



provincial planning
commission

PROVINCE OF KWAZULU-NATAL

KWAZULU-NATAL SITUATIONAL OVERVIEW

April 2016

TABLE OF CONTENTS

LIST OF ABBREVIATIONS	24
1 INTRODUCTION	29
2 OVERVIEW OF KZN FROM A NATIONAL PERSPECTIVE	31
2.1 THE NATIONAL PLANNING COMMISSION AND NATIONAL GROWTH PATH	31
2.2 THE NINE POINT GROWTH PLAN	34
2.3 THE STATUS OF WOMEN AND GIRLS	37
2.4 YOUTH DEVELOPMENT.....	40
2.5 RURAL DEVELOPMENT	40
3 THE PHYSICAL AND ENVIRONMENTAL LANDSCAPE.....	40
3.1 TOPOGRAPHY.....	41
3.1.1 Elevation	41
3.1.2 Slope.....	42
3.2 GEOMORPHOLOGY.....	43
3.3 LAND COVER	45
3.4 AGRICULTURAL POTENTIAL.....	47
3.5 MINING AND BIODIVERSITY	51
3.6 HYDROLOGY	53
3.6.1 Strategic Water Source Areas	55
3.6.2 Water Management Areas (WMAs).....	57
3.6.3 Umgeni Water: Water Resource Regions.....	68
3.6.3.1 Lower uThukela Region.....	69
3.6.3.2 Mvoti Region.....	70
3.6.3.3 Mdloti Region	70
3.6.3.4 Mooi/Mgeni Region	71
3.6.3.5 Mlazi/ Lovu Region	72
3.6.3.6 Mkhomazi Region	72
3.6.3.7 Middle South Coast Region	73
3.6.3.8 Mzimkhulu Region.....	73
3.6.3.9 Mtamvuna Region.....	73



3.6.4	Coastal Metropolitan Area Water Reconciliation	74
3.6.5	Freshwater Ecosystem Priority Areas.....	75
3.6.6	Groundwater.....	79
3.6.7	Water Demand Management.....	81
3.6.8	Hydraulic Fracturing (Fracking) Proposals	82
3.6.9	Vulnerability of Community due to Dependence on Open Water Sources.....	83
3.6.10	Wetlands	84
3.7	BIODIVERSITY AND CONSERVATION.....	90
3.7.1	Vegetation.....	90
3.7.2	National Protected Area Expansion Strategy 2008	95
3.7.3	Impact of climate change on biome stability	97
3.7.4	Trans-Frontier Conservation Areas (TFCA)	103
3.8	MARINE AND COASTAL ENVIRONMENT	104
3.9	CLIMATE CHANGE.....	106
3.9.1	Climate Change Vulnerability.....	109
3.9.2	Responses to Climate Change in KwaZulu-Natal	117
3.9.3	Greenhouse Gas Emissions Inventory	118
3.9.4	Durban Adaptation Charter.....	119
3.9.5	Provincial Responses to Climate Change	120
3.9.6	Durban Climate Change Strategy	121
3.10	ENERGY RESOURCES	122
3.10.1	Wind Energy.....	125
3.10.2	Solar Energy	127
3.10.3	Hydro Energy	130
3.10.4	Biomass Energy.....	133
3.11	INSTITUTIONAL ARRANGEMENTS.....	134
3.12	SYNOPSIS: STRATEGIC ENVIRONMENTAL ISSUES.....	135
4	THE DEMOGRAPHIC LANDSCAPE.....	139



4.1	POPULATION CHARACTERISTICS	139
4.1.1	<i>Population size and growth</i>	139
4.1.2	<i>Population distribution, growth and density</i>	140
4.1.3	<i>Age distribution</i>	143
4.1.4	<i>Gender distribution</i>	144
4.2	FERTILITY	145
4.2.1	<i>Marriage and childbearing</i>	145
4.2.2	<i>Fertility levels and trend</i>	147
4.2.3	<i>Teenage pregnancy and childbearing</i>	148
4.3	HOUSEHOLDS AND FAMILIES.....	150
4.4	MORTALITY	151
4.4.1	<i>Early age mortality</i>	151
4.4.2	<i>Adult mortality and longevity</i>	151
4.5	MIGRATION	152
4.5.1	<i>Out-migration</i>	152
4.5.2	<i>In-migration</i>	153
4.5.3	<i>Inter-district movements</i>	153
4.5.4	<i>Characteristics of migrants</i>	155
4.5.5	<i>Migration and access to basic services</i>	156
4.6	SYNOPSIS: STRATEGIC DEMOGRAPHIC ISSUES	157
5	THE SOCIAL LANDSCAPE.....	161
5.1	POVERTY AND SOCIAL DEVELOPMENT	161
5.1.1	<i>Poverty</i>	161
5.1.2	<i>Household food security</i>	164
5.1.3	<i>Social protection</i>	166
5.2	HEALTH	168
5.2.1	<i>General health status</i>	168
5.2.2	<i>Disability</i>	168



5.2.3	Maternal health	169
5.2.4	Patterns and causes of death.....	171
5.2.5	Access to health services	175
5.3	HUMAN SETTLEMENT.....	180
5.3.1	Type of dwelling.....	180
5.3.2	Ownership of dwelling unit	182
5.3.3	Women's Ownership of Land	184
5.4	SAFETY AND SECURITY.....	184
5.4.1	Crime in the province.....	184
5.4.2	Fear of crime	188
5.4.3	Experience of crime.....	189
5.4.4	Gender Based Violence	191
5.4.5	Assessment of law enforcement institutions	192
5.5	YOUTH DEVELOPMENT	193
5.5.1	Education and skill development	194
5.5.2	Youth health	195
5.5.3	Youth unemployment	197
5.6	GENDER AND THE EMPOWERMENT OF WOMEN	198
5.7	SOCIAL COHESION AND SOCIAL CAPITAL	202
5.7.1	Social cohesion	202
5.7.2	Social capital.....	203
5.8	STRATEGIC SOCIAL ISSUES	204
6	THE HUMAN RESOURCE DEVELOPMENT LANDSCAPE	208
6.1	NATIONAL PLANS AND POLICIES	209
6.1.1	The National Development Plan:.....	209
6.1.2	The National Education Policy Act No. 27 of 1996	210
6.1.3	The White Paper for Post-School Education and Training:	211
6.1.4	The Human Resources Development (HRD) Strategy:	211



6.1.5	<i>The National Skills Development Strategy:</i>	212
6.1.6	<i>KwaZulu-Natal Youth Development Strategy:</i>	213
6.2	HRD IN KWAZULU-NATAL – EXAMINING PROGRESS 2011 - 2015.....	214
6.2.1	<i>Goal 2.1: Early Childhood Development, Primary and Secondary Education.</i>	216
6.2.2	<i>Goal 2.2: Skills alignment to Economic Growth (KZN HRD Strategy focus)</i>	231
6.2.3	<i>Goal 2.3: Youth Skills Development and Life-long learning</i>	236
7	THE ECONOMIC LANDSCAPE	244
7.1	OVERVIEW OF KZN ECONOMY IN THE GLOBAL CONTEXT	246
7.2	OVERVIEW OF THE KZN ECONOMY COMPARED TO OTHER SOUTH AFRICAN PROVINCES	254
7.2.1	<i>Growth of Economic Activities in KZN relative to other South African Provinces</i> 254	
7.2.2	<i>Labour Market: Job Creation in KZN</i>	265
7.2.2.1	Employment and Unemployment in KZN	265
7.2.2.2	Female Employment and Unemployment.....	273
7.2.2.3	Formal & Informal Employment.....	276
7.2.3	<i>Economic Factors that Influence the Expansion of Economic Activities</i>	278
7.2.3.1	Domestic Fixed Investment	278
7.2.3.2	Labour Skills: Skills Profile	280
7.2.3.3	Land & Land Use Change for Economic Activities	281
7.3	OVERVIEW OF KZN DISTRICT ECONOMIES.....	291
7.3.1	<i>General Economic Overview</i>	291
7.3.2	<i>General Economic Activities in KZN Districts</i>	294
7.3.3	<i>Economic Activities: Sector performance in KZN Districts</i>	297
7.3.3.1	Primary Sector Activities	297
7.3.3.2	Secondary Sector Activities	299
7.3.3.3	Tertiary Sector Activities	302
7.3.4	<i>Profile of KZN Districts</i>	306
7.3.4.1	Ugu	308
7.3.4.2	uMgungundlovu	308



7.3.4.3	uThukela	309
7.3.4.4	uMzinyathi	310
7.3.4.5	Amajuba	311
7.3.4.6	Zululand	312
7.3.4.7	uMkhanyakude	313
7.3.4.8	uThungulu	314
7.3.4.9	iLembe	315
7.3.4.10	Harry Gwala	316
7.3.4.11	eThekweni	317
7.4	OVERVIEW OF KZN ECONOMIC NODES	318
7.4.1	Durban	318
7.4.2	Pietermaritzburg	318
7.4.3	Richards Bay	319
7.4.4	Summary of the City Economies	320
7.4.5	Other Centres of Economic Activity in KwaZulu-Natal	320
7.5	DETAILED ECONOMIC SECTOR REVIEW	322
7.5.1	Agriculture, Forestry and Fishing	322
7.5.1.1	Overview	322
7.5.1.2	Sugar	323
7.5.1.3	Livestock	326
7.5.1.4	Forestry	328
7.5.1.5	Fisheries	329
7.5.1.6	Employment in Agriculture, Forestry and Fishing	330
7.5.1.7	Food security	332
7.5.1.8	Land tenure issues	333
7.5.1.9	Constraints & Opportunities in Agriculture & Forestry	335
7.5.2	Manufacturing	337
7.5.3	Tourism	342
7.5.4	Finances and Business Support Services	349



7.5.4.1	Finance Services, Financial Inclusion and Access to Finance.....	349
7.5.4.2	Business Support Programmes and Investment Incentives	351
7.5.4.3	Business Services as an Economic Sector.....	352
7.5.5	<i>Wholesale and Retail Trade, Hotels and Restaurants (Trade and Commerce)</i> 353	
7.5.6	<i>Mining and Quarrying</i>	355
7.5.7	<i>Property Development (& Construction)</i>	357
7.5.8	<i>Logistics and Communications</i>	361
7.5.9	<i>The Green Economy</i>	366
7.5.9.1	Renewable Energy	367
7.5.9.2	Low Carbon Transport.....	368
7.5.9.3	Green Buildings/green infrastructure	369
7.5.9.4	Waste Management & Waste Recovery	369
7.5.9.5	Water Resource Management	369
7.5.9.6	Sustainable Agriculture	370
7.5.9.7	Constraints and Opportunities	370
7.5.10	<i>The Informal Economy</i>	374
7.6	INVESTMENT IN KZN.....	377
7.6.1	<i>Domestic Fixed investment</i>	377
7.6.2	<i>Foreign Direct Investment</i>	379
7.7	SYNOPSIS: STRATEGIC ECONOMIC ISSUES	383
8	THE INFRASTRUCTURE LANDSCAPE	387
8.1	WATER AND SANITATION	388
8.1.1	<i>Drought-related Interventions undertaken by Provincial Government</i>	388
8.1.2	<i>KZN Water Supply</i>	390
8.1.3	<i>Water and Sanitation backlogs</i>	392
8.1.4	<i>Challenges in the Water Sector</i>	393
8.2	ENERGY AND ELECTRICITY	396
8.2.1	<i>Coal</i>	397
8.2.2	<i>Nuclear</i>	397



8.2.3	<i>Hydropower</i>	397
8.2.4	<i>Gas and Diesel</i>	398
8.2.5	<i>Wind and Solar</i>	398
8.2.6	<i>Cogeneration</i>	398
8.3	PORT DEVELOPMENT.....	400
8.3.1	<i>The Durban Port</i>	400
8.3.2	<i>Richards Bay Port</i>	401
8.4	KZN ROAD AND RAIL	403
8.4.1	<i>Road Transport</i>	403
8.4.2	<i>Rail Transport</i>	405
8.5	AEROTROPOLIS.....	407
8.6	SPECIAL ECONOMIC ZONES	409
8.7	STRATEGIC INFRASTRUCTURE PROJECTS	410
8.7.1	<i>SIP 1: Unlocking The Northern Mineral Belt With Waterberg As The Catalyst</i>	410
8.7.2	<i>SIP 2: Durban-Free State-Gauteng logistics and industrial corridor</i>	411
8.8	KZN INDUSTRIAL AND TECHNOLOGY HUBS	413
8.9	KZN AIRPORT STRATEGY.....	414
8.10	KZN INFORMATION AND COMMUNICATION TECHNOLOGY STRATEGY	415
8.10.1	<i>Connectivity</i>	415
8.10.2	<i>Digital Access</i>	415
8.10.3	<i>ICT SMME Development</i>	415
8.10.4	<i>ICT Skills Development</i>	416
8.10.5	<i>E-government</i>	416
8.11	KZN WASTE MANAGEMENT STRATEGY	417
8.12	YOUTH DEVELOPMENT AND INFRASTRUCTURE.....	420
8.13	SYNOPSIS STRATEGIC INFRASTRUCTURE ISSUES.....	421
9	GOVERNANCE AND POLICY LANDSCAPE	423
9.1	KZN CITIZENS' LEVEL OF SATISFACTION WITH GOVERNANCE AND SERVICE DELIVERY	426



9.2	ASSESSING POLICY COHERENCE AND OPTIMISING CONDITIONS FOR ACHIEVING PGDS GOALS	429
9.3	STRATEGIC ISSUES FOR CONSIDERATION	431
10	KZN FUNDING LANDSCAPE	434
11	CONCLUSION	444



LIST OF MAPS

Map 1: KwaZulu-Natal Elevation Map	42
Map 2: KwaZulu-Natal Slope Analysis Map	43
Map 3: KwaZulu-Natal Landscapes Map	44
Map 4: Terrain Morphological Units - KwaZulu-Natal	45
Map 5 - KwaZulu-Natal Land Cover	46
Map 6 Agricultural land categories.....	47
Map 7 KZN Existing agricultural activities (Mitchell 2011)	48
Map 8: KZN Gully location map – the extent of land degradation in the Province	51
Map 9 Mining and Biodiversity Guideline areas - coalfields and coal mines	52
Map 10 Mean Annual Runoff per Quaternary Catchment.....	55
Map 11 Strategic Water Resource Areas	56
Map 12 Previous Water Management Areas (pre-2012)	58
Map 13 The 9 revised 2012 consolidated WMAs (DWS)	59
Map 14 Inkomati-Usutu WMA – Surface Water Monitoring Stations.....	
Map 15 Inkomati-Usutu WMA – Groundwater Monitoring Stations	61
Map 16 Pongola-Mtamvuna WMA - location of surface water monitoring stations	63
Map 17 Pongola-Mtamvuna WMA - location of groundwater monitoring stations.....	64
Map 18 Thukela WMA	65
Map 19 National Freshwater Ecosystem Priority Areas (FEPAs) and Fish Corridors.....	76
Map 20 Detail of the FEPA areas and Fish Corridors; Underberg, Mzimkhulu River, Harry Gwala District.....	77
Map 21 NFEPA Groundwater Recharge Areas	79
Map 22 Distribution of boreholes	81
Map 23 - Vulnerability of Households to Water-Borne Diseases.....	84
Map 24 NFEPA wetland coverage in KZN	



Map 25 Wetland Cluster areas in Amajuba and Zululand District correspond with national Strategic Water Supply Areas.....	86
Map 26 KZN Vegetation Types	93
Map 27 Spatial configuration of the Conservation Status of Vegetation Types	94
Map 28 Current protected areas map, also showing NPAES	96
Map 29 KZN Biodiversity Sector Plan Landscape Ecological Corridors	97
Map 30 Areas of Biome Stability.....	99
Map 31 Climate change scenarios: current and low risk / best case	100
Map 32 Landscapes important for ecosystem based adaptation	103
Map 33 Marine Protected Areas off the coast of KZN.....	106
Map 34 Human-climate vulnerability in South Africa	110
Map 35 Human-climate vulnerability in KZN	110
Map 36 - Wind Power Potential within South Africa (Energy Resource Maps, n.d.)	125
Map 37: Annual Solar Radiation within South Africa (Energy Resource Maps, n.d.)	128
Map 38 South African Macro Hydro Power Potential	132
Map 39 South African Macro Hydro Power Potential	133
Map 40: South African Biomass Energy Potential	134
Map 41 Distribution of poverty levels in KZN 2014	163
Map 42: Ingonyama Trust Board Land (2011)	283
Map 43: Catalytic Projects as Major Enablers in KZN	290
Map 44: KZN Main Tourism Regions	343
Map 45 Aerotropolis catchment area	408
Map 46 Aerotropolis 15km and 30km radius.....	
Map 47 Schematic representation of SIP 1 logistics corridor.....	411
Map 48 Schematic representation of SIP 2.....	412
Map 49 Aerial view - Durban Dug-out Port.....	



LIST OF TABLES

Table 1	Protection levels (percentage land area) of national strategic water source areas per province	57
Table 2	Land use in SWSAs per province	57
Table 3	Usutu - uMhlathuze WMA: Reconciliation of water requirements/allocations and available water for the Year 2000 (million m ³ /annum	62
Table 4	Usutu - uMhlathuze WMA: Year 2025 base scenario water requirements (million m ³ /a)	62
Table 5	Usutu - uMhlathuze WMA: Year 2025 high scenario water requirements (million m ³ /a)	63
Table 6	Thukela WMA: Available yield in the year 2000 (million m ³ /a)	65
Table 7	Thukela WMA: Reconciliation of water requirements and availability for the year 2000 (million m ³ /a)	66
Table 8	Thukela WMA: Reconciliation of water requirements and availability for the year 2025 base scenario (million m ³ /a)	66
Table 9	Thukela WMA: Reconciliation of water requirements and availability for the year 2025 high scenario (million m ³ /a)	66
Table 10	Umgenti Water -water resource regions, quaternary catchments, major rivers, significant dams and Water Service Authorities	69
Table 11	NWRS2 Coastal Metropolitan Area Water Reconciliation	74
Table 12	KwaZulu-Natal Major Dams and their Capacity.....	78
Table 13	RAMSAR and Wetlands International Sites within KwaZulu-Natal	88
Table 14:	Conservation Status classification system (Scott-Shaw & Escott, 2011)	91
Table 15:	Protection status classification system (Scott-Shaw & Escott, 2011)	91
Table 16	Estimated growth rates and population density, 2011-2015	141
Table 17	Mothers' marital status – municipal districts.....	146
Table 18	Differences in fertility rates - districts.....	147
Table 19	Teenage childbearing KZN	149
Table 20	KZN Migration status 2006 - 2011	152
Table 21	Inter-district movements, estimates 2006 - 2011	154



Table 22	Percent experiencing insufficient food for children, 2014	164
Table 23	Indicators of household food security and nutrition	165
Table 24	Social grants disbursement, by province, 2015.....	166
Table 25	Summary: selected primary indicators of poverty	167
Table 26	Percent of population reporting disability	169
Table 27	Number of maternal deaths 2009 - 2013.....	170
Table 28	Deaths in KZN by age, by district, 2014.....	171
Table 29	Leading causes of death – by gender, 2014	172
Table 30	Leading causes of death, 2014.....	173
Table 31	HIV & AIDS indicators, 2015	174
Table 32	Public and state-aided health facility in KwaZulu-Natal.....	175
Table 33	Average catchment population per PHC facility	176
Table 34	Differences in health services and access	177
Table 35	Percent of KZN on medical care	179
Table 36	Summary of Selected indicators of health, PGDP indicators.....	179
Table 37	Dwelling types in rural and urban areas, 2014	181
Table 38	Estimates of district households in informal dwellings, 2011	182
Table 39	Selected indicators of human settlement (PGDP)	183
Table 40:	Reported number of crimes in KZN, 2014-2015	185
Table 41:	Recorded number of crimes 2005 - 2015	187
Table 42	Summary of indicators of safety and security	193
Table 43	Youth population of KZN	193
Table 44	Education profile of youth	194
Table 45	Reported status of youth health	195
Table 46	Reported illnesses among youth.....	196
Table 47	Gender differences KZN	198
Table 48	Education differences, adult females - males	199



Table 49	Gender differences in youth education profile	200
Table 50	Indicator of social capital (PGDP)	203
Table 51	Enrolments in ECD KZN by district	217
Table 52	Survival and drop-out rates	221
Table 53	District performance NSC 2015	226
Table 54	Overall quality of passes KZN	227
Table 55	National NSC Maths participation and pass rates	228
Table 56	Infrastructure backlogs in the school system	229
Table 57	KZN TVET Performance in Ministerial Programmes	234
Table 58	Number of learners, educators and institutions in public AET centres in KZN in 2012	241
Table 59	Number of learners in public AET centres in KZN by programme in 2012	241
Table 60	Enrolment in AET Grade 12	242
Table 61	GETC qualifications	242
Table 62:	Annual Growth Rate of Gross Value Addition of Selected South African Provinces by Main Periods (% per year)	256
Table 63:	GVA Per Capita Per Province (2013)	257
Table 64:	GVA Per Capita for KZN and for South Africa (2010 – 2013, Data at 2005 Prices) ...	258
Table 65:	Annual Growth Rate of Gross Value Addition per Capita by Main Periods (% per year)	259
Table 66:	KZN GDP Per Capita (in Current and 2005 Constant Prices)	260
Table 67:	Annual GVA Growth (2000 – 2013 & 2009 - 2013)	261
Table 68:	Annual GVA Growth per Sector (2000 - 2013)	262
Table 69:	Average Annual GVA Growth per Sector (2009 - 2013)	264
Table 70:	Employment and Unemployment per Province	266
Table 71:	Gender Breakdown by High Level Occupations in South Africa and in KZN (2014)	274
Table 72:	Gender and Race Breakdown by High Level Occupations in KZN	274
Table 73:	Change in Workforce profile by Race and Gender	275



Table 74: KZN Agri-Parks: Site & Commodity Priorities (Feb 2016)	288
Table 75: Provincial GVA Growth Rates.....	292
Table 76: Growth in Manufacturing and Construction in KZN Districts by main periods (% Per Annum)	301
Table 77 District performance in economic activities 2009 - 2013	307
Table 78: Commercial Production of Selected Crop for Selected Years (1000 tons).....	323
Table 79: Land Restitution Statistics (1995 to March 2013)	334
Table 80: KZN Tourist Destinations by Foreign Tourists, 2013.....	345
Table 81: Financial Exclusion in South Africa.....	350
Table 82 Water supply and demand	391
Table 83 Water and sanitation backlogs	392
Table 84 Status of road infrastructure 2014 (Service Delivery Achievement 2009-2014, DOT)	403
Table 85 Outcomes of Industrial Economic Hubs feasibility studies	413
Table 86 Summary of District Waste Management facilities and policies 2012.....	417
Table 87 Rating of KZN performance on selected service delivery areas.....	427
Table 88 Level of satisfaction with municipal performance	427
Table 89 Rating on Batho Pele principles	428
Table 90 Citizen's view of top priorities	429

LIST OF FIGURES

Figure 1 Linkages between ecosystem services and human wellbeing	87
Figure 2 Number of vegetation types per conservation status category (Scott-Shaw & Escott, 2011)	92
Figure 3 Rating of South Africa by Climate Action Tracker (South Africa Climate Action Tracker, 2015)	107



Figure 4 South Africa's Climate Change commitments (South Africa Climate Action Tracker, 2015)	108
Figure 5 Extreme weather events recorded in KwaZulu-Natal from 1962-2004 (CEALUM,2008)	113
Figure 6 Distribution of bio-climatic zones of KwaZulu-Natal under temperature increases zones of KwaZulu-Natal under temperature increases (0.5°C – 1.5°C), (Whitwell, 2009) 114	
Figure 7 Distribution of bioclimatic zones of KwaZulu-Natal under temperatures increases (2°C – 3°C), (Whitwell, 2009)	116
Figure 8 Greenhouse gas emissions 2000 - 2010.....	119
Figure 9 KZN Renewable Energy Projects (Beires, 2015)	123
Figure 10 KZN Power Generation Potential (Beires, 2015)	123
Figure 11 Proposed KZN Energy Agency (Beires, 2015).....	124
Figure 12 KZN Wind Resource Potential (Beires, 2015)	126
Figure 13 Wind Resource in eThekweni Municipality at 100m AGL (Energy Resource Maps, n.d.).....	127
Figure 14 KZN Solar Resource Potential (Beires, 2015)	129
Figure 15: Screen clip from Durban Solar Maps online (Durban Solar Map, n.d.)	129
Figure 16: Progress on the Ingula Pumped Storage Scheme (Ingula Pumped Storafe Scheme, n.d.).....	130
Figure 17: Diagram of the Ingula Pumped Storage Scheme (Ingula Pumped Storafe Scheme, n.d.).....	131
Figure 18: PCEC Intergovernmental Linkages (EDTEA pers comm).....	135
Figure 19 Population size 1996 - 2015	139
Figure 20 KZN as percentage of SA population 1996 - 2015.....	139
Figure 21 Projected size of provincial population 2030 - 2050.....	140
Figure 22 Estimates of district population 2015.....	141
Figure 23 Distribution of population groups.....	142
Figure 24 Rural-urban population distribution.....	142
Figure 25 KZN Age distribution 1996 - 2015	143
Figure 26 Age distribution 1996 - 2014	143



Figure 27	Population over age 65, 2001 - 2015.....	144
Figure 28	Gender distribution, 2015	144
Figure 29	Age and sex distribution 1996 - 2015.....	145
Figure 30	Mothers marital status	146
Figure 31	Trends in fertility rates 1996 - 2011	147
Figure 32	Teenage pregnancy trend 2009 -2014.....	148
Figure 33	Marital and motherhood status	149
Figure 34	Average household size, 2014.....	150
Figure 35	Selected household characteristics.....	150
Figure 36	Infant mortality rates estimates 2015.....	151
Figure 37	Estimates of longevity	151
Figure 38	Out-migration KZN, 2006 2011	153
Figure 39	In-migration KZN 2006 - 2011	153
Figure 40	Population net gains/losses by district	155
Figure 41	Age distribution of migrants 2011	155
Figure 42	Characteristics of migrant & non-migrant households	156
Figure 43	Migration and access to basic facilities.....	156
Figure 44	Trends in individual poverty	162
Figure 45	Trends in household poverty	162
Figure 46	Difference in household poverty level, 2014	164
Figure 47	Percent of households receiving social grants, KZN 2014.....	166
Figure 48	Health status of KZN population, 2014	168
Figure 49	Percent of population with disability, South Africa, 2014	168
Figure 50	HIV prevalence among antenatal women 2009 - 2013	170
Figure 51	In-facility maternal mortality	170
Figure 52	Selected indicators: household access to health services	176
Figure 53	Percent of population with medical cover - provincial.....	178



Figure 54	Percent of population with medical aid scheme - KZN	178
Figure 55	Households – type of structure, 2014	181
Figure 56	Selected indicators of housing status in KwaZulu-Natal.....	183
Figure 57	Trend in reported crime	185
Figure 58	Trend in crime categories KZN 2006 - 2015	187
Figure 59	Most feared crimes reported.....	189
Figure 60	Trend in fear of crimes.....	189
Figure 61	Percent experience of crime	190
Figure 62	Percent satisfaction with safety and security services	193
Figure 63	Leading reported illnesses.....	196
Figure 64	Percent of youth not working	197
Figure 65	Gender differences: education and work status	199
Figure 66	Gender differences in youth unemployment	201
Figure 67	The SA Human Resource Development System	212
Figure 68	ECD enrolment rates 2010 - 2013.....	217
Figure 69	Gross enrolment rate KZN.....	218
Figure 70:	ANA results in mathematics 2012 -2014.....	219
Figure 71:	ANA results in language 2012 - 2014	220
Figure 72	Provincial NSC pass rate 2009 - 2015.....	222
Figure 73	Number of passes from 2009 - 2015.....	222
Figure 74	Overall pass rate per racial group	223
Figure 75	Overall failure rate per racial group	224
Figure 76	Male and female performance.....	224
Figure 77	Percentage of Bachelor passes 2009 - 2015	225
Figure 78	Comparing male and female quality of passes.....	225
Figure 79	Performance in various educational categories 2015	225
Figure 80	KZN district performance 2013 – 2015	226



Figure 81 Performance in large key subjects	227
Figure 82 TVET college enrolments 2011 - 2013.....	232
Figure 83 Overall certification rates: Engineering	233
Figure 84 Overall certification rate: Business studies	233
Figure 85: Overall certification rate: NCV	234
Figure 86 KZN working age population by age group	237
Figure 87 Labour force – youth education level	237
Figure 88 Skills development and life-long learning	238
Figure 89 Employment by industry – youth and adults	238
Figure 90 Youth employment by occupation	239
Figure 91 Youth eEmployment by sector.....	240
Figure 92 Youth not in employment, education or training by gender	241
Figure 93: Prices of Primary Commodities (2012 – 2015, Index January 2012=100)	247
Figure 94: GDP of Established & Emerging Countries (2012) and long GDP Forecasts (2050)	248
Figure 95: Growth in Volume of World Merchandise Exports & GDP, 2005 -2013 & Projections	249
Figure 96: Contributions to Year-on-Year Growth in World Merchandise Trade (2012 -2015Q2, Percentage Change from Data in US\$ values)	250
Figure 97: KZN Trade Balance (2004 – 2015).....	251
Figure 98: South Africa – USA Trade (Exports, Imports & Trade Balances, 2000 - 2014)	252
Figure 99: KwaZulu-Natal's Leading Export Markets (2013 & 2014, % of total exports)	253
Figure 100: GVA per Province of South Africa (2000 – 2013)	255
Figure 101: KZN Share of National GVA (at Basic Prices at 2005 constant prices)	257
Figure 102: GVA per Industry and Province	260
Figure 103: Relative Changes in the Number of Those in Age Group in KZN between 2002 and 2015.....	267
Figure 104: Employed as Percentage of Working-age Population (2000 – 2013)	268
Figure 105: Non-participation as Percentage of Working-age Population (2000 – 2013)	268



Figure 106: Number of Employed, Unemployed & Discouraged Work Seekers in KZN	269
Figure 107: Narrow & Expanded Unemployment Rate in KZN (%; Q12008 – Q32015)	270
Figure 108: Number Employed and Number in the Labour Force (Q12008 – Q32015)	270
Figure 109: Provincial Distribution of Total Unemployment by Age-group (2014, %)	272
Figure 110: Incidence of long-term unemployment by previous industry, 2008 and 2014	273
Figure 111: Formal and Informal Employment by Province	277
Figure 112: Trends in Formal and Informal Employment in KZN and in South Africa (2000 – 2013)	278
Figure 113: Provincial Contribution to Total Domestic Fixed Capital Investment (2013)	279
Figure 114: Trends in Domestic Fixed Capital Investment in KZN relative to Economic Activity changes (2000 – 2013, Indices, 2000=100)	280
Figure 115: Skills Profile of Formally employed per Province	280
Figure 116: KZN Economy Overview	291
Figure 117: GVA Per District	294
Figure 118: Trend in the Share of KZN's GVA with eThekweni Metro Municipality	295
Figure 119: Trend in the Share of KZN's GVA with District Municipalities other than eThekweni Municipality	295
Figure 120: Growth in KZN Districts (2000 – 2009 & 2009 – 2013)	296
Figure 121: KZN Districts' Contribution to KZN Agricultural GVA	297
Figure 122: KZN Districts' Contribution to KZN Mining & Quarrying GVA	297
Figure 123: Growth of Primary Sector in KZN Districts	298
Figure 124: KZN Districts' Contribution to KZN Manufacturing GVA	299
Figure 125: KZN Districts' Contribution to KZN Construction GVA	299
Figure 126: Growth of Primary Sector in KZN Districts (excluding eThekweni)	300
Figure 127: Distribution of Main Tertiary Sectors GVA across KZN Districts (2000, 2009, 2013) .	302
Figure 128: Distribution of Government and Social & Personal Services GVA across KZN Districts (2000, 2009, 2013)	304
Figure 129: Growth of Tertiary Sector in KZN Districts other than eThekweni Metro Municipality	305



Figure 130: Distribution of Economic Activities GVA by Main Economic Sectors and in Manufacturing in Ugu	308
Figure 131: Distribution of Economic Activities GVA by Main Sectors and in Manufacturing sub-sectors in uMgungundlovu	309
Figure 132: Distribution of Economic Activities by Main Sectors and in Manufacturing in uThukela.....	310
Figure 133: Distribution of Economic Activities GVA by Main Sectors and in Manufacturing in uMzinyathi	311
Figure 134: Distribution of Economic Activities by Main Sectors and in Manufacturing in Amajuba.....	312
Figure 135: Distribution of Economic Activities GVA in Main Sectors and Manufacturing sub-sectors for Zululand.....	313
Figure 136: Distribution of Economic Activities GVA by Main Sectors and by Manufacturing Sub-sectors in uMhanyakude	314
Figure 137: Distribution of Economic Activities by Main Sectors and in Manufacturing in uThungulu	315
Figure 138: Distribution of Economic Activities by Main Sectors and in Manufacturing in iLembe	316
Figure 139: Distribution of Economic Activities GVA by Main Sectors and by Manufacturing Sub-sectors in Harry Gwala	316
Figure 140: Distribution of Economic Activities GVA by Main Sectors and Main Manufacturing Sub-sectors in eThekweni	317
Figure 141: The District Municipalities and Main Towns/Cities within KZN.....	321
Figure 142: Total Sugar Cane Crop Area (2001/02 to 2014/15 estimates)	324
Figure 143: Total Sugar Production in South Africa (2001/02 to 2015/15 estimates)	326
Figure 144: Selected Livestock Growth Trends	326
Figure 145: Milk Producers & Milk Production in KZN.....	327
Figure 146: Formal and Informal Employment in Agriculture in South Africa and in KZN	330
Figure 147: Change in the location of manufacturing activities across KZN Districts	338
Figure 148: Manufacturing GVA in KZN.....	338
Figure 149: Contribution of Manufacturing Sectors to GVA and to Employment.....	339
Figure 150: KZN Destinations by Domestic Tourists, 2008 & 2013	346



Figure 151: Formal and Informal Employment in Wholesale, Retail, Hotel and Restaurants in KZN	355
Figure 152: House Price Changes (% over a year earlier, 2007 - 2015)	357
Figure 153: Time Residential Properties Remain on the Market on Average (number of weeks)	358
Figure 154: Vacancy Rate & Asking Rental Growth.....	358
Figure 155: Vacancy Rate in Main South Africa Metros	359
Figure 156: Containerised Cargo Handled in South African Ports	362
Figure 157: Deviation of SA container costs compared to a global sample average by main tariff category element (%).....	363
Figure 158: Cost to export a 20ft container (US\$), 2015.....	364
Figure 159: KZN Gross Domestic Fixed Investment per Industry	377
Figure 160: KZN Gross Domestic Fixed Investment Per Category	378
Figure 161: FDI into South Africa (Flows & Stocks)	380
Figure 162: Net FDI Inflows as % of GDP for South Africa and the World (2000 – 2014)	380
Figure 163: Sectoral Distribution of FDI into South Africa, 2015.....	381
Figure 164: TIKZN Committed Projects 2014/15.....	382
Figure 165 SA Energy expansion plans.....	397
Figure 166 Construction of roads per District	404
Figure 167 Satisfaction with governance per district	428



LIST OF ABBREVIATIONS

a	annum
ADA	Agribusiness Development Agency
AeT	Asiye eTafuleni
AFOLU	Agriculture, Forestry and Other Land Use
AGL	above ground level
AGOA	African Growth and Opportunity Act [deal]
APAP	Agricultural Policy Action Plan
AU	African Union
AWG	Action Work Groups – structures for joint planning and monitoring of PGD Plan incorporating government and social partners
BES	Biodiversity and Ecosystem Services
BBSDP	Black Business Supplier Development Programme
BR&E	Business Retention and Expansion
BRIC	Brazil, the Russian Federation, India, and China (BRICS excluding South Africa)
BRICS	Brazil, the Russian Federation, India, China and South Africa (sometimes referred to as BRICSA)
BUR	Biennial Update Report
C	Celsius
CARA	Conservation of Agricultural Resources Act
CASP	Comprehensive Agricultural Support Programme
CBA	Critical Biodiversity Area
CCSD	Climate Change and Sustainable Development Council
CCGT	Combined Cycle Gas Turbine
CDM	Clean Development Mechanism
CER	Centre for Environmental Rights
CGE	Commission on Gender Equality
CH ₄	Methane
CIP	(The) Critical Infrastructure Programme)
CIS	(The) Co-Operative Incentive Scheme
CIVETS	Colombia, <u>Indonesia</u> , <u>Vietnam</u> , <u>Egypt</u> , <u>Turkey</u> and <u>South Africa</u>
CMA	Catchment Management Agency
CO ₂	Carbon Dioxide
COD	Chemical Oxygen Demand
COGTA	Department of Cooperative Governance and Traditional Affairs
COMESA	Common Market for Eastern and Southern Africa
COP	Conference of Parties
CPAs	Communal Property Associations
CPFP	(The) Capital Projects Feasibility Programme
CSIR	Council for Scientific and Industrial Research
CWP	(The) Community Work Programme
DAC	(The) Durban Adaptation Charter
DAFF	Department of Agriculture, Forestry and Fisheries
DARD	(KZN) Department of Agriculture and Rural Development



DCCS	Durban Climate Change Strategy
DBSA	Development Bank of South Africa
DEA	(The) Department of Environmental Affairs
DEAT	(The) Department of Environmental Affairs and Tourism
DERO	Desired Emissions Reduction Outcomes
DME	Department of Minerals and Energy
DMR	Department of Mineral Resources
DoL	(The) Department of Labour
DRDLRD	Department of Rural Development and Land Reform
(The) dti	The Department of Trade and Industry
DTS	Domestic Tourism Survey
DWA	Department of Water Affairs
DWAF	Department of Water and Forestry
DWS	Department of Water and Sanitation
EAC	(The) East African Community
EAP	Economically Active Population
EDTEA	Department of Economic Development, Tourism and Environmental Affairs
EE	Energy Efficiency
EIAs	Environmental Impact Assessment
EMIA	Export Marketing and Investment Assistance
EO	Energy Office
EPCPD	Environmental Planning and Climate Protection Department
EPIP	Environmental Protection and Infrastructure Program
EPWP	Expanded Public Works Programme
ERP	Extension Recovery Program
FDI	Foreign Direct Investment
FEPA	Freshwater Ecosystem Priority Areas
FTA	Free Trade Area
GDP	Gross Domestic Product
GEM	Global Entrepreneurship Monitor
GHG	Greenhouse Gas
GIS	Geographic Information Systems
GVA	Gross Value Added / Addition
GW	gigawatt
ha	hectares
HRD	Human Resource Development
I&APs	Interested and Affected Parties
IASP	Invasive Alien Species Program
ICLEI	Local Governments for Sustainability
ICMA	Integrated Coastal Management Act
ICWA	iMfolozi Community and Wilderness Alliance
IDC	Industrial Development Corporation
IDP	Integrated Development Plan
IDZs	Industrial Development Zones
IGRFA	Intergovernmental Relations Framework Act
INDC	Intended Nationally Determined Contribution



IPP	Independent Power Producer
IPAP	Industrial Policy Action Plan
ISP	Internal Strategic Perspective
IRP	Integrated Resources Plan
ITB	Ingonyama Trust Board
Km	kilometre
KPI	Key Performance Indicator
kW	kilowatt
KZN	KwaZulu-Natal
l	litre
LTA	Long Term Adaptation Scenarios
LULUCF	Land Use, Land Use Change and Forestry
m	metres
m ³	cubic metres
MAR	Mean annual Runoff
MCEP	The Manufacturing Competitiveness Enhancement Programme
MEA	Millennium Ecosystem Assessment
MI	megalitre
mm	millimetres
MICE	Meetings, Incentives, Conferences and Exhibitions
MINT	Mexico, Indonesia, Nigeria and Turkey (group of countries)
MMTS	Mooi-Mgeni Transfer Scheme
MPA	Marine Protected Area
mt	million tonnes
MtCO _{2e}	million metric tons of carbon dioxide equivalent
MTSF	Medium Term Strategic Framework
MW	Megawatt
NASA	National Aeronautics and Space Administration
NC	National Communication
NCCRP	National Climate Change Response Plan
NCPC	National Cleaner Production Centre
n.d.	no date
NDP	(The) National Development Plan
NEPAD	New Partnership for Africa's Development
NFEPA	National Freshwater Ecosystem Priority Areas
NGP	(The) New Growth Path
N ₂ O	Nitrous oxide
NPAES	National Protected Area Expansion Strategy
NPC	National Planning Commission
NSBA	National Spatial Biodiversity Assessment
NSSD	National Strategy for Sustainable Development
NWC/WDMS	National Water Conservation and Water Demand Strategy
NWI	National Wetlands Inventory
NWRS2	National Water Resources Strategy 2
NYDA	(The) National Youth Development Agency
OECD	(The) Organisation for Economic Co-operation and Development
OEMs	Original Equipment Manufacturers



PA	Protected Area
PCEC	Provincial Committee for Environmental Coordination
PV	Photovoltaic
PGDP	KZN Provincial Growth and Development Plan
PGDS	KZN Provincial Growth and Development Strategy
RAMSAR	International Convention on Wetlands
R&D	Research and Development
RBIDZ	Richards Bay IDZ
RE	Renewable Energy
REDZ	Renewable Energy Development Zones
REIPPPP	Renewable Energy Independent Power Producers Procurement Programme,
RES	Revenue Enhancement Strategies
RMP	Resource Management Plan
RQO	Resource Quality Objective
s	second
SACN	South African Cities Network
SACU	Southern African Customs Union
SADC	(The) Southern African Development Community
SALGA	South African Local Government Association
SANAs	Situational Analysis and Needs Assessment
SANBI	South African National Biodiversity Institute
SANParks	South African National Parks
SAPOA	South African Property Owners Association
SARB	(The) South African Reserve Bank
SARS	South African Revenue Service
SASA	South African Sugar Association
SASS	South African Scoring System
SASSA	South African Social Security Agency
SATSA	Southern African Tourism Services Association
SDF	Spatial Development Framework
SE	Sustainable Energy
SEA	Strategic Environmental Assessment
SEDA	Small Enterprise Development Agency
SEIF	(The) Shared Economic Infrastructure Facility
SESE	Survey of Employers and the Self-employed
SETA	Skills Education Training Authority
SEZ	Special Economic Zones
SFRA	Streamflow Reduction Activities
SIP	Strategic Infrastructure Project
SMMEs	Micro, small and medium enterprises
SPLUMA	(The) Spatial Planning and Land Use Management Act
StatsSA	Statistics South Africa
STEG	Solar Thermal Electricity Generation
SWSA	Strategic Water Source Area
TAs	Traditional Authorities
tCO ₂ e	tonnes of carbon dioxide equivalent



TFCA	Transfrontier Conservation Area
TKZN	Tourism KwaZulu-Natal
TIZKN	Trade Investment KwaZulu-Natal
UNFCCC	United Nations Framework Convention on Climate
UNIDO	United Nations Industrial Development Organisation
WDM	Water Demand Management
WfW	Working for Water
WMA	Water Management Area



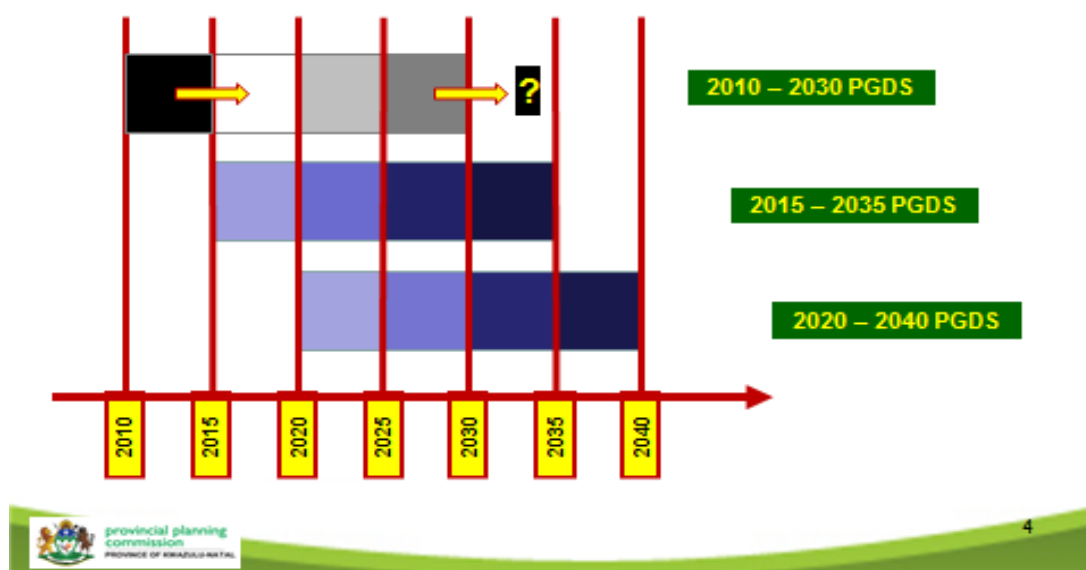
1 INTRODUCTION

The purpose of this Situational Analysis is to provide the context and background from which an integrated strategic planning process for the Province of KwaZulu-Natal can proceed.

This document is a review of the *KwaZulu-Natal Situational Overview* of 2011. It has been compiled with input from specialists in particular fields both within and outside of government and is meant to gather a range of information which can be used by citizens and organisations for information purposes. It is tempting to say that it should serve as an encyclopedia of KZN, except that information has a shelf-life, may soon become outdated as social, political and economic environments change and the validity of data itself is frequently contested. Nevertheless there must be a factual basis from which planning processes can take root and this edition 2016 has been produced using as wide a lens as time permitted with the main goal in mind: that of a review of the KZN Growth and Development Strategy.

The Province's over-arching strategic planning documents include the *KZN Situational Overview*, the *KZN Provincial Growth & Development Strategy* and the *KZN Spatial Development Framework*. The KZN Provincial Executive has mandated the KZN Planning Commission to review the Provincial Strategy every 5 years within a rolling 20 year trajectory. It is important to note a caveat: that in these review processes, short and medium term strategy is not expected to or meant to be dramatically changed every few years, as time is needed for the adopted strategies and plans to be implemented, monitored and evaluated, before further large-scale changes are proposed. Still, the custodians of the strategy seek to respond to altered social and environmental circumstances: bear in mind that the *KZN Provincial Growth and Development Plan* is reviewed annually.

Establishing a 20 year, 5 year and Annual Planning Cycle



Whilst it is true that most of the major indicators and measures of development do not show very dramatic short-term shifts, such that they suggest major changes in strategy, the revision



of the *KZN Situational Overview* has tried to take into account a host of new research information and analyses which have become available during the period 2011 to 2015. Most significantly, the research team has had access to new data and analysis from the 2011 National Census, much of which was not available at the time of finalizing the 2011 *KZN Situational Overview*. This has allowed for more in-depth description of the state of development in the Province.

The Situational Overview was undertaken using a sectorial analysis methodology, i.e. the state of each key sector of the Province's growth and development framework was assessed in turn and within this sectorial framework, the main cross-cutting issues which impact on virtually all sectors were analysed.

Structure of this Report

The Situational Overview Report is structured according to the sections or Landscapes, identified below, namely:

- The Physical and Environmental Landscape;
- The Demographic Landscape;
- The Social Landscape;
- The Human Resource Development Landscape;
- The Economic Landscape;
- The Infrastructure Landscape
- The Institutional and Policy Landscape

Using new global, African and South African development insights and scenarios, each section captures the current relevant profile of KZN, identifying the potential areas of backlog, constraints and vulnerability in relation to growth and development. Thereafter, opportunities for growth and possible high level prioritisation are highlighted. The *methodology enables* assumptions to be verified, with updated information & analysis based on both information and stakeholder input.

The *Situational Overview* is not meant to be the full and final capturing of all information on development in the Province. It is more meant to serve as a reference document for discussion and consultations in the review of the PGD Strategy. There will be many other sources of information and research reports that may not be specifically referenced or considered in the compilation of this *Situational Overview*. Just as the PGD Plan is not an inventory of everything done in the Province, but rather a selection of strategic areas for impact, so the information presented herein may not be fine-grained enough for every user's purpose. It is hoped that the development partners and stakeholders in the Province will highlight where they feel there are significant gaps in the Overview, or where specific information sources need greater focus or reference in the Overview. All stakeholders are therefore encouraged to use this document as one of the points of reference in assessing the PGDS, and to alert the Provincial Planning



Commission where there is a strong feeling that important information needs to be incorporated into this document.

2 OVERVIEW OF KZN FROM A NATIONAL PERSPECTIVE

The continued social and economic exclusion of millions of South Africans, reflected in high levels of poverty and inequality, is our biggest challenge. Central to addressing these challenges sustainably over time is our ability to create jobs for more people and to improve the quality of education, especially for poor black people. (NPC Diagnostic Overview)

2.1 The National Planning Commission and National Growth Path

As noted in the National Planning Commission (NPC), extremely high rates of unemployment and underemployment prevent poverty from being reduced. With inclusive growth requiring a greater participation of a broader section of working age people, economic growth and industrial changes are required.

The types of changes needed are set, by the NPC, as those that raise South Africa's global share of value-add and that further help manufacturing growth and exports. Reducing the barriers to entry and to operation for the private sector and allowing black businesses to emerge and grow are also central aspect of the changes. These changes are required to shift the growth trajectory away from a commodity price-driven growth trajectory (with commodity prices high at the time of the NPC Diagnostic). The State has a role to play in this to help stimulate opportunities at the regional level.

Improving skills acquisition together with seriously improving educational achievements and the education system would contribute, in turn, as set out in the NPC Diagnostic document to reduce wage inequality and to boost youth employment.

Modernising public infrastructure so that logistics systems become highly efficient is essential, to help shift the structure of production to suit the needs of a dynamic economy. Improved logistics will also compensate for the adverse effects of South Africa's distance from its main markets. Spatial challenges that increasingly marginalise the poor are to be dealt through "strengthening the planning responsibilities of municipal government, to ensure that national and provincial government's sectoral infrastructure initiatives are aligned with municipal plans." New initiatives are to be put into place for a better use of scarce national resources (e.g. water).

What is set out above is unpacked in the NPC report for the Economy (NPC, *Economic Diagnostic*). This diagnostic emphasises three main areas which, combined, affect economic performance and inclusive growth. These are:

- Labour and how labour is used;
- Productivity and the factors that influence it such as institutions, education, etc.;



- Capital stock and changes to the level of capital stock.

The three areas are connected but each was displaying characteristics and trends that needed to be redressed for an inclusive growth trajectory to be put into place in South Africa. From particular goals to be pursued, objectives can then be defined with a number of key constraints set out in the *Economic Diagnostic* and that are identified through a situational-type analysis for the country as a whole. Thus from observations of trends the following are examples of key problem areas: the proportion of South African adults that participate in the labour market needs to be increased; as for productivity, it needs to grow in order to help increase labour force participation, particularly to help reduce the labour cost burden of firms; education and training needs to be unlocked to help enhance the productivity of new young recruits. Other key features of the economy are as follows:

- An economy that has very high rates of unemployment; and,
- An economy that is shaped by the mineral-energy industrialisation legacy;
- An economy where mineral revenues were high (historically) but that failed to significantly invest in human development to adequate levels with, as a consequence, poor educational outcomes; investments have been seriously lacking in health services moreover;
- Uneven productivity improvements between 2000 and 2010.

Generally, the economy was on a problematic path. This path was characterised by:

Even before the global economic crisis, factors such as low savings, poor infrastructure, skills shortages in the face of high unemployment, a high import bill versus relatively low growth in exports, near-saturation in private sector capacity utilisation and inefficiency of government economic services had started to strain the economy.

A transformation was required to break the path dependent trajectory on which South Africa was.

The NPC *Economic Diagnostic* sets out the Critical Factors in Employment and Growth. These are, in terms of sector trends and competitiveness, the following:

- **Investment and savings** with a poor performance in both areas prior to the writing up of the *Economic Diagnostic* although the corporate sector, supported by the government infrastructure programme, markedly improved investments until the 2008 crisis;
- **Use of natural resources** with an inefficient as well as resource intensive growth path. This needed to be altered through: energy efficient investments, a better use of water resources and a reduction of solid waste (particularly at the Municipal level).

The NPC stresses, in the discussion of the use of natural resources, that problems of land quality places particular limits to land use. Only 13% of the country is arable land and only 3% of land is high potential land. This means that the land is over-exploited;



- **Enterprise development** with low rate, by international standards, of early stage entrepreneurial activity rates in the country. Only 17% of the small businesses were registered at the time of the NPC *Economic Diagnostic*. Moreover, South Africa is affected by a missing middle group of firms, that is, firms that have between 10 and 300 employees. Micro, small and medium enterprises (SMMEs) are affected by access to finance and by regulation that is not suited to their development;
- **Macro-economic imbalances** with a current deficit, currency volatility and a narrow export base.

The above are in parallel to a range of other issues (e.g. distance from the large markets, spatial development issues, etc.).

Focusing on the critical factors in employment specifically draws on **regulatory certainty**. The causes of regulatory uncertainty in mining and in agriculture differ but low levels of production on resettled and redistributed land are noted in the *Economic Diagnostic*. For employment, **the growth of services** is to be noted – particularly because of the skills requirements of growing services sectors - but caused by productivity growth rates differentials. The growth of services is noted to constrain the expansion of goods production through services that are increasingly traded internationally, offer new export revenue opportunities. A bias in favour of both, **capital and skills-intensive sectors**, also curbs the employment opportunities of those less educated or skilled, fuelling inequality along the way.

In terms of the labour market, the *Economic Diagnostic* sets out **high-entry level wages** (relative to productivity) as a major constraint to entry workers. This is in the context of **growing number of young people** who dominate the demographics profile of South Africa and these are people who will need to enter the labour market. **Poor spatial arrangements** such as long distance between where the workers reside and where they live penalise those that are amongst the poorest.

Finally with regards to regional trends and to international trade, progress has been made. Also, South Africa has progressively unlocked its advanced manufactured goods exports but without offering high levels of purchasing power (in real terms). In other words, the value of what was exported by the country was, at the time of writing of the NPC Diagnostic Report, notably low.

With the above detailed, the NPC set out options and trade-offs in a number of areas. Of note for the purpose of the KZN Situational Analyses is the following:

- Trade-offs in the short term between pursuing measures that will increase growth and employment and those are related to expanding welfare;
- Empowerment is an imperative;
- Questions could only be raised by the NPC in terms of whether it is existing or new workers and firms that have to be prioritised; and in terms of how to grow without deteriorating the natural resource base.

The above were set out as choice to be made. These, together with the range of problems identified by the NPC and the type of changes required on the critical factors for employment and growth have driven a number of key documents to help unlock structural and systemic



changes. The changes are articulated in the National Development Plan (NDP) ^{that} sets South Africa's long term vision as to how the economy is to be restructured to create new opportunities so as to reduce inequality and poverty in country and detailed in the New Growth Path (NGP).

Numerous policies and strategies have been put into place nationally that are in line with the NDP vision and with the NGP but that also reflect particular “choice” over the questions raised by the NPC.

The province of KwaZulu-Natal is following on all main national initiatives with the objective of addressing the triple challenges of poverty, inequality and unemployment. Economic development in the province of KwaZulu-Natal is, in fact, shaped by a number of strategies and policies and related support programmes and measures. These, which guide growth and development planning within the provincial government have a number of objectives but are aimed at creating a more conducive business environment within the province, at encouraging new investment, at developing SMMEs and cooperatives, and at expanding exports and the export potential in KZN. The province has in place a KZN Investment Strategy, a KZN Export Strategy that will be shortly finalised, a (draft) KZN Industrial Strategy, an SMME Development Strategy, and a KZN Cooperatives Strategy. Partnerships have been emphasized and arrangements for dialogue between partners are firmly into place, including around the interventions that frame the PGDS and related PGDP. A range of Social Accords - including to help focus interventions for women and the youth – have been concluded.

A few provincial strategy and policy documents are still in draft form but there has been important progress in the implementation of the main strategies. These have become transformed into actual programmes, projects and interventions on the ground. In turn, the province has taken up particular national initiatives, such as operation Phakisa that was launched in 2014, and rapidly embraced the new opportunities related to these initiatives.

A number of projects are advanced and unique to the Province while the provincial policies and strategies are aligned with national policies and strategies. The province is actively engaging local government to take up a central role in terms of industrial, investment and export promotion. In turn, the province has a number of initiatives and projects that are in line with the recent Nine-Point Growth Plan set out in the 2015 State of the Nation Address.¹

2.2 The Nine Point Growth Plan

The Nine-Point Growth Plan sets adjustments to deal with particularly large scale constraints that affect growth and investor confidence.

The Plan relies on concomitant interventions focused on the following:

¹ The plan was however first released in 2013. The 2016 State of Nation Address only touched upon the plan however.



- 1) **Resolving the energy challenge.** While a 5 point energy plan is in place, the Energy Plan seeks, amongst others, to improve the maintenance of existing electricity infrastructure; to increase generation capacity; and, to manage demand.

Of importance for the economic landscape is that gas as a source of energy is to be pursued (e.g. independent power producers in the gas sector² will be selected) though new generation capacity through coal will be pursued and co-generation contracts with the private sector will be renewed.

The renewing of co-generation contracts could incentivise companies that have biomass³ by-products in their production (say)⁴ to use these by-products further.

Exploration of oil and gas, driven through operation Phakisa along coastal areas, is part of the strategy of shifting towards and searching for new energy sources.

In turn, with the plan seeking to better manage energy demand, there are new opportunities for the green economy. However, some criticisms of this aspect of the plan is that it is insufficiently focused on renewable energy alternatives.⁵

- 2) **Revitalising the Agriculture and the agro-processing value chain.** The plan includes a change so as to prevent foreigners from owning (non-residential) land but of note for KZN is that land reform is to be accelerated.

Specifically, the government announced its draft policy proposals on land reform ("Strengthening the Relative Rights of People Working the Land" or the 50/50 policy framework) in this regard. This protection takes the form of government contributing up to 50% of the land allocation to those that have worked the land (the proportion varies with the number of years for which the workers have worked the land) that will be shared by the workers through the Land Reform programme. The contribution will be made to an investment fund for the purpose of expanding the farms. The project starts with pilot cases.⁶

Agri-parks (agro-hubs that offer all services along the various commodity value chains) are to be set up in all South African District Municipalities as part of this growth plan point though the poorest municipalities will be first prioritised for this. District Land Reform Committees are set to train smallholder farmers as part of this project. R2 billion was to be set aside for this for 2015/16.

² In parallel, Eskom is to switch from diesel to gas as a power source;

³ Biomass refers to the remains of organism such as plants or animals and their waste products in the environment. Biomass is an energy source. Woodchip or sugarcane residues are examples of biomass.

⁴ The reference to biomass here refers to the fact that it tends to be associated with co-generation in KZN. It is nevertheless, only illustrative of the point.

⁵ See: <http://allafrica.com/stories/201602110856.html>, accessed February 2016.

⁶ Improved productivity, improved land distribution and poverty alleviation are some of the expected outcomes of this policy.



- 3) **Advancing beneficiation and adding value to our mineral wealth.** Whilst the new operation Phakisa in mining is being unpacked, particular value chains (titanium, platinum and iron and steel) are to be prioritised through support mechanisms. The automotive sector, which is large in KZN, has a direct stake in this with platinum a major input into catalytic converters. Moreover, a number of large rare minerals companies operate in the province of KZN. Special Economic Zones (SEZs) can attract new players in the relevant mining value chains.

New innovation opportunities are also to be unlocked through partnerships for the development and commercialisation of new products that derive from the mining sectors mentioned above.

- 4) **More effective implementation of a higher-impact Industrial Policy Action Plan.** The Black Industrialist Programme to “create large-scale transformed industrial sectors” is now finalised; support for this programme is seen as an additional step to further help the development of small and medium size local firms.⁷ The Department of Trade and Industry (the **dti**) is now looking for new SEZs as part of this point of the growth plan. Also as part of this point are the commitments to set up an “inter-Departmental clearing house” to help unblock a number of bottlenecks affecting investors.
- 5) **Crowding in / encouraging private sector investment.** Particular constraints around slow Environmental Impact Assessments (EIAs) and the issuing of water-use licenses are to be addressed (particularly for strategic sectors). An independent study of the investment environment is also to be undertaken.

The private sector will be brought in through partnership with the public sector to provide the goods required for infrastructure development, including marine engineering and shipbuilding. Localisation plans are also unpacked in such a way so as to involve the private sector in this point of the plan.

- 6) **Moderating workplace conflict.** The modalities of a national minimum wage are being considered as part of this point of the growth plan.
- 7) **Unlocking Micro, small and medium enterprises (SMMEs), Cooperatives, Township and rural enterprises' potential** through procurement and the development of a new framework “to strengthen” as well as “to regulate” the informal business sector. Economic infrastructure (e.g. industrial parks, incubators with machinery and equipment) will be put into place to support township enterprises. A business rescue strategy for SMMEs and Co-operatives in financial distress will be developed.
- 8) **State Reform**, including boosting the role of the state owned companies, Broadband, water, sanitation and transport infrastructure. Government facilities will be connected in Umgungundlovu and in Umzinyathi in KZN with Telkom the designated entity for the broadband roll-out.

⁷ R23 Bio has been set aside for this (see 2016/17 budget announcement).



