



SOUTH AFRICA'S VOLUNTARY NATIONAL REVIEW (VNR) REPORT 2019



EMPOWERING PEOPLE AND ENSURING INCLUSIVENESS AND EQUALITY



ACRONYMS AND ABBREVIATIONS

4IR	Fourth Industrial Revolution
ASGISA	Accelerated and Shared Growth Initiative for South Africa
AU	African Union
CNG	Compressed natural gas
CO ₂	Carbon dioxide
CSIR	Council of Scientific and Industrial Research
CSO	Civil society organization
DAFF	Department of Agriculture, Forestry and Fisheries
DBE	Department of Basic Education
DEA	Department of Environmental Affairs
DPME	Department of Planning, Monitoring and Evaluation
DST	Department of Science and Technology
DTI	Department of Trade and Industry
DVA	Domestic Violence Act
GBV	Gender-based violence
GDP	Gross domestic product
GEAR	Growth, Employment and Redistribution
GNP	New Growth Path
HIV	Human Immunodeficiency Virus
ICT	Information and Communication Technology
IPP	Independent Power Producer
IRP	Integrated Resource Plan
MOI	Means of implementation
MTSF	Medium Term Strategic Framework
NDC	Nationally determined contribution
NDP	National Development Plan
NGO	Non-governmental organization
NPC	National Planning Commission
NSSD	National Strategy for Sustainable Development and Action Plan
NWRS	National Water Resources Strategy

PEP	Post-exposure prophylaxis
PhD	Postgraduate doctoral degree
PSET	Post-School Education and Training
RDP	Reconstruction and Development Programme
REIPPPP	Renewable Energy Independent Power Producers Programme
SADC	Southern African Development Community
SAEON	South African Environmental Observation Network
SANEDI	South African National Energy Development Institute
SANBI	South African National Biodiversity Institute
SAHRC	South African Human Rights Commission
SAPS	South African Police Service
SDG	Sustainable Development Goal
SFWS	Strategic Framework on Water Services
SME	Small- and medium-sized enterprise
SOA	Sexual Offences and Related Matters Act
SoE	State-owned enterprise
Stats SA	Statistics South Africa
STEM	science, technology, engineering and mathematics
STI	sexually transmitted infections (STIs)
TB	Tuberculosis
TFM	Technology Facilitation Mechanism
TVET	Technical and Vocational Education and Training
UNDP	United Nations Development Programme
VNR	Voluntary National Review
WTO	World Trade Organization

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OPENING STATEMENT



“We can in fact change the world and make of it a better place.”

Nelson Mandela

The adoption of the 2030 Agenda for Sustainable Development in 2015 signalled the universal commitment of the world’s leaders together to confront challenges that must be successfully overcome if humankind is to survive on this planet. From our own experience as South Africans, we fully appreciate the significance of a common cause that unites diverse people to successfully defeat even the otherwise most intimidating of human challenges and adversity. For it was with similar solidarity and support from the international community that South Africa was freed from the yoke of apartheid in 1994. Apartheid was an atrocious, anti-human and anti-development political system that the world, through the United Nations declared a crime against humanity, and whose scars still linger in the socio-economic fabric of now democratic South Africa.

South Africa’s first Voluntary National Review (VNR) is testimony to the national commitment to the full and integrated implementation of the 2030 Agenda. The National Development Plan (NDP): Vision 2030 – “Our future, make it work” was adopted in 2012 as South Africa’s development loadstar and roadmap. It predates the 2015 adoption of the United Nations’ 2030 Agenda for Sustainable Development and the African Union (AU) Agenda 2063 - “The Africa We Want”. The NDP has a 74 per cent convergence with the Sustainable Development Goals (SDGs) and prioritizes job creation, the elimination of poverty, the reduction of inequality, as well as growing an inclusive economy by 2030.

Recognizing the interconnectedness of these complementary aspirations and developmental agendas, South Africa has recently established a national coordinating mechanism for national engagements and for reporting on the 2030 Agenda, the AU’ s Agenda 2063 and the Southern African Development Community’ s (SADC) Regional Indicative Strategic Development Plan (RISDP), in alignment with the NDP. This national coordinating mechanism will ensure that national resources are optimally deployed, together with international support, the provision of public sector finance, technology and capacity building, which are required for successful integrated implementation of these development agendas.

This first review will assist all South Africans in understanding the impact of policies and programmes towards realizing sustainable development and the considerable developmental challenges that remain. Although sustainable

development objectives are integrated into government planning systems and processes at national, provincial and local levels, much more needs to be done to ensure that all national stakeholders are more effectively engaged in delivering on the ideal of providing a better life for all.

Despite the significant progress that South Africa has made on its developmental journey since the advent of democracy in 1994, the country remains among the most unequal societies in the world. Achieving the SDGs is therefore in South Africa's best interest as the country pursues the vision of the Constitution of a united, non-racial, non-sexist and prosperous nation, at peace with itself and the rest of the world.

As part of our efforts in this journey, access to free education for children from poor households has been expanded, and over 9 million children attend no-fee schools. Support for early childhood education has been significantly increased, and every South African child will be provided with digital workbooks and textbooks on a tablet device over the next six years. Individuals benefiting from the social protection system have significantly increased from 3 million in 1994 to 17.5 million in 2018. South Africa has the biggest anti-retroviral treatment (ART) programme in the world with more than 4.5 million people on regular treatment.

Major strides have been made in addressing gender inequalities since 1994. Legislative frameworks have been developed aimed at ending all forms of discrimination against women and girls. Representation of women in national parliament increased from 25 per cent in 1994 to 41 per cent in 2016, and to 44 per cent following the national election of 8 May 2019.

The newly elected His Excellency President Cyril Ramaphosa recently appointed a Cabinet, of which 50 per cent are women. Initiatives to mainstream youth empowerment are underway including to reduce barriers to youth employment.

Wider access to affordable and reliable energy is a prerequisite for broad-based economic development in South Africa with due regard to the imperative for a just transition to a low carbon economy. Domestic and international implementation of the United Nations Framework Convention on Climate Change and its Paris Agreement is critical. Legislation and policies have been adopted, including the introduction of a carbon tax, to address climate change and to enhance the country's ability to adapt to the ongoing environmental changes. South Africa is among the pioneers in adopting Green Economy strategies.

Significant progress has been made in harnessing science, technology and innovation to contribute towards addressing poverty, unemployment and inequality in South Africa, guided by the Ten-Year Innovation Plan, the National Research and Development Strategy aligned to the NDP.

In implementing an innovation agenda for inclusive development, South Africa continues to harness innovative technology solutions to improve access to basic services, such as safe drinking water, sanitation and electricity.

While South Africans can rightly derive inspiration from the progress that has

been made under the democratic dispensation, the Government is aware of the challenges that persist and of new ones that emerge.

The country is still plagued with the growing disparity in wealth and the concomitant inequality that feeds into social discontent. Despite targeted policies and legislation, discrimination and gender-based violence (GBV) against women and children persist.

Regular national, provincial and local elections provide all political role-players with the opportunity to engage communities on the country's development trajectory as well as on the implementation of the NDP and SDGs.

In this regard, as this maiden VNR has highlighted deepening progress and making headway against our challenges requires more enhanced stakeholder engagements and partnerships and where necessary, social compacts. As South Africa looks ahead to 2030, it seeks to build on the solid progress achieved and on the strong policy, legislative and planning foundation, consolidating and expanding the many areas where public and private resources have been invested with positive results.

South Africa looks forward to a successful journey to 2030!

Tshediso Matona

Secretary of National Planning

The Presidency, South Africa

SUMMARY

This Voluntary National Review (VNR) reports on South Africa's progress in achieving the 2030 Agenda for Sustainable Development, the remaining challenges, and the policies required going forward. Preparation of the VNR was led by Statistics South Africa (Stats SA) and the Department of Planning, Monitoring and Evaluation (DPME) within the Presidency. An institutional mechanism was established and extensive consultations undertaken to integrate views across the Government, provincial and local governments, the private sector, civil society, academia and the United Nations under the technical leadership of UNDP.

The multi-stakeholders' approach adopted in the preparation of the VNR is a testimony to the national commitment to the inclusive and integrated implementation of the Sustainable Development Goals in South Africa. This approach has laid the foundation for building strong alliances and collaboration for the SDGs implementation between the governments and their social partners. In addition, the adoption of this report at the Cabinet level, chaired by the President, is a sign of high-level political commitment to the implementation of the 2030 Agenda for Sustainable Development.

Promoting democracy and inclusive growth have been the overarching goals of successive governments since the end of apartheid. Governments have struggled to reverse the dramatically unequal distribution of income during the apartheid era through land reform, a progressive tax system and support for black economic empowerment. An extensive social assistance system has tackled poverty reduction; South Africa spends more on social safety nets per capita than all but 13 countries in the world. Free education and healthcare, together with subsidized water and electricity, have increased access to basic services. In this regard, the 2019 VNR theme, ***Empowering people and ensuring inclusiveness and equality***, is very relevant to the country's developmental priorities and aspirations.

Nevertheless, the historical inequities of the apartheid system, manifesting in the form of economic, social and political exclusions, continue to impede progress. These are structural issues, unique to South Africa, tend to perpetrate intergenerational poverty and income inequality. This bequeath a challenging context to development management to subsequent governments.

Because of imbalance in wealth, opportunity and power, poverty and unemployment rates are much higher among black Africans than among Asians or whites. Children from prosperous families attain high-quality education by paying fees, while many children in rural areas struggle with

unqualified teachers, inadequate materials and schools constructed of mud. The spatial pattern of segregated communities during apartheid still limits employment opportunities for the poor. These problems are exacerbated by slow growth, which is constrained by skills shortages and government policies that limit firms' ability to innovate and grow.

The National Development Plan (NDP), the Government's basic strategic document for economic development, which prioritises the elimination of poverty, reduction of income inequality and growing an inclusive economy by 2030, is closely aligned with the targets articulated in the SDGs. Government expenditures reflect the high priority accorded poverty, inequality and governance (SDGs 1, 10 and 16), which account for 42 per cent of all spending on SDGs. Spending on these Goals has increased markedly in real terms over the past three years.

There has been significant progress in the country's development journey since 1994. The South African economy, remains the most diversified and advanced on the continent with its Gross Domestic Products tripled between 1996 and 2011 to \$400 billion before it declined to \$385 billion in 2019 while its foreign exchange reserves rose from about \$3 billion to about \$50 billion during the same period. Giant strides have been made in such areas as provision of clean water, electricity, sanitation, education and health services. For example, more than 9.0 million children are enjoying no-fee schools, 17.5 million people benefited from social protection system in 2018 (up from 3.0 million in 1994), and 4.5 million people are benefiting from ant-retroviral treatment – the largest globally.

An inventory of progress on the SDGs reveals the remarkable advances made in development over the past 25 years, as well as the considerable challenges that remain:

- Goal 1: Poverty has declined sharply but remains high among black Africans, female-headed households, the poorly educated and the rural population.
- Goal 2: Policies to support incomes and increase agricultural production have reduced the share of the population that is vulnerable to hunger from 24.2 per cent in 2002 to 10.4 per cent in 2017.
- Goal 3: Improvements in health services have reduced maternal and child mortality rates and the incidence of some communicable diseases.
- Goal 4: Access to education and literacy has increased, and the share of children benefiting from early childhood education is high, but completion rates in the upper secondary grades and enrolment rates in tertiary education are low. Inadequate skill levels severely constrain growth.
- Goal 5: The Government has made considerable efforts to enforce legal prohibitions of discrimination against women. Representation of women in

national parliament has increased considerably from 25 per cent in 1994 to 46 per cent in 2019 with representation in cabinet standing at 50 percent. This remarkable progress notwithstanding, women continue to have unequal access to incomes.

- Goal 6: Access to safe water and sanitation services has increased, but poor management practices threaten the sustainability of water resources.
- Goal 7: Access to electrical power has increased, although affordability remains an issue and informal settlements are difficult to connect. The use of renewables has risen sharply, but the electricity grid remains heavily dependent on coal.
- Goal 8: Low skill levels, limits on competition, inadequate infrastructure and inconsistent government policies constrain productivity and growth. Improvements in the business climate are essential to boost growth and reduce the high levels of unemployment, particularly among women and youth.
- Goal 9: Outdated rail facilities, overburdened roads and poorly integrated mass transit have eroded the efficiency of transport services. Production and trade is dominated by primary commodities, while the share of manufacturing in output has fallen over the past 25 years. Resources devoted to innovation are limited. Mobile coverage is widespread, but affordability problems limit use.
- Goal 10: South Africa has one of the highest levels of inequality in the world.
- Goal 11: Fragmentation threatens the sustainability of cities and impairs inclusion. Mass transit modes are poorly integrated.
- Goal 12: Increased recycling and substituting for scarce materials are helping to improve the sustainability of consumption.
- Goal 13: Major efforts are underway to limit climate emissions and to develop strategies to mitigate and adapt to the impact of climate change.
- Goal 14: The legal and policy framework supports efforts to maintain the sustainability of marine resources.
- Goal 15: Forest coverage appears to be declining, but greater information is necessary to monitor changes in land resources and biodiversity. Redressing legacies of inequitable ownership and land distribution, spatial mismatches in land management and unsustainable land practices remain major challenges.
- Goal 16: Some progress has been made in reducing violent crime and in restoring faith in law enforcement. South Africa has a world-class legal aid system that is used as a model by many countries. Some Government departments view access to information as a threat, rather than as a right.
- Goal 17: Effective implementation will require stronger alliances between national stakeholders (including the governments (national, provinces and local governments), the private sector, civil society and academia. as well

as stronger global partnerships through South-South and North-South collaborations on issues relating to equality, greater resources, improved access to technology and compliance by all countries with trade agreements.

Going forward, the Government should consider selected sectoral initiatives for:

- increasing support for local food value chains and scale-up nutrition interventions;
- strengthen procurement and human resources management in the health sector;
- increasing the use of African languages in lower school grades;
- emphasizing science, technology, engineering and mathematics (STEM) subjects, trades and entrepreneurial skills in adult training;
- correcting legal provisions that fail to provide adequate support for women;
- reducing water losses, strengthening demand management, improving connections in informal settlements, ensuring the financial sustainability of water companies and financing infrastructure improvements;
- increasing access to electricity, particularly in informal settlements, and focus on renewables and the efficiency of energy use;
- expanding support for small businesses and assistance to address retrenchment, and training workers for job transitions;
- improving connections between townships and economic centres, upgrade informal settlements, and building low-income housing in leafy suburbs and urban centres;
- strengthening innovation outside the realm of formal institutions;
- increasing integration of urban transit systems, strengthening and optimizing freight corridors, improving options for long-distance passenger transport, and improving rural access and mobility;
- ensuring that land conservation is aligned with the needs of local communities;
- supporting alternative approaches to dispute settlements through civil society organizations (CSOs), community-based organizations and paralegals;
- addressing the complete breakdown in confidence between the police and the community, and removing barriers to the release of information.

Preparation of the report confronted several important challenges. Greater resources should be devoted to generating the data required to monitor

progress in the SDGs. Considerable success was achieved in integrating the views of a wide range of stakeholders, but new platforms and fora are necessary to support greater involvement of the private sector in achieving the goals. A stronger communications strategy would help ensure that the strong government support for the SDGs is translated into more widespread public support; South Africa played a leading in the formulation and adoption of this strategy.

Drawing on lessons from past experiences and emerging opportunities, South Africa has what it takes to accelerate progress on the SDGs. Developing stronger alliances, collaboration and partnerships between within and between stakeholders, including governments, private sector actors, civil society, academia and international development partners, is a game changer. Effective implementation of measures to achieve the SDGs requires stronger global partnerships to garner increased resources and improved access to technology and good practices. In this regard, global partnerships should be based on equal relationships, mutual accountability and adherence to agreed global norms, particularly trade agreements. We are committed to use the new institutional mechanism for the SDGs coordination to improve our ability to ensure that policy priorities are reflected in budgetary allocations. This also requires building capacity to manage synergies and trade-offs among the SDGs. remains a critical priority. We are committed to adhering to the principles of coordination, coherence and impact – anchored on integrated implementation, monitoring and evaluation, to accelerate the achievement of the SDGs.

PART I: CONTEXT AND CHALLENGES TO DEVELOPMENT

1. INTRODUCTION

Main messages

This report analyses progress on the Sustainable Development Goals (SDGs) and recommends policies to further development.

The report uses the National Development Plan (NDP) and Vision 2030, which outline the Government's strategy to achieve inclusive and sustainable growth as the starting point.

Since 1994, good progress has been made in improving the lives of South Africans through the establishment of a solid foundation for democratic governance and increases in access to education, health services, water, electricity, housing and social protection for those who were excluded by the apartheid government. Nevertheless, the country continues to struggle with the racial divisions and inequities generated by apartheid. Ensuring universal access to critical services, particularly education, is essential to improve equity and to empower people to achieve their dreams for economic advancement.

South Africa's policy development and planning systems have undergone various changes since 1994. During the early stages, a democratic approach was adopted where sectors and departments were given the space to develop their own plans that were informed by their particular mandates. Central guidance, where it existed, occurred through the State of the Nation Addresses (SONA) and the Programme of Action (POA) managed at the centre of government.

The Government also has provided guidance through the introduction of broad development strategies (See Box 1). In 2012, the NDP: Vision 2030 became the country's blueprint for economic growth and development. The NDP provides a thorough analysis of the underlying and structural factors that South Africa must address in order to reduce unemployment, eliminate poverty and reduce inequality in a manner that is just, inclusive, and environmentally and socio-economically sustainable.

Box 1. Post 1994 Governments have inaugurated a series of strategies to further development

The Reconstruction and Development Programme (RDP) sought to strengthen democracy and establish a more equal society through reconstruction and development. The RDP identified five major policy objectives which are outlined in the White Paper on the Reconstruction and Development Programme (1995): create a strong, dynamic and balanced economy; develop human resources capacity of all South Africans; ensure that no one suffers racial or gender discrimination in hiring, promotion or training situations; develop a prosperous, balanced regional economy in Southern Africa; and democratize the state and society.

The RDP was successful in some areas, such as the establishment of an extensive welfare system. The system catered to the elderly, people with disabilities, children in need, foster parents and many others who are too poor to meet their basic social requirements. Free healthcare programmes were implemented for pregnant women and small children, and free meals were provided to between 3.5 to 5 million school children.

In 1996, the Government introduced a macroeconomic policy framework, the **Growth, Employment and Redistribution (GEAR)** strategy, to stimulate faster economic growth. The policy encompassed most of the social objectives of the RDP, in addition to fiscal deficit reduction, inflation control, exchange rate stability, reducing barriers to trade and liberalizing capital flows. GEAR brought greater macroeconomic stability, better reporting and increased accountability. The management of public finances improved significantly and the negative growth rate of the early 1990s was reversed. Tighter monetary policy and government restructuring helped to reduce government expenditures.

In 2005, GEAR was replaced by the **Accelerated and Shared Growth Initiative for South Africa (ASGISA)**. ASGISA aimed to reduce poverty by 2010 and halve the unemployment rate by 2012. It also recognized that the addressing these issues needed to be at the forefront of economic policy decision-making.

In 2009, during the State of the Nation Address, President Zuma announced the **New Growth Path (NGP)** to replace ASGISA. The NGP promised to create 5 million jobs and to reduce the unemployment rate to 14 per cent by 2020, as well as to lower poverty and inequality.

The major purpose of this report is to analyse development progress in the areas covered by the Sustainable Development Goals (SDGs), to show how government policy and historical circumstances are shaping this progress, and to recommend changes in policies that could accelerate development going forward. This analysis is heavily rooted in discussions of the NDP, which is broadly consistent with the SDGs (see below). This VNR does not provide an analysis of progress as defined by the specific targets used in the SDGs; this issue is addressed in the national SDG report, to be released this year. Nor does it attempt to forecast whether South Africa is likely to meet the targets defined in the SDGs.

This is South Africa's first Voluntary National Review, one of 47 global reviews, of which 17 are from Africa. The 2019 theme, "*empowering people and ensuring inclusiveness and equality*", is appropriate for South Africa, given the theme's alignment with the main thrust of the country's vision 2030 and the National Development Plan (NDP). To achieve the overarching objective of the theme, the following goals have been prioritized for this year's High-Level Political Forum (HLPF): Goal 4 (Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all); Goal 8 (Promote sustained, inclusive economic growth, full and productive employment and decent work for all); Goal 10 (Reduce inequality within and among countries); Goal 13 (Take urgent action to combat climate change and its impacts); Goal 16 (Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels); and Goal 17 (Strengthen the means of implementation and revitalize the global partnership for sustainable development).

However, to take the advantage of the VNR, this report provides an overview of all 17 goals, focusing on progress, opportunities, challenges and lessons, including the policy and operational environments for implementing steps to achieve each goal. The participation in the 2019 VNR facilitated partnerships across government, the private sector, CSOs and development partners on strategic priorities, challenges, lessons and next steps. The alliance among stakeholders creates the momentum to come together to solve complex development problems and to determine how each stakeholder can contribute to addressing these challenges.

2. REVIEWING THE 2030 AGENDA TOGETHER (METHODOLOGY AND PROCESS FOR PREPARATION OF THE REVIEW)

Main messages

Partners (DPME and Stats SA) commit to do what is necessary to achieve targets set in the NDP & SDGs and government commits to lead on the country's Voluntary National Report (VNR).

Extensive consultations were carried out within the Government and with civil society and the private sector.

The review process was a collective effort involving consultations with all relevant sectors and stakeholders on the drafting of the report. Sector Working Groups were formed and led by Stats SA.

The basis of this approach was the importance of inclusivity and adherence to the universal principle of 'leaving no one behind' when implementing the Agenda 2030 for Sustainable Development. It is nonetheless recognized that there will always be room for improvement in broadening outreach efforts.

The VNR report was prepared by collecting information from primary sources and reviewing secondary information, such as official documents and data, led by Stats SA and the Department of Planning, Monitoring and Evaluation (DPME) within the Presidency. The primary sources included extensive stakeholder engagement and inter-governmental consultation. Since the nature of SDGs calls for collective effort, the Government encouraged participation by major stakeholders, such as non-governmental organizations (NGOs), private and business sector associations, academia, chapter 9 institutions such as South African Human Rights Commission (SAHRC), and civil society organizations (CSOs). Some of the secondary sources included desk reviews of ministry reports, budget votes, sectoral policies, the National Development Plan (NDP) and relevant legislation documents.

Building on its experience during the Millennium Development Goals (MDGs) era, Stats SA released South Africa's SDG Indicator Baseline Report in 2017 (Stats SA, 2017d). The report covers Tier I and Tier II indicators on which reliable data were available. At the time of publication, 156 of 230 indicators could be measured according to agreed standards and methods; South Africa was able to report on 63 per cent of these indicators. With the SDG Indicator Baseline Report as a basis, Stats SA initiated a process to produce a national SDG Report with extensive analysis of South Africa's progress. This SDG report, which will be released in 2019, forms the basis for discussion of South Africa's progress and challenges in this VNR.

DPME is responsible for the overall coordination of the VNR, which includes ensuring adequate quality control and stakeholder consultations, and consisted of two phases:

✓ ***Phase 1: Data collection, analysis and validation led by Statistics South Africa***

A process of collecting, analysing and validating national data began in November 2018. Experts were contracted to draft 17 SDG Reports, and open invitations were sent to civil society, multilateral organizations and academia to provide data and to review the results between January and March 2019. Various platforms were created to validate each of the 17 SDG Goal Reports. In order to ensure the broadest possible societal engagement, Stats SA covered all travel and accommodation costs.

The Goal Reports formed the basis for four SDG Thematic Reports and an SDG Country Report. This process took place concurrently with Phase 2 and fed directly into drafting of the VNR. These reports highlight inter-linkages among the SDGs and are grouped into social, economic, environmental, and peace and justice SDGs.

✓ ***Phase 2: Expanded stakeholder engagement and VNR drafting***

During Phase 2, DPME coordinated the process aimed at incorporating the data collected, analysed and validated in Phase 1 into the VNR.

Open invitations were extended to stakeholders to review the findings. A zero draft VNR was used as a basis for these consultations, and input was used to draft an updated VNR. Table 1 provides a schematic overview of key milestones in the drafting of the VNR.

Table 1. Key milestones in drafting the Voluntary National Review

Date	Consultations	Stakeholders	Key emerging issues/output
March – May 2019	Broad-based consultation on the SDGs	Lead – Statistics South Africa Others – All government departments, civil society organizations (CSOs), United Nations Agencies	SDGs Country Report
12 June 2019	CSO Consultation on the SDGs and the VNR	Lead – Africa Monitor Others – Gender Commission, South Africa Human Rights Commission, National Planning Commission/DPME, United Nations agencies.	The CSO report highlighting good performance on policies and ratifying conventions, but improvements are needed on public awareness, especially at the province level, and disaggregated data and evidence to measure progress. Also, better performance measures are needed to reduce inequality and unemployment, improve the quality of education in marginalised areas and address climate change.
28 June 2019	Private sector consultation on the SDGs and the VNR	Lead: Global Compact Network South Africa Others: registered members, National Planning Commission/DPME	The private sector report showcasing SDGs integration in plans and implementation on education, financial inclusion, responsible business and ecosystem preservation.

3. POLICY AND ENABLING ENVIRONMENT (LOCALIZING THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT)

South Africa is deeply committed to the goals set out in the SDGs, the African Union's Agenda 2063 – “the Africa We Want” – to achieve a prosperous Africa based on inclusive growth and sustainable development, and the Southern African Development Community's Regional Indicative Strategic Development Programme (SADC RISDP). South Africa played a critical role during the development of these global, continental and regional agendas. As a rotating Chair of G77+China, South Africa led the group during negotiations of the SDGs. The AU adopted Agenda 2063 under South Africa's chairpersonship in 2013. South Africa played a key role in the development of indicators for the SDGs and Agenda 2063, through Statistics SA. Thus, the legal framework and government policies have long reflected many of the positions underlying the SDGs. South Africa's NDP, AU's Agenda 2063 and the United Nations' SDGs are mutually reinforcing agendas. Agenda 2063 also focuses on the AU's Pan-African drive, African cultural identity, common heritage, values and ethics, the African Renaissance, and security. Above all, the Government approaches the Vision 2030 Agenda with a sense of urgency – the establishment of a just and inclusive society where all South Africans are empowered to improve their position in life through their own efforts has been delayed too long already.

3.1 Institutional mechanisms and creating ownership of the SDGs

Main messages

The newly established institutional mechanism for coordination will ensure effective consultations with all stakeholders and better implementation of the reform programmes.

