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For the attention of: **Climate Secretariat**
Department of Forestry, Fisheries and the Environment
By email: climatesecretariat@environment.gov.za

Copied to: **Mr Maesela Kekana**
Chief Directorate: International Climate Change Relations & Negotiations
Department of Forestry, Fisheries and the Environment
By email: MJKekana@environment.gov.za

Mkhuthazi Steleki
Department of Forestry, Fisheries and the Environment
By email: MSteleki@environment.gov.za

groundWork and Earthlife Africa's comments on

South Africa's new Nationally Determined Contribution

Introduction

Under the Paris Agreement of 2015 all countries must submit a 'nationally determined contribution' (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC). The first NDCs submitted in 2015 were to be updated every five years with stronger measures. This was

clearly necessary since the Paris Agreement aims to keep global warming to "well below than 2°C" and preferably less than 1.5°C above pre-industrial temperatures but the combination of all NDCs submitted in 2015 added up to global warming of 4°C or more.

However, there is nothing to hold countries to their 'contributions' – a word used in preference to 'commitments'. As the second round of NDCs comes in – a year late because the 2020 negotiations were put on hold because of Covid-19 – it seems highly unlikely that they will add up to anything below 3°C.[1] Since 2015, five years of more or less unmitigated pollution has gone skyward. 2020 global emissions were down 7% on 2019 because of Covid lockdowns. This is the reduction that would be required each year from now for a half chance of keeping the temperature below 1.5°C – a goal that is fast slipping away.[2] And this reckoning does not take account of climate feedbacks such as the loss of albedo from melting ice, the largescale venting of carbon dioxide and methane from melting permafrost peat bogs in the Arctic or the proliferation of wildfires.

Meanwhile, the Intergovernmental Panel on Climate Change (IPCC) – the panel of scientists – released a Special Report on 1.5°C in 2018. It concluded that the costs of climate change will rise exponentially: it is taking a heavy toll now with warming of just over 1°C, it will take a much heavier toll at 1.5°C, and 2°C warming will be disastrous. "Rapid and far-reaching" changes to the economic system – and sub-systems such as energy, industry and agriculture – are needed to keep temperatures below 1.5°C or, indeed, below 2°C. In particular, creating a more equal society is an imperative for both mitigation and adaptation.

South Africa's second NDC was published for comment on 30 March by the Department of Environment, Forestry and Fisheries (DEFF). It has allowed just one month for written comments but says that, in April/May, it will do 'multistakeholder workshops' in each of the provinces as well as consultations with sector interest groups (energy, transport, industry, agriculture) in April/May. This tight time frame is made more challenging because the document is almost entirely incomprehensible

[1] For how far off the pace the second round NDCs are, see UNFCCC, *Nationally determined contributions under the Paris Agreement*, 26 February 2021.
[2] Global Carbon Project, in United in Science 2020 report compiled by World Meteorological Organisation for the UN General Secretary, published in September 2020. Available at: public.wmo.int/en/resources/united_in_science.

to anyone who is not a policy wonk. It is perhaps written for the UNFCCC and climate specialists in government, corporates and civil society. It is not written for the people.

Nevertheless, like the first NDC, this second NDC claims that South Africa's priority is to eliminate poverty and reduce inequality. Amongst other statements, it says, "Generally, South Africa needs time for sustainable development, which is necessary to eliminate poverty, reduce inequality, increase employment and promote inclusive economic growth, while simultaneously seeking to contribute to mitigation and assist our vulnerable communities in adapting to climate impacts" [pp. 28/29].

This sounds good. But:

- The pace of climate change does not afford time.
- South Africa's development is everything but sustainable, irrespective of how much time it has.
- Poverty and inequality have increased since 1994. The NDC says, "A just transition means leaving no-one behind" [4]. But with no transition at all, some 60% of people are already 'left behind'. That is the proportion of people who are poor on official statistics. Nor does this or any other government policy actually seek to eliminate poverty. Like the National Development Plan (NDP) and the global sustainable development goals (SDGs), it relies on 'inclusive growth'.[3] It is not surprising that people do not believe that government – or corporate capital – actually cares.[4]
- As the NDP made clear in 2012, 'inclusive growth' is really about corporate profit. It is code for suppressing wages in the hope that bosses will employ more people. It relies on what the World Bank calls "a better mobilisation of private capital" and so hands power to private investors.[5] We note that investors (those who make the decisions) are clustered in the top 1% of income earners, a polluter elite who are responsible for double the pollution put out by the bottom 50%.[6]

