# VIEWS FROM AN EMERGING MARKET: CHARACTERISTICS OF SOUTH AFRICAN JUST TRANSITION PROJECTS AND THE CHALLENGES THEY RAISE FOR THE LOCAL AND INTERNATIONAL FINANCIAL ECO SYSTEM

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## Introduction

In South Africa there is a clear and differentiated understanding of climate finance and just transition finance. Climate finance is understood to relate to the funding of the decarbonisation of the economy including climate actions such as mitigation, adaptation and increased resilience. Climate finance is thus essentially technology driven and climate finance investments will chase projects and programmes that deliver reduced GHG as their main outcome. Climate finance (and the $100billion of climate finance which the global North committed to the developing world) was not designed to carry the additional burden of also financing the real economy consequences and impacts of these decarbonising activities on vulnerable workers and communities.

While climate finance works to deliver climate action, just transition financing is a complement to this funding and focuses on societal and developmental goals for those negatively impacted by such climate action. Just Transition finance is thus about financing the 'management of the consequences' of decarbonising activities funded by climate finance. Just Transition finance will chase investments which offer positive socio economic impacts for vulnerable groups negatively impacted by decarbonisation impacts (and climate change). Whereas climate finance is about technology, just transition finance is about people.

Just transition funding is thus required over and above climate finance and will need to be mobilised and deployed in a manner which is fitting to the socio political economic contexts of negatively impacted workers and communities in developing countries. These contexts will shape the scale, character and nature of interventions requiring just transition funding and will hence inform the quality of fund mobilisation.

In new research, a sample of just transition projects in Mpumalanga South Africa has been identified and analysed providing evidence of the financing needs of such projects and larger scale programmes. The analysis shows that projects with lower levels of just transition ambition can likely be funded by the existing financial eco system in South Africa with the assistance of increased public sector (local and foreign) de-risking and blended finance instruments. Projects with higher just transition ambitions (projects with structural and transformative outcomes), however, will struggle to be funded by the existing financial eco system and will need system level change. These system level changes will require local and international, as well as private and public finance eco system actors to co-create new mechanisms, instruments, business models, incentives and project development approaches to support structural and transformative just transition actions on the ground.

This paper briefly describes the project research completed and then focuses on the financing characteristic that high just transition ambition projects exhibit. The final section looks at the tool kit of possible eco system interventions which would support the mobilisation and deployment of such funding and begins to drill down into the specific roles of key actors including the South African state, the South African private sector and the DFI's and MDB's of the global North.

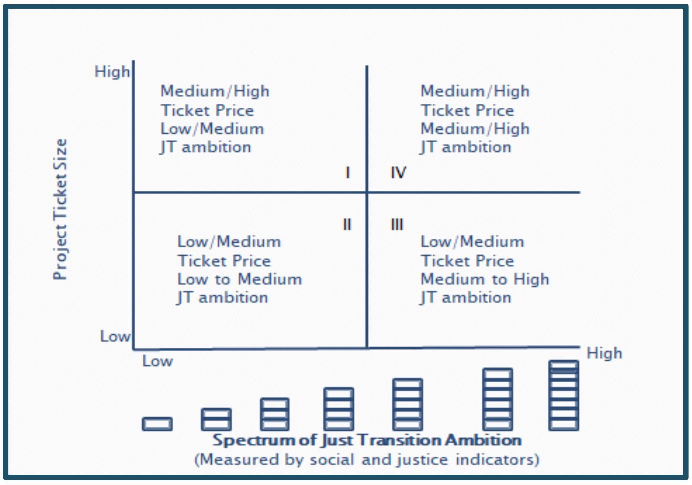
## Just Transition Projects in Mpumalanga South Africa

Mpumalanga in South Africa is the regional economy most impacted by the accelerated decommissioning of Eskom's coal fired power plants. As home to the majority of Eskom's generation fleet, and the majority of the country's coal mines, Mpumalanga is South Africa's hot spot in terms of the negative impacts of decarbonisation climate action. Job losses on the ground have already begun to occur. A sample of 26 projects currently being planned and implemented in Mpumalanga's most coal dependant districts provides the first evidence of the characteristics of South African projects which self-identify themselves as being just transition projects. Projects for the research sample were sourced from: local, provincial and national government, mines, the power utility, private sector companies, chambers of commerce, CSIR and SPV's set up to support the just transition such as the Investment Catalyst and Mine Water Co-ordinating Body.