Private businesses are integrating the SDGs into corporate strategy and day-to-day operations to become more socially responsible and to investigate new approaches to growing their business.

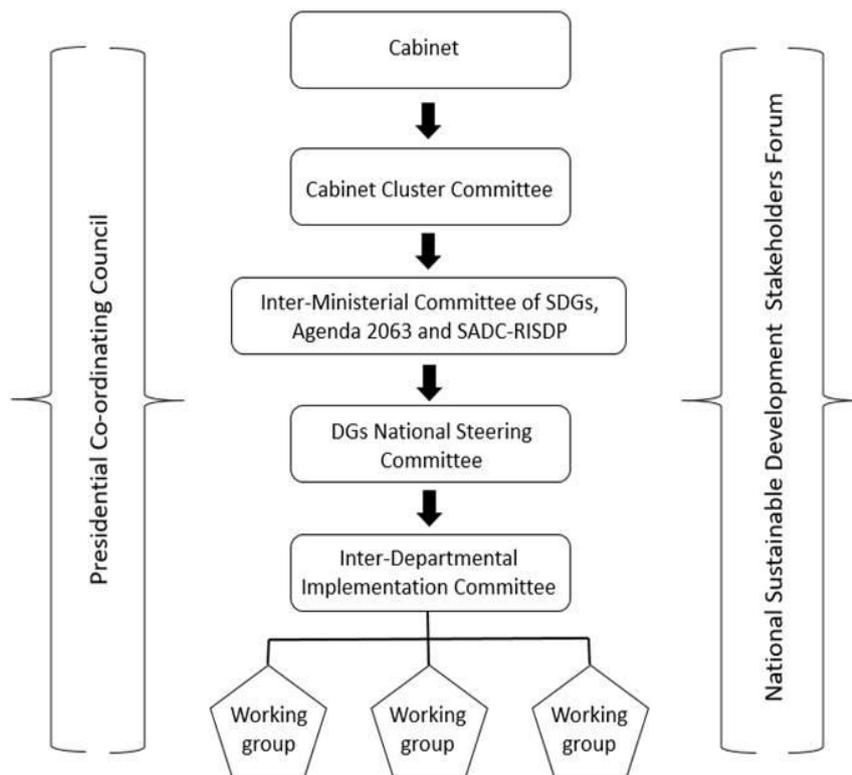
The Government has created new institutional mechanisms for internal coordination to ensure that all stakeholders are involved in monitoring the achievement of the SDGs and evaluating related policies, and to improve coherence between global, regional, national and sub-national development plans.

The agency responsible for oversight of strategic planning, coordination of policy design and implementation, performance monitoring and accountability monitors the implementation of the NDP at the national level and leads the quarterly reporting to Cabinet on the implementation of the outcomes of the MTSF, an important implementation vehicle for the NDP. Key aspects of this process are to determine data needs, ensure consistency, and evaluate the quality of reports on the MTSF indicators and targets.

A national coordination mechanism has been approved by Cabinet to strengthen implementation of development policies and to review progress on the SDGs and other agendas, such as the African Union's Agenda 2063 and the Southern African Development Community Regional Indicative Strategic Development Programme (SADC RISDP). To the extent possible, the coordination mechanism relies on current government structures and processes in order to avoid duplication. However, the Inter-Ministerial Committee on Sustainable Development Agendas and the National Development Stakeholders Forum are new (see Figure 1). The Director-Generals' National Steering Committee is composed of Directors-General from the Departments of Planning, Monitoring and Evaluation (meeting chair), International Relations and Cooperation, Environmental Affairs, Women, Basic Education, Higher Education, Cooperative Governance and Traditional Affairs, Finance, Science and Technology, Public Service and Administration, and Government Communications.

This new structure is designed to obtain high-level guidance from the top political leaders, to strengthen administration through committees that bring together political authorities and civil service managers, and to integrate the views of government and social partners. (The structure of the new mechanism is shown in Figure 1.)

Figure 1. The national coordination mechanism (led by DPME)



Note: SADC-RISDP=Southern African Development-Community-Regional Indicative Strategic Development Plan.

Five groups of key stakeholders are included in the national coordination mechanism: (i) national government; (ii) provincial and local governments, since the achievement of development targets is anchored in the programmes of sub-national governments; (iii) Parliament, to ensure legislative oversight; (iv) civil society, the private sector and academia; and (v) the United Nations, the AU, SADC and development partners, to generate resources to support the programme and obtain information on lessons learned from international experience.

One hopeful sign of the potential success of efforts to involve stakeholders is the initiative of private firms to integrate the SDGs into corporate strategy and day-to-day operations. Private sector hope that making progress in the SDGs will be consistent with finding opportunities that can grow businesses, for example through reducing carbon emissions, connecting with communities to generate jobs, and improving infrastructure. Progress in achieving the SDGs also could increase confidence among investors and civil society, thus contributing to growth. The Government can assist these efforts by supporting increased participation of small- and medium-sized enterprises (SMEs) in the policy dialogue, for example, by enabling associations of SMEs, investigating sponsorship or funding for participation,

or exploring the role of champions in driving participation. It can also assist by using a principles-based approach to build a common language, provide an ethical framework for businesses, and create and share tools that enable businesses to take a principles-based approach.

The Global Compact Network South Africa conducted extensive dialogues with private firms on their integration of the SDGs into business practices. While large organizations have made significant progress, they noted a lack of meaningful platforms and fora for effective collaboration within their sectors, across the private sector, with communities, and with the public sector.

Civil society organizations (CSOs) also have a platform, led by Africa Monitor, where dialogue and information sharing are undertaken on the implementation of the SDGs.

The oversight role of the Parliament in the coordination process is critical. This includes ensuring national budgetary allocations reflects the national development and SDGs priorities while also ensuring set targets are met.

This is just the beginning of the process to ensure that the goals of national, regional and international agendas are deeply integrated into the policies and programmes of Government and all stakeholders. A strategy and roadmap will be developed for the overall implementation of the reform program, and an integrated monitoring and evaluation system will be established to track progress on the SDGs and other agendas.

Stakeholders will be encouraged to align their objectives and missions with those of the SDGs, the NDP and AU's Agenda 2063. The Government will encourage stakeholders to refer to the three agendas in their documents describing strategies, plans and projects, and to enter into partnerships to further these objectives in different areas. The efforts of different stakeholders will be mapped to identify synergies and promote alignment among policies and programmes. Platforms will be created for sharing and networking. A virtual cloud as a space for regular communication on joint efforts will help to strengthen collaboration. Tools and mechanisms will be identified to enhance coordination between different groups and associations.

3.2 Incorporating the SDGs into the national framework for economic development

Main messages

The National Development Plan, the fundamental strategic document describing the Government's development programme, is closely aligned with the SDGs.

Some of the SDG targets that are not explicitly addressed in the NDP are included in sectoral programmes, so that the Government's programme covers almost all targets.

The NDP is the Government's major strategic document that analyses the underlying and structural factors that South Africa needs to address to spur development, with the key goals of reducing unemployment, eliminating poverty and reducing inequality. The NDP essentially provides a roadmap for the Government's economic development policies and has received widespread support across the political spectrum, as well as the public and private sectors.

There is substantial convergence between South Africa's NDP and the SDGs. While the NDP was not intended to cover all the focus areas of the SDGs, an analysis by DPME in partnership with UNDP indicates that 74 per cent of the SDGs applicable to South Africa are integrated in the NDP.¹ Out of the remaining SDG targets, 32 are addressed comprehensively in sectoral-level programmes or other programmes running in parallel to the NDP. Thus, only 12 of the SDG targets (7 per cent) are not addressed by major government initiatives.

There are considerable similarities between the broad objectives stated in the NDP and those of the SDGs, for example with respect to the overarching imperatives of: raising employment through faster economic growth; improving the quality of education, skills development and innovation; building the capability of the state to play a developmental, transformative role; and leaving no one behind. These objectives are all interlinked. For example, improvements in education will lead to higher employment and earnings, as well as establish a pool of skilled workers that the Government can draw upon to improve services.

In some areas, NDP policies are particularly close to the SDGs:

¹ Mapping the National Development Plan – Assessing the convergence between the NDP, the SDGs and AU Agenda 2063, July 2018.

- ✓ Economy and Employment (chapter 3) and Social Protection (chapter 11) have direct linkages to all the targets in Goal 1, except the official development assistance (ODA) goal (1.a).
- ✓ The economic infrastructure focus of the NDP has significant convergence with targets in SDGs 1, 5, 6, 7, 9 and 11.
- ✓ The objectives of NDP Chapter 5 on environmental sustainability and resilience are closely aligned with SDGs 1, 2, 6, 7, 11, 12, 13, 14 and 15.
- ✓ The NDP's emphasis on South Africa's leadership responsibility and the importance of inter-regional trade is consistent with four SDG targets focusing on South-South and regional cooperation, as well as adherence to global trade agreements (such as the Doha Round).
- ✓ The NDP chapter on transforming human settlements covers SDG targets 1.4, 11.1, 11.2, 11.3, 11.7 and 11.b.
- ✓ The actions and programmes outlined in the NDP chapter on improving education, training and innovation strongly converge with SDGs 4, 5, 8 and 9.
- ✓ Actions under the NDP objective of healthcare for all are closely aligned with targets 1.1, 1.2, 1.4, as well as all the SDG 3 targets on good health and well-being.
- ✓ The NDP chapter on social protection strongly overlaps with SDGs 1, 2, 4 and 10.
- ✓ Chapter 12 of the NDP focuses on issues related to security, access to justice and the rule of law, addressing similar issues as SDG targets 3.5, 3.6, and 3.7, and all targets in SDG 16.
- ✓ The NDP objectives in fighting corruption supports policies that address SDG 16.
- ✓ Finally, the NDP states that "the country's vision is a society where opportunity is not determined by race or birth right; where citizens accept that they have both rights and responsibilities. Most critically, South Africa is united, prosperous, non-racial, non-sexist and democratic country." These principles are also reflected in SDG targets 10.2, 10.3, and 16.

The fact that the NDP and SDGs are 74 per cent aligned is a good opportunity for South Africa to ensure national policy decisions are consistent with the SDGs.

3.3 Integration of the three dimensions

Main messages

The government has established a new institutional mechanism to provide political leadership, inter-ministerial coordination, and stakeholder involvement in managing the reform programme, and to support the integration of economic, social and environmental goals.

The involvement of local and provincial governments in policy coordination will encourage them to formulate their own integrated development plans to achieve the SDGs.

Consistency across economic, social and environmental policies is critical for inclusive and sustainable growth. Ensuring that development planning is consistent with the SDGs helps to focus attention on achieving coherence across development policies. All levels of the institutional mechanisms described above should function in a way to ensure that the trade-offs and synergies across economic, social and environmental policies are taken into account in policymaking. As shown Figure 1, each committee brings together representatives from across the government ministries and departments that are involved in development policy. At the same time, the inclusion of provincial and local governments, Parliament and social partners will broaden the representation of views and ensure that all groups can have a say in policy discussions. This structure will help ensure that policies to boost economic performance will be considered in the context of whether vulnerable and disadvantaged groups benefit, and whether policies are consistent with the sustainable use of natural resources.

Involvement in this new development planning process will encourage local governments to adopt Integrated Development Plans (IDPs) and provincial governments to adopt Provincial Growth Development Strategies (PGDS). This will raise awareness of development challenges, facilitate the joint consideration of economic, social and environmental issues at these levels of government, and help empower communities to play a more active role in policymaking. All of these effects will tend to improve the integration of development policies, but will require capacity building and knowledge sharing across sub-national governments and with the central government. Giving priority to capacity building at the local level will strengthen services that are closest to the people. These goals are closely linked to the theme for the High-Level Political Forum (HLPF) 2019 of “Empowering people and ensuring inclusiveness and equality”. There are some good case studies indicating that there are efforts to integrate the SDGs into development planning. For instance, the experience of Ethekewini municipality illustrates

efforts to integrate the SDGs into development planning at the local level (Box 2).

Box 2. The SDGs and local development planning – Ethekewini Municipality

The SDGs are deeply integrated into city development planning.

- ✓ The internal communications related to sustainable development and municipal strategies reflect alignment to the relevant SDG. For example, any publication or communication on gender equality will refer to the relevant SDG, as well as the associate targets and indicators.
- ✓ All master classes held in the municipality have been revised to emphasize direct linkages to the SDGs. For example, the master class on strategic planning and performance monitoring reflects SDGs 11 and 16.
- ✓ SDG awareness and advocacy seminars have been held with senior and middle management so as to inform them on the global agenda and the need for alignment of their operational programmes to the SDGs.

The active participation of Ethekewini Municipality in the United Cities and Local Government (UCLG) organization has assisted the Municipality in developing toolkits for SDG awareness and localization. Senior staff within the municipality have been involved in the packaging and development of training modules that can be used to build capacity on SDGs at the local government level. Ethekewini Municipality, through the Strategy Office, has provided content and assisted the UCLG and UN Habitat in the development of training modules on SDG awareness, SDG strategic planning and implementation, and SDG monitoring and reporting. Currently, 12 staff members have been trained on the methodology of SDG localization using the above modules.

3.4 Leaving no one behind

Main messages

Government efforts, including an expansive social protection mechanism, have focused on improving the lot of underprivileged South Africans.

Inequality remains high, however, and some groups, especially youth and rural dwellers, are particularly disadvantaged.

South Africa's development programme focuses on identifying and serving the most disadvantaged groups, as can be seen across several sectors. For example, considerable resources have been devoted to providing free education and free primary healthcare in order to reach the poor. The success of these efforts can be seen in the achievement of near-universal literacy, increased access to primary education, and declining maternal and

child mortality rates. Several legal provisions focus on prohibiting discrimination against women, and efforts have been made to step up reporting and punishment of gender-based violence (GBV). Public works programmes are devoted to hiring the unemployed, and training programmes focus on youth, who suffer from disproportionately high unemployment rates. Extensive social assistance programmes support incomes of the poor; social grants reached 17.5 million South Africans, particularly, children, the poor and the elderly. South Africa spends 3.3 per cent of GDP on the social safety net, compared to an average of 1.5 per cent in upper middle-income countries and 1.9 per cent in high-income countries (World Bank, 2018). South Africa spends more on social safety nets per capita than all but 13 countries in the world.

Despite these efforts, many poor and excluded South Africans have been left behind. Inequality is extremely high, poverty reduction is particularly slow among some groups, informal settlements suffer from lack of basic services, and richer South Africans have much greater access to quality education than do the poor. In short, the public sector has only partially compensated for the legacy of inequities from apartheid and market pressures that may exacerbate poverty.

3.5 Structural issues

Main messages

Poverty, inequality and unemployment are high, and racial imbalances remain prominent despite the end of apartheid 25 years ago.

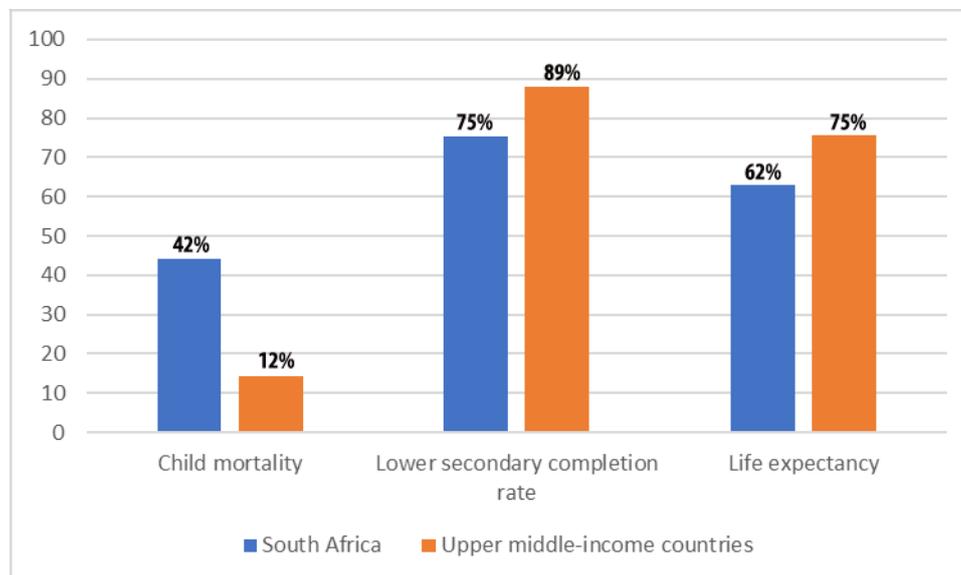
Low skill levels, limits on competition, inadequate infrastructure and inconsistent government policies constrain productivity and growth. Production and exports are dominated by primary commodities.

Dramatic reforms to improve the transparency and consistency of policy, break up cartels, improve the quality of education, and make growth more inclusive are essential to achieve the SDGs.

South Africa faces high levels of poverty and inequality, extremely high unemployment rates, severe racial imbalances despite the 25 years since the end of apartheid, and a structure of production and trade that remains dominated by primary commodities. Government transfers do play an important role in reducing poverty and inequality, but clearly more rapid and inclusive growth will be necessary to make substantial progress in addressing these problems.

Although welfare has improved over the past 25 years (described in detail in subsequent chapters), South Africa remains far behind other upper middle-income countries, reflecting the high levels of inequality. For example, 44 children die before the age of five for each 1,000 live births (Figure 2). The average for upper middle-income countries is 14.4. Similarly, life expectancy at birth is 63 years in South Africa, but 75.5 years on average in upper middle-income countries. And 75.4 per cent of the appropriate age group completed lower secondary education in South Africa, compared to almost 88 per cent in upper middle-income countries.

Figure 2. Welfare indicators in South Africa are much worse than the average for upper middle-income countries



Notes: Child mortality refers the number of deaths before the age of 5 per 1,000 live births in 2016. The lower secondary completion rate is the share of the appropriate age group that has completed secondary education for 2016. Life expectancy is for 2017.

Source: Stats SA, 2016b and World Bank World Development Indicators database, accessed 21 June 2019.

Inadequate skill levels constrain growth. Anecdotal evidence indicates that the wages of highly-skilled workers have risen dramatically compared to those of low-skilled workers, indicating that the demand for skilled labour has chronically exceeded supply. Part of this rise can be explained by skill-biased technical change, which is a global phenomenon. In South Africa, growth in services exports and high-quality manufactures, both of which frequently require substantial inputs of highly-skilled labour, may have also played a role. The post-apartheid expansion of public services and concomitant skilled labour requirements to design and manage these services within the public sector may have also contributed.

Defects in the higher education system limit increases in the supply of skills. While there are some good universities, the system as a whole is not producing sufficient graduates in key skill categories; this was undoubtedly a constraint on growth in the first decade of the 21st century. Even more serious is the relatively small number of suitable graduates emerging from vocational and technical training colleges.

After 1994, many had hoped that structural economic changes would result in an era of strong economic growth that would boost job creation and improve the incomes of disadvantaged groups. However, the economic shackles of apartheid have not been loosened, and the economy has not been transformed. South Africa's lagging productivity growth and declining export performance have been associated with a lack of competitive pressure in both input and downstream markets. Many of South Africa's markets, including food, agricultural inputs, steel and energy, were historically tightly regulated and protected oligopolies or monopolies. During the 1990s, the Government undertook a range of reforms to open these markets to trade and competition. But many markets remain oligopolistic, with a high degree of vertical integration and, in some cases, strategic behaviour that reflects previous regulatory conditions (World Bank, 2016a).

Bold structural reforms, supported by social partners, are needed to unlock the economy. These include: reducing barriers to entry to promote competition; limiting the size and influence of state-owned enterprises (SoEs); increasing labour market flexibility; establishing a more supportive environment for SMEs; reducing the cost of energy; and improving the quality of the education system.

Various government policies have weakened business confidence. Delays to the mineral resource law and plans for land reform and intellectual property rights have not been conducive to economic growth. Furthermore, policy uncertainty and lack of coherence has reduced private sector investment. Definition of the Government's goals on property rights issues, including land, agricultural reform and intellectual property, could strengthen confidence and improve efficiency. The adoption of simpler and more consistent rules on many government requirements, ranging from Broad-Based Black Economic Empowerment to sector codes and import requirements, would make South Africa a much more attractive place to do business. All in all, the Government will have to rebuild trust to foster the conditions required for structural change and reform (Cassim, 2015).

Making growth more inclusive will require further interventions. Growth will have to become more employment-intensive by improving skill matching, addressing the particular spatial pattern of work and residence in South

Africa,² being more supportive of informal employment, and providing temporary safety nets through public works programmes. Finally, income redistribution through state grants and improving access to services of poor and vulnerable groups is critical. South Africa has achieved significant success in some areas, but education remains a channel through which inequalities continue to be perpetuated and strengthened (Bhorat et al., 2014).

Democratic elections in 1994 initiated a process of re-engagement with the global community, which is still ongoing, pushing up demand for imports and opening opportunities for export. Openness poses challenges, but it also provides links to global demand, technical advances, high-quality inputs to production, and competition that can reduce mark-ups and spur firm productivity and growth.

Secular stagnation in mining has impaired export earnings, underlining the importance of export-oriented policies to reduce dependence on mining. South Africa has considerable potential for non-minerals exports. In manufactures, South Africa's most productive firms are larger and much more likely to engage in direct importing and/or exporting. In terms of breaking out of the current economic malaise, large, productive firms with established links to international markets likely have the highest near-term growth potential. South Africa also has considerable potential to export services and has performed relatively well in supplying rapidly growing African markets over the past two decades. These two features interact, for example, in the servicing of mining equipment and sales of consumer goods in South African supermarkets located abroad (UN-WIDER, 2016).

Infrastructure investments are required to ease binding electricity and transport bottlenecks. Public sector infrastructure providers need to become more efficient. In addition, inviting greater private sector participation in infrastructure could increase the volume and efficiency of services while limiting the burden on public finances.

Broadly speaking, the interventions required to achieve Agenda 2030 are to ramp up growth, raise investment and employment levels (especially employment of youths), strengthen the capacity of the State to implement development projects and programmes, reduce corruption, and strengthen partnerships between Government, the private sector, labour unions, CSOs and development partners.

² Due to apartheid spatial planning, the poor live far away from their work places. In some rural areas, people on average spend three to four hours a day travelling between their homes and work, thus reducing their ability to earn income and adding to their expenses.

PART II: PROGRESS ON THE GOALS

This part provides an overview of the progress that South Africa has made to date in implementing the SDGs. Although this year's VNR theme is "Empowering people and ensuring inclusiveness and equality", and focusing specifically on SDGs 4, 8, 10, 13, 16 and 17, this report provides an overview of progress on all the SDGs.

4. COUNTRY PROGRESS

4.1 Goal 1: End poverty in all its forms everywhere

Main messages

The share of the population living below the national poverty line fell from 51 per cent in 2006 to a still-high 40 per cent in 2015, and poverty levels are particularly high among some groups.

The Government's comprehensive programme to reduce poverty includes a progressive tax system, free basic services and an extensive social assistance system.

The current situation

South Africa achieved a notable reduction in poverty, although the most recent available data show a disturbing increase. The share of people living on incomes below the international poverty line of US\$1.90 a day fell from 29.3 per cent in 1993 (just before the end of apartheid) to 16.4 percent in 2011, but then rose to 18.8 per cent in 2015 (Figure 3). The share of people living on incomes below the national lower bound poverty line,³ which is higher than the global poverty line (by 26 percent in 2006 and 19 percent in 2015), shows a similar pattern: the poverty rate fell from 51 per cent in 2006 to 36.4 per cent in 2011, but then rose to 40 per cent in 2015.⁴ Moreover,

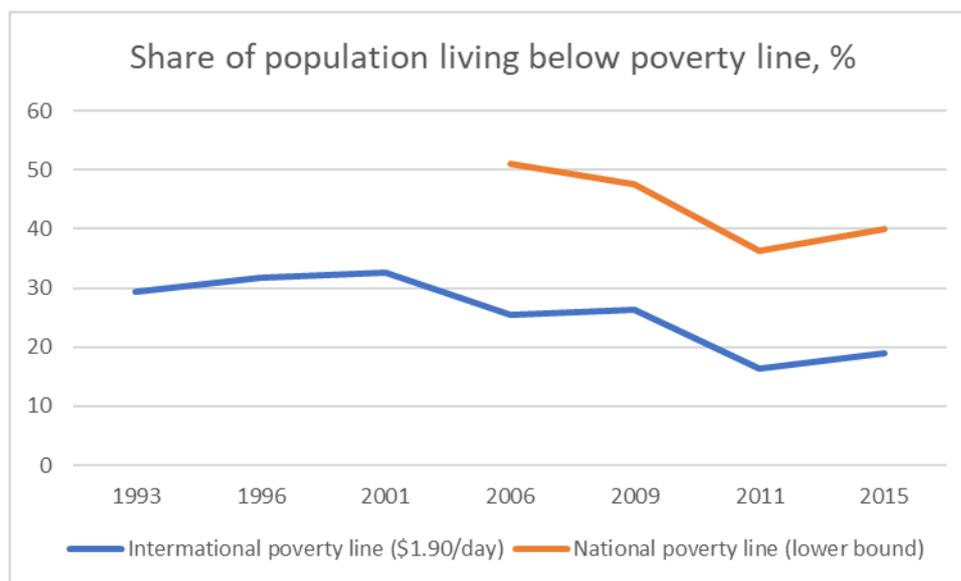
³ The National Poverty Line, which is dynamic and indexed to inflation, is defined as ZAR785 in April 2018 prices, and ZAR647 in April 2015 prices per person per month.

⁴ South Africa has three poverty lines, first published by Stats SA in 2012, which capture different degrees of poverty. The poverty lines were based on spending and consumption data from the 2000 Income and Expenditure Survey. In 2015, the poverty lines were rebased – i.e. the poverty lines were recalculated using new data from the 2010/2011 Income and Expenditure Survey. The latest poverty trends report (Stats SA, 2017c) includes poverty estimates for 2006 to 2015.

incomes among the poor declined and became more unequal (DPME, Statistics South Africa and World Bank, 2018). This deterioration in poverty coincided with a period of slow growth (just under 2 per cent, or only slightly higher than the growth rate of population) and some rise in unemployment (from 24.7 per cent in 2012 of the labour force to 25.2 per cent in 2015).

Around one-quarter of the poor live in extreme poverty (food poverty line). For lower-bound poverty line, 40 per cent of South Africans are considered poor while nearly half of South Africa’s population is considered chronically poor at the upper-bound national poverty line.⁵ Comparing South Africa’s poverty rate with other countries should be taken with caution because the national poverty line is higher than the global absolute poverty line by most countries (\$1.9/day) – translating to 18.9 per cent of South Africans.

