Supply & Demand Model of Social Practitioners in South Africa

Gap analysis and recommended strategies
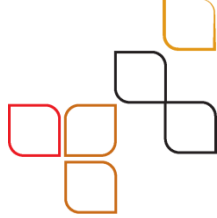
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Contents

Disclaimers

The Department of Social Development in collaboration with Mott MacDonald is assessing the current demand and supply of social service practitioners (SSPs) with a view to create a model which can accurately forecast for the future workforce needs of the sector. In this report, the difference between the supply and demand estimates of SSPs in South Africa is summarized and some recommendations are discussed.

Aim of this report

This report assesses and summarises the gap findings in supply and demand forecasted by the Excel based *Supply and Demand Model*. This report details the following:

- Methodology and Limitations of the Supply and Demand Gap analysis.

- Aggregate gap of social service practitioners in South Africa over the forecast horizon.

- Supply and demand gap for each SSP type in each province over the forecast horizon

- Recommended strategies from the model process and findings

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Determining the Gap in Supply and Demand in Social Service Practitioners in South Africa

Methodology
Techniques and Limitations

No standardised method for developing a gap model in workforce planning exists. However, in order to build a model that represents the sector we have built a custom model that combines various techniques in workforce planning, econometric modelling survey methods and statistical modelling. The methods are summarised below:

Time Series and Statistical Modelling
- A **time series** is a series of data points indexed in time order. Several time series techniques have been applied. **Ordinary Least Squares Linear Regression** has been used to determine the long run relationship between GDP per capita and enrolments. **Auto Regressive Moving Average (ARIMA)** has been used to forecast the future relationship between prevalence drives and SSP demand. **A poison probability density function** has been used to determine the likely of exiting the sector.

Survey Techniques
- **Secondary data** has been collected from **focus groups**, **stake holder meetings**, **surveys** and previous studies have been used to get a better understanding of conditions faced by SSPs. This data was particularly useful in determining reasons for leaving the sector as well the average tenure an SSP is likely to stay in the sector.

Workforce Planning
- We have relied on widely used techniques used for **workforce planning**. We have used **Trend Analysis** to study historical sector employment levels to make assumptions on future employment levels at provincial levels. We have used **Ratio Analysis** to forecast the relationships across various variables i.e. graduate enrollment ratios as well as spread between NPO and DSD. Factors and reason for SSP **Turnover** rates have also been calibrated into the model.