To qualify as a self-identified just transition project, projects needed to demonstrate that they were being designed in response to a sudden or progressive exogenous shift in their operating environment which results in curtailed economic activity (such as the decommissioning of a power plant or mine closure). This direct responses requirement assists in differentiating normal socio economic projects with just transition projects. To maximise the sample size and breadth of projects, eligibility requirements were kept to a minimum. Fossil fuel-based and brown projects were excluded. Economic diversification projects which were not necessarily green (but were not brown) were included, as were all green projects[1]. Projects at all stages of development were considered as long as they met the basic requirements of having a dedicated project developer or champion who was resourced to develop the project further and had access to at least some preliminary funding to undertake initial development. Once qualifying projects were identified then investment, financing and socio economic impact surveys were completed. Although the project sample was geographically specific and focused on a just energy transition it is argued that generally observed project characteristics are likely to be applicable to any location and sector, thus giving the characteristics (and their financing implications) general applicability.

The projects captured in the sample identified themselves as being just transition projects despite varying levels of ambition in each project's projected impact and outcomes. All projects are commercially viable, although several projects include suites of activities where some are commercially viable and some not. All projects were deemed to be important to the economic diversification and opportunity generation of the regional economy. Diagram 1 illustrates a framework in which to consider just transition projects of varying levels of ambition as well as varying ticket price.

**Diagram 1: Just Transition Finance Framework**




Source: Lowitt (2021)

Project ticket size was chosen as the vertical axis variable as it is the most basic measure by which to indicate whether a project is likely to attract the interest of financiers or not. Stakeholders in the

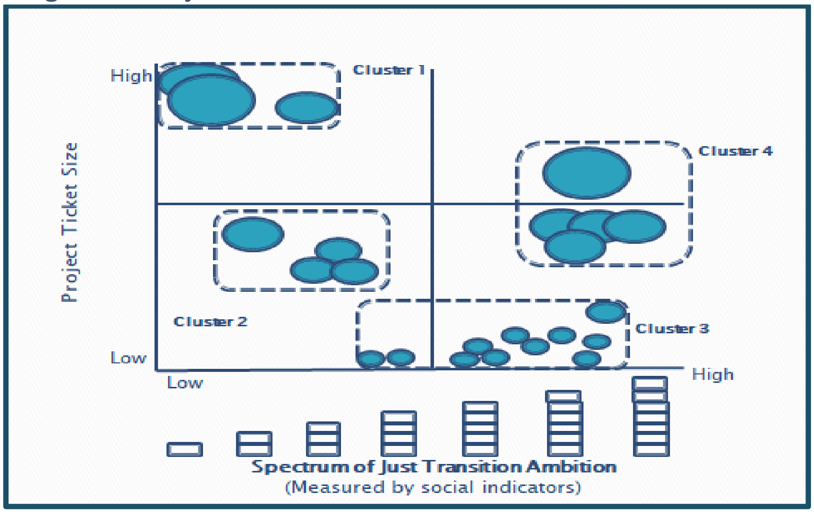
[1] It is important to note that just transition projects seek to identify non carbon intensive economic diversification opportunities in areas which are negatively impacted from a transition to net zero. While it would be optimal for projects to positively support climate change, economic diversification is a sufficient outcome as long as the new opportunity is not brown.

financial sector supported the view that low to medium ticket size projects in South Africa will fail to attract mainstream financial sector interest (or funding) because of the lack of venture capital, limited private equity interest in smaller projects, no angel funding and the fact that due diligence costs will be greater than the value of the transaction in small ticket-sized projects, making transaction costs too high to be profitable for the banking sector. Moreover the continued existence of medium- to large-scale investment opportunities available in the South African market means that mainstream funders are not actively seeking new investment spaces in which to participate. This suggests that funding for quadrants II and III will be hard to source; while funding for quadrants I and IV will be of greater interest to the financial eco system.

The horizontal axis measures just transition ambitions and will be measured in terms of quantifiable social indicators. Work on these indicators is forthcoming. At this stage, for illustrative purposes a low just transition ambition project may seek simply to provide alternative employment for workers directly impacted by the transition away from coal. This alternative decent employment opportunity would be shown in the single box on the left hand side of the horizontal axis. On the right-hand side of the horizontal axis multiple social indicators and justice measurements would be attained in a high ambition project, as shown by the cumulative stack of indicator boxes on the right of the axis. Illustratively such indicators could include: decent alternative employment opportunities at improved salaries to those earned in the coal sector, new and sustainable livelihoods for the impacted community, new asset ownership by communities and workers, job retraining and reskilling and the up-skilling of communities, restoration of land and waterways to ameliorate environmental abuse of the past, empowered community participation in programme development, and increased access to services, especially energy, water, sanitation, health and education.

Plotting the 26 Mpumalanga projects in the above framework four clear clusters are observed.