Figure 3. Poverty had fallen, but has begun to rise again



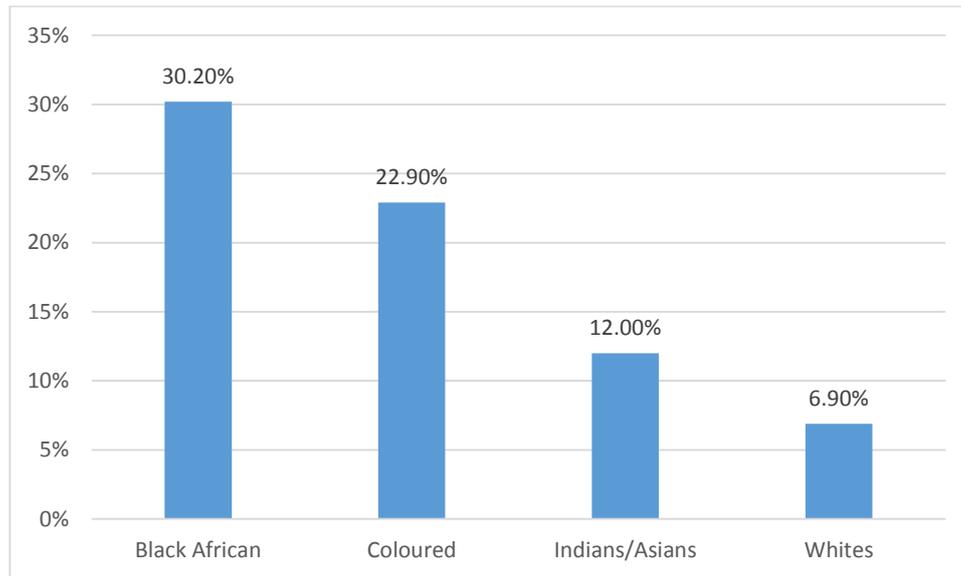
Source: DPME, Statistics SA, and World Bank (2018).

Poverty rates differ greatly by groups and geographical location. Poverty is highest in Limpopo and the Eastern Cape provinces, and lowest in the Western Cape and Gauteng provinces. In 2015, 93 per cent of poor people in South Africa were black, and 64.2 per cent of blacks lived on incomes below the LBPL (Figure 4). By contrast, only 5.9 per cent of Indians/Asians and 1 per cent of whites lived on incomes less than the LBPL. Poverty is also higher among children (poverty rate of 51 per cent), those living in rural areas (poverty rate of 65.4 per cent), and people with little or no education (poverty

⁵ The food poverty line in 2015 prices is ZAR441 per person per month (ZAR531 in 2017 adjusted prices); the lower-bound poverty line in 2015 prices is ZAR647 (ZAR758 in 2017 adjusted prices); and the upper-bound poverty line in 2015 prices is ZAR992 (ZAR1,138 in 2017 adjusted prices). <https://africacheck.org/factsheets/factsheet-south-africas-official-poverty-numbers/>

rate of 61.6 per cent). Targeted interventions for these groups are essential if poverty levels are to drop to the SDG target of 20 per cent by 2030.

Figure 4. Poverty rates were dramatically higher among blacks than among whites, share of population with incomes less than the lower bound poverty line, per cent in 2015



Source: Stats SA (2017c).

The policy framework

Poverty reduction has been the focus of government development efforts since the advent of democracy. Poverty alleviation has been the central goal of many government strategy documents and programmes over the past 25 years.⁶ The NDP is fundamentally focused on the elimination of poverty and the reduction of inequality.

South Africa has made progress in reducing extreme poverty through a progressive, social wage programme that helped to finance the provision of social assistance and free basic services – old age pensions, child grants,

⁶ These include the Constitution, the 1994 Reconstruction and Development Programme, the 1994 Land Reform Programme, the 1996 Growth Employment and Redistribution, the 2001 Integrated Sustainable Rural Development Strategy/Programme, the 2003 Expanded Public Works Programme, the 2004 Comprehensive Agricultural Support Programme, the 2006 Accelerated and Shared Growth Initiative for South Africa, the 2009 Comprehensive Rural Development Programme, the 2010 New Growth Path (NGP), the 2010 Recapitalisation and Development Programme, the 2012 National Development Plan, the 2014 National Policy on Food and Nutrition Security, and the 2015 National Integrated Early Childhood Development Policy, together with the NDP.

primary healthcare, orphan grants, subsidized water and electricity, housing assistance, no VAT on certain food items, and more public schools declared as no-fee schools. Other initiatives to reduce poverty have included land reform, free higher education and programmes to increase entrepreneurship (UN, 2018).

South Africa's key poverty reduction programme since 2000 has been social grants, which have expanded rapidly and now provide assistance to 17 million South Africans. In 2015, social grants were received by 71.9 per cent of all elderly persons and 92.2 per cent of those classified as poor. Approximately one-third of households with children (34.3 per cent) and 61.3 per cent of poor households with children are covered by child support grants (South Africa's SDGs report). Without social grants, poverty would be 8 per cent higher than the current level.⁷ Expenditures on social grants are expected to continue to rise by 26 per cent from 2016/17 to 2019/20.

4.2 Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

Main messages

Policies to support incomes and improve agricultural production have achieved a notable decline in hunger. However, food insecurity and its effects, notably stunting in children, remain serious challenges.

The current situation

Food security⁸ has improved and the share of households that are vulnerable to hunger fell from 24.2 per cent in 2002 to 10.4 per cent in 2017 (Stats SA, 2017b:56). South Africa's commitment to social assistance played an important role in this achievement.

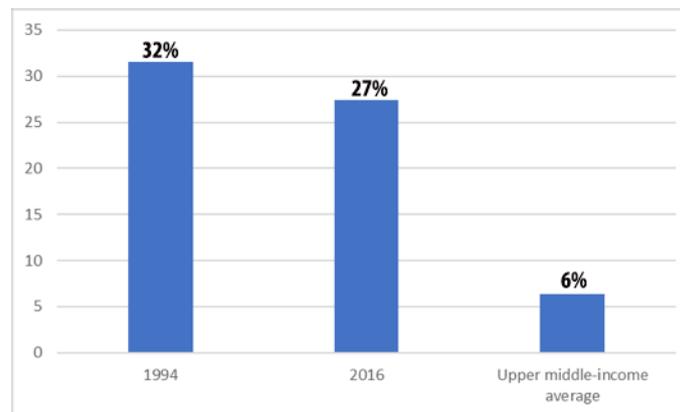
Despite this progress, hunger remains a serious issue. Over three million households are reported to have run out of money to buy food as of the end of 2016, of which 90.8 per cent were black Africans (Stats SA, 2016b:166-7). Furthermore, the prevalence of underweight children and stunting in children under five is still a major concern. As of 2016, 27.0 per cent of children under five suffered from stunting (share of children under five with low height for age), indicating a lack of nutritious food and poor-quality food (Figure 5). This

⁷ This is based on a study by Posel and Grapsa (2017), using the National Income Dynamics Study (NIDS) 2008–2014/15.

⁸ Food security is defined as access to and control over the physical, social and economic means to provide sufficient, safe and nutritious food at all times.

represents only a modest decline from the 31.5 per cent rate in 1994. By contrast, the average for all upper middle-income countries was only 6.4 per cent. The challenge of stunting was found to be more severe in rural areas, followed by urban informal areas (Department of Social Development and Department of Agriculture, Forestry and Fisheries, 2014). At the same time, 13.0 per cent of children under five are regarded as overweight, more than double the global average of 6.1 per cent.

Figure 5. Levels of stunting remain high, share of children under five with low height for age, per cent in 2016



Source: Stats SA, 2016b (SADHS) and World Bank World Development Indicators database.

The policy framework

Policies and strategic documents, including the Constitution, the NDP, the Medium Term Strategic Framework (MTSF) 2014–2019 and the Agricultural Action Plan for 2015–2019, are designed to improve food security and nutrition. The NDP recognizes that the ability to access food, rather than its availability, is key towards determining the food security of households (NPC, 2012). The NDP also emphasizes the need to enhance agricultural production and calls for increased investment in research and the development of innovative farming methods to improve agricultural productivity, as well as skills development among extension officers to address the needs of smallholding farmers. However, the NDP does not include concrete targets on how outcomes are to be achieved. For example, it does not provide a clear link between its job creation goals and the reduction of food-insecure households.

The Government has increased its commitment to providing food security schemes targeted for the poor and vulnerable, which have contributed significantly to the improvement in living standards (Stats SA, 2017c:32). The National Food and Nutrition Security Plan includes support for land reform

and field crop production, as well as the provision of social grants and nutrition education. To date, these efforts have had some impact on improving food security (access to food), but have not greatly improved nutrition security (access to a wide range of foods that provide essential nutrients).

The Government is establishing a multi-sectoral Food and Nutrition Security Council to oversee:

- ✓ the alignment of policies, legislation and programmes;
- ✓ coordination and implementation of programmes and services that address food and nutrition security;
- ✓ the establishment of inclusive local food value chains to support access to nutritious affordable food;
- ✓ the expansion of targeted social protection measures and sustainable livelihood programmes;
- ✓ the scaling up of high impact nutrition interventions targeting nutritionally vulnerable groups;
- ✓ the development of an integrated communication plan to help people make informed food and nutrition decisions; and
- ✓ the development of a monitoring and evaluation system for food and nutrition security, including an integrated risk management system for monitoring related risks.

More than three-quarters of the cost of this programme involves the doubling of the number of extension officers employed over the National Food and Nutrition Security Plan period. Improvements include the implementation of early registration of children born in public facilities, which would improve the targeting of assistance to children, implementation of a universal child support grant registration, and the expansion of the coverage of the meal provision programmes at Community and Nutrition Development Centres, Early Childhood Development Centres and schools. Table 2 provides a list of policies and programmes related to SDG 2.

An important part of the Government's programme is to revitalize agriculture and the agro-processing value chain by increasing support for smallholder farmers and substantially expanding the number of agricultural producers. Lack of access to actionable information inhibits agricultural growth; crop monitoring products such as crop arable land fraction and crop anomalies and biophysical products such as chlorophyll content and canopy water content were distributed by the South African National Space Agency (SANSA) to support crop monitoring activities during the 2016/17 and 2017/18 summer growing seasons. The recipients included Mob Insurance, an SME that uses data obtained from satellites to insure smallholder farmers

against weather-related risks, Senwes, an agricultural company, and the Grain Farmer Development Association.

Table 2. Summary of South Africa’s policies and programmes related to SDG 2

POLICIES AND STRATEGIC DOCUMENTS	Overarching policies				
	National Development Plan (2011–2030) Medium Term Strategic Framework (2014–2019) Strategic Plan for the Department of Agriculture Forestry and Fisheries (2015–2020)			The Constitution 1996 Agricultural Policy Action Plan (2015–2019) The New Growth Path (2011)	
	Thematic area policies and programmes				
	Food security and nourishment	Agricultural production	Generic conservation	Research and Development	Marketing
<ul style="list-style-type: none"> Integrated Food Security Strategy (2002) National Food and Security Policy (2013) National Food and Nutrition Security Policy Implementation Plan for South Africa (to be finalized). 	<ul style="list-style-type: none"> National Policy on Food and Nutrition Strategy (2013) Policy for the Recapitalization and Development Programme Integrated Food Security Strategy (2002) Various strategies to adapt to, or mitigate the effects of, climate change. 	<ul style="list-style-type: none"> National Plan for Conservation and Sustainable use of Farm Animal Genetic Resources (2016) National Policy on Plant Improvement (2012) Plant Breeders’ Rights Policy (2011). 	<ul style="list-style-type: none"> Integrated Growth and Development Plan (2012) Agricultural Policy Action (2015–2019) Agricultural Research Council Vision 2050 (2016) Agricultural Research Council Strategic Plan (2015–2020) Bio economy strategy. 	<ul style="list-style-type: none"> South African Trade Policy and Strategy Framework (2011) Agricultural Marketing Policy for the Republic of South Africa (2010) Integrated Marketing Strategy for Agriculture, Forestry and Fisheries Products. 	
PROGRAMMES	<ul style="list-style-type: none"> Fetsa Tlala National School Nutrition Programme Social grants and social relief of distress Early Childhood Development (ECD) and School Nutrition Programme (SNP) One Household One Hectare. 	<ul style="list-style-type: none"> Comprehensive Rural Development Programme (CRDP) Fetsa Tlala Land Reform Comprehensive Agricultural Support Programme (CASP) – Ilima/Letsema Recapitalization and Development Programme (RADP/RECAP) One Household One Hectare Micro Agricultural Financial Institution of South Africa (MAFISA) Land Care Agri-parks Operation Phakisa. 	<ul style="list-style-type: none"> Agriculture Production, Health and Food Safety Programme Plant Genetic Resources Centre Long-term Sustainability Strategy Plant Genetic Resources Programme Farm Animal Genetic Resources Programme. 	<ul style="list-style-type: none"> Comprehensive Rural Development Programme Research and Development Programme Research and Innovation Programme 	<ul style="list-style-type: none"> Trade Promotion and Market Access Programme Export Market Development and Promotion Programme Market Information System Market Research and Market Intelligence Programme.

The country has performed relatively well in maintaining the number of animal genetic resources. However, conservation of plant genetic resources between 2016 and 2017 was disrupted due to drought conditions, which affected mainly deciduous fruit genes. The total number of producers who benefited from animal improvement schemes grew from 1,288 in 2011 to 8,676 in 2017. The large increase in the number of farmers who receive assistance provides some optimism about the quality and quantity of livestock production in South Africa; increased livestock production would contribute towards food security as well as improved livelihoods in rural communities.

4.3 Goal 3: Ensure healthy lives and promote well-being for all and at all ages

Main messages

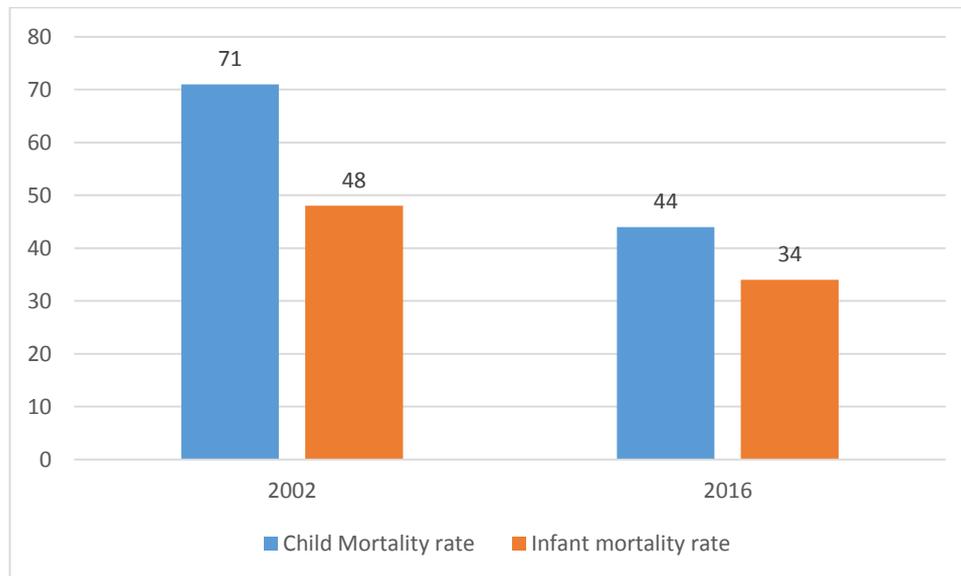
Increased access to healthcare has supported reductions in child and maternal mortality rates, but mortality rates remain high.

Key challenges include improving access to healthcare (particularly in poor areas), getting better value for money by strengthening procurement practices (for example, for medicines, vaccines and medical equipment), improving mental health and disability services, and increasing funding.

The current situation

South Africa has made considerable progress in improving healthcare and reducing premature death. The under-5 child mortality rate fell from 71 per 1,000 live births in 2002 to 48 in 2016, and the infant mortality rate, from 48 per 1,000 live births to 34 (Figure 6). Over 70 per cent of mothers and children received post-natal care within six days of delivery, although this remains well below the share in upper middle-income countries. Maternal mortality rates are subject to considerable uncertainty, but estimates for South Africa indicate that rates have fallen but remain more than three times the level in upper middle-income countries. South Africa struggles with communicable diseases: around 7.5 million people, and 19 per cent of adults aged 15-49 were HIV positive in 2018, and 567 per 100 000 population cases of tuberculosis (TB) were recorded in 2017.

Figure 6. Child and infant mortality rates, number of deaths per 1,000 live births



Source: Stats SA, 2016b

The policy framework

South Africa's Constitution provides that all South Africans have the right to equitable healthcare and to the progressive improvement in access to and quality of care. The Reconstruction and Development Plan (RDP) sets the goal of providing free health services for mothers and children, followed by free primary healthcare for all, as well as a clinic-building programme. And the National Health Act 61 of 2003 provides a legal framework for the health system, taking into account the obligations imposed by the Constitution and other laws on health services at the national, provincial and local government levels.

The NDP gives an overarching policy framework for the health sector, including policy direction on the key elements of health system strengthening and governance. The NDP identifies nine health goals, including raising life expectancy to 70 years, reducing maternal, infant and child mortality, and significantly reducing non-communicable diseases (NCD), injuries and violence. Addressing the social determinants of health and disease is identified as a key priority required to achieve these goals. The NDP also aims to reduce the cost of private healthcare and addresses the need for improvements in the quality of care.

The National Strategic Plan (NSP) for HIV, sexually transmitted infections (STIs) and tuberculosis (TB) 2017–2022 guides the country's response to the HIV, TB and STI epidemics. It involves multi-stakeholder collaboration by the Government, civil society, communities and the private sector to reduce HIV, TB and STI morbidity and mortality. The Prevention of Mother to Child Transmission programme played an important role in reducing infant mortality.

The philosophy of primary healthcare forms the basis of South Africa's health policy and provides guidance for healthcare service delivery. The principles underpinning the delivery of primary healthcare include: equity; community participation; social and economic development; an integrated referral system to facilitate a continuum of care; teams of health professionals with specific and sophisticated biomedical and social skills; adequate resources; a client-centred approach; and interventions focused on the determinants of poor health, health promotion, prevention, cure and rehabilitation.

The inequities of apartheid are still prevalent in the health system. Achieving universal health coverage, getting better value for the money spent on healthcare, and increasing funding remain a challenge. Access and quality remain poor in some areas, and services for people with emotional problems or disabilities are limited.

Strengthening supply chain processes for the procurement of quality medicines, vaccines, medical equipment and health information management products is a key step towards achieving the SDG targets on health. South Africa needs to demonstrate improvements in quality of healthcare services underpinned by evidence-based clinical practices. It also needs to improve the operational efficiency and utilization of human resources, supported by appropriate strategies in recruitment, retention and human resources forecasting. While the Government has increased the subsidized training of health professionals, it is difficult to retain trained staff in the public sector health services, especially at senior levels. South Africa introduced Occupational Specific Dispensation (OSD) for health professionals in the public sector to overcome this challenge. The Government is devoting resources to developing improved healthcare practices (see Box 3).

Box 3. Innovation and research to improve healthcare

The Government is investing in innovation to improve health services and in the development of appropriate medical devices, diagnostics and vaccines to address communicable and non-communicable diseases. Research and development under the Strategic Health Innovation Programme (SHIP), a joint effort of the Department of Science and Technology (DST) and the Department of Health and the Medical Research Council (MRC), focuses on diagnosis, vaccines, new and improved drugs and medical devices for treatment of HIV, tuberculosis (TB), diabetes, cancer and neo-natal conditions. DST concentrates on new and improved drugs, therapeutics and delivery systems, and on ensuring that drugs are adaptable to the South African context by working with major manufacturers and making an effort to use South African resources. DST is working with various institutes with similar approaches to vaccines and biological medicines, and is exploring means of making diagnosis more user-friendly, easier and faster, and thus able to deliver results rapidly and reduce patients' waiting time at clinics. Considerable emphasis continues to be placed on harnessing information and communication technologies (ICTs) to improve administration and the efficiency of primary healthcare facilities, important for the early detection and rapid response to health challenges.

DST has contributed to product development to strengthen South Africa's ability to locally manufacture active pharmaceutical ingredients and to develop the ability to locally manufacture vaccines and biologics. A Uterine tamponade was introduced for the management of postpartum haemorrhage to reduce maternal deaths. DST supported the Tshwane Khulelwe project to evaluate the clinical significance and benefit of routine screening with Umbiflow, a portable umbilical artery Doppler device developed by the South African Medical Research Council and the Council for Scientific and Industrial Research. The device aims to assist in detecting foetuses at risk of stillbirth and is cost-effective compared to similar devices. DST has contributed to the reduction of under-five mortality by providing the Extended Programme of Immunisation vaccines via Biovac in which DST holds a 47 per cent share. DST also supported development of a vaccine for Group B Streptococcus (GBS), a cause of invasive neonatal diseases as well as of severe infections in the elderly and immune-compromised patients. DST has also supported the development of new prevention and treatment technologies, including for HIV, tuberculosis and malaria.

In addition, DST:

- ✓ provides a continuous supply of the Hib vaccine;
- ✓ contributes to the development of diagnostics and treatment regimens for Ebola, and malaria;
- ✓ supports the development of diagnostics and treatment regimens for non-communicable diseases, including diabetes, cancer and pneumonia;
- ✓ contributes to the development of medical devices and diagnostics;
- ✓ supports the development of health Apps for Essential Medicine List, HIV and tuberculosis treatment guidelines, Road to Health and MomConnect;
- ✓ supports the development of house designs that are environmentally friendly, fire-proof and well ventilated (in conjunction with the Swiss Embassy).

DST also has established international linkages through its participation in the activities of the Global Programme for Infectious Diseases – Research (GloPID-R), which focuses on assistance with epidemics and outbreaks of disease.

4.4 Goal 4: Ensure inclusive and equitable quality education, and promote lifelong learning opportunities for all

Main messages

Most children complete primary school and nearly all adults are literate. Learning as measured by standardized tests has improved rapidly, albeit from a low level.

The educational system continues to suffer from inequities in the quality of education, low enrolment rates in upper secondary and tertiary schooling, and limited access to training.

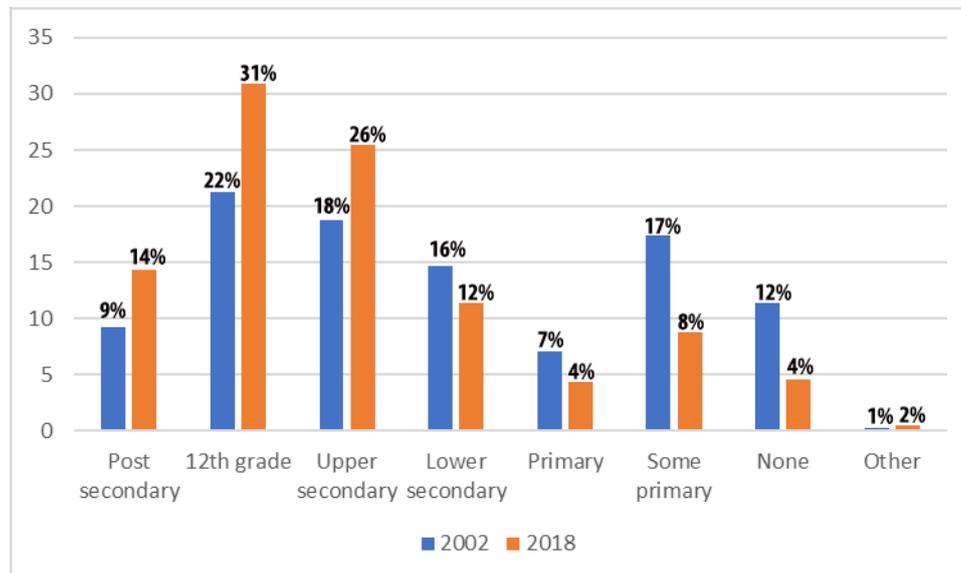
The current situation

Education is critical to empowering all citizens to reach their full potential, and South Africa has made considerable progress in improving access. Virtually all adults (between the ages of 15 and 64) are literate, compared to 82 per cent in the mid-1990s. This achievement reflects high levels of educational access at the lower grades. Almost 95 per cent of the country's children participate in organized learning in the year before the official Department of Basic Education (DBE) primary school entry age. Among those aged 16 to 18, approximately 95 per cent have completed Grade 7, and just under 90 per cent of those aged 19 to 21 have completed Grade 9. By contrast, less than 51 per cent of those aged 19 to 21 have completed Grade 12, and only 27 per cent of an age cohort that begins primary school becomes qualified to study for a degree at a university.

The country has become significantly more educated over the past 16 years. For instance, early childhood education (0-4 years) rose from 8 per cent in 2002 to 42 per cent in 2017 – thanks to enhanced implementation of the Children's Act and School Act. Moreover, in 2002, 22 per cent of the population 20 years or older had completed high school, while 30 per cent had not completed primary school (Figure 7). By 2018, the share of high school graduates had increased to 30.9 per cent, while the share who had not graduated from primary school had fallen to 14 per cent. It is important to note that girl-child education is one of the best on the continent. For instance females accounted for 58 percent of the total headcount enrolment in higher public education in 2016 in the country (Department of Women Affairs, 2019).

While access has increased, quality of education remains a challenge. The issue of drop-out from the schooling system from the age of 15-or so contributed to high youth unemployment rate.

Figure 7. Educational attainment increased sharply from 2002 to 2018, highest educational attainment, per cent of population aged 20 or more



Source: Stats SA, 2018.

Some progress has been made in improving the quality of education. The allocation of funds to poor schools has increased markedly, and the physical conditions of learning have improved. For example, virtually all schools now have electricity and access to drinkable water. Nevertheless, the school system confronts numerous challenges, including: lack of administrative capacity; teachers with inadequate qualifications (in 2017, 91 per cent of secondary school teachers were viewed as qualified); weak infrastructure (only 59 per cent of schools meet minimum infrastructure requirements); a lack of essential materials; teacher absenteeism as high as 10 per cent on a normal day; and a lack of effective resource management (Open SDG Club South Africa, 2019). Some of these problems may reflect the rapid expansion of access to education, which placed considerable stress on educational facilities and personnel.

