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ASSERTIVE FISCAL POLICY IN AN EQUITABLE AND WORKER-CENTRIC CLIMATE RESPONSE

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ACRONYMS

BFM	Blended Finance Model
DRM	Domestic Resource Mobilisation
EMDE	Emerging Market and Developing Economy
ETS	Emissions Trading System
GFECRA	Gold and Foreign Exchange Contingency Reserve Account
GFL	General Fuel Levy
GHG	Greenhouse Gases
JET	Just Energy Transition
JET-IP	Just Energy Transition Implementation Plan
JETP	Just Energy Transition Partnership
MDB	Multilateral Development Bank
MPRR	Mineral and Petroleum Resource Royalty
NDC	Nationally Determined Contribution
OECD	Organisation for Economic Co-operation and Development
PCC	Presidential Climate Commission
RE	Renewable Energy
REI4P	Renewable Energy Independent Power Producer Procurement Programme
SDG	Sustainable Development Goal
TDP	Transmission Development Plan

EXECUTIVE SUMMARY

The working paper explores the kinds of fiscal policies that would enable South Africa to take more direct control over its future in terms of its response to the harm that will be caused by climate change, while also positioning it to seize the opportunity that climate action can yield for the economy and to deliver positive socio-economic outcomes for workers.

Underpinning the paper is the assumption that the cumulative effects of market failure cannot be fixed by the market alone. Private companies will not sufficiently incorporate externalities into their decisions or give sufficient weight to equity, may not be able to enter green industries in the absence of a supportive ecosystem, do not always have sufficient information to act on or incentive to acquire such information, and may be myopic with regards to their own long-term best interests.

The paper argues in support of more state-led financing of South Africa's climate response, and identifies particular revenue sources which are suited to such financing.

The paper also argues for a climate response fund into which earmarked revenues for the climate response would be paid, and which would represent a credible but also flexible tool for responding fiscally to changing mitigation, adaptation and green industrialisation priorities.

Implicit in the market failure approach is a critique of the blended finance model (BFM), understood as public efforts to de-risk the delivery space in order to incentivise private investment. The BFM carries three kinds of public interest risk that are hard to guard adequately against:

- The volume of finance coming through may simply not be enough.
- The volume may be sufficient, but the overall distribution of costs and benefits (including risk) may not be fair.
- Transparency may not be adequate to ensure meaningful scrutiny and democratic accountability.

The paper offers a number of recommendations:

- More consideration should be given to government-issued climate bonds to finance a significant initial segment of renewable energy infrastructure. A gentler deficit glide path, combined with governance improvement, would enable specific climate bonds to be issued for initial renewable energy grid spending over three years.
- A carbon tax pathway is needed for the years up to 2040 that converges with Paris targets. The paper considers a pathway that leads to an effective rate of R500 per tonne CO2 by 2040, with revenue of about R50bn per year associated with it. Carbon tax revenue should be recycled for climate response purposes: half to green industrial policy interventions and half to the climate response fund.
- The General Fuel Levy (GFL) was conceived as a tax on motorists, initially earmarked for transport priorities but subsequently added to general tax revenue. It makes a significant contribution to general revenue, is easy to administer, and in the current nature of things can be thought of as a tax on fossil fuel. For 2023/24, the revenue estimate is R 93 bn and the paper recommends that 30% of this be allocated to the climate response fund.
- South Africa's Mineral and Petroleum Resource Royalty (MPRR) compensates the state, as custodian / owner of mineral resources, for the permanent loss of mineral resources mined. The MPRR is by its nature designed to compensate a society for loss of resources as well as for the consequence of the extraction of those resources, and makes an ideal funding source for climate responses. The paper recommends that all MPRR revenues should be earmarked for the climate response fund, adding a minimum of R15bn a year to predictable revenue for the fund.
- Over time, the structure of the South African state has become cumbersome to the point of generating significant additional coordinatory costs which exceed the value of the structures created. Rational re-structuring needs to be a priority, which can also generate fiscal savings, a portion of which should go to climate priorities.

- The current deduction framework in support of retirement provision is highly regressive, and reform holds great potential both for climate response financing and for a fairer system than is currently the case. Specifically, the paper recommends a more assertive cap on retirement contributions, yielding around R20bn of fiscal savings.
- In South Africa, as elsewhere, wealth inequality is even higher than income inequality, and the history of wealth accumulation is intimately tied up with the extractive economies that now pose a climate risk and hamper a quicker transition. In principle, wealth taxes can complement taxes on income and consumption, though the paper notes both behavioural risks and administrative challenges that may arise, which would need to be taken into consideration.

A climate response fund would harness funds to cover likely shortages in the quantum of adaptation spend, support a just transition for affected workers in Mpumalanga, and more generally help address inequity in climate impacts and the ability to adapt to them amongst South African households.

Fund priorities would need to be set and reviewed regularly, given that many more granular dimensions of climate change impact are only beginning to emerge. There is much that is not known in detail yet, and a fund-based approach can combine flexibility and certainty in an effective way.

The combined impact of the proposals generates about R100bn for climate priorities annually, a substantial starting point and a clear indication that the country is serious about responding to the threat to workers and the economy more generally posed by climate change and that, moreover, it is willing to take a 'strategic lead' in designing and directing this response, rather than letting the market lead through a dependence on private finance and/or the blended finance model.

1. INTRODUCTION

How and why should a country like South Africa commit scarce domestic fiscal resources to responding to a climate crisis, when the primary responsibility for taking and financing urgent action falls on those developed countries whose industrialisation is the primary cause of the problem? This paper responds to this over-arching exam question by exploring the kinds of fiscal policies that would enable South Africa to take far more direct control over its future, in terms of its response to the harm that will be caused by climate change, while also positioning it to seize the opportunity that climate action can yield for the economy, and in a way that can deliver positive socio-economic outcomes for workers.

There is a conundrum at the core of the climate response and its financing, which is this: although the benefits of aggressive climate mitigation and adaptation responses significantly exceed the likely costs of doing nothing – in other words, continuing with 'business as usual' – the upfront costs are large (N.Stern 2006).[1] These costs are, generally, monetary in nature, whilst many of the benefits are not. The costs of 'doing nothing' are also likely to be a mix of monetary and non-monetary costs that are distributed across sectors and societies.

At the best of times, the requirements would be daunting.[2] Although climate challenges, if left unchecked, will come to jeopardise all other growth and development goals, at the moment climate response priorities compete with a large wish list of developmental and economic growth goals, many of which feel more tangible, from a resource-allocation perspective, and are better understood by citizens.

The ability of countries to respond assertively through fiscal actions is also hampered, to a significant and undeniable extent, by the poor fiscal circumstances many of them face. These result from the over-arching economic conditions of the last fifteen years, which commenced with a global financial crisis in 2008, and whose precarity was worsened by the Covid-19 pandemic. At the time of writing, debt levels have interacted with two years of post-Covid higher inflation and higher global interest rates, which have accelerated debt risks for many emerging markets and developing economies (EMDEs).

Even where the risk of debt distress and debt crisis is small, the interaction between higher debt stock and higher interest rates has generated the argument that there is less fiscal space for non-debt service priorities, and that maintaining existing programmes has become a challenge, let alone allocating more to climate responses. These and other factors, such as disagreements in determining an equitable adjustment burden, in terms of decarbonisation between countries and between generations,[3] mean that the climate financing gap remains large for both mitigation and adaptation needs.

Yet, in some cases the impact of debt may be exaggerated, while in others it may be used as an excuse for inaction in terms of domestic resource mobilisation (DRM). So, it is undoubtedly the case that 'international public finance' (concessional, bi-lateral or multi-lateral finance to poorer countries) must play an important role in support both in general for predominantly poorer countries who will be at the receiving end of climate-related impacts they are not responsible for, and in particular for non-carbon intensive development trajectories in areas such as energy and transport in these countries. But this should not obscure the other dimension of the imperative, which is for sovereign countries to take as much control of their destiny as possible, by deploying domestic, public resources to tackle the threat to citizen lives and livelihoods posed by climate change.

From the perspective of a country such as South Africa, it would be unwise to rely exclusively on the private sector and private finance, and it would be equally unwise to rely too heavily on international public finance. There are accelerating costs being imposed on the domestic economy, on the one hand, and opportunities being missed, on the other, both of which require a more assertive domestic response, enabled by a domestic fiscal assertiveness, whether volumes of non-domestic public and private support are forthcoming or not.

Domestic resource mobilisation is not only needed to capture potential domestic gains – for example, green industrial policy gains. It is ultimately the only way to ensure equitability in the energy transition, specifically for displaced workers and for poorer South African households, who will be vulnerable to higher energy costs as huge capital outlays are integrated into tariffs and into long-term tariff agreements with private actors.

This point goes to the core of a further fundamental question, and one that captures the essence of the conundrum articulated above: what sort of transition will this be? The notion of justice is now embedded in the concept of the 'just energy transition' that currently lies at the heart of South Africa's climate change response. Is this going to be a narrow and shallow transition, in which – for good reason (both the duty to mitigate CO2 emissions in line with international obligations and the need to address the vulnerability that heavy reliance on coal imposes on the South African economy) – the country moves from a fossil fuel-dominated energy system to one in which renewable energy, providing safer, better paid jobs, delivers clean energy security for the population and industry? Or should the ambition be far greater — to deliver a deep as well as broad 'whole economy' transition (Calland 2023)? Put crudely, the former can easily be characterised as driven by the import of inexpensive renewable energy 'kit' from China, such as solar panels, that are then used by mainly European renewable energy companies to make profits for European shareholders.

In this paradigm, adding to an already treacherous political economy, a justifiable question will inevitably be asked: what's in it for South Africa? The answer to that question can only be positive if a wider, deeper economic transition is catalysed by the shift in energy system – one in which new, job-creating industrial value chains are created.

Relating back to the 'exam question' that this paper tackles, the sub-question then becomes: what fiscal tools are available to couple a narrow and shallow energy transition to a wider and deeper one? Although this paper does not engage directly with green industrialisation, there is significant potential to develop local green manufacturing and create green jobs in South Africa, and fiscal tools, including some expenditure from a proposed climate response fund, represent one important means of support.