**Diagram 2: Project Clusters**




Source: Lowitt (2021)

Cluster 1 projects are high ticket price projects valued at between 35 and 100billion Rands. The projects are technology driven and focus on mitigation. They utilise technology with some international track record and risk profile. They have limited just transition ambitions and will create jobs in the tens to hundreds, although they do potentially create substantial (longer term) downstream opportunities if they are realized. The projects do support the idea of social inclusion and community engagement is part of the project design. It is likely that due to the project's high ticket price, government guarantees and some degree of knowledge and comfort regarding technological risk, these projects will be funded quite easily by the existing financial eco-system although some innovative transaction structuring may arise[2].

Cluster 2 projects have a ticket price of 500 to 900million Rands. The projects are focused mainly on mitigation with one project focused on adaptation and increased resilience. The projects utilise technology which may not have a track record in South Africa but is proven internationally. The projects are driven by large listed corporates and off take agreements are likely to be put in place prior to funding being sought. The projects also have limited just transition ambitions focused mainly on decent job creation and community inclusion in consultation and decision making. These projects are likely to attract some domestic financial sector interest because of the project originators, the medium price tags and the international technology track record. The local financial sector is, however likely to be nervous about the returns and cash flows associated with such domestically unknown projects and will in all likelihood require (local and, or international) DFI's to come to the funding party with some type of blended finance, de-risking or guarantees. As such it is argued that projects of this nature can be funded by the existing financial eco system with tweeks and innovations to the system's transaction structuring, mechanisms and instruments.

Cluster 3 projects have a low ticket price ranging from a low of 1million Rands to a high of 25 million Rands. Most are mitigation projects with some adaptation activities. Most projects are related to the circular economy (waste re-use) and water. The projects exhibit higher just transition ambitions. Most projects in this cluster include as core elements: alternative livelihoods for proximate community members, retraining and reskilling, new asset ownership and revenue generation opportunities. The projects are almost all based on new and novel technology, and new and novel business models including deal participants with no commercial track record. This makes it hard for the existing financial eco-system to assess and price project risk. In addition the cost structure of most South African financial sector players is such that the cost of completing due diligence on a new project with a ticket price in the cluster 3 range is higher than the final project investment. This means that the transaction costs are prohibitive and as a result such projects will not be considered let alone funded. Cluster 3 projects, which are likely to be the **dominant exemplar of just transition projects in South Africa going forward**, are unlikely to be funded by the existing financial eco-system. Issues of scale, scalability and replicability are notable in relation to the cluster.

Cluster 4 has been nicknamed the unicorn cluster as it exhibits both an attractive ticket price (6billion Rands) for the financial eco system and a very high level of just transition ambition (including livelihood opportunities for up to 1.2million vulnerable people, reskilling and retraining, creation of entirely new value chains, new asset ownership models, new business models, increased access to services and positive environmental impacts). The project includes totally novel technology with a very limited international track record, a totally novel approach to project design and architecture, new deal participants and multi layered funding requirements all of which will need to be secured at the beginning of the program of work. The project suite will require grant funding, impact investing, concessionary funding and commercial market related funding. The novelty of the project and its design will make it difficult for the existing financial eco-system to fund projects of this nature.

[2] There has been much debate about the inclusion of cluster 1 projects in the sample. The projects as major decarbonisation activities in South Africa's transition to net zero will be funded by climate finance which is able to offer attractive term sheets and which will fill in the lack of early stage investment in new technology which characterises the South African economy. The reason why cluster 1 has been included as a just transition project is the project developers self-identification of the project as such and the reality that repowering and repurposing coal fired power plants will constitute economic diversification and hence new jobs and livelihood opportunities.

The project sample analysed in Mpumalanga thus clearly shows that just transition funding mobilisation and deployment in South Africa will need to respond to two sets of challenges. The first set relates to projects with relatively low just transition ambitions. These projects fit easily into the decision making processes and institutional structures currently in place in the existing financial eco system. Increased access to de-risking will improve the risk related return of such projects and will support the increased volume of funds flowing into this market. The second set of just transition funding challenges are more systemic and will require a fundamental rethink of how the financial ecosystem interacts with the real economy. These challenges and possible toolkits to address them are covered in the next sections.

## The Challenges of Low to Medium Just Transition Ambition Projects for the Financial Eco System

As argued above, projects with low or medium levels of just transition ambition but relatively high ticket prices are likely to be funded by the existing financial eco-system. Where such projects are finding it hard to source the necessary quality of funding it is largely because of the inherent early stage of the project's development cycle or the untried nature of new technology which are hindering it rather than its just transition specific characteristics. This may seem strange to an international audience but is a well know phenomenon in the South African financing context where angel investors, venture capital and private equity is limited; as is the scale of public grant and concessionary funding. The key to unlocking appropriate funding for such projects relates to innovative instrument design, new mechanisms and other targeted de-risking and credit enhancement tools. De-risking facilities such as patient capital, quasi equity and debt, and concessionary debt as well as credit enhancement tools such as risk buy down schemes, state backed guarantees, first loss provision, political risk insurance, subordinated debt or the creation of risk pooling facilities will all increase the attractiveness of such projects to funders.