Skill levels in upper grades are low. For example, proficiency in reading and mathematics drops precipitously between primary and lower secondary school: in 2014, 71 per cent of primary school students achieved a minimum proficiency in mathematics, but by the end of lower secondary school, only 10 per cent did (Open SDG Club South Africa, 2019). South Africa is one of the lower-performing countries in mathematics and science on the Trends in International Mathematics and Science Study (TIMSS) tests (many participating countries are high income).

However, some improvements were registered over the past several years. South Africa achieved the fastest improvement in grade 9 tests between the

2002, 2011 and 2015 surveys conducted by the Third International Mathematics and Science Study (TIMSS). Student scores in the country's Progress in International Reading Literacy Study (PIRLS) improved significantly between 2006 and 2016. Finally, the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SEACMEQ) noted a large improvement at the grade 6 level from 2007 to 2013 in both mathematics and reading.

Lack of Internet access is one constraint on skill levels. Although around one-third of schools have computers for pedagogical purposes, less than 19 per cent have access to the Internet for these purposes; this is considerably lower than in many of countries that compete with South Africa.

While difficult to measure, the educational system, particularly in rural areas, continues to struggle with achieving adequate quality. Some of the major reasons are that teachers lack experience or subject knowledge, that they have to travel great distances to get to work and that some students have to travel from home to school and back.

Enrolment in higher education remains low. In South Africa, 1,901 students are enrolled in tertiary education for 100,000 people, compared to 3,104 in China and 4,023 in Brazil. South Africa's enrolment rate is lower than that of the average of lower middle-income countries. Similar to many other countries, female participation in tertiary education has increased sharply.

Most youth aged 15–24 are unable to access post-school education and training (PSET). As of 2016, there were 2.9 million students enrolled in PSET institutions and 3.2 million youth who were not in employment, education or training. There are also concerns regarding the efficiency and quality of parts of the PSET system. The dropout rate remains high even though participation has declined over the years. Furthermore, many of the programmes and curricula offered at South African universities and Technical and Vocational Education and Training (TVET) colleges are not adequately responsive to the needs of the economy.

The policy framework

Many of the problems facing today's school system are rooted in apartheid. The Bantu Education Act of 1953 set out to ensure that whites received a better education than blacks. Black pupils received about one-fifth of the funding of their white peers. They were taught almost no maths or science. Most independent church-run schools that provided a good education in black areas were shut down.

Since 1994, the Government expanded access to schooling. However, it also replaced a school system segregated by race with one divided by wealth. Schools in poorer areas receive more state funding, but there are still around 500 schools built from mud, mainly situated in the Eastern Cape province. In contrast, schools in richer areas have access to additional resources by charging fees. In theory, these schools are required to admit pupils even if their parents cannot afford the fees. In practice, they are fortresses of privilege.

Education in South Africa is governed by the Department of Basic Education (DBE), which is responsible for primary and secondary schools, and the Department of Higher Education and Training (DHET), which is responsible for tertiary education and vocational training. The South African Schools Act (No. 84 of 1996) is aimed at ensuring that all learners have access to quality education without discrimination, and makes schooling compulsory for children aged seven to 15. The Act and the South African Council for Educators (SACE) regulate the conduct of teaching.

Education is a priority in overall policy and planning at all government levels. Key education policies are as follows:

- ✓ The NDP stresses the role of education, training and innovation at all levels in eliminating poverty and reducing inequality, and emphasises the importance of education in establishing a unified nation (NPC, 2012). The NDP aims are embodied in the Medium Term Strategic Framework 2014–2019.
- ✓ The Twenty Year Review (1994–2014) monitored progress in implementation of education policies (Department of Planning, Monitoring and Evaluation, 2014).

The Action Plan to 2019: Towards the Realization of Schooling 2030 details what DBE wants to achieve in relation to learning and enrolments across its range of activities and how it intends to achieve this. The Action Plan is consistent with many of the SDG targets for basic education (DBE, 2015).

Improving literacy by supporting the use of African languages as a medium for learning and teaching is a priority of DBE. Providing sufficient reading materials in African languages is seen as a path to improving student performance. In addition, schools are making efforts to strengthen English as a subject and as a medium of instruction in the intermediate and upper grades. DBE has been implementing Early Grade Reading Study (EGRS) at the provincial level since 2015, in collaboration with academic researchers. Other initiatives to improve literacy and numeracy include the partnership

between the DBE and the National Education Collaboration Trust, which rolled out the Primary School Reading Improvement Programme for 11,000 Foundation Phase teachers across all provinces. DBE also collaborates with information and computer technology (ICT) businesses such as Vodacom and Microsoft, and international organizations such as the United Nations Children’s Fund support professional development for educators. DBE also works with various NGOs such as Read Foundation, Molteno, Room to Read, Zenex Foundation, Jika Imfundo and Nali Bali to improve literacy levels.

The interventions that have been identified in South Africa for a successful National Strategy for Mathematics, Science and Technology (MST) Education 2019–2030 are teacher development, review of the MST curriculum and the provision of appropriate learning support material. DBE is also working on the development of an Early Grade Mathematics Project, to provide cost-effective policy and programmatic interventions to improve Foundation Phase Mathematics (DBE, 2019).

The DBE’s draft Rural Education Policy proposes ways of addressing many of the challenges of resourcing, staffing and other issues that face rural schools (DBE, 2018). DBE continues to collaborate with DST and other stakeholders on an innovation system at national and sub-national levels in an effort to enhance access to ICT and appropriate technologies for the basic education system. One of the key partnerships is with the National Education Collaboration Trust, which demonstrates the commitment of the private and non-profit sectors in improving the quality of basic education. DST also continues to maintain its Technology for Rural Development Programme (TECH4RED), which demonstrates and transfers innovative technology solutions towards improving the quality and outcomes of the basic education system.

Democratic South Africa’s tertiary sector has seen profound changes, with mergers between universities in areas of the country that were previously ethnically divided such as homelands and others in what was designated South Africa as well as between universities and former technikons. While one purpose of the mergers was to harmonize standards and quality, campuses located in previous homeland areas, in many instances, continue to struggle to compete for students with strong academic backgrounds and for staff.

Resources available for training have expanded significantly (Box 4). Towards 2030, key priority interventions for the Post-School Education and Training (PSET) system include:

- ❖ provision of a diverse set of training opportunities, especially in STEM subjects;
- ❖ skills development for sustainable livelihoods;
- ❖ entrepreneurial skills development;
- ❖ annual monitoring and reporting on the performance of the PSET system by providing reliable data for planning and monitoring through quality management information systems.

Box 4. Progress in training

The Government has increased the level of resources devoted to training:

- ✓ Technical and Vocational Education and Training (TVET) colleges were expanded in order to ensure that young people have vocational skills that will help them to find work easily.
- ✓ The Artisan Development Programme was expanded to produce more artisans such as plumbers, welders, and electronics.
- ✓ Access was expanded to workplace-based learning programmes such as Learnerships, Apprenticeships and Internships through the Sector Education and Training Authorities.
- ✓ The Department of Higher Education identified 13 priority trades that are required for all government infrastructure projects: bricklayer, electrician, millwright, boilermaker and automotive mechanic, among others. In order to assist in enhancing the capacity of 26 targeted TVET colleges across the country, the Department has entered into service-level agreements with a number of major industry partners and associations specializing in these trades, including the Steel and Engineering Industries Federation of Southern Africa, Retail Motor Industries, the Institute of Plumbers of South Africa and the South African Institute of Welding. The targeted TVET colleges are expected to play a major role in this process, focusing on the development of artisans required for large-scale projects such as strategic integrated projects, Operation Phakisa, War on Leaks and other strategic interventions aimed at increasing economic activity.
- ✓ Efforts were made to ensure that the training system is responsive to the needs of the labour market. The Department has initiated a major project on Labour Market Intelligence, to provide information on employment and growth trends of industry sectors, and on imbalances between skills supply and demand. It also provides forecasts of skills that are needed in the future. In addition, there are enrolment planning systems that direct funding towards occupations that are in demand.
- ✓ A website has been developed for Career Development and all the occupations that are in demand – www.careerhelp.gov.za

4.5 Goal 5: Achieve gender equality and empower all women and girls

Main messages

South Africa is one of the few countries shaping global performance on woman participation in public positions, including Parliament and Cabinet.

Several defects of the legislative and policy frameworks need to be corrected to achieve full equality for women.

The current situation

South Africa remains one of the trailblazers and pacesetters on women in political participation and in public offices globally. Over the past 25 years, the role of women in political leadership positions has increased. The share of seats in Parliament held by women rose from 25 per cent in 1996 to 46 per cent in 2019. This puts South Africa at the eighth highest in the Inter-Parliamentary Union's rankings for women's representation in lower houses or National Assembly (Rama and Morna, 2019). The share of women serving in provincial legislatures has also increased, from 33 per cent in 2014 to 46 per cent in 2019. And for the first time in South African history, the new Government has appointed the same number of women to Cabinet positions as it has men. (South Africa is one of the few countries in the world to achieve this.) Key positions in the Executives are held by women including Department of International Relations and Cooperation, State Security and Department of Environmental Affairs.

Women leadership in local government has also improved substantially over the past 25 years. Women representation rose from 19 per cent in 1995 to 41 per cent in 2016. South Africa is one of the three countries⁹ leading women leadership in local government in SADC between 2010 and 2016 (Department of Women Affairs, 2019).

Some progress has been made in reducing the incidence of human trafficking, which decreased from 0.04 per 100,000 persons in 2013/14 to 0.02 in 2015/16.¹⁰ The prevalence of marriage by girls under 15 decreased significantly between 2010 and 2014, with only seven recorded early marriages in 2014. This may indicate that the legislative frameworks that have been put in place, such as the Recognition of Customary Marriages Act, deter early marriage.

Despite laws prohibiting discrimination and government efforts, women continue to have unequal access to incomes and empowerment. Progress has been made, however, in reducing early and forced marriages, and human trafficking. For instance, women have suffered discrimination in economic opportunities for many years. Women's historical marginalization has left its mark on South Africa, just as it has in the significant majority of countries around the world. While women make up 51 per cent of South

⁹ South Africa comes after Lesotho and Namibia.

¹⁰ These data only partially reflect progress of achieving Target 5.3, since they only include human trafficking for sexual purposes.

Africa's population, they fill just 44 per cent of skilled posts, according to labour data released in 2017 by Stats SA. According to the 2017 Pulse of the People report, women on average earn 27 per cent less than men.

The prevalence of GBV, which includes harmful cultural practices, remains high. For instance, the South African 2016 Demographic and Health Survey found that one in five women older than 18 years has experienced physical violence.¹¹ Findings from the 2018 Victims of Crimes survey also estimated that 138 per 100,000 were raped.¹² However, evidence from the Ministry of Women Affairs (2019) shows reported rape in 2018 was below what was reported between 2008 and 2016. The rising trend of legal aid could have contributed to the decline.

Other areas of pronounced inequality or discrimination also exist. For instance, individual land ownership (34 per cent of individual land ownership and 13 per cent of total hectares of farmland). Women employment in construction, mining and transport is 20 per cent and below whereas it is more than 60 percent in services and private households (Department of Women, 2019).

The policy framework

Discrimination against women and girls is prohibited under the Constitution, which established, for the first time in the country, that women are legally regarded as equal citizens in all respects (Hames, 2006). The Constitution provides for the establishment of 'gender machinery', which consists in a number of Chapter 9 institutions. One of the institutions is the Commission for Gender Equality (CGE), which has the responsibility to ensure that the provisions pertaining to gender equality in the Constitution are upheld.

Addressing gender inequality has been an important goal of the Government since the end of apartheid. For instance, the Commission for Gender Equality Act 39 of 1996 was established to address this challenge. South Africa is a signatory to regional and international conventions that deal with gender issues¹³ (Mpani and Nsibande, 2015), and the legislative and policy framework is aligned with these agreements.

¹¹ Statistics South Africa, 2016c, South Africa Demographic and Health Survey 2016.

¹² Statistics South Africa, 2018b, Crimes Against Women in South Africa, 2018 Report. For more information on violent crimes see OSCSA, 2019.

¹³ These include: the Convention on the Elimination of all forms of Discrimination against Women (CEDAW), the Declaration on the Elimination of Violence against Women, the Discrimination (Employment and Occupation) Convention, the Equal Remuneration Convention, the Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa (commonly referred to as the Maputo Protocol), the Solemn Declaration on Gender Equality in Africa, and the Southern African Development Community (SADC) Protocol on Gender and Development.

The Domestic Violence Act (DVA) No. 116 of 1998 and the Criminal Law (Sexual Offences and Related Matters Act [SOA] No. 32 of 2007) provide an extensive definition of both physical and sexual violence, and offer broad coverage and harsh penalties for those involved. The SOA was supported by the development of the National Policy Framework on the Management of Sexual Offences Matters in 2013. Violence against women and children has also been targeted through various campaigns, which aim to educate, raise awareness and emphasize the importance of every member of society's role in the eradication of violence against women. Examples include the 16 Days of Activism Against Gender Violence Campaign, 365 Days of Action to End Violence Against Women and Children, the 365 Day National Action Plan, Orange Day and Women's Day.

South Africa also has passed laws prohibiting discrimination, including the Promotion of Equality and Prevention of Unfair Discrimination Act (PEPUDA) 4 of 2000, Employment Equity Act (EEA) 55 of 1998, the Labour Relations Act (LRA) 66 of 1995, and the Basic Conditions of Employment Act 75 of 1997. Discrimination has also been rooted out through the development of other acts that are addressed in the other targets.

Some shortcomings remain in the legal framework:

- ✓ a lack of legislation dictating a quota for women representation in national parliament and political party candidate lists;
- ✓ failure to explicitly criminalize marital rape or rape without proof of forced physical penetration;
- ✓ a lack of legislation mandating equal remuneration for work of equal value;
- ✓ exceptions for marriage under the age of 18.

South Africa's main policy frameworks, the NDP and Vision 2030, address the challenges that South African women face by prioritizing a number of subsidiary goals that affect them, such as poverty and unemployment. The NDP reinforces the notion that women's empowerment and participation in the economy are critical for the economic transformation of the country. Furthermore, the NDP recommends that:

- ✓ specific focus be placed on unemployed women with respect to public employment;
- ✓ all sectors of society should support the promotion of women leadership;

- ✓ measures should be put in place to provide women access to basic services, as well as antiretroviral treatment and routine micro-biocides; and
- ✓ women should feel protected by the law, without fear of crime (Department of Women, 2015):

The South African Integrated Programme of Action (POA): Addressing violence against women and children (2013–2018) has served as the government’s action plan for addressing GBV. South Africa is also developing the Draft Prohibition of Forced Marriages and Child Marriages Bill, which will provide even greater protection from these harmful practices.

In 2017, the Stop Gender Violence Campaign developed a report based on a vast amount of research from NGOs and government, as well as inputs from provincial and consultative meetings, on the nature of GBV (Stop Gender Violence Campaign, 2017). The authors identified a number of gaps and weaknesses in the institutions that are responsible for ensuring the effective implementation of policies to control GBV (Table 3).

Table 3. Challenge areas, gaps and weaknesses in efforts to prevent gender-based violence (GBV)

Challenge area	Gaps and weaknesses
South African Police Service (SAPS)	
Policy and guidelines	<ul style="list-style-type: none"> ✓ Unavailability of ‘station orders’ as mandated by the Sexual Offenses and Related Matters Act (SOA), which explains how the police should handle certain categories of crime as outlined in the Domestic Violence Act (DVA) (Vetten, 2010). ✓ Inadequate reporting of domestic violence incidents (Vetten et al., 2009; Department of the Civilian Secretariat for Police, 2016) and maintenance of the Domestic Violence Register (Vetten et al., 2009; Department of the Civilian Secretariat for Police, 2016). ✓ Absence or lack of functional victim-friendly rooms (VFRs), as mandated by the Victim Empowerment National Instruction.
Training	<ul style="list-style-type: none"> ✓ Poor officer communication. ✓ Highly inconsistent responses to reported rape cases (Artz and Smythe, 2007). ✓ Poor quality investigations due to lack of availability of investigating officers, high caseloads and inadequate qualifications (Artz and Smythe, 2007). ✓ Premature closing of cases due to insufficient contact information for the complainant (ibid.). ✓ Infrequent crime scene investigation (ibid.; Sigsworth et al., 2008).

	<ul style="list-style-type: none"> ✓ Long delays between the reporting of rape and the time of arrest (Artz, Smythe and Leggett, 2004). ✓ Failure to provide victims with a copy of their statements and to adequately document their contact information for follow-ups (Artz, Smythe and Leggett, 2004; Vetten et al., 2008; Sigsworth et al., 2009). ✓ Inappropriate collection and management of forensic evidence (Vetten et al., 2008; Sigsworth et al., 2009). ✓ Failure to monitor the training of SAPS officers (Wakefield, 2014).
Resources	<ul style="list-style-type: none"> ✓ Failure to ensure protection orders are instated due to the lack of human or financial resources to follow up on applications (Vetten, 2010). ✓ Inadequate reporting and statement-taking due to understaffed and under-resourced police stations (Artz, Smythe and Leggett, 2004).
Accountability and coordination	<ul style="list-style-type: none"> ✓ Poor coordination between SAPS and health clinics resulting in lack of referral for medical attention, including HIV post-exposure prophylaxis (PEP) (Wakefield, 2014). ✓ Lack of coordination between investigating officers and prosecutors with respect to the collection and provision of sufficient evidence, which leads to case delays (Artz, Smythe and Leggett, 2004; Vetten et al., 2008). ✓ Insufficient monitoring of training quality and alignment of training standards with the required experience needed when dealing with the implementation of the SOA and DVA (Combrink and Wakefield, 2009). ✓ Failure to submit six-monthly reports to Parliament, as required by the DVA, on complaints and disciplinary actions against police officers, as well as the police's response to recommendations made by the Independent Complaints Directorate (Vetten, 2010).
Department of Health (DOH)	
Policy and guidelines	<ul style="list-style-type: none"> ✓ Failure to establish guidelines for physical, psychological and emotional violence, and to include them in the DOH's mandate; currently, only sexual violence forms part of its mandate (Stop Gender Violence Campaign, 2017).
Training	<ul style="list-style-type: none"> ✓ Lack of trained staff, especially forensic nurses, to conduct timely forensic exams (Stop Gender Violence Campaign, 2017) ✓ Poor quality forensic exams, lack of sensitivity and information sharing (ibid.). ✓ Lack of empathy and sensitivity training of nurses, which may lead to secondary traumatization (Coovadia et al., 2009) ✓ Overemphasis on PEP rather than on the full range of services need by survivors, such as emotional and psychological support (Rohrs, 2011) ✓ Poorly administered PEP; failure to provide victims with sufficient information on PEP (ibid.). ✓ Refusal to treat victims prior to a criminal case being filed due to misunderstanding of guidelines (ibid.).
National Prosecuting Agency (NPA)/Department of Justice and Constitutional Development (DoJ&CD)	

Training	<ul style="list-style-type: none"> ✓ Insufficient assessment of the sensitivity training of prosecutors and magistrates who deal with victims of sexual assault to avoid secondary victimization (Townsend, Waterhouse, and Nomdo, 2014).
Resources	<ul style="list-style-type: none"> ✓ Perverse incentives to withdraw cases due to high caseloads faced by overworked and under-resourced prosecutors (ibid.). ✓ Insufficient financial resources for Sexual Offences Courts (SOCs) (Stop Gender Violence Campaign, 2017).
Accountability and coordination	<ul style="list-style-type: none"> ✓ Frequent case postponements which lead to the likelihood of cases being dropped by victims, as well as an interruption in recovery processes due to having to relive cases (Townsend, Waterhouse, and Nomdo, 2014). ✓ Low conviction rates (Vetten et al., 2008; Jewkes et al., 2009; Townsend, Waterhouse, and Nomdo, 2014).
Department of Social Development (DSD)	
Policy and guidelines	<ul style="list-style-type: none"> ✓ Failure to provide adequate shelter for those who are victims of violence (Stop Gender Violence Campaign, 2017). ✓ Redundant overlaps between the National Register for Sex Offenders (NRSO) and the National Child Protection Register which causes unnecessary administrative burdens (Mollema, 2015).
Resources	<ul style="list-style-type: none"> ✓ Insufficient resources and budgetary constraints which hamper the provision of adequate shelter for women and children (Bhana, Lopes and Massawe, 2013). ✓ Failure to appropriately implement the Victim Empowerment Programme (VEP) due to the inadequate allocation of resources needed for staffing and awareness creation (Simpala, 2012; Thorpe, 2014). ✓ Inadequate number of social workers employed due to insufficient financial resources, leading to an overburdening of current employees (Stop Gender Violence Campaign, 2017).
Department of Education (DOE)	
Policy and guidelines	<ul style="list-style-type: none"> ✓ Prevalence of violence, physical and sexual abuse, and gang-related activities despite the existence of policies and codes of conduct in schools as provided for by the South African Schools Act 84 of 1996 (Mncube and Harber, 2013). ✓ Failure to integrate the curriculum with lesson plans on gender-based violence (GBV) and other violence prevention (Stop Gender Violence Campaign, 2017). ✓ Failure to address the prevalence of corporal punishment, despite being prohibited by the South African Schools Act (Mncube and Harber, 2013). ✓ Failure to regulate cyber-bullying by law, therefore limiting victims' recourse (Moodley, 2012).
Resources	<ul style="list-style-type: none"> ✓ Insufficient resources to effectively implement the Integrated School Health Policy (ISHP), which aims to tackle the low service provision, sub-optimal nurse to school ratios and the absence of referral services (Shung-King, 2013).
Accountability and coordination	<ul style="list-style-type: none"> ✓ High frequency of sexual relationships between students and educators despite prohibition by the Employment of Educators Act 76 of 1998 (Stop Gender Violence Campaign, 2017).
Department of Correctional Services (DCS)	

Policy and guidelines	✓ Failure to establish an official comprehensive policy on the prevention of GBV in prisons and for the care of victims (Stop Gender Violence Campaign, 2017).
Training	✓ Inadequate training on sexual violence of medical staff in prisons (ibid.).
Resources	✓ Insufficient ratio of officials-to-inmates, leading to inadequate supervision of inmates, a key factor in the prevalence of sexual violence (Muntingh and Satardien, 2011).
Accountability and coordination	✓ An ineffective internal complaints mechanism within the Department of Correctional Services, especially in relation to sexual violence (ibid.).
Department of Traditional Affairs (DTA)	
Policy and guidelines	✓ Failure to provide a sufficient definition of female genital mutilation (FGM) in the Children’s Act and Promotion of Equality and Prevention of Unfair Discrimination Act (Stop Gender Violence Campaign, 2017).

Source: Adapted from the National Strategic Plan on Gender-based Violence Shadow Framework, Stop Gender Violence Campaign (2017).

Various programmes have been introduced to increase the participation of women in science, technology and innovation. These include scholarships, internships, technology skills development and targeted technology support platforms, led by both the Government and the non-state sector partners.

Interventions that are required urgently to achieve gender equality and women empowerment by 2030 include increased resources, improved training, strengthened policy implementation, and increased monitoring and evaluation. One example is the need for more effective means of monitoring progress towards ending discrimination.

4.6 Goal 6: Ensure availability and sustainable management of water and sanitation for all

Main messages

South Africa has achieved significant improvements in access to safe water and sanitation services. However, some areas, particularly informal settlements, remain underserved.

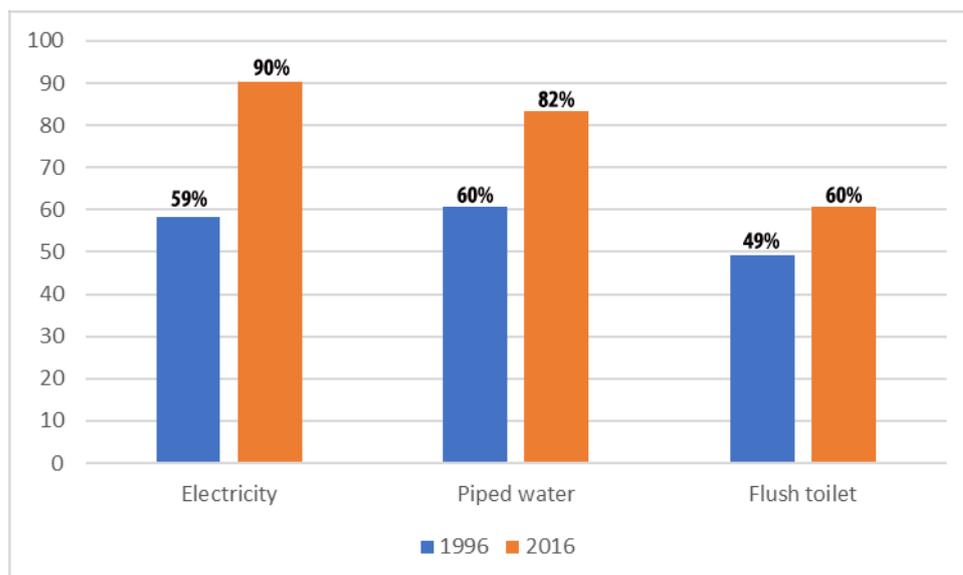
Sustainability of water resources is threatened by poor management that has led to excessive water losses and insufficient resources.

The current situation

Ensuring equal access to basic services is fundamental to socio-economic development. The share of the population with safely managed drinking water rose from 60 per cent in 1996 to 75 per cent in 2016 (Figure 8). However, 84 per cent of urban dwellers had access compared to only 60 per cent of rural residents. Mothetha, Nkuna and Memaet (2013) suggest that these disparities exist because rural municipalities often lack the capacity and skills required to support water services provision.

The share of the population with access to at least basic sanitation services increased from 59 per cent in 2000 to 83 per cent in 2017. Progress in improving sanitation is hampered by a lack of infrastructure, particularly in rural areas. Poor operation and maintenance of both water and sanitation infrastructure, combined with the use of infrastructure beyond the design capacity, is eroding reliability and sustainability of supply.

Figure 8. Access to critical public services improved dramatically, share of population, 1996–2016



Note: Data for electricity are 2017 rather than 2016.

Source: Stats SA (2017c).

The share of the population practicing open defecation fell from 12.6 per cent in 2000 to 2 per cent in 2017. The reduction was driven by the decline in rural areas from 25.5 per cent in 2000 to 4 per cent in 2017, while the share in urban areas remained low over the period.