- 9) **Growing the ocean economy and tourism**, including through operation Phakisa discussed further below but also cutting across the refurbishing of ship and rig repair facilities which have, in fact, been already initiated in Durban. This point of the plan has generally great relevance for KZN.

Tourism is set to benefit from an Air Transport Strategy although product enhancement and diversification in the sector are also being developed to expand the sector.

2.3 The Status of Women and Girls

The status of women and girls in society has to be of concern to all citizens and especially within authority structures. With 52% of the population of KwaZulu-Natal being women in 2015 there are negative consequences for unequal access to productive resources, services and opportunities, such as land, livestock, financial services and education. Numerous studies underscore the social costs of women's lack of education and assets, linking it directly to high rates of undernutrition, infant mortality and - in some countries - HIV/AIDS infection. Rural women fare worse than their urban counterparts on all measures. There are also high economic costs: wasted human capital and low labour productivity that stifle development and progress in all fields.

The KZN Commission for Gender Equality has participated in the PGDP planning and implementation structures and has made inputs into this strategy review process.

Gains

There seems to be consensus on the gains that have been made through the creation of a state architecture in the form of the National Gender Machinery, or structures in the state that have the potential to do gender mainstreaming and promote gender equality.

There is also consensus that law reform has led to many women friendly laws that has gender equality as their intent. The WEGE Bill is the latest addition with the difference that it focuses specifically on the empowerment of women.

South Africa has signed and ratified numerous international treaties like CEDAW, the SADC Protocol on Gender and Development and the AU Protocol on Women that should contribute to gender equality. Women's representation in political parties and the civil service has increased, even though not all parties adhere to 50/50. There is an active civil society that attempts to keep the state accountable.

Skills Development Programmes such as the expanded Public Works Programmes, and grants and funds through the Department of Trade and Industry (DTI), Department of Economic Development (DED), Department of Rural Development and Land Reform (DRDLR), Independent Development Trust (IDC), Small Enterprise Development Agency (SEDA), and other agencies, training and internship programmes have been employed to ensure that women take part in previously male dominated sectors.

Women's co-operatives: there is evidence of support for women in agriculture and farming, and in energy, particularly in green economy projects, such as solar energy and in mining.



What are the Challenges?

At the core of the challenges are the lack of the proper implementation of the laws that have gender equality as their intent, as well as a lack of a political will to enforce measures to create gender equality.

Many of the laws aimed at dealing with gender discrimination, gender based violence and substantive equality are under-resourced, not implemented, or not enforced through the criminal justice system.

International treaties are not properly implemented or not implemented at all, but often used to show that South Africa is progressive with regards to women's equality.

The National Gender Machinery has changed shape since the creation of the Ministry for Women, Youth and People with Disabilities and its Portfolio and Select Committee. Some of the structures of the machinery have been dismantled and there is a lack of coordination among structures as well as a lack of clarity on mandates, with the potential of duplication.

Gender mainstreaming is unsuccessful because of a lack of budgeting for it, the placement of gender focal points at a very junior level in departments and a lack of gender budgeting. There is an assumption that people without skills or training can do gender mainstreaming and there is a lack of political will at top management to implement it.

Institutional cultures are male dominated and where women enter management positions they are often isolated and without support networks. As a consequence the androcentric institutional cultures do not change and contribute to the failure of gender mainstreaming. There is no monitoring and evaluation of gender mainstreaming in the state.

Civil society is very active but has been weakened by the diminishing funding. Since 1994 it has the added burden of providing services that should be provided by the state (eg funding for shelters for domestic violence). Civil society is not consulted and recommendations are not taken seriously by government.

The 50/50 principle for women's representation is not taken seriously in the private sector, the judiciary or in economic decision making and transactions. There is limited support for women in leadership positions that make attrition of women a serious concern. Women in government seem to lack networks in the women's movement that can support them.

The MDGs lack the inclusion of different gender dimensions such as gender based violence. Climate change is one of the issues that will have a serious impact on women.

The criminal justice system fails women due to a lack of police training and secondary victimization by the police and in the courts.

There is a general neglect of LGBTI issues, rural women, women with disabilities and sex workers, as well as violence against these communities.



What are the persistent problems?

Gender Based Violence (GBV) is one of the most intractable problems, with significant under reporting, lack of funding for interventions with policy and discursive shifts. There is duplication among different projects that deal with gender based violence and the role of the National Council on Gender Based Violence is unclear. There seems to be lack of monitoring and evaluation of programmes dealing with GBV, lack of access to justice and impunity of offenders, inadequate services for survivors of GBV.

Women are exposed to *poverty* in large numbers and specifically in the rural areas. Poverty needs to be addressed on the macro-economic level because of structural barriers to women's equal accommodation in the formal economy. Women need access to education, training and skills enhancement. They need to be able to access micro finance for small businesses but also to entrepreneurship opportunities. Women also need access to land.

Stereotypes and stigma against Lesbian, Gay, Bisexual, Transgender and Intersex people are perpetuated by the media. Families and culture can create barriers for them. Attitudes of officials or care workers are abusive and impact on the safety of members of these communities. LGBTBI people experience domestic, cultural, legal and employment barriers as well as hostility from the criminal justice system.

Traditional and cultural practices that influence women in a harmful way need eradication. Practices such as 'ukuthwala', 'ukungena', virginity testing or inspection is described as having implications for gender equality, appears to threaten and objectify girl children and puts the whole responsibility for safe sex, abstinence, and countering the spread of sexually transmitted diseases solely on the shoulders of girls and young women, who are often the victims of gender violence and gender inequality in so many other respects. Manipulation of custom and culture to defend certain behaviours seems to be particularly true of the wave of strongly fundamentalist forms of religion that appear to be increasingly popular in South Africa.

Women face economic, domestic, cultural and legal barriers to *health care and sexual and reproductive health rights and services*. Men's risk taking behavior contributes to women's ill health. Women need to be able to control their own health and to have access to decent health care whether it is private or public health.

Men need space to organize and to discuss issues of masculinities in South Africa. Men are not a homogeneous group and those who do not benefit from patriarchy also suffer. There should be a process of socialization to change attitudes of men and to socialize boys for gender equality.

The technocratic use of gender mainstreaming (such as check boxes and tick lists and events) have robbed gender mainstreaming from its radical potential to change institutional cultures and to include women concerns in policy and legislation.

The marginalization of feminism as a set of ideas as, well as feminist activism. Feminism reclaims a space for women, exposes power relations, and looks for interventions that will change these power relations. Merely appointing more women to positions is not a feminist solution and formal equality does not equal substantive equality.



Particular descriptions of context as they affect women are presented in the landscapes following, with pointers for strategic interventions. These women-focussed interventions are drawn from the Plan of Action agreed on at the 2014 National Gender Summit.

2.4 Youth Development

Youth development is one of the major cross-cutting issues in the Provincial Growth and Development Plan. Many aspects of youth issues centre on their education and skills levels, their health status and economic opportunities accessible to them as well-equipped and healthy members of the society. Internationally, challenges in these areas have been recognised as the essential elements of the demographic bonus at the disposal of societies that currently share a demographic profile that is similar to KwaZulu-Natal. Locally, these issues have been raised and extensively discussed in research and policy making circles and the Provincial Strategy must respond to issues of young people.

2.5 Rural Development

KwaZulu-Natal remains one of the three provinces in South Africa where the rural population outnumbers the urban population, though with a decreasing margin. Fifty-one percent of people in the province lived in rural areas in 2015. The sustaining of livelihoods and opportunities for accessing social services in rural areas is a recurring theme in the various landscapes of this report. Rural contexts are described in relation to the physical environment, spatial planning issues and to economic opportunity / interventions.

There is much that can be said to have shifted in the landscape of the Province in the last five years. This *Situational Overview* tries to highlight the main issues which are likely to impact on development strategy going forward. It is hoped that this will be useful to all social partners and stakeholders in reviewing and improving the Province's long-term growth and development strategy, and in turn, the short-term action planning and resource allocation needed to achieve the goals of a better life for all in KwaZulu-Natal.

3 THE PHYSICAL AND ENVIRONMENTAL LANDSCAPE

This chapter is a consolidation and revision of the previous environmental and physical landscape chapters in the 2011 Situational Overview.

KwaZulu-Natal can be described as a province of contrasts. The topography differs from mountains and hills to a coastal plain which broadens considerably to the north and contains important wetlands such as the St Lucia System, Lake Sibaya and the Kosi Bay System. The vegetation varies from alpine veld in the high-lying areas of the Drakensberg on the border with Lesotho to subtropical coastal forests along the Indian Ocean. A very prominent characteristic of this province is the deeply cut parallel valleys and ridges formed by a large number of short, fast-flowing rivers which can be seen as the result of a large variation in



altitude over a very short distance: from Mont-aux-Sources (3,282 meters), on the border with Lesotho and the Free State to sea level over a distance of just 200 kilometers.

Much of the landscape of KwaZulu-Natal is characterised by dispersed rural settlements in terrain where infrastructure service delivery is particularly challenging. 32% of the land within province falls under the custodianship of the Ingonyama Trust Board (ITB) (Ingonyama Trust Board, 2012) and as such accommodates a large portion of the population of the province, mainly in the form of rural and communal villages. The Province has the highest number of agricultural households (28.2% involved in agricultural activities), the majority being livestock farmers (Statistics South Africa, 2012). Overall, 51% of the population of KwaZulu-Natal is classified as "rural" (refer to Demographics section for further details), combined with the large-scale poverty experienced (the poverty rate has dropped to around 45% from 48.4% in 2012) as well as the acknowledged vulnerability of rural communities to variable economic conditions, service delivery and climate variability, suggests that any spatial planning and growth and development interventions will have a significant focus on rural development. The rural development focus should extend beyond development planning and include practical interventions such as facilitating the transition from non-sustainable traditional agricultural methods towards more sustainable methods within a sustainable livelihoods approach.

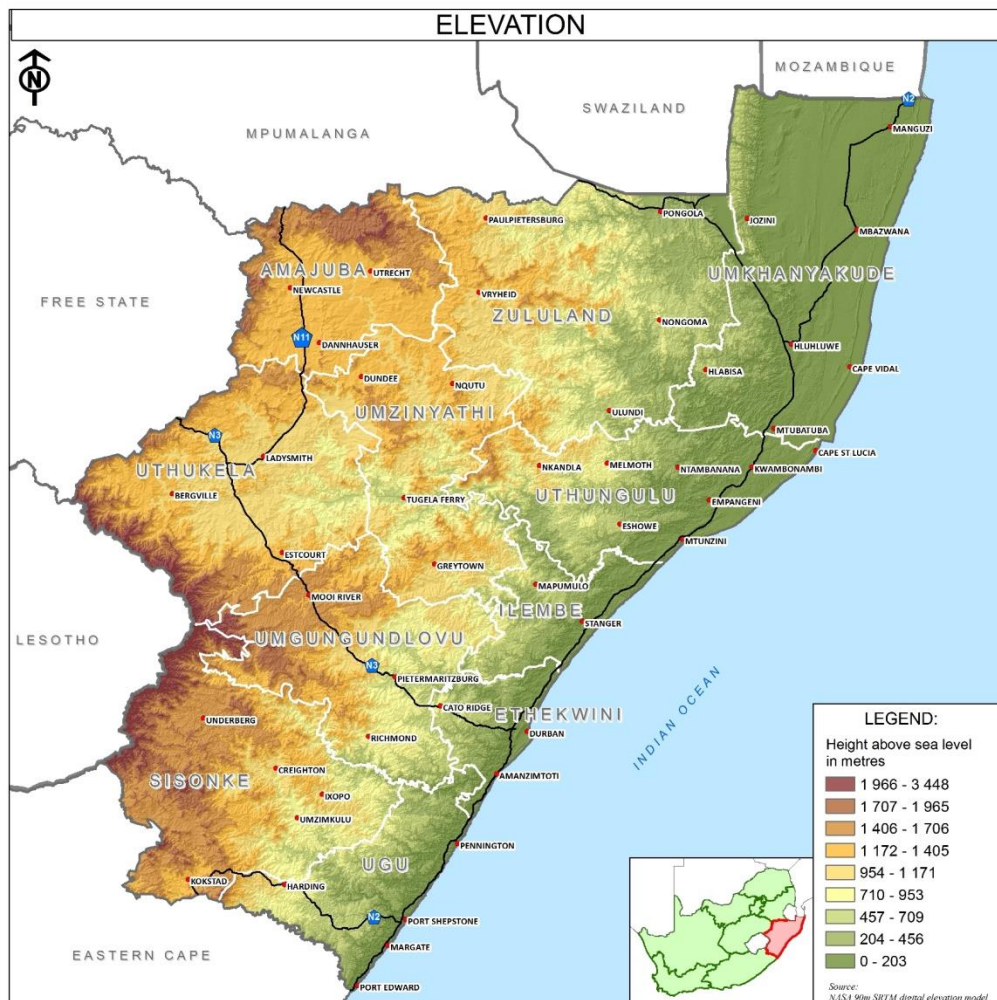
3.1 Topography

3.1.1 Elevation

The elevation of KwaZulu-Natal varies from the interior to the coast. The height above sea level ranges from 3,448m on the escarpment of the Drakensberg, to 0m at the coast, as illustrated by the map below.



Map 1: KwaZulu-Natal Elevation Map



Source: NASA, 2010

The elevation character of the province impacts on human settlement and production patterns. Firstly, the scattered settlement pattern in many part of the more rural areas of the province is the result of the undulating hills and the tendency of households in communal and rural areas to settle either on the crests of the hills or (where more even slopes occur) near the rivers as source of water for consumption and/or agricultural production. Secondly, the elevation of the various biological production regions impacts especially on agriculture and the crops that could be cultivated within specific regions. Thus the primary economic base for the various regions will differ based on their specific landscape.

The resulting scattered nature of settlements and production practices impacts on the cost-effectiveness of infrastructure development in certain areas and contributes to the vulnerability of communities as a result.

3.1.2 *Slope*

The mountainous character of KwaZulu-Natal provides for the presence of a number of steep slopes. The largest part of the province has slopes that range between 9 to 58 %.

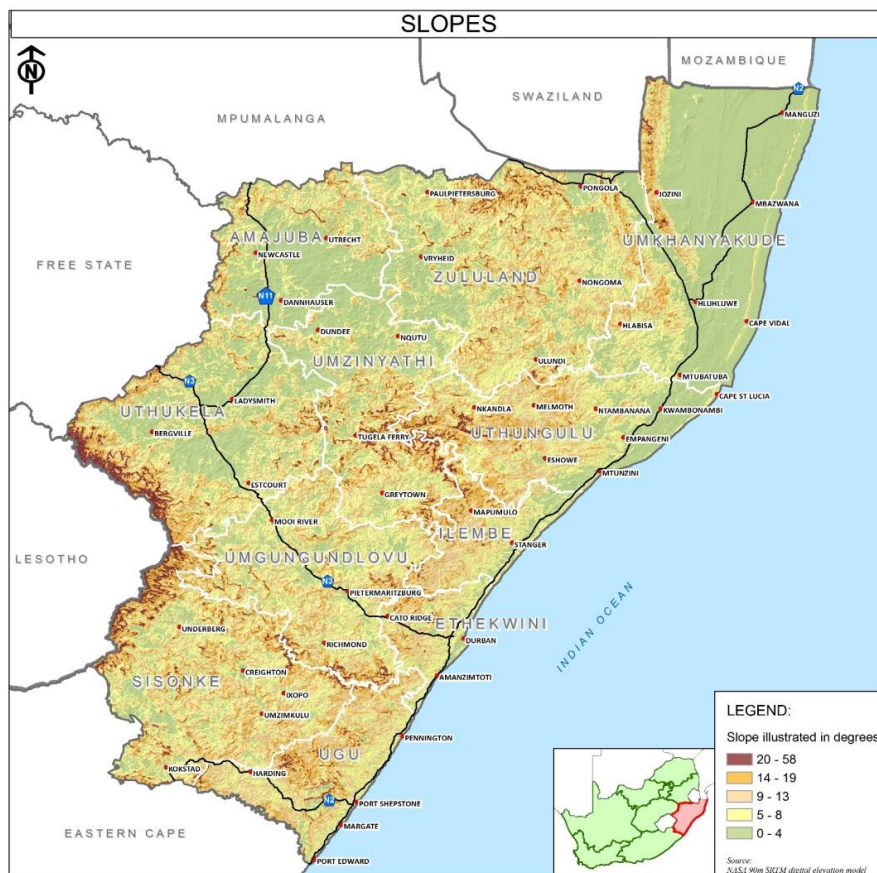


The slopes create a relatively large number of quaternary water catchment areas which in itself creates an opportunity for localised management of water resources and quality. This might contribute to the fact that KwaZulu-Natal has fairly good river ecosystems compared to other provinces as discussed later in this report.

The steep slopes impact on construction options and cost and further contribute to the scattered development pattern of the rural areas, where traditional construction practises situate the uMuzi's on top of the hills and ridges. Map 2 depicts the slopes across the province. On certain slopes (> 12 degrees) planned development should take visual sensitivities into account as well as the reduction of cut-and-fill construction that might cause erosion and loss of topsoil.

At a localised level the slope would impact on the cost of the provision of services (due to the need for addition pump facilities) as well as the feasibility of commercial agricultural production which uses mobile equipment such as tractors which can only be operated on slopes of less than 12 degrees.

Map 2: KwaZulu-Natal Slope Analysis Map



Source: NASA, 2010

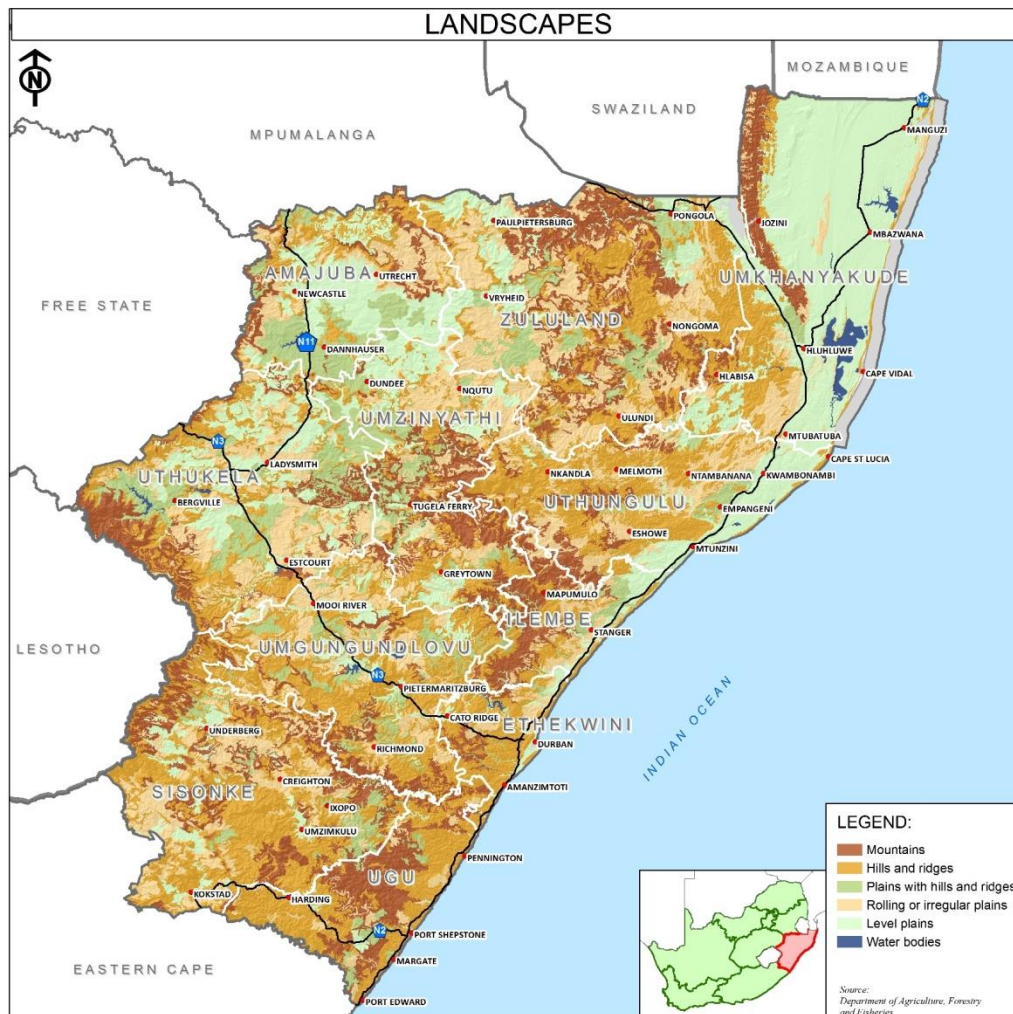
3.2 Geomorphology

The elevation and slopes within KwaZulu-Natal create one of the most mountainous landscapes in South Africa, which gradually descends from the high Drakensberg mountains



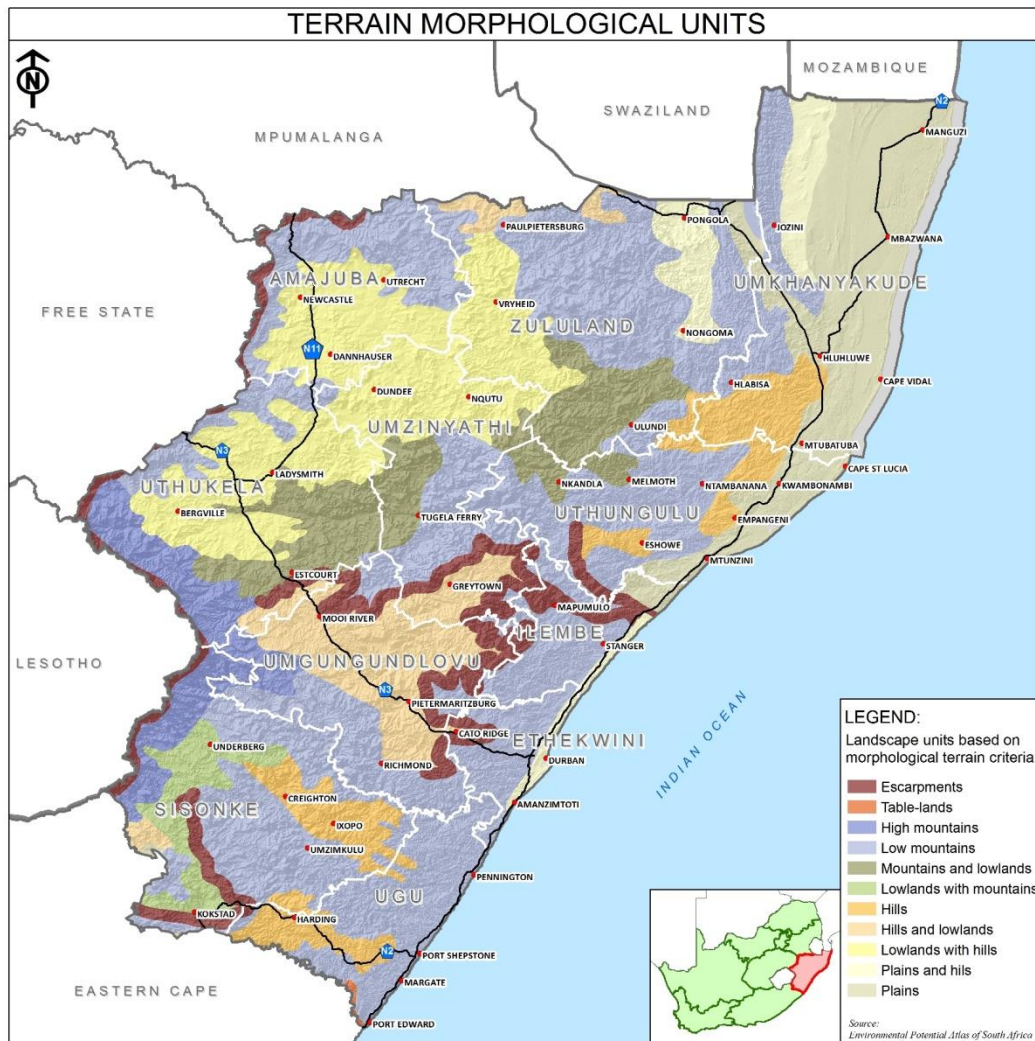
in the west with a number of escarpments in the interior of the province, to low mountains in the midlands, to highly dissected, low, undulating hills adjacent to the coast in the east.

Map 3: KwaZulu-Natal Landscapes Map



The landscapes give form to the terrain morphological units illustrated by the map below. The evidently highly dissected, low, undulating mountains pose a number of challenges with regards to planning. This terrain form is oriented with waterways running towards the ocean with the exception of the Pongola area where waterways turn northwards as they reach the sandy plains of the lakes region. These geo-morphological units result in most regional roads routing mainly in an east-west direction between the high-lying areas to the low lying coastal areas. Due to high construction costs and natural settlement patterns, there is very little north-south cross connectivity between communities and between economic production areas, which makes some areas inaccessible and difficult to service.

Map 4: Terrain Morphological Units - KwaZulu-Natal



3.3 Land Cover

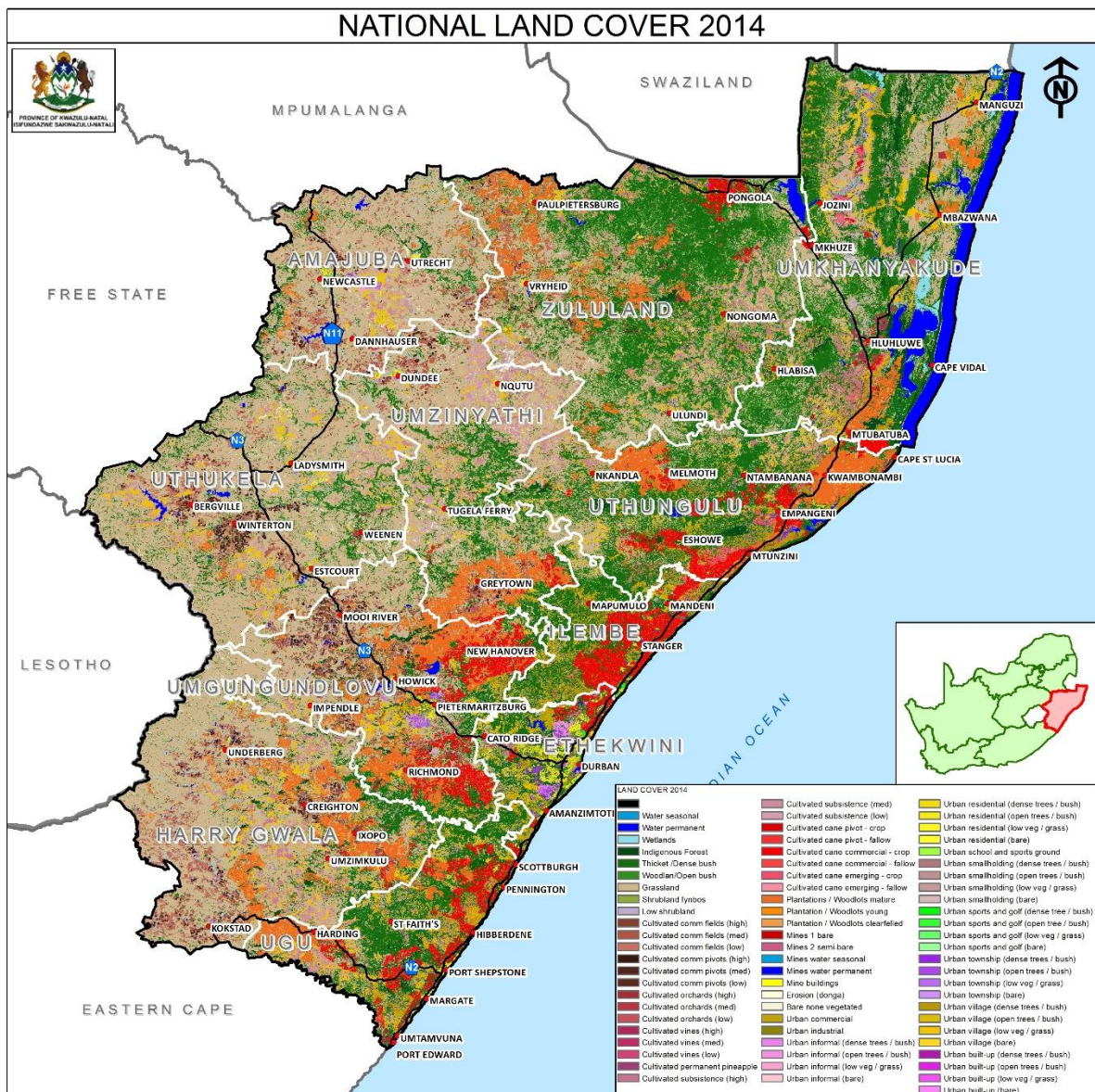
The land cover across the province is based on 30x30m raster cells, and is ideally suited for \pm 1:75,000 - 1:250,000 scale GIS-based mapping and modelling applications (GeoTerralmage (Pty) Ltd, 2014). This clearly indicates the settlement pattern within the province as well as the areas being used for agricultural production and forestry.

Patterns that stand out are the sugar cane agriculture along the central and southern coast. Some dryland agriculture is evident West of Lake St. Lucia, Bergville/Winterton as well as in the Vryheid/Utrecht/Dundee triangle.

Another clear pattern emerging is the "Natural grasslands" in the West on the shallow rocky soils of the mountains and foot slopes. As one moves towards the East there is a transition to "Thicket" with "Forest plantations" in a North-South band in the Midlands area.



Map 5 - KwaZulu-Natal Land Cover



GeoTerralimage (Pty) Ltd, 2014

Areas that focus on forestry are: Ixopo, Donnybrook, Harding, Greytown, Vryheid and the area between Nkandla and Ulundi. The unstoppable march of technology has cut into the profitability of forestry and paper operations and this will need to be taken into account when choosing the most viable land use for each part of the province. Plantations are often located in catchments with the highest rainfall and tend to have an adverse effect on river volumes.

The remaining "Indigenous forests" are along the coast in the iSimangaliso Wetland Park with patches on the Lubombo mountains, South of Nkandla, North of Howick and West of Newcastle. The presence of natural and planted forests creates opportunities for economic activities which includes forestry activities as well as tourism opportunities.



3.4 Agricultural Potential

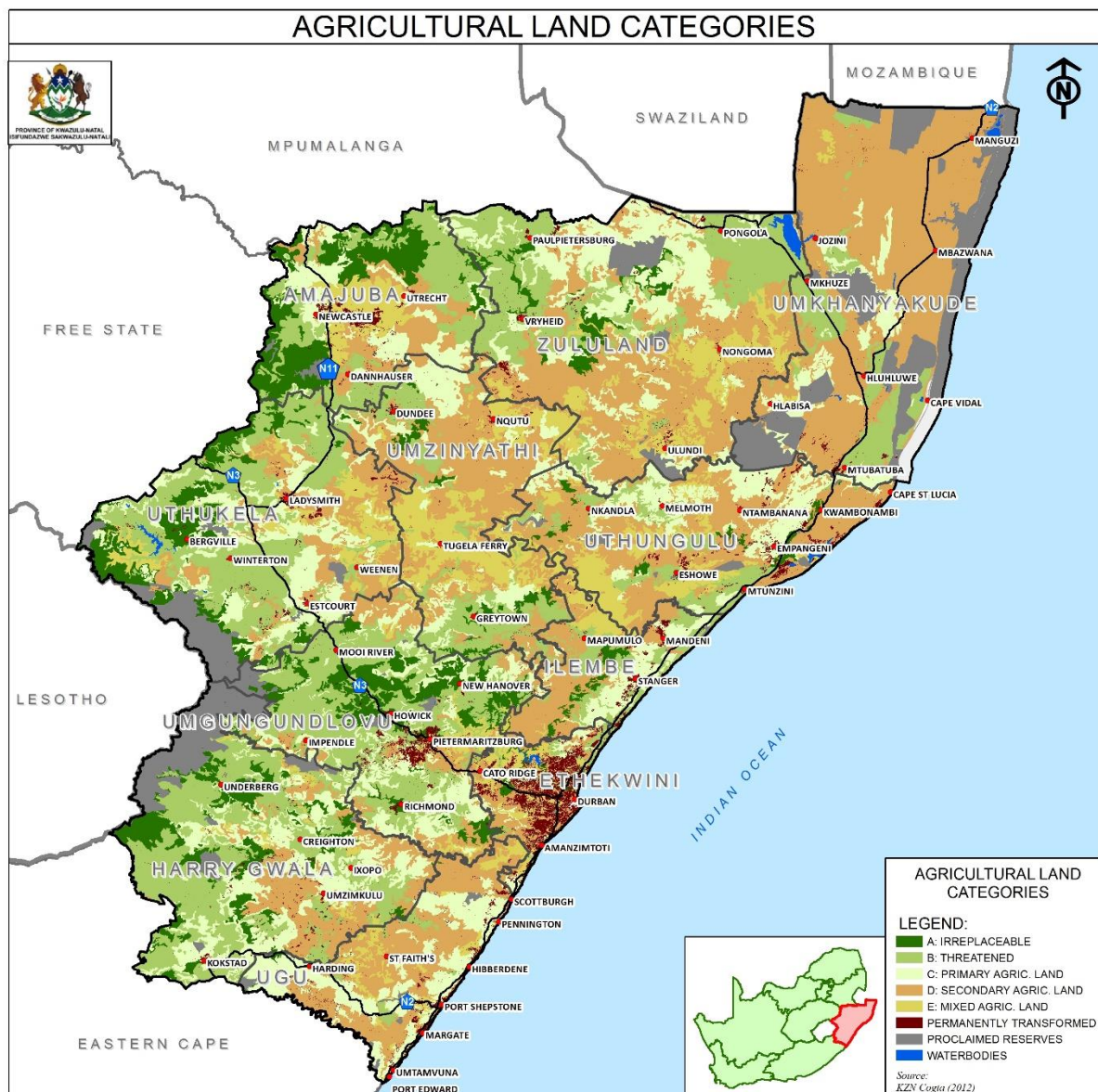
The agricultural sector is recognised as key to addressing poverty in the province since the poorest people in KZN live in the rural areas. In spatially locating areas of agricultural potential in the province emphasis is placed on the need to release latent potential which exists in the lands under custodianship of the Ingonyama Trust Board, and the resolution of the land reform initiatives in the province.

It is reported that 8% of KZN (752 000ha) is defined as having high agricultural potential, while 23% is classified as arable (2,162,000ha) (Mitchell, 2011).

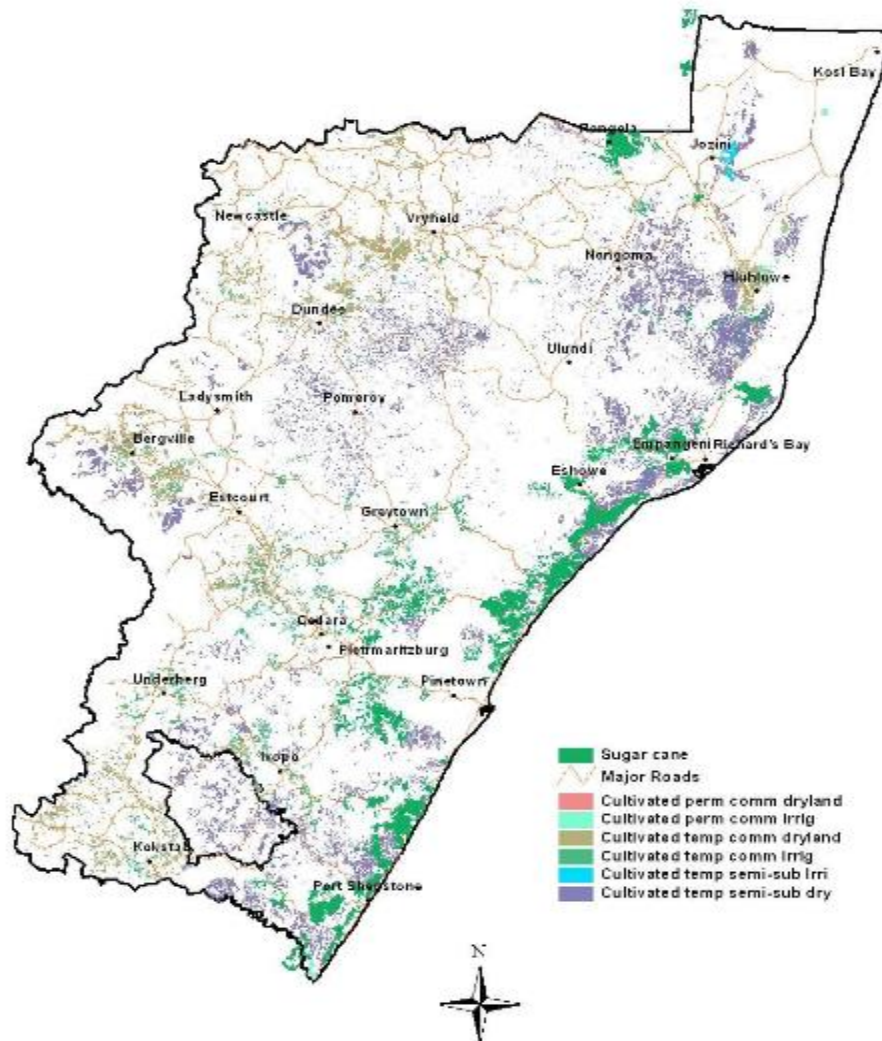
The Land Categories dataset has classified land in the Province according to agricultural potential (KZN COGTA, 2012). Much of the Province is classified as “secondary agricultural land” while pockets of “irreplaceable” agricultural land exist in the central and northwestern parts.

Map 6 Agricultural land categories

Source: KZN COGTA 2012



Map 7 KZN Existing agricultural activities (Mitchell 2011)



Subsistence agriculture affects quality of the soil/land cover/environment and although important for survival, poses a threat to endangered species.

Subsistence agriculture is evident in the densely populated rural areas with surrounding degraded land. Where these areas increase in density even further one notices the start of more formal areas, which in terms of land cover is called "Built-up (informal)" These could be seen as areas requiring social and infrastructure support.

Research into the issue of sustainability in the rangeland commons has shown that, rather than aiming for large-scale commercialisation, support for rangeland users should be appropriate to small-scale and multiple-purpose production systems and facilitate the development of (largely local) market-oriented subsistence livestock-keeping. This should include integrated systems of livestock and dual-purpose crops, training in range management, disease control and livestock husbandry, and schemes to access inputs and markets that overcome the disadvantages of smallholders. Research indicates that the production of small stock for meat and fibre holds greater potential for small-scale commercialisation than cattle, and potential ways of developing this in different areas should be investigated. The Department of Agriculture, Forestry and Fisheries' recently initiated Extension Recovery Plan, aimed at reviving



the public extension service, should provide an opportunity to introduce more appropriate ways to support small-scale livestock farming on rangeland commons (Vetter, 2013).

The NDP has outlined the need for an inclusive rural economy where rural areas are spatially, socially and economically well integrated and coordinated, where residents are economically active and food secure as a result of successful agrarian transformation and rural infrastructure development programmes, and having improved access to quality education and health care and basic services.

The NDP sets out a three pronged approach to agriculture and rural development, namely:

- Agricultural development that is based on successful land reform, employment creation together with strong environmental safeguards;
- Well-functioning and supported rural communities that will enable people to seek economic opportunity. Key elements of support relate to quality education, health care and access to basic services; and
- The promotion of agro-processing, tourism, fisheries and small enterprise development based on an area's economic potential.

The 2015 Strategy for Agrarian Transformation in KwaZulu-Natal (DARD, 2015) reports that the rural population in the province accounts for 54 % of the total provincial population, and therefore makes it one of the most rural provinces in the country. As a result, there is considerable pressure on the provision of services and infrastructure. The agricultural sector is seen as a primary driver of the KZN economy, given the strategic advantage that the Province has in terms of land and its natural resources.

The Strategy for Agrarian Transformation sets out a detailed approach for the transformation of the agricultural sector in KwaZulu-Natal. The mission statement of the DARD is "To promote, through partnerships, sound agricultural practices that promotes to economic growth, food security and advancement of rural communities in KwaZulu-Natal."

The agriculture sector is expected to create employment opportunities, increase the area under production, increase the value of agricultural contribution to the provincial economy, and provide a support programme for commercial farmer development. The Action Working Group focusing on agriculture would, however, need to work with commercial agricultural in order to realise the potential of the sector.

Agricultural policy in the Province is shaped by the NDP, the 2013 Rural Development Framework and the Agricultural Policy Action Plan (APAP). The implementation of the Agrarian Transformation Strategy is anticipated to promote food security, create new jobs in the rural areas, and grow the agricultural sectors contribution to the GDP of the Province, in partnership with interested and affected stakeholders in the rural areas of KZN. One of the aims of Operation Phakisa is to revitalise agriculture and the agro-processing value chain.

Agriculture's current contribution to the provincial economy is currently small. Between 1994 and 2012, the real contribution to GDP of Agriculture, Forestry and Fisheries (AFF) increased by 29%, while employment declined by 30% to 40%. This combination of slow-to-modest growth and declining employment continues a longer term trend that has been evident since the 1970s. The challenges facing agriculture are numerous: rising input costs, an uneven



international trade environment, lack of infrastructure (rail, harbour, electricity), and a rapidly evolving policy and production environment.

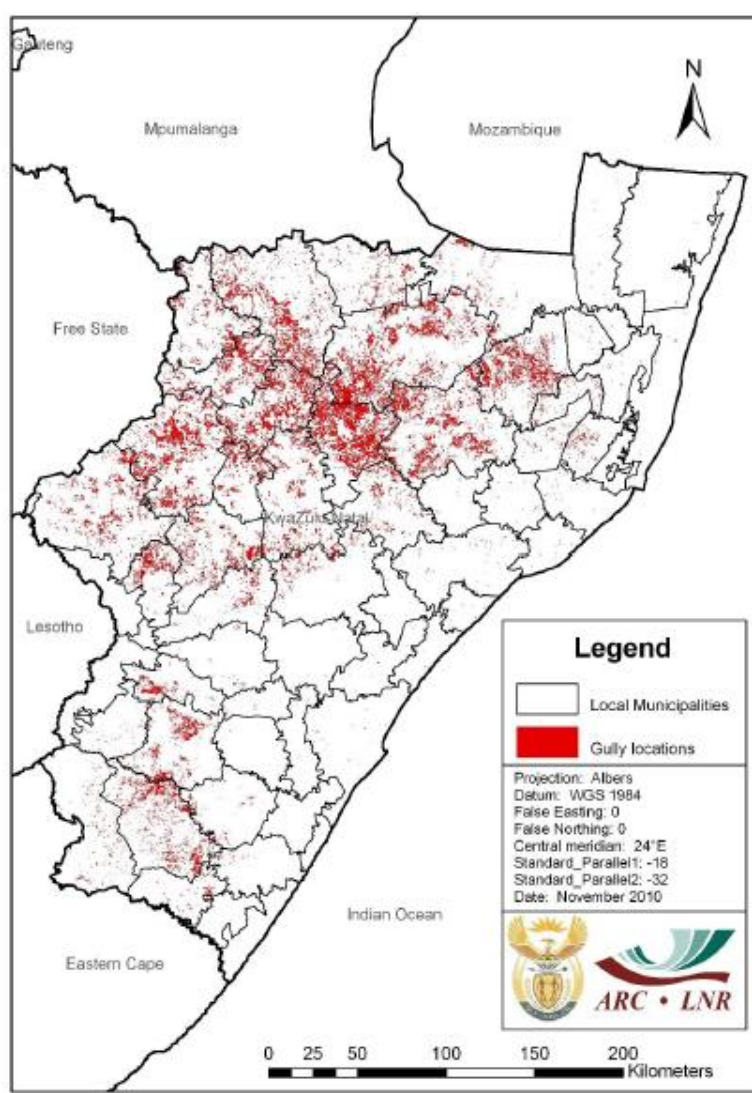
Overall the agricultural sector in KwaZulu-Natal faces several constraints that have resulted in a significant decline in production and job losses. These constraints include inadequate access to funding for infrastructure, land reform processes, increased competition due to international subsidisation, and access to Ingonyama Trust Land for agricultural production. In addition, the dramatic decline in the scientific base within the agricultural sector has led to a position where the Province is under-capacitated to undertake scientific research and the identification of agricultural potential (DARD, 2015).

The commercial agriculture sector is the major employer in the majority of municipalities and forms the economic anchor of these municipalities. Subsistence agriculture is by far the most important source of sustenance for rural households. In order to achieve a reduction of unemployment and poverty the challenge is twofold: to grow and transform the commercial agricultural sector by assisting the development of emerging commercial farmers and to stimulate the development of subsistence agriculture towards more sustainable practices thereby increasing food security. A range of infrastructural necessities will be required eg. Irrigation schemes, transport routes and market structures. The Agricultural Revolution and the Land Reform Programme are key instruments for the achievement of these objectives and they need to be aligned. These interventions, however, need to be informed by the latest land categories data and economic feasibility of agricultural projects.

One of the key challenges facing the agricultural sector is land degradation, due in part to unsustainable farming practices, but exacerbated by poor catchment management, erosive soils and the impacts of a changing climate. The impact of land degradation is both an environmental issue and a socio – economic issue and is linked to food security, poverty, urbanisation and biodiversity. The resultant soil erosion can increase the occurrence and intensity of floods, decrease groundwater recharge, and increase sedimentation in catchments.



Map 8: KZN Gully location map – the extent of land degradation in the Province



Source: Le Roux, 2015

According to recent data (Le Roux & Mararakanye, 2015), gully erosion is affecting large parts of the Province, with the greatest impacts felt in Nquthu (15 519 ha, 7.91%), Abaqulusi (12 384 ha, 2.96 %) and Endumeni (7 337 ha, 4.56%).

The national Environmental Protection and Infrastructure Programs (EPIP) includes a budget under the Working for Land program for the large-scale rehabilitation projects in Nquthu (R10 million), which includes restoration of dongas, construction of gabions, planting of stabilising grass and planting of trees and at Nkandla, which includes sloping of dongas, construction of gabions, planting of vetiver grass, conservation of soil structure and planting of trees (R15 million) (Ramashala, 2015).

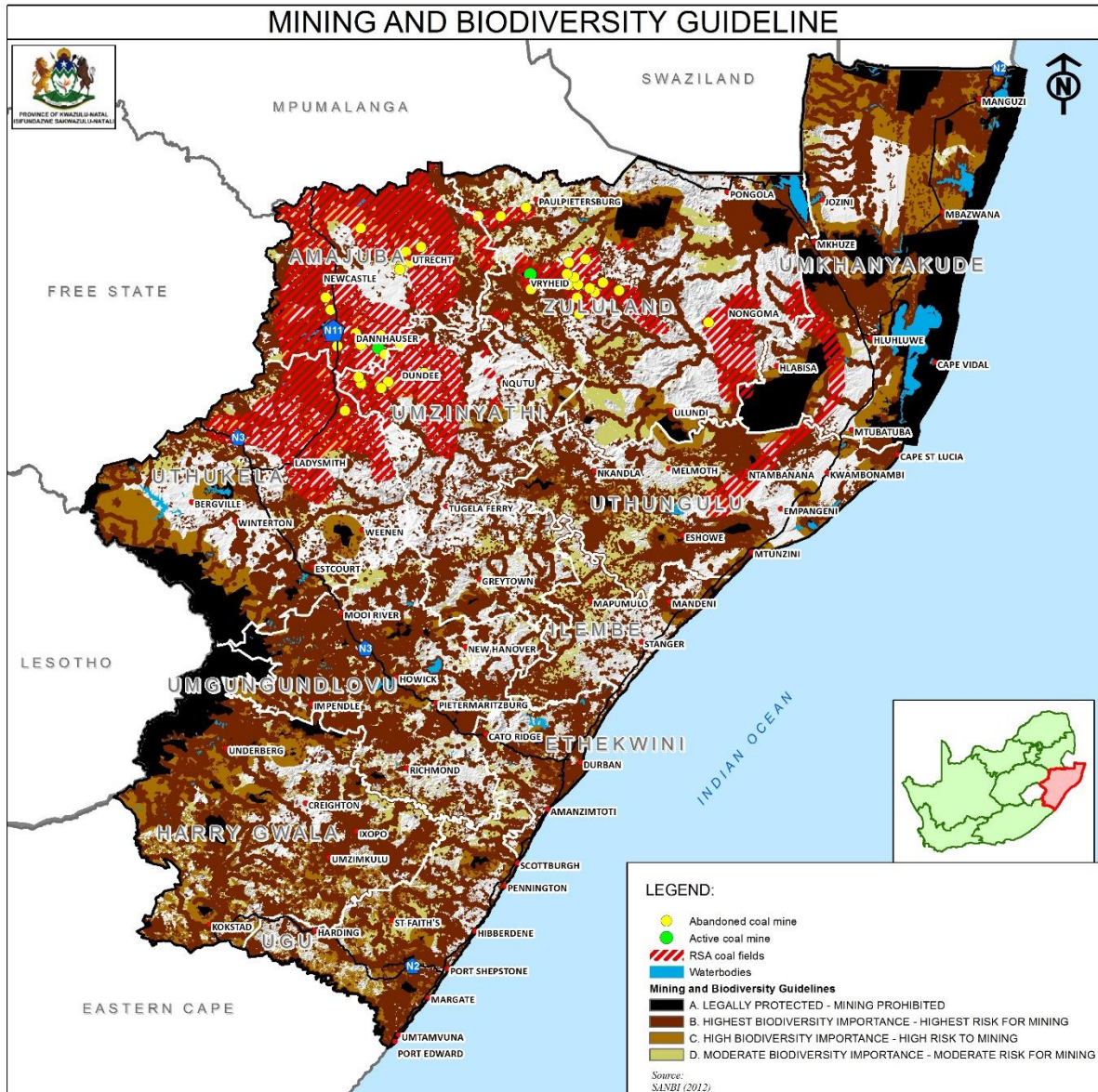
3.5 Mining and Biodiversity

A Mining and Biodiversity Guideline aimed at mainstreaming biodiversity into the mining sector was published on 22 May 2013. Mining applications are now not permitted in certain high priority biodiversity areas. The main mineral and/or mining commodities in KwaZulu-Natal consist of coal deposits and are located mainly within the north western parts of the province.



The map below depicts the coal deposits within the Province, in relation to the (SANBI, 2012). There is substantial overlap between the coal fields areas and areas classified as “highest biodiversity importance”.

Map 9 Mining and Biodiversity Guideline areas - coalfields and coal mines



Source: SANBI, 2012

A recent case study in this regard involved a proposed coal mining application (Fuleni Mine) by Ibutho Coal on the boundary of the Hluhluwe-Imfolozi Nature Reserve in northern KZN. In November 2015, in the face of strenuous opposition from the iMfolozi Community and Wilderness Alliance (ICWA), Ibutho Coal withdrew their current EIA application in the light of the objections and concerns raised.

The “One Environmental System” came into effect 8 December 2014, partly in response to the 2010 “Strategy for Sustainable Growth and Meaningful Transformation of South Africa’s Mining Industry” which identified amongst others fragmented licensing mechanisms as one of the key binding constraints to the global competitiveness of the industry – the new system provides for



coordination and integration of Environmental, Water and Mining Authorization processes with agreed fixed time-frames for the consideration and issuing of the permits, licenses and authorisations (within a 300 day period).

There are concerns around the fact that Department of Mineral Resources (DMR) whose mandate is the exploitation of mineral wealth in the country is now deciding on all mining applications, with other Departments relegated as commenting authorities on applications.

There has been an increase in illegal sand mining reported across the Province. Growing problem of acid mine drainage in disused mines, produced when a mineral known as iron pyrite — commonly found in gold mines, and often called fool's gold because of its similarity in colour to the real thing — comes into contact with the water that starts rising in disused mine workings. Sulphuric acid is produced once the iron pyrite reacts with air and water.

The new authorization system is still being tested in practice and issues include lack of integration of reporting formats and lags in meeting timeframes. Subsequently there has been an increase in contraventions of the National Water Act related to delays in processing of water use licenses (the regional Department is significantly under-staffed and a moratorium has been placed on further appointments).

Further to above, KZN EDTEA is set to establish a provincial Project Steering Committee which will be headed by EDTEA's General Manager for Environment who will oversee the environmental authorization applications. At the district municipality level, to establish Technical Advisory Forums and Review Teams which will ensure applicants' adherence to timeframes and assist applicants with specialist advice in managing their applications. There is a need to unlock the more than 452 outstanding projects in the EIA system with a potential value of about R1,7 trillion.

Mineral extraction from coastal dunes might impact on the environmental quality and amenity and compete with conservation, tourism and lifestyle development options along especially the northern coastal areas.

Recent fracking proposals in KZN have highlighted the need for provincial fracking guidelines. According to recent media reports, there is potential oil drilling and gas fracking on nearly 40 percent of the land surface area of KZN (40% of KZN surface fracking, oil drilling targets, 2016). The need for cheaper sources of renewable energy must be carefully weighed against the potential impacts on biodiversity, water resources and community health and safety.

3.6 Hydrology

KwaZulu-Natal's population is growing at an average growth rate of 0.7% per annum, and with current local economic growth rates of 3.72% percent per annum (2000-2013) (refer to Demographics section) there is a need to ensure water security and healthy water ecosystems that support the provincial growth and development priorities. Growing water demands of the energy, mining and agriculture sectors, increasing urbanisation and industrialisation, place enormous pressure on limited water resources in terms of management and allocation.



The current drought situation in parts of KZN, brought on by the worst El Nino event experienced since 1980s and exacerbated by late rains, have resulted in certain parts of the province being declared disaster areas and receiving funding for specific drought mitigation measures.

The recent construction of the Spring Grove Dam in the Midlands is aimed at augmenting supply and various provincial water transfer schemes are being put into place.

The National Water Resources Strategy (NWRS2), gazetted on 16 August 2013, sets out the strategic direction for water resources management with particular focus on priorities and objectives for the period 2013-2017 (DWS, 2012). It provides a framework for the protection, use, development, conservation, management and control of water resources, as well as a framework within which water must be managed at catchment level, in defined Water Management Areas (WMAs). The NWRS2 priority themes set out specific Performance Indicator (KPI)/ targets and timeframes. The Strategy includes a National Desalination Strategy, which aims to provide for desalination of brackish water, mine water, industrial effluents, municipal treated effluents and seawater introduces new water quality issues. The Strategy also includes a National Strategy for Water Re-use.

The NWRS2 reports that over the last ten years' national water consumption of the domestic sector has increased from 22% to 27% of the total resource.

The NWRS2 outlines the following national Water Sector Priority Focus Areas (2013 – 2018):

- Achieving equity, including Water Allocation Reform
- Water conservation and water demand management
- Institutional establishment and Governance
- Compliance monitoring and enforcement
- Planning, infrastructure development & operation and maintenance of water resources infrastructure

The major focus of the NWRS2 is equitable and sustainable access and use of water by while sustaining the water resource. Equity and redistribution will be achieved through the authorisation process and other mechanisms and programmes, such as water allocation reform, financial support to emerging farmers and support to urban and rural local economic development initiatives.

The NWRS2 emphasises that effort must be intensified with specific targets set to reduce water loss. Water conservation and water demand management measures will have multiple benefits in terms of the postponement of infrastructure augmentation, mitigation against climate change, support to economic growth and ensuring that adequate water is available for equitable allocation.

A new resource for water resource data is the WR 2012 web site platform, which began in 2012 and is due for completion in April 2016. The intention is to build on the WR2005 study by including additional water resources data and information, enhanced water resource models, updated data to September 2010 and to have all this information on a web based system.



Detailed data is available on extent of alien vegetation and afforestation and volumes of abstraction and irrigation areas per catchment area.

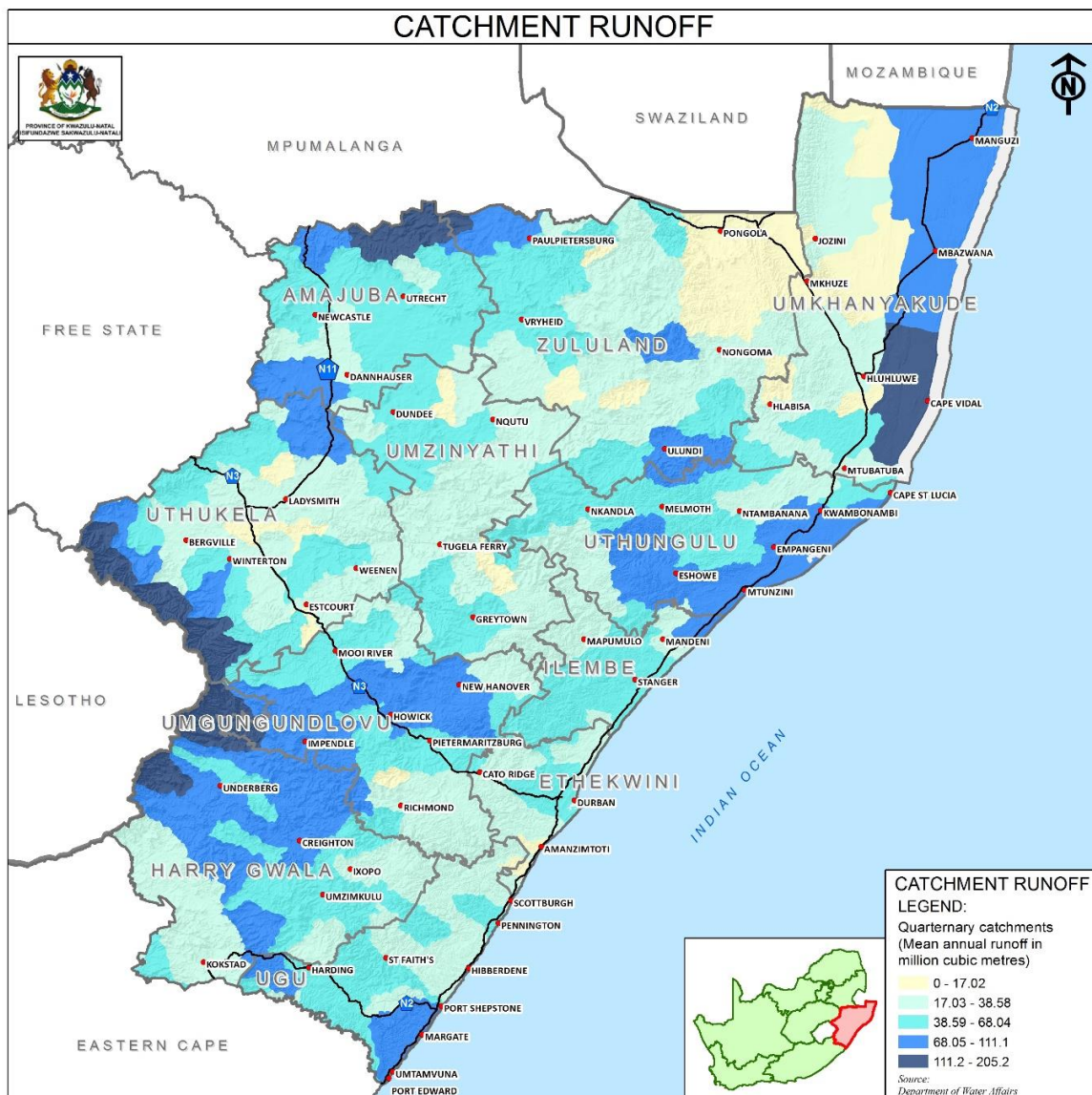
The National Cleaner Production Centre (NCPC-SA) is reportedly rolling out a national Industrial Water Efficiency Project. The project, part of the NCPC-SA's long-term plan, is being expedited due to South Africa's current drought and water scarce nature to harness the potential of industry to not only reduce their overall costs and risks in times of water shortages, but also contribute on a large scale to the country's water efficiency targets.

3.6.1 Strategic Water Source Areas

There are wide disparities in the distribution of MAR per quaternary catchment across the Province. Strategic Water Source Areas (SWSAs) (CSIR, 2013) are those areas that supply a disproportionately high amount of the country's mean annual runoff, in relation to their surface area, here defined as those areas that contribute more than 50% of the country's MAR.

