OXFORD ECONOMICS

CASE STUDY

Partnership for Market Readiness

SOUTH AFRICA

1. PROJECT HIGHLIGHTS

Key Cross-Country Benefit	Key National Benefit
Implementing a carbon tax and offset scheme transforming the incentive structure in one of the 20 largest global GHG emitters.	***PMR played a key role in the implementation of the carbon tax outlined in the country's NDC and Country Partnership Strategy.***

2. QUICK FACTS

Categories	Project Details
Project Name	South Africa Partnership for Market Readiness (PMR)
Project Description	The PMR supported the implementation of a carbon tax and complementary offset scheme by filling knowledge and analytical gaps and providing technical assistance concerning capacity needs within the government.
Global Public Good (GPG) Theme	Climate & environment
Sub-Theme	Climate change mitigation
Sector	Public administration – Energy and extractives, ICT services

Disclaimer: We based the case study on the information cited and publicly available as of May 2023. The findings – especially concerning the GPG perspective – have been concluded to our best knowledge. The views expressed are the authors' assessments and do not necessarily reflect the project stakeholders' views. Any errors that remain are our responsibility

Country of Implementation	South Africa
Region	Sub-Saharan Africa
Income Category	Upper middle income
Implementation period	2017-2020
Project Volume	Total project cost US$ 2.89 million
Financial source	US$2.10 million Trust Fund, rest borrower contribution
Instruments	Investment project financing
MDB Involved	World Bank
Implementing Partner	Government of South Africa (Borrower), National Treasury (implementing agency) and others[1]
Link to detailed project information[2]	https://documents1.worldbank.org/curated/en/510721623958449245/pdf/South-Africa-Partnership-for-Market-Readiness-Project.pdf

3. WHY THIS IS A BEST PRACTICE

- **Sustainability:** The PMR in South Africa is ecologically, socially, and economically sustainable. The carbon tax has been implemented structurally changing the incentive structure towards carbon emission reduction. Moreover, apart from the initial set-up and administrative cost, the policy does not require significant government funding in the long-term. Notably, the tax even constitutes a source of government revenue that may be used to address other national development priorities. All stakeholders were included, and carbon offset schemes are provided to ensure long-term competitiveness of the country's economy.
- **Scalability:** The carbon tax and carbon offset scheme can easily be scaled-up by covering more sectors or increasing the tax rate.
- **Transformability:** The carbon tax is a textbook market mechanism internalising (part of) the externalities imposed by CO2 emissions. Thus, the incentive structure affecting all economic actors is adjusted to also reflect the social cost of emission. The project is therefore transformative. Yet, the

[1] For a full list of implementation partners, see The World Bank (2020, 54 ff.): https://documents1.worldbank.org/curated/en/691751608001800037/pdf/Brazil-First-Amazonas-Fiscal-and-Environmental-Sustainability-Programmatic-Development-Policy-Financing.pdf

[2] If not stated otherwise, the two documents provide the main source for the case study.

power of the tax crucially depends on its stringency, including the tax rate, regulations on exemptions, the design of offset schemes, and MRV quality. In the country's current Country Climate and Development Report (CCDR) the World Bank recommends strengthening the current tax by increasing the rate and coverage.

4. PROJECT INFORMATION

4.1 CHALLENGES OF GPG PROVISION IN THE COUNTRY CONTEXT

In 2021, South Africa was **among the 20 largest emitters of fossil CO2 emissions globally**[3] mainly stemming from the energy and mining sectors. As the country's economy is heavily dependent on natural resources, it is also comparatively vulnerable to climate change. Thus, transitioning to a low-carbon economy requires a viable decarbonisation strategy to protect important economic sectors. Moreover, the poor are among the people hit hardest by the impacts of climate change—constituting a further dimension of inequality in the country.

The Government of South Africa has recognised this challenge and endorsed the submission of its Nationally Determined Contribution (NDC) to the Paris Agreement in 2016. It outlines policy actions to achieve the commitment, including the adoption of a carbon tax. **According to the country's National Climate Change Response Policy (NCCRP), carbon pricing is a guiding principle to support a low-carbon trajectory.** It is particularly important as it internalises the cost of carbon emissions within the South African economy and thus helps to level the playing field for investment into low-carbon technologies and practices. One of the reasons the government decided to go for the carbon tax instead of an emissions trading scheme was that the additionally generated tax revenues could promote other national goals, such as poverty reduction. However, as taxing carbon emissions can pose a risk to a country's competitiveness, a **carbon offset system** was planned to complement the tax, providing more flexibility to the taxpayers. Thus, mitigation is incentivised, and other sustainable activities are promoted—even in sectors not directly covered by the tax and/or benefiting from other government incentives.