By way of illustration: in 2023, South Africa imported about R17bn worth of solar panels, mainly from China. Assuming the country achieves 90% renewables in its energy mix by 2040, and with an increase in energy demand to around 50 GW, the potential panel import bill could be as high as R200bn per year from 2035 onward.

Under such circumstances, even quite modest import substitution targets can have a significant job creation impact: if domestic panel production were to replace 15% of imports by 2035, and 20% by 2040, local job creation would be in the region of 60 000 in 2035, and up to 120 000 in 2040.

The second major conceptual, paradigmatic consideration that this paper engages with is the market. Underpinning this paper is a simple guiding assumption: the cumulative effects of market failure cannot, going forward, be fixed by the market alone. Accordingly, the aim is to present arguments in support of more state-led financing of South Africa's climate response, and to identify particular revenue sources which are suited to such financing. We also present arguments in favour of a climate response fund, into which earmarked revenues for the climate response would be paid, and which would represent a credible but also flexible tool for responding fiscally to changing mitigation, adaptation and green industrialisation priorities.

In turn, this requires an interrogation of the prevailing heterodox thinking about blended finance – and the blended finance model (BFM) that is currently at the centre of South Africa's response.

One of the problems with the 'rhetoric' of this BFM approach is the implication that all of this money is needed right now, fuelling a sense of a massive finance gap and a crisis - which rarely translates to useful policy - in which only the private sector can save the day. However, what is needed are predictable, 'ring-fenced' resources deployed over time to climate priorities that may change. As we unpack below, only states can – and should – coordinate, drive and take ultimate financing responsibility for this kind of response; the notion of a just transition should be regarded as a profound public good, given the fundamental and structural economic considerations at stake, and should be treated as such. That the financing of such a transition should not be left to the market, or even governed in a way that makes the market and private capital the dominant player, is the underlying premise on which this paper's argument is based.

The paper is structured as follows: section 2 presents a critical reflection on the current just energy transition financing approach. Section 3 presents a general description of market failure and how it relates to climate responses, with a particular focus on the need to continue to integrate awareness of market failures into climate financing thinking. Section 4 turns to the use of government green bonds in the case of financing renewable energy grids, and section 5 looks at domestic resource mobilisation options in the form of taxes, levies and royalties. Sections 6 and 7 consider public sector reforms and tax regressivity reforms, and the notion that some fiscal savings from these efforts could be allocated to climate finance, before section 8 considers the debate and potential of a wealth tax. Section 9 presents arguments for pooling domestic and possibly international resources for climate finance into a climate response fund, focused especially on adaptation and equity, before section 10 concludes.

2. A CRITICAL REFLECTION ON THE CURRENT JUST ENERGY TRANSITION FINANCING APPROACH

South Africa faces a significant financing gap in meeting its Nationally Determined Contribution (NDC) mitigation and adaptation commitments, and in attaining its intended net zero carbon status by 2050. The Presidential Climate Commission (PCC)'s The South African Climate Finance Landscape 2023 notes, for example:

> South Africa requires an average of R334 billion and R535 billion per year to meet its net zero

goals by 2050 and NDC by 2030, respectively. However, annual average climate finance of R131 billion for 2019-21 presents a funding gap of R203 billion to R404 billion per year to meet these goals (de Aragao Fernandes *et al.* 2023).

A large share (86%) of climate finance currently comes from the domestic private sector, with a focus on clean energy, and with primarily a commercial purpose (de Aragao Fernandes, *et al.*, 2023, pp. 2-4). Initially this spend was driven largely by loadshedding challenges, which have fortuitously accelerated the move by many businesses towards clean alternatives such as renewable energy. To date, there has been relatively little financing from the public sector, modest spending through the South African budget (de Aragao Fernandes, *et al.*, 2023, p. 4), and not enough consideration given to growing adaptation challenges. Nor has enough been done when it comes to assertive measures to promote green industrialisation. The PCC report and other surveys make it clear that South Africa lags global and African averages when it comes to relative public and private contributions, and also lags National Development Plan ambitions, which called for investment of 10% of GDP in the transport, energy and water sectors.

Against a backdrop of insufficient aggregate financing, and private sector dominance in the mix, South Africa concluded one of the first so-called 'country platform' partnerships – the Just Energy Transition Partnership (JETP). JET partnerships have been explicitly conceived to help coal-dependent emerging economies make a just energy transition, and the South African partnership is intended to help give effect to South Africa's just transition, defined as follows in the NDC Report Update of 2021:

> A just transition means leaving no-one behind. It requires procedural equity to lead to equitable outcomes. 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…as part of ensuring a just transition we will need to put measures in place that plan for workforce reskilling and job absorption, social protection and livelihood creation, incentivising new green sectors of our economy, diversifying coal dependent regional economies, and developing labour and social plans as and when ageing coal-fired power plants and associated coal production infrastructure are decommissioned. …The just transition will also need international cooperation, and requires solidary and concrete support (Republic of South Africa 2021).

In 2022, a JET Investment Plan was released and in 2023 an Implementation Plan. A draft 'Financing Framework' was also released (Presidential Climate Commission n.d.). These, together with other supporting documents, provide a fairly good sense of the JET political economy and the intended financing and delivery approach for South Africa's just transition, which is heavily located within a blended finance model (BFM). The OECD has recently defined this approach as:

> the strategic use of development finance for the mobilisation of additional finance towards sustainable development in developing countries. It attracts commercial capital towards projects that contribute to sustainable development, while providing financial returns to investors. This innovative approach helps enlarge the total amount of resources available to developing countries, complementing their own investments and ODA inflows to fill their SDG financing gap, and support the implementation of the Paris Agreement (OECD n.d.).

The Presidential Climate Commission has similarly articulated its approach as follows:

> The international and domestic capital markets, debt markets and development finance pools must be harnessed, structured, and blended to provide the financial capital for this challenging transformation.
>
> Our work will focus on supporting private sector and development finance institutions to understand mitigate [sic} climate risks, seize the market opportunities as part of the measures to align investment decisions with the mitigation and adaptation commitments of the Paris Agreement. The PCC is therefore committed to tracking, monitoring, and reporting on climate finance and just transition related climate finance flows; with the aim to identify barriers to scaling up finance across the policy environment, capital allocation and market gaps.
>
> Furthermore, the PCC will within its mandate, lead the Just Transition programme in the

country by exploring strategic options for scaling up transition and climate finance to contribute towards the achievement of South Africa's NDC's and Sustainable Development Goals (Presidential Climate Commission n.d.).

Arguments for BFM as a large-scale developmental financing model came into prominence around financing the Sustainable Development Goals (SDGs). As with climate finance, in the case of the SDGs very large estimates of 'financing needs' were bandied about (some based on concrete evidence, others less so) which in turn led to alarming estimates of the financing gap and, hence, the imperative to mobilise the private sector. Concurrently, notions of social entrepreneurship and social innovation were becoming popular in the development discourse, with their underlying conviction that developmental win-win scenarios were possible through applying the private sector's alleged efficiency and innovation superiority to intractable social challenges, especially where 'technology' could help bridge some of the delivery gaps (Bornstein 2007; Leadbeater 2001; Morozov 2013).

In the case of the SDGs, success has not been attained, with the United Nations (UN) noting, in July 2023, that the world was "woefully off-track" to achieve SDG targets by the 2030 deadline (United Nations 2023). Whilst disasters like Covid have certainly played a role in retarding progress, the underlying model is a further and important reason for failure (Eurodad 2017). Currently, 'blended finance' is the preferred South African climate financing approach, given concern over fiscal space, and perceptions over superior private sector efficiency in delivering large-scale infrastructure and other projects. The broad arguments for a blended finance approach, especially in relation to infrastructure, are:

1. Governments do not have to issue bonds – i.e. borrow from markets; the private participant (s) does this, which means that public balance sheets are not directly affected. Infrastructure entails large up-front costs: opening such investments to the private sector means a government need not concern itself with this financing dimension, but only with the financial provisions of the long-term agreement. The 'financing headache' is removed, although the ultimate cost to the state and users may be the same or more than a traditional option such as a bond issuance; and it may be distributed less equitably, depending not only on the explicit terms of the agreement but also on how contingencies are integrated.
2. Risk can be allocated more appropriately: an efficient risk allocation, as far as possible, assigns to each party (public and private) those risks it is best able to manage —technical project risks and 'political risk.'
3. Innovation is more likely, if one assumes that the private sector is more innovative, including in projects with a strong developmental component (Mazzucato 2013).[4]

However, there are real risks. Where blended finance models go wrong, from a public interest perspective, they can go wrong in various ways:

- The volume of finance coming through may simply not be enough, or sufficiently predictable, for public interest goals; this has been the case for SDG goals; as with 'harmful tax competition' and other efforts to bring private sector investment in, a state may be left having negotiated unfavourable long-term parameters and also not getting the volumes of finance that are needed.
- The volume may be sufficient, but the overall distribution of costs and benefits (including risk) may not be fair, due to poor initial design, or capture of debates by vested interests in the state, or second and third round negotiations which move away from initial terms of an agreement.
- Because BFM approaches typically run outside the national budgeting system, they are unlikely to exhibit the transparency that is actually needed, given what is at stake; without transparency, meaningful accountability (including from the legislature) also becomes harder, if not impossible, to achieve.

Harris (2003) usefully notes:

> Regardless of who owns the assets, in the end infrastructure services must be paid for either by users or taxpayers – there are no other options. The introduction of private participation

> does not alter this fundamental equation. Some governments overlooked this. They brought the private sector in as a way to help finance infrastructure investments once the public sector had run out of money. In some cases, reductions in cost brought about by private participation through improved efficiency could mean that price levels that were not sustainable under public provision could now cover costs. But in situations where prices were a long way below costs, efficiency improvements could not negate the need in many situations for price increases, at least in the absence of continued subsidisation by taxpayers (Harris 2003; Fouad *et al.* 2021).

The BFM tends to downplay issues of power and incentive incompatibility between private and public actors, and exaggerates the extent to which private incentives can be harnessed to achieve public interest goals. Amongst other features, public interest goals tend to have large externalities, assign significant weight to the equity dimension, and consist in large part of non-monetisable[5] benefits.