Map 10 Mean Annual Runoff per Quaternary Catchment

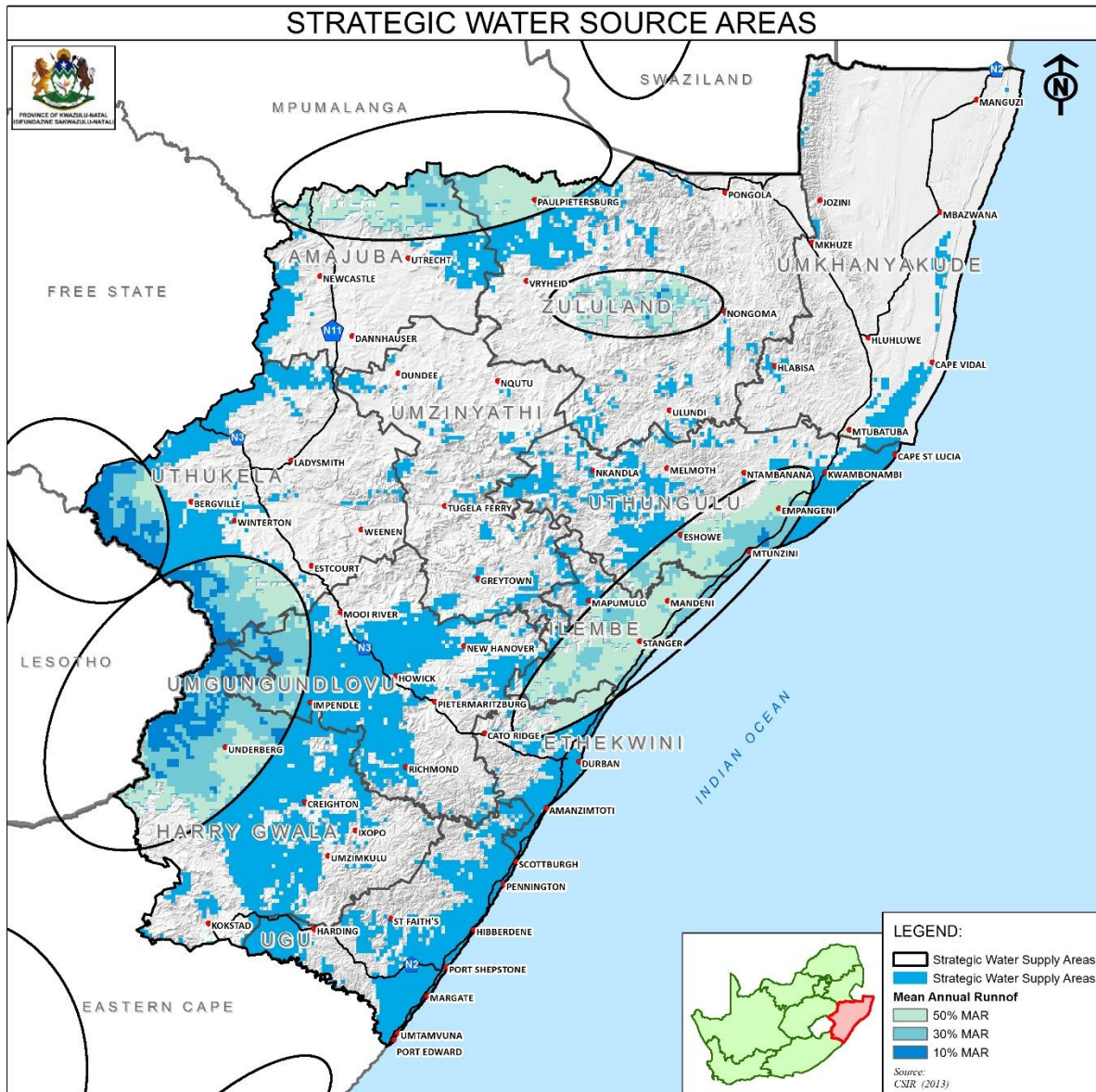
Source: Department of Water and Sanitation, undated



These areas have been mapped for South Africa, originally derived from a 1 x 1 minute grid (MAR_SWSA) (CSIR, 2013) and appropriate management of these areas, which often occupy only a small fraction of the land surface area, can greatly support downstream sustainability of water quality and quantity.

Map 11 Strategic Water Resource Areas

Source: CSIR, 2013



It should be noted that there is a distinction between “yield” and “runoff”. Yield, as used within the context of the Department of Water and Sanitation (DWS), is the amount of water that can be supplied in a catchment using a set human-built water supply schemes (such as dams and inter-basin transfers) as well as taking into account a specified reliability of supply, termed the “assurance of supply”. This is as opposed to “runoff” which is amount of natural flow that occurs in the catchment and is usually expressed on a daily, monthly or annual basis. According to the WWF report (2013) for the purposes of SWSAs, runoff is a more appropriate term than yield, because it relates directly to improving reliability of flows using ecosystem-based management approaches, which focus on maintaining healthy rivers and wetlands.



Importantly is the need to carefully manage land use planning in SWSAs. Setting aside land under formal conservation (see Table below) is one approach and there is a low percentage of formal conservation areas. The reporting on land use change and trends in these areas is imperative to manage the impacts on water quality and quantity.

Table 1 Protection levels (percentage land area) of national strategic water source areas per province

	Protected - Formal A	Protected - Formal B	Not protected
Eastern Cape	6	0.17	94
Free State	4	0.00	96
KwaZulu-Natal	10	0.17	90
Limpopo	12	0.00	88
Mpumalanga	9	0.14	90
Western Cape	31	26	43
South Africa	12	4	84

Table 2 Land use in SWSAs per province

	Natural	Cultivated	Degraded	Urban built-up	Waterbodies	Plantations	Mines
Eastern Cape	67	20	4	3	0	4	0.01
Free State	95	2	1	1	1	1	0
KwaZulu-Natal	60	18	2	6	2	12	0.06
Limpopo	51	14	4	7	1	23	0
Mpumalanga	51	3	2	1	5	37	0.02
Western Cape	76	12	2	3	2	6	0
South Africa	63	15	3	4	2	13	0.03
Lesotho	75	10	13	0	1	0	0
Swaziland	65	11	9	3	0	12	0

* Note: Northern Cape, North West, Gauteng have no national Strategic Water Source Areas

Source: CSIR, 2013

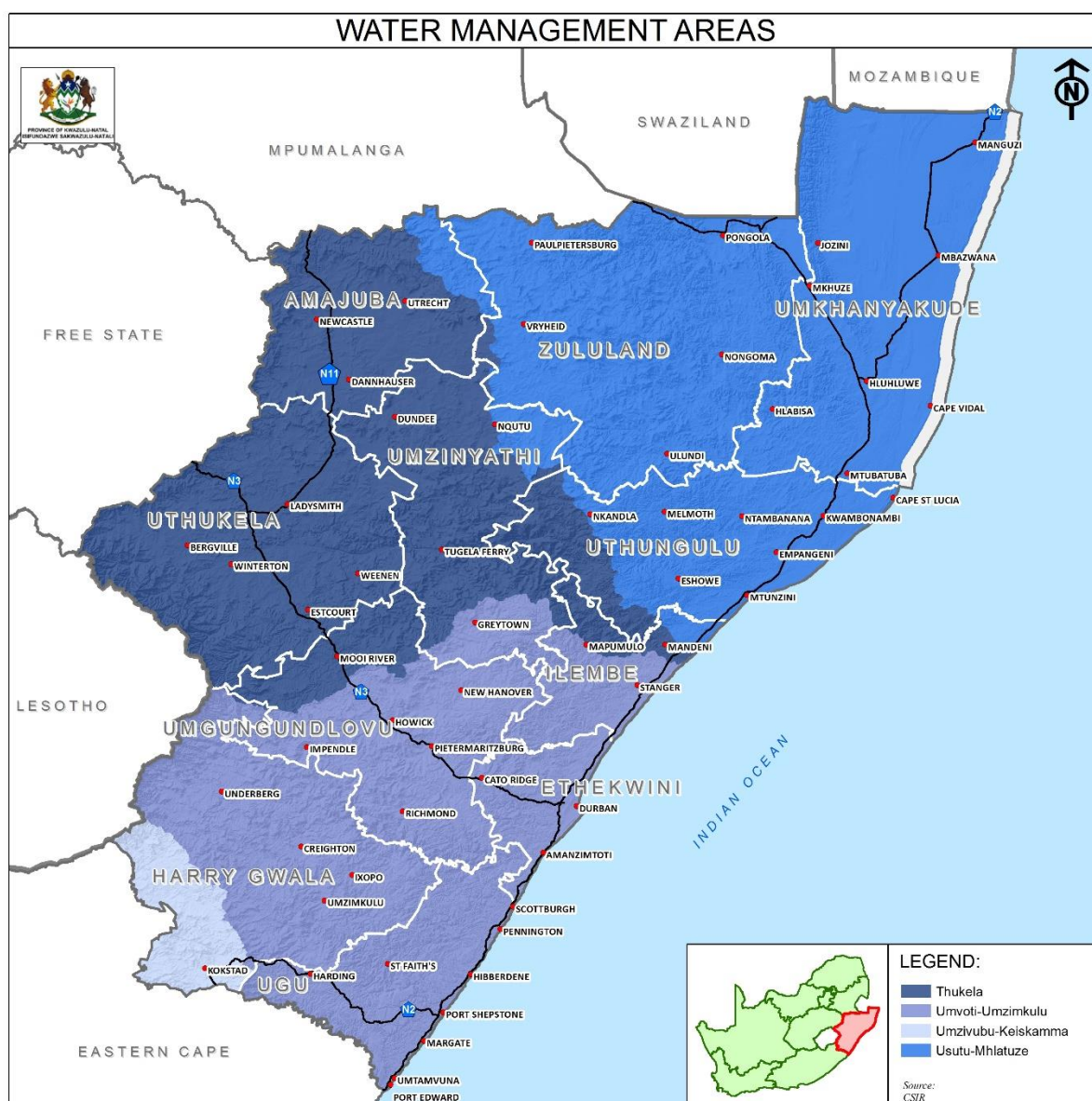
Given that currently 60% of the strategic water resource areas in KZN (Table 2) are under natural land use (untransformed), reporting on land use change and trends in strategic water resource areas is imperative to better manage impacts on water supply.

3.6.2 Water Management Areas (WMAs)

In July 2012, the 19 WMAs in South Africa were proposed to be consolidated into 9 WMAs, in which Catchment Management Agencies (CMAs) will be established. The effect of this in KZN is that the previous Mhlathuze, Thukela and Mvoti-Umzimkulu WMAs are combined to form the **Pongola-Mtamvuna WMA (WMA4)**. The Usutu-Mhlathuze WMA is incorporated into the **Inkomati-Usutu WMA (WMA3)**. The boundaries of the new nine WMAs have been published in the Government Gazette number 35517 of 27/07/12.

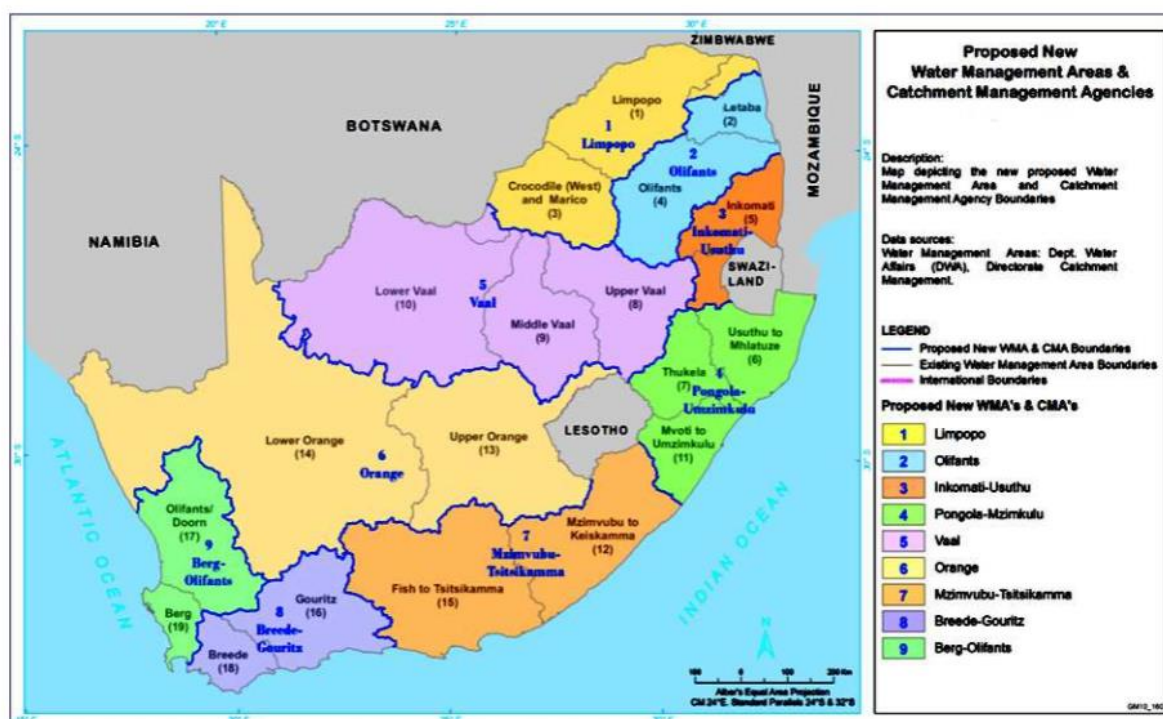


Map 12 Previous Water Management Areas (pre-2012)



Source: CSIR, undated.

Map 13 The 9 revised 2012 consolidated WMAs (DWS)



Source: Dept Water & Sanitation

Note: The descriptions of the KZN WMAs areas below is based on the previous delineation (pre-2012) of WMAs and related studies.

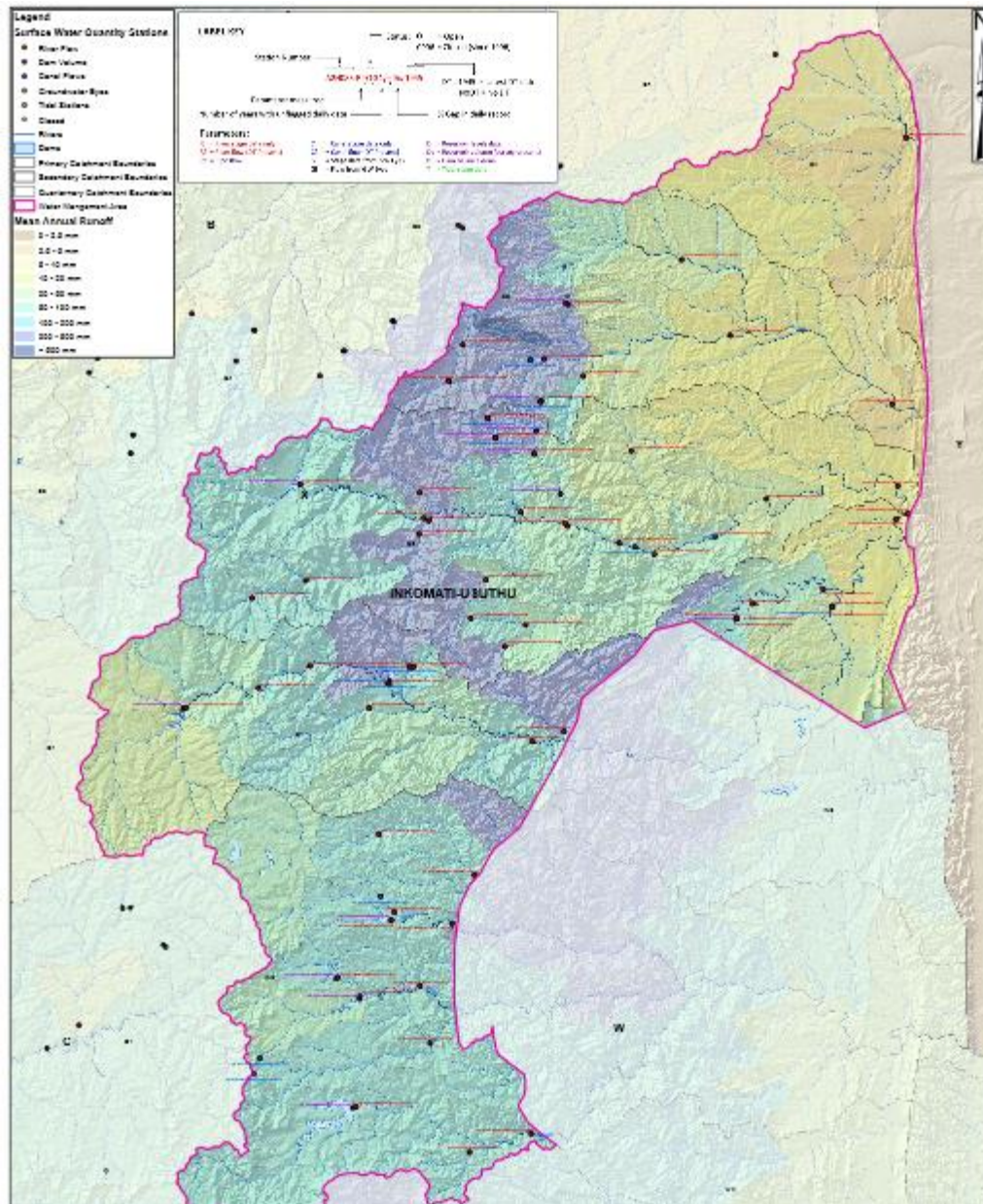
The majority of the province's population and economic activities are concentrated within the previous Umvoti-Umzimkulu and Usutu-Mhlathuze WMAs and at a provincial level, it is imperative that these WMAs are managed to address water demand, system health and potential pollution.



Usutu-Mhlathuze WMA (now part of the Inkomati-Usutu WMA [WMA3])

This WMA located in the north of the province crosses the borders into Swaziland and Mozambique. Various studies have been undertaken in the WMA, including:

Map 14 Inkomati-Usutu WMA – Surface Water Monitoring Stations



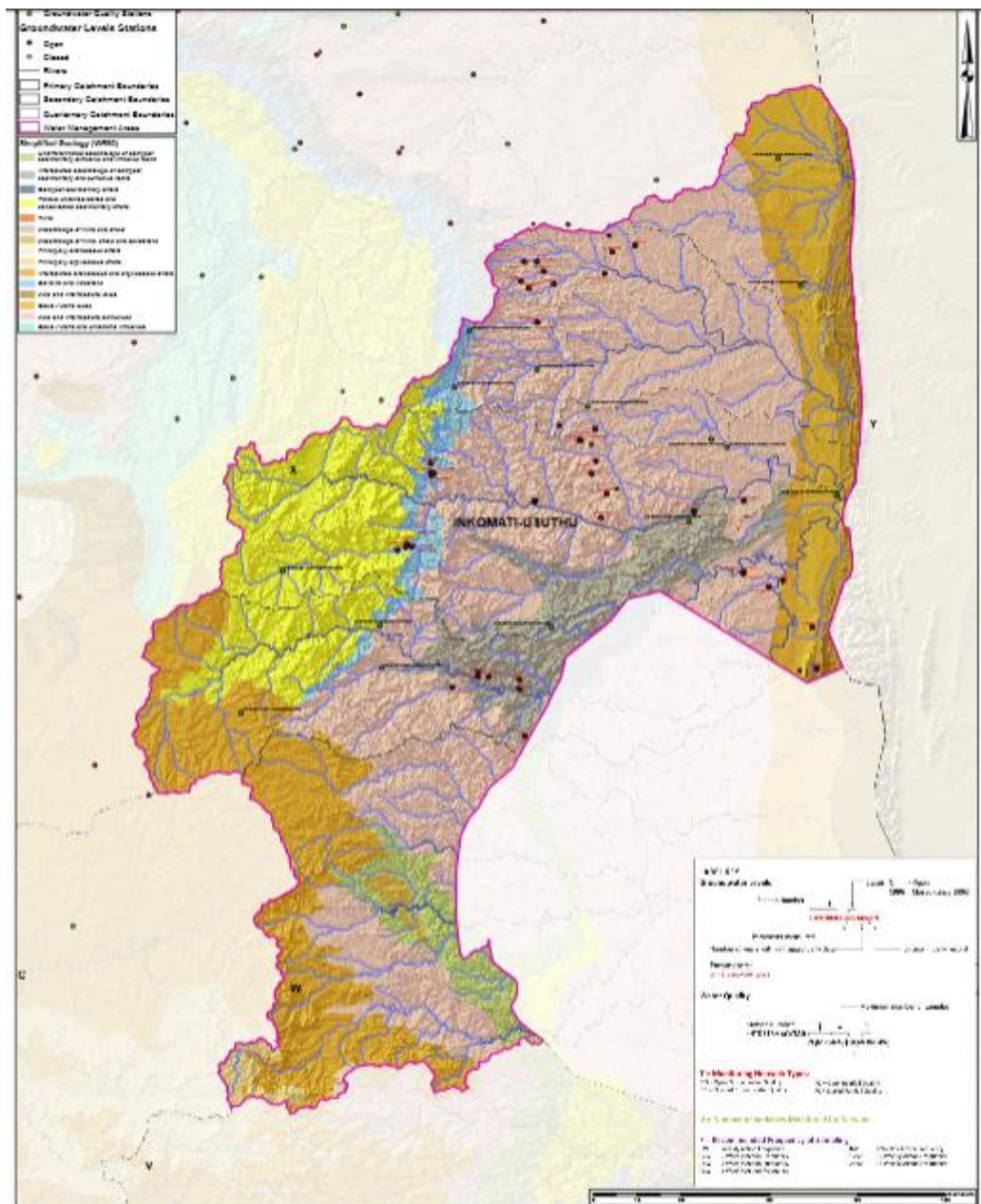
Source: DWS, 2015

- An Assessment of Economic Issues Related to the Usutu-Mhlathuze WMA (2001);
- Overview of the Water Resources of the Usutu-Mhlathuze WMA (2002);
- Usutu-Mhlathuze WMA Overview of Water Resources Availability and Utilisation (2003);
- Usutu-Mhlathuze WMA Internal Strategic Perspective (2004);



- The ecological state of rivers (& wetlands) in the Usutu to WMA: Phase 1 – Inventory and Gap Analysis (2008);
- Reserve Determination of Priority Water Resources in the Usutu, Pongola, Lake Sibayi, Mkuze, Mfolozi And Mhlathuze Catchments: Background Information Document (Nov 2014); and
- Reserve Determination Studies for Selected Surface Water, Groundwater, Estuaries and Wetlands in the Usutu/Mhlathuze WMA – Wetland Prioritisation Report (Dec 2014).

Map 15 Inkomati-Usutu WMA – Groundwater Monitoring Stations



Source: DWS, 2015

The previous Usutu to Mhlathuze WMA is the water management area with the third highest mean annual runoff (MAR) in the country. Significant land use impacts result from the extensive



areas under afforestation and dryland sugar cane. Large areas of invasive alien vegetation, particularly the Mhlatuze sub-area, cause a substantial reduction in the runoff.

The main storage dams are:

- Westoe, Jericho, Morgenstand and Heyshope Dams in the Upper Usutu sub-area. (The Churchill weir diverts water to Westoe Dam.);
- Paris and Pongolapoort Dams in the Pongola sub-area;
- Hluhluwe Dam on the Hluhluwe River in the Mkuze sub-area;
- Klipfontein Dam on the White Mfolozi River; and
- Goedertrouw Dam on the Mhlatuze River.

Table 3 Usutu - uMhlatuze WMA: Reconciliation of water requirements/allocations and available water for the Year 2000 (million m³/annum)

Sector/ Sub-area	Available water			Water requirements/allocations			Balance
	Local yield	Transfers In	Total	Local requirements	Transfers out	Total	
Upper Usutu	202	0	202	69	131	200	2
Pongola	645	0	645	255	38	293	352
Mkuze	33	33	33	78	0	78	(45)
Mfolozi	51	0	51	52	18	70	(19)
Mhlatuze	178	80	258	342	3	345	(85)
W11& W13	49	3	52	20	0	20	32
TOTAL	1 158	62	1 220	816	136	952	268

In 2000, there was an overall water deficit in the Mkuze, Mfolozi and Mhlatuze sub areas.

Table 4 Usutu - uMhlatuze WMA: Year 2025 base scenario water requirements (million m³/a)

Sub-area	Urban		Rural	Mining and bulk industrial	Power generation	Affore- station	Total local require- ments	Transfers out	Grand Total
	Irrigation	(1)							
Upper Usutu	13	13	5	0	0	43	74	114	188
Pongola	213	3	6	1	0	34	257	30	287
Mkuze	61	0	10	0	0	6	77	0	77
Mfolozi	51	11	11	4	0	2	79	18	97
Mhlatuze	94	34	8	86	0	19	241	0	241
Total	432	61	40	91	0	104	728	114	842

Table 4 shows the Year 2025 base scenario water requirements, which assumes an overall reduction in local water requirements and transfers out of the sub areas.



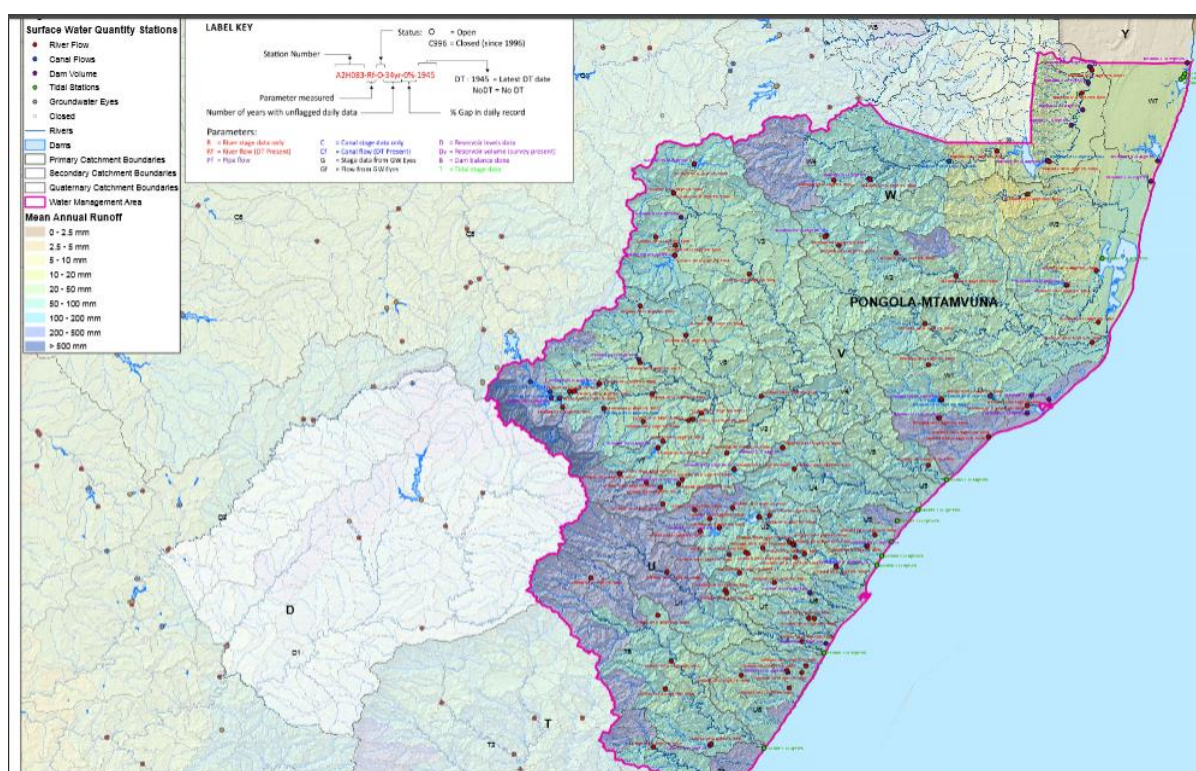
Table 5 Usutu - uMhlathuze WMA: Year 2025 high scenario water requirements (million m³/a)

Sub-area	Irrigation	Urban	Rural	Mining and bulk industrial	Power generation	Affore-Station	Total local requirements	Transfers out	Grand Total
	(1)	(1)	(2)	(3)	(4)				
Upper Usutu	13	18	5	0	0	43	79	114	193
Pongola	213	3	6	1	0	34	257	30	287
Mkuze	61	1	10	0	0	6	78	0	78
Mfolozi	51	18	11	4	0	2	86	18	104
Mhlathuze	94	105	8	86	0	19	312	0	312
Total	432	145	40	91	0	104	812	114	926

For comparison, Table 5 shows the water requirements in Year 2025 for a high use scenario, which again shows an overall reduction in local water use requirements and transfers out.

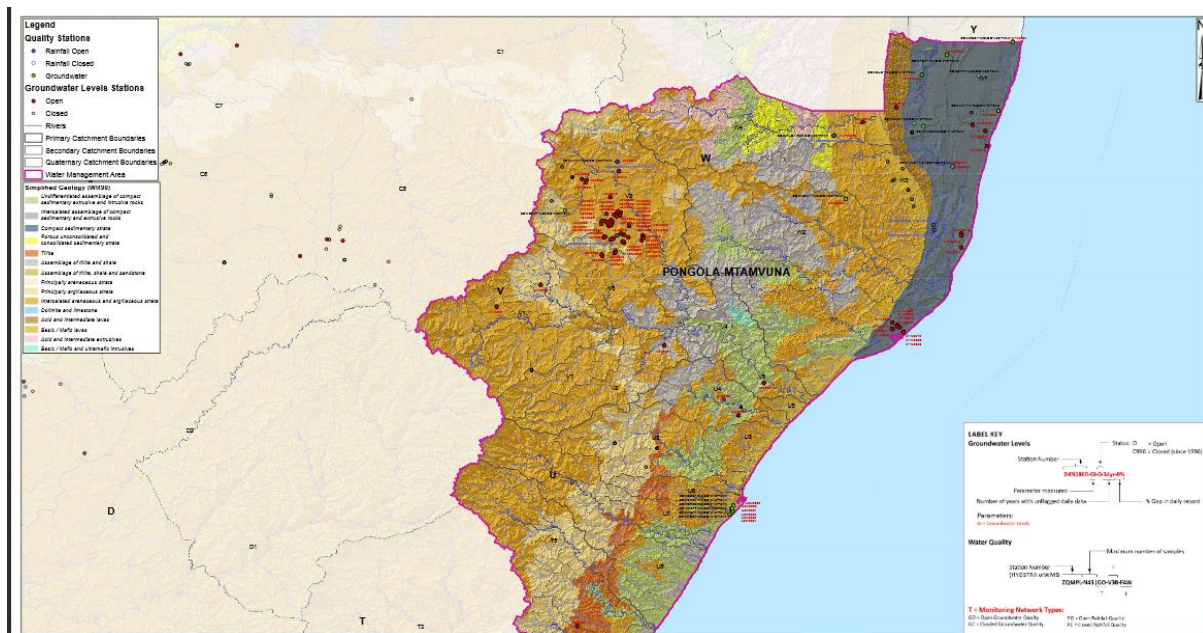
Thukela WMA (now part of the Pongola-Mtamvuna WMA [WMA4])

Map 16 Pongola-Mtamtuna WMA - location of surface water monitoring stations



Source: DWS, 2015

Map 17 Pongola-Mtamvuna WMA - location of groundwater monitoring stations



Source: DWS, 2015

The following studies *inter alia* have been undertaken in the Thukela WMA:

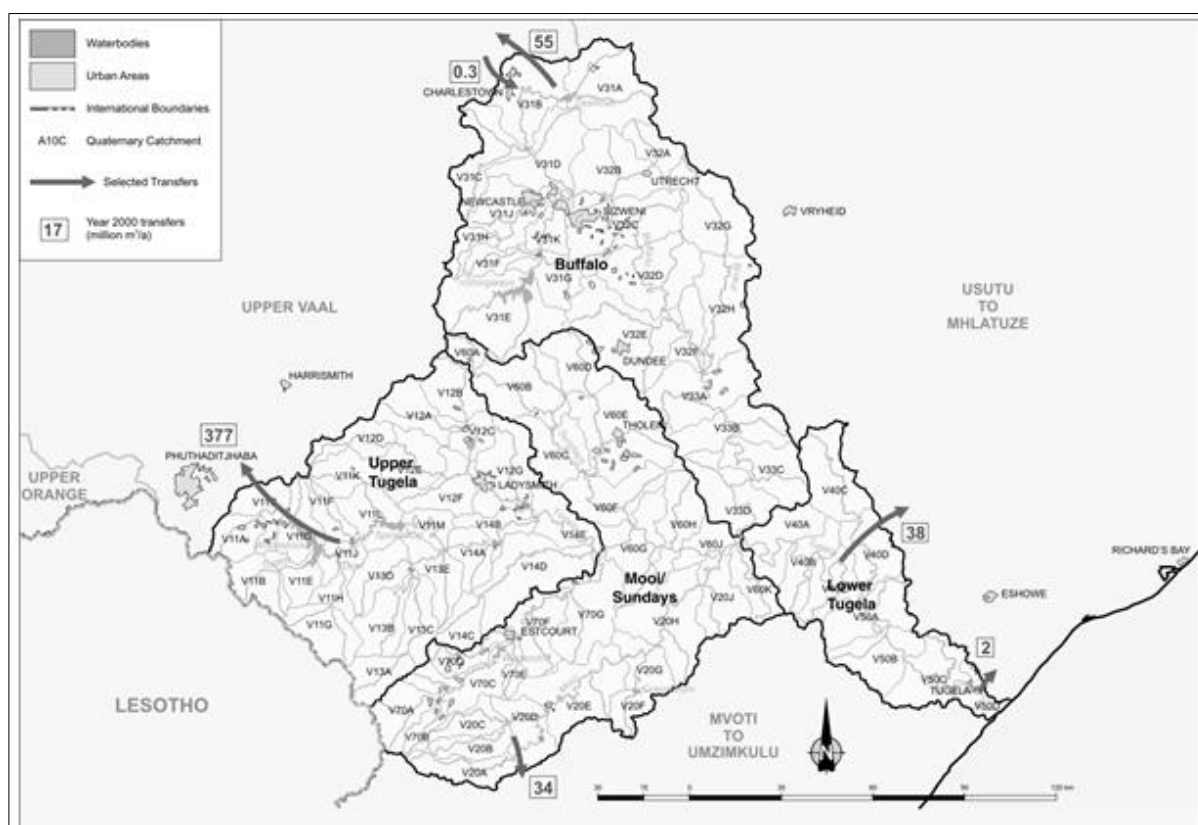
- Thukela WMA reserve Determination Study (2002); and
- Thukela WMA Strategic Internal Perspective (2004);

In 2004, the total estimated water requirement was 521 million m³/annum. 58% of this is required for irrigation, 10% for urban purposes, and 7% for mining and bulk industrial use as well as rural use. It is reported that a significant proportion of available water is taken up by commercial forestry plantations, although this has a minimal direct impact on storage dams in the WMA. There are also large inter-basin transfers out of the WMA into the Vaal, Mhlathuze, Mooi and Zaaihoek systems. The total requirement for transfers out is 541 million m³/ annum.

In terms of irrigation requirements, there is some uncertainty around the usage, with a reported 253 million m³/annum in terms of the 2003 registration database, although this is not aligned with the figures in the Thukela Reserve Determination Study (2002). Irrigation is the largest water user in the Upper Thukela.



Map 18 Thukela WMA



In some parts a surplus of between 80 – 100 million m³/ annum is reported, while the Upper Thukela, Sunday and Mooi River Key Areas were reportedly in deficit.

Table 6 Thukela WMA: Available yield in the year 2000 (million m³/a)

Component/ Sub-area	Natural resource		Usable return flow			Total local yield
	Surface water ¹	Ground- water	Irrigation	Urban	Mining and bulk	
Upper Thukela	376	5	8	5	0	394
Mooi/Sundays	110	3	8	6	1	128
Buffalo	107	6	5	13	5	136
Lower Thukela	73	1	2	0	3	79
Total for WMA	666	15	23	24	9	737

In terms of the overall water reconciliation in 2000, there was a reported deficit in all sub areas (Table 7).



Table 7 Thukela WMA: Reconciliation of water requirements and availability for the year 2000 (million m³/a)

Component/ Sub-area	Local yield	Transfers in ²	Local requirements	Transfers out ²	Balance ¹
Upper Thukela	394	0	88	377	(71)
Mooi/Sundays	128	0	102	34	(8)
Buffalo	136	0	91	55	(10)
Lower Thukela	79	0	53	40	(14)
Total for WMA	737	0	334	506	(103)

Table 8 Thukela WMA: Reconciliation of water requirements and availability for the year 2025 base scenario (million m³/a)

Component/ Sub-area	Local yield ¹	Transfers in	Local requirements ²	Transfers out	Balance ³	Potential for development ⁴
Upper Thukela	396	0	94	377	(75)	380
Mooi/Sundays	131	0	107	34	(10)	218
Buffalo	136	0	92	55	(11)	0
Lower Thukela	79	0	54	40	(15)	0
Total for WMA	742	0	347	506	(111)	598

Table 9 Thukela WMA: Reconciliation of water requirements and availability for the year 2025 high scenario (million m³/a)

Component/ Sub-area	Local yield ¹	Transfers in	Local requirements ²	Transfers out	Balance ³	Potential for development ⁴
Upper Thukela	401	0	104	377	(80)	380
Mooi/Sundays	140	0	129	34	(23)	218
Buffalo	155	0	133	55	(33)	0
Lower Thukela	80	0	54	40	(14)	0
Total for WMA	776	0	420	506	(150)	598

Further deficits in the various sub-areas are predicted under the base and high development scenarios for the WMA. No further development possibilities are foreseen in the Buffalo and Lower Thukela areas.

In 2004, three dams had been proposed for the increased transfers of water into the Vaal and Mgeni catchments (Jana Dam, Mielietuin Dam and Spring Grove Dam). It was anticipated that these dams would increase the yield of the WMA by 598 million m³/ annum. The Spring Grove Dam was constructed in 2011-2012.

In terms of groundwater availability, there are no major primary aquifers in the Thukela WMA and groundwater is held in secondary aquifers. There has been significant groundwater development, particularly related to rural water supply schemes. In addition, there is more



detailed information available on groundwater. The quality of groundwater is good and suitable for domestic use with minimal treatment.

The Uthukela District Municipality is implementing the Thukela Emergency Water Supply Scheme which involves drilling boreholes. Given the widely dispersed settlements and steep terrain, the use of groundwater is seen as the most cost-effective development option for rural water supply. It is recognised in the 2004 report that there is a need for updating the 1994 groundwater mapping report and that areas of high groundwater potential need to be identified. See Section 3.6.6. on updated groundwater mapping.

Issues identified in the WMA include (2004):

- Poor veld management and overgrazing, especially in the Upper Thukela;
- Groundwater pollution in the Ladysmith and Colenso areas;
- Sporadic non-compliance of effluent discharge in Estcourt, Newcastle and Mandini;
- Domestic discharge into Wakkerstroom vlei;
- Discharge of effluent from Sappi paper mill at Mandini which required releases from Spioenkop Dam to dilute the effluent;
- Releases from Ntshingwayo Dam to dilute industrial spills in Newcastle area;
- High Chemical Oxygen Demand (COD) and suspended solids in the Lower Thukela;
- Mining and industrial activities in the upper Buffalo catchment (mines in the area are aiming for zero effluent discharge);
- Closed mine decants in the Sundays and Buffalo catchments;
- Implementation of the mine rehabilitation program;
- Dense settlements with poor sanitation in the upper Buffalo catchments;
- New developments for leisure industry in the Little Thukela catchment; and
- Diffuse impacts in the Mooi River.

In addition, in the 2004 report it is noted that the Regional Office of DWS is under-resourced and focus on pollution control rather than resource quality management. The need for cooperative governance between DWS and the local and district municipalities is highlighted.



Mvoti-Umzimkhulu WMA (now part of the Pongola-Mtamvuna WMA [WMA4])

The Mvoti- Umzimkhulu WMA includes the following major rivers: the Mvoti River, Tongaat River, Mdloti River, Ohlanga river, Umgeni River, Sterkspruit River, Lovu River, Umkomazi River, Mzimayi River, Umzimkulu River and Mtamvuna River and covers the following Dams:

- Albert Falls Dam Mgeni River;
- Hazelmere Dam Mdloti River;
- Inanda Dam Mgeni River;
- Midmar Dam Mgeni River; and
- Nagle Dam Mgeni River.

In 2003, the report titled "Overview of Water Resources Availability and Utilisation" was compiled. The WMA lies predominantly within the province of KwaZulu-Natal, with a small portion in the southern part which falls in the Eastern Cape. The western boundary of the water management area is shared with Lesotho.

Ongoing surface water quality monitoring data is available at https://www.dwa.gov.za/iwqs/wms/data/WMA11_reg_WMS_nobor.htm.

The WMA is characterised by large-scale metropolitan areas of Durban and Pietermaritzburg and at various locations along the coast. Dense rural settlements are scattered throughout the inland parts, mostly in the southern half, where there is less economic activity and people are mainly dependant on cattle herding and subsistence farming for their livelihood. Commercial farms are concentrated along the coast as well as in the northern and central parts. There is little mining activity or power generation activity in the WMA.

It is reported that about 12% of the Gross Domestic Product (GDP) of South Africa originates from the Mvoti to Umzimkulu WMA. Almost 70% of the population in the WMA is concentrated in the Mgeni sub-area.

3.6.3 *Umgeni Water: Water Resource Regions*

The summary which follows is based on the descriptions of the water resource regions in Volume 1 of the Umgeni Water Infrastructure Master Plan 2015/ 2016 – 2045/2046 (Umgeni Water, 2015) (Umgeni Water Infrastructure Master Plan 2015/2016 -2045/2046, 2015).



Table 10 Umgeni Water -water resource regions, quaternary catchments, major rivers, significant dams and Water Service Authorities

Region	Quaternary Catchments	Major Rivers	Significant Dams	WSAs
Lower uThukela	V40, V50	uThukela		Portion of Ilembe Portion of Mzinyathi
Mvoti	U4 U5	Mvoti Nonoti	Lake Merthely Darnall Dam	Portion of Ilembe Portion of Umgungundlovu Portion of Mzinyathi
Mdloti	U30A U30B U30C U30D U30E	Mhlali Tongati Mdloti	Hazelmere Dam Siphon Dam Dudley Pringle Dam	Portion of eThekweni Portion of Ilembe
Mgeni/Mooi	V20 U20	Mooi Mgeni	Craigieburn Dam Mearns Weir Midmar Dam Albert Falls Dam Nagle Dam Inanda Dam	Portion of Umgungundlovu Portion of eThekweni Portion of Mzinyathi
Mlazi/Lovu	U60 U70	Mlazi Lovu Nungwane Mgababa	Nungwane Dam Mgababa Dam Bealulieu Dam Shongweni Dam	Portion of Umgungundlovu Portion of eThekweni
Mkomazi	U10	Mkomazi		Portion of Umgungundlovu Portion of Sisonke Portion of eThekweni Portion of Ugu
Middle South Coast	U80	Mpambanyoni Mzimayi Mzinto Fafa Mtwalume Mzumbe	E.J. Smith Dam Umzinto Dam	Portion of Ugu Portion of Sisonke Portion of eThekweni
Mzimkhulu	T50	Mzimkhulu		Portion of Sisonke Portion of Ugu
Mtamvuna	T40	Mtamvuna		Portion of Ugu

Source: Umgeni Water 2012

3.6.3.1 Lower uThukela Region

Key characteristics of the Lower Thukela Region include:

- Eighty nine per cent of all reported borehole yields are less than 3 l/s, confirming that overall the groundwater resources are moderately poor to marginal;
- The groundwater development potential in the area can be classified as moderate, where resources are, on average, suitable for development of small reticulation schemes for small villages, schools, clinics and hospitals. Recharge calculations indicate the potential groundwater resources are underutilised: less than 25% of potentially available groundwater is presently used;
- The groundwater quality poses no limitation to use for human consumption, and is not therefore a constraint to development;



- the “Thukela Reserve Determination Study” (2004), a comprehensive water resource evaluation assessment, indicated a substantial surplus in the uThukela WMA even after meeting the Reserve requirements, however these assumptions were later questioned as, while valid for Reserve determination, these are not valid for the allocation of water in the uThukela WMA in the short-term;
- It is estimated that there is about 45 million m³/annum (120 Ml/day) which is not allocated, and the uThukela River has been identified as a potential water resource to supply the North Coast area (i.e. south of the uThukela River) in the medium and possibly the long-term; and
- Currently the Lower uThukela Catchment is unregulated and does not have any significant water resource infrastructure on it. Major abstractions are all run-of-river.

3.6.3.2 Mvoti Region

Key characteristics of Mvoti Region include:

- The groundwater potential is particularly high (greater than 3.0 l/s) in the upper catchment in the Natal Group sandstones in a band just south of the towns Greytown, Kranskop and Seven Oaks;
- The Reserve has not been implemented to date and will need to be recalculated at a comprehensive level using the standardised methodology;
- The implementation of the ecological Reserve in the catchment will result in the aggravation of the current situation, which is already marked by periods of curtailments during low flows;
- The water balance of the Mvoti region is in deficit of 56 million m³/annum. Umgeni Water applied for an abstraction licence of 6.57 million m³/annum (18 Ml/day) from the Mvoti River for the Mvoti WTP, this should be reviewed as demands increase;
- There are no major storage dams on the uMvoti and Nonoti rivers and consequently the available yield from this system is limited;
- The Mvoti Region has a high MAR, however, the high sediment loads on the main rivers make the development of small dams on these rivers non-viable. Large storage dams or off-channel storage dams are therefore required;

3.6.3.3 Mdloti Region

Key characteristics of Mdloti Region include:

- The sandstone of the Natal Group represents the most productive groundwater-bearing lithology, followed by mudstone/shale lithologies, the granite/gneiss lithologies and the tillite sediments of the Dwyka Tillite Formation;



- The Hazelmere system has a severe problem with suspended solids and this is due to the nature of the catchment which is overgrazed as a result of improper farming practices and therefore the soil is highly erodible;
- No comprehensive assessment of the Ecological Reserve of uMdloti River has been undertaken to date;
- According to the Mvoti to Mzimkulu ISP (DWS 2004) the water balance of this region is in deficit by 8 million m³/annum (22 Ml/day);

3.6.3.4 Mooi/Mgeni Region

Key characteristics of Mdloti Region include:

- Major urban centres of Durban and Pietermaritzburg are situated within the Mgeni catchment;
- In 2004 the demand in the Mgeni System first exceeded the system yield. With further growth in demand placing the system at a risk of failure, the DWS planned and constructed the Mooi/Mgeni Transfer Scheme-Phase 2A (Spring Grove Dam) to mitigate this risk of non-supply;
- Both the Mooi and Mgeni catchments are no longer open to stream flow reduction activities such as afforestation, expansion of irrigated agriculture or the construction of storage dams, i.e. they are 'closed' catchments;
- Nutrients in the Mgeni catchment were, on a number of occasions, above the set RQOs. The non-compliance was largely due to the sewer problems experienced in the Pietermaritzburg CBD. Due to poor sewage infrastructure in the Mpophomeni area, sewage contamination has been an on-going problem. The agricultural activities in the catchment area also contributed in the nutrients load which has resulted in elevated alga counts;
- Water quality in the Mooi Catchment ranges from excellent to good;
- The ambient water quality of groundwater in the Mooi/Mgeni Region is generally excellent;
- The ecological Reserve has not yet been determined for the Mgeni catchment;
- The Ecological Reserve for the whole of this uThukela Water Management Area (WMA) was undertaken, and this included the Mooi River catchment. This assessment indicated an over allocation of water, particularly on the Little Mooi River. In order to ensure that the correct Reserve flows are maintained in the Little Mooi River about a 50% curtailment of the existing registered irrigation and afforestation is required; and
- The yield of the Mooi/Mgeni System (MMTS-1) was 334 million m³ per annum (915 Ml/day). The Spring Grove Dam Phase 2A, which has been completed, has improved the yield of the Mooi/Mgeni System to 381 million m³ per annum (1044 Ml/day).



3.6.3.5 Mlazi/ Lovu Region

Key characteristics of Mlazi/ Lovu Region include:

- The region is dominated by irrigation and afforestation, with irrigation being the main land use;
- The problematic determinants in this catchment seem to have been E. coli, nitrates and turbidity. There has been an improvement in water quality in these determinants in 2014;
- No comprehensive assessment of the ecological Reserve of either uMlazi or the Lovu rivers has been undertaken to date. The catchment has surplus water available, even taking the estimated ecological Reserve requirements into account. There is no urgency for the ecological Reserve determination and compulsory licensing processes in the catchment; and
- According to the Mvoti to Mzimkulu ISP (DWS, 2004) the water balance of this region is in surplus by 1 million m³ per annum (2.7 Ml/day).

3.6.3.6 Mkhomazi Region

Key characteristics of Mkhomazi Region include:

- The catchment is currently fairly undeveloped with the main land use activities being commercial forestry and irrigated areas in the central catchment areas around the towns of Bulwer, Richmond, Ixopo and Impendle. There is a large industrial abstraction for Sappi Saiccor near the coastal town of Umkomaas;
- There are prevalent sewer problems in the catchment. The sewer network continued to lose much of the sewage generated in the town to the catchment, much of it upstream of the Solly Bux Dam. This poses a risk to the treatment of water at Ixopo WW. Percentage non-compliance of E. coli against the RQO increased slightly from the previous year, as did turbidity;
- No comprehensive assessment, using the accepted standardised methodology, has been undertaken of the ecological Reserve of uMkhomazi River to date;
- A comprehensive reserve determination formed part of the DWA 2015 study taking into consideration the proposed Mkhomazi-Mgeni Transfer Scheme, also known as uMkhomazi Water Project;
- The current Sappi Saiccor abstraction during low flows impacts on the water availability at the estuary of the uMkhomazi River and will need to be addressed as part of the future implementation of the Reserve; and
- According to the Mvoti to Mzimkulu ISP (DWS, 2004) the water balance of this region is in deficit by 72 million m³ per annum.



3.6.3.7 Middle South Coast Region

Key characteristics of Middle South Coast Region include:

- The ambient quality of groundwater in the Middle South Coast Region is generally very good;
- No comprehensive assessment of the ecological Reserve of the Middle South Coast Region has been undertaken to date. Estimates of the Reserve indicate that the ecological Reserve will have a large impact on the availability of water in the catchment; and
- According to the Mvoti to Mzimkulu ISP (DWS 2004) the water balance of this region appears to be in deficit by 4 million m³ per annum.

3.6.3.8 Mzimkhulu Region

Key characteristics of Mzimkhulu Region include:

- The main towns situated in the Mzimkulu catchment are Underberg, Himeville, Creighton, Harding and Port Shepstone which is situated in the Mtamvuna Area but is supplied by uMzimkulu River. The main land uses in the catchment are domestic, rural use, afforestation and irrigation;
- The uMzimkulu River water demands are primarily from agriculture and afforestation; these are the largest water users in the system representing 31% and 41% of total water use respectively;
- Generally the borehole water quality is good;
- The Reserve estimates, based on desktop studies, indicate that the Ecological Reserve will have a large impact on the availability of water in the catchment. The implementation of the Reserve will result in shortfalls that will increase in magnitude and frequency occurring every second year on average. It has been recommended from previous studies that, in order to provide for the water requirements for all user sectors, including the Reserve, the construction of an off-channel storage dam in one of the tributaries to the Mzimkulu River, should be considered; and
- Umgeni Water has no abstractions from this region. According to the recent DWS study (DWS 2011) the deficit in the catchment can be mitigated by the construction of dams on the Ngwangwane and Bisi rivers.

3.6.3.9 Mtamvuna Region

Key characteristics of Mzimkhulu Region include:

- The Mtamvuna catchment consists mostly of communal land. There are also large areas of afforestation and dryland sugar cane in the catchment;



- Generally the borehole water quality is good;
- The catchment is in balance even after making an allowance for the ecological Reserve which means that it has surplus water; and
- According to the Mvoti to Mzimkulu ISP (DWS 2004) the water balance of this region appears to be in surplus by 5 million m3 per annum.

3.6.4 Coastal Metropolitan Area Water Reconciliation

NWRS 2 (DWS, 2012) reports that the growth requirement already exceeded the resource for the KZN coastal areas in 2005. 226 million m3/ annum are required to meet the 2035 development projections (Table 8). Augmentation is anticipated from the Spring Grove Dam, raising of Hazelmere Dam wall, the Lower Thukela Bulk Water Scheme, Mvoti River Development, re-use, Mkomazi River development or desalination of sea water (which is seen as unlimited source). Discussions with stakeholders have revealed that desalination is in fact limited by availability of land and other constraints. The recent feasibility studies undertaken by Umgeni Water noted that an economic analysis will be undertaken towards the end of 2015 to determine the most feasible solution for augmenting the resources of the South Coast, namely; Desalination or the Lower uMkhomazi Bulk Water Supply Scheme. In a similar way the economic feasibility of the northern desalination plant will be compared to the other options for water supply on the North Coast, namely; the uMkhomazi Water Project or the Lower Mvoti Bulk Water Supply Scheme (Umgeni Water Infrastructure Master Plan 2015/2016 -2045/2046, 2015).

Table 11 NWRS2 Coastal Metropolitan Area Water Reconciliation

4. KwaZulu-Natal coastal metropolitan area Supplied from the Mgeni, Mhloti, Mvoti and Thukela river systems	375	440	-65	40 (2018)	Already exceeded in 2005	600	Urban growth and improved standards of living (upgraded service levels)	226	<ul style="list-style-type: none"> •Spring Grove Dam: 60 •Hazelmere Raising: 9 •Lower Thukela BWS Ph 1 and Ph 2: 40 •Mvoti River Development: 28 •Reuse: 40+ •Mkomazi River Development: 150 or Desalination of sea water: (unlimited)
---	-----	-----	-----	-----------	--------------------------------	-----	---	-----	---

In terms of NWRS2, the following projects are seen as pivotal to meeting the 2035 growth projections and water demand:

- Dam on the Mkomazi River to further augment supplies to the eThekweni-Msunduzi Metropolitan areas; and
- Increasing transfers from the Thukela River to supply the Mhlathuze urban area.

The following mega-projects are listed in NWRS2:



- Mkomazi Water Project: Smithfield Dam and water delivery tunnel, which is aimed at augmenting water supply to eThekweni, uMgungundlovu and the surrounding areas;
- Mvoti River - iSithundu Dam or Welverdiend Dam, pump station and diversion weir (to be completed 2023), aimed at securing water supply to domestic and industrial users in the Lower Mvoti basin area (Stanger area);
- Mzimkulu River- Ncwabeni Off-Channel Storage (to be completed 2018), including dam, pump station and pipeline, aimed at ensuring a reliable water supply to the northern part of the Lower KZN South Coast during dry periods;
- The country-wide dam safety rehabilitation program; and
- The raising of Hazelmere Dam wall (to be completed in 2017) is classified as part of SIP 2 (Durban-Free State Gauteng Logistics and Industrial Corridor) and is aimed at augmenting water supply to Umgeni Water for treatment to KZN North Coast (Mdloti to Thukela areas).

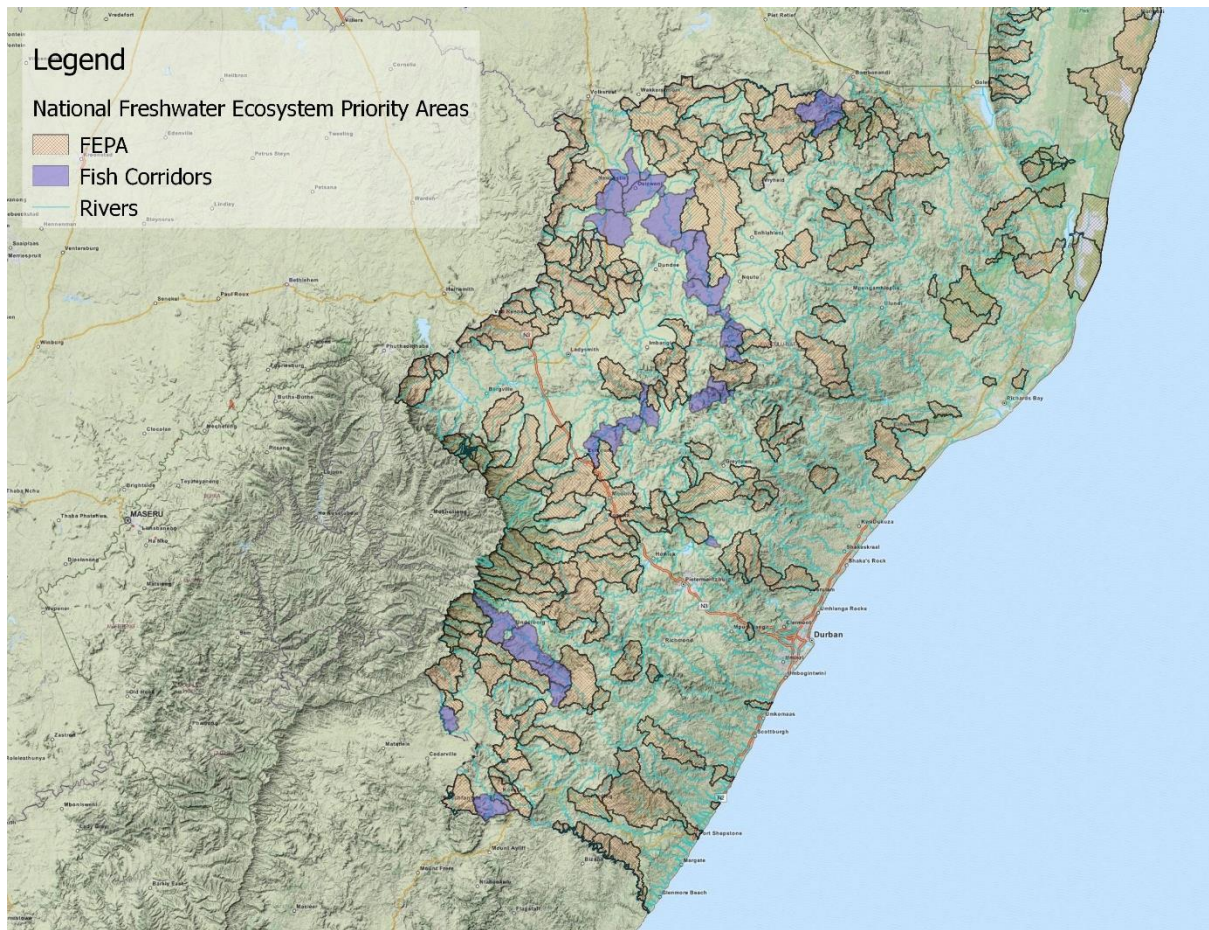
3.6.5 *Freshwater Ecosystem Priority Areas*

The national Freshwater Ecosystem Priority Areas (NFEPA) project has sought to classify the rivers and WMAs in terms of current ecological status. NFEPA takes forward the implementation of the Cross-Sector Policy Objectives for Inland Water Conservation. It also builds on the river component of the National Spatial Biodiversity Assessment (NSBA) 2004, and will feed directly into the NBA (National Biodiversity Assessment) 2010.

The map below illustrates the river ecosystems within KwaZulu-Natal and river FEPA areas.



Map 19 National Freshwater Ecosystem Priority Areas (FEPAs) and Fish Corridors



Source: CSIR 2011

FEPAs are based on **sub-quaternary catchment** units and are required to be maintained in order to conserve freshwater ecosystems and protect water resources for human use i.e. are high value water resources in terms of provision of ecosystem services. These are the "low-hanging fruit" in terms of provincial priorities for conservation of water resources in that these areas achieve:

- 20% biodiversity target for river, wetland and estuarine ecosystem types across the country;
- 20% biodiversity target for significant wetland clusters embedded in natural landscapes, within each wetland vegetation group;
- Population targets for threatened freshwater fish species indigenous to SA;
- Alignment with all remaining free-flowing rivers;
- Alignment with priority estuaries identified in the National Biodiversity Assessment 2010; and
- Alignment with existing protected areas and focus areas for protected area expansion.

Map 20 Detail of the FEPA areas and Fish Corridors; Underberg, Mzimkhulu River, Harry Gwala District

The KwaZulu-Natal State of the Environment Report (2004) evaluates the “health” of the rivers by evaluating the number of species (endemic to the environment) that are present. The index that is being used is the South African Scoring System (SASS).

The above alternative perspective on the health quality of the rivers differs extremely from one tributary to the other. Very few river systems are still in their natural state.

There are at least sixteen major dams within the province serving as water storage areas for potable water, irrigation, recreation and hydroelectricity, as listed below.

Table 12 KwaZulu-Natal Major Dams and their Capacity

Dam	Maximum Capacity (mil.cub.m)	River
Albert Falls Dam	288.1	Mgeni River
Craigie Burn Dam	22.5	Myamvubu River/Mooi River/Buffels River/Tugela River
Driel Barrage Dam	9	Thukela River (Tugela)
Goedertrouw Dam	301.3	Mhlatuze River
Hazelmere Dam	24	Mdloti River
Hluhluwe Dam	25.9	Hluhluwe River
Inanda Dam	241.7	Mgeni River
Midmar Dam	235.4	Mgeni River
Ntshingwayo Dam	194.6	Ngagane River/Buffels River/Tugela River
Pongolapoort Dam	2267.1	Pongola River
Qedusizi Dam	206.9	Klip River
Spioenkop Dam	270.6	Tugela River
Spring Grove Dam	139.5	Mooi River
Woodstock Dam	373.3	Tugela River
Wagendrift Dam	55.9	Boesmans River/Tugela River
Zaaihoek Dam	184.6	Slang River/Buffalo River/Thukela River

KZN Dams, 2016

The Department of Water and Sanitation is currently embarking on a process to compile Resource Management Plans for all state dams in the province. These are as follows:

- Midmar Dam - Draft RMP
- Pongolapoort Dam - Draft RMP
- Albert Falls Dam - Draft RMP (still to be presented to the public)
- Inanda Dam
- Hazelmere Dam
- Craigieburn Dam
- Spring Grove Dam

Umgeni Water is in the process of developing the first RMP for one of their dams: Nagle Dam (S. Harilal, *pers comm*).