In 2018, the country adopted a phased approach for implementation of the tax: phase I covers 2019 to 2022 with an effective tax rate per ton of emissions between US$0.50 and US$4.00. Starting in 2023, phase II incorporates a progressively higher tax rate to be around US$12 on the margin, or higher taking into account the review of the impacts of the carbon tax after the first two to three years of implementation.[4] Notably, Eskom, the dominant South African electricity public utility and the largest producer of electricity in Africa, is not liable to the carbon tax during the first phase—a concession made to help build buy-in. In November 2019, the Carbon Tax Offset Regulations were introduced. These recognise three international carbon offsets standards, namely the Clean Development Mechanism (CDM), Verified Carbon Standard (VCS), and Gold Standard (GS), as eligible to develop offset credits for a domestic carbon offset market.

[3] European Commission (2022): https://edgar.jrc.ec.europa.eu/report_2022

[4] The World Bank (2021, 6 ff.): https://documents1.worldbank.org/curated/en/510721623958449245/pdf/South-Africa-Partnership-for-Market-Readiness-Project.pdf

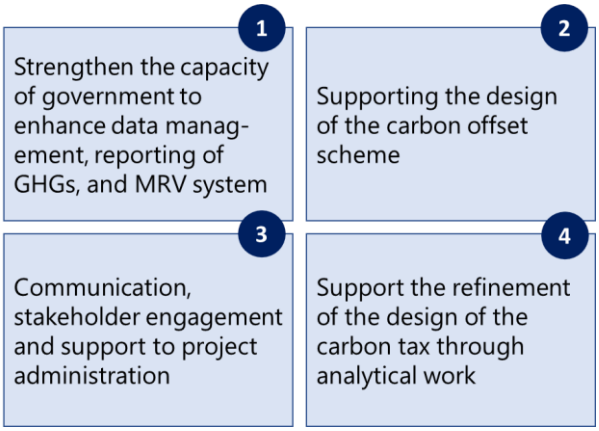
The **South Africa Partnership for Market Readiness (PMR)[5] Investment Project Financing (IPF) project** offered timely technical expertise and financial support to the government as it finalised the design of its carbon tax, offset system, and the data monitoring systems. It also aimed to provide capacity building support within government and key stakeholders around the use of these new tools.

4.2 INTERVENTION

4.2.1 Project Design and Agents of Change

The Project Development Objective (PDO) was to **strengthen the readiness of the government for the design, preparation, and implementation of a carbon pricing instrument**. In detail, the IPF provided by the World Bank consisted of four components, displayed in Figure 1. Component 1 was aimed at strengthening the Department of Mineral Resources and Energy's central energy database, supporting the modification of the National Atmospheric Emission Inventory System, supporting technical capacity building for GHG and energy data management and Measurement, Reporting, and Verification (MRV) systems, as well as providing capacity building to some companies that are subject to GHG reporting. In the short term this should lead to increased integration and efficacy of the Government of South Africa's systems to report and track emissions data.

FIGURE 1: PROJECT COMPONENTS



Source: Oxford Economics based on the World Bank (2021)

Component 2 included the development of a manual for offset system users and framework for adopting local standards. Furthermore, technical assessment of the carbon offset administration system and options for registry hosting were provided. Additionally, technical training for technical and administrative staff and secondment of technical expertise was arranged. Overall, this should increase the country's capacity to manage emission reporting systems.

Next, component 3 aimed to situate the carbon tax clearly as a key policy instrument within a package of measures to promote South Africa's competitiveness in the long-term while addressing climate change challenges. It was designed to help the government to communicate with stakeholders on the objectives and design of the carbon tax and offset system. In addition, it aimed to improve the effectiveness of the project implementation. The goal was to increase stakeholder understanding and capacity to report GHG emissions.

Lastly, component 4 included technical studies on modelling economic impacts and GHG emission intensity benchmarks to help refine the design of the carbon tax policy. This work was ultimately financed through the

[5] The PMR provides support to prepare and implement climate change mitigation policies—including carbon pricing instruments—to scale up GHG mitigation. So far, the programme tracks 19 implementing country participants, 13 contributing participants, and nine technical partners. Moreover, 16 countries have completed road maps for carbon pricing readiness. For more information see https://www.thepmr.org/content/supporting-action-climate-change-mitigation.

PMR Secretariat and through in-kind contributions from the government of South Africa (and not the PMR grant).