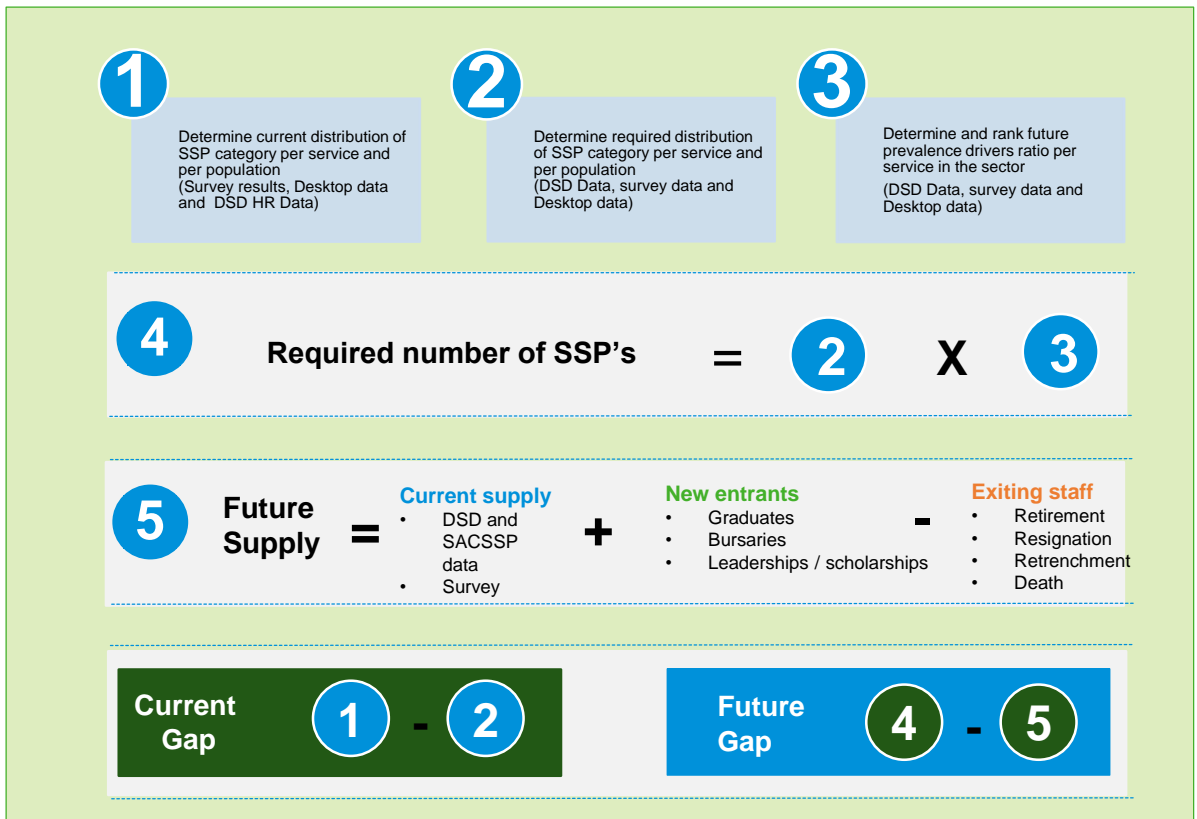| Limitations of Time Series and Statistical Modelling	Limitations of Survey Techniques	Limitations in workforce planning.
Time series techniques rely on historic or serial correlations and is used to estimate the relationship between some variables. Correlation does not always imply causation. Forecasting time series can be challenging due to the inherent uncertainty of the variables being used. It can be very difficult to tell whether a series is stochastic, deterministic chaotic or some combination of these states. The extent to which a relationship retains its properties when corrupted by noise is also unclear. In the case of this model, noise could refer to factors such as labor unrest, economic recession or decreased fiscal spending in the sector. The noise can affect the relationship in different ways even though the equations of the system remain deterministic.	Surveys collect data at a single point in time, it is difficult to measure changes in the responding groups unless two or more surveys are done at different points in time on the same group. Such repetition is often expensive and time-consuming, making frequent periodic surveys impractical. Furthermore, surveys are only as good as the integrity of response by the participating groups. Poor data collection or data analysis can also compromise the quality of the survey.	Similar to time series, workforce planning heavily relies on historic relationships on key ratios , staff turnover to make assumptions on future trends in the workforce. As such, it is not able to perfectly predict the impact of once single events such as labour action or changes in key policies impacting recruitment and retention of the workforce.

Methodology
Determining the Gap in Social Service Practitioners

No standardised method for developing a gap model in workforce planning exists. However, in order to build a model that represents the sector, we have built a custom model that combines various techniques in workforce planning, econometric modelling survey methods and statistical modelling. As discussed in the previous documents, KPMG relies on the difference between current supply and current demand to determine the current gap, and future supply and future demand to determine the future gap. The methods used in determining supply and demand have been detailed in the *Desktop Review*, and *The Supply and Demand Model for Social Service Practitioners*. The diagram below summarises the framework for determining the gap in supply and demand of social service practitioners:
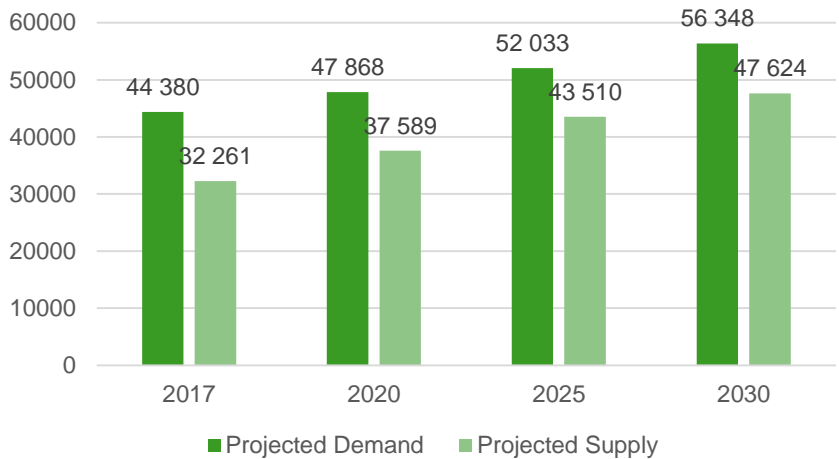
1 Determine current distribution of SSP category per service and per population
(Survey results, Desktop data and DSD HR Data)