More power to investors is similarly embedded in the various market mechanisms promoted through successive rounds of climate negotiations, notably in the Kyoto Protocol, and under discussion at the delayed 26th Conference of the Parties (CoP 26). Generally, they permit carbon trading – allowing

[3] See Philip Alston, 2020, *The parlous state of poverty eradication*, UN Special Rapporteur on extreme poverty and human rights, Report for the Human Rights Council, 44th session, 15 June – 3 July 2020; and the groundWork Report 2014, *Planning Poverty: The NDP and the infrastructure of destruction*, groundWork, Pietermaritzburg.
[4] See The groundWork Report 2020, *"The elites don't care": People on the frontlines of Coal, Covid and Climate Change*. groundWork, Pietermaritzburg.
[5] Quoted by Alston.
[6] Roger Harrabin, *World's wealthiest 'at heart of climate problem'*, BBC, 13 April 2021.

those who reduce emissions below a set quota to sell credits to 'offset' the emissions of big polluters. The Treasury has introduced a carbon tax law, with provision for offsets, which is at heart a market strategy. Moreover, the tax rate is set so low that it will make no difference to actual emissions.

Offsetting now underpins the phrase 'net zero'. It relies two kinds of exchange:

- 'Natural climate solutions' (NCS) assume that carbon absorbed by restored wetlands, forests and grasslands etc. can offset emissions from fossil fuels extracted from below ground. The problem is that, while eco-system restoration is essential, it can only restore what was previously lost by eco-system destruction. Trading 'above ground' carbon sinks for 'below ground' fossil carbon is a fraud.
- Carbon capture and storage (CCS) is an engineering solution to strip carbon from the exhaust gas from burning fossil fuels and burying it under the earth. The problem here is that the technology is very expensive, very energy intensive, would require massive construction of new infrastructure, and storage is unproven at the scale needed to make any difference. The few power plants fitted with CCS at present are technical and economic failures and the CO_2 is sold for 'enhanced oil recovery' to restore pressure in aging oil wells and so to extract more fossil fuel.

"Net zero is not zero," as Kevin Anderson of the Tyndall Centre, the UK's leading climate change research institution, has repeatedly warned.[7]

The NDC says, "A just transition is at the core of implementing climate action in South Africa, as detailed in both the mitigation and adaptation goals presented below" [4]. There is in fact very little in those goals that speaks to a just transition beyond "a pipeline of adaptation activities … to support South Africa's Just Transition to a climate resilient economy and society" [10]. Further, the reduction of power sector emissions is slower than 'least cost' – that is, we are paying extra for extra emissions. Incremental and retarded change coupled with more power to investors does not make for a just transition or an adequate response to climate change. Nor will conventional planning based on past trends. Planning must now anticipate a changed world.

[7] Andrew Simms, *Turning Delusion into Climate Action: Prof Kevin Anderson, an interview*, Scientists for Global Responsibility, June 18, 2020

A just transition must be timely or it condemns millions more people to untimely death; it must be for all – fossil fuel workers, communities who suffer the pollution and everyone who the system makes poor; it must be about changing relations of power between people to create a more equal society where people can live well with each other and with the earth. That includes relations between men and women since the specific vulnerabilities of women are most often the result of their subordination within patriarchal relations.

There is nothing in this NDC that suggests the deep transformation needed for a just transition.

Climate policy goals

South Africa's National Climate Change Response Policy (NCCRP) has two goals:

- to adapt to inevitable climate impacts; and
- to make a fair contribution to mitigating climate change – that is, to reducing greenhouse gas emissions.

The NDC similarly has an adaptation component and a mitigation component. It adds a section on 'support requirements under the Convention and the Paris Agreement' – South Africa's shopping list for finance, technology and capacity support from the Northern powers.

The distinction between mitigation and adaptation provides for convenient categories but is misleading. Climate change is part of the larger disturbance of ecological systems along with massive deforestation, soil degradation, species extinctions and the escalating toxicity of the environment. Covid-19 likewise came out of the rents in the web of life. More narrowly, there are very large overlaps between them:

- Between 1750 and 2010, burning fossil fuels put 1,340 Gt CO_2 into the atmosphere while 'deforestation and other land use change' put another 660 Gt CO_2 into the air.[8] Restoring earth is thus essential to both mitigation and adaptation but it can only compensate for the earlier loss of 'above ground' carbon.