4.2.2 Expected Results

In the intermediate future the project **should strengthen the capacity of the South African government to plan, track, and deliver mitigation activities**. Moreover, the government should be enabled to track GHG emissions in a sustainable and cost-effective manner.

In the long-term, the project contributes to a **cost-effective GHG emission reduction** to achieve South Africa's NDC targets in support of a just transition away from the country's reliance on fossil fuels. Additionally, the project reduces the vulnerability of South Africa's economy to the impacts of climate change.

The results indicators and their achievements are displayed in Table 1. Other outcomes and impacts of the projected included institutional strengthening by improving inter-ministerial dialogue on climate activities and ensuring that stakeholders understood the design of a national carbon pricing instruments. Moreover, exchange and engagement with other PMR recipient countries was enhanced. The carbon tax came into effect in June 2019.

TABLE 1: SUMMARY OF RESULTS

Indicator	Baseline	Target	Actual
Meeting the PDO: to strengthen the readiness of the government of South Africa for the design, preparation, and implementation of a carbon pricing instrument			
Carbon offset scheme designed according to defined criteria and approved by the National Treasury GPG	No	Yes	Yes
Share of targeted entities that report GHG emissions to the government in accordance with the relevant monitoring and reporting protocols GPG	0%	75%	70%
Direct project beneficiaries, of which female	0	250	416
Intermediate Results Indicators: *(1) Strengthen the capacity of the government to enhance data management and MRV systems*			
Monitoring and reporting protocol for GHG reporting by the targeted entities prepared and validated with the main stakeholders GPG	No	Yes	Yes
Verification mechanism established for GHG emissions monitoring and reporting system GPG	No	Yes	Yes
(2) Supporting the design of the carbon offset scheme			
Definition of the rules and procedures and technical guidelines for South Africa's Carbon Offset Administration System by the Department of Mineral Resources and Energy GPG	No	Yes	Yes
Functional registry to support the carbon offset scheme established by the Department of Energy GPG	No	Yes	Yes
(3) Communication, stakeholder engagement and support to project administration			
Stakeholder engagement plan prepared and implemented according to defined criteria	No	Yes	Yes
(4) Support of the refinement of the design of the carbon tax through analytical work			

Industry benchmarks reviewed	No	Yes	Yes

Note: GPG highlights indicators that are particularly relevant from the GPG perspective.
Source: Oxford Economics based on the World Bank (2020)[6]

Overall, the outcome of the project was rated moderately satisfactory—the third best category out of six.[7] This was mainly due to efficiency being rated modest. Challenges at the project management level and external factors caused significant delays and affected the disbursement. This caused a restructuring of the project in 2019 leading to a reduction of the scope, the grant amount was reduced from US$5 million to US$3.8 million, and an extension of the closing date from June 2020 to December 2020.[8] Yet, relevance of the PDO rated high, and efficacy was rated substantial as the project directly contributed to the implementation of a carbon offset system, the modification of key MRV systems, and design of a carbon tax.

5. PROJECT IMPACT

5.1 NATIONAL BENEFITS

Implementing a carbon tax is in line with South Africa's NDC. The country's climate ambition is also reflected in the Country Partnership Strategy (CPS) FY2014-2017 (relevant at the onset of the project), the current country partnership framework FY22-FY26, as well as domestic policies such as the NCCRP. The overall goal is for the country to **transition to a low carbon economy, promoting climate change resilience, and building opportunities for sustainable growth**. The PMR contributes to that by supporting the introduction of a carbon tax incentivising emission reduction, for example through investment in low-carbon technologies and infrastructure. Moreover, an offset system is designed **providing flexibility on how to meet tax obligations** to support international competitiveness of South Africa's economy. More precisely, the project filled knowledge and analytical gaps and provided technical assistance concerning capacity needs with the government. Moreover, the tax is generating revenue that can be used by the government to promote other national development priorities.

Besides these targeted national benefits, the programme also promoted gender equality as almost 60% of the beneficiaries were female.[9] Moreover, the country's institutions were strengthened as coordination among key government departments was required—namely the National Treasury, the Department of Forestry, Fisheries, and Environment, the Department of Mineral Resources and Energy, and the South African Revenue Service. The access to technical expertise and resources and formal as well as informal exchanges with other PMR

[6] The World Bank (2020): https://documents1.worldbank.org/curated/en/875011608545392271/pdf/Disclosable-Version-of-the-ISR-South-Africa-Partnership-for-Market-Readiness-P155885-Sequence-No-08.pdf

[7] The World Bank rating scale from best to worst is Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, and Highly Unsatisfactory.