The approach which has solicited the greatest interest in the context of low to medium just transition project in South Africa is the pivotal role of blended finance going forward. Between 2017 and 2018 a handful of projects were de-risked and additional funding crowded in using blended finance. Unfortunately the scale of blended finance was insufficient at just 4.4billion Rand, and disappointingly the totality of public sector contributions were sourced from donors and off shore DFI's rather than domestic public sector sources. There is consensus in the South African eco system that blended finance has a pivotal role to play in just transition funding going forward. Given the limited fiscal space within which the South African government is operating it is hoped that offshore public sector flows will be forthcoming as part of the undertaking made by the Global North under the Paris Agreement. It is hoped that such off shore inflows will increase both the quantity of blended finance availability in South Africa but also the quality of blended finance availability by focusing on structural weaknesses of the existing eco system such as the funding of SMME's, novel technologies, early life cycle projects and non renewable energy green projects.

While the improved mobilisation and deployment of funds for low to medium just transition ambition projects is important to the diversification of mono economies such as coal towns in the short to medium term; the majority of research and theorising in relation to just transition funding is focused on transformative projects which by their nature demand financing solutions which are difficult for the existing financial eco system to fund. Some of these challenges are considered below using the characteristics of the high just transition ambition projects identified in the sample of 26 Mpumalanga projects.

## The Challenges of High Just Transition Ambition Projects for the Financial Eco System

Based on the characteristics and financing needs of the high just transition ambition sample of projects in Mpumalanga six specific challenges or demand requirements have been articulated.

The first challenge identified relates to interdependencies and the need for an aggregate portfolio approach. The high just transition ambition projects analysed in the Mpumalanga sample show that projects designed to achieve just transition outcomes at a high level involve the creation of a series of interconnected projects whose strength and effectiveness lies in their ability to support and lay the groundwork for future projects. For example: a water security project which supports biodiversity and conservation; both of which are crucial investments to facilitate income generating agricultural and renewable energy investment outcomes; none of which will be possible without the complementary investment in skills, SMME development and digitalisation (Naidoo, 2021). As such financiers will be required to evaluate an inclusive and interdependent investment portfolio which will require a step change in how projects are evaluated. Most important will be for the financial eco system not to cherry pick specific projects based on investment preference but to create investment solutions for the suite of projects as an aggregate portfolio.

The second challenge emanates from the above challenge of an aggregate portfolio. The multi project just transition portfolios analysed in the sample requires a series of layers of funding ranging from grant funding, to concessional funding to commercial funding. These different funding needs associated with a single intervention will require multiple sources of funding, multiple funding instruments and mechanisms and multiple funding models. For example the restoration of environmental degradation may require grant funding from the public sector; SMME skills development and worker retraining may require impact investing; while sustainable agricultural projects will deliver risk related returns that allow for commercial funding (either at concessional rates through a DFI or at market related rates through commercial banks). As funding for the portfolio is required to be known upfront in terms of its ability to roll out and succeed; this will require different stakeholders in the financial eco system to work together in partnership, through collaboration and in a co-ordinated manner which is not part of the modus operandi of the current eco-system. Who will offer the co-ordinating function and how funding plans and term sheets across different financial sector players will be co-ordinated will require changes in how the system operates across institutions..

A third challenge which high ambition just transition projects raise for the existing financial eco system relates to the timing of the participation of financiers in the project development life cycle. Apart from a relatively short period when DFIs were involved in 'making projects', financiers in South Africa have traditionally bought deals rather than made deals. Currently most project developers in South Africa progress their projects to a 'bankable' stage before bringing them to the attention of the market. Although different financial players have different requirements for bankability it is normally associated with a project where at a minimum: a business plan exists, a feasibility study has been completed, and a revenue stream and cash flow presented which allows for the calculation of a risk related return. Once such documents are available project developers take the project to competing institutions in search of the best terms. In just transition projects the complexity of a suite of projects, the different financing requirements of such elements of the project; and often the limitations of the capacity of project developers require that financial eco system players become involved in the project development cycle earlier than in traditional transactions. This earlier level of engagement challenges financing institutions to become involved in creating the project pipeline itself; to undertake financial capacity building amongst project participants; and positions financial institutions to co-create their own deals. This will impact on the business models of financial actors and how and when investment decisions are taken.