[8] International Panel on Climate Change, 2013, Fifth Assessment Report (IPCC AR5), Working Group 1 (WG1): The Physical Science Basis.

- Extracting and burning coal, oil and gas ruins local environments – including marine environments – as well as people's health and so spoils the ground for adaptation;
- Petrochemicals and associated products, including plastics, impose a broader toxic burden on people and the earth and so also ruin the chance of adaptation.

This immensity of ecological destruction also has a common cause in the economy of imperial capitalism, its priority for property and profit and its requirement for never ending growth.

Adaptation

Commenting on the National Climate Change Response Policy (NCCRP) in 2011, groundWork observed, "Adaptation is already an unwelcome necessity but, without serious mitigation, adaptation will fail". The NDC says, "Global average temperature reached 1.2°C above pre-industrial levels in 2020. South Africa is already experiencing significant impacts of climate change, particularly as a result of increased temperatures and rainfall variability, and is warming at more than twice the global rate of temperature increase." [5] It then goes on to cite the NDP and the National Climate Change Adaptation Strategy (NCCAS).

Adaptation, however, was failing before it ever started. This is because environmental integrity, including the relation of people to their environments, is the foundation of adaptation. People's well-being and the well-being of their environments, now and in the future, are intrinsically linked. In South Africa, to the contrary, the priority for capital has resulted in the wholesale destruction of environments as well as the impoverishment of people. The effect is to amplify climate impacts while undermining the resilience of both people and eco-systems.

Thus, the 2014-16 KZN drought was intensified by poor land management as industrial timber plantations dried out wetlands and rivers. Industrial farming also exacerbates floods. The capacity of the soil to absorb and hold water is reduced as land is compacted by heavy machinery and the surface encrusted through the application of agricultural chemicals.

Groundwater, wetlands and rivers are also being poisoned. On the Rand and Highveld, in the Vaal and Northern KZN, acid mine drainage from working and abandoned mines is slowly turning whole catchments into wastelands. Most of the province of Mpumalanga is either being mined or is planned to be mined for coal. The upper Olifants is already ruined. The Vaal is polluted at source and goes from bad to worse downstream. The upper catchments of the Usuthu, the Komati, and the uMpuluzi are compromised. Open cast coal mines are steadily eating out some of the best farm lands in the country while both open cast and underground mining interrupts the flow of groundwater.

Much of South Africa is already water stressed and the engineering that has turned South Africa's rivers into a giant national plumbing system is to compensate for the pollution of water as much as for the lack of it. Industry consumes vast quantities of clean water and returns dirty water to streams and rivers. Across the country, municipalities leak sewage from poorly maintained plants. The cost of treating water escalates and Lesotho's clean water is used to dilute the pollution in the Vaal at the cost of the ecological health of the Senqu-Orange River.

Remediation of damaged environments is an urgent priority. Corporations have a way of avoiding their environmental liabilities. Mining corporations are prone to pass the parcel, selling off mines where profits are exhausted and liabilities are accumulating – in some cases to inexperienced black economic empowerment (BEE) companies. They also commonly just walk away. The country is littered with abandoned and ownerless mines. Miners are required to set aside funds for mine closure but the amount required by the Department of Mineral Resources and Energy (DMRE) is a mere token and amounts to a subsidy. It needs to be raised by about 10 times to reflect actual costs and more for what cannot be remediated.[9] Moreover, the DMRE has no vision for or interest in restoring the land and catchments after mining.

People's settlements – formal and informal – are in a bad state. Municipal services are failing across much of the country, sewage runs down the roads, rubbish piles up on street corners, drains are inadequate and blocked by plastic. In RDP housing, design for energy conservation is neglected – hot

[9] A report for Continental Coal by SRK comments that "DMR methodology is generally acknowledged to underestimate closure liabilities" [SRK Project 427952, 15 August 2011]. It provides for six times more than the DMR requires for closure.

in summer and cold in winter and mostly reliant on dirty fuels – so passing the health and financial costs of keeping comfortable to poor people and to poor women in particular. In mining and industrial areas houses are covered in dust and cracked by blasting.