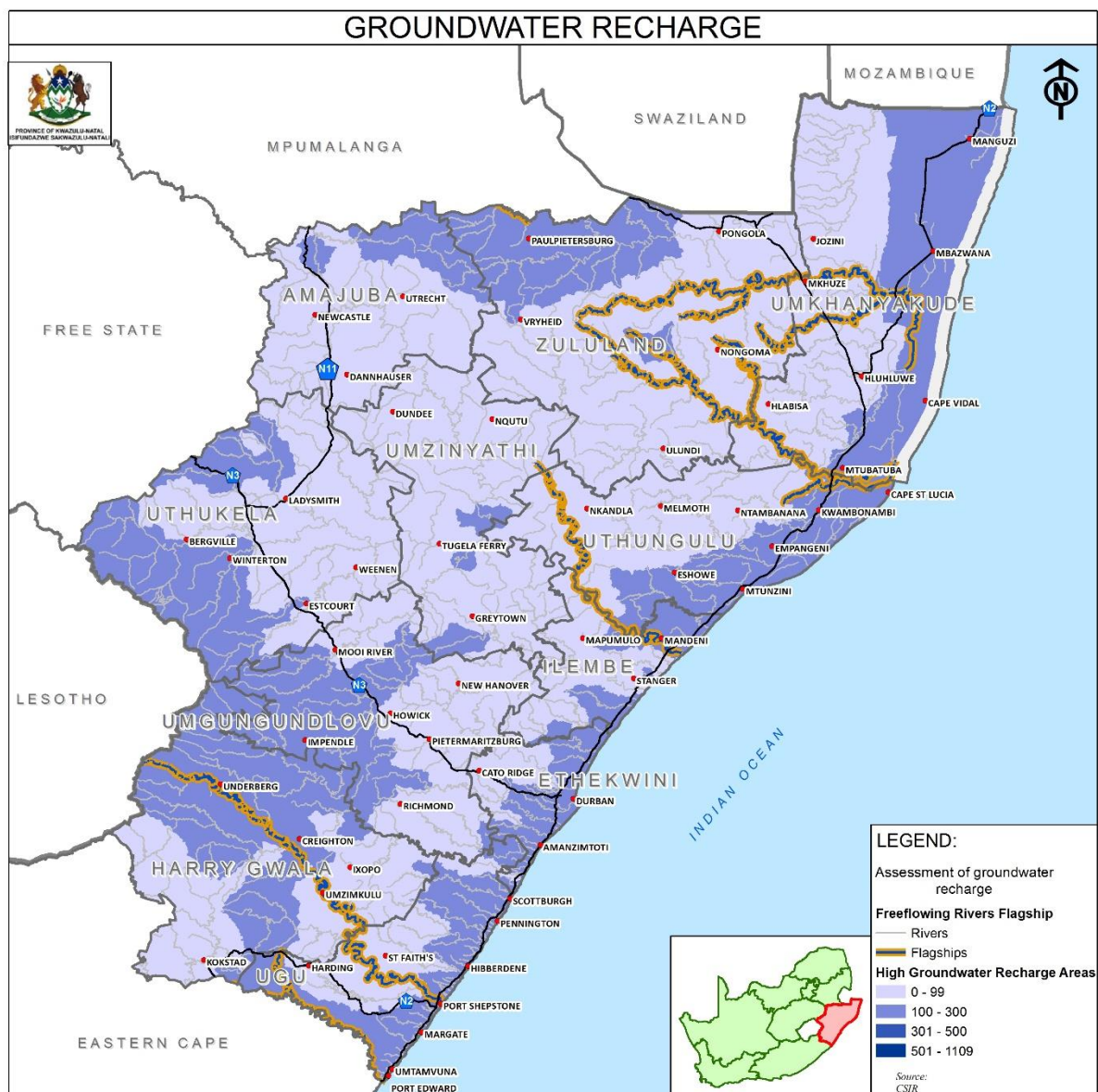


Implementation of management plans for the mentioned dams is aimed at ensuring more equal distribution of water, less wastage of resources, and subsequently higher availability of water to the various industries and communities.

3.6.6 Groundwater

The map below shows areas identified by NFEPA as having high groundwater recharge. These can be regarded as strategic water supply areas of the country. Given that there is a water deficit in most WMAs under current or future development scenarios, the use groundwater resource will need to be considered in many water-stressed catchments.

Map 21 NFEPA Groundwater Recharge Areas



Source: CSIR 2011

The KZN Groundwater Plan was drafted in 2008, and at that stage 48 groundwater points were currently being monitored actively for water level fluctuations and/or chemical parameters. The spatial distribution of these points is very uneven and mostly covers the northern and



southern most parts (DWS, 2008). The Plan highlighted the inadequacy of the groundwater monitoring network worsened by a very high staff turnover which caused discontinuity in projects aimed at expanding the network. There is also a reported lack of data on the reliance on groundwater in rural settlements.

Five Vegter geohydrological regions fall largely or wholly within the KwaZulu-Natal Province. These are the:

- Southern Lebombo;
- Northern Zululand Coastal Plain;
- Northeastern Middleveld;
- Northwestern Middleveld; and
- KwaZulu-Natal Coastal Foreland.

Two fall only partially within this province and are Transkeian Coastal Foreland & Middleveld and Eastern Highveld (DWS, 2008).

High groundwater recharge areas have been identified in the Province (CSIR, 2011). These are sub-quaternary catchments where groundwater recharge is three times higher than the average for the related primary catchment. The recommendation is that the surrounding land should be managed so as not to adversely impact groundwater quality and quantity. High groundwater recharge areas can be considered as the 'recharge hotspots' of the region. Maintaining natural habitat in these areas is critical to the functioning of groundwater dependent ecosystems.

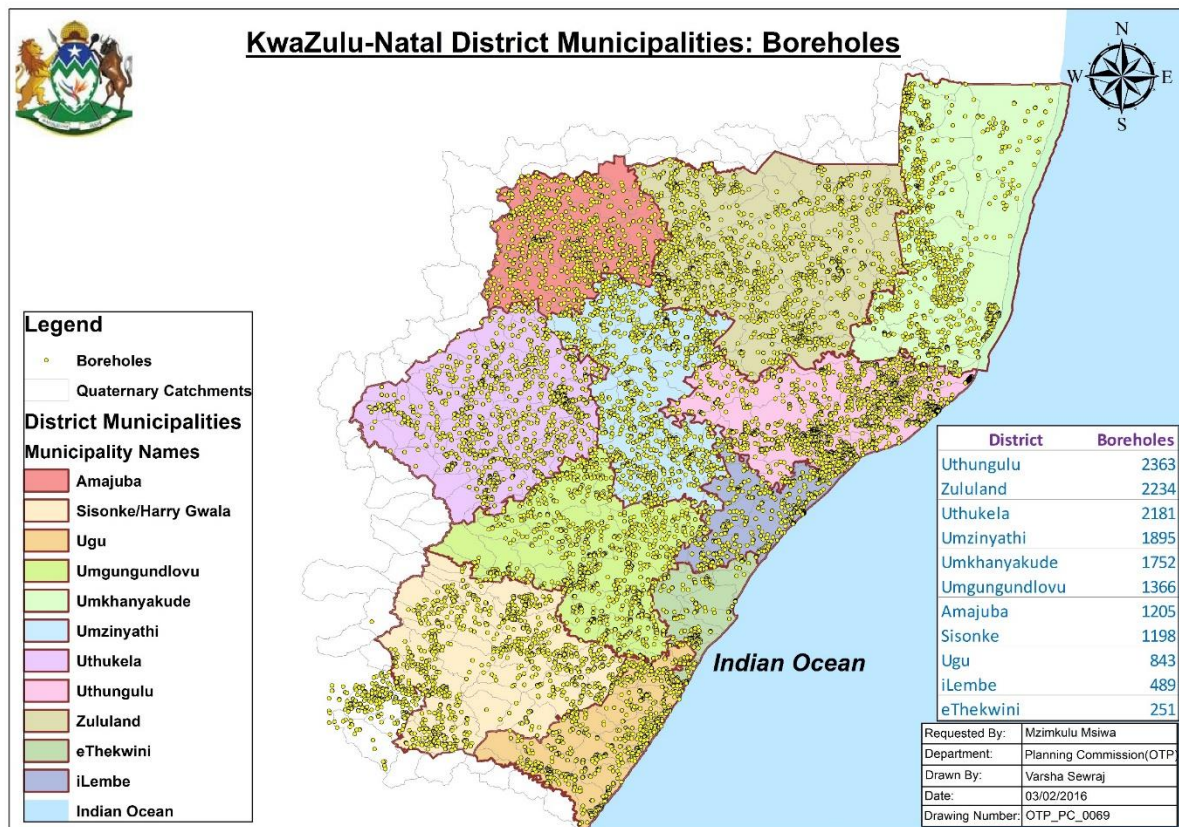
Recently, as part of emergency drought alleviation measures, COGTA announced that money had been allocated to drill boreholes to alleviate the effects of the province's biggest drought in 23 years. R24,6 million has been allocated to the province for the drilling of boreholes, the installation of water schemes and hand pumps is aimed at alleviating the needs of water-scarce communities. It should be noted however that although in some areas, boreholes may produce good yield, the water quality may be unsatisfactory, requiring further treatment of water for potable use through package plants.

In terms of distribution of boreholes, Uthungulu District has the highest number of boreholes followed by Zululand District. The lowest number of boreholes is found in eThekweni Municipality, as much of this District is supplied through municipal bulk water infrastructure.

National government (DWAF, 2008) considers the widespread availability and underutilization of groundwater as a potential positive driver of change in addressing some of the challenges in South Africa's water sector. However, the lack of information on groundwater resources, its usage and quality limits the potential of this option in KwaZulu-Natal. The existing groundwater monitoring network is also regarded as inadequate.



Map 22 Distribution of boreholes



Source: Mzimkulu Msiwa Feb 2016

The National Groundwater Archive project is a web enabled database system that aims to allow for on-going capturing, viewing, modifying and extraction (dissemination) of groundwater related data. This data resource must be considered in the planning and rollout of groundwater supply schemes.

3.6.7 Water Demand Management

Water Demand Management is a component of water conservation and is defined as “The adaptation and implementation of a strategy by a water institution or consumer to influence the water demand and usage of water in order to meet any of the following objectives: economic efficiency, social development, social equity, environmental protection, sustainability of water supply and services and political acceptability In general terms” (DWS, 2004).

Water demand is primarily driven by demographics, land use and development planning trends. The recommendations of the National Water Conservation and Water Demand Strategy (NWC/WDMS) (DWS, 2004) must be considered in planning and development. The Strategy focusses on the agriculture, water services and industry, mines and power generation sectors. The three sectorial strategy documents are complementary to the NWC/WDMS. Thus Strategy does not include Streamflow Reduction Activities (SFRA) or the eradication of alien vegetation under the Working for Water (WfW) programme.

Water Demand Management (WDM) is one of the Water Sector Priority Focus Areas, outlined in Chapter 7 of the NWRs2 (DWS, 2012). There are growing demands from the economic



sectors (energy, mining and agriculture), increasing urbanisation and industrialisation which increase pressure on the water resource in terms of management and allocation.

Over the last ten years water consumption of the domestic sector has increased from 22% to 27% of the total resource and it is reported that water demand is likely to grow at about 1.2% over the next ten years.

As part of Vision 2030, the target is to reduce water demand in urban areas to 15% below business-as usual scenario by 2030. NWRS2 points to the fact that most of the *economically available yield* from surface water resources over large parts of the country has been fully developed and utilised. More than two thirds of the country's MAR is already stored in dams. Where additional water is still available, such as in the uThukela, Mzimvubu and Pongola basins, it is located in relatively remote areas far from existing centres of demand. WDM is recognised as being more cost effective than new water infrastructure development and is increasingly important in the light of climate change when more frequent droughts and floods will impact adversely on the availability of water. (DWS, 2012).

CASE STUDY

Ethekwini Municipality piloted rainwater harvesting to supplement the water supply to 500 poor households in Inanda, Ntuzuma and KwaMashu and managed to save 10% on bulk water demand (DWS, 2012).

Local Government or the water services sector's water use is estimated at around 23% of South Africa's consumption (including domestic and industrial use). Projections indicate that, together with industry, this is the sector with the largest expected future growth in demand, which will require continuous planning to balance supply and demand (DWS, 2012).

Drought Situation

Rainfall records show that 2014/2015 was one of the 10 driest years since 1960. The average water level of all the dams in the province is currently 58% of full supply capacity. Currently 3 of 18 large water supply schemes are at risk, including Hazelmere Dam at 27%, Goedertrouw Dam at 35% and Hluhluwe Dam at 30%. The main drought impacts are however at local and rudimentary water supply schemes where more than 50% of schemes are experiencing serious water shortages (Minister Nomvula Mokonyane: Status of drought, 2015).

A provincial plan of action has been developed which includes, drilling of boreholes, spring rehabilitation and packaged desalination plants. More than 150 tankers have already been deployed in 12 local municipalities. There is also severe restrictions already been put in place across numerous towns and cities, such as Vryheid and Ulundi, City of uMhlatuze, North Coast and South Coast (Minister Nomvula Mokonyane: Status of drought, 2015)

3.6.8 Hydraulic Fracturing (Fracking) Proposals

Recent proposals for fracking of natural gas must be scrutinised against the possible impacts on both ground and surface water quality and quantity in the SWSAs, as well as other impacts



such as seismic impacts. The Midlands of KwaZulu Natal has become an area of interest for potential extraction of shale gas using Hydraulic Fracturing (Fracking). Two Technical Co-operation Permits (TCP) have been issued for KZN. The Rhino Oil & Gas TCP includes areas around Richmond, Eston, Pietermaritzburg, Hilton, Howick, Karkloof, Balgowan, Dargle, Kranskop, Weenen and as far north as Vryheid. Rhino Oil & Gas has initiated an EIA Process. It is reported that each well could use 6- 25 million litres of water (Fracking, n.d.).

The Centre for Environmental Rights (CER) has produced a position paper on fracking (CER, 2014). One of the recommendations is that independent expert panel be appointed by the Minister of Water and Environmental Affairs to review and advise competent authorities on all environmental impact assessments for fracking (including financial provision), to ensure the integrity of assessments and consistency of requirements across the country (MINIMUM REQUIREMENTS FOR THE REGULATION OF ENVIRONMENTAL IMPACTS OF HYDRAULIC FRACTURING IN SOUTH AFRICA, n.d.). In addition, fracking regulations may be passed under the Mineral and Petroleum Resources Development Act, 2002.

3.6.9 *Vulnerability of Community due to Dependence on Open Water Sources*

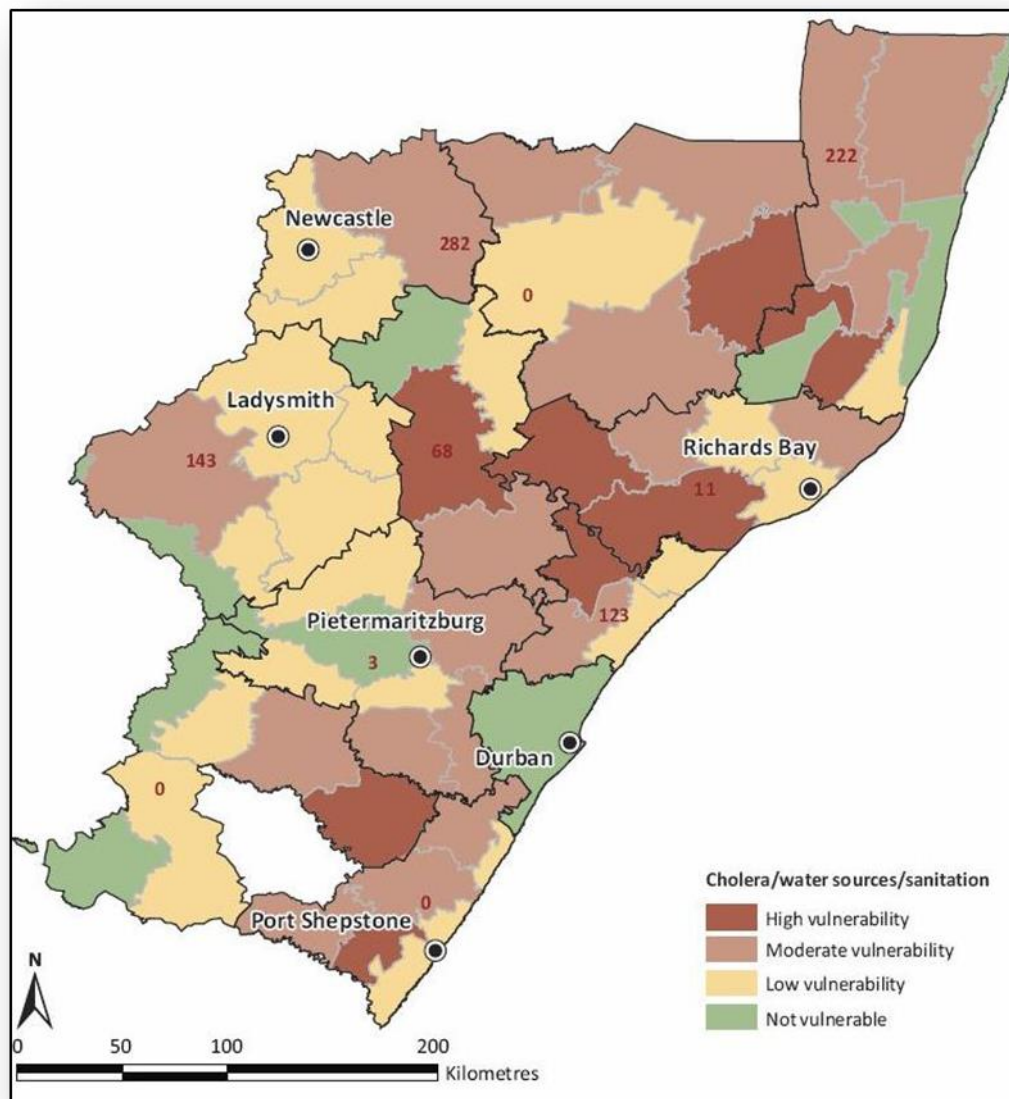
The map below provides a multi-level analysis combining areas of poor river health, communities with high dependency on unprotected water sources, poor sanitation services and the incidence of cholera. The highest incidence of cholera occurs in Amajuba, uMkhanyakude, uThukela, iLembe & uMzinyathi District Municipalities.

The highest concentrations of vulnerable households as a result of inadequate water sources and the prevalence of water borne diseases are located in Nongoma, Hllabisa, Msinga, Nkandla, uMlalazi, Maphumulo, Ubuhlebezwe and Ezinqoleni Local Municipalities. It should be noted that the base study informing the above map was conducted prior 2004, and education and public information campaigns might have reduced the severity of the situation since then.

Education campaigns which make communities aware of the dangers related to water borne diseases and the treatment of water only address symptoms of a larger problem and are not solutions to the real problem of contamination. The real solutions lie in water management planning. Contamination of water sources affects not only the health of communities, but also raises the costs of treatment of water, which again increases operating budgets of the water services authorities thus using funds which could inter alia have been used for improving or installing additional infrastructure to meet the rising demand for development and expansion.



Map 23 - Vulnerability of Households to Water-Borne Diseases



Source: KZN State of the Environment Report 2004, 2005

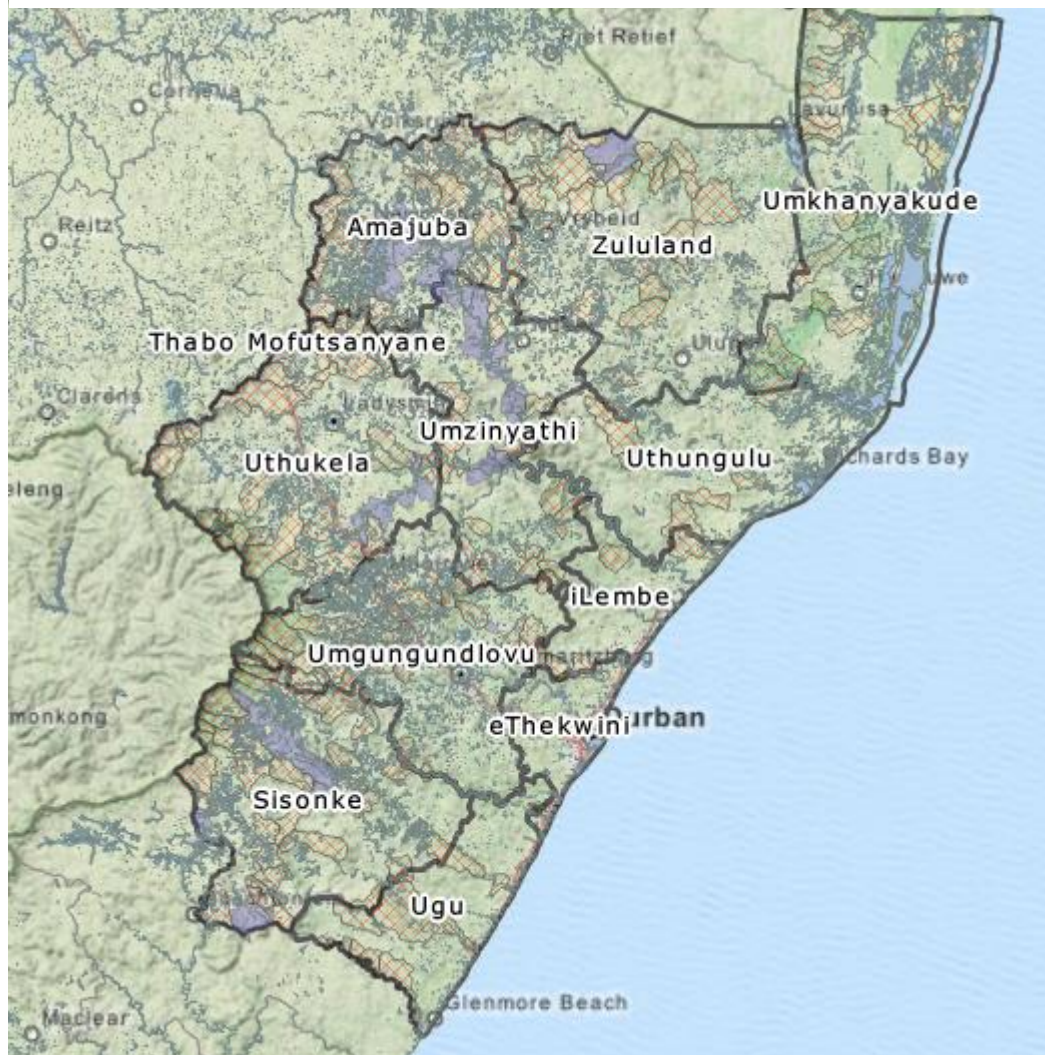
3.6.10 Wetlands

The 2006 National Wetland Inventory (CSIR, 2011) was compiled by the Department of Environmental Affairs and Tourism (DEAT), through the Wetlands Conservation Programme, and through a process of consultation with stakeholders in the country, as well as with the United States National Wetlands Inventory (NWI), a unit of the United States Fish and Wildlife Services. The promulgation of the National Environmental Management: Biodiversity Act 10 of 2004, led to the transformation of the National Botanical Institute into the South African National Biodiversity Institute (SANBI). Because of the new mandate vested on SANBI by the Biodiversity Act, the National Wetlands Inventory, along with its parent programme (Working for Wetlands Programme), was moved from DEAT to SANBI. The inventory dataset presents information on the extent, location and distribution of wetlands systems in South Africa. Upon



completion of the project, a clear picture will exist of the extent, distribution and diversity of South Africa's wetlands, in the form of GIS-based digital coverage and printed maps. A national database, containing the attributes, functions and values of individual wetlands will be linked to this spatial data. Wetland habitats were mapped and classified from remote sensing imagery.

Map 24 NFEPA wetland coverage in KZN



Source: CSIR, 2011

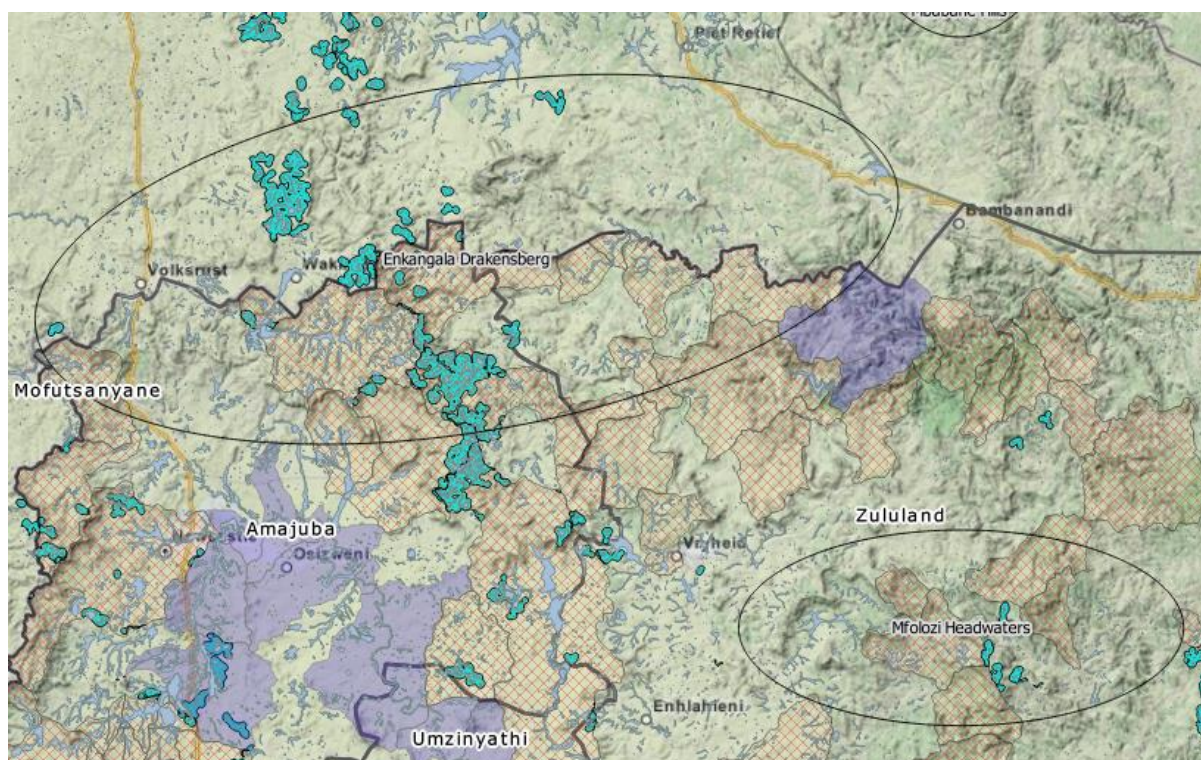
The 2011 wetlands coverage provided through the Wetland Freshwater Priority Areas (FEPAs) dataset includes wetland ecosystem types and wetland condition on a national scale. The dataset also includes wetland delineations for KwaZulu-Natal Province (from Ezemvelo KZN Wildlife). The delineations were based largely on remotely-sense imagery and therefore did not include historic wetlands lost through drainage, ploughing and concreting (NFEPA Metadata, n.d.)

Wetland clusters is a dataset that shows groups of wetlands within 1 km of each other and embedded in a relatively natural landscape (CSIR, 2011). These cluster areas allow for important ecological processes such as migration of frogs and insects between wetlands. In many areas of the country, wetland clusters no longer exist because the surrounding land has become too fragmented by human impacts. A goal of NFEPA is to ensure that at



least 20% of the wetland cluster area identified for each wetland vegetation group is managed in a way that supports dispersal between wetlands within the cluster, ideally a natural or near-natural condition. This has policy and planning implications. These wetland cluster areas, along with the FEPA areas, correspond with the Strategic Water Supply Areas identified on a national scale (areas that contribute >50% of the country's mean annual runoff) (CSIR, 2013).

Map 25 Wetland Cluster areas in Amajuba and Zululand District correspond with national Strategic Water Supply Areas



Source: CSIR, 2011, 2013

Wetland Cluster areas in Amajuba and Zululand District correspond with national Strategic Water Supply Areas

Importantly in KZN, all developments that are proposed in close proximity to wetlands (within 500m) are required to undertake an extensive Water Use Licensing application, including specialist wetland assessments, through the Department of Water and Sanitation's (DWS) regional office. There is a legislative review under way to reduce these reporting requirements for low-risk developments based on a risk assessment approach, although at present the onerous reporting requirements remain in place. This approach has been challenged in the Province and the legal basis for the reporting requirements has been called into question.

The extensive systems of wetlands within the Province thus fall within the mandate of DWS.

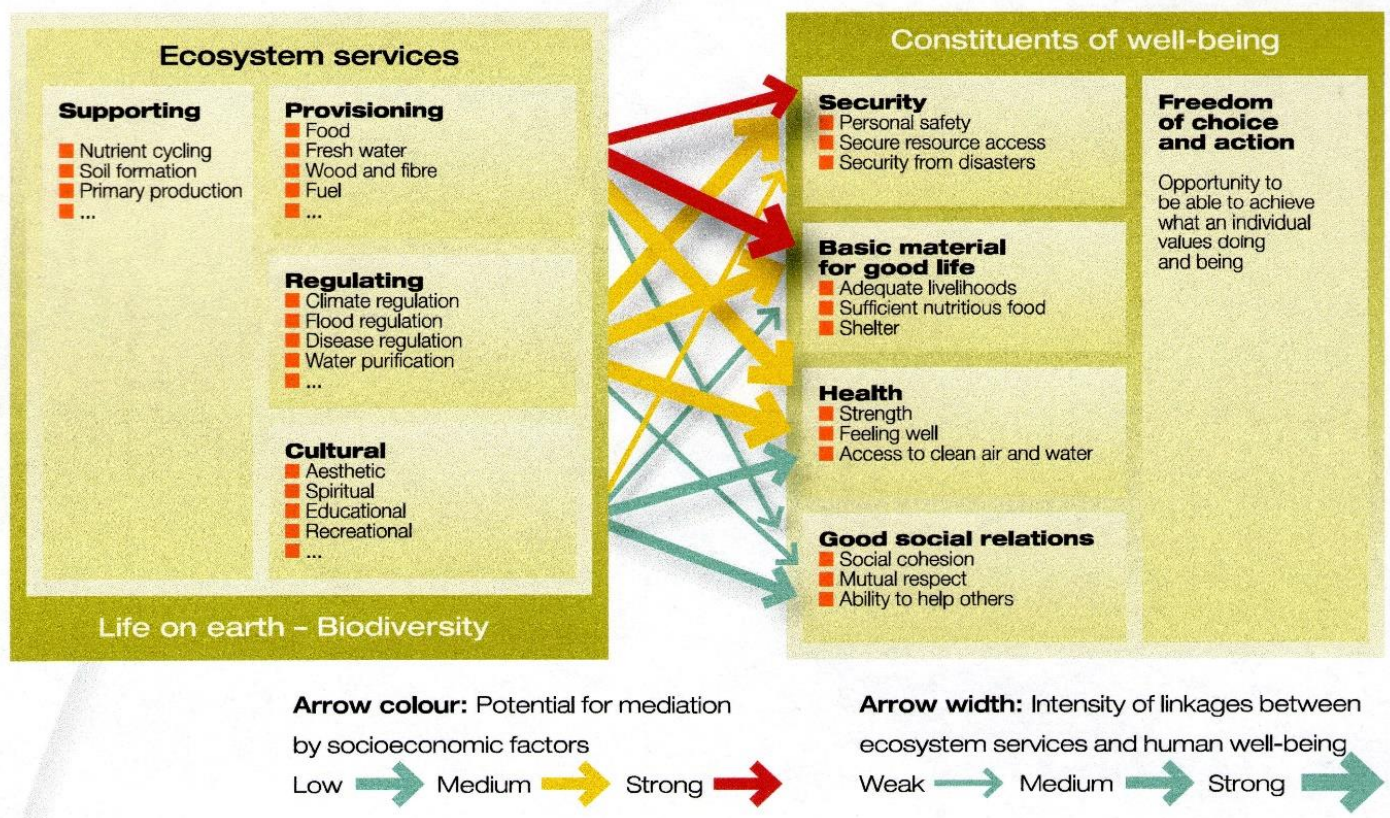
Ecosystem services refers to the ecosystems goods & services that we as society are receiving from the natural environment, free of charge, either directly or indirectly (Ecosystem Goods and Services, n.d.) . The term 'ecosystem services' was defined in the Millennium Ecosystem Assessment (MA Conceptual Framework, 2003) as 'the benefits people obtain from ecosystems', both natural and managed. These services may be categorized as provisional, regulative, cultural or supporting services, also referred to as supporting processes. The first three categories have a direct impact on human well-being, whereas the latter has an indirect



impact by supporting provisional, regulative, and cultural services. Quantifying the value of ecosystem services helps to support the need to maintain ecosystem services, which include provision of food, fuel and fiber, mitigation of drought and floods, climate regulation, soil erosion prevention and water filtration, and services provided in the form of recreational, aesthetic or cultural values. In some cases, it is very difficult to assign a monetary value to these services.

Figure 1 Linkages between ecosystem services and human wellbeing

Biodiversity and Ecosystem Services (BES)



Source: Biodiversity Ecosystem Services, 2012

Wetlands are recognised as provided ecosystem services such as:

- Flood reduction and stream flow regulation;
- Water purification;
- Erosion control by wetland vegetation;
- Biodiversity;
- Chemical cycling: The decomposition of organic matter is slowed by the anaerobic conditions present in wetlands. This results in wetlands trapping carbon as soil organic matter, rather than releasing it into the atmosphere as carbon dioxide; and



- Livestock grazing and crop cultivation.

Wetlands in the Province are threatened by transformation for development and agricultural activities, including housing development, roads, and through abstraction of water.

Excessive livestock grazing could result in overgrazing which may destabilise these systems and lower their functionality. Heavy grazing may cause valuable grazing species to be replaced by less productive and/or less palatable species. Some wetlands erode easily when disturbed by trampling and grazing. Grazing pressure should be managed and the cattle kept away from these flow concentration areas. Wetlands are also threatened by increased runoff from hardened areas. Increased run-off from roads and other hardened or cleared areas can cause increased stormwater flow into the wetlands. This may potentially result in high velocity channelled flow which may damage the filtration capability of the wetland system.

Other threats to wetlands in the Province include increased sedimentation in the wetland due to runoff and erosion from cleared areas. Increased sedimentation may cause loss of wetland vegetation. In addition, the invasion by alien or invasive plants, may greatly reduce the ecological functions of the wetlands.

RAMSAR refers to the Convention on Wetlands of International Importance which is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. It was adopted in the Iranian City of Ramsar in 1971 and came into force in 1975, and it is the only global environmental treaty that deals with a particular ecosystem. The Convention's member countries cover all geographic regions of the planet. Seven of the wetland systems mentioned above are major wetlands, with four of the seven registered as RAMSAR sites.

Table 13 RAMSAR and Wetlands International Sites within KwaZulu-Natal

Site Information	RAMSAR Summary Description
St. Lucia System RAMSAR No: 1ZA006 Designation date: 02-10-1986 Coordinates: 28°04'S 032°28'E Elevation: 0 m - 130 m Area: 155,500 ha	St. Lucia System. 02/10/86; Kwazulu/Natal; 155,500 ha; 28°04'S 032°28'E. Added to the Montreux Record, 4 July 1990, removed from the Record, 11 March 1996. Wetland Park, State Forest Reserve. Coastal wetlands system associated with Lake St. Lucia and consisting of several principal habitat types. Supports the largest estuarine prawn nursery area in South Africa. An important migratory bird staging area, feeding ground for flamingos, and spawning and nursery area for many of the 82 species of fish supported. It is also a breeding area for crocodiles. Large mammals include hippopotamus and black rhino. Human activities have included cattle grazing, slash and burn cultivation, and the planting of <i>Pinus elliottii</i> . The site is an important recreational area offering many facilities and activities. The site was threatened by large-scale mining for heavy metals but spared. Subject of a Ramsar Advisory Mission in 1992. A case study is available. Ramsar site no. 345. Most recent RIS information: 1998.



Site Information	RAMSAR Summary Description
<p>Kosi Bay</p> <p>RAMSAR No: 1ZA011</p> <p>Designation date: 28-06-1991</p> <p>Coordinates: 27 ° 01'S 032°48'E</p> <p>Elevation: 0 m – 102 m</p> <p>Area: 10,982 ha</p>	<p>Kosi Bay. 28/06/91; Kwazulu/Natal; 10,982 ha; 27°01S 032°48E. Nature Reserve. Composed of four interconnected lakes subject to tidal influence, an estuarine channel, and three extensive swamps. Fresh water is derived from three permanent rivers. Principal habitats include swamp and mangrove forest, reed beds, dune systems with associated woodland, and coastal grassland. The site supports a diverse bottom-dwelling invertebrate fauna (30 species) and a rich fish fauna, including eight endangered species. Several birds, mammals, butterflies, and plants are endemic, threatened or endangered. Large areas of swamp forest have been subjected to non-sustainable slash and burn cultivation practices. Human activities include subsistence farming and fishing. Ramsar site no. 527. Most recent RIS information: 1988.</p>
<p>Lake Sibaya</p> <p>RAMSAR No: 1ZA012</p> <p>Designation date: 28-06-1991</p> <p>Coordinates: 27 ° 20'S 032°38'E</p> <p>Elevation: 20 m – 20 m</p> <p>Area: 7,750 ha</p>	<p>Lake Sibaya. 28/06/91; Kwazulu/Natal; 7,750 ha; 27°20S 032°38E. The largest natural freshwater lake in South Africa, separated from the ocean by forested dunes; includes areas of swamp forest and wet grassland. A large variety of endangered or endemic species of reptiles, fish, birds, mammals and plants occur. The site is important for numerous species of breeding birds and supports the second largest population of hippopotamus in Kwa Zulu. The lake supports a diverse zooplankton fauna, 15 species of aquatic and 43 species of terrestrial molluscs, as well as flora and fauna unique to South Africa. A research station is located within the site. The lake provides water for Mbazwane and Vasi. Human activities consist of livestock grazing and cultivation. Ramsar site no. 528. Most recent RIS information: 1988.</p>
<p>Natal Drakensberg Park</p> <p>RAMSAR No: 1ZA013</p> <p>Designation date: 21-01-1997</p> <p>Coordinates: 29 ° 30'S 029°45'E</p> <p>Elevation: 1300 m – 3377 m</p> <p>Area: 242,813 ha</p>	<p>Natal Drakensberg Park. 21/01/97; Kwazulu/Natal; 242,813 ha; 29°30S 029°45E. Wilderness Area, Nature Reserve, Game Reserve, Provincial Park, State Forest. Set in an extremely rugged area that includes three altitudinal zones along the border between South Africa and the Kingdom of Lesotho, The Drakensberg is regarded as the most important mountain catchment in South Africa due to its high yield and water quality, supplying rural, agricultural, urban and industrial users downstream. Conserved since the turn of the century, the entire wetland system is in near-pristine state. The three largest rivers in KwaZulu-Natal originate here, supporting extensive wetlands of various types within the Afro-alpine and Afromontane belts. The area supports numerous endemic and endangered plant and animal species. Human activities include nature conservation and a variety of outdoor recreation activities. There are a research station and a conservation education center available. The site is renowned for the quantity, quality and variety of prehistoric rock art. Many parts are declared wilderness areas. Ramsar site no. 886. Most recent RIS information: 1996.</p>



Site Information	RAMSAR Summary Description
<p>Ndumo Game Reserve</p> <p>RAMSAR No: 1ZA014</p> <p>Designation date: 21-01-1997</p> <p>Coordinates: 26 ° 53'S 032°16'E</p> <p>Elevation: 18 m – 170 m</p> <p>Area: 10,117 ha</p>	<p>Ndumo Game Reserve. 21/01/97; Kwazulu/Natal; 10,117 ha; 26°53S 032°16E. Nature Reserve. Situated at the junction of the Usuthu and Pongolo floodplain systems, the site forms the largest floodplain system in South Africa, consisting of five wetland types, from fresh to brackish, permanent to ephemeral lakes, marshes and pools, as well as riparian and gallery forest. Well known for its abundant bird life and diversity of species, internationally important numbers of several species are supported, including many that are rare or vulnerable. Human activities include controlled harvesting of reeds and sedges, low-density tourism, an important fishery, illegal black and white rhinoceros hunting, and collecting river water for sale in nearby communities. A large agricultural irrigation scheme is operating erratically south of the reserve in the catchment area. Ramsar site no. 887. Most recent RIS information: 1996.</p>

Source: Department of Environmental Affairs & Tourism (DEAT)

Each of these areas represents an internationally important wetland as well as a major tourism opportunity.

3.7 Biodiversity and Conservation

Biodiversity, or biological diversity, is defined as the variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part and also includes diversity within species, between species, and of ecosystems (National Environmental Management: Biodiversity Act, 10 of 2004). Through research and monitoring programs, biodiversity assets, such as threatened species, ecological corridors and priority conservation areas can be identified. Provincial, national and international conservation targets must be achieved through careful conservation planning, including informal stewardship agreements with landowners. Biodiversity

3.7.1 Vegetation

Since 2011, there is new data on the level of transformation of vegetation types in the Province which is helping to refine conservation priorities. New national landcover data (GeoTerralimage (Pty) Ltd, 2014) can be used to further refine these conservation priorities and help to track the loss of high conservation value areas. New data on land degradation and gully erosion highlights the extent of the problem, and helps to point to priority districts, where soil conservation and land care programs need to be targeted.

The refined KZN Vegetation Types classification and mapping (Scott-Shaw & Escott, 2011) has been adapted from the national vegetation types classification system (Mucina, Rutherford, Powrie, van Niekerk, & van der Merwe, 2014). The new classification system takes into account new provincial targets and refined land cover and transformation data. In some cases, there are new vegetation types and or subtypes within the vegetation types identified at national



level. There are differences between the national and provincial conservation status, due to the fine scale mapping of the historical extent and distribution of vegetation types, the amalgamation, removal and addition of new provincial vegetation types, the use of a provincial transformation dataset, which is of higher resolution, more accurate and temporally relevant as compared to the national transformation dataset used to determine the national vegetation type conservation status.

The Conservation Status is determined by comparing the amount of natural habitat remaining in the province with the biodiversity conservation target of the vegetation type.

Table 14: Conservation Status classification system (Scott-Shaw & Escott, 2011)

Threshold	Conservation Status
Remaining natural habitat <= biodiversity target	Critically Endangered
Remaining natural habitat <= (biodiversity target + 15%)	Endangered
Remaining natural habitat <= 60% of original area of ecosystem	Vulnerable
Remaining natural habitat >60% of original area of ecosystem	Least Threatened

The degree of protection status compares the amount of land under formal conservation protection to the target and includes the Stewardship sites that were proclaimed as at October 2010. The protection targets are an estimation of the area required of a given vegetation type to represent a single occurrence of 75% of the total number of species that occur within that vegetation type. They do not consider ecological processes. If ecological processes were to be considered the targets would be higher.

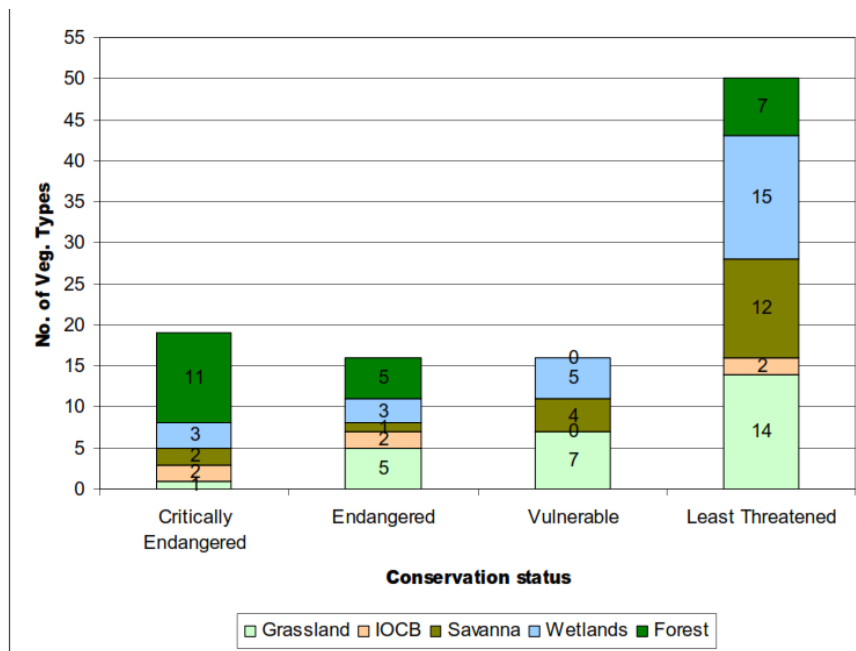
Table 15: Protection status classification system (Scott-Shaw & Escott, 2011)

Threshold	Conservation Status
0%	Not Protected
>0% - <1%	Nominally Protected
>=1% - <10%	Poorly Protected
>=10% - Biodiversity Target	Moderately Protected
>= Biodiversity Target	Fully Protected

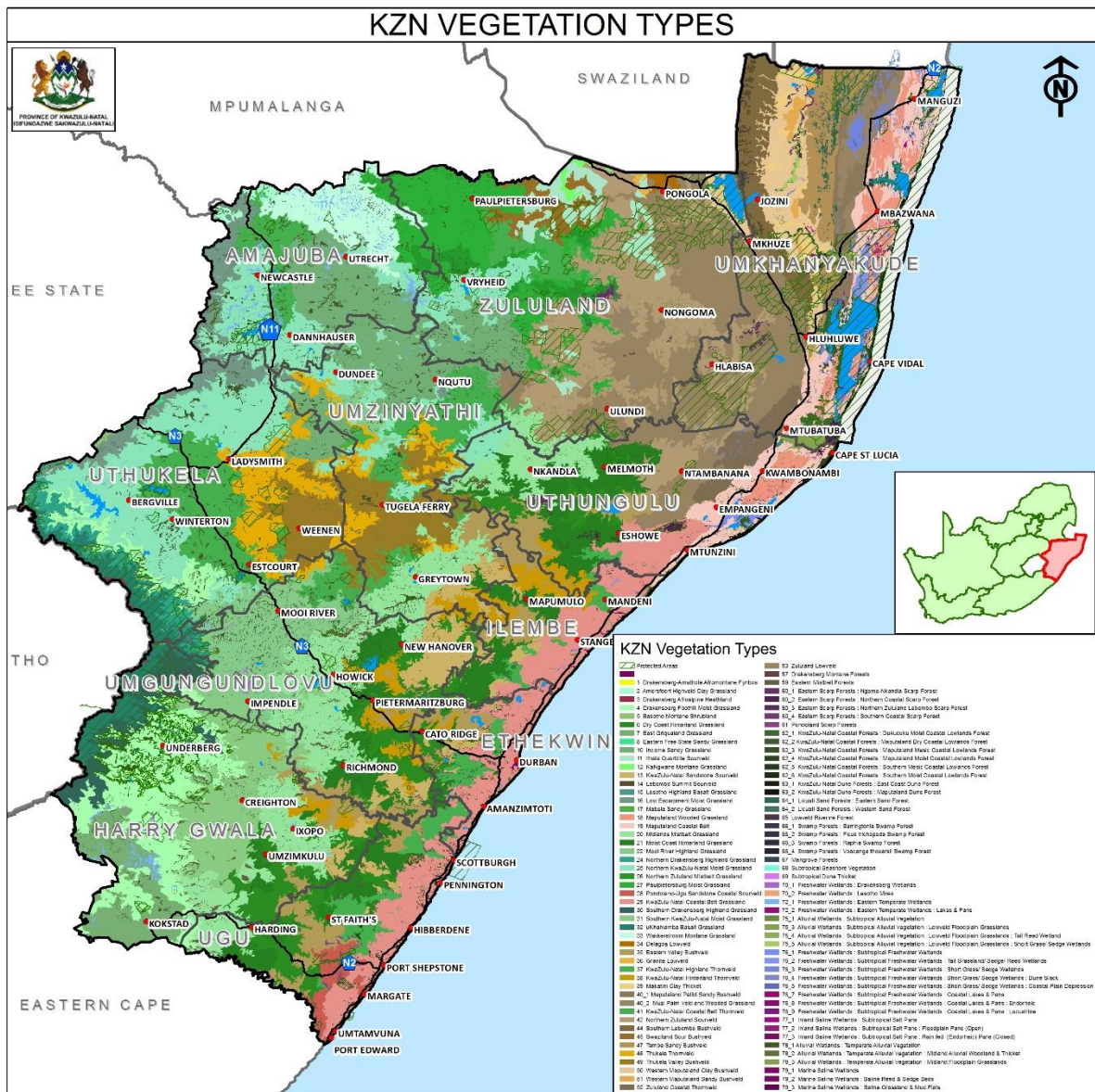
Of the 101 vegetation types and subtypes, 19 are Critically Endangered, 16 Endangered, 16 Vulnerable and 50 Least Threatened. The coastal and midland areas are the most threatened VT's and thus require the most management intervention.



Figure 2 Number of vegetation types per conservation status category (Scott-Shaw & Escott, 2011)



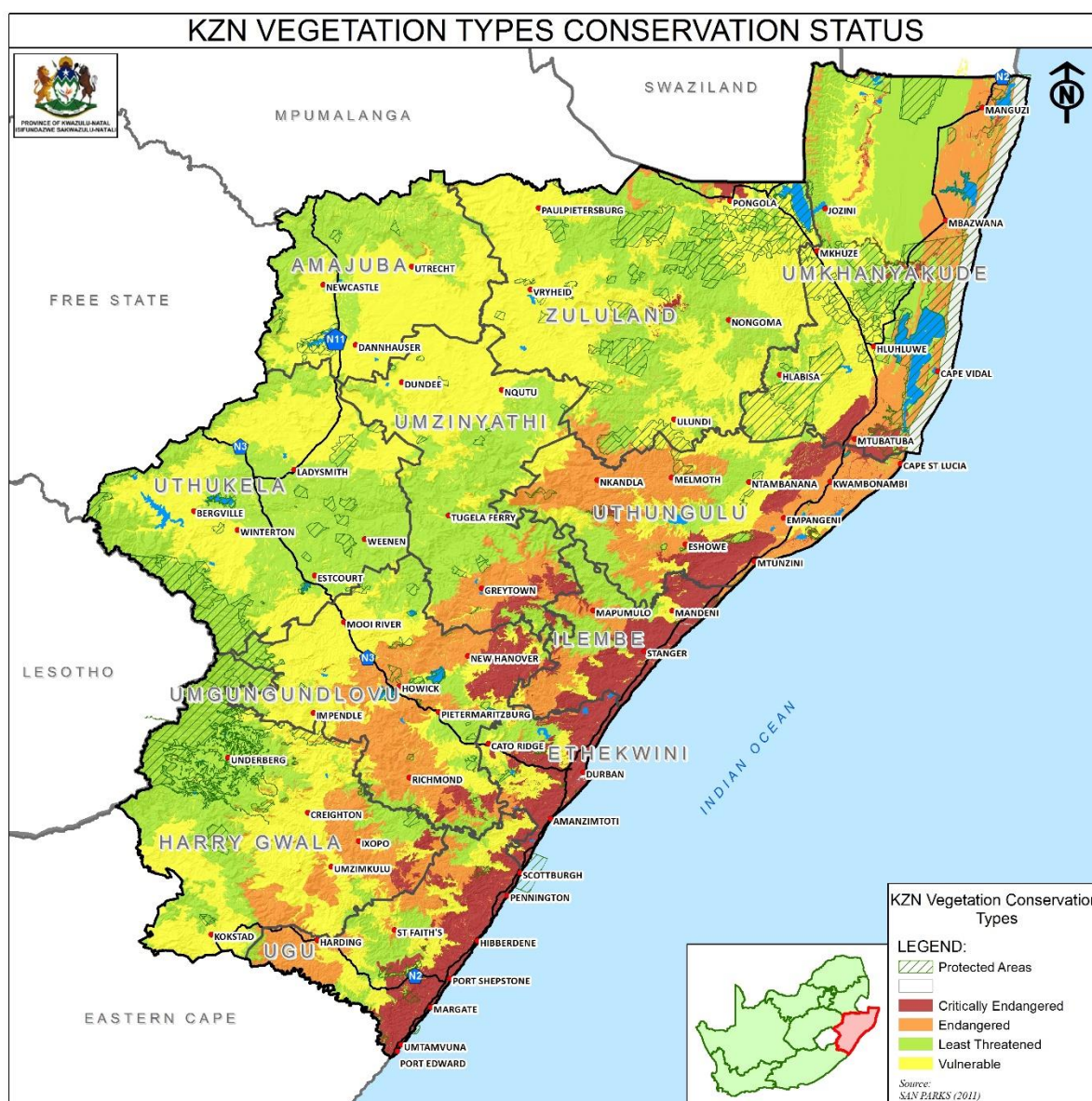
Map 26 KZN Vegetation Types



Source: Scott-Shaw & Escott, 2011



Map 27 Spatial configuration of the Conservation Status of Vegetation Types



Source: Jewitt, 2011

Twenty six vegetation types are adequately protected and meet their biodiversity conservation target, 30 are moderately protected, 20 are poorly protected, whilst 11 have 0% protection and a further 14 have less than 1% formal protection. North Western KZN is very poorly protected and should be prioritized for new stewardship agreements or protected area expansion, especially in light of the mining pressures, wattle invasions and erosion pressures in this area. Similarly, the south coast and midlands area, which are facing a high degree of threat from transformation, also require urgent attention from a protected area expansion perspective (Jewitt, 2011)

Development activities need to be focussed outside of threatened vegetation types and provincial conservation planning needs to prioritise the protection of threatened habitats.

There are four main biomes in KZN (Mucina & Rutherford, The vegetation of South Africa, Lesotho and Swaziland, 2006) viz. Grassland; Savannah; Indian Ocean Coastal Belt and



Forest. The 2011 KZN Provincial Pre-Transformation Vegetation Type Map has considered provincial conservation targets in the assessment of the conservation and protection status of the various vegetation types. These conservation targets have been informed by:

- Targets set for national vegetation types of South Africa (Mucina, Rutherford, Powrie, van Niekerk, & van der Merwe, 2014);
- Updated provincial targets for vegetation types (Jewitt, Conservation Targets for Vegetation Types in KZN, 2009);
- Forest targets (Berliner, 2005); and
- Targets from National Protected Area Expansion Strategy (SANParks, 2010).

The new data includes “accumulated transformation” derived from the 1994, 2000, 2005 v3 and 2008 land cover predictions to determine the level of transformation.

3.7.2 *National Protected Area Expansion Strategy 2008*

Focus areas for land-based protected area expansion are large, intact and unfragmented areas of high importance for biodiversity representation and ecological persistence, suitable for the creation or expansion of large protected areas. The focus areas were identified through a systematic biodiversity planning process undertaken as part of the development of the National Protected Area Expansion Strategy (SANParks, 2010). They present the best opportunities for meeting the ecosystem-specific protected area targets set in the NPAES, and were designed with strong emphasis on climate change resilience and requirements for freshwater ecosystems. These areas should not be seen as future boundaries of protected areas, as in many cases only a portion of a particular focus area would be required to meet the protected area targets set in the NPAES. They are also not a replacement for fine-scale planning which may identify a range of different priority sites based on local requirements, constraints and opportunities.

The map below depicts the current provincial conservation estate in a broad range of protection classes from provincial nature reserves, community conservancies and partnership parks. It also highlights as focus areas to possibly be included as part of the National Protected Areas Expansion Programme (NPAES) within KwaZulu-Natal based on keeping biodiversity corridors intact.

There are two provincial World Heritage Sites - the Maloti-Drakensberg Park and the Isimangaliso Wetland Park. Approximately 9.2% (868 121ha) of the province is under formal conservation protection.



PROTECTED EXPANSION STRATEGY AND CRITICAL BIODIVERSITY AREAS

MPUMALANGA
FREE STATE
LESOTHO
EASTERN CAPE
SWAZILAND

AMAJUBA
UTRECHT
NEWCASTLE
DANNHAUSER
DUNDEE
LADYSMITH
BERGVILLE
WINTERTON
ESTCOURT
MOOI RIVER
IMPENDLE
UNDERBERG
CREIGHTON
UMZIMKULU
KOKSTAD
HARDING
ST FAITH'S
HIBBERDENE
PORT SHEPSTONE
MARGATE
UMTAMVUNA
PORT EDWARD

PAUL PIETERSBURG
VRYHEID
NQUTU
TUGELA FERRY
GREYTOWN
NEW HANOVER
PIETERMARITZBURG
CATO RIDGE
RICHMOND
AMAMZIMTOTI
SCOTTSBURGH
PENNINGTON

ZULULAND
UMZINYATHI
UTHUNGULU
ILEMBE
ETHEKWINI

PONGOLA
JOZINI
MKHULUZE
NONGOMA
HLABISA
ULUNDI
NKANDLA
MELMOTH
NTAMBANANA
Kwambonambi
EMPANGENI
MTUNZINI
ESHOWE
MANDENI
STANGER

UMKHANYAKUDE
HLUHLUWE
CAPE VIDAL
CAPE ST LUCIA
MTUBATUBA

MANGUZI
MBABAZANA

INDIAN OCEAN

LEGEND:

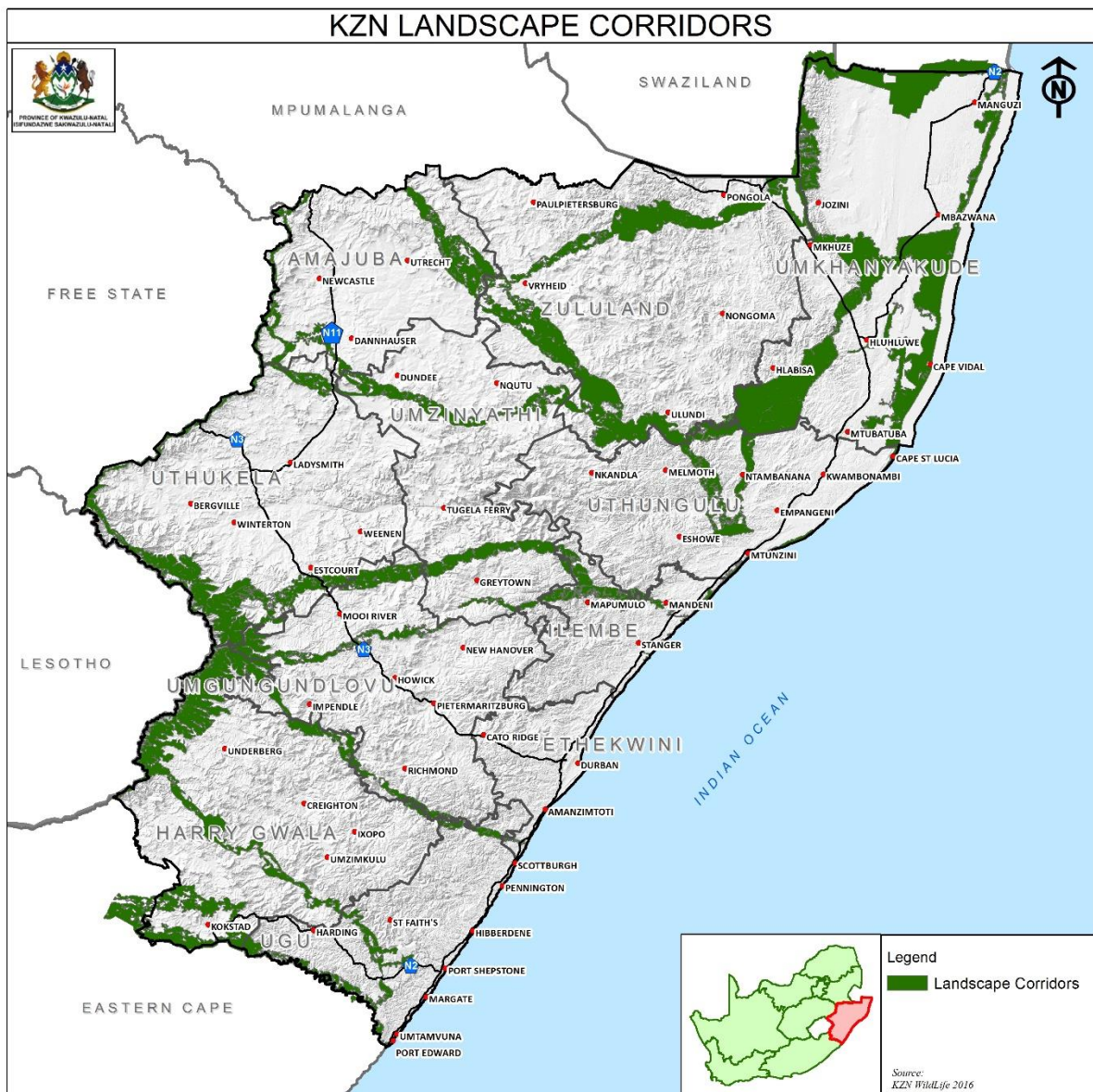
- Protected Areas Expansion Strategy
- Forest Wilderness Area
- Ezemvelo Protected Area
- Acquired but Not Proclaimed
- Community Conservation Areas
- Proclaimed State Protected Areas
- Private Nature Reserves
- Stewardship Sites

Source: KZN Wildlife (2016)

It is further important to note that the potential expansion areas identified as part of the NPAES can further be prioritized at a provincial level by considering the scientific conservation worthiness of areas outside of the national conservation estate with specific consideration of areas playing a role in connecting other areas of important and high biodiversity. The result is an identification of the conservation worthy areas according to a Critical to Low scale set.