[8] The World Bank (2021, 10): https://documents1.worldbank.org/curated/en/510721623958449245/pdf/South-Africa-Partnership-for-Market-Readiness-Project.pdf

[9] The World Bank (2021, 22): https://documents1.worldbank.org/curated/en/510721623958449245/pdf/South-Africa-Partnership-for-Market-Readiness-Project.pdf

recipient countries will benefit the concerned team beyond the project as well. Lastly, the PMR helped the project team maintain momentum and motivation for the introduction of the carbon tax.

5.2 CROSS-COUNTRY BENEFITS

As the project promotes the introduction of a carbon tax as well as an offset system incentivising emission reduction, it contributes directly to climate change mitigation benefitting people globally. Linking the offset system to cross-country carbon pricing mechanisms would also contribute to an efficient mitigation of emissions internationally. Besides mitigating climate change, the project may contribute positively to preserving biodiversity and public health as coal sourced energy is disincentivised.

> "The PMR has played a really significant role in socialising the role of carbon pricing, in not just PMR supported countries, but beyond. — *Bernice van Bronkhorst (Global Director, Climate Change Group World Bank)*"

Externalities are also expected concerning the bigger PMR programme. Moreover, the success factors and lessons learned in South Africa may help other countries to improve the project in their own context. In general, the Global Director of the Climate Change Group at the World Bank Bernice van Bronkhorst states that "The PMR has played a really significant role in socialising the role of carbon pricing, in not just PMR supported countries, but beyond".[10]

6. LESSONS FOR FUTURE GPG PROVISION

6.1 SUCCESS FACTORS

A central success factor of the project was the commitment of the government of South Africa and the National Treasury in particular that began exploring the possible role of a carbon tax already in 2009. South Africa was one of the few PMR countries in which the counterpart was the **Ministry of Finance**, not a line ministry. This indicates the **government's commitment to mainstreaming climate change considerations across the government**. Furthermore, the convening power of the National Treasury could be leveraged across the government. It took a lead role in policy design as well as building support for carbon pricing both within government and among industry. Strong analytics helped to demonstrate why carbon pricing was a **cost-effective and efficient tool to achieve GHG mitigation**. Moreover, the project was fully aligned with the country's commitment to implement carbon pricing as part of its GHG mitigation strategy. As South Africa had already decided to implement a carbon tax prior to PMR funding, these resources could be used to actually implement the carbon tax and to not only use PMR funding for "readiness" activities. Moreover, the project was fully aligned with the country's commitment to implement carbon pricing as part of its GHG mitigation strategy.

Another important success factor of the PMR was its flexibility to adapt—over the life of the project—to the needs of National Treasury and other government partners.

[10] The PMR Secretariat (2021): https://www.youtube.com/watch?v=1LxpL2KOC6g

6.2 HOW TO REPLICATE THE BEST PRACTICE

The PMR in South Africa is part of the larger PMR programme replicated in several countries. So far, there are 19 implementing country participants (including South Africa) out of which 16 have completed road maps for carbon pricing readiness. Moreover, there are 13 contributing participants and nine technical partners.[11] The PMR's support for introducing carbon pricing is therefore replicable by design.

The lessons learned from the project are:

- A clear political mandate and legal basis, together with inter-ministerial coordination, are key for the implementation of a carbon pricing instrument.
- **Ministries of finance are central for climate change action.** They may leverage its convening power across line ministries to ensure coordination and efficiency. As recognised in the Coalition of Finance Ministers for Climate Action, finance ministries have a crucial role to play in accelerating the global shift to a low-carbon, climate-resilient growth model. Beyond fiscal policy design, finance ministries are responsible for managing the national budgeting process and this provides opportunities to main-stream climate considerations into national budgeting.
- Even though the implementation of a carbon tax is the textbook solution to mitigating climate change, its effectiveness crucially depends on the tax rate and coverage.
- The high turnover within the World Bank task team was a challenge. A decrease in the turnover rate may benefit the client country and improve the support needed.
- The project was the first IPF by the World Bank that was implemented by the Tax Policy Unit of the National Treasury. Thus, using World Bank systems was challenging and caused delays. Focussing more on training the Project Management Unit on World Bank processing tools would have been beneficial.
- The binary nature of the stakeholder indicators made it difficult to assess the quality of the outcomes.

[11] The World Bank Group (2022): https://openknowledge.worldbank.org/server/api/core/bitstreams/52409ffd-96f7-58d4-be7f-c8114abbd4c5/content