A sustainable society that caters for everyone can only be founded on democratic economic relations. That requires confronting the power of corporate capital and initiating a major shift in economic priorities. Without this, adaptation strategies are likely to entrench inequality and will ultimately prove counter-productive. This is already the experience of people responding to environmental disaster. Steel Valley was a productive farming area opposite Iscor's (now ArcelorMittal) steel works in Vanderbijlpark. The plant's effluent poisoned the groundwater and, after a long struggle, the corporation was forced to admit it. About that time, farming became impossible. The only "adaptive" strategy left was to abandon the land and find another life somewhere else. Iscor then provided some compensation to the farm owners and bought them out. Farmworkers, however, were left with nothing and had to sell their stock cheap. Most of them now live in the shack settlements around Vanderbijlpark.

Unequal adaptation is also inscribed in the compromised health of people living on the fenceline of polluting industry. Pollution from Eskom's power stations – not including the supply mines – already kills over 2 000 people each year.[10] The developing foetus and young children are particularly vulnerable and the damage stays with them for life. Sick children become sick adults. People from the fenceline communities commonly observe that they do not even get the jobs in the industries that pollute them because they do not pass the medicals. And people's bodies do not adapt to pollution. The South Durban Health Study showed that exposure makes them even more vulnerable.[11] They will also be more vulnerable to the health impacts of climate change. Nevertheless, the major polluters have resisted the setting and implementation of minimum emission standards over a period of two decades.

[10] Mike Holland, 2017. *Health impacts of coal fired power plants in South Africa.* Report to groundwork and Health Care Without Harm.
[11] Rajen Naidoo et al, 2006. *South Durban Health Study*, Centre for Occupational Health, University of KwaZulu Natal; Department of Environmental Health Sciences, University of Michigan; Department of Environmental Health Sciences, Durban Institute of Technology.

In polluted areas, the Department of Health (DoH) scarcely registers the environmental health impacts. It does not keep records of respiratory and other associated illness or make special provision for appropriate treatment. The NCCAS does say that the DoH will launch a "flagship programme to build a healthier, more resilient society" [63], but there is little sign of it and the unequal care from private and public health systems entrenches inequality. More broadly, the strategy does not register the destruction of adaptive capacity at the base of the country's carbon intensive economy. In contrast, the Lancet Commission on Health and Climate Change observed that "tackling climate change could be the greatest global health *opportunity* of the 21st century"[12] [our emphasis]. Phasing out fossil fuels would not only remove a heavy burden on people's health but would also begin the process of detoxing and restoring ecological systems necessary to adaptation.

Mitigation

First, two technical notes on the mitigation target:

- It is for all greenhouse gases and written as CO_2 equivalents (CO_2e).
- It also includes 'forestry and other land use' (FOLU). FOLU is claimed to be a 'sink' – i.e. to absorb carbon. So in 2017, according to DEFF, greenhouse gas emissions came to 555 Mt CO2e but, with FOLU, this was reduced to 513 Mt.[13] So forestry and land use were held to absorb 42 Mt CO_2e in that year. However, "emissions arising from natural disturbances" – mainly wildfires – are not included because they are highly variable and unpredictable [14]. In other words, we count a timber plantation as absorbing carbon but don't count the emissions when it burns. For the coming decade, we are told that the FOLU is assumed to reduce emissions by 12 Mt/y.

The mitigation target of the first NDC (NDC1) was widely seen to be inadequate – that is, it offered considerably less than South Africa's 'fair share'. The second NDC (NDC2) improves on this. The DEFF says it represents South Africa's "highest possible ambition" [3] and its 'fair share' taking account of 'common but differentiated responsibility and respective capabilities' (CBDR&RC) – that is, the difference between Northern and Southern countries in causing climate change and in being

[12] Nick Watts et al, 2015. Health and climate change: policy responses to protect public health, The Lancet Commissions. Published online June 23, 2015 http://dx.doi.org/10.1016/S0140-6736(15)60854-6
[13] DEFF, 2020, *National GHG inventory report 2000-2017*.

able to respond to it. It also gives a headline endorsement of the 1.5°C target [2] before backtracking in the small print [25].

In calculating its fair share, DEFF says it drew on the Climate Equity Reference Calculator (CERC) and Climate Action Tracker. It does not, however, say how it used these tools – it does not show the calculations.

NDC1 targets were defined by the peak, plateau and decline (PPD) trajectory, which was based on an offer originally made at the Copenhagen CoP in 2009: South Africa's emissions would 'peak' in 2025 at 42% below business-as-usual, plateau at that level through to 2035 and then decline through to 2050. Business-as-usual, however, was assumed to be the same as 'growth-without-constraints', a scenario for future emissions developed in 2007 for the Long Term Mitigation Scenarios (LTMS).