Map 29 KZN Biodiversity Sector Plan Landscape Ecological Corridors



Source: Ezemvelo KZN Wildlife, 2015

3.7.3 Impact of climate change on biome stability

In light of the implications of climate change, there is a need for ecosystem based adaptation. This is based on new biome change predictions, identification of areas supporting resilience for SA, which has implications for protected area expansion. Certain parts of the province are at higher structural risk from climate change induced impacts. Intact ecosystems have the potential to reduce climate change impacts through supporting ecosystem based adaptation, while some areas are of particularly high value for supporting climate change resilience.

Areas of biome stability at national scale have been assessed and mapped (SANParks, 2011). See maps attached overleaf. These maps indicate:



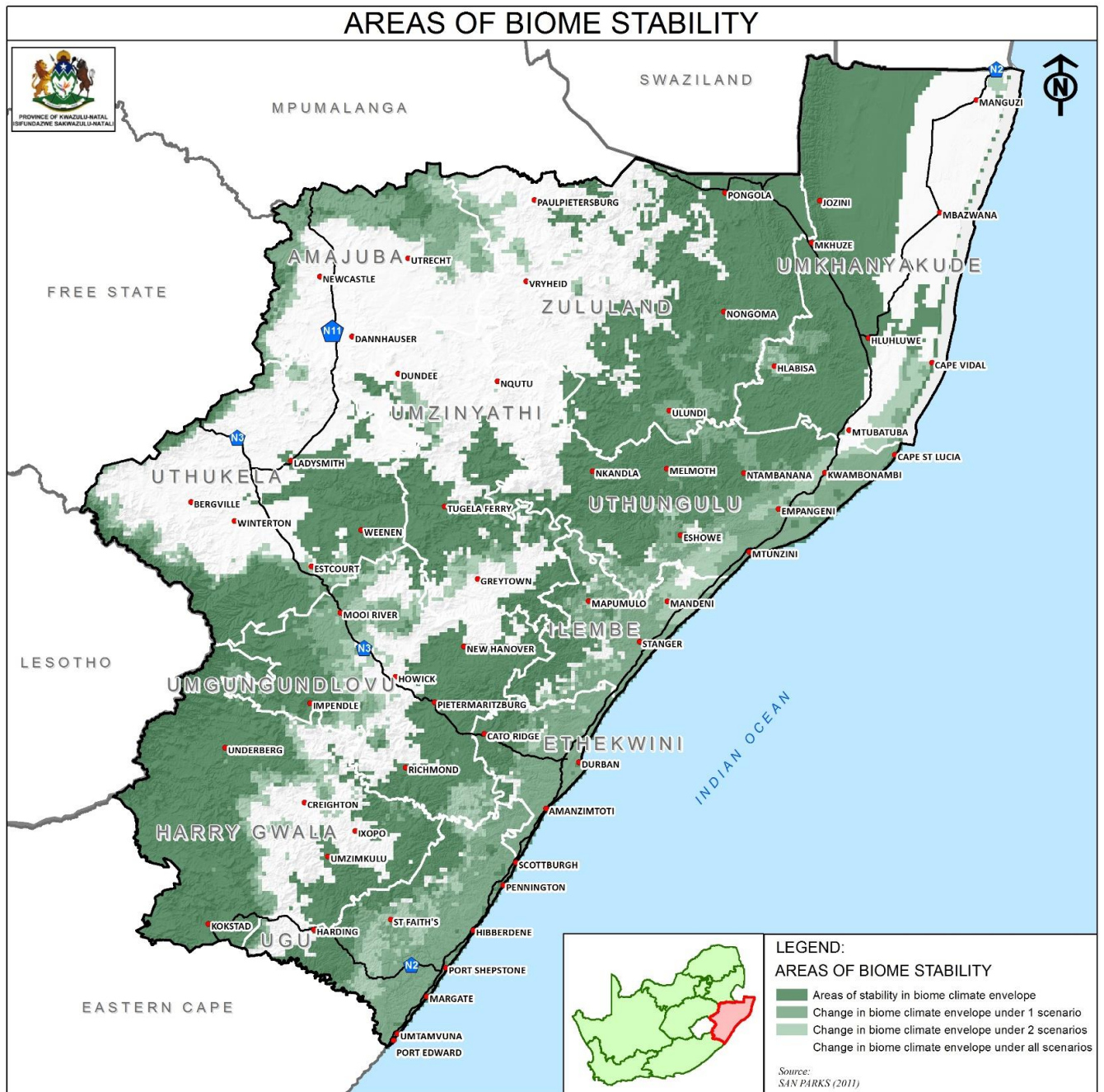
- Areas of biome stability in the face of climate change, under a range of climate scenarios, according to niche modelling results using statistically downscaled future climate scenarios only; and
- Biomes, and specific areas within biomes, that are likely to be more stable under climate change, under various scenarios, namely, 'high-risk' or 'worst case' scenario and a 'low-risk' or 'best case' scenario compiled by SANBI (Guy Midgley and Danni Guo), relating to highest temperature increases and largest rainfall decreases and vice-versa.

The study was based on a 50 year time horizon, considered a reasonable long term planning horizon. When this study is updated based on new climate data, possibly both the medium term and long term predictions could be included. In the interim, as climate change occurs gradually over time, it is useful to conceptualize the worst case scenarios for 2050 as being likely to represent the intermediate case scenarios in 2100 (SANParks, 2011).

SANParks reports that changes in climate are projected to occur over relatively short periods (decades) and with the current state of significant natural habitat loss, degradation, and fragmentation, it is more likely that disruptive change (such as population declines and even extinctions) would occur, especially in areas of future climatic unsuitability (areas shown in white on the map overleaf). In these areas, in particular, natural habitat loss and fragmentation in threatened ecosystems must be prevented.



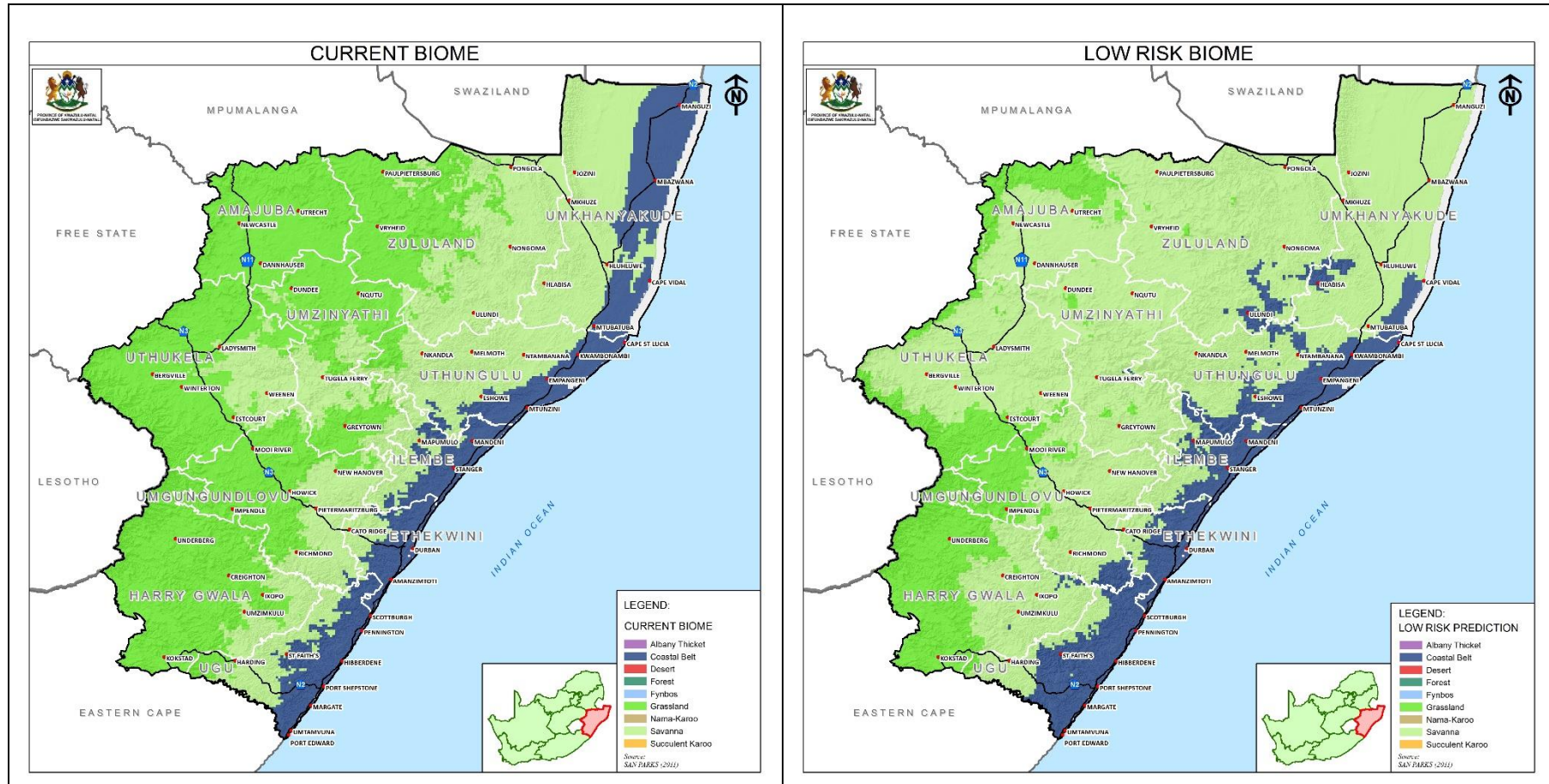
Map 30 Areas of Biome Stability

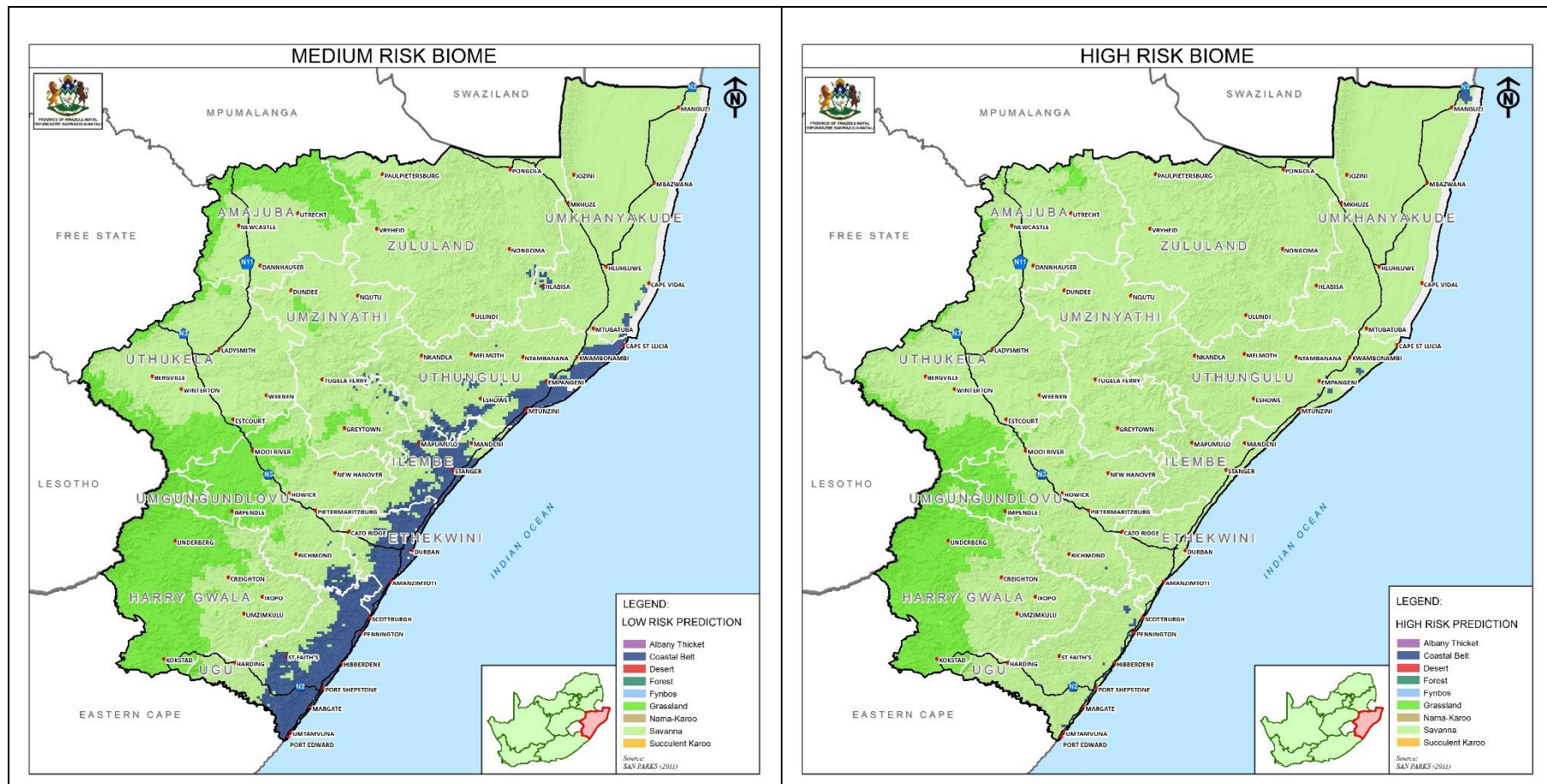


Source: SANParks, 2011



Map 31 Climate change scenarios: current and low risk / best case





Source: SANParks, 2011



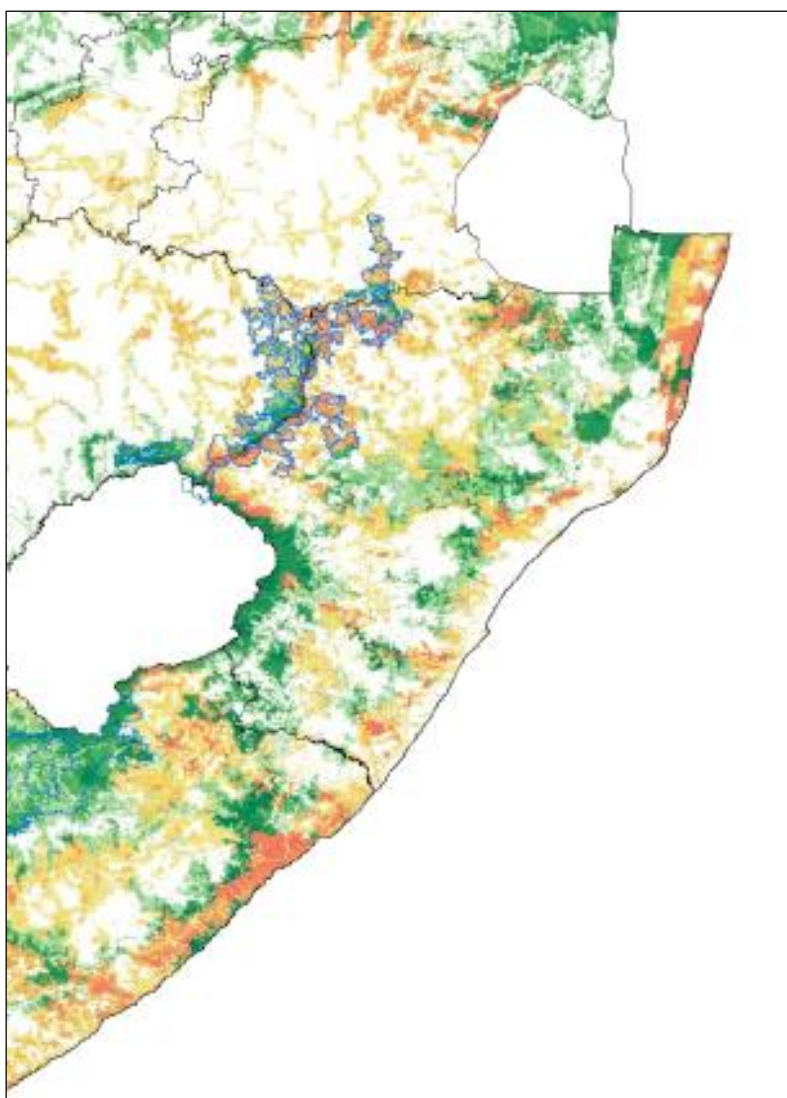
Priorities for conservation and building resilience include protection of:

- Areas with high diversity of habitats;
- Environmental gradients;
- Meso-scale refugia - South facing, gorge habitats;
- Corridors, including Riparian areas and Escarpments;
- Larger well linked unfragmented natural ecosystems;
- Buffer systems, including riparian and coastal buffer zones; and
- Intact centres of endemism.

These have been consolidated into areas important for ecosystem based adaptation (Holness et al, 2011).



Map 32 Landscapes important for ecosystem based adaptation



Source: Holness et al, 2011

The protection of priority intact natural landscapes is the cornerstone of ecosystem based adaptation. These areas are important for:

- Societal adaptation to climate impacts
- Risk mitigation
- Ongoing delivery of ecosystem services (e.g. water)
- Biodiversity (including species) adaptation.

3.7.4 Trans-Frontier Conservation Areas (TFCA)

KwaZulu-Natal is a partial host to two Trans-Frontier Conservation Areas (TFCA), namely the Moluti/Drakensberg TFCA, as well as the Lubombo TFCA.

The Maloti-Drakensberg Transfrontier Conservation Area is a collaborative initiative between the Governments of the Kingdom of Lesotho and the Republic of South Africa. The main objectives of the project are to conserve the globally significant biodiversity that occurs in the catchments of the 300km border straddling the Maloti and the Drakensberg mountains, and to stimulate integrated nature-based tourism development with maximum participation of local communities. The two components are in stark contrast as the KwaZulu-Natal side is actively managed for conservation while the Lesotho side is communal land where stock grazing is one of the few activities that takes place.

The Lubombo TFCA is a unique and complex TFCA, consisting of five smaller TFCAs. The Lubombo Transfrontier Conservation and Resource Area (TFCA) Protocol was signed between the Governments of Mozambique, South Africa and Swaziland on 22 June 2000. It also hosts a strong marine component with many turtle nesting sites present with popular diving and other ecotourism destinations. These smaller TFCAs are as follows:

- Ndumu-Tembe-Futi TFCA, between Mozambique and South Africa (SA).
- Ponto do Ouro-Kosi Bay Marine and Coastal TFCA, between Mozambique and SA.
- Nsubane-Pongola TFCA, between SA and Swaziland.
- Lubombo Conservancy-Goba TFCA, between Mozambique and Swaziland
- Songimvelo-Malolotja TFCA, between SA and Swaziland (recently incorporated into Lubombo TFCA).

An important aspect to consider is that tourists can cross international borders with minimal effort (so called "soft" border posts). It is therefore necessary to ensure proper management of the movement of people. It is also necessary to ensure that complete memoranda of co-operation and agreement are entered into between the two governments and that responsibilities are clearly defined.

Another important consideration is that wildlife, domestic animals, and people are coming into contact more frequently and formal policies and more importantly, practice, on animal disease control are required otherwise there will be negative impacts on public health, agriculture and commerce if not managed correctly.

3.8 Marine and Coastal Environment

The coastline of KwaZulu-Natal stretches for 640km and encompasses two bio-geographical zones (Natal and Delagoa) and supports a greater number of marine species than any other equivalent length of the South Africa Coast. In total, 73 estuaries enter the sea in the province and the coast is heavily utilised for a variety of purposes.

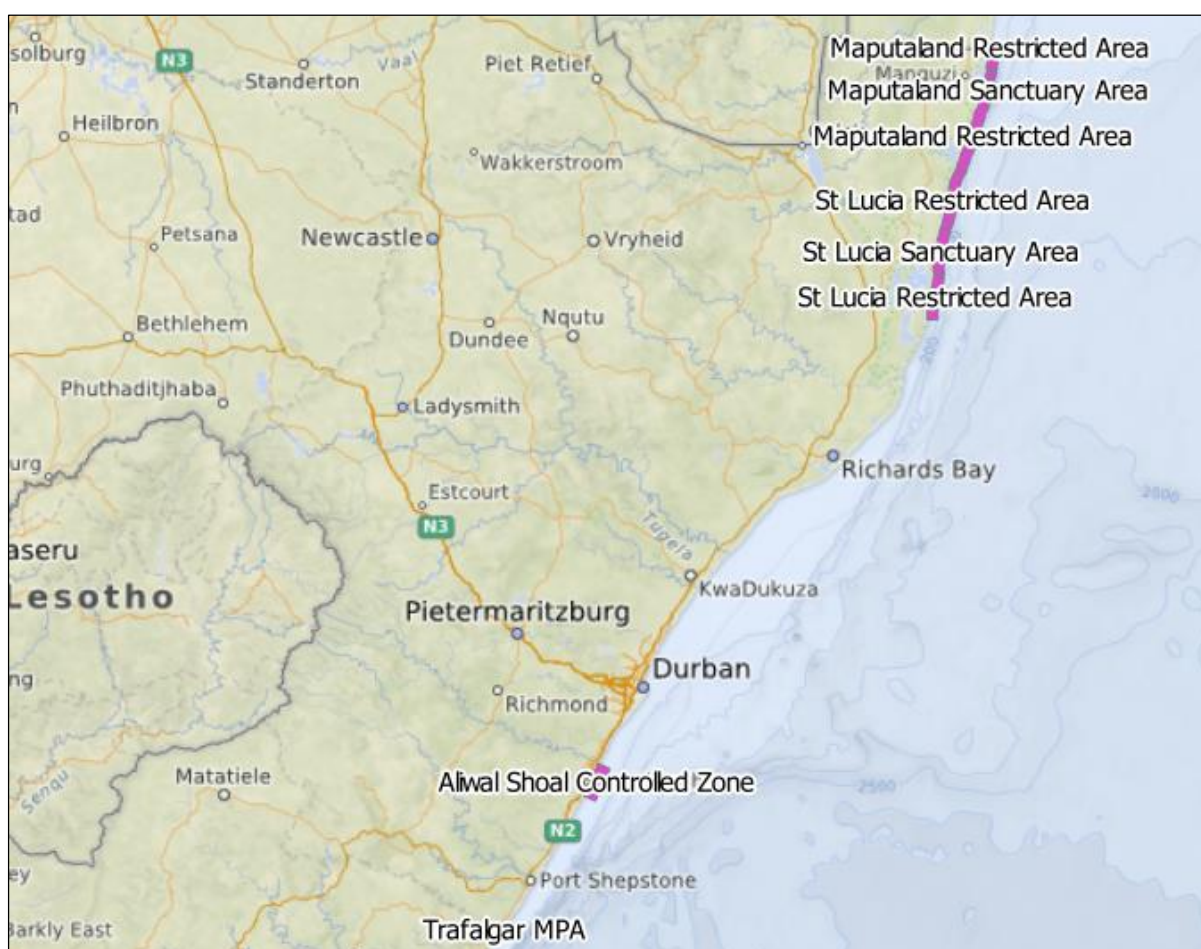
Worldwide, growing population and industrialisation have made oceans increasingly susceptible to damage; to the extent that all human activities impact on the coast. Urbanisation places increasing burdens on the storm water drainage of cities, with sanitation systems also contributing to pollution and damage of the coastal environment. The following potential impacts will need to be considered during the further consideration of development strategies within the province:



- Increasing demand for extension of port operations: facilities for freight-handling and increased accommodation of vessels lead a port to become an industrial zone – with potential threats to the environment. In the case of Durban Port – a delicate balance will have to be sought as the port is also supposed to cater for the tourist trade.
- Mining, poor catchment management, illegal and unplanned water abstraction, invasive alien species and the effects of climate change in temperature, rainfall can result in serious habitat loss. This not only affects the positive natural balance of biodiversity but also threatens the tourist trade.
- Property development of any type on the coast results in land transformation which interrupts sand replenishment of beaches and dunes and sediment flow through estuaries. Coastal pollution and poor water quality in the ocean is also inhibiting various ecological processes and the delivery of associated goods and services.
- Up to 50% of the estuaries in the Province are likely to be negatively affected by pollution, to the extent that their functioning as estuarine ecosystems may be impaired. Others may be unfit for human recreation. Of particular concern is the cluster of estuaries immediately south of Durban Bay.
- Exploitation of coastal resources along the KwaZulu-Natal coast is mounting with the growing global demand for seafood products which is a strong economic inducement for fisheries. Marine and coastal biodiversity is therefore declining and stocks of several resource species have collapsed or are severely over-exploited.
- There are three designated Marine Protected Areas (MPAs) along the KwaZulu-Natal coast (SANBI, 2011) namely the:
 - Maputaland Restricted Area;
 - St Lucia Restricted Area; and
 - Aliwal Shoal Controlled Zone.



Map 33 Marine Protected Areas off the coast of KZN



Source: SANBI, 2011

- Current Protected Areas protocols do not meet the minimum requirements necessary for the effective protection of estuaries or fish, and neither are there open or deep water Protected Areas as part of the protocol. Overall coastal protection in the Province is relatively high, however the distribution of services (shore patrols and boat inspections) along the coast is uneven.

A Coastal Committee has been established and the Province is initiating a Coastal Management Program under the Integrated Coastal Management Act (ICMA).

3.9 Climate Change

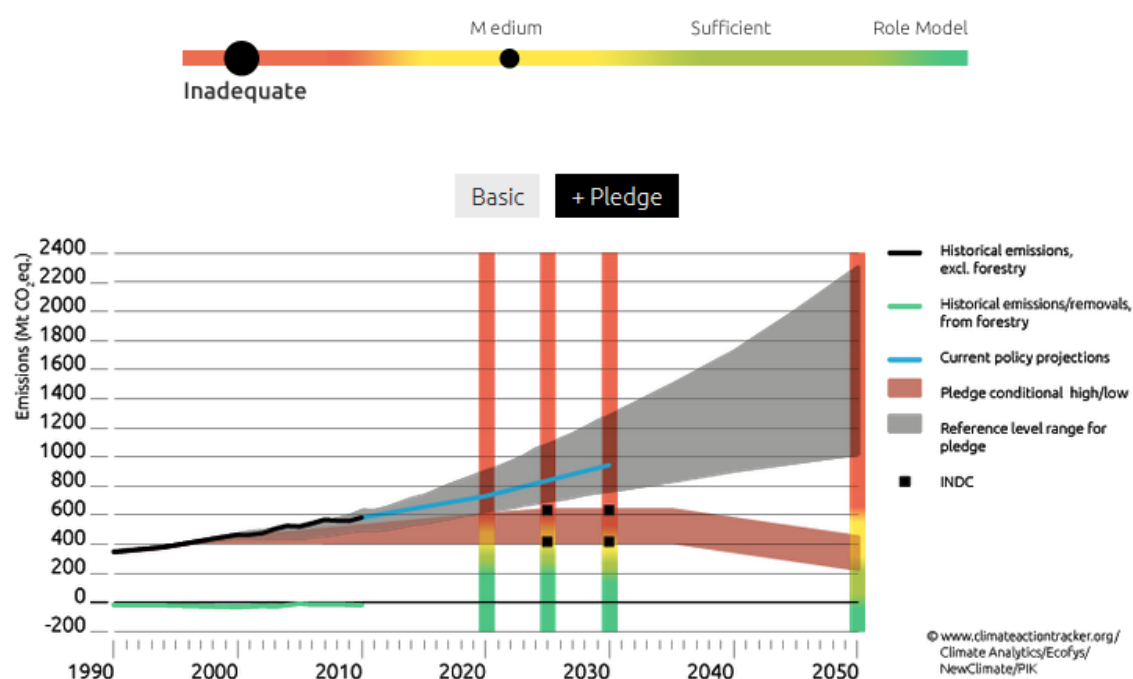
The recent Conference of Parties (COP) 21 conference in Paris held in November 2015, led to a historic international agreement on climate change. The new climate accord outlines, firstly, a global agreement to keep warming to 2° Celsius – and to strive to limit global temperature rise to 1.5°. Second, every country will implement its own climate action plan that will be reviewed in 2018 and then every five years to ratchet up ambition level. Third, there is a commitment to deliver significant flows of money and technical support to help poor countries cope with curbing their greenhouse gas emissions and adapt to climate change. This agreement has been established on the back of mounting evidence of global climate change.

The Paris climate conference is unprecedented in that it recognises the key role of business, investors, cities and provinces in delivering climate action. Indeed, effective mobilisation of these constituencies has helped shape this new global agreement. In particular, the Paris agreement is seen as a step towards an era of net-zero emissions. The graph below summarises the gap between current policy approaches and predicted emission ranges versus the pledge to reduce warming by 2100 to 2 degrees.

Recently, in October 2015, South Africa was rated as “inadequate” in terms of their climate actions and policy. This was based on the Intended Nationally Determined Contribution (INDC) (Republic of South Africa , 2015) (25 September 2015), including the target of reducing its greenhouse gas (GHG) emissions to between 398 and 614 MtCO₂e (incl. LULUCF – land use, land use change and forestry), over the period 2025–2030. This target is equivalent to a 20-82% increase on 1990 levels excl. LULUCF.

The “inadequate” rating indicates that South Africa’s commitment is not in line with interpretations of a “fair” approach to reach a 2°C pathway. This means it is not consistent with limiting warming to below 2°C. Importantly, the study found that if most other countries were to follow South Africa’s approach, global warming would exceed 3–4°C. The study recommends that the emissions reduction target should therefore be strengthened to reflect South Africa’s responsibility to act based on its historical emissions, as well as South Africa’s relatively high emissions per capita (South Africa Climate Action Tracker, 2015).

Figure 3 Rating of South Africa by Climate Action Tracker (South Africa Climate Action Tracker, 2015)



The Paris agreement requires that the climate change will need to be mainstreamed into all aspects of planning, including human settlements and agriculture, with a greater focus on adapting to changing climate patterns in the medium to long term. There is an urgent need to move towards clean energy and low carbon growth and renewable energy to meet the

commitments. In addition, business must become climate change literate and formulate clear pledges to decrease carbon footprints, invest in renewables, and manage resources sustainably. Carbon pricing is required to account for the public health and environmental costs of carbon dioxide emissions from the burning of fossil fuels. National climate action plans hold investment opportunities for the private sector and opportunities to de-carbonize.

The commitments of COP21 need to be mainstreamed into policy and planning, particularly in terms of rolling out industrial energy efficiency strategies, implementing public transport plans, the Municipal Waste to Energy protocol, enforcing the provisions of the National Environmental Management: Air Quality Act, 2004, ensuring that municipalities include climate change response strategies into IDPs and incentivising renewable energy projects.

Figure 4 South Africa's Climate Change commitments (South Africa Climate Action Tracker, 2015)

Copenhagen pledge	
2020 target	-34% below BAU by 2020 incl. LULUCF (20–73% above 1990 levels excl. LULUCF)
	-42% below BAU by 2025 incl. LULUCF (20–82% above 1990 levels excl. LULUCF)
Conditions	A fair, ambitious and effective agreement under the Climate Change convention and the Kyoto Protocol and the provision of support from the international community.
INDC	
2030 target	Emissions incl. LULUCF of between 398–614 MtCO ₂ e over 2025–2030 (20–82% above 1990 levels excl. LULUCF).
Coverage	Economy-wide, all sectors (including AFOLU), six GHGs, with a material focus on CO ₂ , CH ₄ and N ₂ O
Conditions	The finalisation of an ambitious, fair, effective and binding multilateral agreement under the UNFCCC at COP21.
Long term goal	
Long-term goal	Stable emissions over 2025–2035, followed by a decline in emissions to between 212–428 MtCO ₂ e incl. LULUCF by 2050 (-34% below to 29% above 1990 levels, excl. LULUCF).

The COP21 commitments will have economic implications, especially where GHG emissions reductions are applicable, new technologies need to be installed to meet the commitments and carbon tax is applicable.

South Africa's current commitments in terms of greenhouse gas emissions targets mean that emissions should peak between 2020 and 2025 (as targeted by the Copenhagen and INDC pledge), plateau for approximately a decade and then decline in absolute terms thereafter



to between 212–428 MtCO₂e by 2050 (incl. LULUCF). Excluding LULUCF, this long-term target is equivalent to 231–447 MtCO₂e. It is important to note that only the lower end of this range would be rated “Sufficient” (South Africa Climate Action Tracker, 2015). This study was based on the current trend analysis [“With Existing Measures” scenario developed by the Department of Environmental Affairs (Department of Environmental Affairs, 2014)] and assuming a constant value for LULUCF based on the average LULUCF value over the period from 2000–2010.

Nationally, it is reported that South Africa's emissions have steadily increased over time owing to heavy economic reliance on mining and heavy industry. Energy consumption in the industrial and buildings sectors relies largely on electricity as an energy source, which is produced with high carbon intensity using domestic coal. Overall it is estimated that 94% of South Africa's electricity is generated from coal with additional emissions coming from industrial-process emissions, especially steel and cement production (South Africa Climate Action Tracker, 2015). The growth in renewable energy is not likely to displace coal generation, as South Africa's coal generation capacity is likely to grow at a similar rate to renewable energy. The IRP indicates that 16.4 GW of additional coal capacity are either planned or already committed to be built by 2030 (Republic of South Africa, 2013). Under the IRP's base case for 2030, coal generation will still account for 48% of capacity, while renewable generation will contribute to 21% (Department of Environmental Affairs, 2013).

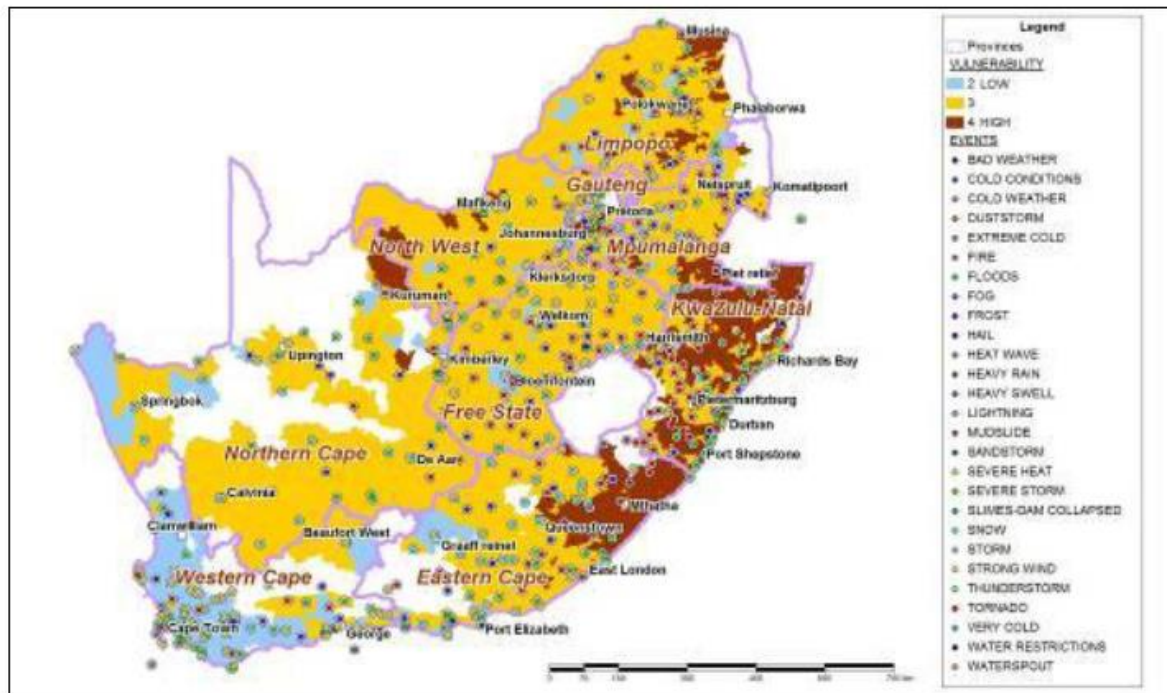
The proposed Carbon Tax Bill (2015) is aimed at decreasing anthropogenic greenhouse gas emissions which contribute to global climate change, by changing the behaviour of South African companies and firms, and through an incentivised process motivate a shift towards cleaner technology when replacing or renewing machinery, technology or processes. Implementation will however be gradually phased-in to ensure that South Africa transitions to a low carbon, climate resilient economy in a cost effective and economically efficient manner. The carbon tax will be implemented together with complementary measures such as a reduction in the electricity levy and other revenue recycling measures. The carbon tax will be administered by the South African Revenue Service (SARS). SARS will liaise with the Department of Environmental Affairs (DEA) and be able to access the National Atmospheric Emissions Information System which will contain emissions information as reported by companies.

3.9.1 *Climate Change Vulnerability*

The potential impacts from a changing climate on KwaZulu-Natal have been assessed in the 2009 Climate Change Vulnerability Study (Thornhill, Governdor-Green, & Khoza, 2009) and subsequent national studies. The Vulnerability Assessment is set to underpin the provincial Climate Change adaptation and mitigation implementation strategy.



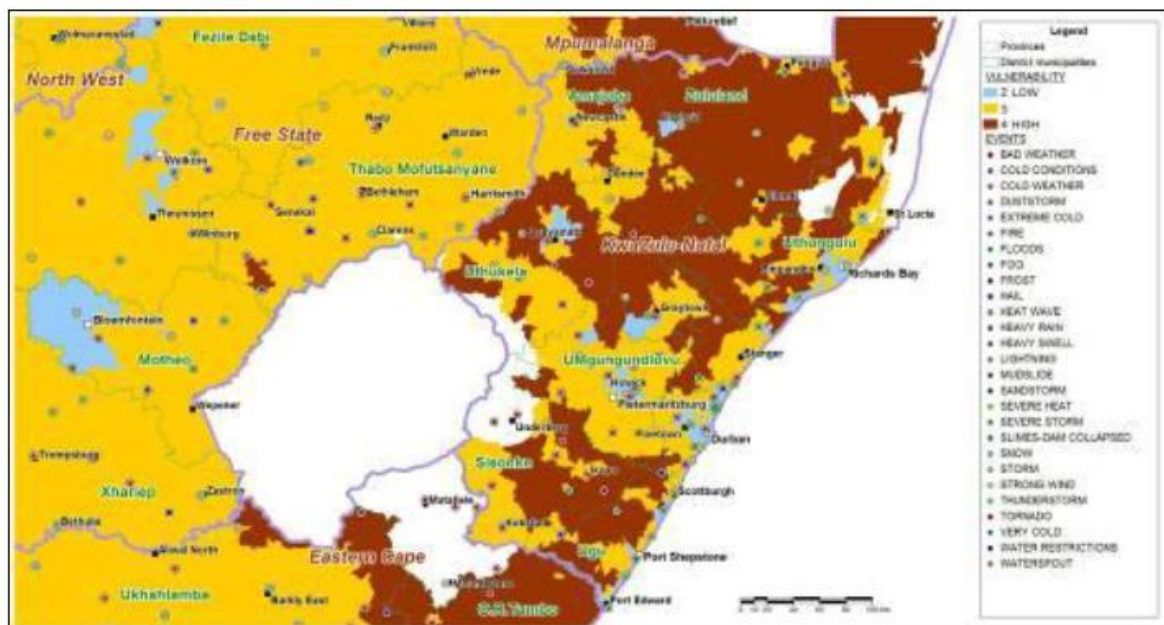
Map 34 Human-climate vulnerability in South Africa



Source: Thornhill, Governdor-Green, & Khoza, 2009

In comparison to the rest of South Africa, KwaZulu-Natal has the highest human vulnerability to climatic events.

Map 35 Human-climate vulnerability in KZN



Source: Thornhill, Governdor-Green, & Khoza, 2009

KwaZulu-Natal's human-climate vulnerability corresponds closely to current poverty levels and densities as well as high levels of land degradation in KwaZulu-Natal. The low vulnerability risk reflected in areas such as Durban/Ethekwini and Pietermaritzburg has taken their disaster readiness into account.

The 2009 study highlighted the following sectorial issues relating to climate change (Thornhill, Governdor-Green, & Khoza, 2009):

- KwaZulu-Natal's growing economy is dependent on energy but the energy sources it requires to meet the needs of its population for economic growth, job creation and poverty eradication are contributing to changes in the climate. The province contributes to global greenhouse gases through various energy and non-energy greenhouse gas sources. These emissions must be reduced.
- The energy sector (electricity generation) is the main contributor to greenhouse gases in KwaZulu-Natal because of the coal-based economy. Electricity consumption is rising.
- The industrial and transport sectors are the highest consumers of fuel. This is an indicator of GHG emissions.
- KwaZulu-Natal's transport sector is expanding and vehicle emissions are expected to increase.
- The biggest potential for reducing greenhouse gas emissions lies within the residential sector.
- The waste sector offers opportunities for the generation of alternative energy.
- The agricultural sector in KwaZulu-Natal contributes to greenhouse gas emissions through a variety of processes and activities but there are many opportunities for reduction.
- KwaZulu-Natal has already taken commendable steps to contribute to global greenhouse gas stabilisation. This provides a solid platform to strengthen future initiatives within the context of the National Climate Change Framework.

To date, the 2009 study has been shared with municipalities in the Province in order to craft their action plans in response to climate change. The study formed the basis of a concept document drafted by SALGA - KZN towards their Climate Change Summit in 2010, where an action plan in response to climate change by municipalities was to be prepared. Two district municipalities, iLembe and uMgungundlovu are using the vulnerability study as a basis towards the development of the district climate change action plans.

The study highlighted the fact that the extent to which the natural resource base would be able to maintain provincial productivity, even without climate change, is uncertain. The extent to which the natural resource base would respond to climate change is clearer; the biggest risk is the uncertainty of thresholds.

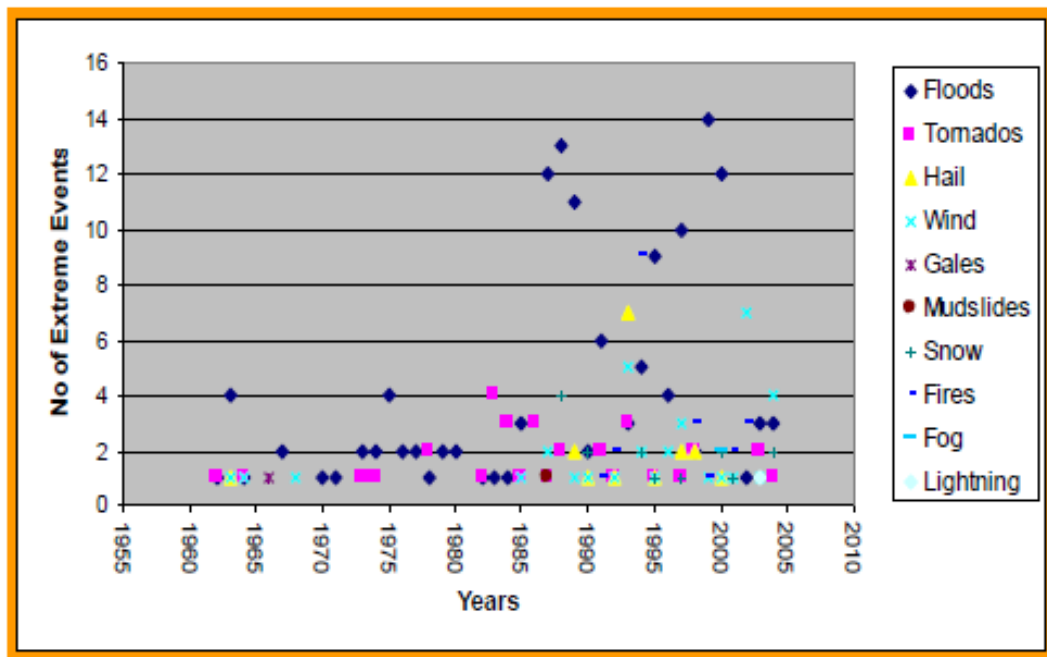


The following **water-related risks** are evident:

- The stressed water situation in the Mvoti-Mzimkulu Water Management Area makes it highly susceptible to adverse climate change impacts. This is exacerbated by the area's current susceptibility to flooding, land degradation and the high human vulnerability index.
- The Uthukela Water Management Area is currently experiencing severe water poverty and the situation is expected to get worse. Natural variability in the climate has resulted in years of prolonged drought while regular flood events have been recorded in Ladysmith since the 1960's. There are water quality challenges and the irrigation sector demands more than 50% of the water in this area. A worsening situation is expected under conditions of climate change.
- Local level risks within the Usutu-Mhlathuze Water Management Area reflect the heterogeneity of its various catchments. The high degree of natural climate variability in the area makes it vulnerable under conditions of climate change. The severity of future impacts will probably depend to a great degree on extreme conditions but water shortages and poor water quality conditions may become worse.
- The high levels and densities of poverty in KwaZulu-Natal in combination with existing and projected threats of droughts and flood hazards is a high risk for the province.
- There are high levels of uncertainty associated with rainfall projections under conditions of climate change but the results of the most recent climate change scenarios include the following for KwaZulu-Natal:
 - An increase in potential evaporation.
 - The annual number of stormflow events will decrease.
 - There would be an increase in recharge events.
 - More variable streamflows are projected despite higher predicted flows overall.
 - Streamflows will shift a month later in KwaZulu-Natal.
 - Sediment yields along the east coast will decrease.
 - There would be a higher relative irrigation water demand.

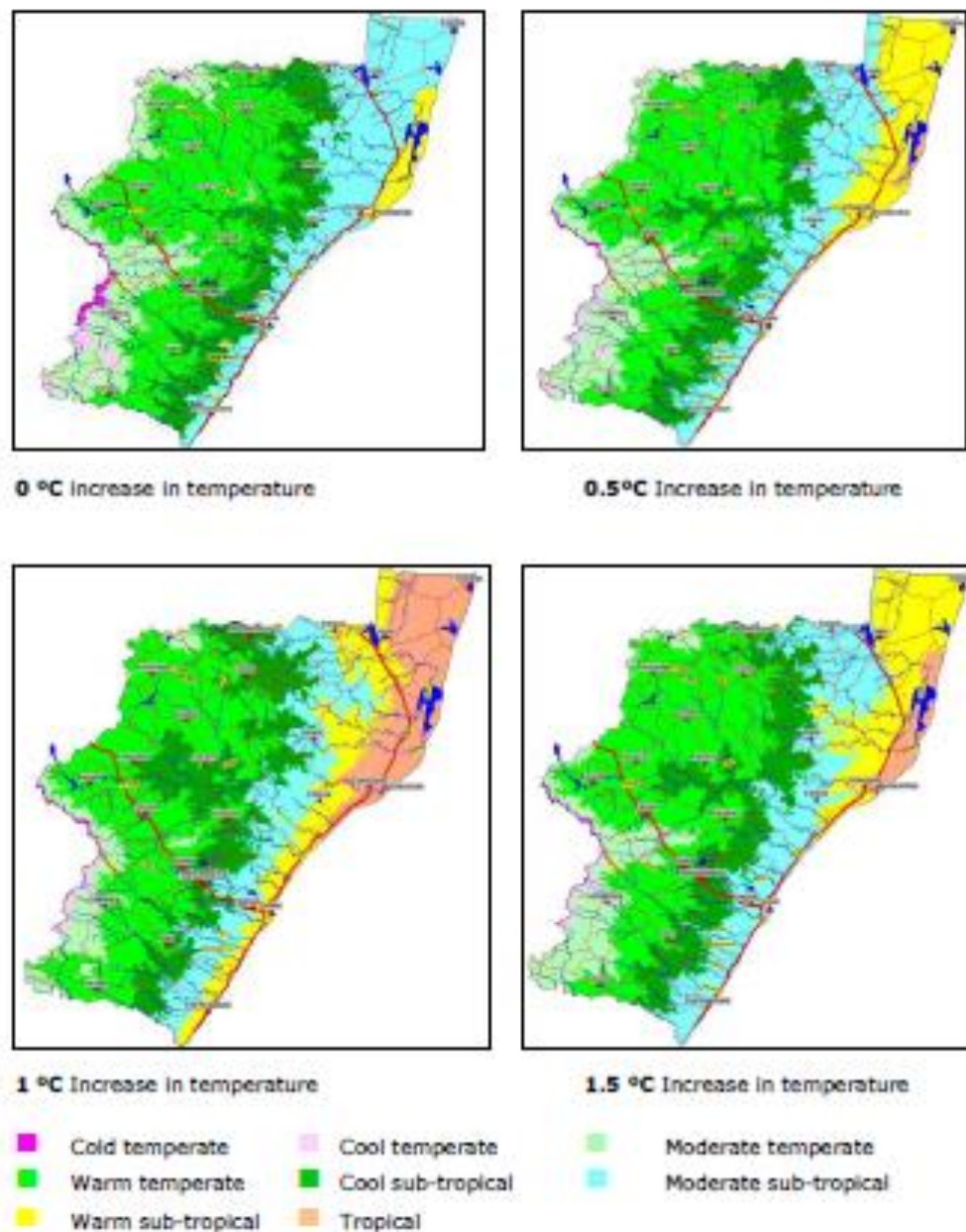


Figure 5 Extreme weather events recorded in KwaZulu-Natal from 1962-2004 (CEALUM,2008)



KwaZulu-Natal has the highest flood hazard in South Africa. The south coast is the most exposed.

Figure 6 Distribution of bio-climatic zones of KwaZulu-Natal under temperature increases zones of KwaZulu-Natal under temperature increases (0.5°C – 1.5°C), (Whitwell, 2009)



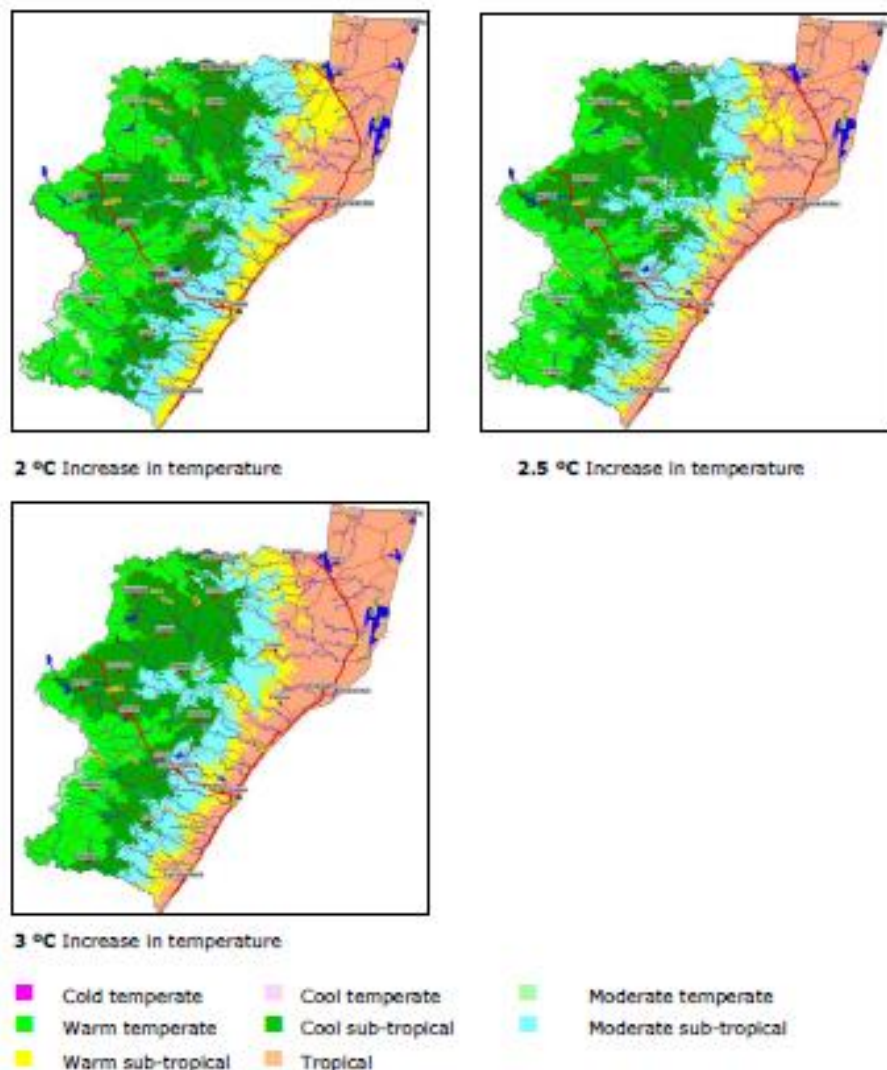
In terms of impacts on the province's **biodiversity**:

- Biodiversity extinction is already occurring. The rate is of concern. There is at least 700 species that we know about that are currently threatened.
- Trends in the conservation status of vegetation types in KwaZulu-Natal are showing alarmingly fast rates of degradation, particularly along the coastal belt and inland from the south coast. This is expected to continue over the short term. Climate change will exacerbate the situation. Ecosystems that “absorb” the shocks of natural extremes such as floods may lose their resilience.
- A shift in bio-climatic zones will cause ecosystem shifts and alterations.

- Cold-adapted species in the Drakensberg will have to prepare themselves for warmer conditions. We are not sure whether they would be able to adapt.
- Current land degradation in the midlands of KwaZulu-Natal is hindering conservation efforts to create migratory pathways for species that may not survive higher temperatures.
- The potential increase in warm sub-tropical and tropical areas in the coastal areas of KwaZulu-Natal may improve land production potential. However, there is a risk of increase in human diseases as species will expand their ranges. Pathogens may find new hosts and ways to transmit diseases to humans.
- The predicted distribution of forests under projected future climatic conditions include a decrease in forest habitats in the north-eastern parts of the province and an increase in forests on the south coast of the province. However, the current state of land degradation will not allow these forests to migrate.
- Modelling to predict species responses to climate change shows that the species-richness "hotspot" that currently exists in KwaZulu-Natal would completely disappear in the future.
- There are few uncertainties as regards the vulnerability of natural ecosystems. We are however unsure where the "tipping point" may be.



Figure 7 Distribution of bioclimatic zones of KwaZulu-Natal under temperatures increases (2°C – 3°C), (Whitwell, 2009)



KwaZulu-Natal's **coastal zone** is already under severe stress due to coastal erosion. A continuation of the existing situation and the added effects of potential climate change is a high risk for the province. A further examination of these risks has shown:

- Changes in sea level rise have already been observed. The sea level rise in Durban has been 2.7mm/year in 33 years.
- Recent storm events on the coast have caused significant damage. The March 2007 storms alone caused property damage to the amount of approximately 250 million rand.
- The increase in coastal storm events is believed to be a definitive indication that change has started. It is expected to continue.
- The south coast is particularly vulnerable to coastal erosion. It is also the area with the highest flood hazard and the highest climate-human vulnerability risk in South Africa.
- Low-lying areas on the north coast will also be affected by climate change and sea-level rise.

In terms of the **agricultural sector** impacts:

- Climate change will cause geographical shifts in specific climate zones. In KwaZulu-Natal this may mean a net loss of cold to moderate climatic zones and a potential increase in warm sub-tropical and tropical areas. The effects may be positive and/or negative.
- Agricultural production will change in a future KwaZulu-Natal – production areas will shift and productivity will be altered. Agricultural opportunities will be gained in some areas while other areas will become the agricultural “losers”.
- There may be a shift in the production areas and a net loss in production of basic “food security crops” such as cabbage and dryland maize.
- Climate change may cause a net gain in potential growing areas for sweet potatoes (another basic “food security crop”).
- Food insecurity in the Zululand, Umkhanyakude, Ugu and uMgungundlovu district municipalities may be worsened by climate change impacts.
- The decline in agricultural production potential in the south coast coincides with the high-risk areas in terms of water and biodiversity changes.
- The results of the most recent climate change scenarios project an increase in the number of days per year with the topsoil at wilting point in most of KwaZulu-Natal – the north-coast is likely to experience amongst the highest increase. This will influence crop yields and increase irrigation demands.
- Ecosystem alterations may result in new pests and diseases – modelling shows that codling moth and spotted stem borers may increase their distribution ranges into KwaZulu-Natal under climate change conditions. The latter is a risk to provincial sugarcane production.

The study concludes that there are **four “high-risk areas”** in KwaZulu-Natal that this analysis has pointed out. These are:

- 1) The Midlands of KwaZulu-Natal
- 2) The north-eastern corner of the province
- 3) The coastal zone, and in particular the south coast.
- 4) Areas of high poverty levels and densities.

3.9.2 Responses to Climate Change in KwaZulu-Natal

South Africa, as a party to the United Nations Framework Convention on Climate Change (UNFCCC), has an obligation to submit National Communications (NCs) every four years and Biennial Update Reports (BURs) in between NCs to report its current standing on climate change in terms of its efforts to mitigate climate change as well as efforts and analysis in the area of adaptation. Long Term Adaptation Scenarios (LTAS) have been proposed.



The IPCC 5th Assessment Report (November 2014) clearly shows a linkage between climate change mitigation ambition and the extent of adaptation required (less mitigation achieved, more adaptation required).

Nationally, South Africa's climate change response interventions will include: development and implementation of the national adaptation strategy for South Africa; implementation of the National Framework for Climate Services for key sectors (including health, water, agriculture, human settlements); updating the mitigation potential analysis; setting Desired Emissions Reduction Outcomes (DEROs) and; a Situational Analysis and Needs Assessment (SANAS) of provincial climate change response planning and adaptive capacity finalised with findings being implemented.

CASE STUDY: DURBAN CLIMATE **CHANGE** STRATEGY

The Durban Climate Change Strategy (EPCPD, 2014) reported the following impacts of climate change on the eThekweni Municipality:

- The average annual temperature increase is expected to be between 1.5°C and 2.5°C by 2065, and increase between 3°C and 5°C by 2100;
- Potential increase in aggregated rainfall by 2065 with an increase of up to 500 mm by 2100;
- The northern parts of the Municipality are expected to experience increases of up to 20% in long duration (1 day and longer) rainfall;
- The outer west areas are predicted to experience increases in short duration rainfall which may lead to localised increases of up to 30% in short term flooding;
- An estimated 30% to 100% increase in year-to-year rainfall variability;
- More intense rainfall events with increased erosive capacity;
- Increasing numbers of heat waves; and
- Future sea level rise is expected to be greater than the current rate of 2.7 (+/- 0.05) mm/year.

3.9.3 *Greenhouse Gas Emissions Inventory*

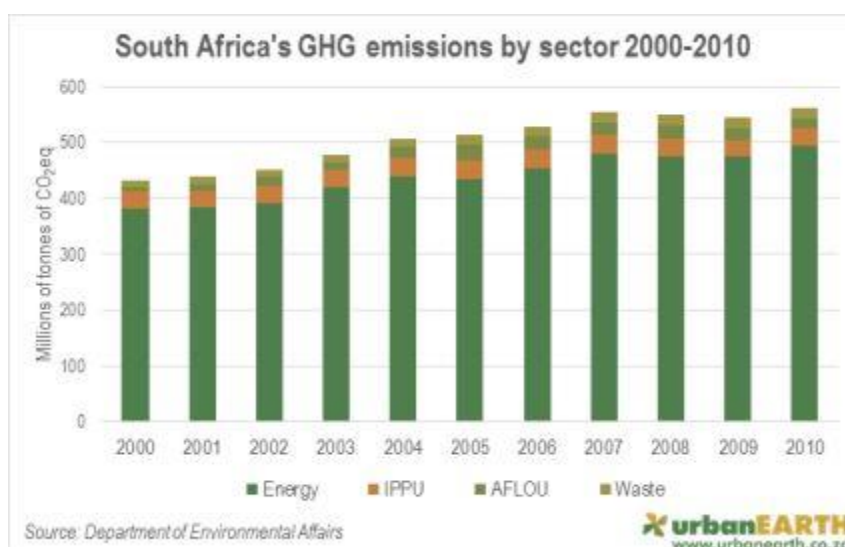
The South African Air Quality Information System will be used to collate data on the Greenhouse Gas (GHG) emissions and inform the country's efforts to address climate change. South Africa currently is committed to implement mitigation actions that will collectively result in a 34% and 42% deviation below its "business as usual" emissions growth trajectory by 2020 and 2025 respectively. The National Climate Change Response White Paper guides immediate and long term action to adapt to the already measurable impacts of climate change and to reduce GHG emissions. The medium term priorities are to develop and facilitate the implementation of a climate change adaptation and mitigation regulatory framework, which



enables the transition of the economy to a climate resilient, low carbon, job creating growth path.

The baseline Greenhouse Gas Emissions inventory (GHG) for the province need to be determined to inform policy. The most recent GHG inventory compiled for Durban (2012) reported that the total amount of greenhouse gas emissions recorded for the entire city was 29,360,395 tonnes of carbon dioxide equivalent (tCO₂e). Transportation and industry are the largest contributors to Durban's GHG emissions, with transportation making up 37% of the total GHGs , and industry emissions contributing 32%.

Figure 8 Greenhouse gas emissions 2000 - 2010



The Department of Environmental Affairs is aiming to develop and implement the National adaptation strategy, to facilitate the implementation of Climate Change Response plans for 5 key sectors and to have "Lets respond" tool kits rolled out to 40 municipalities.

3.9.4 *Durban Adaptation Charter*

The Durban Adaptation Charter was launched at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) 17 held in the City of Durban (eThekweni Municipality), South Africa in December 2011. The South African Government, through the South African Local Government Association (SALGA), South African Cities Network (SACN), eThekweni Municipality and the Department of Environmental Affairs partnered with ICLEI – Local Governments for Sustainability in hosting the Durban Local Government Convention: adapting to a changing climate – towards COP17/CMP7 and beyond.