The availability of renewable internal freshwater sources fell from 971 cubic metres per capita in 2002 to 821 per capita in 2014.¹⁴ Moreover, the quality

¹⁴ The source is the World Bank World Development Indicators database, accessed on 29 June 2019.

of freshwater sources is declining at an alarming rate for a country that is heavily reliant on surface water for social and economic development. In 2016, approximately 40 per cent of water bodies in South Africa had poor water quality resulting from pollution and the destruction of river catchments. There is a lack of consistency across data programmes, platforms and collection approaches indicating that overall water quality measurements are not reliable. Although some groundwater data are available for baseline reporting, there is no readily available method for measuring the indicator for groundwater quality.

In 2017, 52 per cent of wastewater going through waste water treatment works was safely treated and lawfully discharged into the water resource. Other sectors that discharge wastewater, such as mines, are not included.

South Africa's water stress level is 41 per cent, which is extremely high for a semi-arid country that is highly dependent on freshwater sources.¹⁵ Water stress leads to a deterioration of freshwater resources in terms of quantity such as depletion of aquifers from over use, drying up of rivers and streams, and quality such as nutrient enrichment, saline intrusion, pesticides and organic matter pollution) (European Environment Agency, 2019).

Service providers fail to capture incomes from 41 per cent of the water they provide, owing to high levels of leakage from poor maintenance. Revenue management also is poor, so that a large share of income, and thus the resources to maintain and improve water services, is lost.

The low share of land area covered by estuaries (0.23 per cent of land area) and wetlands (2.1 per cent) reflects poor protection of these resources and severe pressures from intensive agriculture, mining and urban sprawl (Department of Water Affairs and Sanitation, 2017: 26). Rivers are excluded from this analysis because South Africa does not have rivers that notably change in their extent. However, rivers are a key ecosystem type, and an indicator measuring trends in river ecosystem integrity should be developed.

The policy framework

The Constitution places a duty on the national Government, in cooperation with the other spheres of government, to ensure that the limited water resources are used to improve the quality of life for the people of South Africa. The Bill of Rights further provides for the right of every citizen to a healthy life, access to food and water, and to a protected environment.

¹⁵ 'Water stress' refers to the ability, or lack thereof, to meet human and ecological demand for water. Water stress considers several physical aspects related to water resources, including scarcity, quality, accessibility and environmental flows (see <https://pacinst.org/water-definitions>). The United Nations states that water stress starts when the water available in a country drops below 4,600 litres per day per person for all uses (www.unwater.org/water-facts/scarcity).

The NDP recognizes that water and sanitation services are cross-cutting issues, where adequate provision of services is essential to address poverty, unemployment, inequality and economic growth. Thus, water management has to be taken into account in planning for all 28 government departments.

The alignment by the NDP to SDG 6 is reflected through what the NDP aims to achieve by 2030:

- ✓ All main urban and industrial centres should have a reliable water supply that meets their needs, while increasing efficient agricultural water use would support productive rural communities.
- ✓ Strategic Water Source Areas (SWSAs), which supply the highest volume of water, will be protected to prevent excessive extraction and pollution.
- ✓ South Africa will fulfil its obligations concerning rivers shared with other countries.
- ✓ By 2030, all South Africans will have affordable and reliable access to safe water and sanitation.
- ✓ The efficiency of water use will increase across all sectors by 2030.

The National Water Policy (NWP), which sets out integrated policy positions for the protection, use, development, conservation, management and control of South Africa's water resources, forms the basis of the legislative framework for water (Karodia and Weston, 2001). The Water Services Act, 1997 (Act No. 108 of 1997), which provides a legal framework for the provision of potable (drinking) water and sanitation services, safeguards the right of access to sufficient water for basic water and sanitation, along with an environment that is not harmful to human health or well-being. The National Water Act (Act No. 36 of 1998) provides a legal framework for sustainable water resource management.

The National Water Resources Strategy (NWRS) is the legal instrument for implementing the provisions of the National Water Act and provides strategic guidance to the broader water sector on the range of activities required over a five-year period in order to realize identified water resource management goals.

The 2003 Strategic Framework on Water Services (SFWS) expands on the Water Services Act (WSA) and provides a comprehensive summary of policy with respect to the water service sector in South Africa and sets out a strategic framework for its implementation.

Aligned to the WSA and the SFWS, the National Sanitation Policy 2016 provides policy positions to address the identified policy gaps and challenges, as well as to address the country's new national and international development imperatives regarding sanitation (Box 5 outlines some innovative approaches).

Box 5. Innovative approaches to improving sanitation services

DST, in collaboration with the Bill and Melinda Gates Foundation, invested in a programme to pilot innovative sanitation technologies. This programme has enabled access to decent and appropriate sanitation services to previously underserved rural communities. It is also contributing to technology localization and unlocking industrialization opportunities for South Africa. Furthermore, an innovative water-efficient sanitation technology solution from the University of Loughborough in the United Kingdom is being applied to South Africa. The South African team spearheaded by DST has tested a local prototype, which once optimized may be mass produced.

The industry and Environment Directorate within the Department of Science and Technology (DST) is supporting the Wastewater Bioremediation Consortium. The consortium undertakes Reference Daily Intake (RDI) activities targeted at demonstrating and upscaling the artificially constructed wetlands bioremediation technology. Bioremediation technologies for the treatment of contaminated wastewater streams are a potential alternative for both domestic and industrial sectors at a time when energy costs are increasing and diverse environmental effects from the use of conventional chemical technologies are becoming more apparent.

South Africa earned a score of 70 per cent (according to a scoring system provided by the United Nations) on setting the prerequisites for integrated water resource planning, including defining policy, establishing relevant institutions and developing instruments. However, greater efforts are still needed to ensure that policies, strategies and plans are implemented on the ground, with a view to also supporting a protocol of shared water sources in SADC. South Africa signed four bilateral commissions, with Lesotho, Botswana, Namibia, Swaziland and Zimbabwe, to strengthen Integrated Water Resource Management, technology transfer, and access to clean water.

Legislated planning tools, such as Integrated Development Plans (IDPs) and Water Services Development Plans (WSDPs), are in place to support the participation of local communities in water and sanitation planning. The government is creating a new indicator to measure the impact of community participation, which may be of use to other countries.

The SDG Programme has also been highlighted as one of the key drivers of the National Water and Sanitation Master Plan (NW&SMP), which is essential to addressing South Africa's water and sanitation challenges.

Water supply needs to be increased by optimizing the water mix to include desalinated water and treated Acid Mine Drainage (AMD). The adoption of new technologies to help support water use efficiency will be instrumental in reducing demand for water.

Key challenges to achieving SDG 6 include:

- ✓ **Water Resource Management:** South Africa has limited water resources and is under severe water stress. Without efforts to increase water resources and reduce water stress, by 2030 South Africa will have a 17 per cent water deficit between supply and demand. The ongoing

drought may mean that this estimate is too low. All water use sectors experience excessive water losses. In the agricultural sector, which accounts for 61 per cent of water use, 27 per cent of water used is lost. Efforts to conserve water are limited and demand management is poor. Limited prioritization of water conservation and water demand management contributes to the excessive water losses in the municipal sector. Limited monitoring points and a decline in monitoring infrastructure are affecting the country's ability to evaluate the health of freshwater ecosystems. Similarly, insufficient flow measurement at critical control points of irrigation schemes makes it difficult to improve water use efficiency.

- ✓ **Service Delivery Gaps:** The unplanned, often complex spatial layout of households in informal settlements, combined with the lack of connections to the sewerage system, present significant challenges when installing water services infrastructure (Ensor, 2016). As a result, there can be a ceiling on the kind of water services that can be provided in informal settlements. It is impossible to provide basic sanitation services to some areas due to challenging topography and terrain. Social protests, characterized by violence and vandalism to water service infrastructure, also affect the delivery to water services.

Poor asset/revenue management: Inadequate asset management threatens the sustainability of services. The delivery of water as a product to the consumer must generate income in order to maintain sustainability. Good delivery of services encourages consumers to pay for this service, promoting even better infrastructure and services; poor delivery of services, in contrast, discourages payment for that service with the consequences of further degradation of the infrastructure. Thus, improving infrastructure and strengthening revenue management go 'hand in hand'. Every Water Service Authority is legally required to implement a five-year Infrastructure Asset Management Plan (IAMP) and a five-year Revenue Management Plan (RMP).

- ✓ **Water conservation and demand management:** South Africa's domestic water consumption is high, at 235 litres per capita compared with the world average of 173 litres per capita. Consumer's mind-set and habits must be changed to reduce water usage and to use water more efficiently.
- ✓ **Funding requirements:** The estimated investment requirement over the next ten years is ZAR899 billion (new infrastructure, ZAR381 billion; upgrades, ZAR133 billion; and rehabilitation, ZAR385 billion). There is a funding shortfall of 37 per cent that must be addressed, in part through a radical revision of water and sanitation tariffs.

In addition to driving the funding requirements of the National Water and Sanitation Master Plan (NW&SMP), the funding needs will be captured within the national grants to enhance delivery of water and sanitation services, including:

- ✓ The Municipal Infrastructure Grant (MIG)
- ✓ The Regional Bulk Infrastructure Grant (RBIG)
- ✓ The Water Services Infrastructure Grant (WSIG).

4.7 Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all

Main messages

Access to electricity has increased sharply since the apartheid era, but substantial challenges remain in connecting underserved areas and ensuring affordability for poor consumers.

While South Africa remains heavily dependent on coal for energy, the use of renewable energy sources has increased significantly. The Government is exploring multiple avenues for reducing carbon emissions in the energy sector.

The current situation

About 95.27 per cent of the population had access to electricity in 2017, up from 58 per cent in 1996 (Figure 8, above). Access is somewhat lower in rural areas, where 80 per cent of the population had electricity (African News Agency, 2018). Government support for renewable energy sources increased the share of renewable energy in final energy consumption from 14.6 per cent in 2013 to 26.2 per cent in 2015. Large-scale renewable energy projects contributed an additional 3.9 GW to the country's generation capacity during the 2012–2018 period. The 27 Power Purchase Agreement (PPA) projects signed in November 2018 are expected to add 2.3 GW more renewable energy generation capacity. Nevertheless, 77 per cent of South Africa's electricity is supplied by coal.

The policy framework

South Africa has various policies that have been developed in support of energy access:

Overarching national policies and strategic documents:

- ✓ National Development Plan (NDP), Vision 2030 (2012)
- ✓ Draft Integrated Resource Plan (IRP) (2019)
- ✓ Medium Term Strategic Framework (MTSF): 2014–2019 (2014).

Cross-cutting Energy Sector-Specific Policies and Strategic Documents:

- ✓ White Paper on Energy Policy (1998)
- ✓ White Paper on Renewable Energy (2003)
- ✓ National Integrated Energy Plan (IEP) (2016)
- ✓ Integrated Resource Plan (IRP) (2010).

Energy Sector Theme-Specific Energy Policies and Strategic Documents:

- ✓ **Supports access to clean and renewable energy:**
 - Universal Access Plan (2005)
 - New Household Electrification Strategy (2013)
 - Draft Electrification Master Plan
 - Electrification Bulk Infrastructure Policy Guidelines (2015)
 - Non-Grid Electrification Policy Guidelines (2012)
 - Schools and Clinics Electrification Policy Guidelines (2010)
 - Policy Guidelines for the Electrification of Unproclaimed Areas (2011)
 - Policy Guidelines for the Electrification of Farm-Dweller Houses (2010).
- ✓ **Supports both renewable and energy efficiency:**
 - Local Government Energy Efficiency and Renewable Energy Strategy
 - National Energy Efficiency Strategy (NEES) (2005)
 - National Energy Efficiency Action Plan (2013)
 - Draft Post-2015 NEES (2016).
- ✓ **Supports renewable energy:**
 - Draft Consultation Paper: Rules for Registration of Small-Scale Embedded Generation (2018)
- ✓ **Supports energy efficiency:**
 - Policy to Support the Energy Efficiency and Demand-Side Management Programme for the Electricity Sector through the Standard Offer Incentive Scheme (2010).

South Africa faces significant challenges in reaching the remaining households that lack access to electricity. It can be difficult to connect urban informal settlements to the grid, and the formalization of settlements is subject to significant delay. Efforts to encourage off-grid electrification have had little success due to the lack of coordination between stakeholders and limited activity in some programmes. Still, the use of off-grid approaches, for example, solar home systems, could increase access in informal settlements.

South Africa is employing pro-poor energy policies and programmes to ensure that once connected, everyone including poor households can afford basic electricity services. Nevertheless, affordability remains a concern, especially since not every poor household can access energy subsidies such

as Free Basic Electricity (FBE) and Free Basic Alternative Energy (FBAE). However, data on affordability are scarce, so the extent of this problem is not known.

According to the World Bank, South Africa has emerged as one of the developing country leaders in the global race to switch to sustainable energy by 2030. The primary sources of renewable energy in South Africa are solar, wind, hydroelectric and biomass. South Africa is a member of the International Renewable Energy Agency (IRENA), an international organization that promotes the use of renewable energy policies. It provides an assessment of resources, financial management, the policy and legal framework, and the capacity of the energy sector to achieve greater reliance on renewable energy. The Government is contributing to the rise in renewable energy through its energy procurement practices (Box 6).

Box 6. Renewable Energy Independent Power Producer Procurement Programme (REIPPPP)

The REIPPPP is a competitive tender process designed to encourage renewable energy projects development. By the end of December 2018, the REIPPPP had made the following procurements:

- ✓ 6,422 MW of electricity from 112 Renewable Energy Independent Power Producers (IPPs) in seven bid rounds;
- ✓ 63 IPP projects were connected to the national grid for a total of 3,876 MW of electricity generation;
- ✓ 32,700 GWh of energy has been generated by renewable energy sources procured under the REIPPPP since the first project became operational. Renewable energy IPPs have proved to be highly reliable. Of the 63 projects that have reached commercial operation date, 62 projects have been operational for longer than a year.

South Africa has implemented strong regulatory provisions to curb emissions and promote cleaner energy production. Innovative programmes include the financing of research to encourage clean energy production, undertaking research on waste to energy, and developing a national bioenergy atlas to support bioenergy development. Progress is being made to increase reliance on renewables in the transport sector (Box 7). To encourage increased renewable energy generation by the private sector, the South African Revenue Service (SARS) has amended Income Tax Act No. 58 of 1962 to include accelerated depreciation for renewable energy assets.

Box 7. Increasing reliance on renewable energy in transport

Steps are being taken to *decarbonize* the transport sector and lower its emissions by supporting the uptake of electric and hybrid cars, the use of cleaner fuels and more energy-efficient technologies, the expansion of non-motorized transportation, and an efficient and integrated Bus Rapid Transport System, among others. Progress has been made in enhancing the City of Tshwane's bus fleet using compressed natural gas (CNG). The City of Johannesburg is using a dual system for their bus network with a combination of diesel and CNG. For phase 2, the City has identified CNG and electric busses as potential newer technologies. The City of Cape Town has selected to procure electric busses, which are currently undergoing testing.

South Africa's location, geography and size provide opportunities for the exploitation of renewable energy resources. The long coastline provides favourable conditions for wind power, and the semi-arid climate and flat terrain are ideal for solar power. The major barriers to increasing reliance on renewable energy include lack of capacity, marginalization, corruption, poverty, environmental degradation, the limited energy innovation system and the high cost of renewable energy technologies. Investors choose to invest in large-scale, non-renewable resource companies such as Eskom, rather than Independent Power Producers such as BioTherm, Mulilo and Juwi South Africa. The Government is involved in several initiatives to testing innovative approaches to improving the use of renewable energy sources (Box 8).

Despite the rise in the generation of renewable energy, achieving substantial reductions in carbon emissions remains a challenge given the important role that coal plays in energy generation and the high energy intensity of production.

Key interventions that the country could consider going forward are:

Addressing programme and data issues concerning energy affordability:

- a. The Cooperative Governance and Traditional Affairs (CoGTA) Department that oversees the implementation of the pro-poor subsidy programmes together with the Department of Education (DoE) should:
 - ✓ ensure that all municipalities have systems in place to register new indigent households and update old indigent registers;
 - ✓ provide support to municipalities so that every indigent household can benefit from these subsidy programmes;
 - ✓ develop consistent pro-poor subsidy policies to be prescribed across all municipalities.
- b. The four priority areas in the energy sector are:
 - ✓ addressing policy and programme concerns around universal access to electricity;
 - ✓ addressing the market structure issues threatening large-scale renewable energy projects;

- ✓ improving the effectiveness of small-scale renewable energy projects;
- ✓ increasing the efficiency of energy use.

Box 8. Technological innovations to reduce carbon emissions

The Government is investing resources in developing alternatives to carbon-based energy.

Hydrogen fuel cell technology

The development of hydrogen fuel cell technologies would help to increase manufacturing capacity and job creation, while providing a clean and reliable energy source. The Department of Science and Technology (DST) is making good progress in implementing the Hydrogen SA (HySA) Strategy, demonstrating fuel cell technology as a viable source of clean energy in South Africa. In the 2017/18 financial year, DST installed the first HySA-developed fuel cell system at Poelano Secondary School in the North West to provide power for lighting and computer equipment. This initiative demonstrates how renewable energy can meet the needs of communities without access to the main electricity grid.

The renewable energy hub and the Spoke Programme

Building on the success of the Technology for Rural Education and Development programme in Cofimvaba (in the Eastern Cape), Solar Turtle, a spin-off company of the Renewable Energy Hub and the Spoke Programme at Stellenbosch University, is expanding its footprint to other rural areas in South Africa and the Southern African region.

In 2017, in partnership with Nedbank, the SolarTurtle team launched its 100 per cent renewable energy-powered ‘mobile bank in a shipping container’ in Mncwasa village, in the remote Mbashe Local Municipality in the Eastern Cape. This cashless, wireless enabled branch is a pilot to explore the feasibility of switching from the Telkom and Eskom networks, which are vulnerable to cable theft and unscheduled downtimes. The lessons learned will be used to guide a possible roll-out in remote rural areas in South Africa and the rest of the continent. The SolarTurtle initiative also received support from the European Science and Technology Union, securing a contract for the roll-out of the initiative in Lesotho to empower women entrepreneurs by providing access to clean forms of energy.

The Manganese Precursor Programme

Batteries and other systems that store energy for later use are rapidly becoming a major focus of global attention. South Africa is endowed with an abundance of high-quality manganese ore, which is an important component in the production of batteries. The manganese precursor pilot facility in Nelspruit, launched on 11 October 2017, is a first step towards finding partners to fast-track the establishment of a precursor manufacturer in South Africa.

Gathering data on household usage of clean fuels

Establishing a dedicated, off-grid management authority would strengthen governance in the decentralized, renewable energy technology sector. The DoE's role in overseeing this part of the value chain is limited to support for the off-grid concession programme restricted to the use of solar photovoltaic (PV) technologies (DEA and SANEDI, n.d.:74). An entity with a mandate to "facilitate, contract and manage decentralized renewable energy technology programmes and initiatives within the off-grid space" (ibid: 13) is needed. This entity would further assist in leveraging the use of different renewable energy technologies (ibid).

South Africa could consider the development of a grid network master plan that "determines the deep off-grid areas and manages the inevitable interface between an expanding grid and a shrinking off-grid environment" (DEA and SANEDI, n.d.: 75). The master plan would provide some certainty to planners, donors, investors, etc. by showing the geographic areas that cannot be accessed by the grid as well as the key "spatial and temporal details of grid versus off-grid systems" (ibid.). This would also help to harmonize the implementation of the grid and off-grid electrification projects that are sometimes executed as different programmes, for example, INEP and municipal and presidential projects.

4.8 Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all

Main messages

South Africa faces prolonged slow growth and high levels of unemployment (particularly among women and youth).

The burden of unemployment is highest among blacks and coloured population.

A wide range of interventions to improve the business climate, increase spatial integration and promote innovation are necessary to boost rapid and job-rich growth.

The current situation

South Africa is the most advanced economy (in terms of technological, financial and physical infrastructure) and the most sophisticated private sector on the continent and the only African member of the G20. It is also the most industrialized and diversified economy in Africa and one of the four

upper middle-income economy.¹⁶ Its foreign exchange reserves are on of the largest and has the largest pension fund in Africa.

The year-on-year quarterly increase in GDP fell from 3.0 per cent in 2010 to 0.8 per cent in 2018 (Figure 9). The trend decline in GDP growth since the early 2010s is due to a number of factors. The fall in international commodity prices from 2012–2016 is estimated to have cost 4 percentage points of GDP (World Bank, 2017). Moreover, the South African economy lacks the dynamism to shift resources quickly in response to changes in prices, due to remaining oligopolies and gaps in physical infrastructure and education that create large productivity differentials across sectors (IMF, 2018). Infrastructure bottlenecks, including severe power outages and transport difficulties, together with labour-management conflicts, have impaired productivity. The need for fiscal consolidation to contain increasing levels of public debt, which exceed 50 per cent of GDP (IMF, 2018) has reduced the stimulus that government policy can offer to demand. Uncertainty over government policy, in particular related to the debates over land reform, investor rights and petroleum and gas exploration, have restrained private sector investment (World Bank 2016b).

While the country has come out of the 2015–2017 recession, in 2018 GDP increased by less than one per cent, or below the 1.6 per cent rise in population, and employment levels continued to decline. Mining sector output remains depressed, and while manufacturing is picking up, its share of GDP has fallen, from 15 per cent in 1994 to 12 per cent in 2017. Key limitations on growth in manufacturing include inadequate infrastructure, declines in expenditures on innovation, a poor climate for entrepreneurship and an insufficient supply of the sophisticated skills required for a modern, competitive economy. There is a particular lack of education in STEM fields. For example, only six of every 1,000 children who started Grade 1 in 2001 chose to pursue a STEM qualification at a tertiary level, only three of whom would complete the qualification.

¹⁶ Others are Botswana, Gabon and Mauritius.

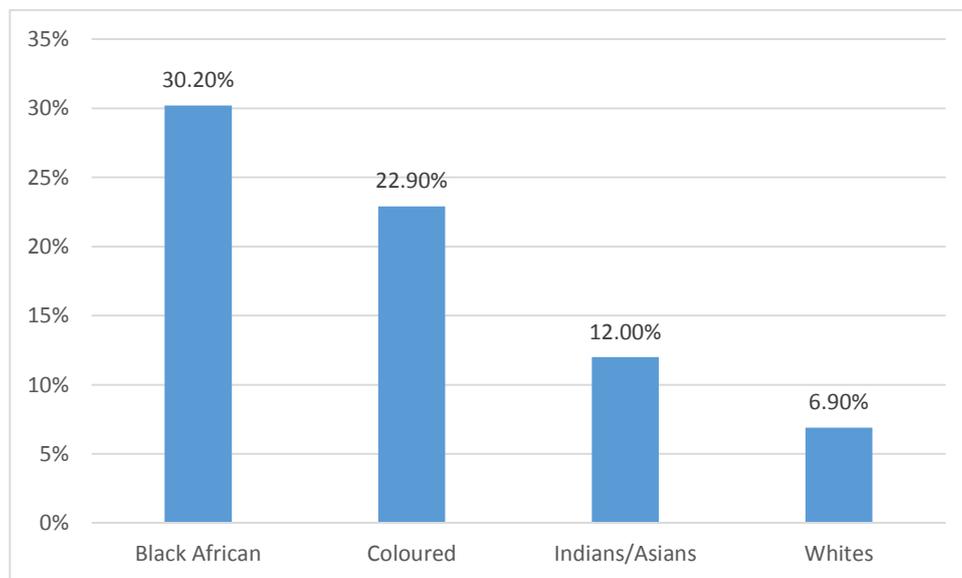
Figure 9. GDP growth has declined since the beginning of this decade



Source: Statistics South Africa database.

Employment levels continued to increase in 2018, while the unemployment level also increased resulting in an unemployment rate of 27.1 per cent, compared to 22.5 per cent in 2008. Unemployment rates are particularly high for women (29.6 per cent in 2017, compared to 25.7 per cent for men) and for youth aged 15 to 24 (53.4 per cent). Moreover, unemployment rates differ dramatically by population group. In 2016, Unemployment rate for black Africans was 30.2 per cent, compared to 12 per cent for Indians/Asians and 6.9 per cent for the white population group (Figure 10).

Figure 10: Unemployment rate by population group



Source: Stats SA, 2017

The policy framework

The NDP aims to eliminate poverty and reduce inequality through an increase in inclusive economic growth (NPC, 2012). Going forward, the following interventions should be considered (beyond those discussed under other SDG targets):

- Given the key role that small businesses play in stimulating economic activity and employment, as well as advancing broad-based empowerment, the Small Business Incubation Programme should be expanded. The Programme provides budding entrepreneurs with physical space, infrastructure and shared services, access to specialized knowledge, market linkages, training in the use of new technologies, and access to finance.
- The Framework Agreement, reached during the 2018 Presidential Jobs Summit, commits social partners to undertake concrete steps to avoid retrenchment and support companies in distress. This will be combined with a Rapid Response Team of experts to assist struggling businesses. In addition, the Training Layoff Scheme will be immediately revived and improved to mitigate job losses. In line with these commitments, focus should be placed on the export of manufactured goods and trade in services, such as business process outsourcing and the remote delivery of medical services.
- Together with a focus on exports, measures should be taken to increase local demand by, inter alia, increasing the proportion of local goods and services procured both by the Government and the private sector.
- Interventions should be developed to support spatial integration by improving connections between the 'buffer zones' between townships and economic centres, upgrading informal settlements, and building lower-income housing in the leafy suburbs and city centres. Land acquisition programmes should be coordinated between relevant municipalities, provincial and national departments.
- South Africa has the resources, talent and youth to embrace digital industrialization. Government and regulatory agencies need to collaborate closely with business and civil society in order to participate in the digital economy.
- Current programmes should be expanded towards an inclusive and responsive system of innovation that is able to support inventions that originate outside the realms of formal institutions of innovation. These programmes include the Government's Grassroots Innovation Programme and the Youth Technology Innovation Programme, as well

as strengthening of the role of intermediary organizations in the innovation system to achieve inclusion.

As a sign of the Government commitment to promoting job-rich growth, the President signed into law the following in December 2018: National Minimum Wage, Basic Condition of Employment Act, Labour Relations Amendment, Labour Laws Amendment, Unemployment Insurance Amendment, and Extension of Security of Tenure Amendment Acts.

This regard, there are extensive policy, legal and institutional frameworks in place to promote decent jobs and rapid economic growth in the country. The main challenge is enforcement. The new regime is committed to accelerated implementation of existing policy, legal and institutional frameworks for job-rich growth. In particular, we are committed to reforming our public enterprises to serve as growth accelerator, to leveraging the power of our private sector and deepen skill development for youth. While the Government is ready to bridge the implementation gap, we call on the private sector and our social partners to join us in turning this challenge in to opportunities for inclusive growth and development. The recent effort by the Global Compact Network South Africa, in turning the SDGs into business opportunities, in using the SDGs interconnectedness to create economic ecosystem impact and in promoting responsible businesses – especially in re-imaging corporate leadership, thriving communities and a healthy environment- in the country is highly commendable. Private sector must use business to promote profit, people and planet simultaneously – they are mutually inclusive.