The crash of 2008 showed that business-as-usual was not a never-ending story of growth. Nevertheless, in 2011, the DEA (as it was) translated the Copenhagen offer into numbers equating business-as-usual to growth-without-constraints: in 2025, business-as-usual emissions would reach 870 Mt CO_2e so a reduction of 42% meant 506 Mt.

However, emissions had already exceeded that target and, under pressure from business, the DEA then cheated the numbers. It introduced an arbitrary 'error range' into the growth-without-constraints scenario. So, for 2025, it projected high growth producing 1,058 Mt CO_2e and low growth producing 686 Mt. With the promised 42% reduction, this then turned the single line PPD trajectory into a very wide range with upper and lower limits: between 614 and 398 Mt from 2025 to 2035. After 2035, the upper limit would decline to 428 Mt and the lower limit to 212 Mt in 2050. At the time it was evident that the upper limit mattered while the lower limit provided the mathematical symmetry to decorate the cheat.[14]

As it happens, since climate policy has made no difference, actual business-as-usual since 2011 has seen little economic growth and the DEFF's latest GHG inventory puts 2017 emissions at 513 Mt

[14] DEA, *Defining South Africa's Peak, Plateau and Decline greenhouse gas emissions trajectory*, August 2011. And see the groundWork Report 2015, *Climate & Energy: The elite trips out*, for a fuller account.

CO_2e (including FOLU). This is lower than the DEA's 2011 low growth business-as-usual projection for 2017 (570 Mt). If we could take government seriously, this would suggest that the PPD lower limit should now be taken as the upper limit.

NDC2 lowers the upper limit for 2025 from 614 to 510 Mt CO_2e and to 440 Mt in 2030. It leaves the lower limit the same at 398 Mt. The DEFF is at pains to point out that the upper limit is 17% lower in 2025 and 28% lower in 2030. The 2025 limit, however, is more or less the same as actual 2017 emissions (513 Mt). It is also close to the 2025 peak (506 Mt) implied by the Copenhagen offer.

Table 1: Comparing promises measured in Mt CO_2e

	2025	**2030**
Copenhagen offer	506	506
Upper limit NDC1	614	614
Upper limit NDC2	510	440
Lower limit NDC1&2	398	398

Leaving aside how it got to the new upper limit, does it represent South Africa's fair share?
The NDCs are partly conditional on financial and technology support from developed countries. As noted above, this is called for on the basis of CBDR: Northern (developed) countries are responsible for the largest part of the emissions that are driving global warming. By any reasonable accounting they have already broken their CO2e budgets and are in deep deficit. It is not physically possible for them to turn their countries into CO_2 sinks on the scale needed to recuperate the carbon debt. This has two implications: First, the North owes the South a climate debt which can only be paid by other means including financial transfers. Second, the South must still reduce emissions by more than its fair share to avoid dangerous climate change.

Taking this into account, in 2014 EcoEquity used the Climate Equity Reference Calculator to calculate what was needed from several Northern and Southern countries, including South Africa, for a good chance of coming in below 2˚C and a slim chance of coming in below 1.5˚C. It concluded that South Africa's emissions should peak in 2014 at about 540 Mt CO_2e (excluding FOLU) and should then decline at between 3 and 6% a year to 320 Mt in 2025 and 260 Mt in 2030. But this would mean

reducing by more than its fair share of 440 Mt CO_2e in 2025 and 400 Mt in 2030. So, on this calculation, "about two-thirds of South Africa's domestic mitigation obligation in 2025 would be self-funded and about one-third would be supported by international finance".[15]

EcoEquity updated its calculation for South Africa in April 2021. It gives lower and higher readings for the country's fair share according to how generously CBDR is interpreted. It does not include land use, so for comparison South Africa's claimed 12 Mt sink must either be added to the NDC numbers or subtracted from EcoEquity's numbers. We have done the latter. For a 1.5°C pathway, the lower 2030 emissions target is 274 Mt CO_2e and the higher target is 352 Mt. So NDC2 is still well off the pace for South Africa's fair share of a 1.5°C budget. For the 2°C pathway, EcoEquity gives the lower and higher targets as 350 Mt and 401 Mt respectively. EcoEquity concludes that NDC2 "does not satisfy" South Africa's fair share: "only the lower bound of the NDC range satisfies the upper bound of the fair share target range for 2.0°C".[16]

Table 2: 2030 emissions (MT CO_2e): NDC2 compared with Fare Share (including FOLU).

