' whether or not the funds reach the African country. These FIFs, operating with legal and financial opacity, are rarely monitored from the way in which funds are used since period of deposit to disbursement, nor does the jurisdiction – such as Mauritius – require any accountability. Civil society critics like Bobby Peek (groundWork South Africa) and Karen Orenstein (Friends of the Earth USA) claim that few FIFs align projects with the needs of developing countries.

adaptation. In total, just five per cent of total global climate funding went to adaptation.[51]

But in assessing the evolution of international law, two themes emerge. First, reparations are primarily considered from the standpoint of a narrowly-defined 'criminal' law interpretation, and they are usually limited to deviant individuals or non-stakeholder groups. Second, reparations fail to properly consider the contradictory role of the state, which is both a primary offender and enforcer of rights. Paradoxically, the modern national state has been the cause of rights violations in the majority of cases that have occurred at mass scale. As witnessed in Nazi Germany, Australia, Canada, the US, South Africa, and other sites of systematised historic rights violation, it is frequently the state's law that was integral to the deprivation of rights. Yet despite the obvious role of the state, even the international definition of genocide fails to incorporate the state. The law, then, is not always right or wrong. While structured on legality, it does not always hold 'legitimacy' for those dispossessed by such systems, where legitimacy is, 'transcribed as a coded word for morality, thus capturing the tension between morality and legality, not the purported one between legitimacy and legality'.[52]

The essence of reparations, narrowly interpreted by international human rights norm, is constructed on five pillars: acknowledgement and apology; guarantees against repetition; measures of restitution; measures of rehabilitation; and measures of compensation. Critical components have long been normalised in international law: that states must balance the needs of victims, and the interests of the public, as well as offenders; that victims must have access to formal and informal dispute resolution mechanisms; the need for comprehensive crime prevention action; restorative justice in the form of reconciliation between offenders, victims and the public, etc. Reparations advocates underscore the essence of the system as requiring the entire community to take responsibility for righting the wrongs, where society has benefitted, and possibly continues to benefit. In the case of African Americans, society would be classified as the wrongdoer, particularly where, 'the injured party is still injured and suffers from the consequences of the wrong'.[53] In this instance, reparations for damages (the basis of tort) would necessarily require restorative justice.

The impact of policy choices (whether at a national or supranational foreign policy level concerning oil partners, or at the domestic level of waste management) is directly mirrored in the political ecology (defined in this context as politically regulated engagement between natural and human ecologies). Though scientific commissions such as the IPCC openly bridge

51 Sharife (note 28 above).

52 J Connor 'The Meaning of "Legitimacy" in World Affairs: Does Law + Ethics + Politics = A Just Pragmatism or Mere Politics?' (2007) SGIR conference presentation <http://www.turin.sgir.eu/uploads/oconnor-legitimacy.pdf>.

53 Quotation by Vincene Verdun. For more see V Verdun 'If the Shoe Fits, Wear It: an Analysis of Reparations to African Americans' (1993) 67 *Tulane LR* 597–698, 612–639.

invisibilised gaps between ecological degradation and human rights, little has been done to move towards reparations and restorative justice.

Gains on the legal front do suggest reparations will be increasingly litigable, yet the litigative landscape is too often interpreted via neo-liberal politico-economic values. Outcomes are too often aligned to facilitate corporate penetration of markets through commodifying as much as possible, with minimal state regulation, intervention or protection. The market considers only profit, with all other factors diminished to externalities. Still, a few recent cases indicate patterns of legal justice may possibly provide standing against blind commodification.