4.9 Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Main messages

South Africa faces significant challenges in achieving efficient infrastructure services, including outdated railroad facilities, overburdened roads and poorly-integrated mass transit.

The country is facing deindustrialization. Manufacturing has declined as a share of GDP since the end of apartheid, and the low, and in some respects, declining level of resources devoted to research and development constrains innovation.

The current situation

South Africa has the most developed physical and economic infrastructure on the continent. If well-leveraged, it could help facilitate the country's integration to the rest of the continent's economy. Strong public-private partnership contributed immensely to the country's infrastructural development.

However, a number of challenges remain, including outdated rail infrastructure, high ports costs, and a shift of freight from rail to road, which strains the road system (NPC, 2012:183-4).

South Africa's progress on the targets of SDG 9 has been uneven:

- ✓ Manufacturing has declined for the past 25 years. The share of the manufacturing sector in GDP fell from 15 per cent in 1994 to 12 per cent in 2017. In the first quarter of this year, value added in manufacturing (at constant prices) was 11 per cent *below* the level of the first quarter of 1993, while GDP had roughly doubled since its most recent peak of 58.6 per cent in 2008.
- ✓ The gross expenditure on research and development (GERD) fell from 0.89 per cent of GDP in 2008 to 0.8 per cent in 2015, and the ratio remains far below the target set by national policy. Business Expenditure on Research and Development (BERD) has fallen steadily number of Full-Time Equivalent (FTE) researchers per million population rose from 398.6 in 2007 to 475.1 in 2015, and the total number of FTE Research and Development (R&D) personnel increased by approximately 11,179. The bulk of these increases came from higher education, rather than business.
- ✓ Third-generation networks have achieved almost universal population coverage, and Long-Term Evolution (LTE) networks now cover slightly more than three quarters of the population. LTE network coverage growth rates are, however, starting to decline quite sharply. Problems with the affordability of mobile data have tended to limit the time many consumers spend online. Mobile telephony is the primary way that most South Africans connect to the outside world: 88.2 per cent of households rely only on mobiles for telephone, and 57 per cent access the internet through a mobile phone, compared to 10.5 per cent at home and 16.9 per cent at work. Progress towards the implementation of fifth-generation networks depends on the successful release of an appropriate spectrum in South Africa. To date, spectrum management has proved particularly challenging in the country.

The policy framework

The NDP suggests that a focus on the following four policy areas will be required going forward:

- ✓ Creating workable urban transit solutions
- ✓ Strengthening and optimizing freight corridors
- ✓ Providing long-distance passenger transport options
- ✓ Improving rural access and mobility (National Planning Commission, 2012: 185–8).

While SoEs dominate parts of the transport sector, the Draft Revised White Paper on National Transport Policy urges increased private sector participation to gain alternative sources of finance (Department of Transport, 2017a:32). The Single Transport Economic Regulator (STER) is envisaged as playing a key role in the creation of an investor-friendly environment, for example, by creating the regulatory systems that enable third party infrastructure access in rail. The STER will be implemented by the Economic Regulation of Transport Bill 2018, which is still in the legislative process.

The key policy document in the rail sector is the Draft White Paper on Rail, which summarizes its mission as follows:

To recognize and understand rail's heritage of missed opportunities, strategic missteps and structural impediments, and hence to identify and mobilize funding and resources to leverage rail's inherent competitiveness to reposition it as backbone of South Africa's land transport task (Department of Transport, 2017b: 28).

While much of the road network is funded by the State, efforts to impose tolls on major corridors, operated either by concessionaires or by South African National Roads Agency Limited (SANRAL), have been resisted. For example, the Gauteng Freeway Improvement Programme (GFIP) has been the subject of massive and coordinated public resistance and non-payment.

The NDP supports the need for industrial policy, for example, to identify sectors with export opportunities, but emphasizes the need to support industries rather than firms, to promote competition and to provide for timely exit strategies (NPC, 2012:115). The Government is investigating the policies required to support businesses in exploiting the ongoing fourth industrial revolution (4IR), and has established a Presidential Commission to guide policies in this area (Box 9).

Box 9. Case study: Establishment of the Presidential Commission on the Fourth Industrial Revolution

The Commission will coordinate the development of South Africa's action plan to guide the response to the Fourth Industrial Revolution (4IR). As part of this effort, the Commission will recommend policies that would position South Africa as one of the leading countries in the evolution and development of the 4IR.

More specifically, the Commission will:

- ✓ Develop an integrated national strategy and plan to respond to the 4IR, including detailed interventions to be carried out in achieving competitiveness of agriculture, finance, mining, manufacturing, information and communication technology (ICT) and electronics, and business with science, technology and innovation as a cross-cutting enabler;
- ✓ advise on strategies to enhance South Africa's global competitiveness;
- ✓ advise on a research programme to advance 4IR;
- ✓ advise on the skills development and future of work;
- ✓ make recommendations on enabling relevant infrastructure for South Africa to participate in the digital economy;
- ✓ recommend an institutional framework and mechanism to coordinate 4IR programmes;
- ✓ recommend approaches to address inclusivity and the digital divide;
- ✓ recommend interventions to enable entrepreneurs and micro-, small- and medium-sized enterprises (SMMEs) to take advantage of 4IR;
- ✓ mobilize resources to support the 4IR interventions;
- ✓ recommend mechanisms to measure the impact of Interventions on 4IR.

The Commission is composed of various stakeholder representatives, including the public sector, business, academia and research institutions, experts, labour, SMMEs, youth, women and non-governmental organizations.

The South African Research Chairs Initiative (SARChI) was implemented in 2006 by DST and the National Research Foundation (NRF) to establish research chairs at public universities in South Africa whose main goals are to:

- ✓ expand the scientific research and innovation capacity of South Africa;
- ✓ improve South Africa's international research and innovation competitiveness while responding to the country's social and economic challenges;
- ✓ attract and retain excellent researchers and scientists;
- ✓ increase the production of masters and doctoral graduates;
- ✓ create research career pathways for young and mid-career researchers, with a strong research, innovation and human capital development output trajectory.

In 2016, 338 master's and doctoral students were fully funded or co-funded in designated niche areas (advanced manufacturing, aerospace, chemicals,

mining, advanced metals and ICTs) and by 31 March 2017, 334 master's and doctoral students were fully funded or co-funded in these areas.

Finally, the Government is investing technologically-advanced approaches that will contribute to meeting the SDG 9 targets for transport and innovation (Box 10).

Box 10. Innovative approaches to meeting SDG 9 targets

The Gautrain Concession

The Gautrain Rapid Rail Link passenger concession is the only example of the integration of private sector investment into the provision of rail transport services in South Africa. The Gautrain runs a vertically integrated 80 km network in Gauteng, which does not interconnect with any other rail network. The project was run as a public-private partnership, using a design, build, operate and maintain (DBOM) model. The bulk of the investment required for infrastructure and rolling stock was financed directly by the State, which retains public ownership of these assets, with the concessionaire contributing just over 10 per cent of required investment funds for the system. Management (operation and maintenance) of these assets was then transferred to the concessionaire. In addition, the concessionaire receives ongoing operational cost subsidies.

While the technical performance of the concessionaire has been good and ridership numbers have increased, increasing attention is being paid to the high operational costs of the system, associated largely with the operational subsidies granted to the concessionaire. In the 2017/18 financial year, these subsidies approached ZAR1.6 billion, which some commentators have suggested is disproportionately large given the relatively small number of commuters serviced.

Fourth Industrial Revolution – Intsimbi Future Production Technologies Initiative

The Department of Trade and Industry's Intsimbi Future Production Technologies Initiative programme ("the Intsimbi programme") is a system solution for technical and vocational skills development as well as the development of enterprise competitiveness for Industry 4.0. The programme will include training in robotics, mechatronics, industrial maintenance, specialized tooling, coded welding and digital technical skills, etc.

The Intsimbi model has succeeded in creating highly innovative industry-driven solutions that can sustainably be expanded to position South Africa's advanced manufacturing sector for the 4th Industrial revolution and to train talented young people for a future in advanced manufacturing. The strategic aim of Intsimbi programme is to prepare the industrial skills base for participation in a highly automated production environment while addressing critical skills shortages.

The Reagenz project

The DST Industry and Environment Directorate's Reagenz project is aimed at exploiting indigenous microbial biodiversity as a basis for competitive advantage. The initiative combines metagenomic-based bioprospecting and biomanufacturing technologies to exploit rich Cape Floral Kingdom and other indigenous African microbial diversity as market-read

y reagent enzyme products. This goal is to replace imports of reagents by the local development of indigenous microbial diversity (IMD)-based technologies.

Sources: The Citizen, 14 January 2019 and DST.

4.10 Goal 10: Reduce inequality within and among countries

Main messages

South Africa has one of the most expansive social protection globally – covering over 30 percent of the population. And despite extensive policies and programmes to foster inclusive growth, inequality remains high – one of the highest in the world.

The legacy of apartheid, particularly the economic isolation of black townships and unequal distribution of land, continues to weigh on incomes in poor communities.

The current situation

According to the 2018 World Inequality Report (World Inequality Lab, 2018), South Africa is one of the most unequal countries in the world. This is due to its historically deep-rooted economic, social and political exclusion of the apartheid regime, which has created structural bottlenecks in addressing poverty, inequality and unemployment. It again weakens the impact of progress achieved social sector like education, health, and housing.

In 2014, the top 10 per cent of the population received two-thirds of the national income, while the top 1 per cent received 20 per cent. The country's Gini coefficient is 0.64,¹⁷ or more than 50 per cent higher than the global average. Indeed, the gap between South Africa's Gini and that of even the 10th most unequal country in the world is very large (Figure 11).

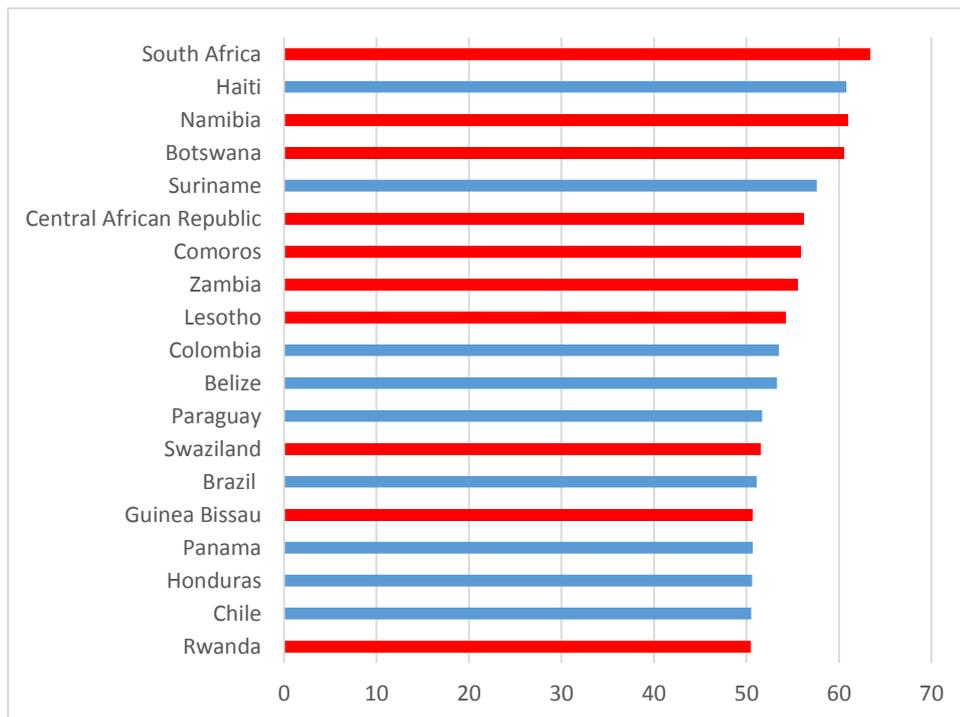
South Africa's position among the most unequal countries in the world is manifest across many aspects of society, including:

- ✓ the sharp divide in the quality of education between rich and poor, which makes social mobility among the marginalized population very difficult;
- ✓ high levels of poverty and unemployment among black Africans and the coloured, particularly among the youth, which is challenging social cohesion with the society;

¹⁷ The Gini is a measure of income inequality, ranging from 0 to 1, where 0 representing a perfectly equal society and 1 a perfectly unequal society.

- ✓ the vulnerability of women to violence, especially gender-based violence, which is eclipsing the remarkable progress achieved in women political empowerment globally;
- ✓ poor access to electricity, piped water and basic sanitation services among the 11 per cent of urban dwellers who live in informal settlements;
- ✓ the South African economy is capital intensive, highly concentrated(monopolistic and oligopolistic in structure);
- ✓ the marginal tax rates for the top income earners declined from 44 per cent in 1990 to 41 per cent in 2015 (Vasss and Hayo, 2018) coupled with high-level of illicit financial flows; and
- ✓ the labour share of national income, which declined from 55 per cent in 1998 to 48 per cent in 2008, steadily rose from 2009 to 54 per cent in 2018 – thanks to the improved industrial, taxation and labour market policies.¹⁸

Figure 11. South Africa leads the 19 most unequal countries globally



Source: Odusola (2017).

There are several drivers of the high inequality of incomes in South Africa. First, wealth holdings are unequally distributed: the top 10 per cent of the distribution of households hold 71 per cent of the wealth, while the bottom 40

¹⁸ See Strauss and Isaacs (2016) for the dynamics of labour share of national income.

per cent hold only 7 per cent of the wealth (Department of Planning, Monitoring and Evaluation, Statistics South Africa and World Bank, 2018). High inequality of wealth in part reflects a highly unequal distribution of land holdings, rooted in the governance of land under apartheid. The South Africa Land Audit Report of 2017 pointed out that **only 7 percent of farms and agricultural landholders controlled 97 per cent of agricultural land holding**. And as much as 72 per cent of land in South Africa is held under private ownership, unlike the dominance of customary and communal landholding in West and Central Asia (ECA, 2003, Odusola, 2019). Institutionalizing a pragmatic, win-win land reform is at the heart of addressing income and wealth inequality in the country. Second, wage income is highly unequal: highly-paid workers in the formal sector, who make up less than a fifth of the workforce, earn nearly five times the average wage in low -skilled jobs, which are often informal and thus a less reliable source of income over time.¹⁹ Third, many poor people have little access to wage employment, and are heavily dependent on grants. Fourth, inequality of opportunity is high. That is, one's earnings potential is heavily reliant on factors that are not under the control of the individual, including place of birth, father's occupation, parents' education, race and gender. Essentially, inequality is passed down from generation to generation.

The SDGs focus on the need to reach the furthest behind first. In terms of inequality, and as argued by Odusola (2019), this refers to the bottom 40 percent of the population on the income ladder. Measuring the severity of the disadvantages this group face is key to measuring progress towards reaching those who are left behind. The average income of the bottom 40 per cent of the income distribution is only 15 per cent of the average income of the top 10 per cent (Odusola, 2019). Ensuring that the bottom 40 per cent of the population (including people living in shanties in cities, rural dwellers and the unemployed youth) have access to national assets such as land, infrastructure and financial assets remains critical to tackling income inequality.

As a result of apartheid spatial planning, most black people live on the outskirts of major cities and economic hubs, which limits their access to economic opportunities. Moreover, economic development in black townships has been limited since the end of apartheid. Nevertheless, inequality between blacks and whites has lessened, on average, since the end of apartheid. However, poverty remains focused on blacks.

¹⁹ This and the following two sentences are based on Department of Planning, Monitoring and Evaluation, Statistics South Africa and the World Bank 2018

The policy framework

The Government has made considerable efforts to reduce inequality since the collapse of the apartheid regime in 1994, for example, through Broad Based Black Economic Empowerment (BBBEE), Access to Education, the Employment Equity Act and Women Empowerment. Nevertheless, inequality remains high and is increasing. Race, geography, education, age and access to labour markets are the key drivers of inequality. Inequality can only be addressed effectively by ensuring adequate coordination across government departments and dealing with the structure of the economy. South Africa faces what could be called 'structural inequality'.

Much of the Government's programme is related to the struggle to reduce inequality. Key interventions going forward should include:

- ✓ strengthening the massive social protection programme to make it more efficient and effective including the fragmentation of the social protection system;
- ✓ deepening the implementation of the Broad-Based Black Economic Empowerment (BBBEE) by making it more productive to contribute meaningfully to inclusive growth and development;
- ✓ the establishment of a national task team for an integrated framework to fight inequality;
- ✓ increased investment in early childhood development (ECD) and promote skill-based education system, while aligning the education system to labour market demands;
- ✓ revival and enhancement of agricultural value chains;
- ✓ use of the current grant system as a wedge to upskill the beneficiaries, thus increasing their chances of getting into the labour market;
- ✓ build on the achievement made on the tax system by promoting progressive taxation, including the implementation of solidarity tax, wealth tax, wealth tax, improved marginal tax rates and tackling illicit financial flows;
- ✓ implementation of a win-win land reform and rural transformation;
- and
- ✓ strengthening efforts to create jobs through promotion of labour absorption and entrepreneurship development programmes.

4.11 Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable

Main messages

A dramatic transformation of South Africa's urban settlements is essential to improve sustainability and inclusion. In particular, major efforts are required to upgrade services to informal settlements.

Despite some progress, many urban areas remain fragmented, with poor connections between transit modes and inadequate services.

The current situation

The share of the urban population that resides in informal dwellings equalled 12.2 per cent in 2017, somewhat higher than the 11.3 per cent share in 2014. Having a significant share of urban areas living in settlements without legal title for their homes and with poor or no access to city water, sewer and electrical connections is inequitable and a serious danger to social peace.

Major steps have been taken to improve public transport systems in major urban areas. For example, several South African cities, including Cape Town, Nelson Mandela Bay, Rustenburg, Ekurhuleni and Tshwane, implemented bus rapid transport systems after the success of these systems in Johannesburg. However, the peri-urban and rural areas in which most of the population resides still rely on minibuses, taxis or private vehicles as the principal means of transport. Improving the integration of the public transport systems within urban areas also remains a challenge.

The policy framework

In line with SDG 11 and the New Urban Agenda, South Africa's national urban policy, the Integrated Urban Development Framework, guides transformation of urban space with the goal of reversing the current inefficient and exclusionary spatial investment patterns in order to promote inclusive social and economic development and to strengthen urban resilience and protection of the urban environment. To create productive, inclusive and liveable cities, planning and land-use management practices must integrate infrastructure investment, public transport and human settlements. South Africa's priority is focused on informal settlement upgrading to most directly support community development and improve urban management.

There is considerable alignment between the individual targets and quantitative indicators in SDG 11 and that of the NDP. The NDP provides strategic guidance on national human settlement development, including an emphasis on upgrading informal dwellings. The primary objective of the NDP for urban areas is to improve access to secure housing, clean water and decent sanitation, underlining the importance of service delivery and housing supply to low-income households.

Box 11 describes innovative efforts to strengthen urban planning. However, successes remain fragmented and without comprehensive integration. As a result, the development of human settlements that are not sufficiently viable and do not have sustainable economies is being reinforced. At the same time, the failure to achieve more efficient, integrated spatial development increases the need for motorized transport, thus worsening pollution and contributing to climate change. The high level of economic and spatial inequality in South Africa is aggravated by the lack of adequately trained urban planning professionals. This is an even greater constraint at the local level, where a number of smaller municipalities lack planning capacity.

As South Africa moves towards 2030, the following interventions could be considered:

- ✓ development of different models of financing for human settlements;
- ✓ acceleration of informal settlement upgrading;
- ✓ development of indicators to track South Africa's commitments with respect to SDG 11;
- ✓ improvement of overall integration and linkages of transport-related policies and programmes. The public transport systems in some major urban areas do not function in a coordinated fashion, resulting in over-serviced and under-serviced routes. For example, bus services are not adequately linked to rail services, such as Metro Rail and the Gautrain.

Box 11. Initiatives to improve urban planning

Breaking New Ground (BNG)

BNG is a comprehensive plan for the sustainable development of human settlements. The National Government is expected to create an enabling environment for social housing through the development of policy and the enactment of legislation, and is mainly responsible for providing the regulatory and legislative framework and funding for social housing programmes. The Provincial Government is responsible for consumer protection and should aim to ensure fairness, equity and compliance with national and provincial norms and standards. The Provincial Government is expected to provide provincial legislation, capacitate the social housing framework, mediate conflicts and administer project capital grant funding. The local government should facilitate housing while encouraging new developments and projects, provide access to land and infrastructure, assist social housing institutions, and provide grant funding and access to bridging finance.

The Integrated Urban Development Framework (IUDF)

The IUDF is a policy framework for the reorganization of South African urban systems to make cities and towns more inclusive and resource-efficient, and good places to live, work, shop and play in, in line with the vision outlined in the National Development Plan (NDP). The objectives are to ensure spatial integration, improve access to services and promote social and economic inclusion.

Innovation Partnership for Rural Development Programme (IPRDP)

The first phase of the European Union-funded initiative focused on harnessing technology and innovation to improve access to decent and appropriate basic services in rural areas. The pilot initiatives of the first phase of the IPRDP supported access to off-grid water, sanitation and energy to improve the quality of life in often marginalized communities. The IPRDP also gave due consideration to building and enhancing the capacity of municipalities to embed science, technology and innovation in service delivery, and contributed to democratizing science, technology and innovation through concerted efforts to communicate in indigenous languages.

4.12 Goal 12: Ensure sustainable consumption and production patterns

Main messages

South Africa is committed to improving sustainability through increasing recycling programs and substituting for scarce materials.

Several innovative programs have been initiated to explore the potential for recycling, some involving advanced technology. However, strict adherence to implementation becomes critical.

The current situation

There are limited examples of progress in recycling. For example, the share of municipal waste that is recycled rose from 1.3 per cent in 2015 to 7.5 per cent in 2017. In 2016/2017, waste exchanges through Industrial Symbiosis in Gauteng (25 synergies) and KwaZulu-Natal (two synergies) reused 6,160 tonnes of waste destined for landfill, resulting in a savings of 8,800 tonnes of virgin resources (NCPC-SA, 2018). But considerable resources also are wasted. For example, Oelofse and Nahman (2013) estimate that food waste generation (the edible portion) in South Africa equals around 30 per cent of local production.

The policy framework

South Africa is party to multilateral environmental treaties, protocols and conventions, and national and sectoral legislation, policies and strategies have, to different degrees, incorporated sustainability principles. Nevertheless, there is still a need for a national sustainable development strategy and vision that connects these principles across sectors to cover all production and consumption patterns.

The 2008 Waste Act and the 2010 National Waste Management Strategy (NWMS) are designed to enforce DEA's constitutional obligation to ensure a safe and healthy environment. South Africa has joined the 10 Year Framework Programme on Sustainable Consumption and Production through the Department of Environmental Affairs (DEA). Since then, DEA has been actively involved in serving as the National Focal Point, in conjunction with DTI and numerous stakeholders. Key progress made by South Africa on the 10 Year Framework include:

- ✓ the development of policy and legislation;
- ✓ initiatives to save energy;
- ✓ enabling environments for renewable energy;
- ✓ major move towards cleaner production piloted and implemented through industry;
- ✓ establishment of mechanisms for funding and sustainable procurement;
- ✓ increased consumer protection and awareness.

The Council of Scientific and Industrial Research (CSIR) completed its analysis of the National Household Waste Recycling Behaviour Survey for South Africa in 2015. This included survey data on packaging waste behaviour for 3,620 households and on food waste for 1,720 households in Gauteng. Comparing the results with the 2010 survey yields insight into

trends in recycling behaviour. The percentage of dedicated recycling households in large urban areas almost doubled from 2010 to 2015, but remained at only 7.2 per cent. The share of dedicated recycling households in smaller towns and rural areas was only 2.6 per cent. Of the four recyclables surveyed (plastic, paper, glass and metal), plastic showed the largest increase in the percentage of households that recycle this material, followed by glass and metal, with paper showing the smallest growth in the number of recycling households. The data also suggest that it is easier for recycling households to increase their recycling (in terms of the quantity or diversity of recyclables) than for non-recycling households to start recycling. The challenge is therefore to find the triggers that will encourage consumers to start recycling and then put measures into place to support ongoing recycling behaviour.

Various innovative programmes have been undertaken to improve the sustainability of production:

(i) The Industry and Environment Directorate within DST is supporting the Bio-refinery Reference Daily Intake programme, which is aimed at the production of materials and chemicals through the sustainable exploitation of biological resources. The programme includes a number of projects using new and improved biorefinery value chains from lignocellulosic feedstock, waste residues and other agricultural raw materials, and various biomass resource streams.

(ii) The 2017 Operation Phakisa Lab on the Chemical and Waste Economy aimed to support the South African economy and create jobs while reducing its environmental footprint. The overall goal was to investigate how the contribution of the chemicals and waste economy can be increased to reach the MTSF and the NDP targets and job creation while reducing the negative environmental and health impacts of chemicals and waste.

(iii) The Working for Waste programme is a preventative measure to ensure that both social and ecological sustainability are achieved through the implementation of sustainable waste management practices.

The Government emphasizes the use of procurement as a tool for environmental policy. However, eligibility for this kind of procurement depends only on the nature of the products, while it would be more effective also to take into account whether contractors employ environmentally sound practices (Bolton, 2008).

The main limitation faced by South Africa in reporting progress in SDG12 targets is a general lack of data. For most targets, there are no accurate primary data to measure progress over time. National data indicating progress are available for reporting only on indicators 12.2.2 and 12.4.1D.

Also, there is no established methodology for indicator 12.2.1 (UNSD, 2018), despite well documented and established methodologies for life cycle assessments (LCAs) of specific materials.

4.13 Goal 13: Take urgent action to combat climate change and its impacts

Main messages

South Africa is taking a lead role in efforts to measure climate change and limit carbon emissions. Strategies have been adopted at the national, provincial and local levels to mitigate and adapt to the impact of climate change.

However, the rising wave of climate change impact is complicating governments efforts to respond to socio-economic challenges like poverty, inequality and unemployment.

The current situation

The average temperature has increased in South Africa in each of the last eight decades, and in 2017 it was predicted that the average temperature would increase twice as fast as temperatures in the rest of the world (Nkanhjeni, 2018).