			1.5°C pathway	2°C pathway
NDC lower limit	398	**Fair Share lower equity range**	274	350
NDC upper limit	440	**Fair Share upper equity range**	352	401

As noted, DEFF has not shown us how it used the CERC tool. But it seems that it gave itself the most generous emissions allowance possible on the CERC 2°C pathway and claims it meets the country's fair share because the NDC lower limit scrapes by the Fare Share upper limit. But there are several additional problems with this.

First, the lower limit remains decorative and was perhaps retained only to be able to claim that the NDC meets the fair share. It seems clear that the Integrated Resource Plan for electricity (IRP 2019) was critical to calculating the NDC2 upper limit. That document repeatedly emphasised that the

[15] Tom Athanasiou, Sivan Kartha and Paul Baer, 2014. *National Fair Shares: The mitigation gap - domestic action and international support*, EcoEquity & Stockholm Environment Institute
[16] EcoEquity, Comparison of South Africa's draft updated NDC to its fair share, Memo to Earth Justice and Centre for Environmental Rights, 25 April 2021.

NDC1 PPD carbon constraint made no difference to the power plan for 2020 to 2030. In other words, there was no ‘constraint’. The NDC2 upper limit improves on the earlier offer but only to the extent that it too imposes no constraint on the IRP. The IRP showed that a ‘least cost’ power plan would be fully renewable with some flexible backup. But it placed an arbitrary limit on how much renewable energy could be built and ‘forced’ 1,500 MW of more expensive coal power into the plan. It also provided for 3,000 MW of fossil gas (or diesel). The DMRE then added another 1,400 MW by favouring gas in its short term ‘risk mitigation independent power purchase programme’ (RMIPPP). This unnecessary inclusion of coal and gas will add about 20 Mt CO_2e a year to South Africa’s emissions. The leakage of methane – a very powerful greenhouse gas – between well head to power station will likely add another 10 Mt CO_2e a year.

The DEFF’s claim that the NDC represents South Africa’s “highest possible ambition” is thus contradicted by its accommodation to the IRP. Further, like the IRP, the NDC does not look beyond 2030. It therefore avoids thinking about the consequences of locking in coal and gas for the next 30 years after completion and well beyond 2050. The NDC notes the National Planning Commission’s just transition process concluded with agreement by the ‘social partners’ on a goal of “zero or net zero emissions” by 2050 [26]. This would imply zero fossil emissions from the power sector by 2040 since it is more difficult to eliminate industrial emissions. This goal will certainly become more urgent as climate impacts escalate over the next two decades. Hence, these plants, together with Medupi and Kusile, will be stranded before the end of their design life and may in any case become inoperable in the context of climate extremes. Sasol’s coal- and gas-to-liquid process must be closed even earlier.

Government, however, is punting a long list of carbon heavy projects which may upset even the DEFF’s modest targets. They include oil and gas exploration and development and construction of extractive infrastructure for coal as well as gas. The most shocking, and stupidest, project is the Makhado energy and metallurgical special economic zone which includes a new 3,300 MW coal fired power station but is not provided for in the IRP or in NDC2.

A second problem is that South Africa, along with other southern countries, must still reduce emissions by more than its fair share if the world is to avoid going over 1.5°C or 2°C warming. On

this score (including FOLU), South Africa's 2030 emissions must be reduced to below 200 Mt CO_2e for 1.5°C and below 300 Mt for 2°C. The North's climate debt must be made to cover this difference.

A third problem is that most carbon budgets do not make allowance for climate feedback – as the earth heats, various natural responses create even more heat – or for the loss of cooling as sulphur pollution is reduced. They also come with large error ranges and the lower ends are more or less near zero. Nevertheless, the carbon contained in working coal mines and oil and gas wells exceeds even the top end of the error ranges.[17] Effectively, the carbon budgets are already spent and all further emissions risk creating runaway climate change as the feedback kicks in. Hence, all exploration should stop now, existing mines and wells will need to close early, and all countries should be reducing emissions as fast as possible and urgently working on a just transition.

Support requirements

The NDC notes that poor countries and communities did least to cause climate change but are most vulnerable to the impacts. We support the demand that rich countries pay their climate debt. At the same time, South Africa has the highest emissions in Africa and owes a considerable climate debt to neighbours such as Malawi with minimal emissions. It is also the most unequal country in the world so the rich in South Africa owe a considerable climate debt to the poor. Declining trust in government puts in question how the debt should be paid and who to. Those questions are amplified when government looks for payment for false solutions or when it seems intent on securing elite accumulation.