A fourth challenge to the existing eco system relates to the parties to a transaction. In the current system contracting parties generally need to meet minimum requirements in terms of financial literacy, a commercial track record and some kind of financial standing be it personal assets in terms of collateral or a company balance sheet. In just transition projects the array of project participants is particularly broad (households, communities, faith based organisations, local authorities, utility providers, large listed companies, SMMEs, training providers) and exhibits a large divergence in track record and financial literacy. Institutions will need to adopt a new way of measuring and assessing contracting party risk and will in many circumstances need to play the role of capacitator and skills developer in relation to the parties to the transaction. This will require a step change for financing institutions and an expanded role for them in getting a project ready for financing. Required activities will be greater than traditional technical assistance and the provision of such services needs to be mainstreamed rather than an incidental and occasional offering.

The fifth challenge to appropriately funding high ambition just transition projects relates to innovation which will provide more early life cycle concessionary and grant funding, more small scale finance, portfolio level and project financial de-risking, smart subsides and improved (or new) forms of scalability and aggregation approaches such as increased deployment of funds of funders. Of particular importance is innovation related to small scale projects with low ticket prices but high ambitions. Given the capacity of small communities to absorb capital it is agreed by experts that in South Africa small just transition projects (less than 25 million Rands) are likely to be the most common type of project implemented to ameliorate the negative impacts of climate action. Collectively all these required innovations, in conjunction with the changes and innovations related to the previous four challenges, amounts to a substantial challenge to how the financial ecosystem operates and what services and products it offers to the just transition project and programme market. Interviews with existing eco system players who are interested in moving into this space all concur that the existing decision making systems and frameworks in their respective institutions prohibit such funds from flowing or such investment decisions from being taken.

This leads to the final broad challenge of transformative just transition project and programme financing, and relates to the institutional and operating environment of eco system actors. To deliver the step changes described above the financial eco system will require, inter alia: new socio economic indicators, new metrics and measurement techniques, new benchmarks, new disclosure requirements, new product labelling and standards, new internal decision making frameworks and systems, new key performance indicators and importantly new incentive structures including remuneration incentives for personnel involved in transacting activities. As all of these requirements are system level changes, many of which are totally novel and potentially highly disruptive it is crucial that the ecosystem as a whole (inclusive of the South African public sector, international DFI and donors, MDB's and the local and international private sector) understand that the learning required to facilitate such a system level change will be immense and the only way progress will be achieved is by collective collaboration, co-ordination, partnering and experimenting at scale.

The final section of this paper seeks to consider at a high level the toolbox of interventions necessary to facilitate the type of system level shift considered above. An attempt has been made to sketch the potential roles of the international and domestic public and private sectors

## Toolbox of Possible Activities

Research on interventions to increase the quantity and quality of just transition funding mobilisation and deployment remains nascent and highly embryonic. No current body of *evidence* exists to inform policy choices or assess the effectiveness of different approaches to support such flows. Unsurprisingly just transition finance thinking in South Africa borrows heavily from the experience of creating an enabling environment for climate finance. It is also understood that just transition finance mobilisation and deployment will suffer from all the technical challenges that climate finance has been dealing with for 20 years. These include achieving global consensus on what counts as a qualifying investment and what disclosures, metrics and measurements are necessary in taxonomies, labelling, standards and eligibility criteria.

While there is no consensus in South Africa on what constitutes a just transition transaction at present, there is important consensus on three key points of departure. First there is consensus that the creation of an enabling and supportive system of finance to fund just transition activities will take a substantial length of time to be created and is thus a long term goal requiring some sort of roadmap process spanning short, medium and long term horizons (and likely to span 15 to 20 years).

Second there is consensus that the end goal of a financial eco system which is able to mainstream support for just transition activities will be fundamentally different to the current financial eco system in terms of how it relates to the real economy and public policy; as well as the instruments, mechanisms and transaction which it will develop and innovate in response to differing finance demands.

Finally there is consensus that every actor in the finance eco system will have a role to play in delivering the funding necessary for a South African just transition. These actors will include the South African public sector and private sector; as well as the public sectors in the global North (through DFI's and MDB's) and private global North investors (institutional investors). International climate finance experience shows clearly that the private and public sectors need to consult extensively and collaborate at all levels to jointly and collectively determine a roadmap towards the mainstreaming of climate action and just transition funding as integral parts of their normal activities. South Africa has embraced this collaborative approach and is currently running several consultation and collaboration initiatives.

From these points of departure South Africa is currently considering a toolkit of initiatives some of which may directly or indirectly impact just transition flows, and some of which seek to create an enabling environment for such flows to occur. Given the nascency of the field of research, interventions and initiatives are presented at a theoretical level but hopefully provide a basis for action and collaboration not only domestically but in relation to global north funding. For example it is hoped that in support of COP 26 global north DFIs might wish to engage on opportunities to support de-risking activities in relation to cluster 2 type projects described above or to support experimental transaction structuring and innovation to learn from funding examples of cluster 4's suite of projects. Although it is understood that the global North is not looking at project funding but rather putting in place mechanisms to support high volumes of sustainable just transition flows, the South African treasury suggests that experimentation and learning necessary to support appropriate just transition finance will require learning first at a project level, then at a transaction level and finally at a portfolio level. South Africa and its immediate requirement to fund ameliorating activities to counter the negative transition impacts of the movement out of the coal value chain in Mpumalanga provides a perfect laboratory of on the ground projects to support and learn by doing.