The Durban Adaptation Charter commits Local Governments to local climate action in their jurisdiction that will assist their communities to respond to and cope with climate change risks thereby reducing vulnerability. By signing the Durban Adaptation Charter they commit to *inter alia*:

- Key information of all local government development planning;
- Ensuring that adaptation strategies are aligned with mitigation strategies;
- Promoting the use of adaptation that recognizes the needs of vulnerable communities and ensuring sustainable local economic development;
- Prioritizing the role of functioning ecosystems as core municipal green infrastructure;
- Seeking innovative funding mechanisms.

As the metropolitan, district and local municipalities of central KwaZulu-Natal are signatories to the Durban Adaptation Charter they have committed themselves to take local climate action in their jurisdiction. It is recognised that a coordinated and collective action between these jurisdictions is however the most effective way to respond to climate change.

Cabinet Lekgotla took a resolution on 13 August 2010 that the Department of Economic Development, Tourism and Environmental Affairs (EDTEA) should report on Climate Change Forecasting and Planning.

3.9.5 *Provincial Responses to Climate Change*

In the Report to the NCCRP Workshop Progress Report on Climate Change Activities (T. Fasheun) the following progress has been made in the province:

- KZN Council for Climate Change and Sustainable Development established in 2012 to coordinate climate change management activities in the province. The Council participated at the Rio+20 Sustainable Development in 2011 and also at the COP18 at Doha, Qatar. The Council aims to pursue localization of manufacturing of renewable energy plant components, and also encourages our tertiary institutions to pursue more vigorously Innovation, science and technology in the green industries related sectors;
- KZN promotes Green Economy through its KZN Renewable Energy Working Group to improve synergies between government departments as well as between government and business in renewable energy related projects and initiatives. The Group is chaired by the Department of Economic Affairs and Tourism. The KZN Trade and Investment which is a government entity plays a major project implementation role. The Working Group is The KZN Renewable Energy Working Group is responsible for Project Facilitation & Packaging, Funding Facilitation, Production & Dissemination of Research, and Capacity Building;
- The Province became a member of the Climate Change Group in September 2011. Since then the province has participated in the Group's programme in Spain, Brazil and Qatar;
- A Provincial Climate Change Summit was held in 2013;
- KwaZulu-Natal Wind Atlas has been developed to determine the mean wind speed of KZN and surrounding regions in order to incentivise investment in local wind energy projects;



- Solar maps have also been developed for the province showing direct normal Irradiation, global horizontal Irradiation and global tilted Irradiation. These variables were used to identify photovoltaic installation potential in the province;
- Some parts of the KwaZulu-Natal coast-line have shown wave energy potential in terms of ocean currents and thermal gradients in the sea. A desk-top study of utilising ocean currents in the province has also been completed by both an NGO and government;
- The Atlas on the geological storage of carbon dioxide in South Africa has shown that some areas in Zululand have potential for carbon storage in the province. The South African Centre for Carbon Capture and Storage, an entity of the Department of Energy, is undertaking stakeholders' consultation in this regard.

3.9.6 *Durban Climate Change Strategy*

Following the successful hosting of COP17/CMP7, and building upon previous climate change-focussed work, eThekweni Municipality has developed a city-wide climate change adaptation and mitigation strategy, through an inclusive and participatory process. The Strategy highlights the need to convert to a low carbon, green economy that prioritises the sustainable use of ecosystem services whilst still meeting development challenges. Final approval of the Strategy by the Municipal Council was obtained in June 2015.

The six Durban Flagship projects are:

- Water Conservation and Demand Management Flagship Program;
- Renewable Energy Flagship Program;
- Energy Efficiency and Energy Demand Management Flagship Program;
- Transport Flagship Program;
- Waste Management Flagship Program; and
- Adaptation Flagship Program.



3.10 Energy Resources

Investment in renewable energy and energy efficiency is important to reduce the negative economic, social and environmental impacts of energy production and consumption in South Africa. The aim of renewable and sustainable energy refers therefore to the generation of electricity whilst the carbon footprint of the operation is reduced. Potential sources of renewable energy includes wind, bagasse, wood, hydro, solar, agricultural waste, wood waste, to name a few.

The Department of Energy has committed to 13,225MW of renewable energy generation by 2025. The National 2010 Integrated Resource Plan (2010-2030) (Integrated Resource Plan 2010-2030, 2011) calls for 17,800 MW of renewable energy to be energy Nation place by 2030. The NDP calls for a 'greater mix of energy sources and a greater diversity of independent power producers (IPPs) in the energy industry'.

In order to meet these commitments and targets and to reduce reliance on non-renewable energy sources, the Department of Energy, the Treasury and the Development Bank of Southern Africa collaborated to set up the Independent Power Producer (IPP) office in 2010 and introduced the Renewable Energy Independent Power Producer's Procurement Programme (REIPPPP) (Department of Energy, 2013), which has attracted R193 billion in private sector investment since 2012. R53.2billion (28%) of this total comes from abroad – totalling 85.8% of total direct foreign investment in South Africa last year. REIPPPP is a strategy that targets a number of high capacity sites that are connected to the national grid and owned or operated by about 100 independent power producers. The result is that Eskom retains a monopoly over national distribution and the holding power of municipalities over distribution at the local level.

There are significant water savings associated with the move to renewables – it is reported that for each kilowatt hour of renewable energy that displaces fossil fuels in the national grid, 1.2 litres of water will be saved. At full operation of the entire portfolio, the programme will save 52 million litres of water per annum (Reaping reward - South Africa's REIPPPP, 2016).

The reduction of regulatory barriers for renewable energy projects coupled with the decline in the costs of solar and wind power, means that these technologies are now cheaper to implement than nuclear or coal (How South Africa can spread renewable energy to low income areas, 2015).

An additional 6300 megawatts (MW) of capacity across technologies was allocated to the REIPPPP by the Department of Energy in 2015, taking the total allocation to 13,225 MW on target to be generated by 2025. It is likely wind power as the lowest cost option will continue to contribute close to 50% of renewable energy procured (Growing Wind Industry gathers to power the winds of change, 2015). By the end of June 2015, about 5% of South Africa's electricity requirements were being provided by renewables, excluding hydro, of which one third is being supplied by solar. By 2030, the plan is to have 21% of the total capacity being derived from renewables.

There are more than 400 wind turbines installed in South Africa - the 13 wind farms totalling 953MW feeding power back into the grid, mostly through private investment. Local communities (within a 50 km radius of developments) have become beneficiaries of renewables, with an average shareholding of 10.5% in renewable projects. This constitutes more than four times the obligated minimum of 2.5% which forms part of the criteria of the REIPPPP (Growing Wind Industry gathers to power the winds of change, 2015).



Existing power projects in KZN is shown in Figure 9. These include co-generation plants, the Ingula scheme, landfill to gas, biomass plant and various others. Most of these are privately owned and for own use (Solar PV List > 100kW, n.d.)

Figure 9 KZN Renewable Energy Projects (Beires, 2015)

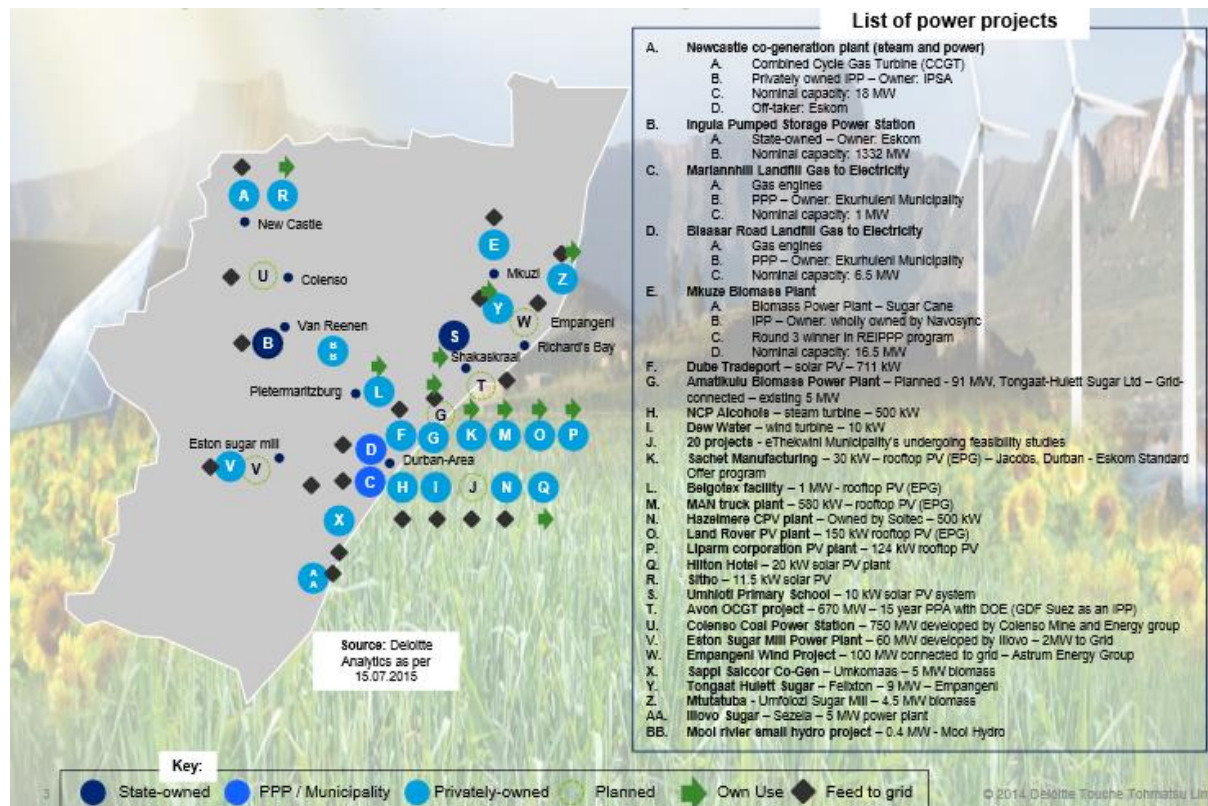
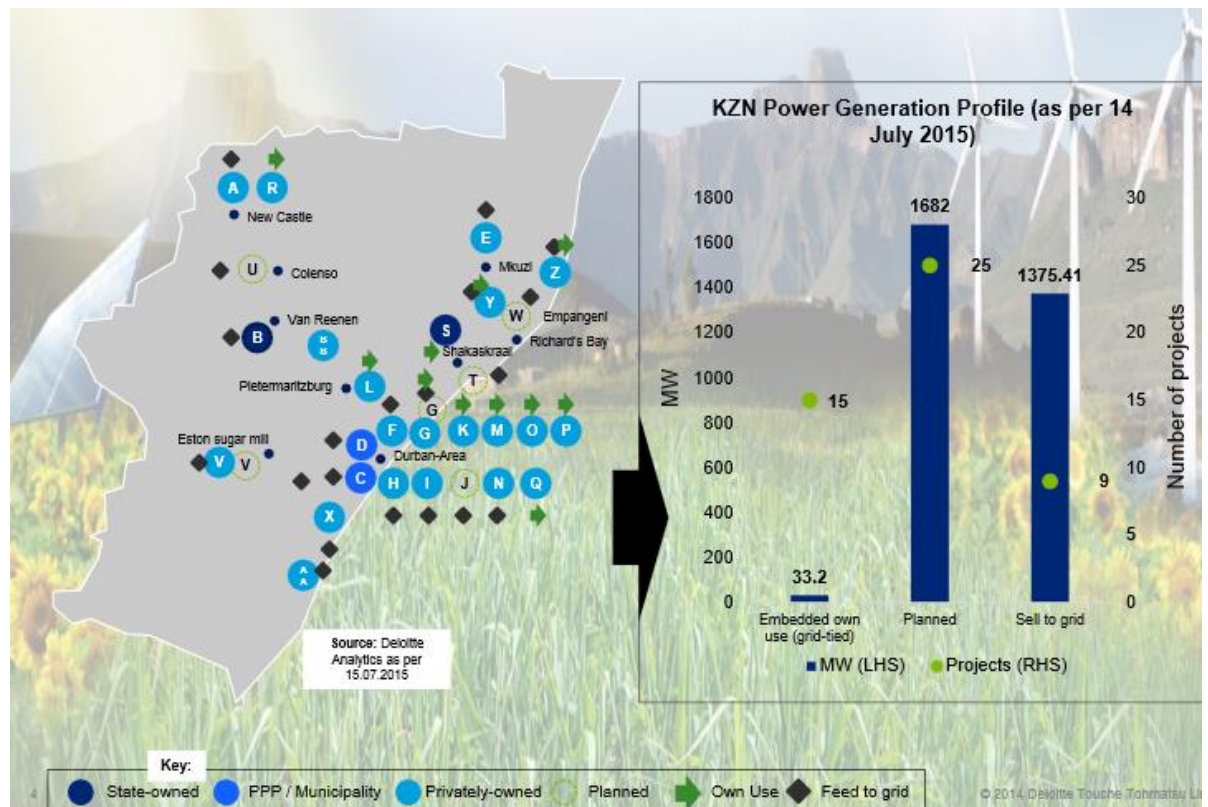


Figure 10 KZN Power Generation Potential (Beires, 2015)



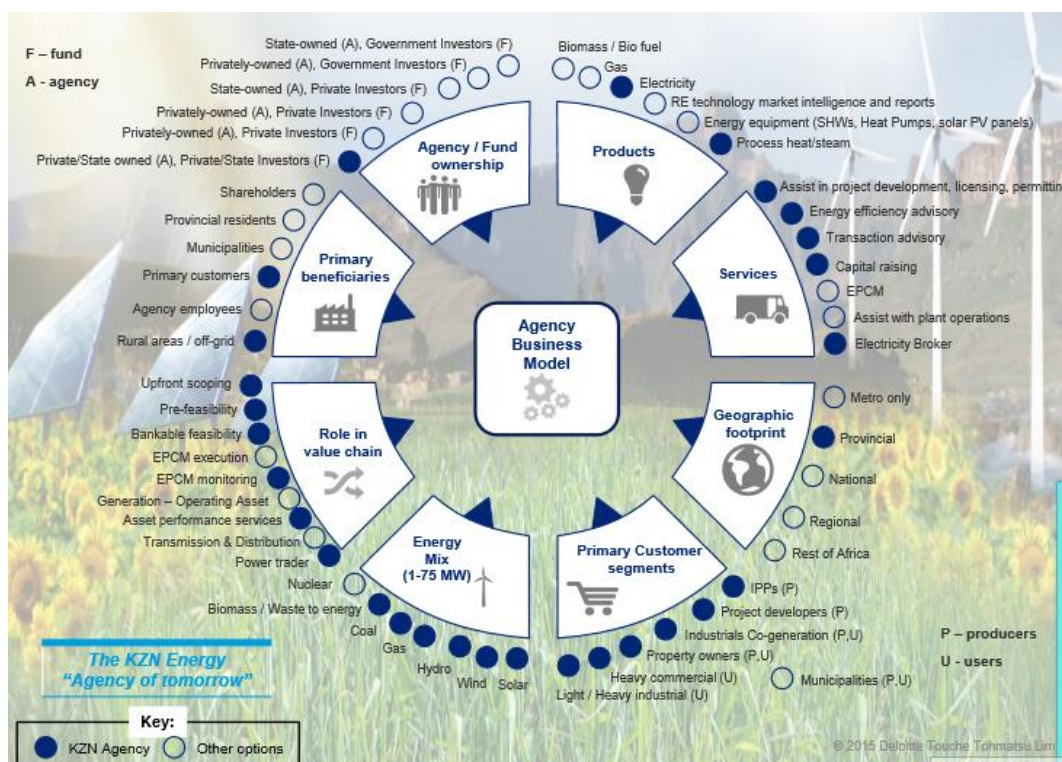
The removal of traditional regulatory barriers, through the 2015 EIA guideline for Renewable Energy projects, will require greater coordination between regulatory authorities. Mechanisms to unlock green economy opportunities exist through the Green Economy Technical Assistance Fund and Green Work/ Groen Sebenza funded by National Treasury.

The eThekweni Energy Office, which was launched in early 2009 in response to the National Power Conservation Program, is responsible for conceptualising and initiating projects in Renewable Energy (RE) (generating energy from renewable sources, such as the sun), Energy Efficiency (EE) (helping use less energy) and Climate Change Mitigation (reducing our greenhouse gas (GHG) emissions). Over the 2010-2014 period, the responsibility of the EO grew to include renewable energy and climate change mitigation interventions. In 2014 the EO and Environmental Planning and Climate Protection Department jointly developed the Durban Climate Change Strategy (DCCS). The DCCS further expanded the mandate of the EO to respond directly to the challenge of Climate Change mitigation.

The KZN Sustainable Energy (SE) Forum is an initiative of the Durban Industry Climate Changer Partnership Project and initially was funded by the eThekweni Energy Office and United Nations Industrial Development Organisation (UNIDO). It is now managed by Three Consulting through a contract with eThekweni Municipality. At regular Forum Meetings, new and current SE projects in KZN are introduced, and there is consultation with stakeholders and I&APs who have relevant expertise on these SE projects, institutional barriers are identified and solutions sought, and there is discussion to contribute the most appropriate and practical implementation of SE research projects. Maps of wind, solar, hydro, ocean and biomass resources are available online at <http://www.kznenergy.org.za/resources/energy-resource-maps/>

There is a call for a provincial KZN Renewable Energy Agency could play a key role in deploying strategic energy projects (Figure 9) (Beires, 2015).

Figure 11 Proposed KZN Energy Agency (Beires, 2015)



3.10.1 *Wind Energy*

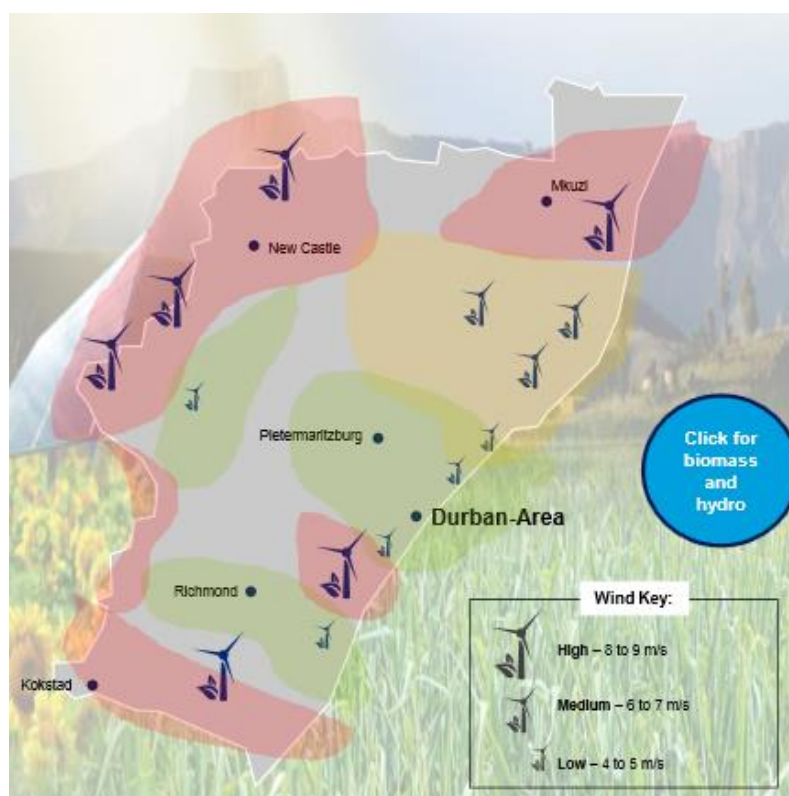
Wind Energy can effectively be categorised into two main areas, namely:

- **Offshore Wind:** When the best sites for onshore wind have been snapped up, the next place to look for large quantities of renewable energy is offshore. Offshore wind offers enormous potential, with stronger more predictable winds and almost unlimited space for turbines. Planning permission can be easier to obtain than onshore, farms can be built at cost effective scales impossible on land, and the availability of space is almost unlimited if deep waters are mastered.
- **Onshore Wind:** The most mature of the renewable energy sectors, the onshore wind industry saw 21GW built in 2007, bringing installed capacity to over 100GW globally.

Map 36 - Wind Power Potential within South Africa (Energy Resource Maps, n.d.)



Figure 12 KZN Wind Resource Potential (Beires, 2015)

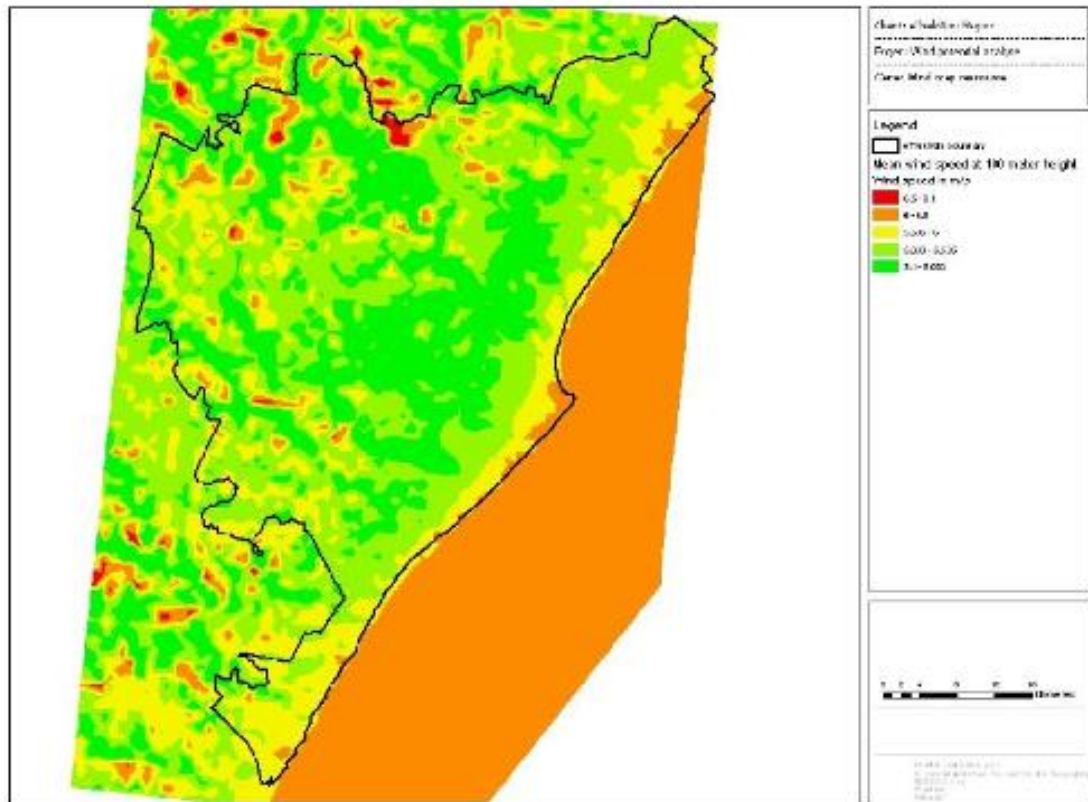


Areas with the greatest potential for wind energy projects include areas to the south around Kokstad, and at Mkuze and Newcastle. It is recognised that large scale commercial wind power generation projects are being targeted in the Northern Cape.

The eThekweni Energy Strategy (adopted in January 2010) makes specific reference to renewable energy production being identified in the key Local Authority & Public Sector Action Plans under the planning designation "Promote Sustainable Point-of-use Power Generation Projects". For this purpose, the municipality has asked 3E to evaluate initially the wind resource at the regional level and to identify sites with the capacity of at least 20MW (based on an analysis of technical and environmental constraints specific to that region).

3E has generated a Wind Resource Map which presents the estimated mean annual wind speed at 100m AGL for the entire eThekweni region. The Wind Resource Map identifies a number of areas in the eThekweni region with wind speeds in excess of c.6.5 m/s as well as a larger number of areas having a wind speed between 6.0 m/s and 6.5 m/s. Moreover, there are a number of areas across the study area which returned wind speeds between 5 m/s and 6.0 m/s, albeit large tracts of these areas are urban/suburban areas. In particular, the entire coastal region returned a wind speed of between 5.535 m/s and 6.0 m/s with some coastal areas returning wind speeds of between 6 and 6.5 m/s.

Figure 13 Wind Resource in eThekweni Municipality at 100m AGL (Energy Resource Maps, n.d.)



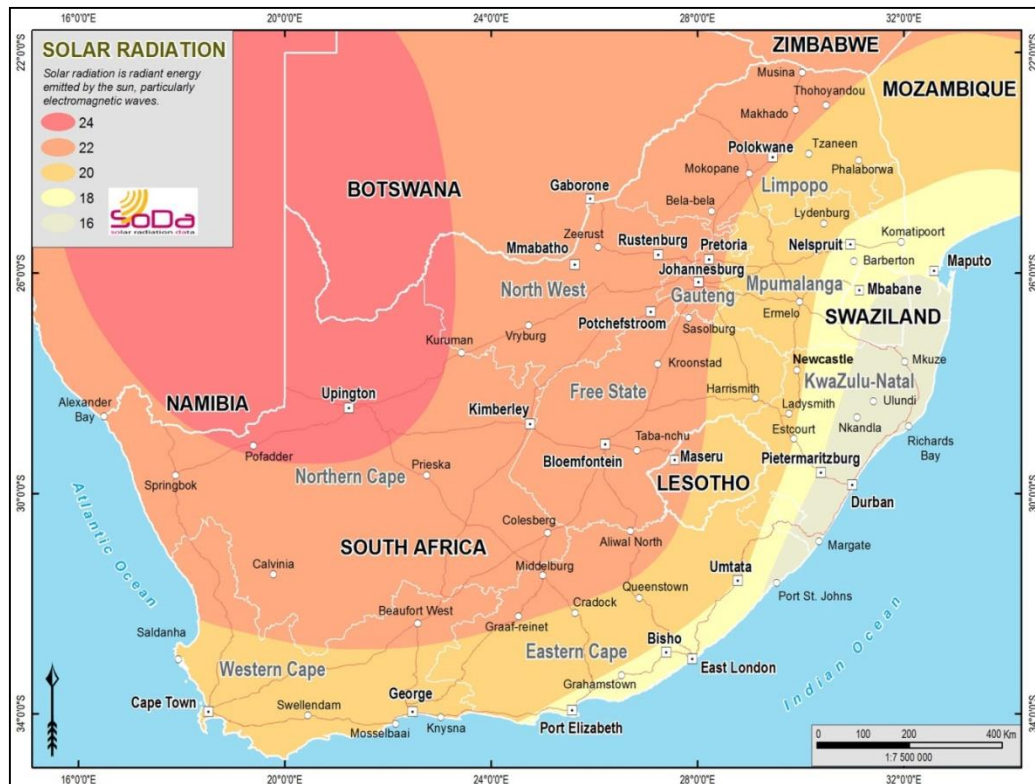
3.10.2 Solar Energy

Solar Energy can also effectively be categorised into two main areas, namely:

- **Solar Photovoltaic Power:** Photovoltaic (PV) technology has made very rapid strides in the past four years, in terms of reducing the cost of crystalline silicon (its main component) and commercializing thin film technology.
- **Solar Thermal Electricity Generation:** While PV is ideal for smaller projects and integrated into buildings, the technology of choice for big solar plants in the world's deserts looks set to be Solar Thermal Electricity Generation (STEG): concentrating the heat of the sun to generate steam, which can be used in conventional and highly efficient turbines.

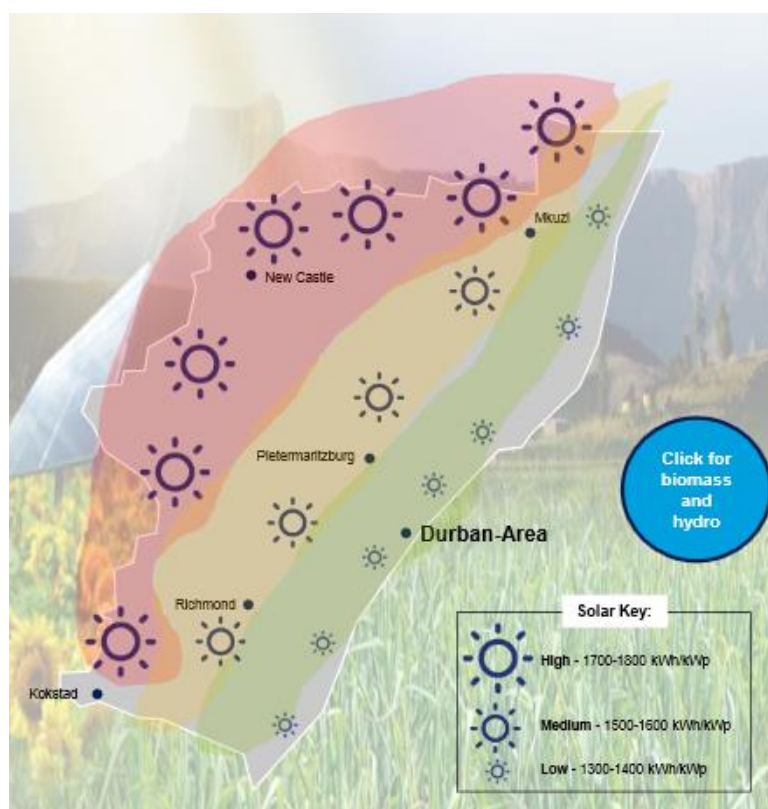
Productive solar energy requires sufficient annual shortwave radiation in order to be deemed feasible. The annual direct and diffuse solar radiation for South Africa is mapped below.

Map 37: Annual Solar Radiation within South Africa (Energy Resource Maps, n.d.)



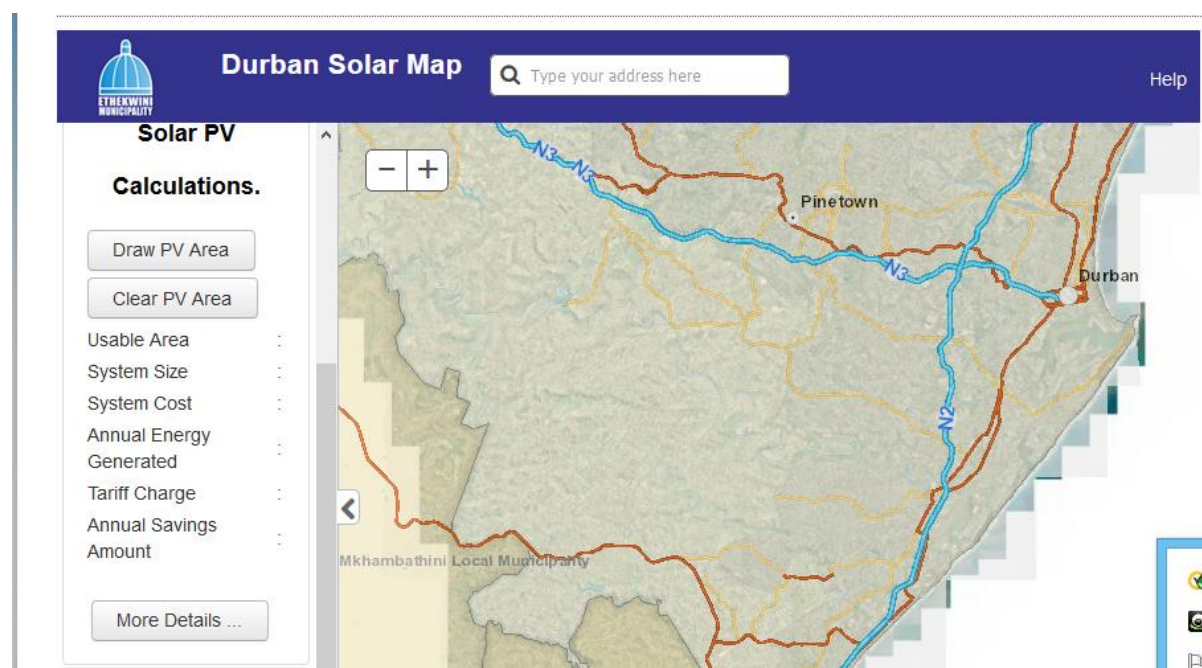
From the map above it is evident that the western and north western regions of South Africa, mainly the Northern Cape and North West Provinces receive the highest annual solar radiation and are thus best suited to the production of solar energy. The KwaZulu-Natal coast from Durban southward represents an area with the least recorded annual solar radiation and subsequently the least potential for the large scale production of solar energy. This comment does not exclude the micro-scale installations on individual buildings – which still remain a cost effective option for the user. The only possible areas suitable for large scale solar energy generation are within the western inland areas of the province within the uThukela District.

Figure 14 KZN Solar Resource Potential (Beires, 2015)



The online Durban solar map tool (<http://www.durbansolarmap.co.za/viewer/>), compiled by the eThekweni Energy Office, allows for planning and costing of solar PV projects within the eThekweni Municipality.

Figure 15: Screen clip from Durban Solar Maps online (Durban Solar Map, n.d.)



3.10.3 *Hydro Energy*

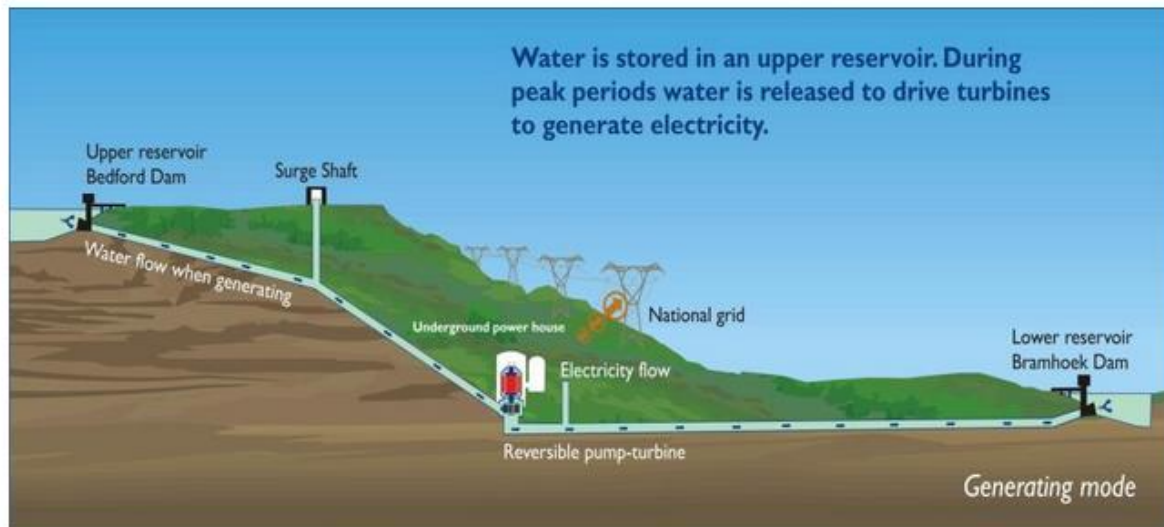
The Baseline Study on Hydropower in South Africa, an assessment conducted by the DME in 2002, indicated that the Eastern Cape and KwaZulu-Natal show the best potential for the development of small, i.e. less than 10MW hydropower plants. The advantages and attractiveness of these plants are that they can either be standalone or in a hybrid combination with other renewable energy sources.

To date, KZN hosts one large hydro-electric power station – the 1334 MW Ingula Pumped Storage Scheme, which is expected switch on 2nd half 2016 to 1st half 2017. The pumped-storage hydroelectric scheme consists of an upper and a lower dam 4.6 kilometres apart and connected to a power station by tunnels. The scheme is being built at a cost of R25 billion.[3] Construction began in 2005. The pumped-storage hydroelectric plant uses water from the upper reservoir to generate electricity during the peak demand periods of the day. At night, excess power on the grid generated by conventional coal and nuclear plants is used to pump water to the upper reservoir. 54.73% (1 892 people), of the total Ingula labour force has been recruited from local communities and municipalities in the KwaZulu-Natal and Free State provinces. The operational life of the power station is expected to be 50 years (Ingula Pumped Storage Scheme, n.d.). As part of the project, a partnership was established in 2003 between Eskom, BirdLife South Africa and Middelpunt Wetland Trust.

Figure 16: Progress on the Ingula Pumped Storage Scheme (Ingula Pumped Storage Scheme, n.d.)



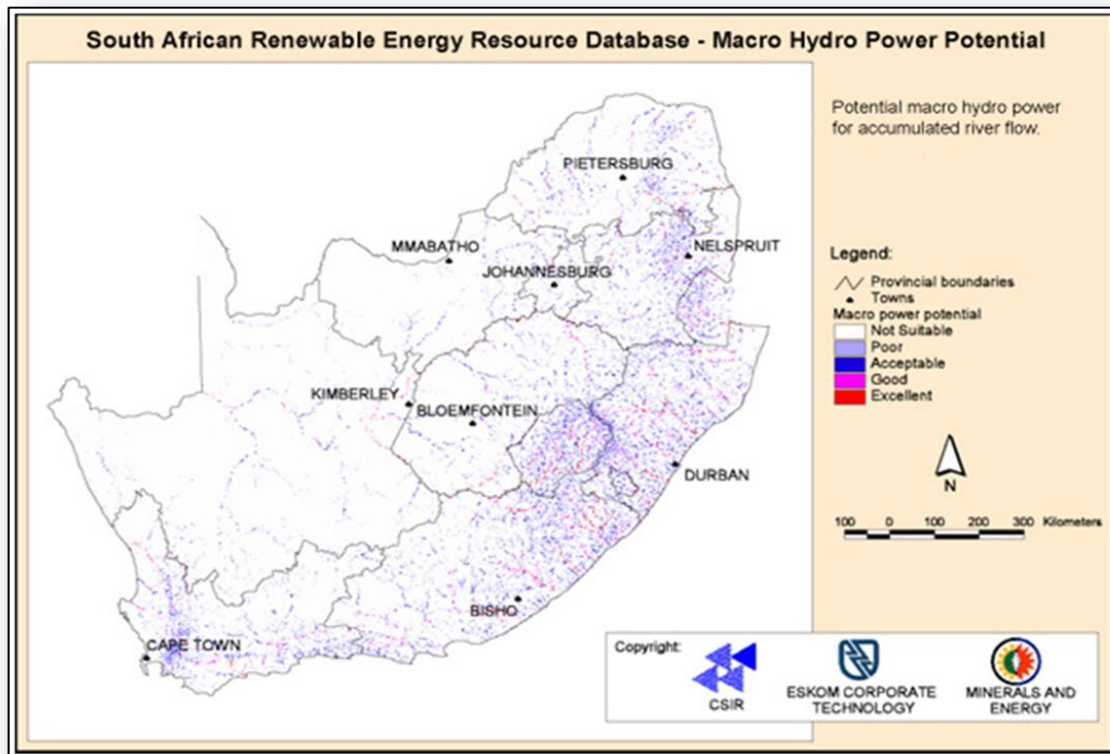
Figure 17: Diagram of the Ingula Pumped Storage Scheme (Ingula Pumped Storafe Scheme, n.d.)



It is estimated that a hydro power plant on the Mooi-Mgeni Transfer Scheme could have 5MW of hydropower capacity. The primary function of the Mooi-Mgeni Transfer Scheme is to transfer water from Spring Grove Dam on the Mooi River to the Mgeni system to meet the water consumption demands of eThekwin, Msunduzi and Umgungundlovu Municipalities. Construction of the Spring Grove Dam is now complete and the dam has been filling with water since March 2013.

As a secondary function, Umgeni Water is investigating the potential to generate hydro-electricity at the outlet of the transfer scheme. It is estimated that about 60 million m³ of water will be transferred per year. At a potential capacity of 5MW, the Hydro-power plant on the Mooi-Mgeni Transfer Scheme could generate ~18,500 MWh per year (Mooi-Mgeni Transfer Scheme, n.d.)

Map 38 South African Macro Hydro Power Potential

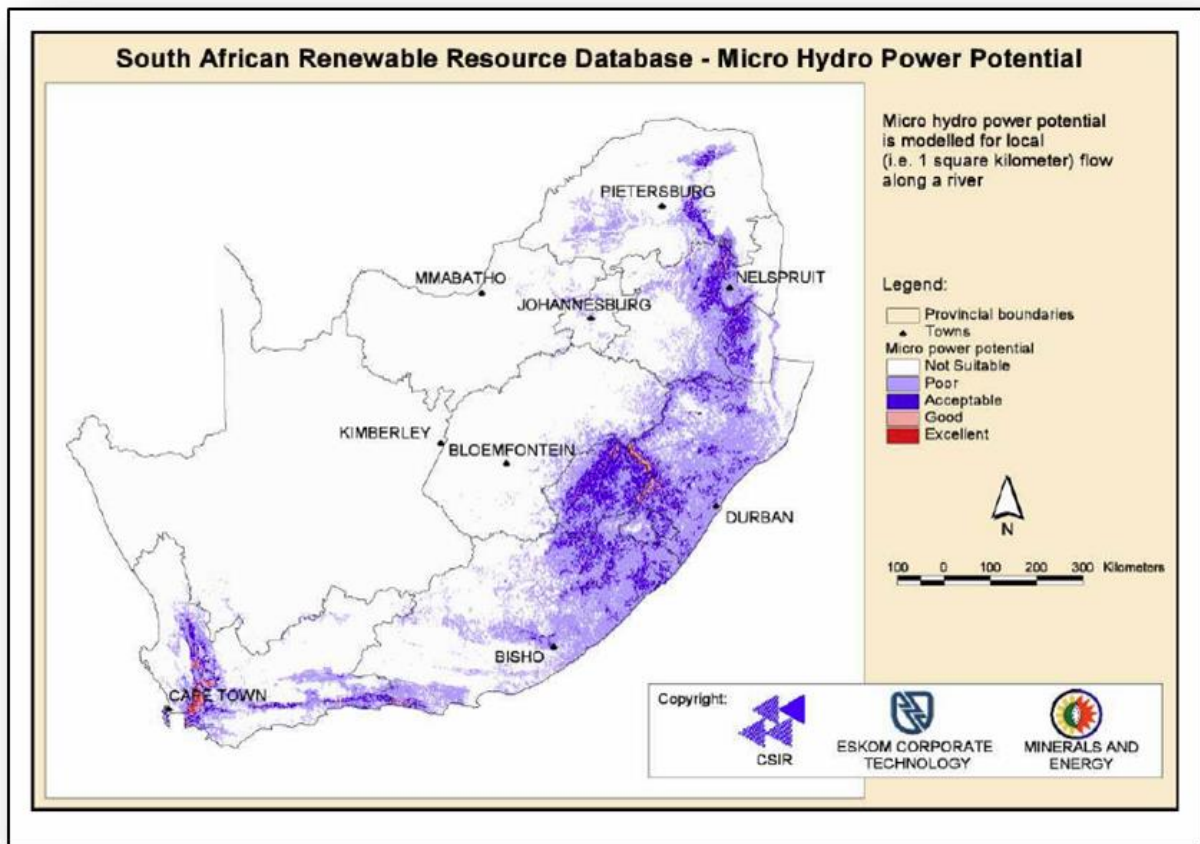


Source: Beires, 2015

Macro power potential was determined using the cumulative mean annual flow volume along a river length. Due to the topography and the high rainfall, KZN provides ample opportunity to implement macro hydro electrical schemes.

In comparison, micro power potential is modelled using the mean annual flow volume for a one kilometre stretch along a river. This approach gives a better estimate of local energy potential and highlights the potentials of fast flowing water (steep gradients) as opposed to large volumes of water. The map above depicts the areas with potential to establish Micro Hydro Power plants. Small plants refer to less than 10MW, hydropower plants. This potential is centred within KZN.

Map 39 South African Macro Hydro Power Potential



Source: Beires, 2015

3.10.4 Biomass Energy

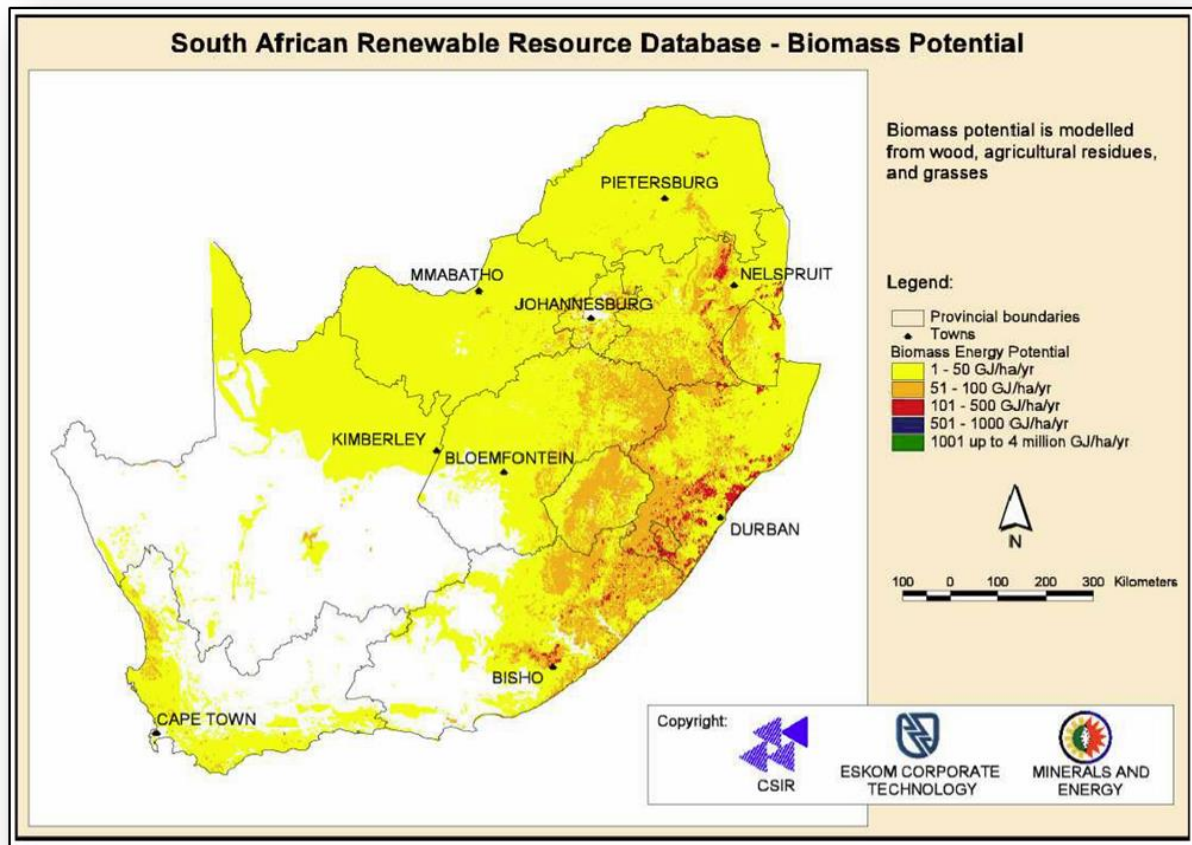
The main sources of biomass are for in-house heat and electricity generation and consist of the following materials

- Fuel Wood;
- Bagasse – Waste created during sugar production;
- Pulp – Waste created during wood processing.

Bio fuel can also be created through agricultural production of energy crops (Maize, Sunflowers and Jatropha Trees). Global investment in bio fuels is on the increase, but most of this flowed into corn-based ethanol, which is more expensive to produce than sugar-based ethanol, subject to volatile prices and controversial because its feedstock is a food staple around the world.

The map below depicts that the northern parts of KwaZulu-Natal has a low yield of biomass whilst the Southern areas of the province produces a medium quantity of biomass fuel.

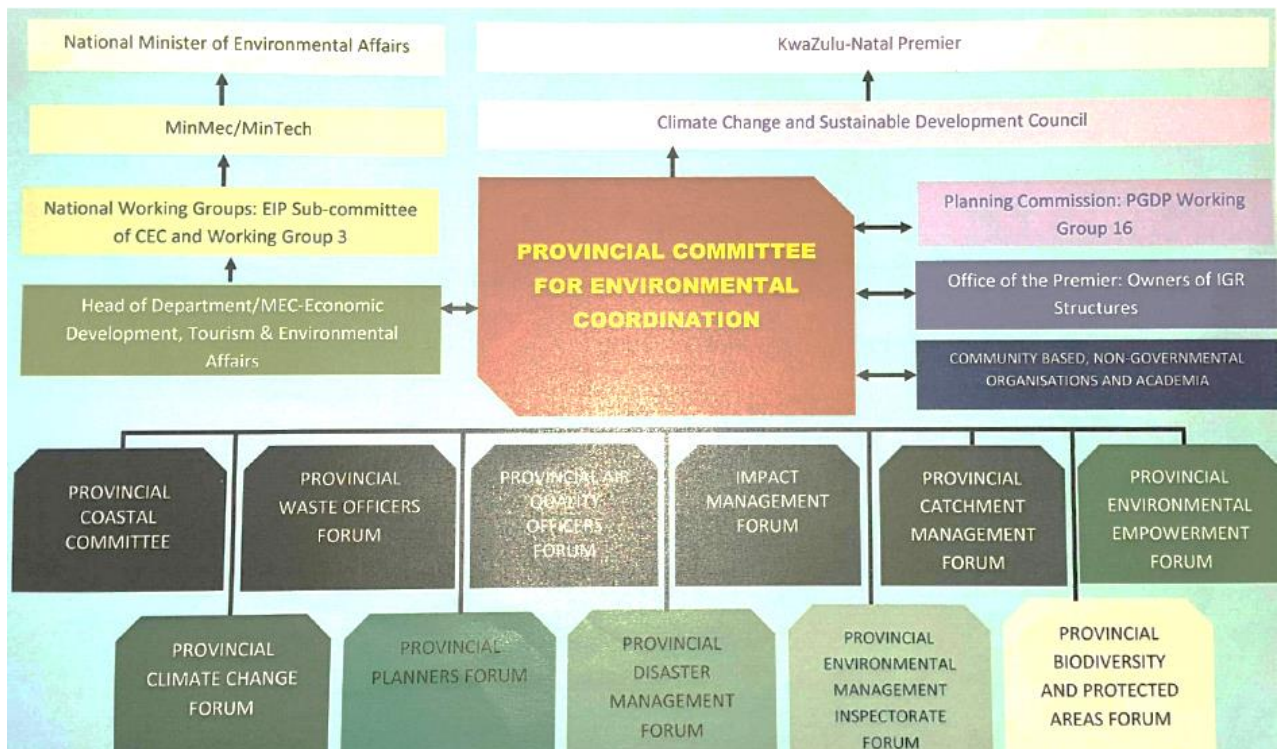
Map 40: South African Biomass Energy Potential



3.11 Institutional Arrangements

Discussions with the Action Working Group (AWG) 16 indicate that there is a need for the AWG to be incorporated into the Provincial Committee for Environmental Coordination (PCEC) in terms of Section 21 of the Intergovernmental Relations Framework Act, 2005 (Act No. 13 of 2005) (IGRFA) and work towards improving intergovernmental relations in the Province in terms of environmental management, enforcement and policy making. The PCEC would coordinate the various provincial environmental committees and structures, and liaise with the Planning Commission and national working groups. To date, participation in the PCEC has been reported to be poor and needs to be encouraged.

Figure 18: PCEC Intergovernmental Linkages (EDTEA pers comm)



3.12 Synopsis: Strategic Environmental Issues

From the brief analysis and overview of Environmental Landscape described above, the following key challenges and impacts have been identified as issues to be considered during the formulation of strategies in support of growth and development within the province:

- Reporting:** It is clear that the PGDP indicators need to be aligned with Outcome 10 (which in turn must encapsulate international commitments/ agreements), the Provincial Environmental Implementation and Management Plan and the National Strategy for Sustainable Development (NSSD). The KZN Environmental Outlook Report is in progress and must inform PGDP indicators. Need for indicators on green procurement and progress in priority catchments. Need for technical document to support the indicators.
- New data:** New data on the level of transformation of vegetation types in the Province is helping to refine conservation priorities. New landcover data (2015) from Ezemvelo KZN Wildlife will further refine these priorities and help to track the loss of high conservation value areas. New data on land degradation and gully erosion highlights the extent of the problem, and priority districts, where soil conservation and land care programs need to be targeted.
- Agriculture:** CARA legislation needs to be enforced, and planning needs to be informed at the local and district levels by the SPLUMA guidelines i.e. protection of unique or high agricultural potential land. Need for agricultural sector plans. The land capability categories decision support layer needs to be introduced into rural development plans and SDFs. Significant trade-off decisions have been taken recently, where high potential agricultural land has been set aside for other uses, notably at Dube Tradeport,



and the full impact of these land use planning decisions needs to be assessed. The impact of climate change on key crops in KZN needs to be assessed and incorporated into agricultural sector plans. Temperate crops are most at risk in terms of climate change effects, even under the commitment to contain temperatures within 2 degrees increase, crops such as cherries could no longer be grown in the province.

- **Climate change:** Vulnerability to climate change in KZN has been assessed in 2009 and vulnerability was found to be linked to poverty levels, settlement densities as well as levels of land degradation. This study needs to be updated. Lower vulnerability risk is highlighted in Durban/Ethekewini and Pietermaritzburg due to disaster readiness. The commitments of COP21 (particularly the 2 degree commitment) need to be mainstreamed into policy and planning, particularly in terms of rolling out industrial energy efficiency strategies, implementing public transport plans, the Municipal Waste to Energy protocol, enforcing the provisions of the National Environmental Management: Air Quality Act, 2004, ensuring that municipalities include climate change response strategies into IDPs and incentivising renewable energy projects. The baseline Greenhouse Gas Emissions inventory (GHG) for the province needs to be determined to support these initiatives. The provincial Climate Change and Sustainable Development Council (KZNCCSD) will play an important role in coordinating these activities.
- **Renewable energy:** There are opportunities to incentivise and increase the number of provincial hydro-electric power, wind power, solar power and biomass projects as well as Carbon Capture and Storage, to reduce reliance on non-renewables and to allow for decentralised electricity generation. The removal of traditional regulatory barriers, through the 2015 EIA guideline for Renewable Energy projects, will require greater coordination between regulatory authorities. Mechanisms to unlock green economy opportunities exist through the Green Economy Technical Assistance Fund and Green Work/ Groen Sebenza funded by National Treasury.
- **Intergovernmental relations:** Action Working Group 16 can be incorporated into the Provincial Committee for Environmental Coordination (PCEC) in terms of Section 21 of the IGRFA and work towards improving intergovernmental relations in the Province in terms of environmental management, enforcement and policy making. The PCEC would coordinate the various provincial environmental committees and structures, and liaise with the Planning Commission and national working groups. To date, participation in the PCEC has been reported to be poor and needs to be encouraged.
- **Agricultural productivity:** High value agricultural land is being lost at a rate of almost 1% per annum, due to urban or industrial development and lack of planning. Agricultural land cannot be replaced and the Province needs to secure this land to provide for food security, particularly in the light of the uncertainties around climate change and the impact on agricultural productivity in the Province. Measures are required to prevent further loss of productive agricultural land in the province, particularly in light of the effects of climate change, through implementing and enforcing CARA legislation, through Land Care, and a network of land use planners and Extension Recovery Program (ERP) officers. This will reduce future costs of land restoration and disaster management and ensure food security. The provincial agricultural potential land categories report was completed by DARD and DAFF in 2013 (updated 6-monthly), which is aimed at planning and providing information to districts and local municipalities for inclusion in SDFs but further work is needed at municipal level to



accurately identify and secure this land (agricultural sector plans are one means of achieving this). A policy gap exists in terms of enhancing sustainability of land reform and restitution projects in rural areas and this must be addressed.

- **Responses to Climate Change:** Areas more vulnerable to effects of climate change need to be highlighted in policy and programs, both in terms of disaster management responses and means of increasing resilience in these areas. In relation to the high risk coastal areas in KZN, the Provincial Coastal Management Program is in progress and through the work of the Coastal Committee, this will inform coastal management strategies and setback lines based on the latest sea level rise modelling.
- **Institutional Capacity:** The delays and lack of staff to process water use license applications at the Department of Water and Sanitation needs to be addressed urgently. The repercussions of delays include non-compliance and impact on local economic growth and ability to meet targets when projects are held up in the water use licensing system, under the new "One Environmental System".
- **Water:** Many of the previously designated Water Management Areas are experiencing a deficit in terms of meeting demands related to year 2035 based on current rates of supply. There is an urgent need to implement water efficiency measures, and move towards rainwater harvesting, groundwater use, low-water or no-water technologies, industrial water efficiency, desalination and water re-use strategies. Wastewater treatment works need to be licensed, upgraded and technical staff put in place to manage these facilities. Given that currently 60% of the strategic water resource areas in KZN are under natural land use (untransformed), reporting on land use change and invasive and alien plant density in SWSAs is imperative to better manage impacts on water supply. FEPAs are based on sub-quaternary catchment units and are required to be maintained in order to conserve freshwater ecosystems and protect water resources for human use i.e. are high value water resources in terms of provision of ecosystem services. These are the "low-hanging fruit" in terms of provincial priorities for conservation of water resources. Recent proposals for fracking of natural gas in KZN must be scrutinised against the possible impacts on both ground and surface water quality and quantity in the SWSAs, as well as other impacts such as seismic impacts.
- **Biodiversity:** The main threats to the biodiversity base in the Province include the spread of alien and invasive plant species (also a threat to water supply) and transformation of land (127 909 ha per annum is reportedly transformed each year). Project impacts need to be managed at level of planning. The Invasive Alien Species Program (IASP) contributes 5, 500 jobs per annum (full-time equivalent). There is a need to set aside more areas as formal/ informal (stewardship) conservation areas, particularly in North Western KZN, in order to protect vulnerable ecosystems and meet biodiversity conservation targets. The effects of climate change on key biomes needs to be interrogated and used to inform long term biodiversity planning – current data indicates that the coastal forest belt is most vulnerable with almost complete loss predicted in terms of high risk scenario.
- **Municipal capacity:** Technical expertise in terms of environmental and waste management is needed in local municipalities in order to implement the biodiversity sector plans, waste management plans, rural development plans, and other environmental policies and plans.





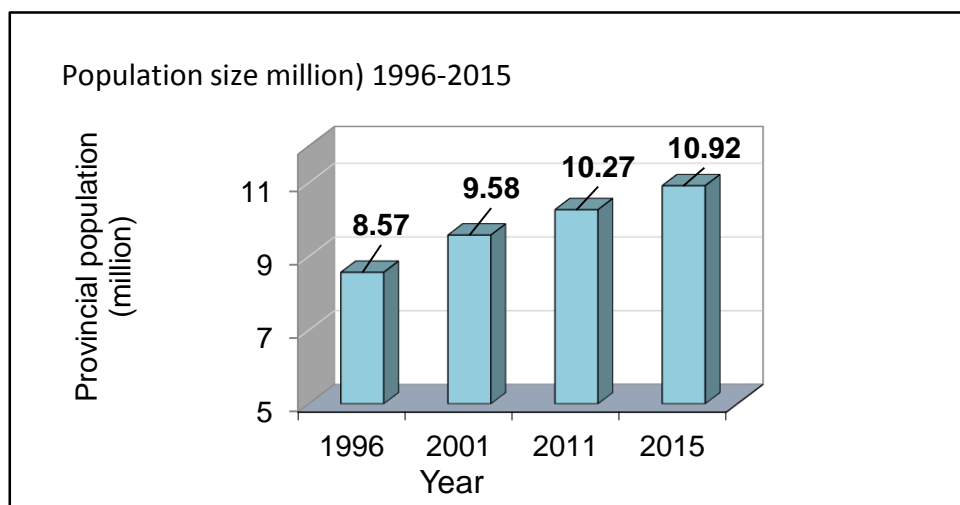
4 THE DEMOGRAPHIC LANDSCAPE

4.1 Population characteristics

4.1.1 Population size and growth

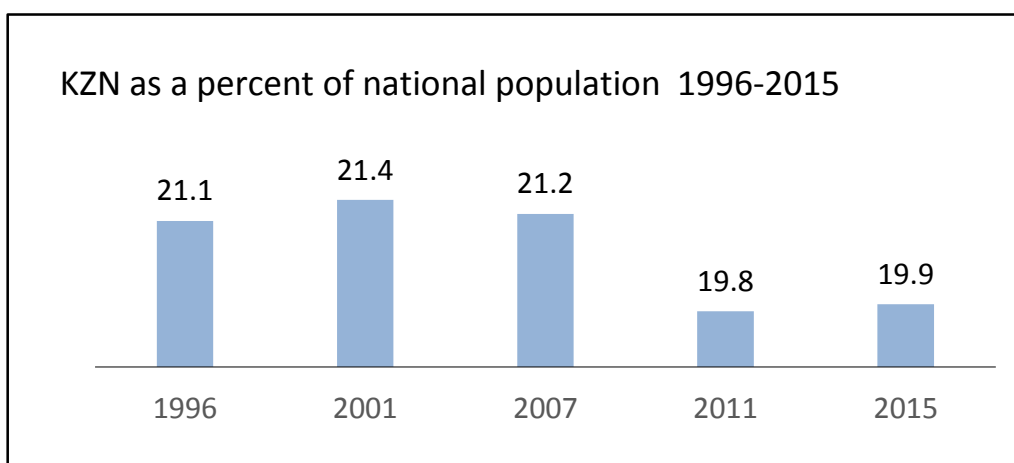
The population of KwaZulu-Natal grew gradually from 8.57 million in 1996 to 9.58 million in 2001, and to 10.27 million in 2011. As shown in Figure 19, Statistics South Africa estimated a mid-year population of 10.92 million for the province in 2015. Its share of the national population was 21.1% in 1996 and declined to 19.9% in 2015 (Figure 20), making KwaZulu-Natal the second most populous province in the country.