For example, in the landmark case, *Friends of the Earth (FoE) Inc v Spenelli*, FoE and four US cities (Boulder, Oakland, Santa Monica and Arcata) filed a lawsuit against two US agencies, the Overseas Private Investment Corporation (OPIC) and the Export-Import Bank (Ex-Im), alleging that the US$32-billion provided for financial and political risk insurance to fossil-fuel intensive projects, did not consider the heavy impact on climate change. Between 1990 and 2003, the plaintiffs alleged the OPIC and Ex-Im funding generated eight per cent of global GHG emissions (including 260-million CO2 annually). Though the case was settled out of court in 2009, under the Obama administration, the 9th Circuit ruling that the plaintiffs had legal 'standing' constructed an important precedent for future related climate change actions.[54] Despite the US government's staunch opposition, it was the first lawsuit by private or public plaintiffs to hold the US government to account for its contributions to climate change, damaging the global environment and the US citizenry.[55]

While the outcome of the settlement has been anything but equitable – Ex-Im, for instance, has reverted to business as usual, including supporting the more rapid extraction of South African coal via US$1-billion worth of Wisconsin-made machinery – the precedent of legal standing was critical. Until this case, citizen-suit provisions enabling citizens etc to act as private attorneys in protection of the environment had been blocked by a series of legal federal and national court rulings. The heyday for legally-grounded environmental challenges in the US was the 1980s, as lawsuits increased from 41 in 1982 to 266 in 1986, with overwhelmingly successful results: 503 of 507 private suits were won by environmental claimants by the late 1980s. The demand for injuctive relief and legal costs differs from civil lawsuits, where plaintiffs are entitled to seek damages personally.

But then, as the *New York Times* reported in 1999, the success of private suits was sharply cut down following a series of Supreme Court decisions by Justice Antonin Scalia, beginning with a *Law Review* article authored in 1983, three years before he was appointed to the Supreme Court, designed to prevent prosecutable civil suits. When asked whether his intention was to 'misdirect' and erode environmental citizen suits, Scalia responded 'of

54 See Ex-Im Settlement Agreement *Friends of the Earth Inc v Spenelli*.
55 C Carlane *Climate Change Law and Policy: EU and US Approaches* (2010).

course … and a good thing too'.[56] Even more broadly considered, rights-based approach through courts often operate in severely constrained spaces,[57] where rights are exercised according to the interpretation of hegemonic systems, excluding intergenerational justice[58] and equity,[59] such as state-capitalism that brooks no challenges (especially China), the US's neo-liberal system, or the EU's capitalist-welfare model.

In spite of the fact that universally-recognised 'human dignity' is enshrined in multiple global, regional and national constitutions, conventions, treaties etc, from the UN to the EU and below, there is still very infirm ground to stand upon for legal precedent in protecting the environment and demanding reparations for damages. Allocation and protection of equal basic rights, including the distribution of scarce resources, should ideally be adjudicated through a globally-determined framework, and be mandatory. Yet, even though more than 100 inalienable human rights treaties exist, the legal application and operationalization of these instruments has not yet been clarified, nor is there significant movement to that end.[60]

Nevertheless, numerous climate-related lawsuits continue, in relation to corporate torts against people in Nigeria, the US, South Africa, Canada, Australia, New Zealand etc. The lawsuits typically focus on curbing the excesses of corporate choice, and their resulting human and ecological 'externalities' – or hidden costs. The Inuit petition, filed by the Center for Environmental Law (CIEL) in 2005, with the Inter-American Commission on Human Rights (IACHR), identified a direct binding obligation on states by international rights law. The petition noted that the US, with five per cent of the population, generated 25 per cent of global GHG emissions, and not only refused to participate in negotiations for genuine reductions, but further, 'actively impeded the ability of the global community to take action'.[61] In

56 W Glaberson 'Novel Antipollution Tool is Being Upset by Courts' *New York Times* (5 June 1999) <http://www.nytimes.com/1999/06/05/us/novel-antipollution-tool-is-being-upset-by-courts.html?pagewanted=all&src=pm>.

57 H Osofsky 'The Geography of Climate Change Litigation: Implications for Transnational Regulatory Governance' (2005) 83 *Washington Univ LQ* 1789, 2005 <http://ssrn.com/abstract=796204>.

58 Justice being interpreted here as an inviolable, universal moral compass, perceived as Aristotle stated, 'justice alone, of all virtues, is thought to be "another's good" because it is related to our neighbours; for what it does is advantageous to another …'

59 Equity in this context referring to various justice-based contexts, ie interspecies, intergenerational etc, defined as 'forms of justice that remedies the injustice of … law at the point of application by attending to particular features of the persons and circumstances involved … so that equity is not generically different from justice … (J Tasioulas 'Justice, Equity and Law' in E Craig (ed) Routledge Encyclopaedia of Philosophy (1989) 148).