*Direct Public Finance Measures in the Financial Eco System*

Theoretically there are numerous ways in which the South African public sector could directly engage in financing just transition activities within the existing financial eco system. All these options have an impact on the fiscus. Given years of slow GDP growth since the end of the last commodity super cycle, rising debt levels and substantial debt guarantees on the government's books related to state owned companies such as SAA and Eskom, the fiscal space for large scale public sector direct funding of just transition activities is extremely limited.

The first option would be for the state to provide grant and concessional funding for just transition projects by making such funding available to the country's DFI's and commercial banks. This would support blended funding opportunities to crowd in private sector funds. Currently some such funding is made available but volumes are marginal and are unlikely to grow in the near future. Indeed treasury suggest that increasing such flows would most likely arise from the re-prioritisation of existing budgets rather than new monies being injected into the system.

The second option government could consider would be the use of targeted credit enhancement tools which essentially reduce the risk of the project to the funder. Options could include risk buy down schemes, state backed guarantees, first loss provision, political risk insurance, subordinated debt or the creation of risk pooling facilities. As with the above option fiscal space will limit the government's ability to utilise these tools at scale.

As an alternative the state could directly fund just transition projects through innovatively structured transactions using line department budgets and possibly special purpose vehicles. The idea here would be for the state to 'demonstrate by doing'. Government's innovative demonstration transaction would provide proof of concept for a new type of funding approach which could then hopefully trigger the development of new and appropriate products in the private sector. While such an option is unlikely as a national programme, specific national line department budgets or provincial or local government funding could be used to support such innovation demonstration albeit that sub national capacity constraints and track records suggest that such activity might be limited.

South African government direct support for financing just transition activities using the three above options is viewed as limited given fiscal space. Rather it is more likely that the majority of direct government just transition activity will be focused on the last two direct finance options: providing tax incentives and social protection measures[3]. In relation to tax incentives, the state could forego revenue collection by providing tax free status for interest or other income received from just transaction instruments. While there remain issues of tax treatment consistency (South Africa still offers fuel subsidies) with this approach such an intervention would definitely increase investor returns and assist in just transition finance mobilisation.

A final direct finance policy option would be for the government to structure and fund just transition programming which is not commercially viable such as the provision of social protection measures or retraining and reskilling programmes for workers negatively impacted by transitions to low carbon trajectories across sectors and locations. How to fund such programmes is a key issue facing south Africa's approach and implementation of just transition activities and is a key issue on which global

[3] Social protection measures, active labour market policies etc. are not dealt with in this paper but the Sector Jobs Resilience Plans commissioned by the Government and available at https://www.tips.org.za/projects/current-projects/item/3936-sector-jobs-resilience-plans contain details of the extent of such measures. Funding these measures is an important part of the roadmap research agenda for South Africa.

north collaboration and partnering engagements are required. Ideas regarding the establishment of a Just Transition Fund for South Africa has been an issue of discussion in the pre COP 26 agenda and negotiations, and it is likely that such negotiations and engagements will continue in the post COP period as well.

In summary all five of the above options have fiscal implications either in the form of financial outlays or revenue forgone. While the instruments are all potentially powerful they are unlikely to feature in the forefront of just transition funding in South Africa in the near term because of constrained government finances. Incentives may be an exception to this generalisation. Opportunity therefore exists (given the commitments of the Global North in the signing of the Paris Agreement) that some of these South African public sector financing limitations could potentially be lessened by foreign donor, DFI and IFI fund deployment (depending on the terms that can be negotiated).

### *Indirect Public Finance Measures in the Real Economy*

A second category of action the South African government and off shore funders could consider would be financing and risk sharing in the real economy. Such activities could increase demand for mitigation, adaptation, resilience and economic diversification activities in transitioning mono economies. These policy measures were used quite successfully by the South African government in supporting increased flows of sustainable finance to local solar water heater manufacturers who benefited from increased sales and hence better financing deals on the back of the solar water heater subsidy programme and local government roll out of solar heaters in the real economy.

Importantly given the character of the projects in the research sample one of the most important indirect measures the public sector (local and foreign) could utilise would be the offering of R&D grants for eligible real economy activities that are developed specifically to provide alternative livelihoods for impacted workers and communities. Examples include R&D grants for using acid mine drainage water for new community agricultural irrigation or valorising fly ash waste from coal fired power plants. Additional tools could include: tax exemptions and reduced transaction costs for certain just transition activities such as the transfer of mining land to community ownership; and very importantly government procurement policy and preferential treatment of just transition enterprises.