2 Determine required distribution of SSP category per service and per population
(DSD Data, survey data and Desktop data)

3 Determine and rank future prevalence drivers ratio per service in the sector
(DSD Data, survey data and Desktop data)

4 **Required number of SSP's** = **2** X **3**

5 **Future Supply** =

Current supply
- DSD and SACSSP data
- Survey

+

New entrants
- Graduates
- Bursaries
- Leaderships / scholarships

-

Exiting staff
- Retirement
- Resignation
- Retrenchment
- Death

Current Gap **1** - **2**

Future Gap **4** - **5**

Overview of supply and demand gap of social services practitioners in South Africa

Overview of Supply and Demand Gap of SSPs in South Africa

The section below summarises the baseline trend in supply and demand of SSPs between 2017 and 2030. In aggregate, under the current sector conditions, supply will approximately grow from **32 200** to **47 600**. Over the same period, demand will also approximately grow from **44 300** to **56 300**.

2017

Supply of SSPs is projected to be approximately **32 200**. In the same year, demand is projected to be around **44 300** SSPs

2020

Supply is projected to be close to approximately **37 500** whilst demand is projected to be around **47 800.**

2025

Supply is projected to be close to approximately **43 500**, whilst demand is projected to around **52 000**.

2030

Supply is projected to be close to approximately **47 600,** while demand is projected to around **56 300**.

	2017	2020	2025	2030
Projected Demand	44 380	47 868	52 033	56 348
Projected Supply	32 261	37 589	43 510	47 624

■ Projected Demand ■ Projected Supply

The section below summarises the baseline trend in the under-supply of SSPs between 2017 and 2030. In aggregate, under the current sector conditions, under supply will approximately decrease from **12 100** to **8 700**.

2017	2020	2025	2030
12119	10279	8523	8724
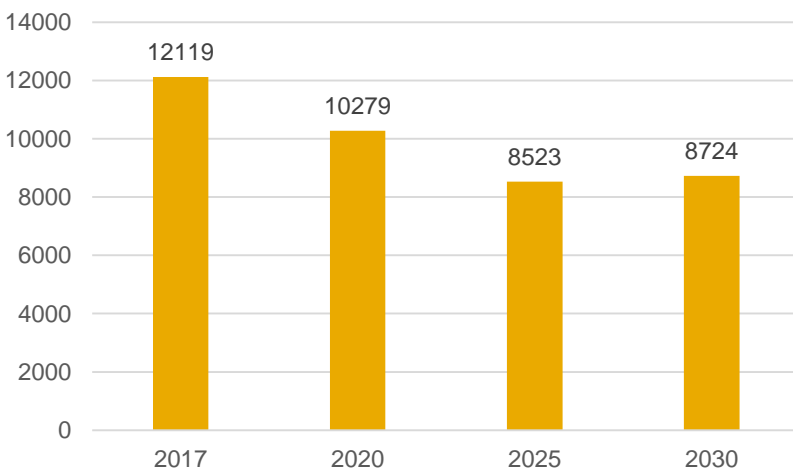
2017

There is an estimated under-supply of **12 100** SSPs in the country

2020

Our model predicts that, by 2020 there will be an estimated under-supply of about **10 200** SSPs in the country

2025

Our model predicts that, by 2025 there will be an estimated under-supply of about **8 500** SSPs in the country

2030

Our model predicts that, by 2030 there will be an estimated under-supply of about **8 700** SSPs in the country