The climatic zones across the country are shifting, ecosystems and landscapes are being degraded, and our terrestrial and marine systems are being overstressed. The recurring heatwaves and droughts are evidences of the daunting challenges of climate change. The water crisis in Cape Town and the cyclone in in Kwa-Zulu Natal, which led to 70 fatalities, are recent examples to show the impact of climate change is real. The heavily affected people (including people in informal settlements, peasant farmers, and unemployed) do not have capacity to cope with the effect of climate change and are more likely to experience intergenerational poverty.

South Africa is committed to implement its Intended Nationally Determined Contributions action plans to reduce its greenhouse gas emission and we have enacted legislations and put policies in place to implement our international obligations such as the National Environmental Management Air Quality Act, the Carbon Tax Act and the Draft National Climate Change Adaptation Strategy recently launched. Efforts to establish the Inter-

Ministerial Committee on Climate Change,²⁰ promulgate Climate Change Bill and promote renewable energy are key in our agenda.

The policy framework

South Africa continues to engage in efforts to fully operationalize the Paris Agreement and to raise the level of ambition, both at the international and national levels. South Africa, along with Rwanda and Nigeria, launched the African Alliance on the Circular Economy at the 23rd United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (CoP23) in Germany in November 2017. South Africa submitted its Nationally Determined Contribution (NDC) to the international community, which consists of three distinct components: (i) mitigation; (ii) adaptation; and (iii) the means of implementation statement. The NDC builds on South Africa's 2009 emission reduction pledge and presents an emission reduction trajectory range for 2025 and 2030.

In addition to operationalizing global efforts at the country level, South Africa convened a Talanoa Dialogue in August 2018. The Talanoa Dialogue is the first of these multilateral dialogues ahead of the full operationalization of the Paris Agreement from 2020. As such, it is an important opportunity for South Africa and other Parties to demonstrate their unwavering commitment to the Paris Agreement.

The South African NDC sets a number of national adaptation goals, including to develop a national adaptation strategy and plan, to strengthen institutional capacity for addressing adaptation at all levels, and to develop a national early warning system, among others.

South Africa has implemented a comprehensive set of strategies, policies and sector plans within key sectors of the economy in order to reduce greenhouse gas (GHG) emissions, which include, among others, the Integrated Resource Plan (IRP), the Energy Efficiency Strategy, the Industrial Policy Action Plan (IPAP), the Green Transport Strategy (GTS), the Climate Change Adaptation and Mitigation Plan (CCAMP) for the South African Agricultural and Forestry Sectors, and the National Waste Management Strategy.

The Department of Environmental Affairs (DEA) has undertaken vulnerability assessments across the nine provinces to determine climate risk with the view to develop appropriate responses. Provincial response plans have been

²⁰ In implementing the mandates of the Committee, the Presidency and the National Planning Commission are mandated to monitor and evaluate implementation, StatsSA to provide data and statistics, DEA to ensure legislative and policy development as well as enforcement while the United Nations Development Programme (UNDP) provides international oversight.

developed to outline adaptation options tailored to provincial needs. The Local Government Support Programme has helped 44 district municipalities to develop risk and vulnerability assessments and response plans. The Government also is active in measuring the impact of climate change on the national environment (Box 12).

Box 12. New advances in measuring the impact of climate change

The South African Environmental Observation Network (SAEON) is continuing its ocean and terrestrial measurements of the impact of climate change, with plans to improve the integration of these two measurements and to develop empirical algorithms for seamless carbon accounting products. To this end, a comprehensive five-year research plan integrating terrestrial and ocean carbon measurements into the Integrated Carbon Observatory Network has been implemented.

The ocean component completed the 8th year of ship-based carbon dioxide measurement, with the glider platform completing its fifth year. The Council of Scientific and Industrial Research (CSIR) contributed its second batch of quality controlled datasets through the Surface Ocean CO₂ Atlas (SOCAT), which positions the organization among the leading research institutions in the world on carbon biogeochemistry. Significant progress has been made on the development of the first African-based Earth System Model, the Variable-resolution Earth System Model (VRESM) at the CSIR, and its application in order to study climate change over Africa and the Southern Ocean.

On the terrestrial side, extensive simulations exploring the parameters that are the most important for describing the physiology of plant functional types occurring in the African savannahs were successfully performed, and the key parameters identified. The first global simulations with the Community Atmosphere Biosphere Land Exchange (CABLE) system coupled to the CASA-CNP model, which simulates the carbon-nitrogen phosphorous cycle, has also been performed – a key step to preparing the Variable-resolution Earth System Model (VRESM) for its application in the Intergovernmental Panel on Climate Change.

In moving forward, we are committed to work with our social, private and international partners to develop a comprehensive plan to transit to renewable energy economy, strengthen local legislative environment and capacity, complete and implement the National Climate Change Adaptation Strategy, scale up budgetary allocation to climate change actions, and strengthen our early warning and disaster risk management systems. Strengthening coordination of climate change action is key. In this regard, mainstreaming climate change actions across departments and agencies of government and also in partnership with our social and private partners remain critical.

4.14 Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Main messages

The legislative and policy framework emphasizes the importance of the sustainability of marine resources.

Advanced technology is being employed to study marine environments and enforce regulations promoting sustainability.

The policy framework

Section 24 of the Constitution guarantees a healthy environment to all South Africans. This constitutional mandate is directly linked to SDG 14 [Conserve and sustainably use the oceans, seas, and marine resources] in (i) preventing pollution and ecological degradation; (ii) promoting conservation; and (iii) securing ecologically sustainable development and use of natural resources while promoting economic and social development.

Ecosystem protection (including marine and coastal ecosystems) is one of the guiding principles of the NDP, which cites the dangers of ocean acidification and the depletion of fish stocks. Marine and coastal resources are further identified as important to the development of an integrated and inclusive rural economy.

Following the formulation of the National Framework for Sustainable Development (NFSD), South Africa approved the 2012–2014 National Strategy for Sustainable Development and Action Plan (NSSD 1). The Plan emphasizes the strategic importance of enhancing monitoring and reporting systems for improved environmental performance (Montmasson-Clair and du Plooy, 2012: 4). Consistent with SDG 14, NSSD 1 also emphasizes the importance of valuing, protecting and enhancing environmental assets and natural resources (including coastal and marine environments). However, a key challenge faced by the NSSD was assigning value to natural resources and ecosystems that would generate financial resources to support biodiversity conservation over the medium term (Republic of South Africa, 2014: 35)

Data challenges limit South Africa's ability to report formally on most of the SDG 14 targets. However, oceans and coasts are overseen by a comprehensive and progressive policy and legal framework that supports achievement of the Goal, and several programmes are having an impact on progress. Government policies and rules, such as fishing regulations, are

helping to preserve life under water. The Government has introduced the concept of the blue/marine economy, which has the potential to boost economic growth and job creation, and fosters infrastructural development, as enshrined in the provisions of operation Phakisa.

Advanced technology is being used to study marine environments and help enforce regulations designed to preserve sustainability:

- (i) A system to detect harmful algal blooms through remote sensing, making use of the detection of fluorescence and deriving chlorophyll in ocean water, was released to public sector and some aquaculture users to facilitate quick reactions to algae threats. Research chairs were established at the South African Institute for Aquatic Biodiversity (SAIAB) and the South African Environmental Observation Network (SAEON) to study ocean and land environments, respectively.
- (ii) The South African National Space Agency South African National Space Agency (SANSA) has contracted the French South African Institute of Technology at the Cape Peninsula University of Technology to develop, fabricate, test and launch a nano-satellite, ZACUBE-2, which is a precursor mission for a constellation of nine 3U cubesats that will be used to monitor illegal fishing in South African oceans. The main payload of the mission is an automatic identification system/very high frequency (VHF) data exchange system sensor. The ZACUBE-2 Mission is part of a grant award received from DST and will also have an imager that will be used for remote sensing.
- (iii) The Department of Agriculture, Forestry and Fisheries (DAFF) receives a daily report from the vessel tracking decision-support tool on all fishing vessels detected in South African waters, including the identification of ships and their most recent positional information; further investigation may then be taken. The system was used to provide evidence for a specific event in which three vessels that were moving illegally through South Africa's Exclusive Economic Zone were stopped and found to have 600 tonnes of squid on board (worth approximately R70 million). The DAFF Fisheries Compliance Department will have an Oceans and Coasts Information System Vessel Tracking Decision Support Tool installed in their control centre to assist operators with monitoring compliance with fishing regulations, including the detection of potential illegal fishing in South African waters.

4.15 Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Main messages

Although there are policies and laws to promote the sustainable use of land resources, a substantial share of land is degraded, and forest cover appears to be declining.

More data are required to monitor changes in land resources and biodiversity.

The current situation

Progress in the preservation of terrestrial environmental resources has been mixed:

- ✓ An indicator of the extent of natural forest, Albany thicket and savannah ecosystems show a general decline in forest coverage in South Africa from 1990 to 2014, but more recent data are not available.
- ✓ The indigenous (natural) forest biome constitutes less than 1 per cent of the country's land area, as the country is too arid to support natural forest ecosystems (DAFF, 2009: 6).
- ✓ South Africa's progress, using the domestic measure of the percentage forest ecosystem extent, shows that, as of 2018, it had 36 per cent of its natural forest biome under formal protection, reflecting the focus on natural forests in conservation legislation and management. By contrast, only 13 per cent of savanna biome and 2 per cent of its Albany Thicket biome are under formal protection. Since 2010, natural savannah has enjoyed a 4 per cent increase in protection and Albany thicket a one per cent increase in protection.
- ✓ South Africa's 2018 report to the United Nations Convention to Combat Desertification (UNCCD) shows that 10.71 per cent of the country's land is degraded.
- ✓ As of 2018, 42 per cent of South Africa's mountain ecosystems are well protected, a 1 per cent increase since 2010. The remaining 58 per cent of the mountain ecosystem types have varying degrees of protection. The overall progress towards protecting mountain ecosystems is positive.

The policy framework

South Africa's national policy and strategic context has provided a solid foundation for supporting environmental sustainability. Legislation and national policies have prioritized sustainable development as a guiding principle. The NDP acknowledges that human wellbeing is dependent on the health of the planet and that South Africa will need clear long-term development strategies to sustainably manage natural endowments (RSA, 2011).

DEA is championing programmes to restore and rehabilitate degraded land,²¹ and to improve ecosystem performance that generally will lead to carbon sequestration, better water yields and improved quality. Over four years, DEA's environmental programmes rehabilitated 190 wetlands, rehabilitated or restored over 100,000 ha of land, trained 1648 environmental monitors, and treated over 762,000 ha to eliminate invasive plants. Land restoration will improve natural species diversity and catchment stability as well as agricultural productivity.

The focus of the biodiversity and conservation programme is on the regulation and management of all biodiversity, heritage and conservation matters. The aim is to ensure equitable and sustainable use, conservation, management, and, where necessary, the restoration of this resource base, and to mitigate threats to resources. Biodiversity richness is one of South Africa's important natural assets a basis for sustainable and inclusive socio-economic development. An example of the importance of biodiversity and its potential contribution to growth can be seen in the cooperation between indigenous groups and a pharmaceutical company in the development of Zembrin® (Box 13).

²¹ Degraded land is land that has lost some degree of its natural productivity due to various forces, including extreme weather conditions (particularly drought) and human activities that pollute or degrade the quality of soils and thus the usefulness of land.

Box 13. Sceletium case study

HG&H Pharmaceuticals (Pty) Ltd. is a local innovative pharmaceutical and natural ingredients company that focuses on the discovery, research and development of evidence-based natural medicines and dietary ingredients for common mental health and wellness conditions.

- A bioprospecting permit was awarded to HG&H Pharmaceuticals (Pty) Ltd. by the Department of Environmental Affairs (DEA) to commercialize the medicinal properties of the Sceletium tortuosium, also known as Kanna.
- The company acknowledged the fundamental role that indigenous knowledge played in discovering this product, and entered into a landmark benefit-sharing agreement with the San Raad van Suid Afrika (San Council of South Africa) jointly with the Paulshoek and the Nourivier communities. This agreement marked South Africa's first prior informed consent benefit-sharing agreement with an indigenous community for the commercialization of an indigenous medicinal plant since the entry into force of the Bioprospecting, Access and Benefit Sharing (BABS) Regulations, which gave effect to chapter 6 of the National Environmental Management Biodiversity Act. The company conducted research and development on the Kanna and developed a quality-based extract called Zembrin®, which has mood-enhancing, anxiety-reducing and cognitive function-enhancing properties, all of which can be of benefit to healthy people suffering from stress. Zembrin® is currently been marketed across the world, including in South Africa, the United States of America, Canada, Brazil, Malaysia and Japan. In Canada, Zembrin® has been approved for sale to "support cognitive function in adults".
- Since 2010, HG&H Pharmaceuticals (Pty) Ltd. has shared more than 5 million rand in financial benefits with the community. The pharmaceutical company shares 6 per cent of all income from Zembrin® with the South African San Communities, which, in turn, allocate 50 per cent of their share to the villagers of Paulshoek and Nourivier in the Namaqualand region of the Northern Cape Province. It is in these communities that the ethnobotanical research was conducted. As a result, Zembrin® is the only Sceletium product to carry the logo of its indigenous beneficiaries, the San Raad van Suid Afrika.
- Further, HG&H Pharmaceuticals (Pty) Ltd., through its partnership, has established massive cultivation and processing plants in the Mpumalanga and Limpopo provinces.

This project has created employment opportunities across the value chain. During the annual cultivation and handling of this crop, approximately 30 people are employed in the process, most of whom are women.

In many ways, South Africa's approach is advanced in global terms with respect to protection of ecosystems and integration of biodiversity in planning and capacity building. Continuing the interventions will require dedicated resources for implementation, supported by improvements in the availability of the data.

The National Biodiversity Economy Strategy aims to promote a new generation of partnerships between protected areas, the private sector and communities. The 3rd Biodiversity Economy Indaba (BEI) ended with pledges by stakeholders in the wildlife, bioprospecting/biotrade and eco-tourism sectors to ensure greater inclusivity and transformation. While South Africa lacks the data to report on Key Biodiversity Areas, efforts are

underway, together with the South African National Biodiversity Institute (SANBI) and BirdLife South Africa, to create a key biodiversity areas (KBA) spatial dataset (Khatieb, 2019).

Climate change presents key challenge in terms of the biodiversity that supports forests. Climate projections indicate that it is likely that many forest areas will experience increasing pressures due to changing moisture patterns and increased fire risks in the future. Since the exact climate distributions are difficult to predict (DEA, 2013: 24), South Africa will need to think dynamically about future reporting and planning. Box 14 describes two innovative projects to improve sustainability.

Box 14. Using technology to improve sustainability

- The joint Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ) and Department of Environmental Affairs (DEA) Carbon Sink Atlas project has been completed. Locally calibrated and validated earth observation (EO) products (including leaf area index, tree cover and biomass) were generated by the EO group and added to the Carbon Sink Atlas to demonstrate the potential for improvements (in terms of lower errors and more detailed measurement) in the assessment of national carbon stocks and fluxes. Phase 2 of the shale gas strategic environmental assessment has been completed, and four research chairs funded at the National Research Fund (NRF) Centres of Excellence National Research Facility: the South African Environmental Observation Network (SAEON).
- The Industrial Bio-economy Directorate within the Department of Science and Technology (DST) is currently supporting the Forest Molecular Genetics programme based at the University of Pretoria. The aim of the programme is to develop a Centre for Tree Genomics and Biotechnology research in South Africa with a focus on the genetic control of woody biomass traits for fibre, bioenergy and biomaterials production.

Preventing the poaching and trafficking of protected species remains a challenge. Although rhinos are the focus of international anti-poaching efforts, this species constitutes the highest share of the proportion of the country's illegal wildlife trade (DEA, 2016). Research by Gonçalves on the Krugar National Park shows that improved surveillance and response capabilities in conjunction with ranger efforts led to a decline in poaching in 2016, but the number of attempted incursions detected increased dramatically (2017: 14).

In 2018, SANBI reported on South Africa's status with regard to alien species control. The report highlights the evaluation of alien species control strategies as a critical area lacking in South Africa. It finds that a robust assessment of the effectiveness of control measures is not possible due to the absence of monitoring of the outcomes of control measures (Van Wilgen and Wilson, 2018: xi).

Ongoing efforts between the South African Government, Stats SA and SANBI are critical to improving the country's reporting capability on SDG 15. Greater efforts need to be made to ensure both effective implementation of government interventions and the collection of relevant, integrated data for tracking progress.

Critical issues going forward include:

- ✓ National reporting has historically omitted ecosystems and biodiversity. Unless the new era of medium-term strategic planning that is underway will take care of this gap, the current MTSF and the Programme of Action (PoA) largely exclude ecosystem and biodiversity evaluations.
- ✓ South Africa's data management systems are historically devolved to various government departments, each with their own data systems, resulting in a legacy of 'silo' reporting.
- ✓ Legacies of inequitable ownership and land distribution, spatial mismatches in land management and unsustainable land practices (DEA, 2006: 88) undermine South Africa's ability to sustainably manage land resources and ecosystems in a way that promotes fair and equitable sharing of the benefits. Ensuring that the targets of SDG 15 are aligned with the needs of communities, particularly those most at risk of land degradation such as in rural and climate-vulnerable areas, is a priority across South Africa.

4.16 Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Main messages

South Africa has a world-class legal aid system that supports the representation of poor individuals in civil and criminal proceedings.

Some progress has been made in reducing violent crime and in restoring faith in law enforcement, but South Africa remains one of the most violent countries among those not affected by civil conflict.

Ensuring that citizens have access to government information remains a work in progress.

The current situation

South Africa has one of the strongest legal, institutional and policy frameworks for promoting inclusive societies. In addition to having one of the best legal aid systems globally, the Chapter 9 of the 1996 Constitution mandated the establishment of state institutions to deepen constitutional democracy. The promulgation of the Promotion of Access to Information Act in 2001 has deepened access to public information relative to other developing countries. Fact, South Africa is one of the 24 African countries with constitutional and legislative frameworks that guarantee right of access to information. The current administration's uncompromising attitudes to dealing with the effect of state capture in public enterprises is key to promoting an inclusive service delivery and a prosperous society.

South Africa has made some progress in reducing violence: from 2013/14 to 2017/18, the share of individuals experiencing a home robbery fell from 1.59 per cent to 0.8 per cent. The share experiencing an assault fell from 0.88 per cent to 0.67 per cent, and the share experiencing a robbery outside the home from 0.81 per cent to 0.63 per cent. (Stats SA, Victims of Crime Survey, 2017/18).

Nevertheless, violence in South Africa remains high. The 2016 South African Demographic and Health Survey (DHS) concludes that one in five women older than 18 has experienced physical violence while the Victims of Crime (VOC) Survey estimated that 138 per 100,000 women are raped.²² The South African Police Services (SAPS) reported an increase in sexual assaults and rape between 2017 and 2018 - reaching 40,035 and 6,786 respectively.²³ The country is ranked 146th out of 163 countries in terms of the level of safety and security (Institute for Economics and Peace, 2018). The use of drugs is one of the drivers of partner violence, which should be one of the policy priorities of government in tackling this challenge.

Crime remains spatially concentrated. In 2018, only 2 per cent of police stations recorded 20 per cent of all murders in South Africa, and 13 per cent recorded 50 per cent of murders (Faull, 2018). Reporting of crimes per number of victims rose from 30.1 per 100,000 in 2011/12 to 35.8 per 100,000 in 2017/18, due to efforts to encourage people to report crimes and increased confidence in the legal system. The share of household heads who reported that they were confident in walking alone at night improved from 29.4 per cent in 2016/17 to 31.8 per cent in 2017/18. Efforts to disaggregate this indicator by sex and age are ongoing and should be strengthened.

²² For DHS see Statistics South Africa (2016) and for VOC see Statistics South Africa (2018).

²³ <https://pmg.org.za/page/SAPSCrimeStats>.

South Africa has also made some progress in some areas, including in the incidence of rape brought to the attention of police per 100,000 reduction in the percentage of school-attending children who experienced any physical punishment and/or psychological aggression at school in the past three months (from 11.4 per cent in 2015 to around 6.3 per cent in 2017), and the existence of independent national human rights institutions in compliance with the Paris principles.

The policy framework

South Africa is making progress in achieving SDG 16 within its borders, plays a critical role in peacekeeping and conflict resolution, and assists other African countries to restore democracy and respect for human rights. In January 2019, South Africa resumed its non-permanent membership in the United Nations Security Council (UNSC), where it is expecting to advance the African Agenda. In 2020, South Africa will be the Chair of the African Union (AU).

The cluster system, introduced as a result of Intergovernmental Relations Framework Act, No. 13 of 2005, plays a key role in facilitating interdepartmental policies and programmes in meeting the goals of the NDP, including:

- ✓ Economic Sectors, Employment and Infrastructure Development (ESEID)
- ✓ Social Protection, Community and Human Development (SPCHD)
- ✓ Governance and Administration
- ✓ International Cooperation, Trade and Security (ICTS)
- ✓ Justice, Crime Prevention and Security (JCPS).

Translating these policies and programmes into concrete development impact remains critical in accelerating the achievement of the SDGs in the country.

Recent policies that may contribute to meeting the SDG 16 targets are as follows:

- ✓ Action has been taken to restore the credibility of institutions such as the National Prosecuting Authority (NPA), the South African Revenue Service (SARS), the State Security Agency (SSA) and South African Police Service (SAPS), including the appointment of a new National Director of Public Prosecutions (NDPP) to lead the revival of the NPA and to strengthen the fight against crime and corruption. Others include South African Human Rights Commission and the Auditor-General.

- ✓ The National Action Plan to Combat Racism, Racial Discrimination, Xenophobia and Related Intolerance was adopted in March 2019.
- ✓ South Africa has a world-class legal aid system, able to provide representation in criminal and civil matters as well as legal advice services (see Box 15). This model has been studied and implemented by many other countries. Legal aid enables access to justice by ensuring that no person will be unrepresented in a criminal trial due to lack of funds.
- ✓ Legal aid has also made great progress in providing civil legal assistance and legal advice focusing on protecting and defending the rights enshrined in the Constitution.
- ✓ SDG 16 Indicator 16.a.1 refers to the “existence of independent national human rights institutions in compliance with the Paris Principles”. South Africa fulfils this obligation in that the SAHRC has been accredited with the status of a National Human Rights Institution (NHRI) in terms of the Paris Principles.

The White Paper adopted by Cabinet in 2016 emphasizes the need for an integrated approach to safety, crime and violence prevention. The White Paper proposes a ‘whole of government’ and ‘whole of society’ approach, and reaffirms that building safer communities is a collective responsibility of both the Government and citizens in general. An implementation framework has been developed to assist the three spheres of government to work together on applying the White Paper.

Through the Civilian Secretariat for Police, the Government has also introduced policies that seek to address the barriers to justice facing vulnerable and marginalized groups. The policy on reducing barriers to reporting sexual offences and domestic violence aims to reduce the gap between reported and unreported incidents and supports measures to enhance the delivery of services to victims. A Policy on the Management and Investigation of Serial Rape and Serial Murder was also developed to improve the policing of sexual crimes.

The Promotion of Access to Information Act of 2000 (PAIA) is comprehensive, including the right to access privately held information. However, there is some disconnect between what the legislation states and how it is implemented. The key implementation agency in access to information is the Information Regulator, but the Protection of Personal Information Act and the order powers of the Information Regulator relating to the Promotion of Access to Information Act are not yet in operation.

While many organizations and the Government are striving to counter racial and gender-based discrimination, there is some evidence that racial discrimination has increased since 2017. The Prevention and Combating

of Hate Crimes and Hate Speech Bill is one of the efforts by the Department of Justice (DoJ) to fight discrimination (DoJ, 2019).

Another challenge is that some government departments are overly legalistic, demanding forms (as described in the regulations) to be filled even when inappropriate. This process limits access to information. Also, forms are available in English and Afrikaans only.

Other challenges include:

- ✓ the lack of adequate resources to support CSOs and community-based organizations in achieving access to justice for vulnerable and marginalized groups;
- ✓ the need for formal recognition of the activities of paralegals;
- ✓ the removal of barriers to access to justice for vulnerable and marginalized groups in informal settlements or rural areas;
- ✓ the inability to meet the demand for civil legal aid services (one approach that would help is greater reliance on alternative dispute resolution mechanisms to settle legal disputes);
- ✓ the length of incarceration of detainees who are awaiting trial.

In the 2015/2016 financial year, Stats SA embarked on the mapping and scanning of the governance statistics sub-system in South Africa as part of a process of identifying and bridging data gaps related to governance statistics. This activity was accompanied by extensive local and international stakeholder consultation and occurred at the same time as the ratification and refinement of the United Nations Sustainable Development Agenda and AU Agenda 2063. The timing of the process enabled the team to benefit from best practices identified by the international community in the context of SDG indicators and reporting, especially in relation to SDG 16.

Within the context of limited resources and the need to bridge the data gap, a decision was made to convert the Victims of Crime Survey (VOCS) into the Governance Public Safety and Justice Survey (GPSJS). Given the broad range of issues that had to be covered by the survey, topics will be covered according to a three-year rotational cycle. Data collection for Year 1 (2018/2019) ended in March 2019, and the first report, which will cover issues regarding discrimination, access to justice, constitutional values and democratic expression, is due in July 2019. Given the importance of crime statistics in South Africa, the experience of victimization and reporting to the police will be included in all three reports. A short publication comparing victimization and reporting rates in the survey with crime rates reported to the police will be published during the two years that the questionnaire focuses on the coverage of aspects of governance not related to criminal justice. A

more comprehensive report similar to the current VOCS statistical release will be produced every three years.

Proposed interventions going forward to 2030 are as follows:

- ✓ Dealing decisively with the effect of state capture in the country's vital public institutions should be a policy priority for the State Owned Enterprises to effectively promote inclusive growth and development.
- ✓ The use of technology and partnerships with community advice officers could help litigants in resolving civil disputes. Promotion of e-governance across the national, provincial and local governments is pivotal to promoting accountable, transparent and responsive governance.
- ✓ Stakeholders should continue to work together to improve the efficiency of the justice system and build confidence in the rule of law and order.
- ✓ It is important to address the complete breakdown in confidence between the police and the community, as the police are failing to manage the high levels of violence in the society. A Community Policing Policy has been developed that seeks to reinforce the community policing approach in line with Sec 206(3) of the Constitution, which requires provinces to promote good relations between the police and the community. Community policing is an approach that recognizes the shared responsibility of police and the community in ensuring a safe and secure environment for all citizens.
- ✓ Coordination should be strengthened between government departments dealing with justice issues, for example, through structures such as the Public Dialogue Mechanism for the Open Government Partnership.
- ✓ Strong governance practices are necessary so that decisions are based on rules rather than individual whim, policies are followed consistently across departments, and adequate budget is provided for implementation.
- ✓ Stronger coordination is required among the Government, the private sector and civil society. There is a need to work on developing a relationship of trust across these groups.