### *Creating an Enabling Environment*

There is general agreement internationally (UN-WB 2017, IPSF 2020, SBN 2019, Robins 2021) that the most important role for the government to play in ensuring there is sufficient funding deployed to finance a just transition to net zero emissions is its role in creating an enabling environment for increased private sector just transition flows. As such the third (and most important) category of possible government action is related to the government providing direction, support and co-ordination to the creation of an enabling environment for the broad financial eco system such that the quantity and quality of finance flowing to just transition activities increases in an appropriate manner. This is an area of policy prioritised in all current just transition finance literature and just transition finance roadmaps.

The two key aspects of an enabling environment which will require government attention relate firstly to just transition disclosure, measurement and metrics. The second relates to sending consistent and appropriate signals, and proving the regulatory and legislative frameworks to support financial eco system actors to mainstream just transition funding mobilisation and deployment. Allied to this is the imperative for the state to ensure that disclosures, metrics and measurements, labelling and standards converge with international equivalents so as to ensure the seamless inflow of Global North funds. These enabling environment interventions are the focus of most climate finance research and just transition roadmap research. The enabling environment creation issues and problems to be solved are relatively well articulated in South Africa. The next steps need to focus on piecing together an action plan of consultative activities to solve such challenges. Access to international experience, principles and experience will be invaluable in determining South Africa's roadmap and to date the global north through various DFI's MDB's and research institutes have provided great support resources of both a financial and human nature. This collaboration and knowledge transfer and idea sharing will be important to continue and deepen over time.

### *Leveraging International Finance Institutions*

The fourth category of possible action the South African government can take to support increased mobilisation and deployment of just transition funding is to actively leverage and maximise the role of international financial institutions (IFI's) including international DFI's, MDB's, government donor schemes and multilateral facilities such as the Green Climate Fund. In South Africa there is a strong view that international funding should be seen as an enhancement to local financing actions and not a substitute for national action. It is accepted that South Africa needs to put its money where its mouth is in relation to just transition funding, but it is simultaneously stressed that under the Paris Agreement the global north has made commitments to support global South just transitions and as such off shore flows do have an important role to play in South Africa's just transition to net zero.

As hinted above, international financial institutions can assist in four areas of South Africa's just transition. First they can facilitate the development of an enabling environment for the economy through knowledge transfer, research support and capacity building. Multiple IFI's are active in this space and are greatly assisting multiple eco system actors to deal with thinking through and understanding just transition challenges. Resources are being made available to both the public and private sector which is important, as limited capacity and capability related to understanding and using new ESG information and measurement has been identified by the South African private sector as a constraint on their ability to mainstream climate financing (a situation which will be replicated in respect to just transition funding as well).

A second area of activity for IFI's in South Africa would be for organisations to support innovative transactions and kick start new markets. The IFC's financing of South Africa's first renewable wind farm in Sere is an exemplar of the power of an off shore funder (with different financing constraints) to absorb the risk of a demonstration pilot to prove the commercial viability and financing opportunity of a new technology or (in the case of the just transition) a new industrial, agricultural or green activity (possibly involving a new business model or scale of operation). Given that South African DFI losses are not underwritten by the state, local development finance finds such projects difficult to fund. Multi and bi lateral IFI's which have greater financial operating scope will thus play an important role in investing in untested projects and projects approaches at a demonstration level to provide proof of concept to the domestic market.

Finally and most importantly in the short run IFI's can meaningfully provide long term financing to support de-risking activities, targeted credit enhancement tools, make grant and concessional funding available at scale to SMME's and early life cycle development projects and programmes, help grow the impact investment market in South Africa, and crucially make funds available for blended finance products and mechanism innovations. South Africa currently has a range of financing needs arising from the just transition currently underway in Mpumalanga. The range includes grant funding at the one extreme to commercial funding on a risk-related return basis on the other. This provides some body of evidence as to the characteristics of the demand for funding related to socio economic context specific just transition investments in South Africa. These projects and their financing needs can be a first step in designing larger support packages and interventions going forward that meet the real economy needs of vulnerable workers and communities negatively impacted by decarbonisation activities.

### *Market Led Developments*

Private sector players within the financial eco system and in the real economy obviously have a pivotal role to play in South Africa's just transition and the financing thereof. In an Investors Roadmap for the UK (2020) it is argued that the rationale for investors in the private sector to focus on the just transition relates not just to 'doing the right thing' but that it is the smart thing to do from a commercial perspective. The rationale for investors to focus on the just transition includes: the need to manage systemic risk, the fiduciary responsibility of boards, material value drivers as well as opportunities to generate positive impacts. Based on this thinking there are five proposed areas of activity the private sector can initiate to begin actioning the just transition agenda.