We submit that there is not enough recognition of market failure potential, and not enough thought is given to how to effectively resource the state as the central, coordinating entity in domestic climate responses, and that this poses risks for the effectiveness and sustainability of South Africa's JET. To put it bluntly: climate change is a 'tragedy of the commons' problem: it is a textbook instance of market failure, and as such requiring the market to lead will only perpetuate the problem.

The solution required is a widespread economic and social 'transition'; a transition in a fundamental building block of the economy - energy production - and a transition in multiple other sectors including food, transport, and infrastructure. Such transitions require coordination, and markets cannot achieve this. The private sector will be enormously important in helping to drive change, but the framework for change must come from democratic collective institutions at sub-national, national and global levels. These are the only places where collective custodianship can reside.

In many important dimensions of the climate response, furthermore, such as local development, worker-centric transition, and support for poorer households, the state's central role will inevitably include the raising and allocation of fiscal resources, and cannot wait for 'concessional finance' as a kind of silver bullet. This is the case because justice- and equity-associated interventions are required, which by their nature stand outside the price and exchange system: it is erroneous to think that a large majority of the climate response can take the form of commercially-oriented investment, production and consumption.

In this regard, a recent Global Leadership Summit on sustainability convened by the University of Cambridge Institute for Sustainability Leadership emphasised that:

> The state still matters and matters greatly to sustainability, both at national and multilateral levels: the market alone cannot be relied on to deliver public goods. And nor can self-regulation be a waterproof safeguard to ensure that market forces deliver products and services that meet society's needs while providing shareholder profits (CISL 2024).
>
> Currently, there is a failure to see the localisation potential of necessary South African efforts to adapt and contribute fairly.[6] Relatedly, there is an urgent need to conceive the South African state as being capable of driving a more visionary and ambitious response to climate change that actively promotes localisation and a worker-centric transition.

In a 2024 CISL foresight paper, the following key principles were set out (CISL 2024):

We believe the following principles should guide thinking about climate finance:

- Climate finance needs to be ramped up on the supply side, through domestic resource mobilisation, significant private investment, and far greater multilateral development bank (MDB) contributions;
- International public climate finance should be substantially more concessional;
- Greater attention needs to be paid to the 'demand side' of climate finance, ensuring that human

capital is also developed to enable South Africa and African countries generally to design credible climate finance investment plans, to deploy financial capital to optimal effect, and to mitigate the transitional impact on jobs;

- Climate finance must be mobilised towards an underlying transformational objective: the 'why' is important; and
- Fiscal tools analysis must include (re)-considering current subsidies and other support to GHG-emitting sectors and entities (and their elimination).

Given these principles, there is a need to consider an alternative financing and delivery framework for the JET and other major policy responses to climate change, embedded in a different political economy, where the state takes a leading coordinator role, and uses fiscal tools[7] assertively and effectively to achieve mitigation targets and ensure optimal adaptation efforts, in a way that promotes inclusive growth and is fair to those most directly disrupted by change.

3. FRAMING FISCAL POLICY IN CLIMATE CHANGE RESPONSES: A MARKET FAILURE APPROACH

For more than a decade, the refrain with regards to climate response has been: de-risk the opportunity space, put in place the 'right' regulatory environment, and private capital will be crowded in to resource the transition at pace and scale. However, this has not happened, and the clock continues to tick unrelentingly, increasing the risk posed by climate change and rendering the transition 'curve' even steeper, with adjustment costs likely to be higher, and with all of the additional political economy complexity that entails.

A key reason for delays has been that the political economy of this approach puts too much confidence in the private sector to address social and developmental challenges, and downplays the inherent problems of market failure in the provision of many socially valuable good and services. By 'market failure' we mean failures of pricing, incentive, market structure, and information in particular markets that make efficient outcomes unattainable for individual actors competing with each other and pursuing their own self-interest.

Simply put, many of the goods and services that are essential to what is, after all, a fundamental transition, are not private goods[8] in the technical sense. The market cannot 'lead' because a large part of required climate responses will not offer sufficient incentives to the private sector. It is important to stress this, because market failure is not about ethics or lack of ethics in private companies, for example, which might be addressable through moral suasion, but about fundamental structural features of many socially valued goods and services.

More specifically, from a social or public interest perspective, private companies left to themselves will not sufficiently incorporate externalities into their decisions, will not give sufficient weight to equity, may not be able to enter green industries in the absence of a supportive ecosystem, do not always have sufficient information or the incentive to acquire it, and may be myopic with regards to their own long-term best interests. We unpack these elements further below.

Externalities: Climate change is, as many have remarked, fundamentally an externality failure: for an extended period of time, carbon emissions were priced free from the producer or

consumer perspective (or better than free if one includes fossil fuel subsidies), because they were not regarded as carrying a current or future social or economic cost. This led to overproduction/ consumption.

Carbon taxes, as well as 'cap and trade' systems, can alter the price of carbon emissions so as to more accurately reflect underlying and long-term cost and risk, and induce more socially efficient investment and consumption decisions. Carbon taxes have high potential for revenue recycling — the allocation of revenues to climate transition priorities.

A carbon tax rate needs to be set high enough to influence decision-making; however, it is unlikely that the most effective way to drive mitigation over the next decade will be through exclusive use of a carbon tax set at a high rate. In the absence of meaningful alternatives (renewables in the energy space), a high carbon tax rate may simply lead to reduced economic activity, which will have consequences for employment, tax revenue and other factors that will influence the sustainability of the tax. Phrased differently: the more available and affordable alternatives are, the more elastic will the demand for fossil fuel energy be, and the greater will the impact of a given carbon tax rate be on mitigation whilst supporting continued growth. Getting this right implies, amongst other things, effective green infrastructure policy, including financing options. Carbon taxes, therefore, fundamentally cannot work as a standalone policy response and must be accompanied by other measures.

Infrastructure financing: As the levelised cost of renewables comes down, and as divestment from fossil fuels accelerates, a key climate response issue will become that of green infrastructural expansion. In South Africa, as well as elsewhere, renewable energy is broadly price-competitive with fossil fuel energy already, but the challenge (and it pertains equally to aspects of transport transformation) is the financing of the infrastructure (the grid) to close the distance between generation location and points of transmission.

Much green infrastructure in transport and energy systems will exhibit natural monopoly attributes, and as such will be vulnerable to the familiar problems around price and quantity of provision.[9] These are not insurmountable, but given the sheer scope of necessary infrastructural expansion over the next ten to fifteen years, much of it in EMDEs, if mitigation goals are to be achieved, it would be wise to not underestimate the ask, both in terms of infrastructure volume required and in terms of challenges of access, pricing and energy security for poorer households. This is one element of the broader equity challenge, which we discuss further below.

Equity: Climate change impacts are inequitable. Poorer countries are, and will remain, more affected than richer countries, and have less means to cushion the impacts. Within a given country, poorer households are also more likely to suffer catastrophic losses of livelihood and assets. In the absence of specific equity-oriented measures, it is also unlikely that the transitional period and the burden of adjustment in many economic systems, together with escalating climate impacts, will be equitable.

There may be employment losses in some sectors which are not offset by gains in others, energy price increases may affect poor households more, and, highly relevant to South Africa of course, workers in 'stranded sectors' may not be able to get employment elsewhere, may not have readily transferable skills etc. Most fundamentally perhaps, there is the question of intergenerational equity, or the relative degrees to which different generations should be expected to contribute to what is after all a multi-generational challenge, requiring a multi-generational response.

Adaptation: Another market failure concerns adaptation spend. In principle, both public and private actors, if they are rational utility-maximisers, would acquire sufficient information about the risks they confront from climate impacts, and would strive to allocate adaptation resources efficiently: that is, to the point where marginal cost and benefit are equal (which is not the same as seeking to address all impacts / eliminate all damage). Phrased differently, under perfect market conditions, information would be available and transactions cost negligible, so that players were able to optimise their mix of remedial and preventative spend, as well as their 'do nothing' option (since some climate impacts will not be addressable under any cost-benefit scenario).

In practice, adaptation is likely to be under-provided due to three factors:

1. Uncertainties around the scope and pace of climate impacts at more granular levels: whilst economics and financial markets do well with risk, neither is adept at, or oriented towards, integrating uncertainty;[10]
2. Myopia: human beings and human institutions, it turns out, are not rational utility-maximisers, even when they have good information, as various strands of economic thought, including behavioural economics, have shown in the last two decades;
3. Coordination / cooperation failures: a given insurer may want to increase premiums to better reflect risk, but can't do so if all market participants don't, given the need to remain competitive. There are realisable co-benefits, but market players on their own won't be able to actualise them.

Dynamic efficiency: 'Dynamic efficiency' is the ability of markets collectively to respond to opportunities, as in new sectors, in such a way that an economy attains or approximates Pareto-optimality over longer periods of time, given changes in information, technology, consumer wants, social needs, and so forth.

A large share of the benefits of dynamic efficiency are social or collective and do not go to initial movers, who carry large private risk but may only recoup moderate private returns as a result. Coordination failures occur where a large share of the benefit of first entering new industries (say RE) are social rather than limited to the private actor: under such circumstances, industrial policy can and should be used to compensate private actors for the positive externalities of their investment.

'Industrial policy' intervention arises precisely because markets tend not to be dynamically efficient: information is asymmetrical, risks are poorly understood (there is uncertainty), and 'network effects' may be extremely limited. The rate of innovation will be lower than ideal, and the rate of adoption domestically of innovations from elsewhere will be lower than ideal.

Climate impacts are escalating, bringing accelerated adaptation challenges, and there are domestic costs arising, to a growing extent, from delays. South Africa, like all other emerging markets and developing economies, cannot indefinitely adopt a 'wait and see' approach when it comes to the promised international concessional finance, but should also explore fiscal options that do, in fact, exist.

Allocative efficiency in the public sector means getting the optimal mix and volume of public goods, services and transfers for given resources, with 'optimal' meaning generating greatest social return. The social return on climate spending is likely to be large for all adaptation spending and green industrial public spending, and for all efforts to ensure equity and a worker-centric transition, and is likely to be larger than for significant components of current budget spend.

Phrased differently: although climate response spend (say on storm protection for a city's coastal infrastructure) costs money that can be hard to find, the benefit of this spend (understood as foregone damages and indirect benefits such as job creation etc) is many multipliers of the cost.

