

# Our Urban Future

## Highlighting the growth trajectory of South Africa's settlements

ALIZE LE ROUX, KATHRYN ARNOLD, SIBUSISIWE KHULUSE-MAKHANYA, GERBRAND MANS & LAURA WOOLS Council for Scientific and Industrial Research (CSIR), Spatial Planning and Systems, Built Environment, Pretoria, South Africa

#### SOUTH AFRICA'S CITIES ARE GROWING



South Africa is experiencing high levels of population expansion and urbanisation, and this growth is occurring at an increasingly rapid

Currently more than half (over 65%) of the country's population lives in urban centres. This growing and urbanising population will continue to place pressure on infrastructure and service delivery, with major cities taking the most strain.

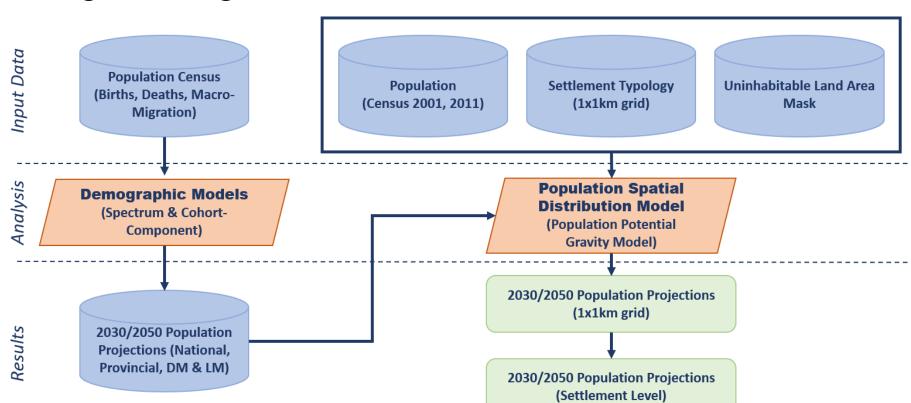
Population growth can be a catalyst for economic growth, but effective planning and policy interventions are needed.

Adaptation planning is therefore vitally important for ensuring the sustainability of these growing urban centres.

#### THE SETTLEMENT GROWTH MODEL

Through novel research led by the CSIR's Spatial Planning and Systems group, a settlement growth model has been developed to spatially and explicitly project the growth and decline of South African settlements, for the first time in South Africa, to 2050 in order to understand the pressures associated with their development trajectories.

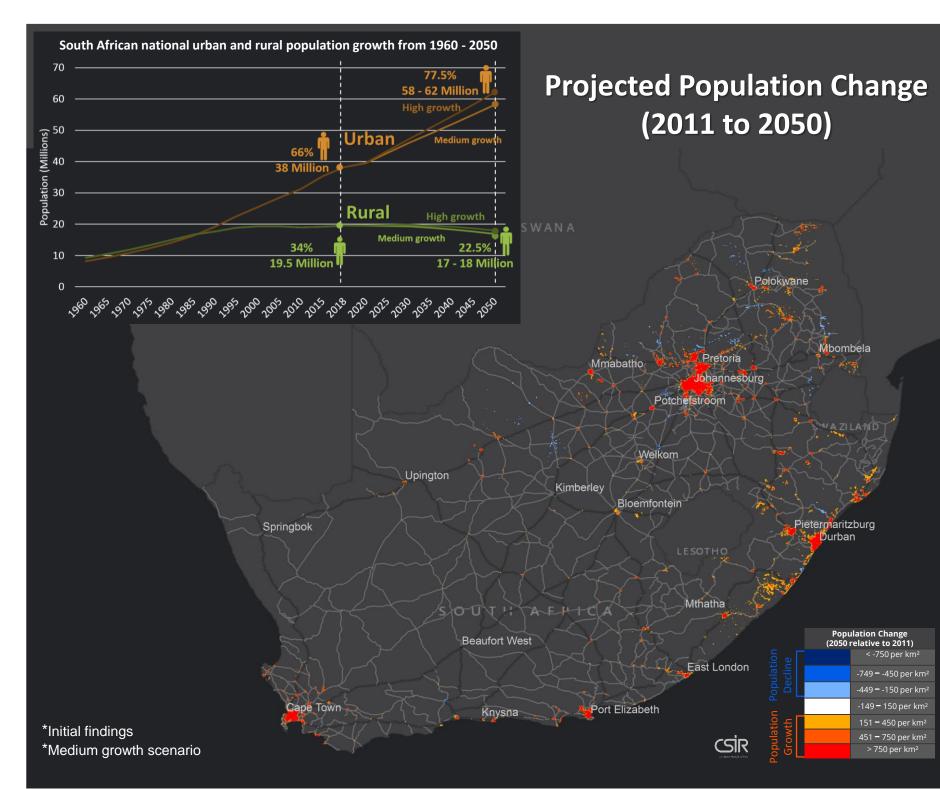
The core modelling components of the settlement growth model are the demographic model and the population potential gravity model. Spatially coarse demographic projections are fed into the population potential gravity model which is used to downscale the national population projections, resulting in 1x1km resolution projected population grids for 2030 and 2050. This research is an ongoing focus area for CSIR's Spatial Planning and Systems group, and further refinements to the methodology and model are being investigated.



#### A LIKELY 2050 FUTURE

Population change over time (growth or decline) is an inevitable phenomenon. Current projections indicate an additional 19-24 million people to be added to the national population in the next three decades, and the vast majority of this growth will be in cities and towns.