The first is for investors to formally incorporate the just transition into their investment strategies. Such inclusion will signal that the institution understands the justice dimensions of climate action and is prepared to mainstream support activity rather than deal with it as a niche add on. To enable financial institutions to make such changes to their investment strategies international and national standards for environmental and social performance are required as well as the need for providers of sustainability ratings to provide appropriate enabling products. Interviews with local financial eco system players highlight the fact that to date just transition activity in South Africa is viewed as a niche activity and that internal systems, frameworks and incentives do not support increased investment in this area. Indeed in the country's just transition vanguard financial institution, the ESG and just transition team comprises only four people.

The second suggested activity for private sector financial institutions to undertake to support just transition activity and funding is to increase corporate engagement with the companies they invest in. Conversations with such companies need to progress the move to bring all portfolio companies into line with Paris Agreement requirements as well as engagement on the justice issues of the implications of climate action. Financial institutions are perfectly positioned to raise these issues with real economy corporates but such engagement will only progress from adoption to application and action if performance indicators can be agreed, measured and compared. This intervention has proved highly effective in the climate finance space where financial intermediaries require companies they invest in to disclose emissions and then agree to decrease such values (Investor Roadmap UK 2020).

The third and most impactful action the private sector can take in support of the just transition relates to a financial institutions allocation of capital. Investors can shift their allocation of capital to specific assets aligned with the just transition such as building a thriving just transition bond market at a national (and especially) local level. Institutions may also allocate capital in support of new and novel leveraging opportunities such as impact investment and blended finance, and by creating new fit for purpose instruments, vehicles and mechanisms to deploy funds. In order to facilitate these flows new business model development, capability support and incentive alignment will be required.

The fourth action the private sector can adopt to accelerate just transition fund mobilisation and deployment is to work with the national government, policy makers, regulators and financial authorities to create a strategic framework that will maximise incentives and opportunities for investors to shift their capital allocations. Policy advocacy and partnerships are thus crucial and could cover a multitude of dimensions including: macro and industrial policy, labour and environmental policy and public finance measures including mechanisms to incentivise investors, innovative options for funding sustainable infrastructure and funding of retraining and reskilling. This is thankfully occurring at scale in South Africa and governance structures have been put in place to systematise such interactions.

Finally and perhaps most importantly the path to increased just transition funding lies in the private financial eco-system experimenting at scale with good monitoring and evaluation systems and an iterative feedback loop to learn lessons and improve.

Interviews with financial eco system actors in the private sector suggest a range of responses to entering the just transition funding market ranging from the dismissive to those actively seeking to engage. Across the board there is however consensus that capital allocation shifts at scale (i.e. mainstreaming just transition finance) will not occur without: i) increased clarity on measurement, metrics, disclosures and labelling (an enabling environment); ii) framework and system level changes in financial institutions related to transactions especially opportunity identification and investment decision making (notably the traditional role of credit committees); iii) changes in corporate Key Performance Indicators (KPI) and incentive structures (for units and individuals) and iv) capacity building in the private sector to provide financial actors with the knowledge required to identify, assess and make decisions on just transition transactions.

## Conclusion

Ensuring the mobilisation of sufficient funds to finance the just transition in South Africa is one challenge. A second challenge is ensuring that the type of funding available is a match for the funding demand emanating from the real economy and especially vulnerable workers and communities negatively impacted by decarbonisation activities. As such the just transition financing challenge is both about the quantity and the quality of finance mobilised and deployed. However, due to restricted project and programming pipelines in South Africa currently the immediate just transition financing challenge relates more to the quality of finance rather than the quantity of finance. This will hopefully change overtime.

By creating a body of evidence based on a sample of real economy just transition projects ready (or nearly ready) for implementation South Africa there is now a starting point from which to innovate and develop context appropriate just transition financing instruments, mechanisms and approaches. By understanding the characteristics of different clusters of just transition projects; an aggregate understanding of just transition financing demand can now be disaggregated into more specific market demands which require specific design and implementation solutions.

It is crucial that the local private and public sector begin to engage with the differentiation of just transition financing needs; but it is equally crucial that the Global North in meeting their obligations under the Paris Agreement take note of the local context in South Africa (and other emerging economies) and provide funding which meets the needs of the local market and local conditions. Some of these funding needs may include traditional products which can easily be provided such as technical assistance, capacity building, patient capital, first loss capital, and concessional debt and equity instruments. At the same time some of these financing needs may require more novel innovations and designs and not sit comfortable in the suite of assistance the global north traditionally provides. It is sincerely hoped that increased co-operation, collaboration, knowledge sharing and partnering will enable the global north to play the role required of it by the global south as it strives to meet the challenges of decarbonisation without leaving anyone behind.

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