60 The ICJ has, via cases such as Barcelona Traction Light & Power Co (*Belgium v Spain*) 1970 ICJ 3, 32 (5 February judgment); Military and Paramilitary Activities (*Nicaragua v US*) 1986 ICJ 14, 114 (27 June judgment) identified that UN member states have inviolable human rights obligations, but save for exceptions, the scope of the rights has yet to unpacked and implemented due to opposition from political blocks of power.

61 Carlane (note 55 above).

a supplemental testimony to that provided by Sheila Watt-Cloutier,[62] who described indigenous peoples sustainably inhabiting ecologies, as 'early warning systems', attorney Martin Wagner identified the impacts of global warming as violating three specific sets of rights: the rights of indigenous people; the right to life, security, and physical integrity; and the right to use property without undue interference.[63]

The 'right to life' for instance, is defined by international scholars as holding, 'access to the means of survival, realize full life expectancy, avoid serious environmental risks to life, and to enjoy protection by the State against unwarranted deprivations of life'.[64] Customary international law obligates every state 'not to allow knowingly its territory to be used for acts contrary to the rights of other States'.[65] Yet while giving the matter time and attention, the IACHR rejected the petition, providing only a hearing. This was similar to *Massachusetts v EPA*,[66] the first climate change case[67] to reach the US Supreme Court. The suit was driven by a coalition (including 12 states such as California, Washington, Oregon; cities such as Washington and NY; environmental organisations etc) who petitioned the EPA to regulate GHG emissions under the Clean Air Act s 202(a)(1), harming public health and welfare, such as the coast of Massachusetts. The EPA denied the request, claiming that even if Massachusetts was aided, to combat global warming, the whole of the US would have to be regulated. The Court ruled 5:4, upholding the EPA's stance.

Once again, Scalia was instrumental, stating that the 'statute says nothing at all about the reasons for which the Administrator may defer making a judgment …' and that courts should not get involved in EPA matters, as the EPA is the specialist authority. Yet the plaintiffs were in the right: for a suit to have legal standing, legal pillars such as injury, causation and redressability are required, all of which was sufficiently proved. Scalia's views on reparations for state violations of human rights is well known: 'Individuals who have been wronged by unlawful racial discrimination should be made whole; but under our Constitution there can be no such thing as either a creditor or a debtor race'.[68] When engaging the issue of plaintiffs seeking justice via the Alien Tort Claims Act (ATCA) – designed for this very purpose, Scalia stated, '… Some matters … are none of its business', but this did not include Scalia

62 Backed by the Inuit Circumpolar Conference, an NGO representing a constituency of 150,000 Inuit based in Canada, Alaska, Greenland, and Russia, filed on 'behalf of all Inuit of the Arctic regions of the United States and Canada'.

63 M Wagner 'Testimony of Earthjustice Managing Attorney Martin Wagner before the Inter-American Commission on Human Rights, 1 March 2007' (2010) cited in Carlane (note 55 above).

64 B Ramcharan 'The Concept and Dimensions of the Right to Life' in *The Right to Life in International Law* (1985).

65 Wagner cited in Carlane (note 55 above).

66 *Massachusetts v Environmental Protection Agency* 549 US 497 (2007).

67 For a summary of some key climate change cases worldwide, see S Stone & D Grossman 'Summary of Climate Change Cases' INECE <http://www.inece.org/conference/7/vol2/33_ClimateChange.pdf>.