Unless this growth is effectively planned for and efficiently managed, it will place enormous pressure on bulk infrastructure delivery, as well as having critical implications for national and regional policies and inter-governmental prioritisation efforts.



### POPULATION PRESSURE MATRIX Based on the initial outputs from the settlement growth model, population growth pressure was categorised for all formal settlements nationally, taking into account changes in both relative and actual population change

High

Extreme

between 2011 and 2050.						
Actual Population	Relative Population Change 2011 to 2050					
Change 2011 to 2050	< -5.0 %	-5.0% – 4.9%	5.0% – 49.9%	50.0% – 99.9%	≥ 100.0%	
< -1000 people	Declining	Declining	1	-	-	
-1000 – -101 people	Declining	No Change	1	-	-	
-100 – 99 people	No Change	No Change	No Change	No Change	No Change	
100 – 999 people	-	No Change	Medium	High	High	

Projected Population Pressure	Number of settlements nationally		
Declining Population	192		
No Change	498		
Medium Growth	520		
High Growth	263		
Extreme Growth	164		
Total number of settlements	1637		

Medium

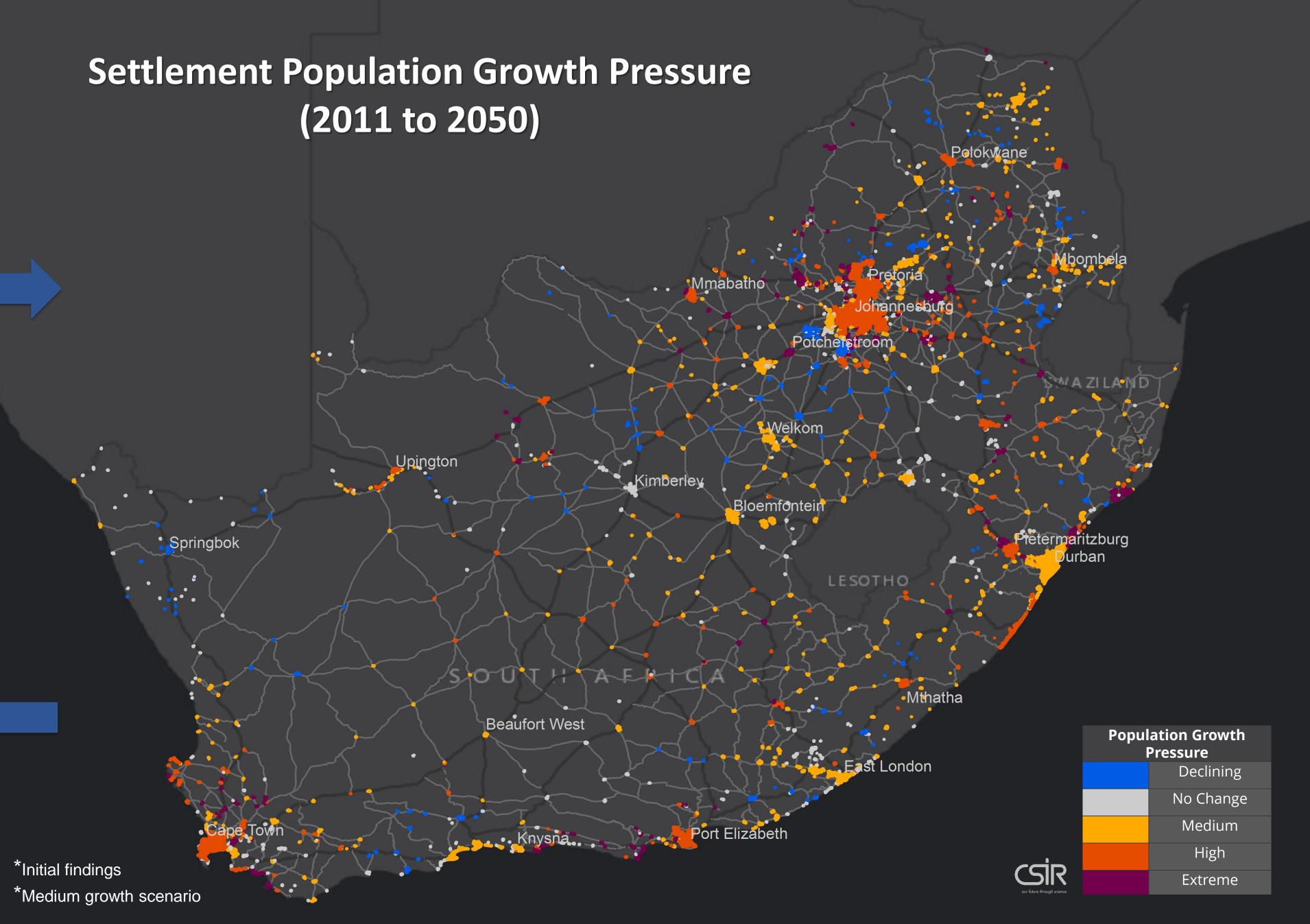
≥ 1000 people

Medium

#### **EXTREME GROWTH PRESSURE AREAS**

Regional service centres, secondary cities and metros are projected to experience the greatest population growth pressure in the next three decades, followed by large towns.





#### **CONTACT US**

#### Alize le Roux Gerbrand Mans

Spatial Planning and Systems, CSIR Spatial Planning and Systems, CSIR ALeroux1@csir.co.za GMans@csir.co.za

Senior Researcher Research Group Leader (Urban and Regional Planning)