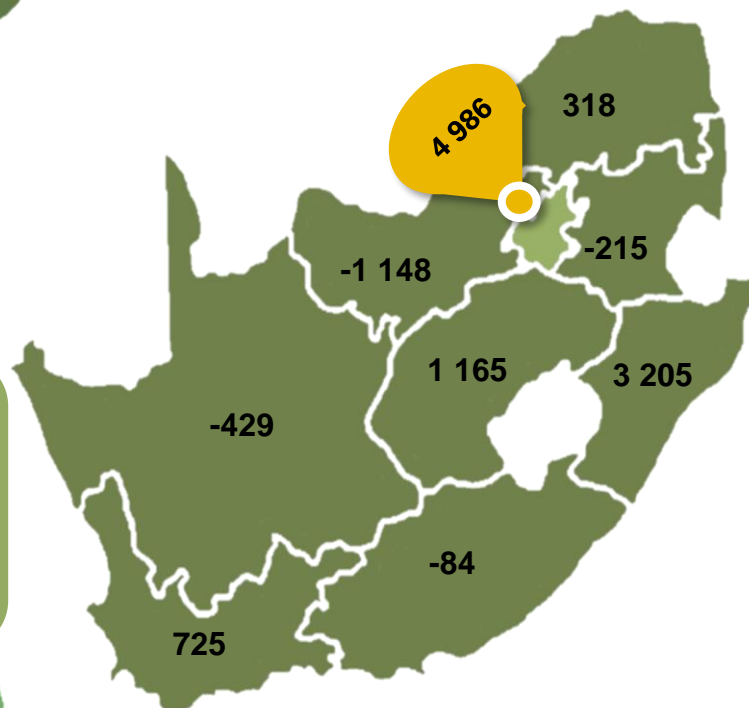# Overview of Supply and Demand Gap of SSPS in South Africa

4 059

1 194

-401

409

1 486

3 668

108

995

602
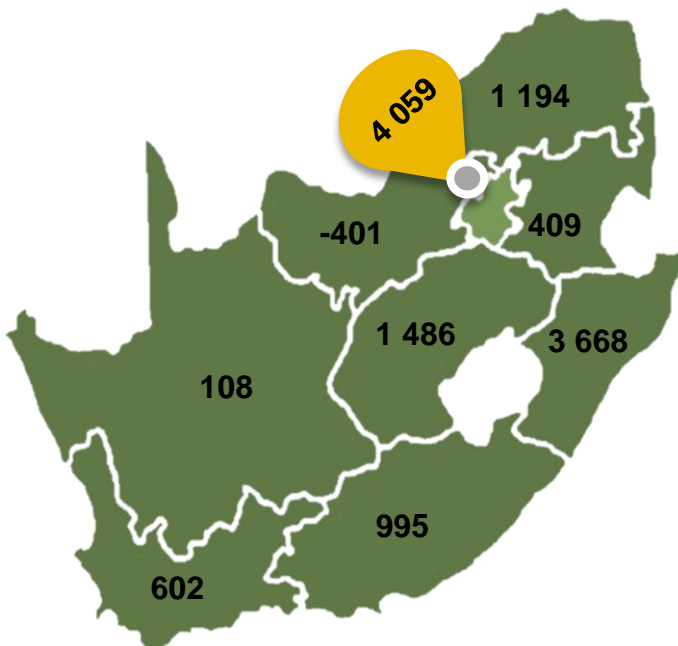
Currently the under-supply in social services practitioners amounts to around **12 100**. Gauteng, Kwa Zulu and Free State respectively account for **76 %** or close to **9 200** of this gap. The North West province has an over supply of nearly **400** SSPs.
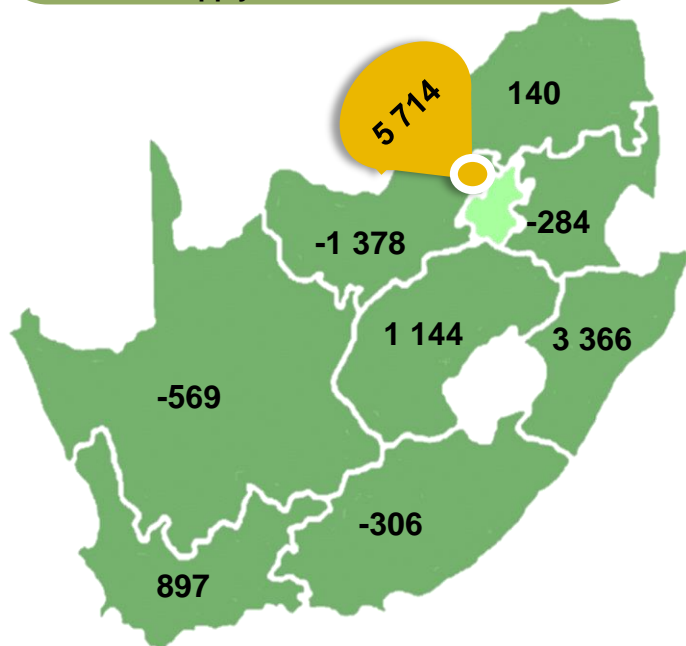
The gap in social services practitioners in **2025** is projected to decline to an estimated **8 500** from nearly **12 100** in 2017. All provinces show a marked decline in under supply except for Gauteng where under supply is projected to approximately grow to roughly **4 900** from **4 000**. **Northern cape**, **Eastern cape, North West and Mpumalanga have an over supply of SSPS**