68 A Scalia Concurring Opinion *Adarand Constructors Inc v Pena* (No 93-1841). See <http://www.law.cornell.edu/supct/html/historics/USSC_CR_0515_0200_ZC.html>

weighing down heavily in *United States v Eichman*, when he declared the burning of the American flag unconstitutional.[69]

The ATCA itself, the most crucial instrument for reparations in the US, may soon be drastically trimmed down: currently, the ATCA allows US courts jurisdiction over claims from foreigners for international law violations, specifically human rights.[70] This usually takes the form of a confrontational model between victims who allege violations, and the corporations responsible. This may not be as dire to activists as might appear: the case brought forward by Nigerian political activists against Shell for aiding and abetting a dictatorship, is a case in point. In their argument, Shell would claim[71] that corporate liability under international law does not exist. In June 2009, Shell agreed to an out-of-court settlement with reparations payments of US$15.5-million. Representing just four hours' worth of Shell profits, it was considered by some a crucial step in establishing liability and disincentivising corporate exploitation of people and nature. But others keenly note that Shell won a massive victory by avoiding trial and 'closing' the case, thus avoiding a court undressing of Shell's corporate affairs. The lawsuit represented window-dressing symbolism in this reading. The context, despite Justice Samuel Alito's contrary statement, is that Nigeria is a key oil supplier to the US, integral to Washington's foreign policy and energy security. But in his statement querying whether the case really belonged in the US, conferring a kind of 'legal Rome' status, Alito rightly probed whether international judicial systems might be a better option.

Beyond these kinds of tort actions, will courts start declaring climate-related ecological debt a valid concept? The Ecuadoran court system is one site for exploring constitutional rights to nature, and Bolivia may follow. In February 2011, a US$8.2-billion judgment against Texaco was won by Ecuadorans in local courts due to decades of Amazon oil pollution, which then doubled because of the failure of the firm's owner Chevron to immediately apologise. Chevron refused to recognise the judgment and filed a countersuit of racketeering against the plaintiffs' lawyers.[72] An international climate tribunal is one of the climate justice movement's objectives, similar to the International Criminal Court in The Hague. Although at the time of writing the final judgment had not been made, oil company BP was fined in the region of US$20-billion for its Deepwater Horizon spill in the Gulf of Mexico.

Indeed the power of reparations, at its core, is a moral claim located in a landscape of politics. But, as we have seen, when placed against the backdrop

69 Rescued from dormancy in 1980 when the 2nd US Circuit Court of Appeals ruled that US courts had jurisdiction over international rights violation in *Filartiga v Pena-Irala*, 630 F.2d 876 (1980).

70 Other critical ATCA cases include reparations for foreign multinationals buttressing the apartheid regime in South Africa, the infamous Chiquita fruit farms in Colombia, Exxon and Chevron operations in Indonesia etc.

71 Shell as respondents, see <http://www.losangelesemploymentlawyer.com/International-Human-Rights/Supplemental-Brief-for-Respondents-8-1-12.pdf>.

72 D Edwards 'Chevron Sues Ecuadorians who Stood up to Toxic Contamination' (2011) *The Raw Story* <http://www.rawstory.com/rs/2011/02/14/chevron-sues-ecuadorians-who-stood-up-to-toxic-contamination/>.

of rights-bearer, interpreted by the legal arms of political powers that have benefitted from the injury, transnational legal routes for litigating rights-talk are unlikely to provide justice for injured human and natural ecologies. In identifying four major preconditions for successful ecological regimes, Ian H Rowlands highlights the importance of fairness, 'in a system wide sense … including less tangible factors such as history and ideology …'.[73] Indeed, for reparations and restorative justice to be realised, an equitable politics separate from lethal market-mechanisms and capitalist ideologies must be devised. This must factor in both losses suffered by the victims, and gains accrued by the beneficiaries, distributed collectively to collective masses, prioritising interspecies equity and reparations – the most vulnerable, the most irreplaceable, of all victims. These decisions must be realised as supra-sovereign and mandatory, political decisions. Where monetary compensation is necessary as one complementary strategy, funds should be distributed outside of rent-seeking state patronage machines, through systems such as Namibia's pilot version BIG.[74]