Figure 19 Population size 1996 - 2015



Sources: Census data and mid-year population estimates for 2015.

Figure 20 KZN as percentage of SA population 1996 - 2015



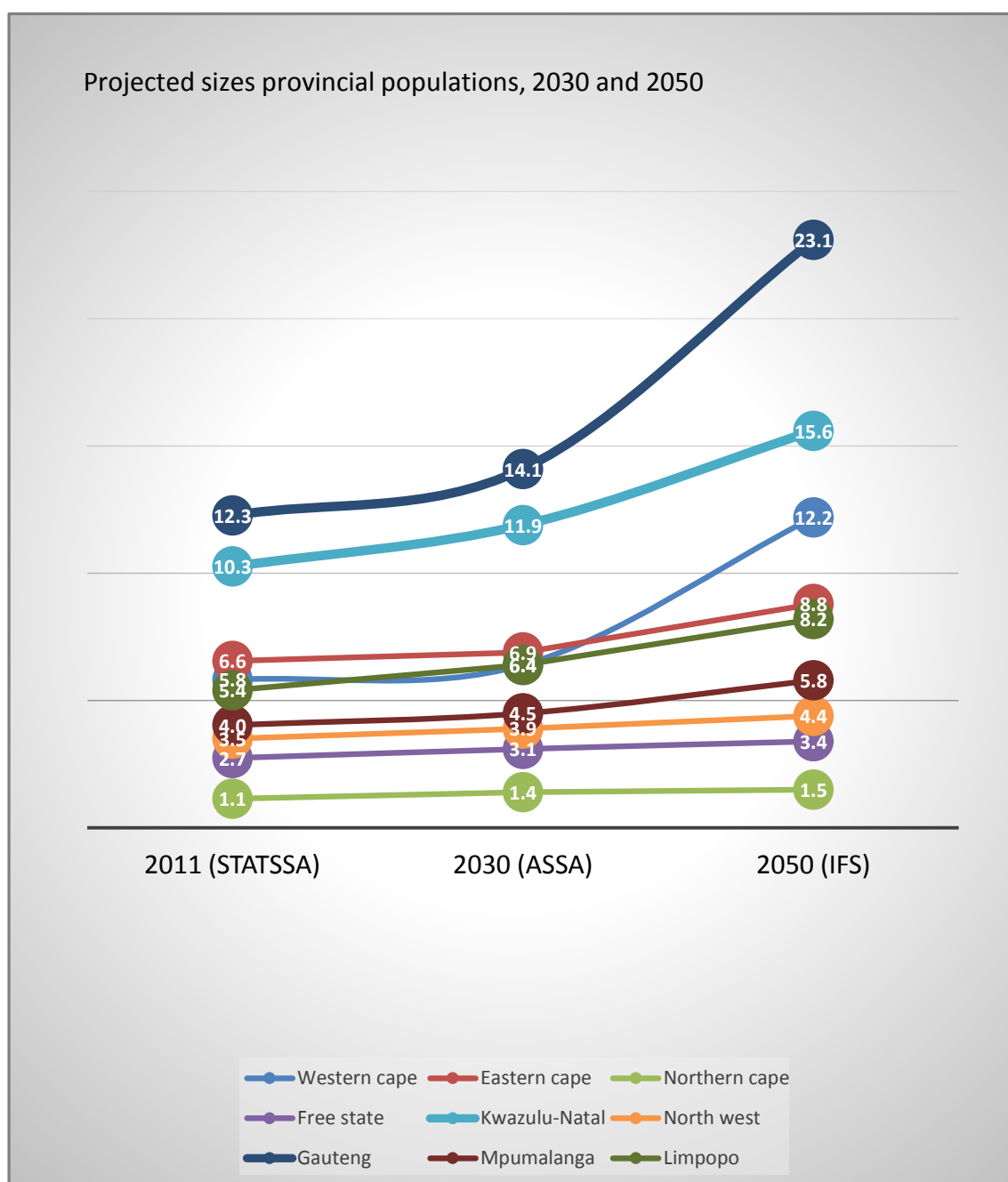
Source: Statistics South Africa, 2012 and 2015

The mid-term and longer term growth patterns of the provincial population depend on trends in key demographic factors that include fertility, mortality and migration. Projections that are



based on different assumptions about these factors indicate a population size of between eleven and twelve million for KwaZulu-Natal by 2030, a size which is likely to keep KwaZulu-Natal as the second most populous province following Gauteng in the next fifteen years (Figure 21).

Figure 21 Projected size of provincial population 2030 - 2050



Sources: ASSA model 2011; IFS, 2013

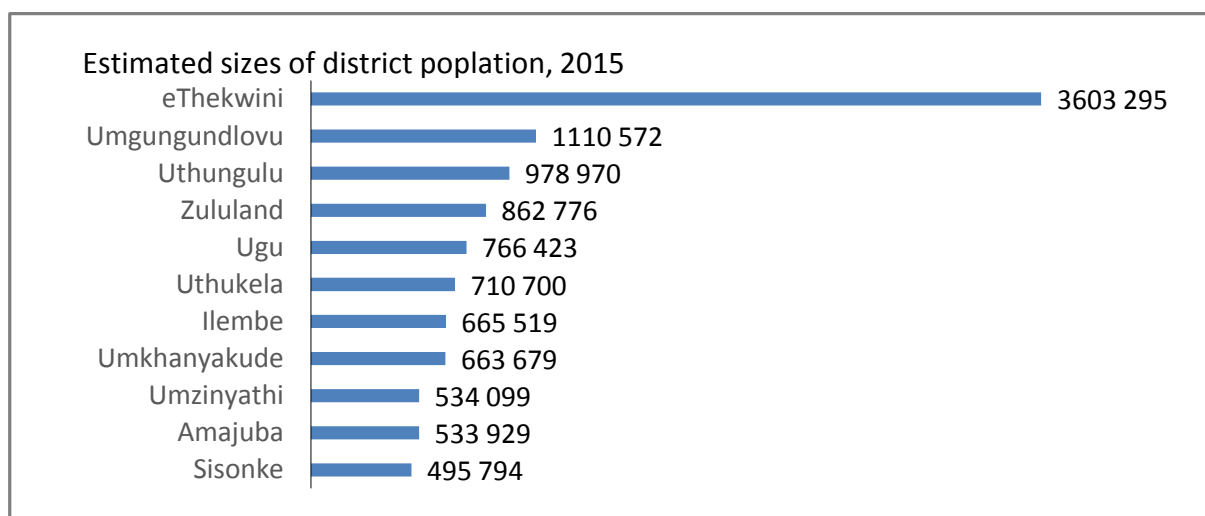
4.1.2 Population distribution, growth and density

KwaZulu-Natal population is unevenly distributed in the districts. Ethekwini metropolitan district had an estimated population of close to three and half million people in 2015. Other districts with significant shares of the provincial population in 2015 are UMgungundlovu (1.1million), Uthungulu (0.95 million), Zululand (0.84 million and Ugu (0.76 million). Sisonke had the smallest share (just about half a million) of the provincial population in 2015. The three districts of



Ethekwini, uMgungundlovu and Uthungulu, which are among the main hub of economic activities in the province, constituted more than half of the population of KwaZulu-Natal in 2015.

Figure 22 Estimates of district population 2015



Note: Based on mid-year population estimate by StatsSA

All districts recorded some increases from 2011 to 2015 with an estimated average growth rate of 1.3%. Districts with growth rates higher than the provincial average include Ethekwini, Amajuba, Sisonke and iLembe (Table 16). The average population density for the Province in 2015 was 116 persons per km². Population density varied widely, ranging from only 48 persons per km² in Sisonke and Umkhanyakude to as many as 1611 per km² in eThekweni. Four districts (iLembe, Ugu, Uthungulu and UMgungundlovu) had more than a hundred people per km².

Table 16 Estimated growth rates and population density, 2011-2015

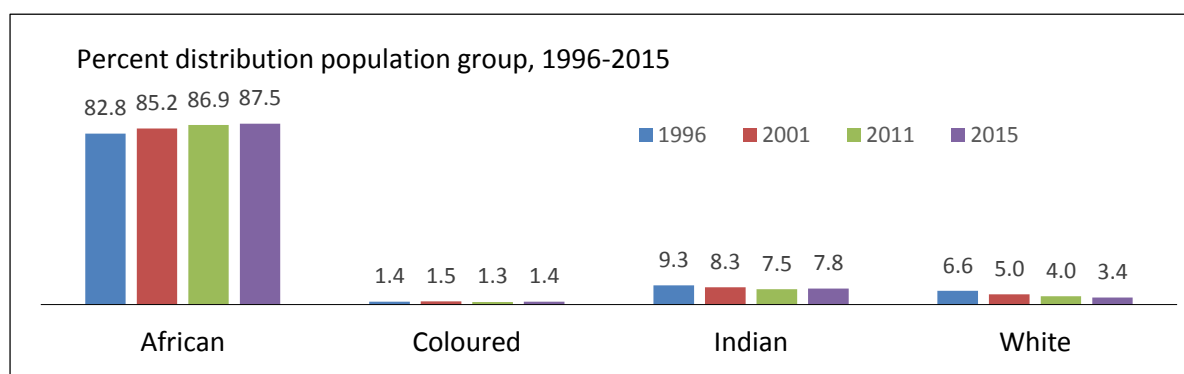
Estimated growth rates and population density, 2011-2015		
District	Growth rate	Density (pop per km ²)
Ugu	1.2	151
UMgungundlovu	1.0	112
Uthukela	0.9	62
Umkhanyakude	1.3	48
Uthungulu	0.9	116
Sisonke	1.8	48
Umzinyathi	0.9	62
Amajuba	1.4	77
Zululand	0.9	57
iLembe	2.0	204
eThekweni	1.4	1611
KwaZulu-Natal	1.3	116

Source: Calculated from the censuses and mid-year estimates by STATSSA.

Population groups

The African sub-group of the population is in a majority. Their share increased from 83% in 1996 to 87.5 in 2015. The African population is also more evenly distributed in districts than others: 29% of the African population were estimated to live in eThekweni and ten percent in Umgungundlovu. In comparison, 60.4% of the Coloured group in the Province lived in eThekweni and 15% in Umgungundlovu in 2015. Seventy-five percent of the Indian population and 53% of the White group in KwaZulu-Natal lived in eThekweni in 2015.

Figure 23 Distribution of population groups

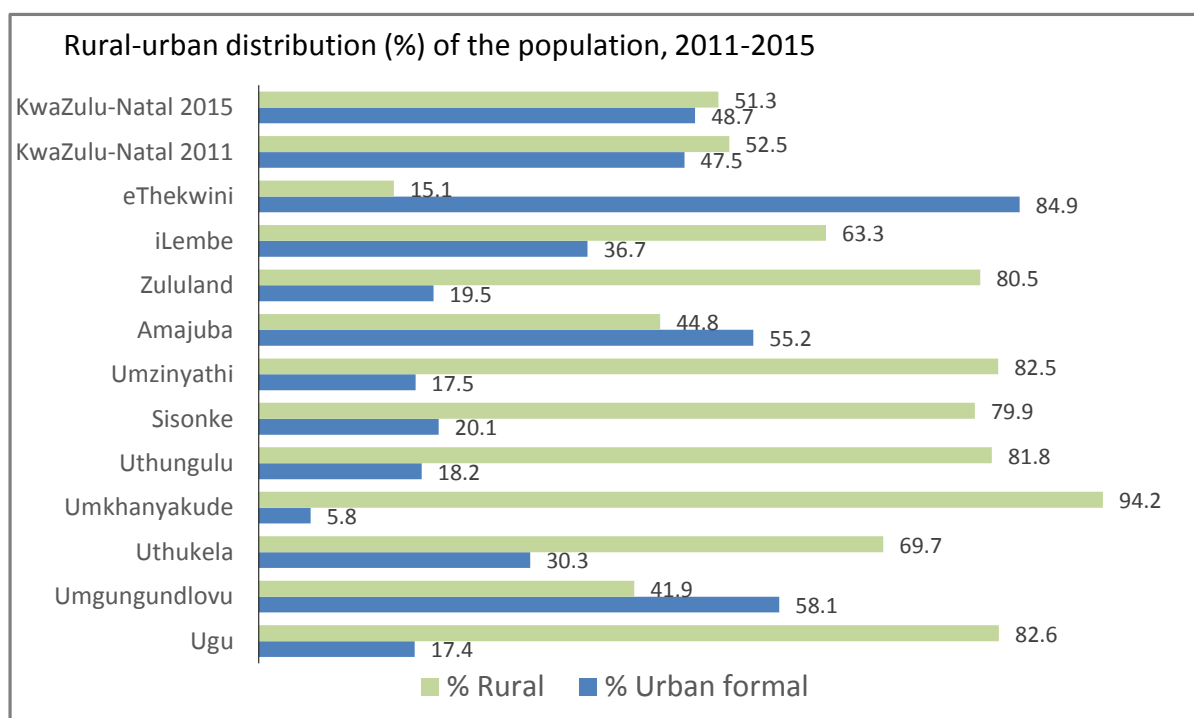


Source: Calculated from censuses and population estimates (1996-2015).

Rural-urban composition

KwaZulu-Natal remains one of the three provinces in South Africa where the rural population outnumbers the urban population, though with a decreasing margin. Fifty-one percent of people in the province lived in rural areas in 2015. Figure 24 shows that greater proportions of the population of eThekweni (85%), uMgungundlovu (58.1%) and Amajuba (55.2%) lived in urban areas in 2011.

Figure 24 Rural-urban population distribution



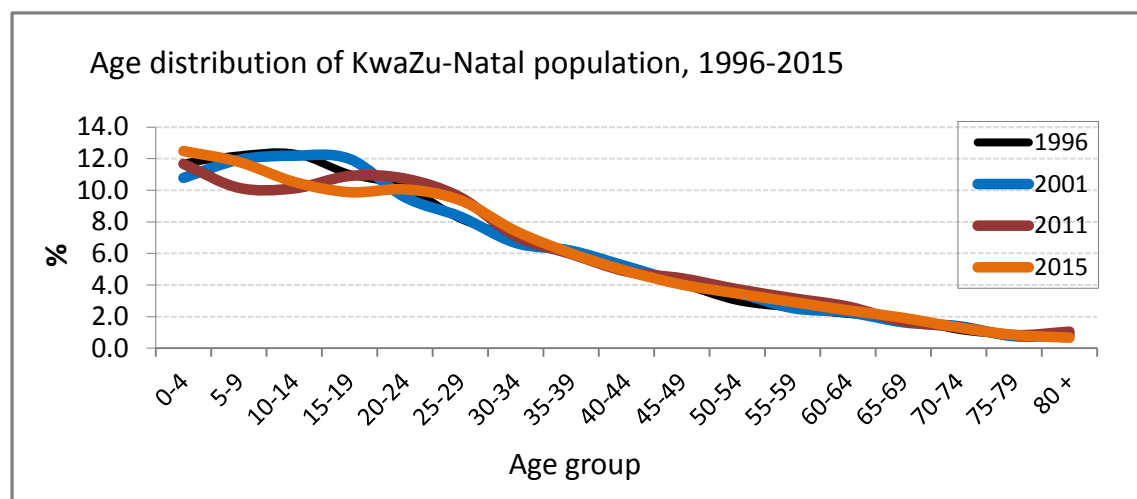
Source: Calculated from Census and GHS data sets.



4.1.3 Age distribution

The provincial population is characterized by a gradual reduction in the percentage of people under the age of 5 and gradual increase in the population in youthful⁸ and older age groups (Figure 25). An estimated number of 3.8 million people were younger than 15 years in 2015; 6.6 million were aged 15-64 years and 0.52 million were aged 65 years or older.

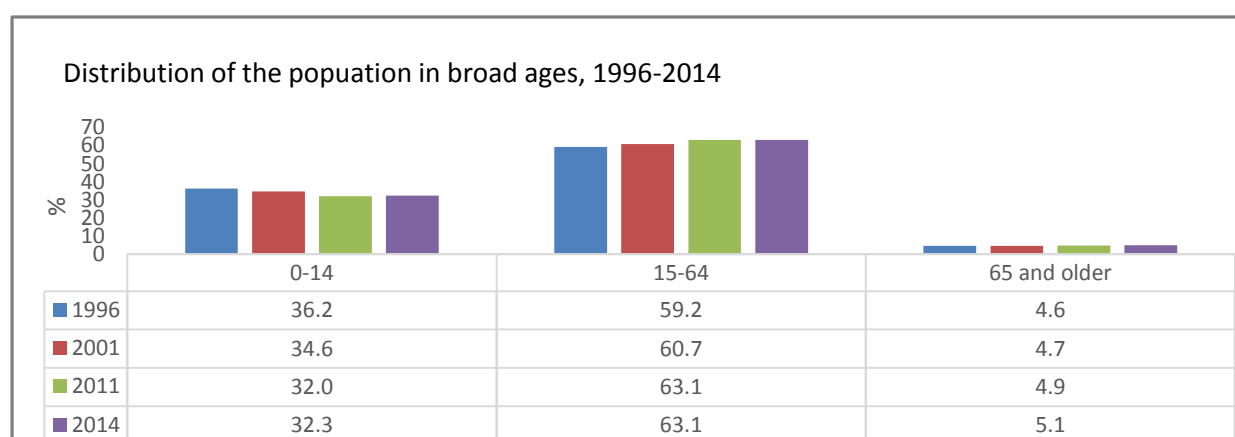
Figure 25 KZN Age distribution 1996 - 2015



Source: Calculated from census 1996-2011 data; STATSSA, 2015.

The population of KwaZulu-Natal in active working age group (15-64) increased slightly from 1996 to 2015 (Figure 26). The population aged 65 years or older changed from 4.6% in 1996 to 5.1% 2014. The increase in this older age group was significant among the White, Indian and Coloured sub-groups of the population (Figure 27).

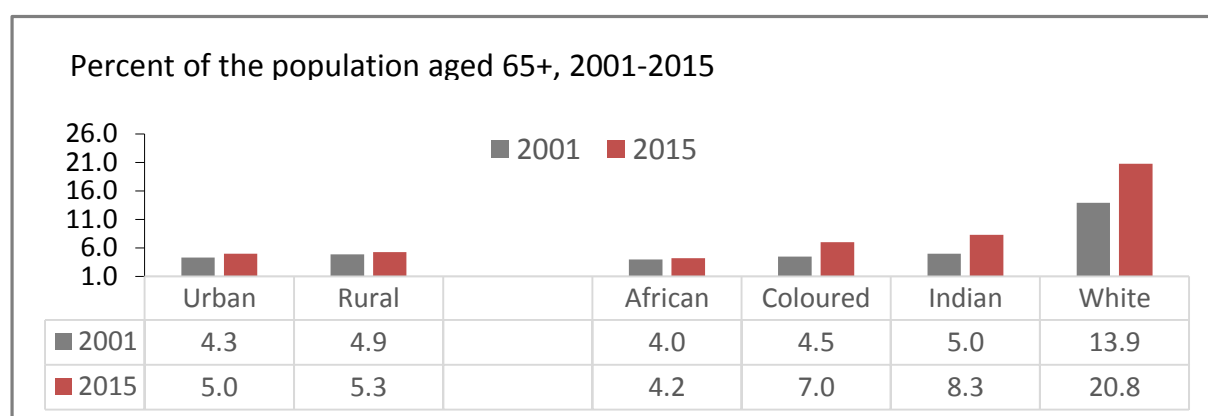
Figure 26 Age distribution 1996 - 2014



⁸ The differences in the age distribution of young people in the 2011 census and its predecessors as shown in Figure 4.6 remain a subject of unresolved debates among demographers.

Source: Calculated from censuses and mid-year population estimates data.

Figure 27 Population over age 65, 2001 - 2015

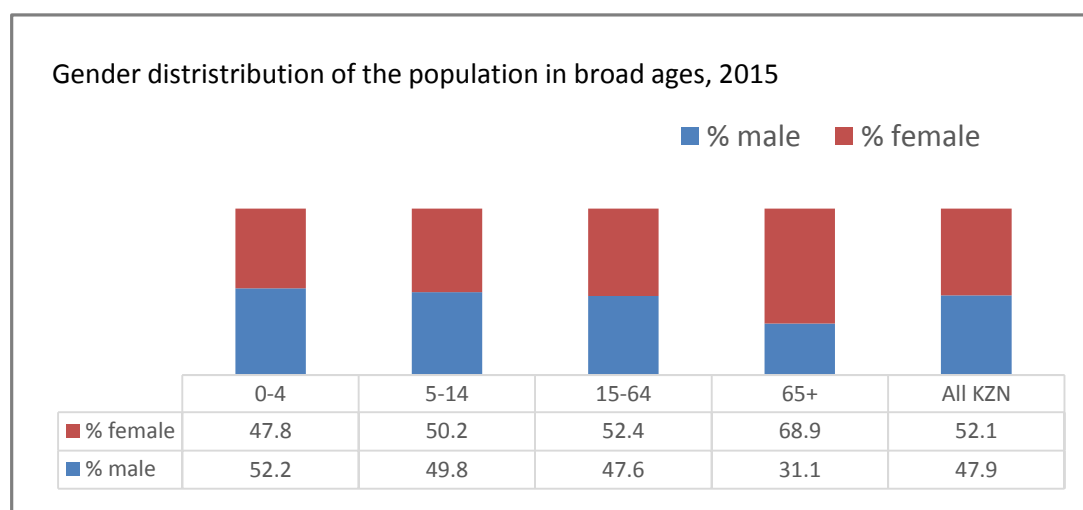


Source: Calculated from census population estimates by Statistics South Africa

4.1.4 Gender distribution

Figure 28 shows that women outnumbered men in all three census years for reasons that include sex-selective mortality and migration processes. Fifty-two percent of the population of KwaZulu-Natal were women in 2015. Males outnumbered females at the youngest age group, but thereafter, there were more females than males (Figure 28).

Figure 28 Gender distribution, 2015

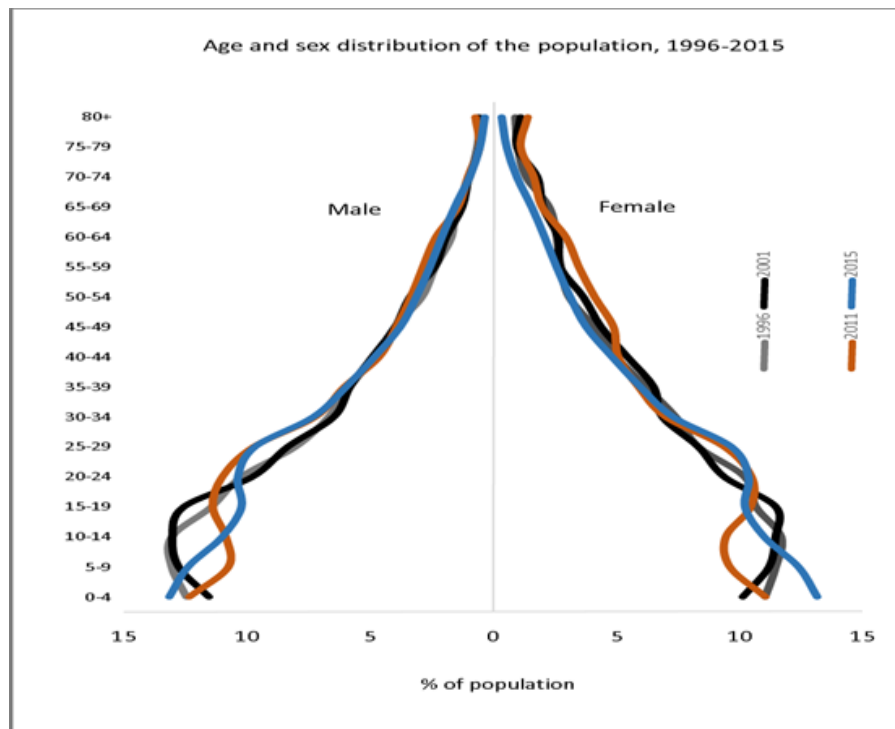


Source: Data from Statistics South Africa

There were 92 males for every 100 females in the province in 2015. The sex ratio for the youngest age group (0-4) was 91. The sex ratios for other broad age groups were: 101 for people aged 5-14, 91 for the wide age group of 15 -64, and 52 for people older than 64 years.



Figure 29 Age and sex distribution 1996 - 2015



4.2 Fertility

4.2.1 Marriage and childbearing

Marriage is highlighted here in the context childbearing because of its statutory and developmental roles in South Africa as in other countries. First, formal marital unions are entrenched in national legal and statistical systems of South Africa. Marriage data are routinely collected and analysed by relevant institutions, and marital status is used for a wide range of official decision-making purposes. Secondly, promotion and strengthening of marriage are among the guiding principles of the White Paper on Families in South Africa.⁹ From the perspective of health development, the report of the most recent national HIV and AIDS survey¹⁰ recommend promotion of marriage following results which show a lower rate prevalence of HIV among legally married people.

KwaZulu-Natal shows remarkable childbearing patterns with important implications for social and economic development. First, the majority of all women in childbearing ages were never in a formal marriage (67.4%), and 8.5% were cohabiting in 2014. Altogether, less than a quarter of all women in childbearing ages was married (21.2%), widowed (1.6%), separated or divorced (1.3%). Secondly, the province has a high prevalence rate of non-marital

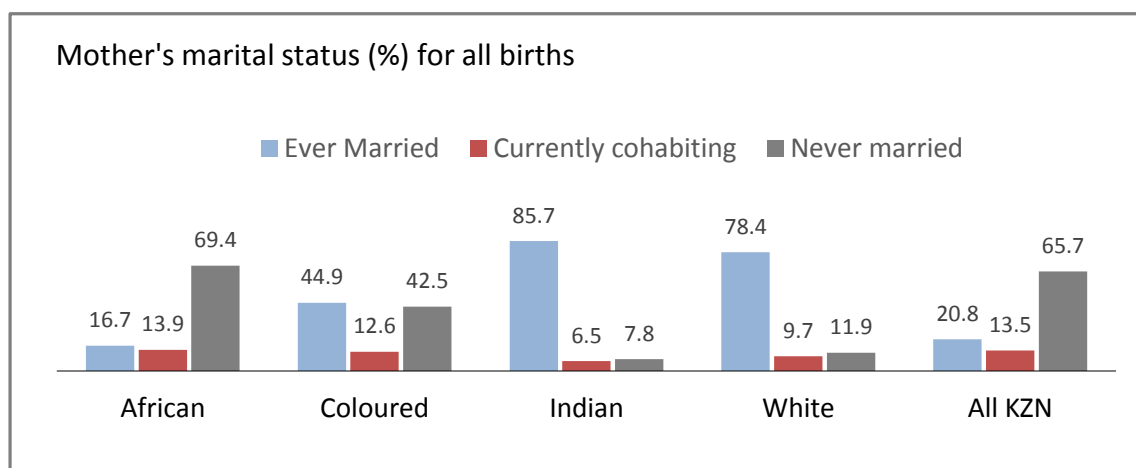
⁹ Department of Social Development. 2012. *White Paper on Families in South Africa*. Pretoria.

¹⁰ See Chisana, et. al. 2014.



childbearing. Only 21% of all births in KwaZulu-Natal in 2011 were by ever-married mothers (Figure 30). More than sixty-five percent of births were by women who were never married. This childbearing pattern is predominantly a characteristic of African and Coloured population groups. In contrast, 86% of births among the Indian sub-group, and 78% of births among the White group were by ever-married mothers.

Figure 30 Mothers marital status



Source: Chimere-Dan, 2014.

Table 17 Mothers' marital status – municipal districts

Mother's marital status (%) for all births			
Characteristics of mothers	Marital status		
	Ever Married	Currently cohabiting	Never married
Ugu	18.0	9.2	72.8
UMgungundlovu	25.5	9.4	65.1
Uthukela	17.0	14.3	68.7
Umkhanyakude	12.1	14.6	73.3
Uthungulu	18.7	11.4	69.9
Sisonke	23.4	17.5	59.1
Umzinyathi	10.8	24.2	64.9
Amajuba	13.9	8.8	77.3
Zululand	15.5	8.2	76.3
iLembe	16.8	18.1	65.1
eThekweni	28.6	14.4	57.0
Place of residence			
Urban	28.8	14.8	56.4
Rural	14.7	12.6	72.6
Education			
No education	24.5	22.7	52.8
Primary	20.0	22.5	57.6
Part secondary	15.3	14.4	70.3
Secondary +	26.1	9.7	64.3
Work status			
Working	35.0	13.4	51.5
Not working	15.9	14.6	69.5



Not economically active	19.1	12.3	68.7
-------------------------	------	------	------

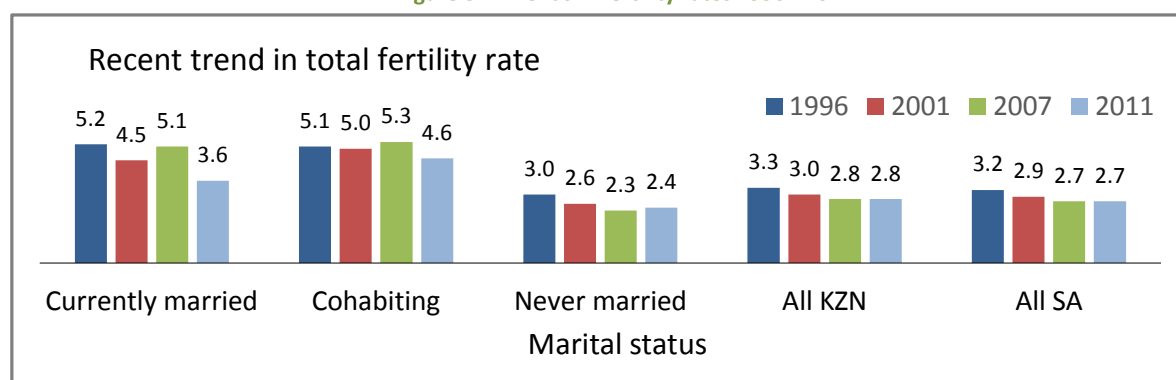
Source: Census 2011 datasets and Chimere-Dan, 2015

4.2.2 Fertility levels and trend

The total fertility rate for the province in 2011 was 2.8. Statistics South Africa used an assumed total fertility rate of 2.x for the Province in the 2015 mid-year population estimate. Available data show that the level of fertility is higher in Umzinyathi, Sisonke and Zululand, than in other districts. It is also higher in rural areas, among those with no more than primary education, and for non-working women. The African sub-group of the provincial population have a higher level of fertility than others.

KwaZulu-Natal experienced a decline of fertility from 3.3 in 1996 to 3.0 in 2001, and down to 2.8 in 2007, a level that did not change in 2011¹¹ (Figure 31). This decline is quantitatively bigger for marital fertility, although its effect on the total fertility rate is not pronounced because there are relatively fewer married mothers than those who have never been married.

Figure 31 Trends in fertility rates 1996 - 2011



Source: Chimere-Dan, 2014

Table 18 Differences in fertility rates - districts

Differences in total fertility rate				
	Ever married	Cohabiting	Never married	All
Ugu	3.7	4.4	2.7	2.9
UMgungundlovu	3.6	3.4	2.1	2.5
Uthukela	4.1	5.1	2.7	3.1
Umkhanyakude	3.6	4.9	3.0	3.3
Uthungulu	3.2	4.2	2.2	2.5
Sisonke	5.4	5.4	3.0	3.7
Umzinyathi	4.9	6.4	3.2	3.8
Amajuba	3.4	4.4	2.7	2.9
Zululand	4.3	5.4	3.1	3.4
iLembe	3.9	4.7	2.7	3.1

¹¹ Most demographers do not think that KwaZulu-Natal has experienced a significant rate of fertility decline during the past decade.



eThekweni	3.3	4.1	1.9	2.4
Urban	3.4	4.1	1.9	2.4
Rural	4.0	5.1	2.9	3.2
African	3.8	4.7	2.5	2.9
Coloured	2.7	4.0	1.6	2.3
Indian	3.4	3.4	0.3	1.7
White	3.1	1.8	0.7	1.9

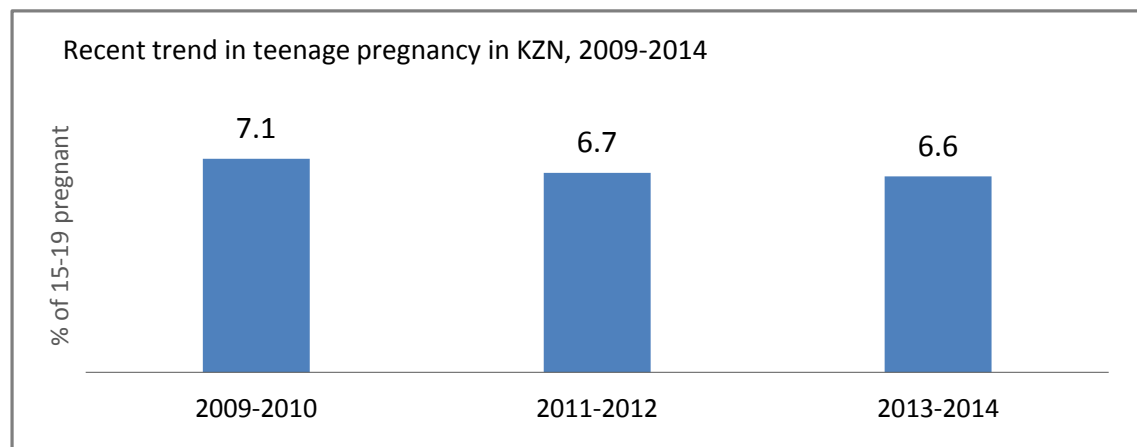
Source: Chimere-Dan, 2014

The low prevalence of marriage and marital births in KwaZulu-Natal and other parts of South Africa are demographic realities, resulting in part, from past policies, and which should be considered alongside other factors such as female-headed households and teenage childbearing that are established correlates of elevated social and economic disadvantage in South Africa and other societies.

4.2.3 Teenage pregnancy and childbearing

The rate of teenage pregnancy in KwaZulu-Natal declined slightly from 2009 to 2014. Figure 32 shows that 6.6% of all women aged 15-19 years were pregnant in 2013-2014 compared to 7.1% in 2009-2010. Teenage pregnancy is more prevalent among African subgroup of the provincial population, and also slightly higher among girls who live in rural areas.

Figure 32 Teenage pregnancy trend 2009 -2014



Source: Calculated from General Household Surveys (2009-2014).

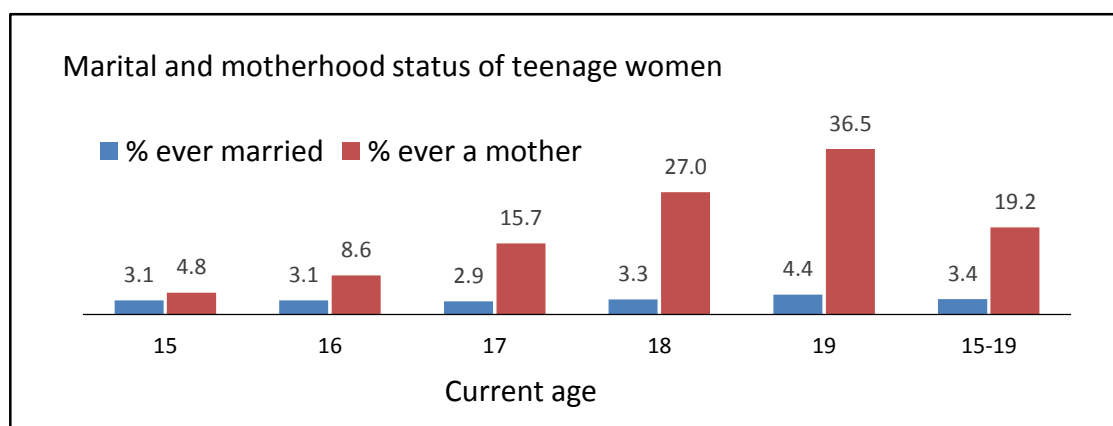
A high proportion of births by teenage women take place outside a formal marriage.¹² Figure 33 shows that only 3.4% of all women under the age of twenty in 2011 were ever married, compared to as many as 19.2% who were already mothers. The prevalence rate of

¹² This pattern contrasts with the experiences of most African countries where concerns about teenage childbearing are linked to teenage marriage because most births by teenage mothers take place within a marriage.

motherhood in 2011 increased with age, rising from 4.8% for 15-year old women to 36.5% for those aged 19 years.

The data for 2011 in Table 19 show that the rate of teenage motherhood ranged from 16.7% in Uthungulu to 20.9% in Umkhanyakude. It was slightly higher in rural areas (20.1%) than in urban areas (17.7%). The prevalence of teenage motherhood in 2011 was higher among African and Coloured women (20.3% and 15.7% respectively) than for Indian and White women (5.1 and 4.1% respectively).

Figure 33 Marital and motherhood status



Source: Chimere-Dan, 2014.

Table 19 Teenage childbearing KZN

Teenage childbearing in KwaZulu-Natal						
District	% ever a mother in each age					
	15	16	17	18	19	15-19
Ugu	5.5	7.1	14.8	27.6	46.1	20.6
UMgungundlovu	5.7	7.6	18.8	28.0	33.2	19.5
Uthukela	2.0	6.6	20.9	26.5	35.2	18.2
Umkhanyakude	3.6	11.8	15.0	30.3	43.7	20.9
Uthungulu	3.9	8.3	13.3	24.4	31.5	16.7
Sisonke	3.1	7.7	15.9	29.7	40.6	19.7
Umzinyathi	5.5	8.7	15.4	26.7	43.4	19.2
Amajuba	5.1	7.1	13.2	26.2	32.6	17.0
Zululand	4.3	7.7	15.6	31.0	40.7	20.1
iLembe	5.2	11.3	15.1	31.0	39.1	20.6
eThekweni	5.9	9.4	15.3	24.1	33.1	19.1
Place of residence						
Urban	5.0	8.3	14.8	23.8	30.8	17.7
Rural	4.6	8.8	16.2	29.2	40.9	20.1
Population group						
African	4.9	9.1	16.6	28.5	38.7	20.3
Coloured	5.7	7.1	15.2	19.9	25.7	15.7
Indian	2.1	2.3	3.5	6.6	9.5	5.1
White	2.4	2.4	4.2	5.6	7.9	4.4

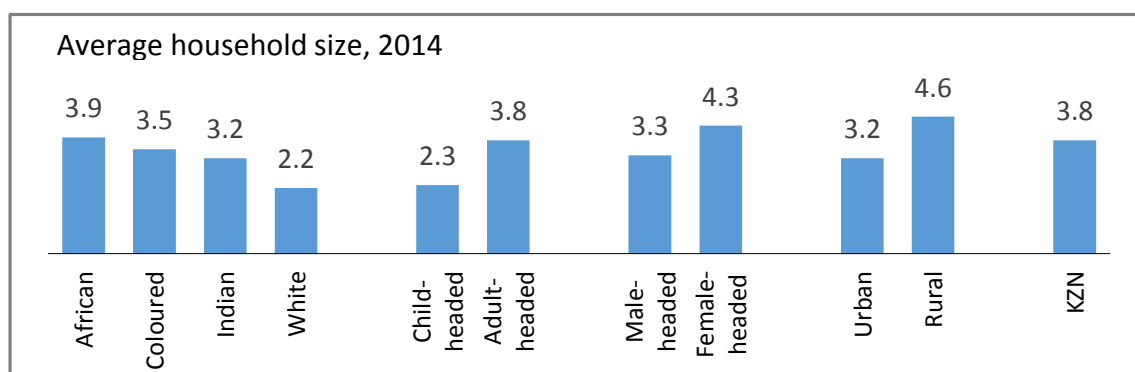
Source: Chimere-Dan, 2014, based on 2011 data.



4.3 Households and families

A gradual decline in average household has been in progress in all parts of the province that has been in progress for more than a decade and half. The average household size in the province declined from 4.3 in 2001 to 4.0 in 2011, and to 3.8 in 2014. Figure 34 shows that the average household size in 2014 was biggest in rural areas (4.6). Female headed households, African and adult-headed households also had bigger household sizes than others.

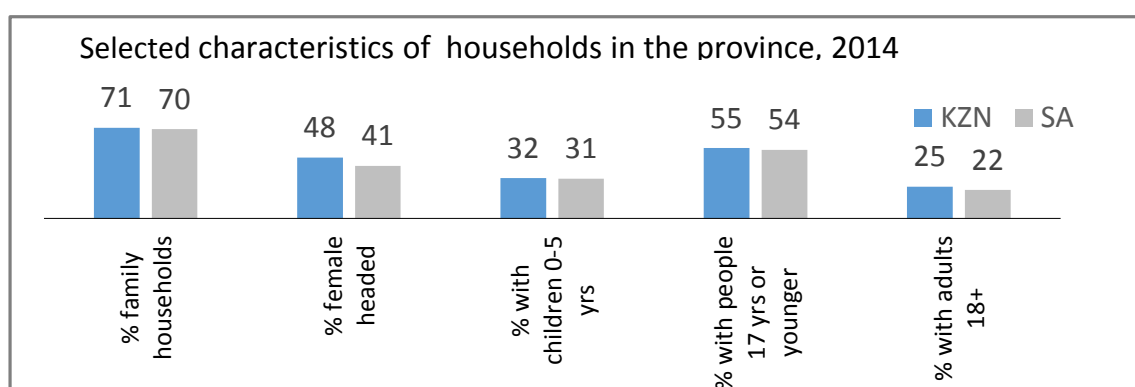
Figure 34 Average household size, 2014



Source: Calculated from GHS2014 data.

Majority of people in KwaZulu-Natal (71%) live in family households (with blood relations) (Figure 35). Forty-eight percent of all households in the province in 2014 were headed by women; one third had children under the age of five, a quarter had people aged 64 years or older, and more than half had people under the age of 17 years.

Figure 35 Selected household characteristics



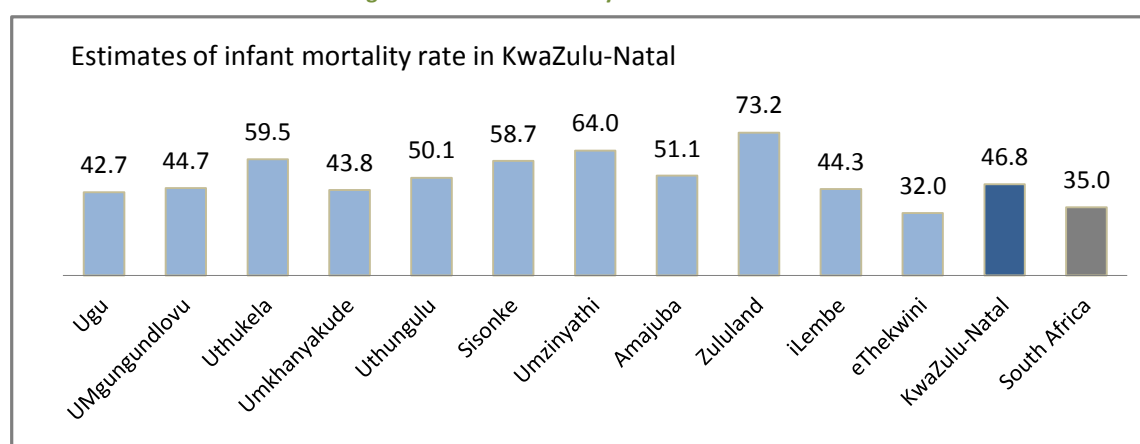
Source: Calculated from GHS2014 data.

4.4 Mortality

4.4.1 Early age mortality

Recent analysis of official statistics estimated an infant mortality rate of 46.8 for KwaZulu-Natal, a level that is higher than the national average of 35 (see Figure 36). Estimates of infant mortality for more than half of the districts in the province are higher than fifty. These districts with high rates of infant mortality rates include Zululand (73.2), Umzinyathi (64.0), Uthukela (59.5), Sisonke (58.5), Amajuba (51.1) and Uthungulu (50.8). The lowest estimate of infant mortality rate (32) was estimated for eThekweni (Figure 36). A child mortality rate of 66.0 estimated for the province is significantly higher than the national estimate of 51.8.

Figure 36 Infant mortality rates estimates 2015

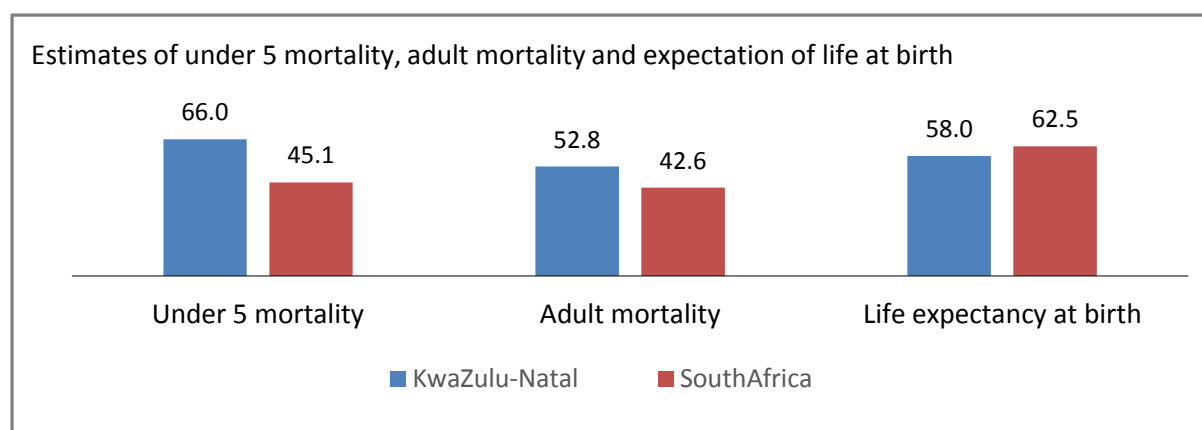


Source: Statistics South Africa, 2015.

4.4.2 Adult mortality and longevity

The adult mortality rate has been on a declining trend after an increasing trend from about 2000 to 2005. An adult mortality rate of 52.8 per thousand for KwaZulu-Natal is higher than the national average of 42.6 per thousand (Figure 37). The expectation of life at birth which was estimated to be 46 years in 2005, increased to 58 years in 2011 with slightly longer life span for women (59 years) than for men (57 years) in the province.

Figure 37 Estimates of longevity



Source: Compiled from STATSSA and various sources.

4.5 Migration¹³

Table 20 summarizes the migration status of the province based on period data from the 2011 census. Of the total population in 2011, 9.4 million were non-migrants, 74 168 were immigrants, 282 175 moved into KwaZulu-Natal from other parts of the country. A little more than this number (306 121) left KwaZulu-Natal for other parts of the country. These movements gave rise to a negative net migration number. The number of people who left the province between 2006 and 2011 is estimated to be 23 946 14 more than those who moved into the province.¹⁵

Table 20 KZN Migration status 2006 - 2011

Summary of migration status of KZN population, 2006-2011	
Migration status	Number: 2006-2011
Non-migrants (born in KZN, still in KZN)	9 400 702
Immigrants (from outside South Africa)	74 168
In-migrants (moved into KZN from other parts of South Africa)	282 175
Out-migrants (moved from KZN to other parts of South Africa)	306 121
Net migration (number who moved into KZN less those who left KZN)	-23 946

Source: Statistics South Africa, 2015.

4.5.1 Out-migration

The information in Figure 38 shows the destination provinces for the 306 121 people who left KwaZulu-Natal between 2006 and 2011. As many as sixty-eight percent moved to Gauteng. Other significant outflows are to Mpumalanga (11.5%), Western Cape (9.9%) and Eastern Cape (8.1%).

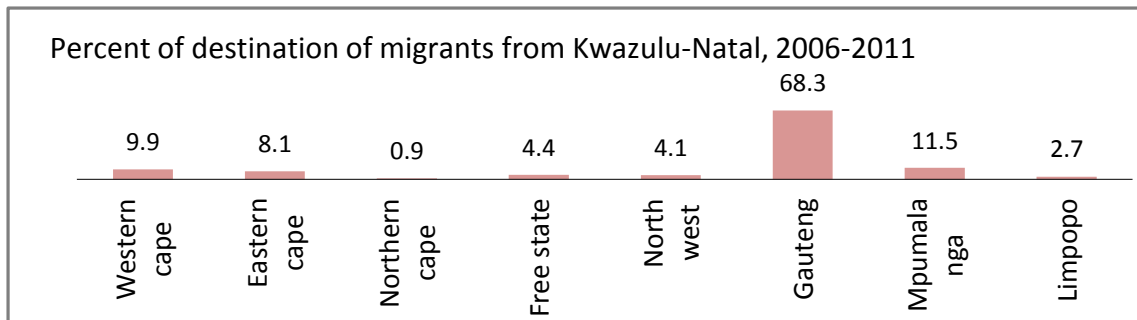
¹³ Many analyses in South Africa are usually based on lifetime or period data. Estimates and conclusions may vary depending on whether results are based on lifetime or period data. Many statistics in this section are based on period data from 2006 to 2011.

¹⁴ Statistics South Africa assumed a smaller but negative net migration of -7 for the purposes of producing mid-year population estimates for the period of 2011-2016.

¹⁵ Based on 10% census sample; data for these estimates excluded 'not stated' categories.



Figure 38 Out-migration KZN, 2006-2011

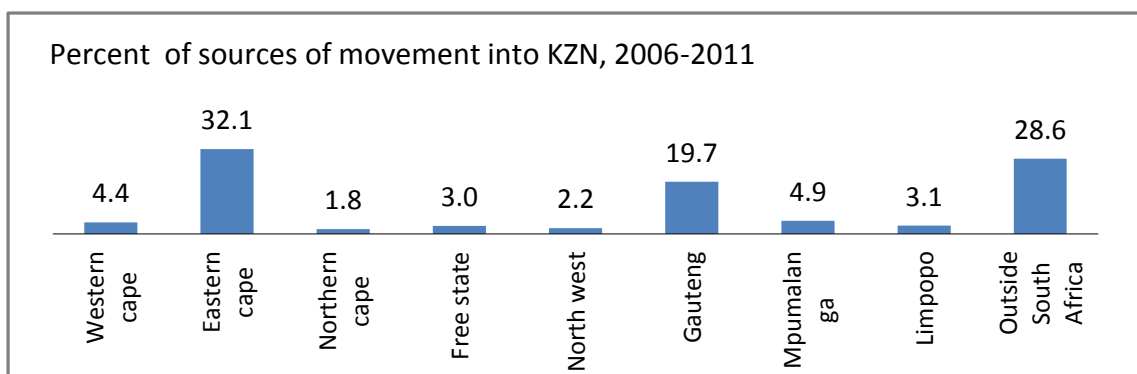


Source: Calculated from census 2011 data.

4.5.2 In-migration

The largest number of people who moved into KwaZulu-Natal between 2006 and 2011 (32.1%) came from Eastern Cape.¹⁶ Figure 39 also shows that twenty-nine percent were from outside South Africa. Twenty percent of in-migrants are from Gauteng which, to some extent, is evidence of circularity in the KwaZulu-Natal-Gauteng migration pattern.

Figure 39 In-migration KZN 2006 - 2011



Source: Calculated from census 2011 data.

4.5.3 Inter-district movements

The data in Table 21 are estimates of losses and gains by each district between 2006 and 2011, excluding and including people from outside the province. Net gains of people by UMgungundlovu, Uthungulu, Amajuba, ILembe and Uthukela during this period were due to inter-district movement. Districts with net losses of people from strictly inter-district movement (that is, without counting people from outside the province) include Ugu, Zululand, Umzinyathi, eThekweni and Umkhanyakude.

¹⁶ This statistic is not corrected for the effect of boundary changes.

The statistics in Table 21 show that people from outside the province contributed more than half of the estimated 122 255 people who moved into eThekweni from 2006 to 2011. With or without people from outside the province, Zululand had a negative net migration number during this period. This is possibly the case for Umkhanyakude as well, but exact numbers are not available due to complication introduced by boarder changes.¹⁷

Table 21 Inter-district movements, estimates 2006 - 2011

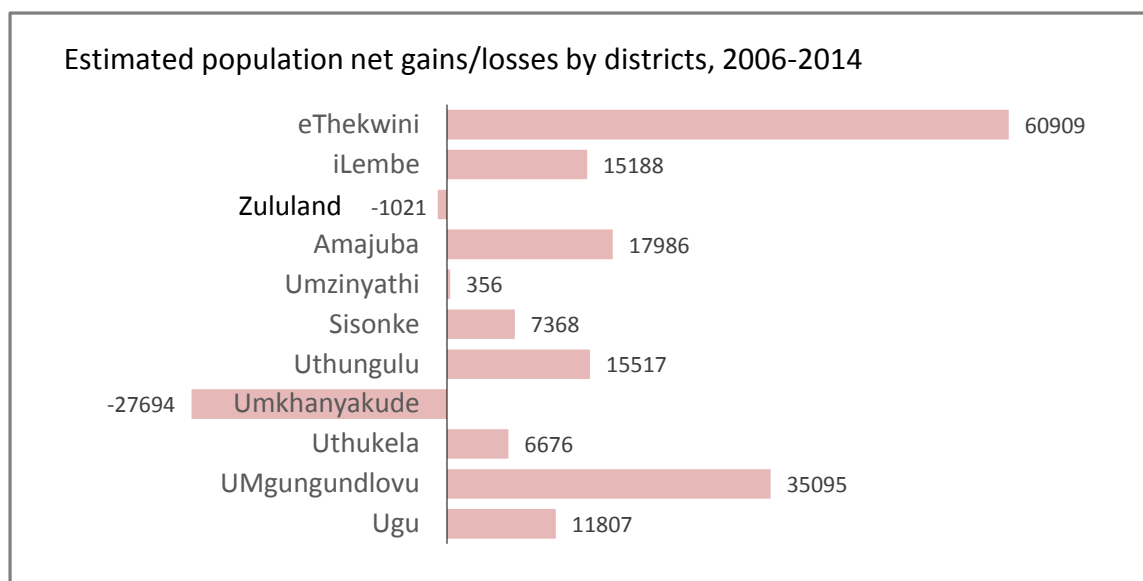
Estimates of inter-district movements, 2006-2011						
	In-migration			Out migration		Net migration
District	From outside KZN	From other districts	All in-migrants	All out-migrants	Within districts only	All in-migrants
Ugu	16778	12086	28864	17057	-4971	11807
UMgungundlovu	15403	31021	46424	11329	19692	35095
Uthukela	5083	10368	15451	8775	1593	6676
Umkhanyakude	2016	5473	7489	35183	-29710	-27694
Uthungulu	7117	24116	31233	15716	8400	15517
Sisonke	6879	7529	14408	7040	489	7368
Umzinyathi	2627	7340	9967	9611	-2271	356
Amajuba	7731	14767	22498	4512	10255	17986
Zululand	4097	8589	12686	13707	-5118	-1021
iLembe	9473	15073	24546	9358	5715	15188
eThekweni	64983	57272	122255	61346	-4074	60909

Source: Based on 10% sample of census 2011 data and Statistics South Africa, 2015.

¹⁷ Allowing for such corrections, the picture of a negative net outmigration is likely to persist for Umkhanyakude.



Figure 40 Population net gains/losses by district



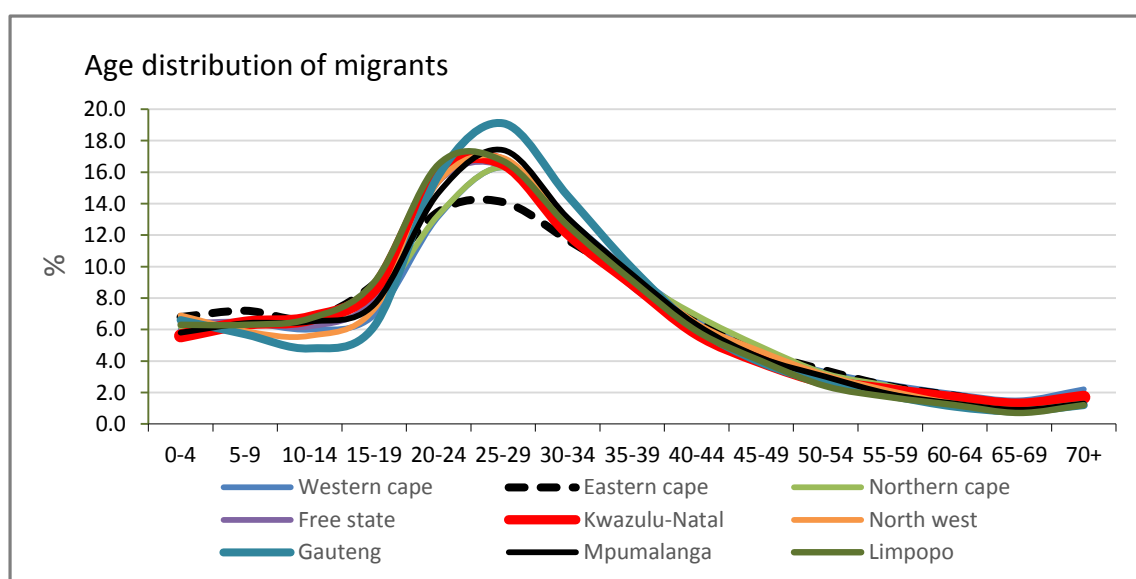
Source: Based on 10% sample of census 2011 data.

Note: Estimates for Umkhanyakude were not adjusted for border changes.

4.5.4 Characteristics of migrants

In KwaZulu-Natal and other parts of the country, migrants are mostly in young and economically active age groups. With minor variations, their ages peak in the twenties and thirties for all provinces (Figure 41). More comparative data about in-migrants and non-migrants in Figure 41 confirm the selectivity of migration in KwaZulu-Natal. There are more people with matric or higher levels of education among migrants than among non-migrants. The migrant sub-group of the population have more employed people compared to non-migrants. Migrant households have more male heads, while non-migrant households have more female heads. Many migrants live alone; they are in predominantly one-person households, headed by people aged 18-34 years.

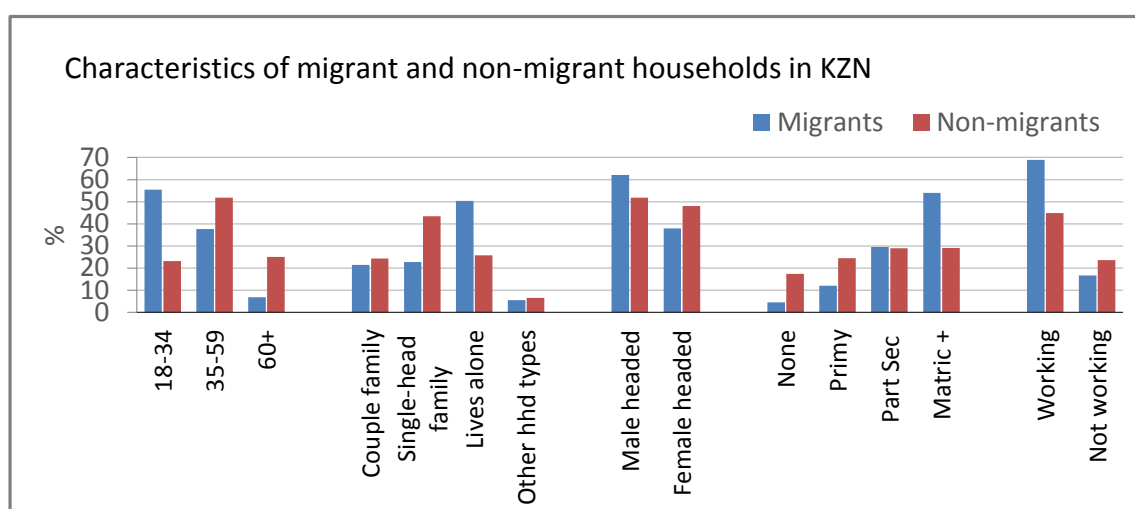
Figure 41 Age distribution of migrants 2011



Source: Calculated from Census 2011 data.



Figure 42 Characteristics of migrant & non-migrant households

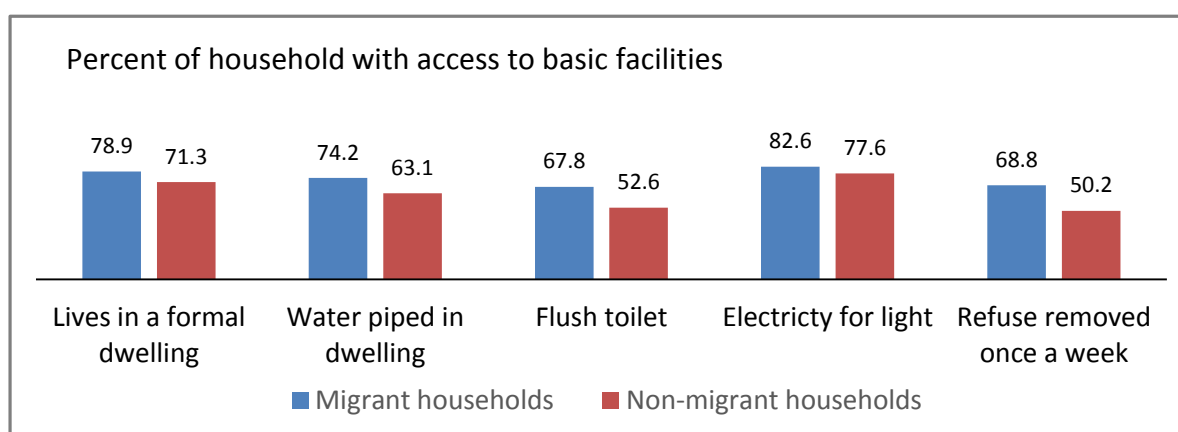


Source: Calculated from 2011 census data Chimere-Dan, 2015.