4 986

318

-1 148

-215

1 165

3 205

-429

-84

725

5 714

140

-1 378

-284

1 144

3 366

-569

-306

897

The gap in social services practitioners in 2030 is projected to be approximately **8 700**. **Gauteng and Western Cape are the only two provinces with growing under supply over the forecast horizon**. Other provinces experiencing under supply show significant declines. The North West, Eastern Cape, Northern Cape and Mpumalanga provinces are in surplus supply.

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The Supply and Demand Gap in Social Workers

Social Workers

Role of social workers

Provide individuals, families and communities with assistance to enhance their collective social condition.

Supply and Demand analysis (2017-2030)

Current

In aggregate, there are currently close to **11 600** social workers in the sector. Approximately **1 700** are working in NPO and **9 900** for DSD
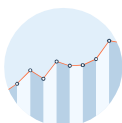
Currently there is an estimated demand of **18 800** social workers in the sector.

Future

There is a projected supply of approximately **17 200** social workers in 2030, of which **2 500** working in NPO and **14 700** working for DSD.

There is a projected demand of nearly approximately **23 700** social workers in 2030.

Estimated gap analysis social workers (2017-2030)

The table below details the gap projected for social workers between 2017 and 2030 per province. Based on the table below, South Africa currently has an under supply of roughly 7 100 social workers. In the year 2030 under supply is projected to be approximately 6 400 largely because of persistent growth in under supply for Gauteng.

Province	2017	2020	2025	2030
Eastern Cape	386	105	-198	-347
Free State	652	619	597	614
Gauteng	1 742	1 938	2 014	2 232
Kwa-Zulu Natal	2 052	1 981	1 952	2 045
Limpopo	266	39	-169	-263
Mpumalanga	813	749	753	799
Northern Cape	251	240	230	243
North West	172	112	33	4
Western Cape	854	1 012	1 062	1 162
TOTAL	**7 188**	**6 796**	**6 274**	**6 490**

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The Supply and Demand Gap of Social Auxiliary Workers

Social Auxiliary Workers

Role of social auxiliary workers

Social auxiliary workers play a supporting role to the function of social workers.

Supply and Demand analysis (2017-2030)

Current

Currently there is a supply of approximately **6 600** social auxiliary workers, of which **3 900** working in NPO and **2 700** working for DSD.
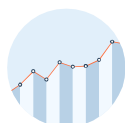
Currently there is an estimated demand of **8 600** social auxiliary workers.

Future

There is a projected supply of approximately **9 844** social auxiliary workers in 2030, of which **5 863** working in NPO **3 982** for DSD.

There is a projected demand of approximately **11 000** social auxiliary workers in 2030.