The NDC adaptation section puts price tags for international support on a number of elements. The biggest item is US$3 to 4 billion "required for implementation of the NCCAS" from 2021 to 2030 [10]. This includes support for a just transition although that term is not used in the NCCAS. It also includes support to sector adaptation plans and says: "The priority sectors are identified as, biodiversity and ecosystems; water; health; energy; settlements (coastal, urban, rural); disaster risk reduction, transport infrastructure, mining, fisheries, forestry and agriculture" [10].

[17] Oil Change International, 2016. *The Sky's Limit: Why the Paris climate goals require a managed decline of fossil fuel production*, written by Greg Muttitt with H. McKinnon, L. Stockman, S. Kretzmann, A. Scott, and D. Turnbull, Oil Change International.

To date, sectoral implementation focuses on how each sector can be saved from the impacts of climate change. The question of whether the sector – or the dominant practices within the sector – is compatible with serious adaptation is not asked. This gives rise to perverse adaptation. Thus, industrial timber and sugar plantations have driven the degradation of catchments but the restoration of catchments is made subordinate to the survival of plantations. As noted above, mining and burning coal is also not compatible with serious adaptation.

Other sectors such as water, health and human settlements urgently need to adapt to climate change but are failing even in the most conventional terms.

The NDC says the key to South Africa's mitigation ambition is the electricity sector [27]. Based on EcoEquity's calculations, however, it does not cross the threshold of South Africa's own fair share to get to the additional reductions that would justify international funding. To the contrary, the IRP costs more to pollute more than 'least cost'.

In its call for support, the NDC2 says, "In the first NDC, South Africa identified various technologies that could help us to further reduce emissions" [28]. It also refers to the fourth Biennial Update Report (BUR) for 2018-2019 which has a long list of "technologies prioritised in the DEA and DST Mitigation Technology Plan" [Table 4.10 ff]. NDC2 doesn't name them, but they include several false and toxic solutions: Carbon Capture and Storage – largely if not exclusively to the benefit of Sasol; Nuclear Pressurised Water Reactor; 'advanced' biofuels; waste as 'alternative fuels' to fire up cement kilns. The big ticket items are nukes and CCS and were put at the top of the NDC1 shopping list.

Other technologies on the BUR list are necessary to a transition, including renewables, biogas, electric vehicles, smart grid and various forms of energy efficiency. However, there is no discussion of the context of use. For example, electric vehicles for public transport mean something very different to private electric SUVs. In short, the devil is in the details and the details are not given.

NDC2 also calls “for support in the form of concessional finance for low carbon projects; debt restructuring;” and project and infrastructure support. It says that South Africa received US$2.4 billion climate funding a year in 2018-19 from public sources – Northern governments and multilateral funds. This included adaptation funding but most of it went to mitigation projects. 89% of it was loan finance and 11% grants. South Africa wants “significantly higher levels of climate finance”, aiming at $4.5 bn a year by 2025, and $8 bn a year by 2030, with an even split between adaptation and mitigation [28]. This suggests something around $120 bn by 2040.

Again, there are no details but, if 89% of that is debt, this looks like a major expansion of South Africa’s hard currency debt. Even if concessional interest rates apply, Rand volatility may well result in escalating repayments. This plays to a key economic vulnerability: interest and dividend payments to international investors are a major drain on the balance of payments.

Conclusion

Changing power relations requires changing the terms of participation. The Long Term Adaptation Scenarios (LTAS) noted the potential for unequal adaptation but participation in the LTAS itself was unequal. The LTAS and government’s climate policy documents reflect a generally patrician regard for “the poor” who are rendered as beneficiaries of the state and without agency. Thus, the NCCRP makes a principle of “uplifting the poor and vulnerable” and this is again quoted in the NCCAS [24]. Those who are given agency are those seen to have adaptive capacity – that is, those with capital.

Consultation for the NDC is limited. We think the DEFF needs a more expansive conception of participation, starting with the recognition that government’s primary obligation is to people. We think government’s climate response, including the NDC, should come from a single process of deep and continuing engagement with people within a framework of, and giving meaning to, open democracy. Ultimately, it is this process that will shape a future if indeed there is a future for people on earth.

End:-