With regard to access to information, the following interventions should be developed:

- ✓ The Information Regulator, which is the information commission for South Africa dealing with access to information and personal data, needs to work with the SAHRC to close the gaps in the handover of implementation of the law to the Regulator from the SAHRC.

- ✓ The Government should be more open and proactively publish its information, as well as attend to records management and the duty to record in order to improve the quality of information.
- ✓ More public education is needed to address the lack of awareness of the law by the public.
- ✓ There is a need to raise awareness at all levels of government on the right to information.
- ✓ There is a need for education in key sectors, such as SAPS and Justice, which are crucial to exercising one's rights as a citizen.
- ✓ There is an urgent need for South Africa's good national legal framework to filter down to other levels of government, especially at the local level.
- ✓ There is a need to improve compliance with the Promotion of Access to Information Act:
 - Long delays are experienced on requests for documentation that should be readily available for release.
 - Accountability would be strengthened by proactively making some documents public, without requiring that someone file an access to information request. The Equal Education Law Centre (EELC) made this argument with respect to school infrastructure plans and reports, and the Bhisho High Court in July 2018 ordered the DBE to amend the infrastructure regulations to provide that plans be made public. Although the Constitutional Court endorsed this judgment in October 2018, the Minister has not informed the public of any efforts to comply with the order and amend the regulations.
 - Stats SA should continue to publish information in an accessible form, including continuously updated machine- readable data sets.
 - The Promotion of Access to Information Act of 2000 (PAIA) should be part of the curriculum of the National School of Governance.
 - Information should not be for the rich only: PAIA litigation does work but is out of the reach of most citizens. The cost of seeking justice should be reduced, especially for vulnerable and marginalized groups.
 - There is need to develop feedback loops where the Government reports on progress.

Box 15. Success stories in the legal sector

Legal Aid South Africa: Access to Justice

Legal Aid South Africa provides quality criminal and civil legal aid services, as well as legal advice services. In the past five years (2014/15 to 2018/19), the organization has taken on a total of 1,902,251 new criminal matters and 274,782 new civil matters, and provided legal advice services to 1,565,890 clients. Therefore, access to justice has been provided to a total of 3,742,923 persons. Sound financial management resulted in Legal Aid South Africa receiving consecutive unqualified audits for the past 17 years.

The organization is also involved in strategic litigation, including class actions and major legal issues that involve, for example, an interpretation of the Constitution that may contribute to changes in laws or that may result in systemic changes in the interest of poor and vulnerable persons.

Contemporary human resources practices have resulted in the organization being accredited as a Top Employer for the past ten years, as well as a leader of the public sector category for the past four years.

Regulation and recognition of community-based paralegals

The Centre for the Advancement of Community Advice Offices of South Africa (CAOSAs) has approached the Government of South Africa for the recognition and regulation of the Community Advice Office (CAO) sector. The Government has shown some willingness to participate in consultations towards the regulation of the sector and as well as to develop a policy to promote sustainability. Civil society organizations (CSOs) have been pushing for this form of collaboration with the Government since the 1990s.

Collaboration between the formal justice system and community justice institutions

In the peripheries of Pretoria North, a successful partnership has been established between the Ga-rankuwa Magistrate Court and a Community Advice Office, located in Mabopane, the *Ntsu Advice Office*. The partnership has resolved 90 per cent of the cases referred by the Magistrate Court to the Ntsu Advice Office. Because of this partnership, other cases are directly referred from the Ntsu Advice Office to the Magistrate Court.

- ✓ To increase reliance on informal arbitration processes, the Government should:
- recognize, regulate and have a sustainability policy for community-based paralegals and other indigenous/home-grown community justice service providers, systems and structures;
 - ensure that the independence of paralegals as well as indigenous/home-grown justice systems is guaranteed through governance and accountability mechanisms, including self-regulation, where appropriate;
 - provide adequate funding for community-based paralegals and indigenous/home-grown justice systems in their justice budgets;

- ensure that in the Department of Justice and Constitutional Development, there is a unit that is focuses on supporting community advice offices;
- formalize the collaboration between the justice system and other institutions and initiatives, for example, community advice offices or other indigenous initiatives, using complementary mechanisms for conflict resolutions.

PART III: THE WAY FORWARD AND CONCLUSION

5. THE WAY FORWARD

The success of the Government's programme to achieve the SDGs will critically depend on the effectiveness of implementation arrangements and on defining an overall framework for the reform programme.

South Africa has several opportunities that could effectively accelerate the SDGs implementation. The first is the federal structure of governance that comprises 288 units²⁴ that could be leveraged for collective implementation of SDGs interventions simultaneously. The second is the existing infrastructure – financial, technology, and physical infrastructure – which is an important accelerator of development, instrument of regional integration and a tool of shared prosperity. The third is cultural diversity that could be used to power social capital, synergy and cohesion. The strong and sophisticated private sector is the fourth opportunity. In this regard, promoting inclusive market, impact investment and public-private partnership, devoid of political patronage, could unleash the power of partnership for accelerated progress. Fifth, resources needed to achieve the SDGs are within reach. The strong commitment to improved governance by the current administration could increase the momentum to tackle corruption and illicit financial flows, expand resource mobilization, and attract private sector financing. Finally, South-South Cooperation holds the key to leapfrogging development transformation without going through the associated teething problems. The BRIC, for instance, offer tremendous opportunity for South Africa. Promoting development exchange between South Africa, the BRIC and the rest of the world could help accelerate the achievement of the SDGs.

5.1 IMPLEMENTATION

Goal 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development

Main messages

Effective implementation of measures to achieve the SDGs requires stronger global partnerships to garner increased resources and improved access to technology and good practices.

²⁴ This comprises 1 national, 9 provinces and 278 local governments or municipalities.

Global partnerships should be based on equal relationships, mutual accountability and adherence to agreed global norms, particularly trade agreements.

One of the major challenges facing implementation of the SDGs is the lack of provisioning for and mobilizing of additional, adequate and predictable financial resources. This has not been provided for within the United Nations system and must be a priority as part of the commitments made in the context of the global partnership for development.

Effective domestic resource mobilization is essential for obtaining the financing required to achieve the SDGs. One area of importance for the continent and the country is to reduce illicit financial flows and the ensuing loss of tax revenues and domestic investment; from 2010–2014, the government lost ZAR510 billion in tax revenues due to illicit flows (Open SDG Club South Africa, 2019). Multinational corporations should make their rightful contributions in the countries where their revenues are generated.

South Africa supports the view that financial flows for the implementation of the SDGs must be underpinned by an expanded and strengthened global partnership for development. The Third International Conference on Financing for Development (FfD3) of July 2015 provided a framework for the financing needs of developing countries that was fundamentally connected to the integrity of its statement on means of implementation (MOI). The MOI encompass financial resources and technology transfer for implementing sustainable and equitable development, as well as the appropriate structural reform of the international financial and trade systems, as upheld by the structure and content of the Monterrey Consensus.

Development partners should not only meet their current commitments, but also increase official development assistance, with binding timetables. This should not, however, replace other commitments made by developed countries to assist developing countries in attaining their sustainable development objectives. Public-private partnerships have an important role to play in mobilizing the necessary financial resources for sustainable development and to promote poverty eradication.

Improved access to technology from developed countries is essential to implement the 2030 Agenda. South Africa has called for the early implementation of the global commitments towards the Technology Facilitation Mechanism (TFM) and the Addis Ababa Action Agenda (AAAA) on Financing for Development. The TFM is key to enhancing scientific cooperation, reducing the technology gap between developed and

developing countries, and building local capacity in science, technology and industry.

South Africa participates in the Multi-Stakeholder Forum for Science, Technology and Innovation for the SDGs held annually in New York as part of the TFM to discuss the role of science, technology and industry in the implementation of the SDGs.

South Africa proposed hosting the Multi-Stakeholder Forum for Science, Technology and Innovation for the SDGs at the continental level, which would be an opportunity for Africa to discuss science, technology and industry for SDG implementation. It would also assist Africa in coordinating representation in the United Nations Multi-Stakeholder Forum for Science, Technology and Innovation for the SDGs, which is held annually, as well as in the United Nations Multi-Stakeholder Forum. The proposal was approved by INECA. South Africa also has been active in supporting collaborative research projects with other African countries to improve the use of technology in addressing the SDGs (Box 16).

Box 16. South Africa's partnership activities in research

The African partnership portfolio has been especially active, with 54 research and innovation projects jointly supported by the Department of Science and Technology (DST) and African partner governments during 2016/2017. DST also supported 15 African Union (AU) and Southern African Development Community (SADC) science, technology and industry initiatives, making it possible for these initiatives to progress. DST enabled an investment of ZAR388 million by several of its internal partners in other African countries' STI capacity. A diverse portfolio of bilateral and multilateral programmes coordinated by DST during 2016/2017 provided South African researchers with opportunities to collaborate in joint knowledge-generation activities with 668 international partner organizations. This collaboration saw an investment of more than ZAR1.2 billion by DST's international partners in support of collaboration with South Africa. These relationships and investments were invaluable in expanding and enriching South Africa's knowledge-generation outputs.

Trade constitutes an essential component of the MOI. The achievement of the SDGs is contingent on countries living up to the expectations of the Doha Development Agenda. South Africa reaffirms the central role of the World Trade Organization (WTO) in today's global economy. The WTO provides the multilateral framework of rules governing international trade relations, an essential mechanism for preventing and resolving trade disputes, and a forum for addressing trade related issues that affect all WTO members.

South Africa remains firmly committed to a rules-based, transparent, non-discriminatory, open and inclusive multilateral trading system as embodied

in the WTO. It reaffirms its commitment to ensure full implementation and enforcement of existing WTO rules and is determined to work together to further strengthen the WTO.

Strengthened and revitalized global partnerships are anchored on common but differentiated responsibilities between developed and developing countries, with developed countries taking the lead in facilitating finance, technical expertise and other practical mechanisms to assist in the implementation of the SDGs.

Managing partnerships entails building mutual understanding, fostering respect, focusing on solving a common challenge, and driving a productive relationship. In order for a partnership to have a lasting impact, it requires long-term stakeholder commitments, sustained funding, ongoing resourcing and consistency of personnel to help ensure their success.

Partnerships present South Africa with an enormous opportunity, especially if they can strengthen its capacity to engage in and lead such efforts – delivering at both the global and country levels. Global partnerships should be established on the understanding that countries are not on the same levels of development and will, for some time, continue to experience different development trajectories, affected by factors such as instabilities in global markets and in certain regions of the world. Nevertheless, future global partnerships should shift away from the donor-recipient mind-set towards true partnerships that fairly benefit all partners.

5.2 THE POLICY FRAMEWORK

Main messages

Policy priorities, as revealed by budgetary allocations, emphasize reducing poverty and inequality, strengthening peace and justice, deepening quality education and infrastructure.

The new institutional mechanism should improve the Government's ability to ensure that policy priorities are reflected in budgetary allocations.

Capacity for managing synergies and trade-off among the SDGs remains a critical priority.

Going forward, South Africa aims to operationalize the institutional mechanism established to manage the reform programme and to monitor

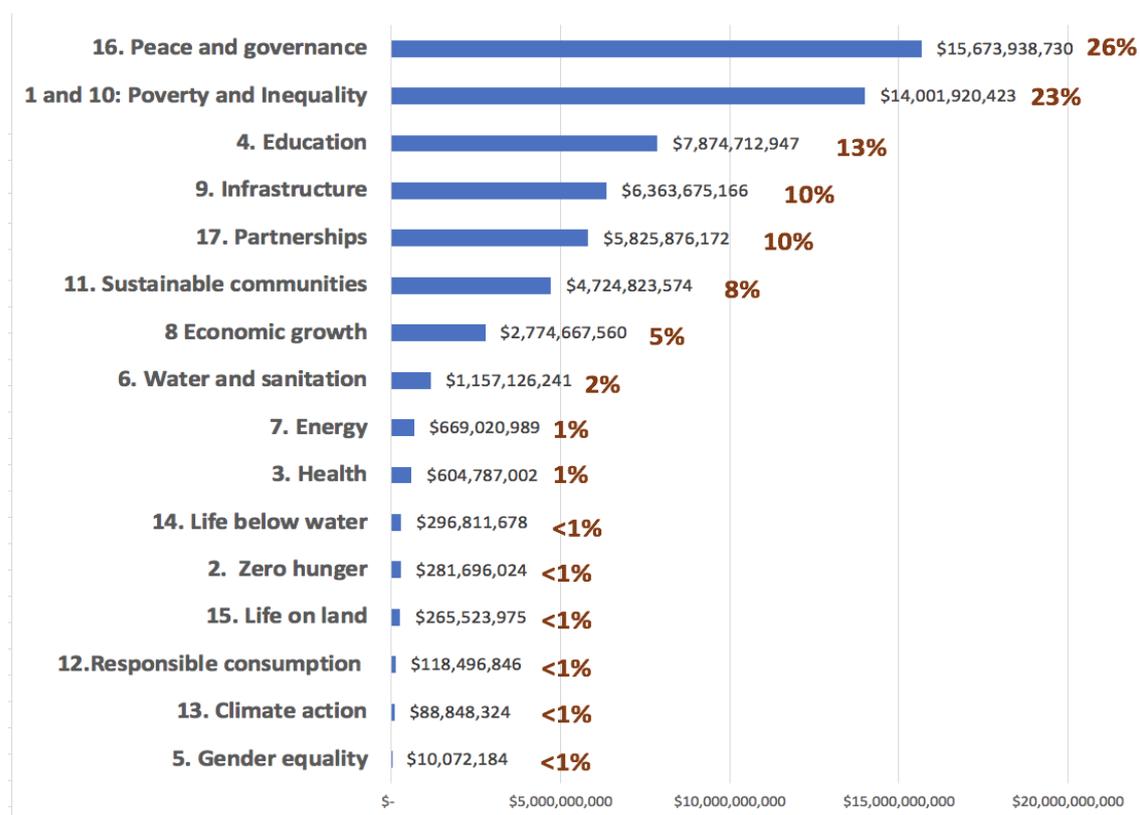
progress towards achieving the SDGs. This should strengthen the coordination of activities to achieve the SDGs among all stakeholders, including central government, provincial and local governments, the private sector and civil society. Stronger coordination is essential to improve the coherence and efficiency of all development resources, including budgetary expenditures, public sector loans, donor assistance and activities of the private sector and civil society. The institution will also act as a central point where information can be shared by all stakeholders on implementation of the SDGs. Improved monitoring and evaluation of progress towards the SDGs is necessary, which in some cases will require the generation of new data. Moreover, there is a need for South Africa to create a greater awareness of the SDGs, especially at the local government level.

Establishing the institutional framework to manage the reform programme will improve the Government's ability to set spending priorities that are consistent with the goals of policymakers. A methodology has been developed to allocate spending as recorded in budget documents to the achievement of specific SDGs.²⁵ Considering the current allocation of spending by SDG provides a necessary first step in reallocating spending to be consistent with the development of the reform programme.

The SDGs that captured the most funding in fiscal year 2017/8 were promoting good governance, peace and justice (SDG 16), reducing inequality (SDG 10) and reducing poverty (SDG 1) (Oduola and Neuhaus, 2019). The three accounted for 42 per cent of spending on SDGs, followed by spending on education (SDG 4), infrastructure (SDG 9) and partnerships (SDG 17) combined (Figure 12). This reflects the Government's deep commitment to ending poverty and addressing high levels of inequality (South Africa possibly being the most unequal country in the world), as well as the serious challenge to welfare and development posed by the high level of violence.

²⁵ Using the United Nations [Tier Classification for Global SDG Indicators](#), each sub-programme within each vote of the [2018 South Africa National Budget](#) was assigned an associated SDG (when appropriate) and an associated SDG target (when possible).

Figure 12. Spending on SDGs reflects the importance of reducing poverty and inequality, and improving peace and governance



Source: Odusola and Neuhaus' (2019) computation from 2018 South Africa National Budget.

Nevertheless, this allocation risks under-addressing other priorities including accelerator goals, such as investments in economic growth (SDG 5) with 4 per cent of SDG-related spending, access to energy (SDG 9) with 1 per cent, climate action (SDG 13) with less than 1 per cent, and gender equality (SDG 5) with less than 1 per cent of SDG-related spending.

The ability to manage synergies and trade-offs among the SDGs is critical. Identification of and investment in programmes with the potential to support progress in several goals could yield efficiencies in SDG-related spending. Currently, the skewed nature of SDG-related spending does not take advantage of available synergies that could be leveraged to achieve multiple goals at once. For example, tailored investments in SDGs 7 and 9 could simultaneously achieve other SDGs especially 1, 2, 5, 6 and 8 using targeted spending mechanisms that conserve funds. Food programmes in schools could help reach poor children and encourage school attendance. Registering children born in public institutions could improve the coverage of child support programmes. And improvements to informal urban settlements could be planned so that sanitation, water and electricity connections are provided efficiently. Identifying such synergies will require building capacity

in applied research. Trade-offs associated with strategic interventions such as infrastructure development, green growth strategies and climate change mitigation particularly on how they affect displaced population and job losses remain critical. Building the needed capacity to be able to manage synergies and trade-offs are crucial to accelerating progress on the SDGs.

Investment in applied research that helps to examine the intended and unintended impact of policy implementation is key to addressing shocks and vulnerability that have become norms in managing SDGs interventions. Moreover, applied research that identifies key development multipliers and accelerators by stakeholders is pivotal.

Government spending on achieving SDGs 1 and 10 is increasing. Total spending on these SDGs rose from US\$11.2 billion in 2014/2015 to US\$14.0 billion in 2017/2018. The total increase of 25 per cent is very close to the 24 per cent increase in total spending on SDGs over this period. More broadly, the shares of spending on individual SDGs in the total changed little from 2014/15 to 2017/18. Only three SDG categories (SDGs 4, 9 and 11) experienced a change in share that exceeded 0.5 percentage points, and in all cases it was less than one percentage point. This is not surprising since government spending in general tends to have substantial inertia. What is perhaps more significant is that total spending on SDGs rose by about 6 per cent in real terms over this period, or much more than the roughly 2.5 per cent increase in real GDP.

The highest financed programmes under SDG 10 involve: social protection for the elderly, children and persons with disabilities; social security payments; social grants administration; and foster care. The budget allocation for these top seven programmes accounts for over 96 per cent of all spending on SDG 10. Each of the programmes designed to address other populations, such as war veterans, substance abusers, HIV/AIDS, and asylum seekers, received less than 1 per cent of total funding on SDG 10.

Total spending on the SDGs is projected to rise by 26 per cent from 2017/18 to 2020/21. This would likely represent a further increase in real spending, given that inflation in South Africa has averaged around 5 per cent over the past few years. The largest increases in spending are on grants-in-aid (22 per cent), social protection for children (17.5 per cent) and services for substance abusers (10.4 per cent). In contrast, the programmes projected to undergo the largest percentage spending decline from 2017/18 to 2020/21 include spending on war veterans (-24.2 per cent) and services for 'social relief of distress' (-12.1 per cent).

6. CONCLUSION

Main messages

Developing strong alliances, collaboration and partnerships within and between stakeholders, including governments, private sector actors, civil society, academia and international development partners, is a game changer.

We are committed to adhering to the principles of coordination, coherence and impact – anchored on integrated implementation, monitoring and evaluation, to accelerate the achievement of the SDGs.

This VNR traces the progress South Africa has made in achieving the Vision 2030 Agenda. The 25 years since the end of apartheid have seen remarkable improvements in poverty, health, education and access to basic services. Nevertheless, daunting challenges remain. South Africa's position among the most unequal countries in the world is manifest across many aspects of society, including the sharp divide in the quality of education between rich and poor, high levels of poverty and unemployment among black Africans, the vulnerability of women to violence, and poor access to electricity, piped water and basic sanitation services among the 11 per cent of urban dwellers who live in informal settlements.

Many of the inequities that plague South Africa have their origins in apartheid. While the position of black Africans has improved over the past 25 years, their incomes remain well below that of other South Africans, and their levels of poverty much higher. Spatial patterns from the apartheid era, when townships were located far from economic centres, continue to separate poor South Africans from employment opportunities and require lengthy and costly commutes.

Slow growth in incomes has contributed to the failure to fully address the inequities of apartheid. While the Government has devoted a considerable share of the budget to social assistance (a higher per capita level than all but a few countries in the world) and the provision of free healthcare and education, slow growth in taxable incomes nevertheless limits the potential for increases in expenditures. Thus, the quality of education available to the poor is often low, and their access to education drops off sharply in the higher levels. Only 51 per cent of South Africans aged 19 to 21 graduated from high school, and South Africa's enrolment rate in tertiary education is lower than the average for lower middle-income countries. This not only perpetuates inequality, but it also sharply limits the supply of skills, which, in conjunction

with low expenditures on innovation and inadequate resources devoted to infrastructure, constrain innovation and productivity.

Some policies that would not require large expenditures would help boost growth. Completing the reforms of the 1990s to break up oligopolies in food processing, agricultural inputs, steel and energy would increase competition. Reducing barriers to entry, limiting the size and influence of state-owned enterprises, and easing constraints on the hiring and firing of workers would improve the efficiency of private firms and enable smaller, more innovative firms to break into markets that have previously been closed to them. Several steps also could be taken to improve the business climate and resolve uncertainty over government policies. Major issues include bringing forward the mineral resources law, resolving uncertainty concerning policies on intellectual property rights and land reform, and adopting simpler and more consistent regulatory requirements, for example, in the rules governing the Broad-Based Black Economic Empowerment programme and import requirements.

Addressing the challenges headlong and frontally is key. The urgent need to develop the roadmap to monitor progress and identify implementation bottlenecks and collectively address them is also pivotal. Developing strong alliances, collaboration and partnership within and between governments, private sector actors, civil society, academia and international development partners is critical to solving complex development challenges together.

A focus on the individual SDGs should not ignore the interconnections between them. Pinpointing common themes can help to ensure that policy reforms address issues efficiently and consistently. First, South Africa has failed to address inappropriate spatial patterns that limit growth and impair welfare. Cities suffer from fragmentation, with poorer neighbourhoods far from centres of employment, large settlements that, due to location and informal legal status, are difficult to connect to basic services, and poorly integrated transit systems that do not provide smooth connections between bus and rail services and result in over served and underserved communities. Addressing these issues requires greater and more efficiently planned infrastructure investment, the location of subsidized housing in leafy suburbs and urban centres, and policies that emphasize support and provision of legal rights to informal settlers.

Second, the sustainability of South Africa's use of natural resources is threatened on many fronts. Freshwater resources are declining and quality is deteriorating, in large part due to pressures from mining, intensive agriculture and urban sprawl. At the same time, high levels of leakages from poor maintenance result in service providers failing to capture income from 41 per cent of the water they supply. In addition to wasting precious

resources, and in conjunction with poor revenue management, this erodes the financing needed to maintain and improve water services. Almost 11 per cent of South Africa's land has been degraded due to extreme weather conditions (particularly drought) and human activities. South Africa is likely to suffer disproportionately from some effects of climate change, as it is anticipated that the average temperature will increase twice as fast as temperatures in the rest of the world. It is important to view all programmes from the standpoint of their impact on sustainability.

Third, it is important to understand the extent to which the erosion of confidence in the legal system undermines the achievement of the SDGs in general. The high level of violence in South African society reduces confidence in one's personal security, erodes the trust between citizens and the police (and thus the effectiveness of enforcement) and threatens stability and growth. Women are particularly vulnerable, and greater efforts are required to understand the drivers of GBV and how victims can be identified and assisted. Confidence in the justice system also depends on speedy access to a fair trial. Here, progress has been made through efforts by South Africa's world-class legal aid system to extend representation to the poor. Increasing support for informal methods of resolving civil conflicts would enable the courts to allocate more resources to criminal justice. It also is necessary to address the lengthy periods that some accused persons suffer while awaiting trial.

Fourth, exploiting innovative technologies is critical to achieving the SDGs, which underlines the importance of experimentation and pilot projects to try out new approaches. One positive note for the future is the wide range of small projects based on technological solutions to urgent problems, which could possibly be scaled up. Examples include: the development of advanced medical devices, diagnostics and vaccines to address communicable and non-communicable diseases; the transfer of innovative technology solutions to improve quality and outcomes in education; approaches to the provision of off-grid water, sanitation and energy in marginalized communities; the use of industrial symbiosis to reuse waste; construction of a carbon sink atlas to improve the measurement of national carbon stocks and fluxes; the development of hydrogen fuel cell technologies to generate clean energy; a manganese precursor pilot facility to produce materials for batteries; and advanced techniques to improve the study and enforcement of regulations for marine environments.

Fifth, there is an urgent need for the generation of data across sectors to better understand development challenges and improve monitoring of progress. A lack of appropriate data impairs policy formulation and the monitoring of progress in many policy areas, such as: the incidence of crime;

the sustainability of marine resources; waste disposal and recycling; the extent to which affordability limits the use of energy and communications; the quality of groundwater, ecosystem and biodiversity evaluations; the quality and coverage of post-secondary education and training; and the incidence of human trafficking.

Finally, the generation of data is only productive if it is disseminated appropriately. Differences in data systems among government departments limit the ability to integrate information across the public sector. And despite laws mandating public disclosure, some departments resist providing information to the public. The involvement of all stakeholders in the identification of problems, design of policies, programme execution, monitoring and evaluation is essential to progress, but will be ineffective in the absence of sufficient information. This requires maintaining documents in accessible forms, efficient management of information across the public sector, speedy and accurate compliance with requests for information, and the proactive supply of information that is important for stakeholders to make informed decisions.

The challenges facing achievement of the 2030 Agenda are daunting. As shown in this report, however, the Government has been willing to dedicate massive resources to reducing poverty, has made important strides in improving access to services, and has a strong tradition of experimenting with innovative technological approaches to addressing development problems. We take cognizance of the need to be guided by the principles of coordination, coherence and impact – anchored on integrated implementation, monitoring and evaluation. We are confident that the strategic plans adopted to achieve the SDGs, in concert with stronger cooperation with all stakeholders, will have a dramatic impact on the lives of South Africans over the next decade.

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