Estimated gap analysis social auxiliary workers (2017-2030)

The table below describes the gap projected of social auxiliary workers between 2017 and 2030 per province. There is an estimated current under supply of 1900 SAWs in 2017. Under supply is expected to decline to approximately 1 100 in 2030. **Mpumalanga and the North West are expected to have an over supply of SAWs by 2030**

Province	2017	2020	2025	2030
Eastern Cape	350	280	212	193
Free State	334	334	343	365
Gauteng	753	864	945	1 086
Kwa-Zulu Natal	734	637	556	552
Limpopo	403	368	349	357
Mpumalanga	-210	-331	-433	-483
Northern Cape	-51	-97	-140	-163
North West	-267	-353	-455	-515
Western Cape	-66	-105	-193	-219
TOTAL	**1 979**	**1 598**	**1 182**	**1 174**

The Supply and Demand Gap of Child Youth Care Workers

Child Youth Care Workers

Role of child youth care workers

Child youth care workers provide developmental and psychosocial support services to children and youth.

Supply and Demand analysis (2017-2030)

Current

Currently there are approximately **4 600** child youth care workers, of which **2 600** working in NPO and **2 000** for DSD.

Currently there is an estimated demand of **5 200** child youth care workers.

Future

There is a projected supply of approximately **6 200** child youth care workers in 2030, of which **3 200** working in NPO and **3 000** and for DSD.

There is a projected demand of approximately **6 600** child youth care workers in 2030.

Estimated gap analysis child youth care workers (2017-2030)

The table below details the gap projected child youth care workers between 2017 and 2030 per province. Currently there is an estimated under supply of 1 000 CYCWs. In 2030, projected under supply will decrease to 300 CYCWs. **North West shows an increase in under supply over the forecast horizon.**.

Province	2017	2020	2025	2030
Eastern Cape	163	193	227	268
Free State	123	107	91	90
Gauteng	109	193	238	313
Kwa-Zulu Natal	312	225	139	110
Limpopo	242	226	218	226
Mpumalanga	10	-55	-107	-131
Northern Cape	-74	-100	-130	-145
North West	5	-20	-52	-67
Western Cape	-323	-294	-304	-294
TOTAL	**568**	**476**	**319**	**369**

The Gap in
Supply and Demand
of
Care Givers

Care Givers

Role of care givers

Care givers provide service offerings as a response to government interventions at community level.

Supply and Demand analysis (2017-2030)

Current

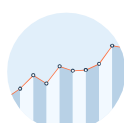Currently there are approximately **7 200** care givers working in the sector.

However, there is an estimated demand of **9 800** care givers.

Future

There is a projected supply of approximately **10 700** care givers in 2030.

There is a projected demand of approximately **12 900** care givers in 2030.

Estimated gap analysis care givers (2017-2030)

The table below details the gap projected for care givers between 2017 and 2030 per province. In 2017, there is an estimated under supply of 3000 care givers in South Africa, this is predominantly driven by a large under supply in Gauteng. Under supply is projected to decrease to approximately 2 200 in 2030.

Province	2017	2020	2025	2030
Eastern Cape	643	565	515	517
Free State	377	266	166	118
Gauteng	1 286	1 417	1 658	1 952
Kwa-Zulu Natal	472	451	494	590
Limpopo	502	387	282	229
Mpumalanga	-116	-221	-301	-330
Northern Cape	-12	-202	-360	-467
North West	-134	-273	-426	-528
Western Cape	6	-4	26	107
TOTAL	**3 024**	**2 385**	**2 054**	**2 189**

The Supply and Demand
Gap of Community Development Practitioners

Community Development Practitioners

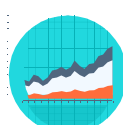## Role of community development practitioner

Community development practitioners facilitate activities that enable households and communities to manage their own development to achieve sustainable livelihoods. They promote an understanding of good community values for members of the community.

Supply and Demand analysis (2017-2030)

Current

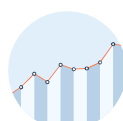Currently there are approximately **2 300** community development practitioners working in the sector

Currently there is an estimated demand of **1 700** community development practitioners.

Future

There is a projected supply of approximately **3 500** community development practitioners in 2030.

There is a projected demand of nearly **2 000** community development practitioners in 2030.