The net present value for most such spend is likely to be significantly higher than a 'business as usual' trajectory, where there are upfront savings (since nothing is done), but continuous rounds of damage to the infrastructure, where costs are either the costs of repair or the lost welfare as infrastructure is abandoned.

On the financing side, firstly there is a need for more domestic resource mobilisation: public resources will be required in areas where market failure will lead to under-provision. There may, in this regard, be scope for introducing new revenue instruments, but it may also be a matter of earmarking some revenue instruments for climate priorities that are credibly aligned with climate considerations.

Secondly, there is the need to decisively influence production and investment decisions to align with climate priorities in South Africa and globally. This is less about raising revenue and more about altering the costs that structure such decisions, and is largely a matter of a faster implementation of a meaningful carbon tax.

Tools which have as a primary aim changes in behaviour can (as with the carbon tax) also generate revenue, but, importantly, if the tool is successful in its primary aim then its usefulness as a revenue instrument is likely to decline over time, and this decline needs to be integrated into decisions.

In financing climate spending from the domestic fiscus, a government may elect to simply do so from general revenue, as opposed to ear-marking – dedicating particular revenue sources (or defined shares of such sources) to a particular purpose. By its nature, ear-marking is an insulation of some revenue from the normal budget drafting and approval process.[11] Historically, ear-marking has been used, for example, where a portion of current revenue is saved for future generations, as in various natural resource-oriented funds.[12] Ear-marking can also be employed to insulate funds and establish confidence that they will be used for their intended purpose, where budgeting credibility is low or has deteriorated. In this sense, ear-marking can play a similar role to fiscal rules (rules around budget deficit size and the like): neither mechanism is desirable as such, because, in principle, the budget should be open in its entirety to annual scrutiny, and an effective, scrupulous government should build trust through doing what it says it will do, not through imposing rules on itself. However, ear-marking (and fiscal rules) can help restore trust and legitimacy.

In the discussion that follows, we take an earmarking approach, in the sense that we link the need for domestic resource mobilisation for climate responses to particular revenue streams. We also, in a later section, argue for a climate response fund, focused on climate-related adaptation and equity priorities, where these revenues would be pooled, and which would be mandated to receive grants and concessional finance.

It is important to note that failure to secure what South Africa regards as a 'just' international contribution to its transition will not mean that mitigation and adaptation efforts can be curtailed.[13] There is an unavoidable and overwhelming self-interest in ensuring that adequate climate action is taken and is sufficiently resourced.

4. FISCAL SPACE AND SOVEREIGN GREEN BONDS

In this section we consider the potential for sovereign green bonds to form part of the financing mix for the provision of grid infrastructure for renewable energy, an immediate low-hanging fruit in South Africa's climate response. Given the extreme fossil fuel intensity of electricity generation in South Africa, and the fact that South Africa has an ageing coal fleet, shifting to RE by 2040 is, essentially, a matter of accelerating the inevitable (Steyn, Tyler, Roff, Renaud, & Mgoduso 2021).

South African mitigation targets are provided in the NDC 2021 (updated) which gives targets for 2025, 2030 and 2050 (soon to be updated).

Table 1: SA NDC 2021 update targets

In 2025, annual greenhouse gas (GHG) emissions will be in a range from 398-510 Mt CO2- eq
In 2030, annual GHG emissions will be in a range from 350-420 Mt CO2-eq
The target for 2050 is net zero status [14]

The main constraint currently is not private investment appetite for generation (envisaged as coming mainly through the Renewable Energy Independent Power Producer Procurement Programme (REI4P)), but lack of RE transmission capacity in the Northern, Western and Eastern Cape. Transmission infrastructure is not keeping pace with demonstrated / realistic private appetite to invest, or with the country's energy security and mitigation needs.

The JET Implementation Plan (JET-IP) gives costs of RE generation at about R500bn over five years, to meet NCD commitments and address the electricity supply crisis; and it quotes the ESKOM Transmission Development Plan (TDP) that shortfall on financing for transmission infrastructure is about R250bn. The current approach, as set out in the JET-IP, leans heavily on the lack of 'fiscal capacity to borrow' as a rationale for seeking out private finance.

> The estimated financing gap for transmission infrastructure underscores the need to mobilise other sources of financing and other transmission project execution models. There is also increasing recognition in government that private investment in transmission is not only needed, but that there are proven models applicable in the South African context which are successful elsewhere. Furthermore, private investors, DFIs and MDBs have confirmed their willingness and capacity to participate in both transmission and distribution infrastructure (Presidential Climate Commission, 2022, p. 76).

As Swilling also notes:

> One of the key barriers is access to the ~235-372 bn ZAR (~$14-22 bn) of capital required to finance new transmission infrastructure in the coming 10-12 years. The required funding to strengthen the transmission grid over the next decade, is close to Eskom's current debt levels of ~390 bn ZAR. Constraints on attracting the required capital will likely remain, even with the new transmission company and after the announced Eskom debt take-over by government. There is a need to explore additional avenues to attract and deploy sufficient capital, including avenues that finance transmission off the transmission company's balance sheet (Blended Finance Taskforce & Centre for Sustainability Transitions 2023).

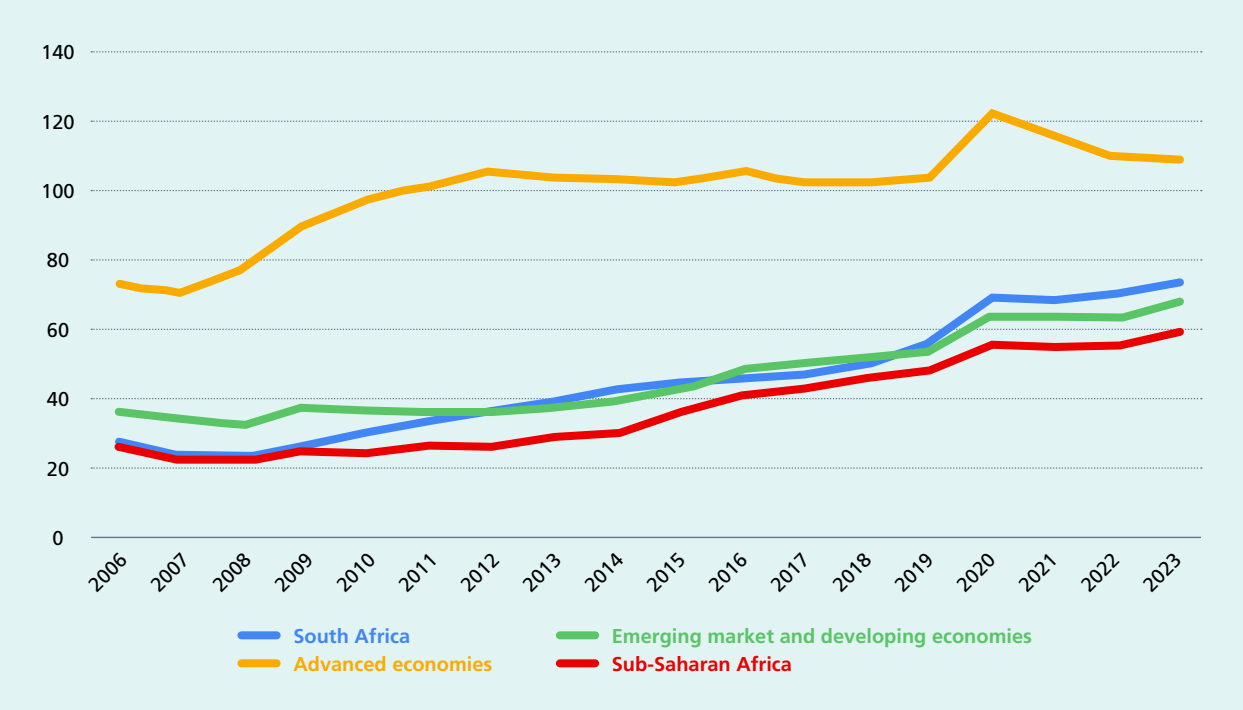
If this kind of infrastructure is provided 'commercially', as the JET documents suggest, then it is important to compare such an option with a traditional 'bond and procurement' model. In both cases some concessional finance will be available.[15] The key comparison is between a blended finance approach, in which a type of public-private partnership (PPP) arrangement locks in costs to the fiscus, in the form of payment on completion, and, we presume, an availability payment for a period of twenty years, and a green transmission sovereign bond, with the capital raised transferred from National Treasury to the National Transmission Company.

Given the concerns outlined above in respect of excessive reliance on blended financing, we believe the South African state needs to take the lead in this area, through issuance of an initial green infrastructure bond. Doing so would be an important market-making move, would establish real credibility for larger-scale RE infrastructure build (which should bring costs of capital down), would provide further assurance to RE generation firms, and would ensure that core aspects of RE infrastructure would remain under state control and meaningful democratic scrutiny and accountability, in areas such as pricing and access.

This would also not be perceived as a strange move: the Climate Bonds Initiative reports that in 2023 about $600bn of climate bonds were issued. Importantly, the share of government climate bond issuance has increased significantly since 2016, when Poland was the first country to issue such a bond, and is now at around 20%, or $120bn, a year.

In South Africa's case, a key objection to the idea of issuing a government climate bond is that it is not fiscally affordable. It is worth touching on this dimension of the climate response in a bit more detail. As Figure 1 shows, government debt has, globally, increased since around 2008 and the global financial crisis; South African trends have broadly tracked those of EMDEs generally, albeit with a slightly faster debt growth rate.