Yet, ecological debt advocates must be very careful not to adopt the capitalist conception of justice-served by diminishing damage to monetary compensation only. The self-defeating, narrow and economistic nature of legal torts, realised through money, is infected with the pitfalls of capital as the sole compensation, *via personal reparations* as the goal. For reparations to be just, collective restorative action must underpin political imperatives at a state and trans-state level, rather than primarily pursued through courts. What differentiates the two, among other fundamental distinctions, is that collective reparations involve accountability that must be evinced from *a change in structural and systemic architecture*, as opposed to merely a 'fine' for wrongdoing. In other words, the 'fine' (polluter pays) must be followed by a *ban* on further pollution, for there to be restorative justice. Theories of justice must not be limited to financial compensation as the core strategy, or delinked from the root cause of injustice, ie that the state as a sovereign power influenced by powerful for-profit institutions, determines how pollution is created, by their own policies, and by those of their legal and human citizens, including companies like Shell. At the heart of climate change, of course lies the ability of states to 'write laws' facilitating legal and financial environments of opacity, extending from human rights to environmental regulation. The Netherlands, for instance, where Shell is based, hosts over 355 dirty industry subsidiaries. The same country provided a sovereign loophole as a tax haven for mega-multinationals sustaining the apartheid regime. Justice for the

73 IH Rowlands 'Ozone Layer Depletion and Global Warming: New Sources of Environmental Disputes' (1991) 16 *Peace and Change* 260.

74 Investigative research by Ejolt-CCS revealed that funds remitted via the Nampost system were corruption free. As citizens cannot often, if ever, hold governments to account, avoiding this crucial fault line is necessary. Africa's primary source of maldevelopment is derived from capital flight, 60 per cent caused by corporate mispricing, estimated at US$200-billion minimum annually.

climate would thus require justice at various levels, including the natural sanctioning of secrecy jurisdictions.

In this context, imposing a fee for ecosystem services and other pricing strategies leading to environmental markets must be abandoned. Instead, prohibitive fines are needed to incentivize preventative action; bans must be implemented for certain activities, such as gas flaring; and reparations in the form of ecological debt must finally begin. The various past and future climate-regime meetings can either accept this reality, or continue privatising nature, with all the market failures we have come to expect. And if this continues, yet more litigation for various forms of ecological debt is inevitable.

VI Conclusion: How, Then, to Pay the Ecological Debt?

At the end of this process, there necessarily arises the question of how, if either legal or direct action pressure permits climate debt to become part of Northern climate concessions, the payments are 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 UN agencies and aid (and even international NGO) bureaucracies. As one reflection, the late Ethiopian tyrant Meles Zenawi – Africa's leading climate debt advocate, ironically – in July 2011 announced the purchase of 200 tanks from Ukraine for over US$100-million even while climate change caused the worst drought in 60 years, leaving millions of his subjects hungry. When demands for democracy and human rights soon emerged, he jailed more opposition party leaders and expelled Amnesty International, and was caught by the BBC using development aid as a reward for impoverished citizens' political loyalty, penalising non-members of his party by denying them food.[75]

The solution to the complementary 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 BIG payment. According to *Der Spiegel* correspondent Dialika Krahe, the village of Otjivero, Namibia, was an exceptionally successful BIG 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. Haarmann and his wife Claudia, both of them economists and theologians from western Germany, were the ones who calculated the basic income for Namibia. 'The basic income

75 A Ashine 'Ethiopia Expels Amnesty Group and Jails Opposition Party Leaders' *Uganda Monitor* (2 September 2011) <http://www.monitor.co.ug/News/World/-/688340/1229108/-/11hh59e/-/?utm_medium=twitter&utm_source=twitterfeed>; BBC 'Ethiopia: Using Aid as a Weapon of Oppression' (25 August 2011); T Mountain 'Ethiopia Buys Arms as Millions Starve' *Counterpunch* (7 July 2011).

> 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.[76]

According to leading African investigative journalist John Grobler, within the BIG system – allocating R100 per month for those under 60 years old, a sum paid out for two years, between January 2007 and December 2008 – 'there is no space for corruption in the system'. The impact on social indicators, including food, education and health security, dramatically increased. Contrary to opposition within government, no new shebeens were opened – instead, shebeens were closed on BIG payout days. Meanwhile, domestic violence, begging and sex work (and with it, transfer of HIV and STDs) declined considerably.