Estimated gap analysis community development practitioner (2017-2030)

The table below details the projected over supply of community development practitioners between 2017 and 2030 per province. There is an estimated over supply of close to 600 CDPs in South Africa. This is predominantly driven by an over supply of approximately 500 in the Eastern Cape. Over supply is projected to increase to close to 1 500 in 2030. Over the forecast horizon Gauteng retains an under supply of SSPs

Province	2017	2020	2025	2030
Eastern Cape	-547	-688	-839	-937
Free State	1	-18	-33	-44
Gauteng	169	146	132	131
Kwa-Zulu Natal	97	80	65	68
Limpopo	-219	-288	-361	-408
Mpumalanga	-89	-110	-127	-138
Northern Cape	-7	-18	-29	-36
North West	-176	-210	-249	-272
Western Cape	132	131	135	140
TOTAL	**-639**	**-975**	**-1 306**	**-1 496**
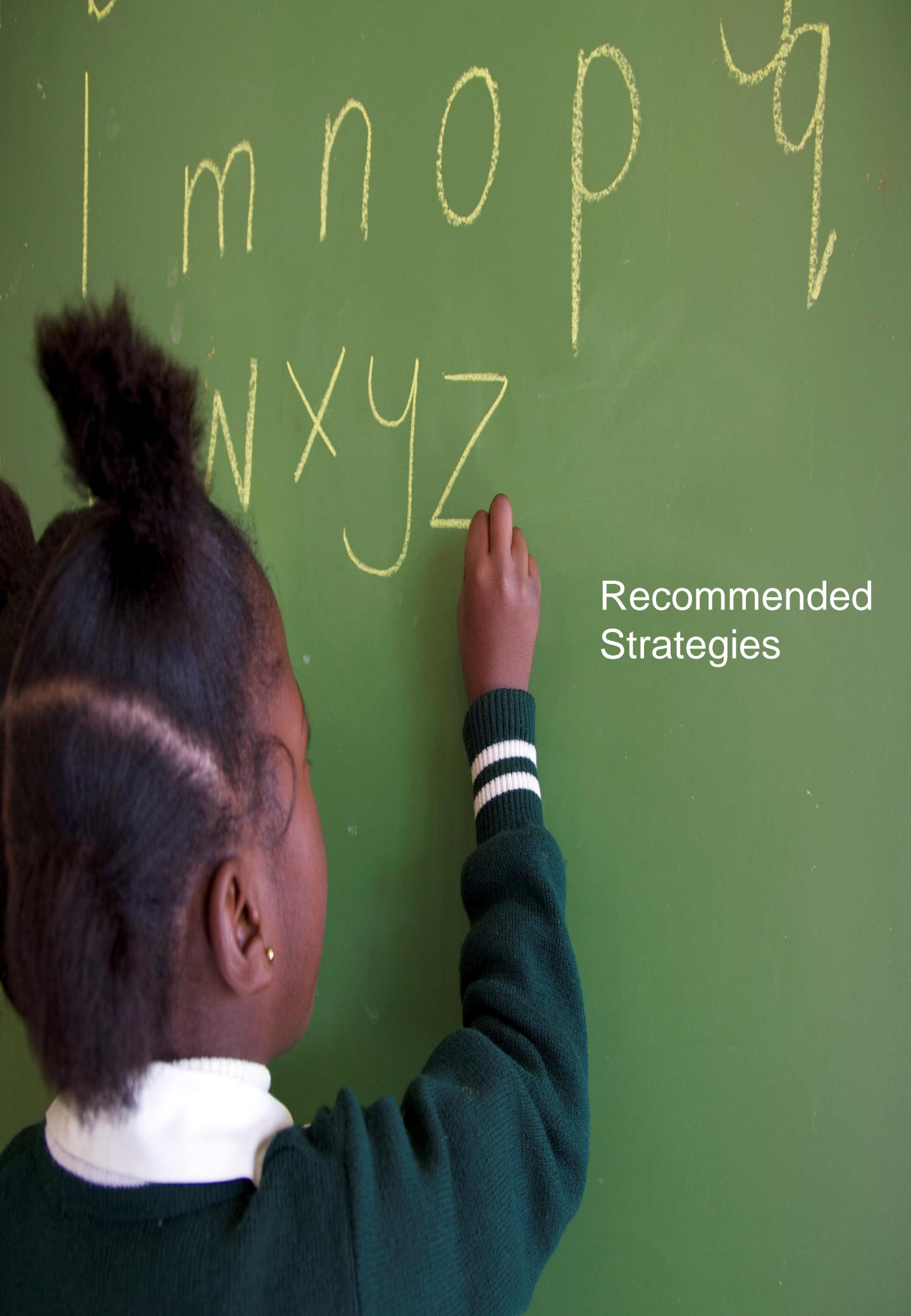
Recommended
Strategies