Figure 1: Gross government debt as share of GDP, selected countries and regions, 2006 - 2023

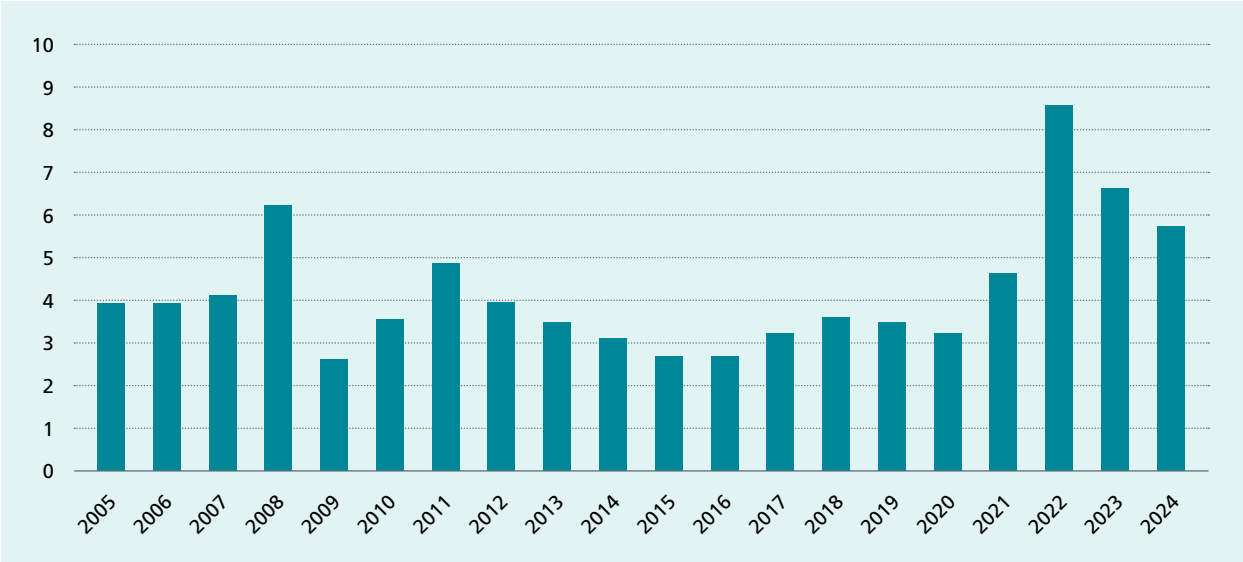


Source: International Monetary Fund, World Economic Outlook, October 2024

South Africa's debt-to-GDP share is broadly aligned with that of, for example, EMDEs, though it has grown by 45 percentage points since 2006, compared to 32 percentage points for EMDEs.

Over these roughly fifteen years, and particularly post-Covid, many EMDEs have become more debt-vulnerable: the inherent risks associated with larger debt stocks have been exacerbated by rising interest rates and dollar appreciation, driven by northern economies' attempts to deal with higher inflation in the Covid and post-Covid context (see Figure 2).[16] Considerable inflation uncertainty remains, and central banks globally (including the South African Reserve Bank) have, rightly or wrongly, indicated that they are unlikely to quickly reduce rates further until more economic certainty prevails.

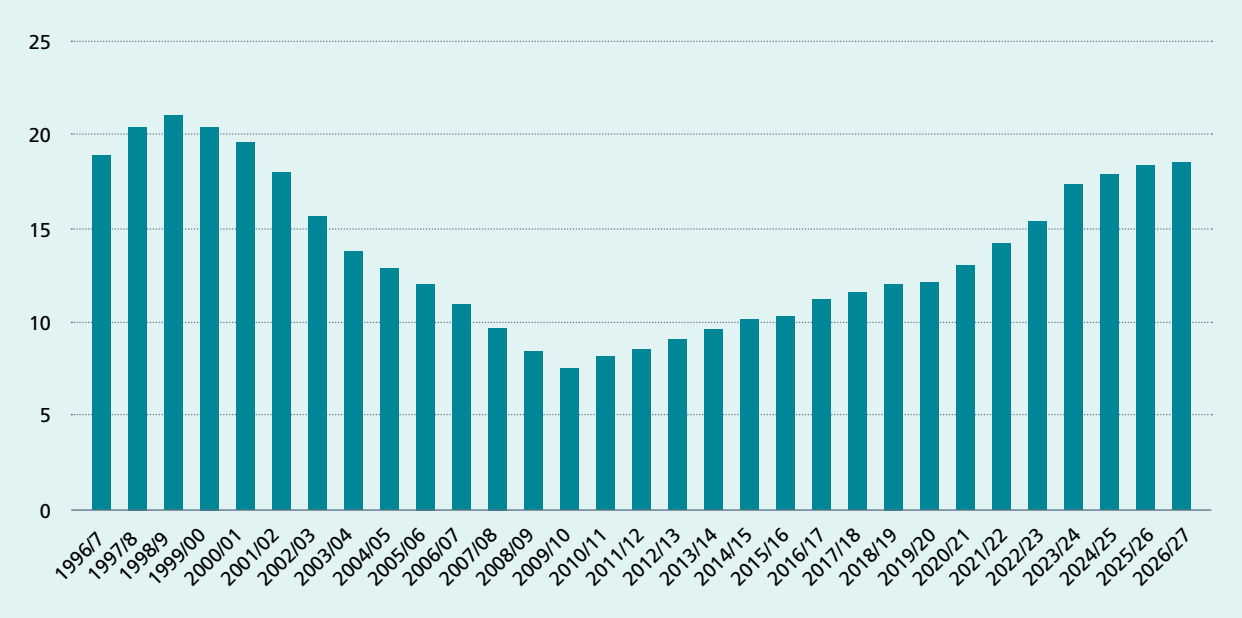
Figure 2: World inflation 2005 - 2023, % change in consumer prices



Source: National Treasury Budget Tables

As Figure 3 shows, debt service costs for South Africa[17] have grown significantly, rising from a low of 7.6% of budget expenditure in 2009/10 to 17.9% for the current year (2024/25), and projected to increase to 18.6% in 2026/27, though still lower than the 1998 / 1999 peak of 21.6%.

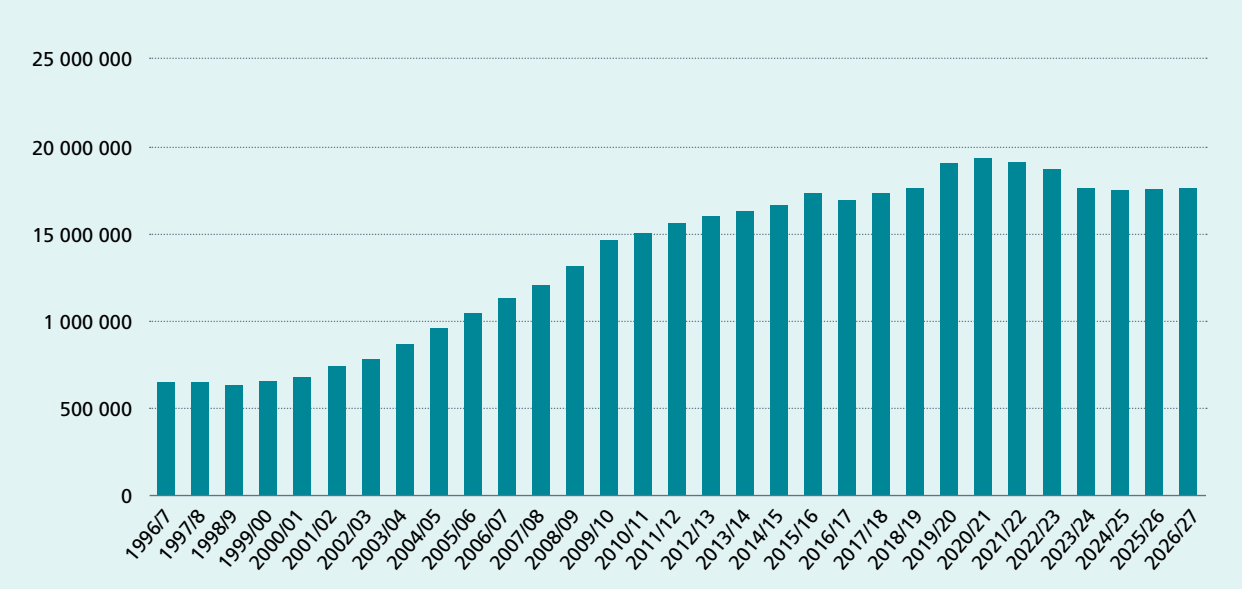
Figure 3: SA debt service costs as % share of main budget expenditure, 1996/97 - 2026/27



Source: National Treasury Budget Tables

As debt servicing commitments increased, and with the higher growth and tax revenue hoped for not materialising since 2009, budgetary allocations have plateaued and decreased in real terms. Figure 4 shows main budget real expenditure, excluding debt spending, to give a visual sense of this plateauing that has occurred.

Figure 4: SA main budget expenditure, 1996/97 - 2026/27, excluding debt servicing (constant 2024/25 Rbn)



Source: National Treasury Budget Tables

Current (2024/2025) non-interest budget spend is only 1% more, in real terms, than the budget of 2015/16, nine years before, a reality which is particularly sobering if one bears in mind that population growth has continued to average 1.3% -1.4% per year over this time (in other words real per capita budget spend has decreased by more than 10%).

Fiscal consolidation has become the norm since around 2015: with the exception of the Covid years, there has been little to no increase in the inflation-adjusted value of allocated resources. 'Structural' challenges associated with low growth have been compounded by Covid expenditure needs, as well as the fiscal transfers to Eskom provided for in the Eskom Debt Relief Act of 2023, which allocated R225bn to Eskom to meet debt payments due for the Medium-Term Expenditure Framework (MTEF) period 2024/25 – 2026/27.

Fiscal austerity, however, risks curtailing essential investment, not only in the climate response, but also in the building of human capabilities which are required, and failing to address the huge distributional and opportunity inequities in South Africa, which continue to corrode cohesion, and therefore productivity increases and sustainable growth. It is not only climate change which requires an assertive, distributionally-minded response from the state, but also the general context of a stalled economic journey. Potentially, the climate response can jump-start a general economic acceleration, but to do this will require a different fiscal trajectory that enables a state-driven response to financing, combined with significant improvements in governance and budgetary value for money.

Specifically, as one component of a gentler fiscal glide, far more consideration should be given to government-issued climate bonds to finance a significant initial segment of RE infrastructure. A gentler deficit glide path, combined with governance improvement, would enable specific climate bonds to be issued for initial RE grid spending over three years.

The current fiscal year (2024/25) as well as 2025/26, are effectively defined by a gross borrowing requirement from the interaction between the final two tranches of Eskom debt relief, on the one hand, and proceeds from the Gold and Foreign Exchange Contingency Reserve Account (GFECRA) settlement, on the other (see Table 2).