If this strategy was to be generalised, the first priority would be to introduce a BIG programme to low-income people 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 (ATMs) and specialised withdrawal accounts would be sensible, although currency distortions, security and other such challenges would differ from place to place. How has BIG or similar income transfer schemes worked elsewhere? Ironically, in oil-dependent, conservative Alaska, the BIG concept – in the form of a dividend from oil-sourced income that goes to every Alaskan citizen – has been welcomed across the ideological spectrum. Does such a grant to working-class people disincentivise them from seeking work? According to Guy Standing of the International Labour Organisation, the BIG can actually generate 'a greater incentive to search and to take jobs, particularly low-wage jobs or low-income, own-account activities'.[77] The reason is that BIG is universal and does not get withdrawn once a job is taken. (On the other hand, the BIG can, of course, be used against labour, as much as for labour, as Franco Barchiesi records; and as James Ferguson notes, BIG is a social policy that can readily operate within the logic of neo-liberalism.[78])

In short, when it comes to monetized reparations for loss and damage from climate change, a modified version of an income grant, specific to the impact and geographical area affected, would provide due legal compensation to individuals affected. Still, once that has been accomplished, a much deeper strategy for financing collective climate adaptation or survival strategies – not to mention full transformation of socio-economic systems to achieve a post-carbon world – would still be required. But the question still arises: is monetized accounting appropriate within the concept of ecological debt,

76 D Krahe 'A New Approach to Aid: How a Basic Income Program saved a Namibian Village' *Der Spiegel International* (10 August 2009).

77 G Standing 'The South African Solidarity Grant' in G Standing & M Samson (eds) *A Basic Income Grant for South Africa* (2003).

78 F Barchiesi 'Liberation of, through, or from Work? Postcolonial Africa and the Problem with "Job Creation" in the Global Crisis' (2012) 4 *Interface: a Journal for and about Social Movements* 230; J Ferguson 'Formalities of Poverty: Thinking about Social Assistance in Neoliberal South Africa' (2007) 50(2) *African Studies Review* 71.

which is described by Martinez-Alier as a debt owed also to future generations and species.

As Karin Mickelson notes:

> ecological debt traces many of the benefits presently enjoyed by the North to its longstanding ability to draw upon global resources. The moral responsibility with regard to ecological debt, in other words, does not derive from visiting the 'sins of the fathers' upon present generations in the North. Instead, it arises from an acknowledgment that the privileged position of the developed countries represents the culmination, and in many cases the perpetuation, of a history of unequal access.[79]

All of this is still rejected by the North. 'The concepts of "ecological costs" and "ecological debt" are highly controversial' for European elites, according to Jos Delbeke, the European Commission's director-general for Climate Action. 'The concept of "North" versus "South" does no longer hold. Therefore, as agreed at last year's Durban conference, we need a new legally-binding global agreement covering all countries – by 2015 at the latest.'[80]

But given the ability of Washington – joined by BRICS [Brazil, Russia, India, China, South Africa] countries – to sabotage binding cuts in the UNFCCC, the multilateral negotiations now appear permanently doomed. The burning problem of climate debt can otherwise be addressed through solidaristic initiatives – in the way German Lutherans responded to the Namibian BIG opportunity[81] – and through litigation, such as is seen in embryonic form in the ecological debt cases discussed above. In this way, a strategy emerges with much greater ambitions: to ensure that the GHG '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 to confirm 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.

Indeed the contemporary argument for climate debt to be paid is simply the first step in a long process, akin to decolonisation, in which the master – the polluting global North (the wealthy of South Africa included) – must know that the tools with which his house were built, including the profit motive and markets, are not – and cannot be – effective in remodelling for a new society. And he must also 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. And that work of valuation and pricing, finally, must be

79 K Mickelson <http://faculty.law.ubc.ca/hsu/climate_seminar/GORD_REV_readings1.pdf> 6.

80 Cited in Sharife (note 28 above).

81 For an exemplary form of such solidaristic popular education, see the film 'The Bill' produced by eco-film <http://www.eco-film.de/-> and sponsored by GermanWatch <http://germanwatch.org/klima/film09e.htm>.

done *without creating new market strategies to privatise nature* and to worsen world financial chaos and corruption. The climate debt must be implemented so as to begin to achieve justice, via direct payments to the victims of the crisis the master has created.