Conclusions and Recommendations

The programmes and services provided by the social development sector and delivered by social service practitioners directly address the United Nations Development 17 Global Goals for Sustainable Development.

In essence the role of SSPs in society is to foster sustainable development in the communities in which they operate. Workforce planning is an important aspect equipping policy makers with planning tools to ensure there is no shortage of SSP in the community. This section details recommendations from findings throughout the development of the *Supply and Demand Model for Social Service Practitioners in South Africa*. Our insights are a function of the findings from our gap analysis, as well as limitations and challenges experienced through the modelling process. If correctly implemented these recommendations will not only help reduced the under supply in SSPs but they will also help the sector internal and external factors affecting workforce planning in sector. The figure below summaries the *UNDP's 17 Goals for Sustainable Development*

Source: United Nations Development Programme: The 17 Global Goals for Sustainable Development.

Recommended Strategies

Only **23%** of enrolled students, graduate. This ratio is too low to sustain an increase in external supply. Our model shows that increasing the ratio to **30 % adds 2 460 SSPs** in the sector. It is important to implement policies between the DHET, the DSD and the HWSETA to help address challenges that reduce dropout rates

The absence of the bursary programme will **reduce the supply of SSPs by 2 200** over the forecast horizon 2017-2030. We recommend the programme remain in place. However, this should be implemented with a clear plan on absorbing beneficiaries and preventing backlogs. Current vacant positions should also be filled.

An SSP is likely to remain employed in the sector for 7 years. Improving working conditions and addressing challenges raised by SSPs such as OSD can greatly increase the tenure and supply of SSPs in the sector. **Increasing the tenure before exiting the sector by 1 year can add as many as 3 000 SSPs in 2030**

A key limitation with this model is the **unreliability** of the number of SSPs working in the **NPO** sector, and a lack of workload related data. We recommend the implementation of an HR system in the NPO sector with the help of the DSD and SACSSP to record the number of active SSPs in the NPO sector.

The sector perennially has to develop surveys to gather data on key information factors affecting SSPs. However the DSD can implement cost effective period surveys in its intranet to keep track of the challenges faced by SSPs. **This data can be reported as part of the quarterly non financial data reports**

Our findings show a persistent under supply of SSP categories like Care Givers and oversupply of Community Development Practitioners over the forecast horizon. In light of challenging fiscal conditions, we recommend that planning of resources to address this challenge take into account deficits and surpluses in other SSP categories.

Our findings show that despite a marked decline in gap between supply and demand over the forecast horizon **Gauteng province is persistently experiencing increasing under-supply of SSPs.** We recommend that policy makers avail human and financial resources to reduce the gap in Gauteng

Our findings from the Desktop Review reveal that there at least **3 015 vacant posts** in the sector at the same time our findings show that only **55% of scholarship holders are absorbed** into employment in the sector. Addressing the policy bottlenecks is a quick win for the sector to improve its current under supply conditions

Implementation of the model should be led by DSD, through a / multi-stakeholder Working Group, consisting of representatives from Institutes of HWSETA, the SACSSP, the NACCW and other critical stakeholders. This will ensure coordination of efforts across key partners – which will be critical for advocating for continued resourcing and funding for the workforce over the immediate and longer term.

In response to the existing data gaps and limitations of the model, it is recommended that a research agenda be identified and implemented by DSD, with the support and engagement of academia, the SACSSP and other stakeholders. Additionally that the model undergo a thorough review process and be updated every 3-5 years, based on evolving data, research and new trends.

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