Table 2: Government gross borrowing requirement, 2022/23 - 2026/27

R million	2022/23 Outcome	2023/24 Revised Est.	2024/25 Medium Term Est.	2025/26 Medium Term Est.	2026/27 Medium Term Est.
Main budget balance	-309 938	-331 386	-320 946	-308 151	-287 218
Redemptions[18]	-90 324	-145 759	-172 568	-185 598	-166 295
Eskom debt-relief arrangement	–	-76 000	-64 154	-110 223	–
GFECRA settlement (net)	–	–	100 000	25 000	25 000
Gross Borrowing Requirement	-400 262	-553 145	-457 669	-578 972	-428 513
As Share of GDP	6.0%	7.8%	6.1%	7.3%	5.1%

Adapted from Budget Review, 2024, National Treasury, Table 7.2

We believe the fiscal glide path from 2026/27 onward should, however, bring the overall borrowing requirement down at a slower rate than proposed, and specifically should provide for climate bond issuance of R100bn in 2026/27 and 2027/28, generating a gross borrowing requirement of about 6.3% rather than 5.1%, for both these years, and a total debt stock that tops out at around 77% of GDP in 2026/27 before decreasing, which would allow a true, state-led initiation of RE grid infrastructure financing, before private sector investment is pulled in.

5. FOSSIL FUEL TAXES, LEVIES AND ROYALTIES

In this section, we look at the key fiscal tools that need to inform a more assertive fiscal response, both in terms of behavioural change and of domestic resource mobilisation for domestic climate priorities, which, if left to 'the market', will be under-addressed or not addressed at all.

We then present arguments in favour of these revenues constituting a stand-alone climate response fund, as a flexible but credible vehicle for coordinating a resourced response to climate change over the next decades, in a way that will not only increase South Africa's 'sovereign grip' on a pivotal threat to its future socio-economic well-being, but also help ensure that workers are protected from the most serious consequences of climate change and the necessary response to it.

Hence, we now turn to explore a series of other fiscal tools that should be considered, starting with fossil fuel taxes, levies and royalties.

5.1. Carbon pricing

Currently, the cost borne by a producer per unit of greenhouse gas emission (the private cost of carbon) does not accurately reflect the externalities of these emissions - i.e. the social costs of carbon that arise directly from the emissions; nor is the price of carbon currently at a level that will move decisions towards alternatives, or more energy-efficient use of existing options.

It is important to price emissions correctly (get the price of carbon right) to incentivise changes in production and investment as well as consumption, and in contextual dimensions such as urban design, as one of a suite of necessary options to address climate change (Stiglitz, Barrett, & Kaufman).

The removal of fossil fuel subsidies and the use of tax instruments can have an important fiscal revenue impact over the transitional period, in addition to eliciting behavioural change. Globally, carbon pricing is becoming more prevalent, with about 40% of emissions covered under a carbon tax or emissions trading system (ETS) at present.

The Stern / Stiglitz Commission on Carbon Prices found that:

> the explicit carbon-price level consistent with achieving the Paris temperature target is at least US$40–80/tCo2 by 2020 and US$50–100/tCO2 by 2030, provided a supportive policy environment is in place (Carbon Pricing Leadership Coalition 2017).

As a recent World Bank review notes, however, the price of carbon globally remains significantly lower than these and other estimates of what is required to attain Paris Agreement targets (World Bank Group 2024).Over the next decade, it is likely that EU economies, for example, will increasingly bring their domestic carbon price into alignment with Paris Agreement-aligned prices, and use border carbon adjustments to compel a convergence in traded goods prices that reflects carbon costs.

This will have important economic implications for South Africa if the country has not at that point moved assertively in the direction of efficient carbon pricing. In general, it is only a matter of time before 'mitigation effort' becomes a condition for concessional finance, from Europe at least. But moving faster (bringing the domestic carbon price into alignment quicker) can also support developing local renewable and related industries, which will be possible to a much smaller degree if South Africa is playing catch up ten or fifteen years from now.

South Africa's Carbon Tax was introduced in 2019 and follows a polluter-pays-principle. The tax is imposed on emissions through combustion and other processes (e.g. cement production), as well as on fugitive emissions that exceed a specified threshold. About 90% of total GHG emissions are in principle covered by the Carbon Tax, with agriculture, forestry, land use and waste excluded.

The initial transitional arrangement, which provided for very generous exemptions and allowances and was intended to remain in place temporarily, has now been extended to 2025. At present there is a large difference between statutory and effective rates, and the effective rate is maybe best deemed a kind of 'nuisance tax', with negligible impact on the investment and production decisions of the firms on whom it is imposed. The statutory rate, furthermore, is significantly below any kind of Paris Agreement-aligned rate.

A recent IMF paper estimated South Africa's effective tax rate was less than R7 per ton of CO2 in 2021/22, compared to the statutory rate of R134 by end 2022, and a Paris-aligned rate of about R1 000 (International Monetary Fund. African Dept. 2023).

A GSI / ISID report also notes:

> Using a benchmark of EUR 60 (USD 68.6) per tonne of CO2, a low-end rate needed by 2030 to achieve slow decarbonisation by 2050, South Africa achieved a score of 13% in 2018… This means that, in theory, South Africa's taxes across the energy sector amounted to 13% of a EUR 60/tCO2 carbon price. This compares to 19% for the OECD and G20 average, 13% in India, 9% in China, 7% in Russia, and 1% in Brazil… it is important to note that the analysis was based on South Africa's official rate of USD 9.15/tCO2e, not the much lower applied rates. If based on the applied rates, South Africa's carbon pricing score would be far lower (Bridle *et al.* 2022).

Unsurprisingly, given the low effective rate, carbon tax revenue has also been negligible, with revenue in 2022 / 23 of R1.6bn, intended to increase to about R2.4bn in 2026/27. As an essential component of its transition, South Africa needs to make a credible public commitment to a carbon price that is aligned with Paris targets, and a methodology for estimating the domestic carbon price that is aligned with international best practice.

Stern and Stiglitz note in this regard:

> Efficient carbon-price trajectories begin with a strong price signal in the present and a credible commitment to maintain prices high enough in the future to deliver the required changes. Relatively high prices today may be more effective in driving the needed changes and may not require large future increases, but they may also impose higher, short-term adjustment (Carbon Pricing Leadership Coalition 2017 pp. 2-3).

We have also noted the need for certainty around carbon tax trajectory[19] as part of general policy certainty in this area, which will also tend to reduce the cost of capital for green infrastructure investment.

To instil predictability and credibility, a carbon tax pathway is needed for the years up to 2040. We suggest four key targets to 2040 (see Table 3), although even here the final rate in 2040 will fall far short of the roughly R1 000 Paris-aligned rate recommended by Stiglitz and Stern.

Table 3: A carbon price trajectory for SA, with revenue implications and emissions reduction assumptions

	2025	2030	2035	2040
Effective Carbon Tax Rate (Rand per tonne CO2)	R100	R150	R300	R500
Emissions MT CO2	450	350	200	100
Revenue (Current Rands)	R45 bn	R52.5 bn	R60 bn	R50 bn
Revenue constant 2025 Rands[20]	R45 bn	R41.1 bn	R36.8 bn	R24.1 bn

Carbon tax revenue should be recycled for climate response purposes: half to green industrial policy interventions and half to the climate response fund.

5.2. General fuel levy

South Africa, like other countries, imposes a variety of indirect carbon taxes which serve to significantly raise the price of carbon. The General Fuel Levy (GFL) is the most significant one. The GFL is

a tax on petrol / diesel levied on motorists, and raises the overall price of carbon in South Africa, although this is not its primary policy aim.

The GFL was conceived as a tax on motorists, initially earmarked for transport priorities, but subsequently added to general tax revenue. It makes a significant contribution to general revenue, is easy to administer, and in the current nature of things can be thought of as a tax on fossil fuel. It is also, like other consumption taxes such as VAT, a 'hidden tax,' meaning taxpayer resistance and evasion / aggressive avoidance are a less prevalent feature.

In 2022/23, revenue from the GFL was R81bn, and for 2023/24 the estimate is R93bn. The GFL can be an important and appropriate source of revenue for the climate response fund, if a share of its revenue (for example 30%) were to be allocated to this fund.

5.3. Mineral and petroleum resources royalty

South Africa introduced a Mineral and Petroleum Resource Royalty (MPRR) in 2008 to compensate the state as custodian / owner of mineral resources for the permanent loss of mineral resources mined.

The MPRR is by its nature designed to compensate a society for loss of resources, as well as for the consequences of the extraction of those resources. South Africa is a 'resource curse' economy in many respects, with levels of inequality that are fairly typical of economies rich in natural resources, with the social and political challenges arising from that inequality, and with a difficult climate transition as a result of the link between its natural resource economy and historically cheap electricity.

Conceptually, what mining royalty and resource rent approaches have in common is the aim to secure benefits, or 'compensation', for the state and society, from the fact that natural resource extraction entails opportunity costs in the form of a permanent loss of such resources. A royalty, then, is a form of compensation for the loss of non-renewable resources, paid to the state as owner or custodian of the resource.

The royalty formula varies to some degree with company profitability, but ultimately it is envisaged as independent of this, since the resource loss accrues to future generations, regardless of whether the mining company made a profit or not in extraction and /or refinement.

In 2022/23, revenue from the MPRR was about R25bn, and in R 2023/24 it was R16bn.

All MPRR revenues should be earmarked for the climate response fund, adding a minimum of R15bn a year to predictable revenue for the fund.

6. PUBLIC SPEND EFFICIENCY REFORMS AND RESOURCES FOR CLIMATE RESPONSE

Maximising budgetary return requires evaluating the costs of programmes against their benefits, to optimise allocative efficiency; zero-based budgeting, which National Treasury has endorsed as a guiding framework in recent years, is the attempt to apply this to the drafting of budgets on an ongoing basis.

It is difficult rigorously and quantitatively to compare outcomes and impacts of different departments,

relate these to costs, compare this to the possible return on alternatives, and in this sense build an optimal budget from scratch, on an on-going basis.

We believe that, over time, the structure of the South African state has become cumbersome to the point of generating significant additional coordinatory costs, which exceed the value of the structures created. Rational re-structuring needs to be a priority, to enhance the social return on public spending.

Departmental mergers, and the conversion of some departments into programmes, are essential to generate savings over the medium term as well as to enhance impact. The current excess of departments and political heads in fact generates decisional and coordinator burdens; more would literally be achieved, in our view, if there were fewer departments (i.e. the coordinatory costs exceed the benefits of governance specificity).

It is not about smaller government, but about bringing more structural coherence into government.

As an exercise, we suggest national departmental mergers below, and assume cost savings of only 30% (the post-merger department's total costs will be 30% less than the addition of the separate costs of each department prior to the merger.[21]

We also identify departments that do not in our view warrant stand-alone department status, but would be better served by being integrated as smaller programmes into existing departments: in such cases we estimate a potential savings of 50% to the fiscus after the reconfiguration.

A secondary but important gain from such re-structuring (see Table 4) is actual fiscal savings, and we believe that a share of realised fiscal savings, obtained through re-structuring efforts, should be earmarked for climate responses.

Table 4: Mergers and reconfigurations: National department saving potentials

R million	Departments	Current allocation (excluding transfers / financial assets)	Saving
Merge	Trade, Industry and Competition & Small Business Development	1 948 & 258	662
	Basic Education & Higher Education	4 898 & 11 477	4 913
	Social Development & Women, Youth, Persons with Disabilities	936 & 205	342
	Civilian Secretariat for the Police Service & Independent Police Investigative Directorate	152 & 356	153
	Science and Innovation & Communications and Digital Technology	581 & 757	401
Reconfigure as programme	Tourism	926	463
	Military Veterans	457	229
	Traditional Affairs	130	65
	Planning, Monitoring and Evaluation	471	236
TOTAL SAVING			7 464

Source: Data from the 2023 National Budget

These restructuring-related savings at national level total around R7.5bn; this excludes the non-financial benefits of reduced coordinatory costs associated with a state that is structurally too large.

At a provincial level, there is an urgent need to reconsider expenditure that occurs through provincial premier offices and provincial legislatures. The cost of maintaining South Africa's provincial leadership structures has become unsustainable, when compared to governance and legislative contributions actually made. Savings could be pursued pertaining both to the provincial legislatures and the premiers' offices.

Table 5: Provincial legislatures: cost in 2022/23

R million	MPL salaries	Total compensation of employees costs	Total provincial legislature cost
Eastern Cape	68.4	356.0	571.0
Free State	24.5	167.6	294.7
Gauteng	NA	389.8	825.2
KwaZulu Natal	87.0	345.6	644.3
Limpopo	51.6	252.5	386.0
Mpumalanga	27.1	250.5	371.8
North-West	35.4	238.5	487.6
Northern Cape	26.4	132.4	210.7
Western Cape	43.7	134.9	226.8
TOTAL	**364.1**	**2 267.8**	**4 018.1**

We believe the function of the provincial legislative system would be best served by a simplified arrangement, for example a Northern and a Southern Provincial Legislature, clustering respectively five and four provinces. Savings through such an option, or alternative proposals, could and should reduce provincial legislative costs by 75%, saving R3bn.

We also believe that current provincial premier office budgets are significantly larger than optimal: premier office budgets for all nine provinces totalled R6.5bn; savings can be realised here of at least one-third of this, saving R2.2bn.

Across spheres of government, there are a number of 'transversal expenditures' that are highly likely to have reached allocatively inefficient amounts, and that generate substantial fiscal costs, particularly given the proliferation of departments and entities, and given that these costs are duplicated in each entity (see Table 6).

Table 6: Totals for some transversal services

	National	Provincial	National / Provincial	2/3rd	Saving
Advertising and communications	R 2.2 bn	R 2.7 bn	R 4.9 bn	3.3	1.6
Computer services	R 8.9 bn	R 6.4 bn	R 15.3 bn	10.2	5.1
Consultants and professionals	R 6.8 bn	R 4.8 bn	R 11.6 bn	7.7	3.9
Travel and subsistence	R 5.6 bn	R 3.7 bn	R 9.3 bn	6.2	3.1
TOTAL	**-**	**-**	**41.1**	**27.4**	**13.7**

There is also a lack of standardisation / control, as a result of which amounts often bear very little relation to objective factors such as size of budget or population. Examples are massive outlays for communications, marketing and the like, excluding the allocation to GCIS itself, which is comparatively modest at around R180 million a year.

Similarly, when it comes to ICT services, the state does not appear to use its power as a buyer effectively, to ensure value for money, nor, it would appear, is there enough consideration in public entities for rigorous value for money in making purchases. The Auditor General has highlighted this at both local and provincial levels.

The use of consultants and professionals is still adding a cost of R11bn per year to the national and provincial sphere, with these amounts being particularly problematic considering the large numbers of analysts, economists and the like employed in government, who are nonetheless supposedly not able to do the work at the required quality.

Furthermore, very often consultant reports seem to languish unused and unimplemented due to a lack of 'political will.' Savings should be implemented to reduce spending on such items to two-thirds of current amounts for a start, which would save about R13bn in the national and provincial sphere.

The fiscal savings associated with efficiency-orientated reforms would, in the illustrative example provided here, total R26.4bn, of which we believe half (R13.2bn) could be allocated for an initial period to climate responses.

7. REDUCING REGRESSIVITY IN RETIREMENT DEDUCTIONS

South Africa has a wide range of tax expenditures: foregone tax revenue through exemptions, deductions and credits that aim to support government social and economic goals. The current deduction framework in support of retirement provision is, however, highly regressive, and reform holds great potential both for climate response financing and for a fairer system than is currently the case.

National Treasury/SARS estimate in the 2021 Tax Statistics that, for 2020, PIT deductions totalled R240bn; of this, R154bn benefitted taxpayers with taxable income of R500 000 or more. A large share of this benefit is in the form of tax deductibility of retirement contributions. After 2016, provident fund contributions became tax-deductible in addition to pension fund contributions, and Table 7 shows the large jump in allowed deductions after 2016 as a result.

Table 7: Percentage of income granted as a PIT deduction by income group

Income group	2016	2018	2020
1- 70 000	1.4	3.8	3.3
70 000- 350 000	4.3	10.2	8.9
350 000– 500 000	6.1	13.5	12.8
500 000 +	6.5	12.4	12.3
Total deduction allowed	86.3 bn	227.2 bn	240.5 bn
Share of deduction to 500k+ group	53%	56%	64%

The current deductions are simply too generous to richer South Africans, and changes are possible which continue to incentivise retirement contributions but would reduce costs to the fiscus, and free up resources for cash transfers.

The most plausible change to make the system more equitable would be to reduce the cap on permissible retirement deductions. Currently, it is set too high, and in practice amounts to virtually all retirement contributions being tax deductible.

As table 8 shows, average allowed deductions toward the top of the taxable income ladder ranged from R159 000 to R292 000 in 2020, the latter for taxpayers with taxable income in excess of R5mn.

Table 8: Average allowed PIT deduction, taxable income groups >R1mn

	Number of taxpayers	Amount (R mn)	Average allowed deduction
R1 000 001 to R2 000 000	165 326	26 296	159 057
R2 000 001 to R5 000 000	34 947	8 541	244 424
R5 000 001 +	6 100	1 784	292 464

Reducing the cap would ensure that retirement incentives exist for all taxpayers, through to the middle and upper middle class, but would eliminate tax deduction benefits for the very rich. Table 9 provides an illustrative scenario for caps of R100 000, R150 000 and R200 000, using the average

values available at the time of writing, through the tax statistics.

Table 9: Savings from 3 alternative caps for retirement fund tax deduction

Taxable income	Number of taxpayers	Deduction with cap R350 000 (R bn)	Deduction with cap R100 000 (R bn)	Deduction with cap R150 000 (R bn)	Deduction with cap R200 000 (R bn)
R750 001 to R1 000 000	193 075	22 676	19 308	22 676	22 676
R1 000 001 to R2 000 000	165 326	26 296	16 533	24799	26 296
R2 000 001 to 5 000 000	34 947	8 542	3 495	5242	6 989.4
R5 000 001+	6 100	1 784	610	915	1 220
Total allowed deduction		59 299	39 945	53 632	57 182
Fiscal saving compared to 350 000 cap			19 354	5 666	2 117

With an annual cap of R100 000, fiscal savings would be in the region of R20 billion. The R750 000 -R1 000 000 group would contribute slightly more than R3 billion, the R1 0000 000 to R2 000 000 group about R10 bn, the R2 000 000 to R5 000 000 group about R5bn and the R5 000 000+ group about R1bn.

Importantly, these fiscal savings would be distributed across large numbers of richer taxpayers, none of whom would bear a significantly larger burden. For example, the actual average deduction value for the R750 000 - R1 000 000 group in 2020 was R117 000. Savings of R3 bn come from an average reduction in the allowed deduction of R17 000 per year, in other words. We believe that fiscal savings which eliminate the more regressive element of retirement contribution support should be allocated to the climate response in full.

8. A WEALTH TAX?

In South Africa, as elsewhere, wealth inequality is even higher than income inequality, and the history of wealth accumulation is intimately tied up with the extractive economies that now pose a climate risk and hamper a quicker transition.

It is worth asking then whether a general tax on wealth (a tax base comprising all assets minus liabilities, therefore a 'net wealth tax') could play a climate financing role, whilst also reducing inequality.

Chatterjee, Czajka, & Gethin, 2021 provide estimates of revenue associated with a net wealth tax for three rate scenarios, with the tax focused on the richest 1% of the South African population, as Table 10 summarises.

Table 10: Three wealth tax scenarios

Wealth group	No. adults	Wealth threshold	Low tax	Moderate tax	High tax
Top 1%	356 000	R3 820 000	1%	3%	3%
Top 0.1%	35 600	R30 350 000	2%	5%	7%
Top 0.01%	3 560	R146 890 000	3%	7%	9%

Source: Chatterjee, Czajka & Gethin, 2021

The authors find that the moderate tax, i.e. with rates from 3% to 7%, could generate revenue between R70bn and R60bn per year. It is important to note that, in their approach, the tax would only be applied to wealth above a specified threshold, not to an individual's entire wealth holding,

which could reduce some of the incentive to evade or seek to aggressively avoid the tax.

The authors also argue that, for this top 1% wealth cohort, liquidity issues that would hamper their ability to pay the tax are less likely to arise. However, as the authors note, and as the Davis Tax Committee (DTC) report on wealth tax set out in some detail (Davis Tax Committee 2018), there are significant challenges in implementing wealth taxes effectively, and for most countries that have introduced a general wealth tax in peace time,[22] the revenue performance has been disappointing.

Two types of issues are likely to arise, and the crux question concerns the scope of each issue in affecting revenue raised from the tax, and other burdens[23] imposed by the tax that may diminish its overall value. Part of the challenge here is that there is quite limited empirical information on what works, when, and why. The issues are behavioural responses that may arise on the taxpayers' side, and issues around administration / implementation of the tax.

It is, because of the nature of the tax, hard to estimate the extent to which wealthy taxpayers may move money offshore, under-report their wealth or emigrate, in order to reduce the burden of a wealth tax. Part of the problem is simply that it is hard to estimate the extent to which this already occurs. Chatterjee *et al.* (2021) note some studies which give 10% to 20% loss as a result, but these are noted as being speculative values.

The DTC report noted the recommendation of Thomas Pickety, on visiting South Africa in 2015, that the country introduce a net wealth tax at, initially, a very low rate, to begin to build up taxpayer wealth knowledge. A wealth tax may also bias savings decisions, and decisions around holding some forms of assets over others because of the tax — so-called deadweight losses; these are particularly difficult to estimate at the best of times.

In addition to uncertain behavioural responses, there are difficult design questions and administration questions. These include whether retirement funds should be taxed (these are a large share of financial assets), fairness in the valuation of some assets, the equity of a wealth tax, given that the super-wealthy are probably more able to avoid the tax than the merely wealthy, and what deductions to allow in calculating net wealth.

The joint COSATU / SACTWU submission to the DTC, whilst cognisant of these and related challenges, recommended a recurrent net wealth tax, at a progressive rate of 0.5% - 2.5%, levied on net wealth in excess of R1 million at the time, around R1.3 million in today's money.

We still support this proposal, which should be read with the DTC's own 'road map' for what would need to be put in place first for such a tax to be effective:

1. Further consideration as to the appropriate tax base (i.e. which forms of wealth to include within the scope of the tax).
2. Comprehensive data on the pattern of wealth ownership.
3. An evaluation as to whether the revenue generated would exceed the administrative and economic burden on taxpayers and the revenue authorities. In relation to the first question, the most important single question is whether retirement funds should fall within the scope of the tax.

Clearly, thought needs to be given to the treatment of retirement funds from a wealth tax perspective, and how this relates to existing subsidies as well as to our proposal in the previous section.

The important point to note is that eliminating the regressive element of current retirement contribution support opens the way for serious engagement with a wealth tax: in past commentary, it was pointed out that it made little sense to subsidise retirement contributions on the one hand (foregoing tax revenue) and then tax them on the other hand. Eliminating excessive subsidisation would address this constraint and pave the way for completing the steps set out by the DTC, en route to eventually introducing a workable net wealth tax in South Africa, as part of ensuring tax equity and with some revenue potential.

9. A CLIMATE RESPONSE FUND FOR ADAPTATION AND EQUITY

In the preceding sections we have sought to show how domestic resources can be mobilised by earmarking, a carbon tax and a gentler fiscal glide. There are a number of reasons why these revenue streams should be pooled together, we believe, into a climate response fund focused on the adaptation and equity spend aspects of climate change and the response to it.

A climate response fund would harness funds to cover likely shortages in the quantum of adaptation spend, to support a just transition for affected workers in Mpumalanga, and more generally to help address inequity in climate impacts and the ability to adapt to them amongst South African households. Fund priorities would need to be set and reviewed regularly, given that many more granular dimensions of climate change impact are only beginning to emerge. There is much that is not known in detail yet, and a Fund-based approach can combine flexibility and certainty in an effective way.

In practice, South Africa faces a compelling need to establish / re-establish fiscal credibility and general government trust, particularly in an era where coalition leadership may loom larger, whilst climate change pressures escalate. Earmarking some funds for particular climate purposes, especially where they are to be deployed over longer periods of time, may be the best way to achieve this, and we consequently recommend a climate response fund, which would focus on adaptation responses and the equity dimensions of the transition, with shares of particular revenue sources paid into it.

Establishing and capitalising such a fund should not wait for large volumes of concessional finance, and we believe there are a number of domestic revenue sources which can and should be used now to set up the fund.

10. SUMMARY AND CONCLUSIONS

The South African government needs to drive climate responses in South Africa, including the assertive use of the fiscus to allocate resources to climate priorities. A reliance on the private sector and / or blended finance, in the absence of fiscal allocations, is unlikely to achieve climate objectives, and will not ensure that the decarbonisation trajectory is equitable and worker-centric.

In addition to the issuance of green bonds, accompanied by a moderately altered debt path, and the willingness to re-capitalise the Industrial Development Corporation to drive green industrialisation, we have shown above that a combination of revenue earmarking and fiscal re-allocation can generate substantial initial resources for a climate response fund focused on adaptation and equity priorities, which would otherwise be under-resourced over the next decade. Table 11 outlines the recommended fiscal re-allocation.

Table 11: Summary of recommended fiscal re-allocation to annual climate responses (Climate Response Fund) from 2026

	2026
Carbon Tax (1/2)	R 22.0 bn
GFL (30%)	R 30.0 bn
MPRR (100%)	R 15.0bn
Restructuring Savings (50%)	R 13.2 bn
Retirement Reform	R 20.0 bn
TOTAL	R 100.2 bn

As shown in Table 11, these DRM-oriented proposals combined generate more than R100bn a year for climate priorities, a substantial starting point and a clear indication that the country is serious about responding to the threat to workers and the economy more generally posed by climate change. Moreover, it indicates a willingness to take a 'strategic lead' in designing and directing this response, rather than letting the market lead through a dependence on private finance and/or the blended finance model. This positioning, with a fundamentally more assertive and creative approach to domestic fiscal policy and allocation, is, in turn, indispensable to unlocking large-scale concessional and commercial finance over the years 2030 to 2050, to complete an economic transition that is essential if South African lives and livelihoods are to be protected.

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ENDNOTES

1 The scientific evidence is now overwhelming: climate change presents very serious global risks, and it demands an urgent global response. The benefits of strong, early action considerably outweigh the costs.

2 Historically, the kind of resource mobilisation and de-prioritisation of other spending that is required has only ever occurred under war conditions.

3 In principle, all are committed; in practice, procrastination is the norm and 'international diplomacy' has not achieved what needs to be achieved.

4 A fair amount of recent work has challenged this notion by pointing to the essential role public financing has played in innovation, not least of course the internet.

5 i.e. the value of the good or service is not immediately extractable in money terms because it is offered free or subsidised to the user (e.g. public education) in the case of mixed goods, or because by its nature it is difficult to price (e.g. defence or the justice system) in the case of pure public goods.

6 As climate impacts escalate and climate efforts intensify, developed economies are likely to use tools like border carbon adjustments more assertively: i.e. it would be myopic to think South Africa can pursue business as usual in a changing world without serious adverse effects. Economic necessity as well as the ethics of being a good global citizen point in the same direction here.

7 Throughout, we will use the phrase 'fiscal tool' in a broad sense, to include the fiscal dimension of macro-economic policy, taxation and spending through the budget, incentives / subsidies (tax expenditures), as well as those dimensions of economic regulation which bear closely on the fiscus.

8 They are not defined by rivalry in consumption and / or it can be hard to exclude people from their benefits.

9 Infrastructure does not meet the non-rivalry test for a pure public good: once fixed and sunk costs are incurred, additional users can be admitted with negligible or zero marginal costs to a given network. This is its 'lumpiness' feature. In such instances, setting marginal cost equal to price, which would be efficient from an overall welfare point of view and would embody the 'public interest,' yields a continuously decreasing average price: socially efficient pricing generates a loss-making enterprise. Other price regimes which avoid enterprise losses will lead to lower than optimal usage volumes. Regulatory options (whether a public or private entity is regulated) are a 'next best' solution which yields other problems, such as manipulation of cost information by the regulated entity.

10 Risk can, by definition, be estimated probabilistically; uncertainty, by definition, is a lack of information that would enable probabilistic optimisation to occur.

11 Though of course the overwhelming share of any budget is already 'locked in' through salary contracts and multi-year investment agreements, and budgetary discretion at the margin is actually very limited, particularly under 'fiscal consolidation' and low growth, where new priorities cannot be financed through more borrowing or additional revenue from higher income.

12 Sovereign wealth funds.

13 Because the transition will occur at any rate in key trading partners of South Africa, and increasingly large shares of South African exports will become vulnerable to carbon adjustments by these trading partners.

14 According to Climate Action Tracker, 2030 is regarded as 'almost sufficient' to make a fair global contribution to a less than 2 degree C increase, but policies and actions are 'highly insufficient': there is, in other words, an important divergence currently between NDC commitments and binding policies to get there. Regarding net zero target, CAT notes that, given its preliminary nature, and the lack of more detailed information, the CAT currently does not evaluate South Africa's net zero target. The CAT will do so once further information is communicated by the government.

15 More concessional finance will be pledged for a PPP, because international firms will bid, and it is their governments which are making concessional finance decisions.

16 Initially demand-driven and arising from fiscal stimulus efforts in the actual pandemic period, and subsequently supply-side constraints as a post-Covid world was not able to simply re-initiate pre-Covid supply chain performance.

17 This includes both the interest on debt and paying off the capital amount.

18 Domestic and foreign long-term loan redemptions.

19 In the medium- to long-term, explicit price trajectories may need to be adjusted, based on the experience with technology development and the responsiveness to policy. The policy dynamics should be designed to both induce learning and elicit a response to new knowledge and lessons learned. Price adjustment processes should be transparent, to reduce the degree of policy uncertainty.

20 5% inflation assumed throughout.

21 We exclude departmental transfers from this calculation since cost savings are associated primarily with administrative and salary costs.

22 This is an important dimension of the context for taxing the rich, one to which we return below.

23 For example, changes in general tax compliance culture if a 'tax on the rich" is perceived by many people as being evaded by the relevant taxpayers.