4.5.5 Migration and access to basic services

Provision of basic services for migrants and non-migrants especially in urban and metropolitan and other urban areas remain a major challenge to different provincial departments. The general pattern in the census data (Figure 43) suggests slightly better access to basic services by migrant households. This evidence may not necessarily imply that migrants receive priority over non-migrants in the delivery of basic public services in KwaZulu-Natal. Further analysis with sufficient statistical controls for important differences between migrants and non-migrants, including the factors in Figure 43, would offer a clearer picture.

Figure 43 Migration and access to basic facilities



Source: Statistics South Africa, 2015.

For purposes of provincial and local level interventions, answers to the basic question about why people migrate should necessarily be seen as time and context dependent. In post-

apartheid South Africa,¹⁸ and KwaZulu-Natal in particular,¹⁹ research suggests a dominance of economic factors and availability of basic facilities as major reasons. Aspirations for a better quality of life also play a major role in migration decisions, especially during initial phases of migration plans by a family or an individual. This observation agrees to a large extent with the empirical profile of all categories of migrants in the province today.

The current volume and directions of migration in KwaZulu-Natal also suggest other non-economic or material reasons, such as a balance of aspiration, motivational, emotional and other capabilities, as well as sub-group specific considerations. Therefore, seemingly straightforward economic reasons should necessarily be interpreted alongside other material and non-material capabilities of people to implement a desired family or personal migration strategy.

Circular and local area movements are among contemporary patterns of migration in KwaZulu-Natal. When people migrate from an impoverished family to other parts of the same district or local municipality, this movement is, in most instances, assumed to be a temporary step, with an expectation that their return (circular migration) will have economic and other benefits for the sending family. However, from the perspective of provincial, district and local authorities, this movement could result into more financial burden with potential for duplication of basic services. This situation calls for closer monitoring of changes in population numbers in districts and local areas of the province. The policy ramifications these and other prevailing patterns of migration in KwaZulu-Natal call for more insights from further analysis and modelling, using custom data about detailed migration processes and patterns in the province.

4.6 Synopsis: Strategic demographic issues

The past two decades have seen a gradual correction of the anomalous demographic characteristics that KwaZulu-Natal acquired from past development ideologies and practices. The current profile the provincial population reflects a phase of demographic transition which can facilitate socioeconomic development if it is carefully monitored and practically integrated into the implementation of the *Provincial Growth and Development Plan*.

The population of KwaZulu-Natal recorded only a modest growth rate from 2001 to 2011. Its overall share of the national population in the foreseeable future will depend on different demographic and other factors. Volatility in factors that influence demographic trends, and the poor quality of key demographic data caution against heavy reliance on a number of existing population projections without empirical adjustments,²⁰ especially for short-term decision-making. A more certain fact is that the competition for the biggest province in South Africa will, at least in the next two decades, be between Gauteng and KwaZulu-Natal.

¹⁸ See Kok, et.al. 2006, Benneth, et al. 2015.

¹⁹ Rogan, et.al. 2010, Muhwava, et al. 2010.

²⁰ Assumptions in available projections, their results and implications for the demographic profile of KwaZulu-Natal, are open to technical assessment, an exercise which is outside the scope of the present analysis.



1. Implement a local-area demographic monitoring system

Small-area positive and negative population growth in the province are driven principally by economic considerations in much the same way as rural-urban migration. Whereas these local demographic shifts cannot be mechanically managed with legislative instruments in the apartheid-era population control style, their contribution to development should be harnessed by strategic assignment of growth points, such as those proposed for agro-villages and similar interventions in the Comprehensive Rural Development Programme. Success in this area will however require a system of continuous demographic monitoring that collects more and up-to-date data to supplement generalized information provided by Statistics South Africa and other agencies.

2. Intensify emphasis on spatial inclusiveness in development implementation

The current rural and urban distribution of the population raises questions about alternative models for addressing the spatial unevenness in the distribution of development opportunities. In this regard, there is a need for re-evaluation of assumptions in development models and practices. Development aspirations in the province may no longer rest only on expected trickle-down effects of concentrations of urban development. If successfully implemented, plans in the Comprehensive Rural Development Programme (CRDP), Integrated Urban Development Framework (IUDF) and the new provincial anti-poverty programme can take advantage of current rural and urban demographic profile to achieve a more balanced spread of development opportunities.

3. Expect and plan for a reduction in very young population

Allowing for other possibilities, the evidence suggests a further decline in the number of children under the age of 5 in the medium term. This should, with time, reflect in a more significant reduction in number of children as a proportion of the provincial population, and necessitate strategic reductions in the quantity of facilities and services for young people, thus, releasing more resources that can be deployed to improve the quality of services offered to people in these younger ages. However, because demographic change is usually gradual rather than radical or instantaneous, careful and continuous local-level monitoring will be necessary to correctly identify the true timing of these demographic expectations.

4. Expect and plan for further increases in the youth population

The increasing trend in the size of youthful population will add to a growing number of people in active working ages, which apparently guarantees adequate supply of human capital for different development sectors in the province. In the context of a stable or declining number of very young children, this profile will quite likely accentuate a stage of the demographic transition which holds some promise for accelerated social and economic development in KwaZulu-Natal. Again, because, in a demographic sense, this is a transitional state, many economic demographers see it as perhaps no more than a window of opportunity that may be used or missed altogether. The development gains of this unfolding demographic trend ill



depends on the extent to which the provincial government is able to invest in health, education and work opportunities for the youth in rural and urban areas.

5. Expect and plan for further increases in the population of older population

Sub-groups of the provincial population currently experience incipient increases in the proportion of people in older age groups. These increases, which are currently more visible among the White subgroup than in others, will be expected across all other groups with improvements in longevity and other demographic processes. This trend will most certainly raise the need for more facilities and services for people in older age groups in the province.

6. Address the development implications of the prevailing fertility regime

Provincial departments should anticipate and allow for short-term fertility changes in their development interventions. More specifically, interventions by government departments should institute further investigations into teenage and non-marital childbearing which presently amplify socioeconomic disadvantage for affected families, mothers and children. New and existing interventions that mitigate the negative impacts of these childbearing patterns on personal and social development in the province should be encouraged.

7. Emphasize multi-sector interventions for mortality reduction

Infant and child mortality rates are among the most sensitive indicators of health and social well-being. Although estimates of these indicators suggest declining trends, the province has rates that are among the highest in the country. This evidence calls for better coordinated inter-departmental interventions to reduce infant and child mortality. Available estimates suggest a gradual improvement in longevity following the devastation caused by the HIV and AIDS epidemic during the past two decades. Mortality levels in the province are affected directly and indirectly by this epidemic although its effect should hopefully wear out with time in response to on-going interventions in the province. At the same time, possible cohort effects of HIV and AIDS on mortality schedules, especially in older age groups, in the next ten to fifteen years, are largely unknown. Projected improvement in longevity will increase the number of people in older ages, including people who might need more material and social support beyond the narrow economic assistance that is offered by non-contributory pensions.

8. Diversify economic opportunities in order to maximize gains from migration

Recent statistics show that KwaZulu-Natal is a net exporter of people to other parts of the country. Movement from the province to Gauteng remains the second most important inter-provincial moves in the past two decades.²¹ People who move from, into or within KwaZulu-

²¹ Following the migration stream from Limpopo to Gauteng



Natal share basic characteristics which suggest that work, longer term career opportunities and availability of basic services are among the important reasons for their migration. They are predominantly young men and women with some secondary education.

In the past, when movement was restricted by policy with limited range of economic activities in migration destinations, men constituted the overwhelming majority of migrants. This profile is changing and more adult women are participating in out-migration. Notwithstanding this narrowing gender gap, sex-selective migration remains an important contributor to an increase in the number of female-headed households and related social and economic problems, especially in rural and poorer areas of the province.

The relatively large number of people who move from Gauteng to KwaZulu-Natal is indicative of circular and other more complex aspects of migration. This evidence which challenges conventional migration assumptions, should receive more research attention in the province. Better understanding of the roots, levers and dynamics of circular migration will guide various departments in addressing the needs of various categories of migrants and non-migrants.

While recognizing the economic benefits of remittances from migrants, excessive and negative net migration may not serve the long term development interest of KwaZulu-Natal. Use of policy instruments to encourage spatially diversified economic opportunities and promotion of economic development hubs in target locations can reduce pressure on public facilities. It can also eliminate duplication of services in response to the needs of highly mobile sub-groups of the provincial population.

Lastly, considering the low level of fertility in the province, with no visible prospect for a big upswing in the near future, it would appear to be in the longer term social and economic interest of the province to discourage large-scale and permanent out-migration from the province. At least, the province should also encourage in-migration of people with skills needed in different areas of development.



5 THE SOCIAL LANDSCAPE

The first *KwaZulu-Natal Situational Overview* (PPC, 2011) reviewed a wide area of social sector challenges for the Provincial Growth and Development Plan (PGDP). Areas covered in the overview include quality of life, poverty and social welfare, human relationship, youth, gender, social cohesion, education, health, safety and security, and sustainable human settlement. Strategic social issues raised in the overview include a need to intensify anti-poverty interventions, promotion of improvement in the quality of human relations, re-designing human settlement, improving the capacity of departments to deliver services, and the quality of such services in the Province.

Building on the 2011 overview, the aim of the current update is to highlight the state of social sector issues that are included in the human and community development goal of the PGDP. Attention is limited to objectives specified for the human and community development goal of the PGDP. Areas covered include poverty eradication and social services, health, household food security, sustainable human settlement, safety and security, and social capital.²² Substantive issues are raised, and with recommendations within the confines of this update.

5.1 Poverty and social development

5.1.1 Poverty

Poverty is one of the most widely recognized human and social development challenges in KwaZulu-Natal. The human development index was used as the baseline indicator for assessing poverty in the Provincial Growth and Development Programme. Other nationally standardised indicators have been introduced, including the lower-bound and upper-bound poverty lines recommended by Statistics South Africa,²³ and the Multiple Poverty Index.²⁴

Although there has been a declining trend in different indices of poverty in the Province, KwaZulu-Natal currently ranks among the poorer provinces in South Africa. KwaZulu had 26.3% share of the poor in the country in 2011, an increase of 4% in its share in 2006.²⁵ Estimates from the National Income Dynamic Survey indicate a decrease in absolute poverty (% below a food poverty line) from 26% in 2008 to 11% in 2004/2015. A decline in social inequality was also estimated between 2008 and 2014 based on the share of income earned by the poorest sixty percent of the population of KwaZulu-Natal.

²² Three cross-cutting issues included in this update are youth development, gender and the empowerment of women, and social cohesion.

²³ Statistics South Africa, 2014a.

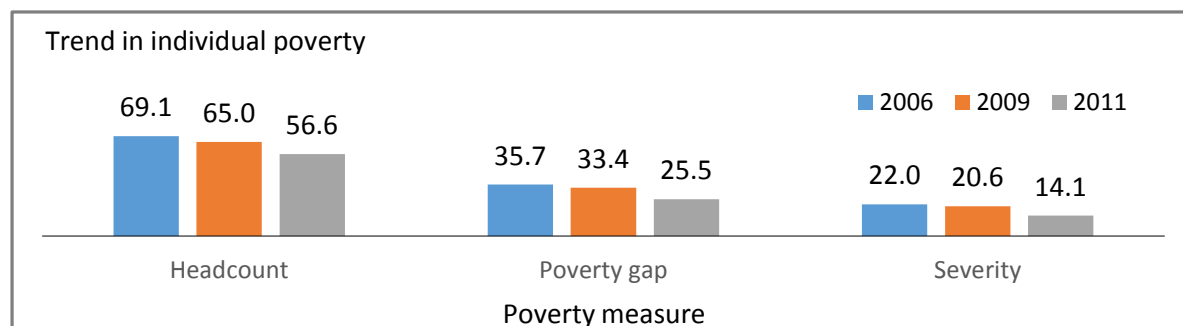
²⁴ Statistics South Africa, 2014bc.

²⁵ Statistics South Africa, 2014b.



Figure 44 shows the trend in poverty headcount index in the province.²⁶ The percent of individuals in poverty in KwaZulu-Natal declined from 69.1% in 2006 to 56.6% in 2011. The poverty gap,²⁷ also declined from 35.7 in 2006 to 25.5 in 2011, and the severity of individual poverty declined from 22 in 2006 to 14.1 in 2011.

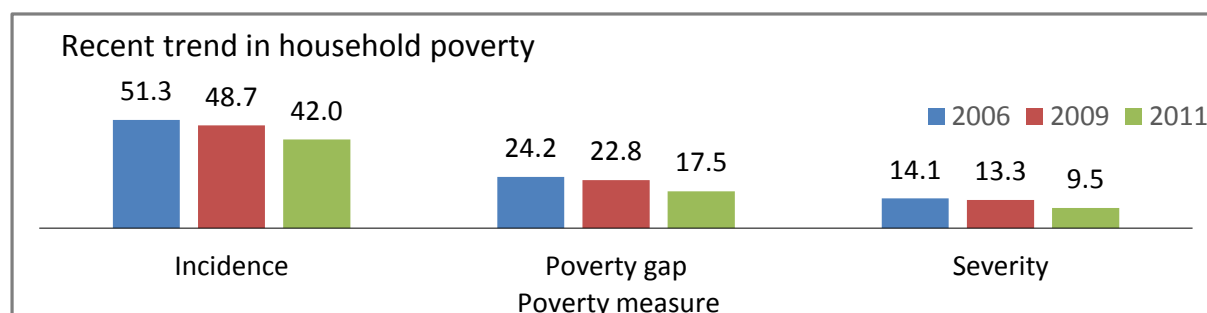
Figure 44 Trends in individual poverty



Source: Statistics South Africa, 2014.

A similar declining trend is observed for household poverty. Figure 45 shows that the incidence of household poverty declined from 51.3% in 2006 to 42% in 2011. The household poverty gap narrowed from 24.2% to 17.5% in 2011, and the severity of household poverty reduced from 14.1 in 2006 to 9.5 in 2011.

Figure 45 Trends in household poverty



Source: Statistics South Africa, 2014.

A spatial presentation of the poverty profile of KwaZulu-Natal in Map 41 highlights several locations which are among the poorest areas in the country. The differences in poverty levels in Figure 46 were calculated based on monthly household expenditure levels lower than

²⁶ This is the share of the population with a consumption level below the upper bound poverty line,

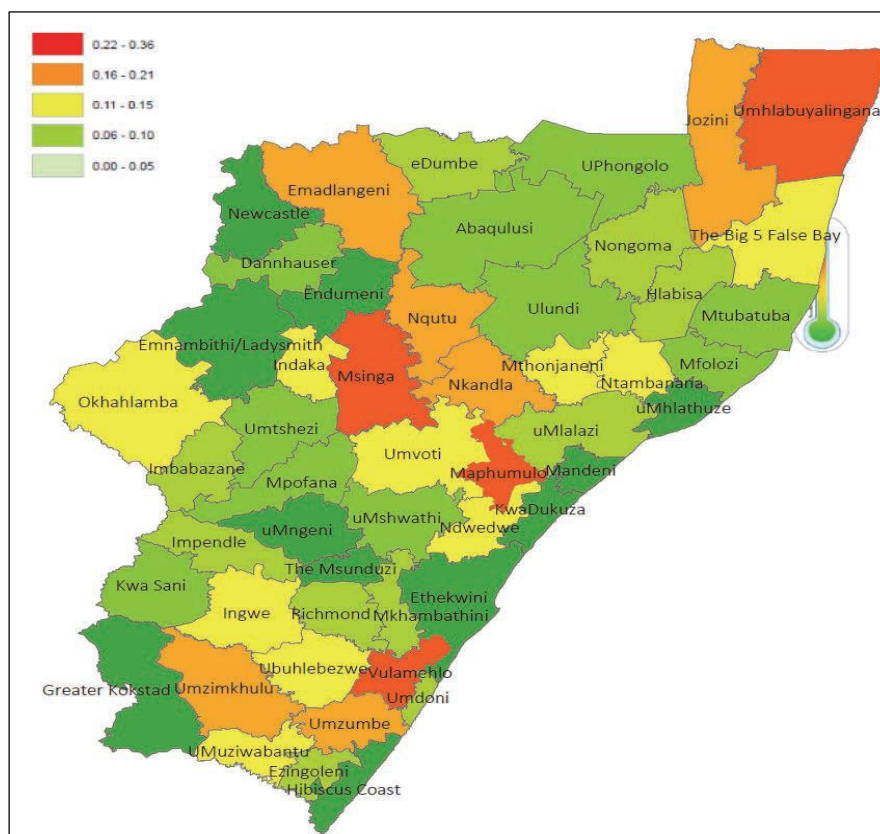
recently rebased (see Statistics South Africa, 2015a).

²⁷ The distance between the average income and the poverty line.



R2500.²⁸ Using this threshold, seventy percent of African households in KwaZulu-Natal were poor in 2014, compared to five percent of the White population. The level of household poverty was higher in urban informal and rural households than in formal urban households. Households headed by females, and those headed by people aged 18-39 years were poorer than others in 2014.

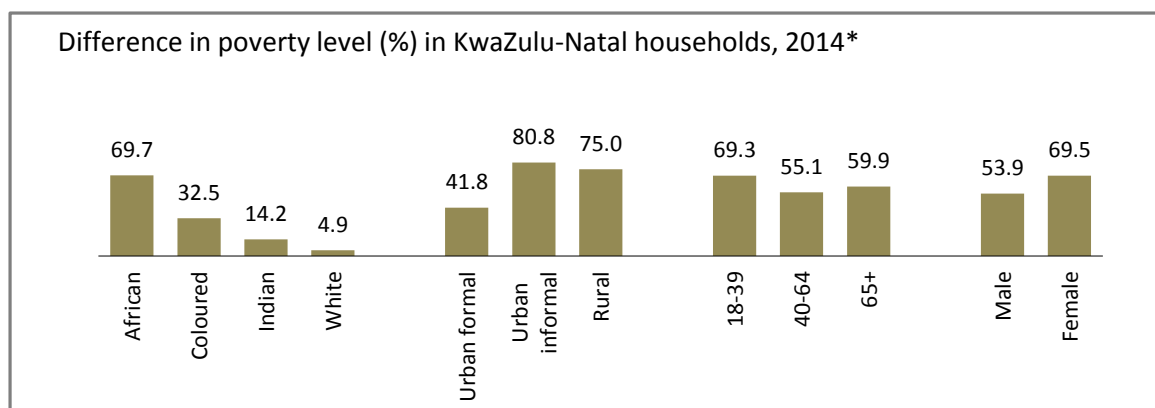
Map 41 Distribution of poverty levels in KZN 2014



Source: KwaZulu-Natal Poverty Eradication Master Plan (2014).

²⁸ See Statistics South Africa, 2016a.

Figure 46 Difference in household poverty level, 2014



Source: Calculated GHS data, 2014.

5.1.2 Household food security

Household food security is a critical dimension of well-being that mirrors the poverty status of a population. Statistics from the General Household Survey (Table 22) show that twenty-three percent of households with children reported that children seldom or sometimes experienced insufficient food. For six percent of households with children, insufficient food for children was a regular experience. The highest proportions of households experiencing insufficient food for children in 2014 were in rural areas, among those headed by people in the 18-39 age group, and also among female-headed and African households.

Table 22 Percent experiencing insufficient food for children, 2014

Percent experiencing Insufficient food for children, 2014				
Characteristic		% experiencing insufficient food for children		
		Never	Seldom/sometimes	Often/always
Population group	African	69.1	24.8	6.1
	Coloured	92.8	7.2	0.0
	Indian	95.7	3.0	1.4
	White	98.3	1.7	0.0
Place of residence	Urban formal	83.2	12.4	4.5
	Urban informal	77.9	19.8	2.4
	Rural	62.9	30.1	7.1
Age of household head	18-39	70.7	22.8	6.5
	40-64	72.8	21.6	5.6
	65+	69.3	26.4	4.3
Gender of head	Male	78.2	16.9	4.9
	Female	66.9	27.0	6.1
All	KZN	71.6	22.8	5.6

Source: Calculated from GHS 2014 data.



Table 23 shows some changes in selected measures of household food security in the province based on statistics from various sources. There has been a remarkable decline in the incidence of underweight for age among children under the age of five in the past few years. Other household food related indicators that show significant declines in the province are dietary deficiency index (from 60 in 2011 to 49.4 by 2015, and hunger episodes (from 35% in 2011 to 28% by 2015).

Table 23 Indicators of household food security and nutrition

Indicators of household food security and nutrition		
Indicator	Baseline (2010/11)	AWG 8 latest (Quarter 4, 2014/15)
% of children who are stunted	15.3	14.2
% of children who are wasted	2.5	2.3
% of children who are obese	14.6	14.0
Under 5 years severe acute malnutrition incidence (per 1000)	8.3	5.8
Underweight for age under 5 years incidence (per 1000)	44.6	18.8
% under five years with moderate acute malnutrition (MAM)	8.3	0.5
Dietary diversity index: % percentage of households consuming fewer than the 15 major food categories in the previous month.	60.0	49.4
Hunger episodes: % of household member gone hungry at least sometimes in the preceding 12 months 2012	35.0	28.3

Sources: KZN-AWG8 and various; periods indicated are approximate.

In 2011 the CGE completed a national study on gender mainstreaming in the water sector ²⁹ where eThekweni Metropolitan municipality (urban) and Sisonke District municipality (rural), as well as Umgeni Water Board were selected as case studies. The challenges surfaced were prevalent in all provinces, but of specific relevance to KZN was that participants reported the

²⁹ Commission for Gender Equality, "Gender Mainstreaming in the Water Sector: Evaluating Progress by Municipalities and Provincial Water Boards, a National Report", p.25-26, 2011.



difficulties of engaging in income generating activities such as food gardens without access to water.

5.1.3 Social protection

The national government expenditure on social grant increased from R50.7 billion in 2005/2006 financial year to R102.2 billion in 2014/2015 financial year, constituting no less than three and half percent of the GDP for each year. KwaZulu-Natal receives the highest share of social grants compared to other provinces in the country. The province accounted for 3 919 193 or 23.2% of close to seventeen million social grants disbursed by the South African Social Security Agency in December 2015. Table 24 shows that KwaZulu-Natal received the highest percent of all types of grants except for war veteran grants.

Table 24 Social grants disbursement, by province, 2015

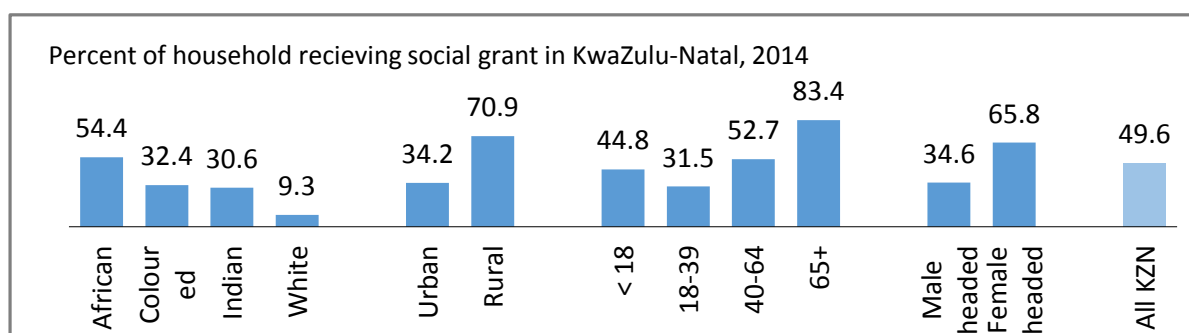
Percent of social grants disbursed in provinces as at 31 December 2015									
Province	% of grant type								
	OA G	WV G	DG	GIA	CD G	FC G	CS G	Total %	Number
Eastern Cape	16.9	15.3	16.6	13.9	15.2	22.5	15.7	16.2	2731469
Free State	5.9	1.5	6.7	2.0	5.1	7.3	5.6	5.7	970054
Gauteng	16.0	26.8	10.2	3.0	12.8	11.4	14.4	14.2	2403746
KwaZulu-Natal	20.4	11.9	24.6	34.2	28.4	24.0	23.6	23.2	3919193
Limpopo	13.8	6.5	8.6	20.0	10.5	10.7	14.6	14.0	2360623
Mpumalanga	7.3	5.0	7.1	5.1	7.6	7.1	8.8	8.3	1407185
Northern Cape	2.6	3.1	4.7	5.5	3.9	2.9	2.5	2.7	453932
North West	7.5	3.1	7.5	6.0	7.0	7.5	6.8	7.0	1186157
Western Cape	9.6	26.8	14.0	10.3	9.6	6.7	8.1	8.7	1477946
All SA	100	100	100	100	100	100	100	100	16910305

Source: SASSA, 2015.

Data from the 2014 General Household Survey show that about half of all households in KwaZulu-Natal reported that they received at least a social grant (Figure 47). These proportions are slightly higher than the national averages of forty-five percent. These statistics highlight categories of households that are more materially vulnerable than others, and for that reason, more dependent on state support. Rural households, those headed by Africans, women and people older than sixty-four years received social grants more than others.

Figure 47 Percent of households receiving social grants, KZN 2014





Source: Calculated from GHS 2014 data.

Table 25 shows an improvement in most indicators of poverty from 2010/11 to about 2013/14. The percent of households below the upper bound of the poverty line declined from 67% to 57% in the most recent period. Effective dependency ratio (economically inactive people divided by economically active people) is the only indicator with no observable decline within the period of interest.

Table 25 Summary: selected primary indicators of poverty

A summary of selected primary indicators of poverty			
Indicator	2010/2011	2012/2014	2015 target
% of households that lie below the upper bound poverty line	67.5	57.0*	60.0
% of children who are stunted	15.3	14.2	14.2
% of children who are wasted	2.5	2.3	2.3
% of children who are obese	14.6	14.0	14.0
under 5 years severe acute malnutrition incidence (per 1000)	8.3	5.8	5.1
Underweight for age under 5 years incidence (per 1000)	44.6	18.8	40
% under five years with moderate acute malnutrition (MAM)	8.3	0.5	6.5
Effective dependency ratio (economically inactive people/economically active people)	4.0	6.5	3.6
The poverty gap	28.8	25.5	27.4
Severity gap	16.7	14.4	15.9

Source: AWG8 2015; not adjusted for changes in poverty threshold.

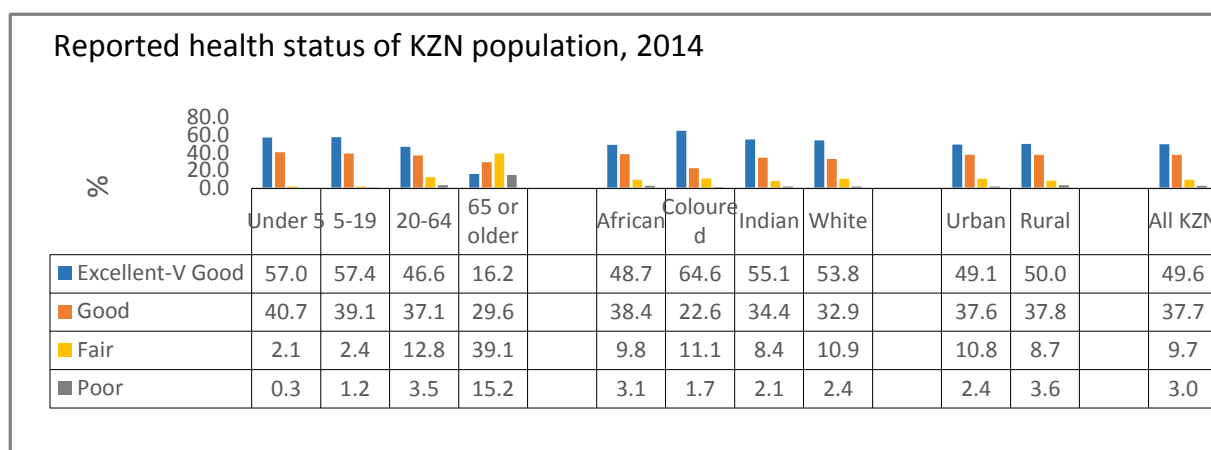


5.2 Health

5.2.1 General health status

Majority of people KwaZulu-Natal are healthy. In 2014, half of the population reported that they were in excellent or very good health, and thirty-eight percent reported that their health was in good condition. Figure 48 shows that only 9.7% reported that their health was in a fair condition. Reports of poor health are slightly higher in rural area, and among the African population group. A significantly higher percent of people aged 65 years or older (15.2%) reported poor health in 2014.

Figure 48 Health status of KZN population, 2014

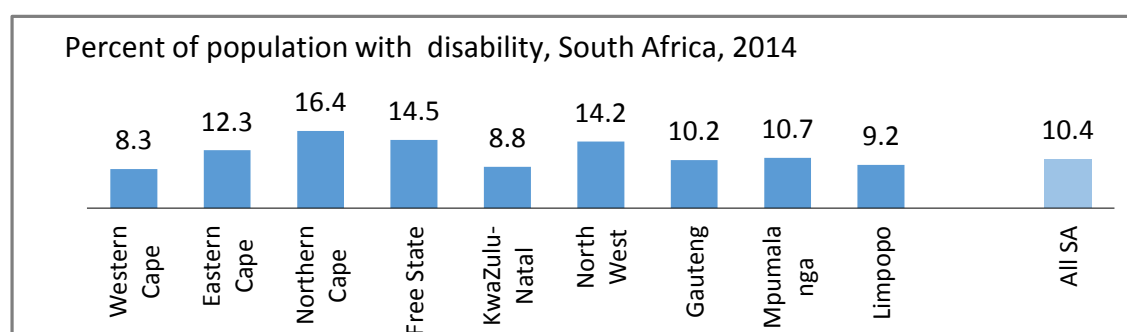


Source: Calculated from GHS 2014 data.

5.2.2 Disability

An estimated number of 926 345 people reported a disability in the Province in 2014. The incidence of reported disability in KwaZulu-Natal was 8.8% in 2014,³⁰ compared to a national average of 10.4%, as seen in Figure 49.

Figure 49 Percent of population with disability, South Africa, 2014



Source: Calculated from GHS, 2014.

³⁰ Based on unadjusted reports for people in all age groups in the 2014 GHS data.



Table 26 shows that the incidence of disability in the province is positively associated with age; less than ten percent of people under the age of 15 years reported a disability, compared to thirty-eight percent among those aged sixty-five years or older. The Coloured group reported slightly higher percent of disability than others in the active working age range of 15-64 years. Also in this age range, rural residents reported a higher level of disability (7%) than all others (5.3%).

Table 26 Percent of population reporting disability

Percent of population reporting disability, 2014					
		% in age group			
		0-14	15-64	65+	All
Population group	African	9.5	6.2	37.4	8.7
	Coloured	4.0	11.2	40.7	11.5
	Indian	7.2	3.2	38.1	6.9
	White	9.3	8.0	38.8	14.5
Place of residence	Urban formal	9.7	5.3	38.1	8.4
	Urban informal	9.6	5.3	38.8	7.2
	Rural	9.1	7.0	37.4	9.4
Gender	Male	9.4	5.3	32.8	7.6
	Female	9.3	6.8	40.0	9.8
All	KZN	9.4	6.1	37.8	8.8
Number		319 045	402 474	204 826	926 345

Source: Calculated from GHS, 2014.

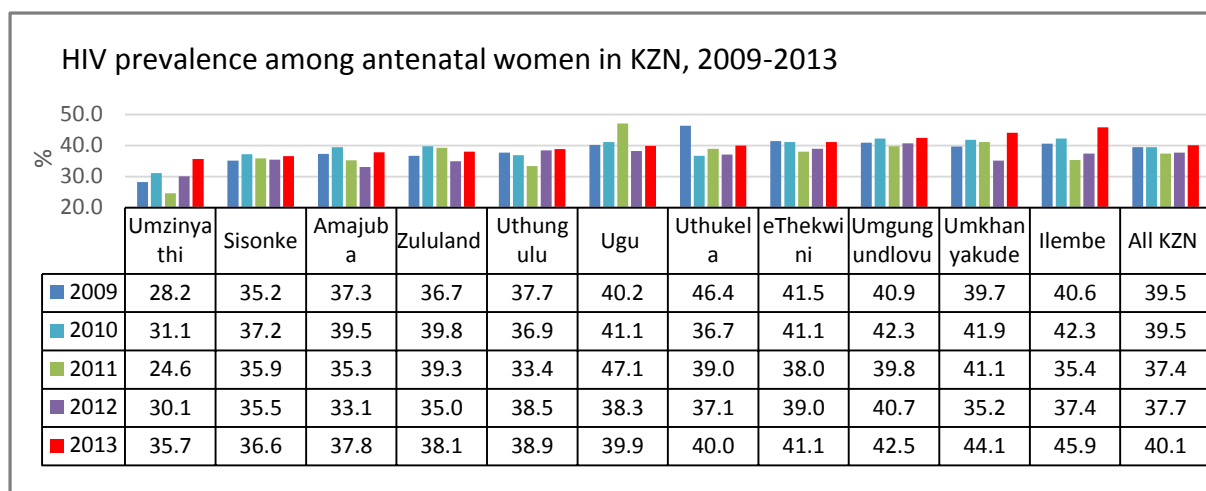
5.2.3 Maternal health

The ANC coverage rate in the Province declined slightly from 92% in 2012 to 88% in 2014. On the other hand, delivery rate in facility (%) improved from 76% in 2012 to 82% in 2014.

The most recent results of the National Antenatal Sentinel HIV Prevalence Survey indicate that KwaZulu-Natal had the highest prevalence rate (40.1%) in 2013. Districts that include Ilembe, Umkhanyakude, Umgungundlovu and Ethekwini had prevalence rates that are higher than forty percent (Figure HIV prevalence among antenatal women 2009 - 2013 50) in 2013.



Figure 50 HIV prevalence among antenatal women 2009 - 2013



Source: National Department of Health, 2015

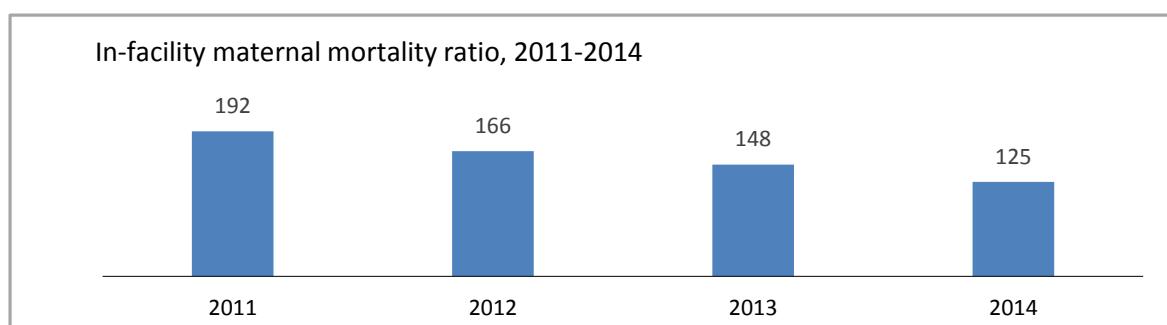
The number of maternal deaths in KwaZulu-Natal declined from 393 in 2010 to 280 in 2013 (Table 27). This declining trend is clearer in the estimates of in-facility maternal mortality ratios (Figure 51) which changed from 192 in 2011 to 125 in 2014. The 2014 estimate of in-facility mortality ratio for KwaZulu-Natal is slightly lower than the estimated national average of 133.

Table 27 Number of maternal deaths 2009 - 2013

Number of maternal deaths, 2009-2013					
	2009	2010	2011	2012	2013
Amajuba	11	9	6	5	10
eThekweni	124	126	122	113	97
Ilembe	19	35	12	11	21
Sisonke	2	7	13	14	7
Ugu	46	27	21	19	22
Umgungundlovu	21	42	49	54	34
Umkhanyakude	10	16	11	10	8
Umzinyathi	7	16	12	7	8
Uthukela	29	23	17	27	15
Uthungulu	54	49	57	52	38
Zululand	32	23	29	9	20
All KZN	365	393	361	320	280

Source: Annual Performance Plan 2015/16-2017/18

Figure 51 In-facility maternal mortality



Source: KZN Department of Health, 2015



5.2.4 *Patterns and causes of death*

Table 28 shows the age and sex profile of more than seventy-nine thousand deaths reported for the province in 2014. As expected, more deaths were reported in eThekweni (21.8%) which has more than a third of the population of the province. The broad active working age group of 15-44 years recorded the highest number of deaths (32.6%) in the province.

Table 28 Deaths in KZN by age, by district, 2014

Deaths in KwaZulu-Natal districts, 2014*							
	0	1-14	15-44	45-64	65+	All ages	
						N	%
Amajuba	266	110	842	732	869	2819	3.7
eThekweni	765	472	5479	4742	5105	16563	21.8
iLembe	231	179	1381	1111	1446	4348	5.7
Sisonke	199	193	1421	1083	1450	4346	5.7
Ugu	348	276	2511	1928	2703	7766	10.2
uMgungundlovu	443	272	3250	3049	3759	10773	14.2
uMkhanyakude	226	159	1150	822	1111	3468	4.6
uMzinyathi	326	176	1377	1197	1424	4500	5.9
uThukela	374	252	2746	2212	2306	7890	10.4
uThungulu	641	282	2669	1929	2219	7740	10.2
Zululand	494	255	1980	1414	1727	5870	7.7
All KZN (N)	4313	2626	24806	20219	24119	76083	76083 (79138)
All KZN %	5.7	3.5	32.6	26.6	31.7	100	100

* Excluding deaths with unspecified district or age: total deaths in the province in paranthesis.

Source: Statistics South Africa, 2015b.

Based on statistics of reported deaths in Table 29, tuberculosis (11.2%), cerebrovascular diseases (6.2%), HIV (6.2%), diabetes mellitus (6.2%) and other forms of heart disease (4.8%) were the five leading causes of death in KwaZulu-Natal in 2014. These causes also were the five leading causes of death separately for males and females, though in a slightly modified order. For instance, HIV was reported as the second leading cause of death for males, but as the fourth leading cause of deaths for females, following diabetes mellitus and cerebrovascular diseases.



Table 29 Leading causes of death – by gender, 2014

Five leading causes of death for males and females, 2014											
Male				Female				All			
Rank	Cause	N	%	Rank	Cause	N	%	Rank	Cause	N	%
1	Tuberculosis (A15-A19)	5379	13.3	1	Tuberculosis (A15-A19)	3459	9.0	1	Tuberculosis (A15-A19)	8863	11.2
2	HIV disease	2567	6.3	2	Diabetes mellitus	3135	8.2	2	Cerebro-vascular diseases	4940	6.2
3	Cerebro-vascular diseases	1900	4.7	3	Cerebro-vascular diseases	3038	7.9	3	[HIV] disease	4927	6.2
4	Diabetes mellitus	1733	4.3	4	[HIV]	2343	6.1	4	Diabetes mellitus	4868	6.2
5	Other forms of heart disease	1628	4.0	5	Other forms of heart disease	2182	5.7	5	Other forms of heart disease	3812	4.8

Source: Calculated from death data reported for 2014 by Statistics South Africa, 2015b.

Table 29 shows that the five leading causes of infant deaths reported for KwaZulu-Natal in 2014 include respiratory and cardiovascular disorders specific to the perinatal period (15.7%), intestinal infectious diseases (13.5%), disorders related to length of gestation and foetal growth (P05-P08) (7.4%), disorders related to length of gestation and foetal growth (P05-P08) (7.1%), and infections specific to the perinatal period (5.6%).

Intestinal infections, tuberculosis, influenza and pneumonia, malnutrition and HIV were reported in that order as the leading causes of death among children (1-14 years) in the province in 2014 (Table 30). It is noteworthy that preventable diseases or diseases of poverty were among the leading causes of death among people in this age range.

Tuberculosis and HIV were reported as the two leading causes of death in the broad age group of 15-44 years. Tuberculosis was also reported as the leading cause of death among people aged 45-64 years. In contrast, the reported leading causes of death in 2014 among adults older than sixty-four years were cerebrovascular diseases (12.8%), diabetes mellitus (11.4%), and other forms of heart disease (8.7%), hypertensive diseases (7.4%) and ischaemic heart diseases (4.2%).



Table 30 Leading causes of death, 2014

Five top single-causes of death by age group, 2014					
Rank	Age group				
	0	1-14	15-44	45-64	65+
1	Respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) 15.7%	Intestinal infectious diseases (A00-A09) 12.1%	Tuberculosis (A15-A19) 18.8%	Tuberculosis (A15-A19) 13.0%	Cerebro-vascular diseases (I60-I69) 12.8%
2	Intestinal infectious diseases (A00-A09) 13.5%	Tuberculosis (A15-A19)* 5.8%	Human immuno-deficiency virus [HIV] disease (B20-B24) 5.8%	Diabetes mellitus (E10-E14) 8.5%	Diabetes mellitus (E10-E14) 11.4%
3	Disorders related to length of gestation and fetal growth (P05-P08) 7.4%	Influenza and pneumonia (J09-J18) 5.6%	Other viral diseases (B25-B34) 5.6%	Cerebrovascular diseases (I60-I69) 6.5%	Other forms of heart disease (I30-I52) 8.7%
4	Disorders related to length of gestation and fetal growth (P05-P08) 7.1%	Malnutrition (E40-E46) 4.3%	Influenza and pneumonia (J09-J18) 4.3%	HIV disease (B20-B24) 6.1%	Hypertensive diseases (I10-I15) 7.4%
5	Infections specific to the perinatal period (P35-P39) 5.6%	HIV disease (B20-B24) 4.1%	Intestinal infectious diseases (A00-A09) 4.1%	Other forms of heart disease (I30-I52) 4.1%	Ischaemic heart diseases (I20-I25) 4.2%

Source: Calculated from death data reported for 2014 by Statistics South Africa, 2015b.



Estimates of HIV and related indicators³¹ are presented in Table 31. The prevalence rate of HIV estimated for KwaZulu-Natal in 2015 was 15.4% (17.6% among females, 13% among males, and 23% among people aged 15-49 years). The prevalence rate of HIV among people aged 15-49 years was 23%. The ASSA2008 model estimated that 1 680 200 people in the province lived with HIV in 2015.³² An estimated number of 187 299 people lived with AIDS-defining conditions. The number of patients receiving ARVs was 951 462, and 53% of these were on ARVs. People on ARVs in KwaZulu-Natal constituted 31% of all people on ARVs in South Africa. AIDS-related death contributed 39% of all deaths in 2015. The Province had an estimated number of 416 266 maternal AIDS orphans in 2015.

Table 31 HIV & AIDS indicators, 2015

Estimates of HIV and AIDS indicators for KwaZulu-Natal, 2015	
HIV and AIDS related Indicators	Estimate
HIV prevalence % total population	15.4%
HIV prevalence % (females)	17.6%
HIV prevalence % (males)	13%
HIV prevalence % among people aged 15-49 years	23%
Number of people living with HIV	1 680 200
Number of people with AIDS-defining condition	187 299
Number of patients receiving ARVs	951 462
Estimated proportion of people living with HIV on ARVs	53%
People on ARVs in KwaZulu-Natal as a % of all people on ARVs in South Africa	31%
Estimated % of all deaths due to AIDS 2015	39%
Number of AIDS orphans <18 years (maternal)	416 266

Extracts from reported results based on ASSA2008 model. See HST, 2015.

Data from the 2011 KwaZulu-Natal Hospital Survey show that males outnumbered females until the age 14 years. From the age of 15 years, females outnumbered males in the proportion of

³¹ Based on the ASSA2008 model, unless otherwise indicated.

³² SANAC progress report on the NSP estimated 1.81 million people living with HIV in the province in 2014.



HIV infections in admission patients until the age of 40 years. After this age, males outnumbered females until the age of 74 years; thereafter gender differences were not noticeable.

5.2.5 Access to health services

Public health services in KwaZulu-Natal are provided by 764 primary health care facilities and 72 hospitals in different categories as shown in Table 32. In addition, there are 2234 general medical practices, 30 group practices/hospitals, 6 private hospitals with 'A' status, 19 of 'B' status and one private rehabilitation hospital.³³ The average catchment population per primary health care facility is biggest in eThekweni. Amajuba, UMgungundlovu, ILembe and Utheka also have big number of catchment population per primary health care facility compared to others (see Figure 81).

Table 32 Public and state-aided health facility in KwaZulu-Natal

Public and state-aided health facility in KwaZulu-Natal												
District	PHC Clinics					Hospitals						
	Clinics	Comm. Health Centres	Satellite Clinics	Mobile Service	Total PHC Facilities	District	Regional	Tertiary	Central	Specialised TB	Specialized Psychiatric	Chronic/ Long-Term
Ugu	55	2	0	17	74	3	1	-	-	1	-	-
UMgungundlovu	51	3	1	16	71	2	1	1	-	2	3	-
Uthukela	35	1	0	14	50	2	1	-	-	-	-	-
Umzinyathi	49	0	0	11	60	4	0	-	-	1	-	-
Amajuba	25	0	0	7	32	1	2	-	-	-	-	-
Zululand	68	1	0	17	86	5	0	-	-	1	1	-
Umkhanyakude	56	0	0	17	73	5	0	-	-	-	-	-
Uthungulu	61	1	0	17	79	6	2	1	-	-	-	-
ILembe	34	2	0	10	46	3	1	-	-	-	-	-
Sisonke	38	1	0	13	52	4	0	-	-	1	1	-
eThekweni	100	8	0	33	141	2	4	-	2	4	1	2
All KZN	572	19	1	172	764	37	13	2	2	10	6	2

Source: Department of Health, Strategic Plan, 2015-2019.

³³ Reported in provincial Department of Health Strategic Plan, 2015-2019.



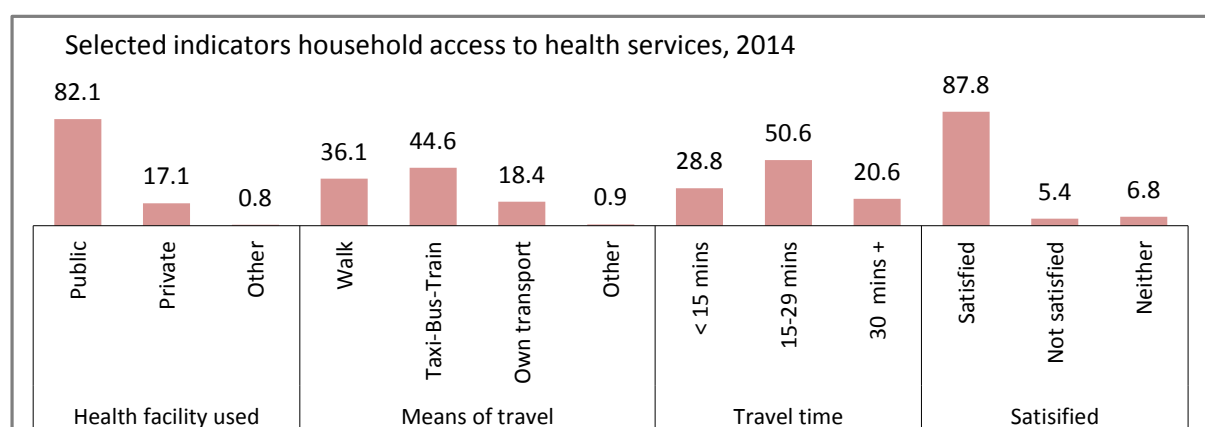
Table 33 Average catchment population per PHC facility

Average catchment population per PHC facility	
District	Average catchment population
Ugu	9 917
Umgungundlovu	14 827
Uthukela	13 655
Umzinyathi	8 570
Amajuba	15 858
Zululand	9 582
Umkhanyakude	8 739
Uthungulu	11 870
ILembe	13 705
Sisonke	9 075
eThekwini	24 568
All KZN	13 687

The health facility used by people, their means and duration of travel to a facility, and their levels of satisfaction for the services they received are presented in Figure 52.

More than eight in every ten households in the province used public health facilities in 2014. Only 17.1% of households made use of private health facilities in that year. As many as 36.1% of households reported that they walked to a health facility, but a greater percent (44.6% travelled by taxi, bus or train. Less than twenty percent of households travelled to a health facility with their own transport. Half of all households reported that it took between a quarter and half an hour of travel time to get to the nearest health facility. Most households in all sub-categories who used a health facility reported that they were satisfied with the services they received (Figure 52).

Figure 52 Selected indicators: household access to health services



Source: Calculated from GHS 2014 data.

Table 34 Differences in health services and access

Differences in health services and access, 2014													
	Preferred facility			Means of travel				Travel time			Satisfied		
	Public	Private	Other	Walk	Taxi-Bus-Train	Own transport	Other	< 15 mins	15-29 mins	30 + mins	Satisfied	Not satisfied	Neither
African	88.5	10.6	0.9	40.7	50.1	8.3	0.9	24.2	51.9	23.9	86.2	6.0	7.8
Coloured	52.8	43.5	3.7	23.4	34.0	41.2	1.3	52.2	47.8	0.0	95.4	3.1	1.5
Indian	56.5	42.9	0.7	14.1	18.1	66.5	1.2	56.1	41.7	2.3	96.5	2.3	1.2
White	30.2	69.8	0.0	3.2	3.5	92.1	1.2	51.2	45.7	3.2	97.7	1.3	1.0
Urban formal	67.9	31.5	0.6	33.4	29.6	36.4	0.6	44.3	48.5	7.2	91.5	4.4	4.1
Urban informal	91.9	7.6	0.5	47.7	48.4	3.4	0.5	29.8	59.0	11.2	91.4	3.8	4.8
Rural	93.9	4.9	1.2	35.1	59.3	4.3	1.3	11.9	50.0	38.1	82.8	7.0	10.2
18-39	82.3	16.6	1.0	42.6	44.1	12.9	0.4	31.8	50.9	17.3	87.8	5.1	7.1
40-64	81.1	18.2	0.7	32.5	44.2	22.5	0.9	28.0	50.3	21.7	87.6	5.8	6.7
65+	84.5	14.8	0.8	31.8	46.1	19.8	2.3	24	51.8	24.1	88.7	4.8	6.5
Male	77.2	21.9	0.9	32.7	39.7	27.0	0.6	33.2	49.7	17.1	89.9	3.7	6.4
Female	87.5	11.8	0.7	39.9	49.9	9.0	1.2	23.9	51.7	24.4	85.7	7.1	7.2

Source: Calculations from GHS 2014 data set.

Access to medical cover in the province is briefly described in this section against the background of progress that has been made towards the establishment of a universal national health insurance.³⁴ The National Council of Medical Schemes³⁵ estimated that membership of medical schemes in South Africa was 8.81 million in 2015, and KwaZulu-Natal was not proportionately represented: only 15% of this membership was from this Province.

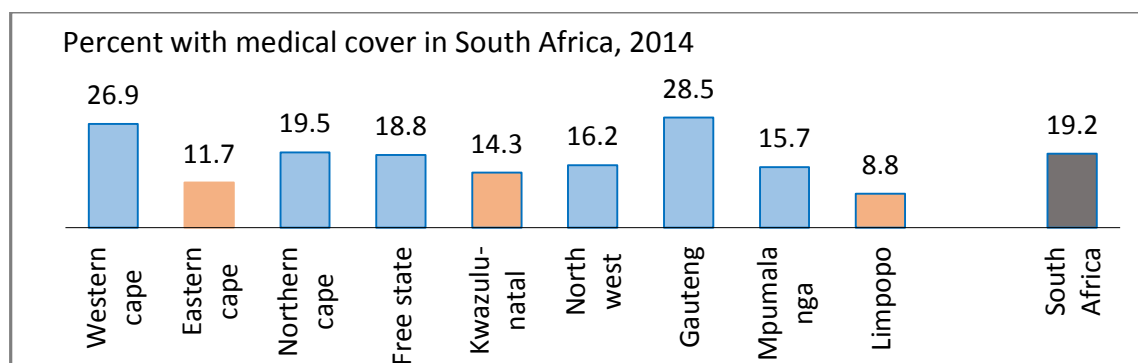
³⁴ The National Health Insurance is currently being piloted in three districts in the province (Umgungundlovu, Umzinyathi and Amajuba).

³⁵ The Council for Medical Schemes, 2015.



KwaZulu-Natal is among the three provinces with very low percent of the population covered by medical schemes. Figure 53 shows that only 14% of people in the Province had medical cover in 2014.

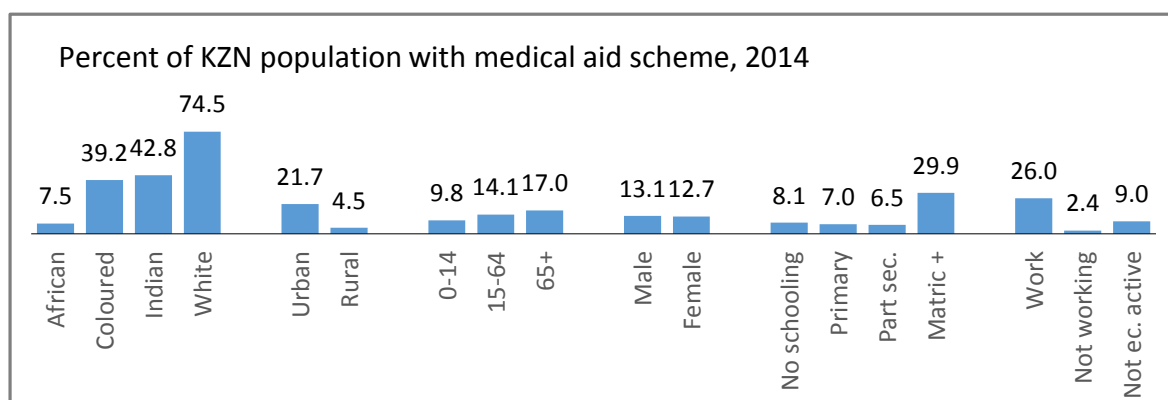
Figure 53 Percent of population with medical cover - provincial



Source: Calculated from GHS 2014 data.

Within the province, factors that are highly associated with access to medical cover include population group, type of place of residence, education and work status (see Figure 54). The White group, urban dwellers, educated and working people had more access to medical cover than others in 2014.

Figure 54 Percent of population with medical aid scheme - KZN



Source: Calculated from GHS 2014 data.

Access to medical cover is strongly related to work status and type of work. In view of this fact, the differences in Table 35 are further examined for working and non-working people in different sub-groups of the population. Table 35 shows that only 26% of working people in KwaZulu-Natal had medical cover in 2014. Access to medical cover ranged from 17% for African workers to 81% for White workers. More formal urban working people had medical cover than workers in urban informal and rural areas. There is a small gender difference in access to health cover in favour of working women compared to working men. A majority of non-encomically active White population (71%) had medial cover in 2014. This is not the case for non-economically active population in other groups; the African group in particular, had a comparative level of medical coverage of just four percent.

Table 35 Percent of KZN on medical care

Percent of KZN population on medical care, 2014			
	Work status		
	Working	Not working	Not econ. active
African	16.5	1.9	3.7
Coloured	54.9	11.8	30
Indian	53.2	12.7	32
White	80.8	12.3	70.8
Urban formal	40.7	4.9	24.2
Urban informal	2.4	0.6	0.6
Rural	12.5	1.1	2.1
Male	24.5	1.6	8.9
Female	27.8	3.1	9.1
All KZN	26.0	2.4	8.9

Source: Calculated from GHS 2014 data.

The following are drawn from the report of Action Work Group 10 and provide a picture of progress on the PGDP indicators (Fourth quarter 2014).

Table 36 Summary of Selected indicators of health, PGDP indicators

Summary of Selected indicators of health					
Indicator	Base Line 2010	AWG10	Targets		
		latest	2015	2020	2030
Life expectancy at birth (in yrs) (2013) (males)	49.1	57.0	56.4	58.4	
Life expectancy at birth (in yrs) (2013) (Females)	50.2	58.4	60.7	62.7	
Percentage of Primary Health Care facilities scoring above 80% on the Ideal Clinic Dashboard (2014)	6.25	10.1	20%	100	100
Maternal mortality in facility ratio (annualised) (per 100 000 live births) (2010).	195	118.7	120	100	60



Infant mortality rate (per 1000 live births) 2010	32.1	31.4	30.5	29.0	26
Under-5 mortality rate (per 1000 live births). 2010	43.4	42.6	42	40.0	36.0
HIV prevalence and incidence among 15-24 year old pregnant women (pregnant women) Baseline: (2012)	25.8%	?	25.5	25.0	24.0
TB incidence and prevalence (per 100 000 population). 2010 Baseline: 1 161 per 100 000	1161	808	700	200	170
Professional Nurses per 100 000 population (per 100 000) 2010	130	138.4	141.3	147	155
Medical Officers per 100 000 population (per 100 000) 2010	24	21.2	33.9	36	48
Dietary diversity index: % percentage of households consuming fewer than the 15 major food categories in the previous month.(AWG8)	60	49.4	54.0	46.0	30.0
Hunger episodes: % of household member gone hungry at least sometimes in the preceding 12 months 2012 (AWG8)	35	28.3	32.0	24.0	6.0

Source: Various and AWG10

5.3 Human Settlement

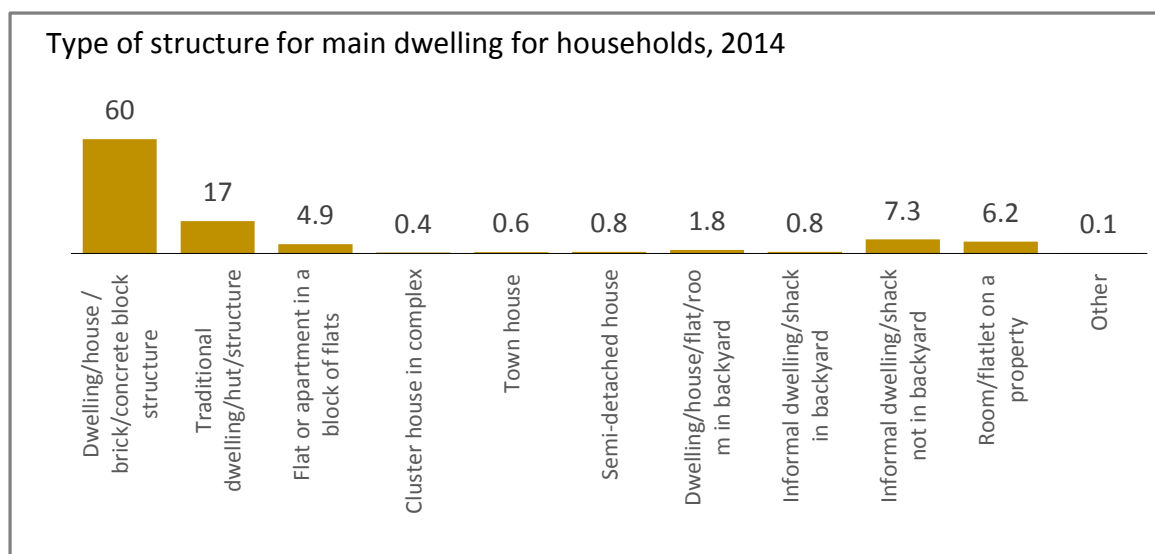
5.3.1 Type of dwelling

The estimated number of households living in brick houses in the province increased from 624 437 in 1995 to more than 2.66 million in 2014. Figure 55 shows that six in ten households in KwaZulu-Natal lived in brick houses, and 17% lived in traditional dwellings in 2014. Informal dwelling accommodated eight percent of households, with the majority of these in shacks that are not in backyards. Only 6.2% of households in the province lived in rooms/flatlets on a property in 2014.

Differences in estimated types of main dwelling follow an expected pattern. More formal urban dwellers lived in brick houses (67.5%) than households in rural areas (58.1%) and urban informal areas (42.2%). A sizeable percent of estimated urban informal households (34.6%) lived in informal dwellings or shacks that are not located in backyards (Table 37).



Figure 55 Households – type of structure, 2014



Source: Calculated from GHS 2014.

Table 37 Dwelling types in rural and urban areas, 2014

Dwelling types in rural and urban areas, 2014						
Type of dwelling	Urban formal		Urban informal		Rural	
	N	%	N	%	N	%
Dwelling/house or brick/concrete block structure on a separate stand	795534	67.5	157925	42.2	645772	58.1
Traditional dwelling/hut/structure made of traditional mater	24989	2.1	50363	13.5	376133	33.8
Flat or apartment in a block of flats	116941	9.9	2140	0.6	11370	1
Dwelling/house/flat/room in backyard	17708	1.5	12477	3.3	18765	1.7
Informal dwelling/shack in backyard	9551	0.8	9726	2.6	707	0.1
Informal dwelling/shack not in backyard.	59554	5.1	129266	34.6	6910	0.6
Room/flat-let on a property or a larger dwelling servants' quarters	105793	9.0	8968	2.4	51148	4.6
Other	39014	4.1	1334	0.4	467	0
All	1178002	100	374072	100	1111271	100

Source: Calculated from GHS 2014 data.



The number of households in backyard shacks decreased from 62 658 in 2011 to an estimated number of less than twenty thousand in 2014. On the other hand, the percent of households in non-backyard shacks increased from 6% in 2011 to 7.3% in 2014 (actual numbers are 148 889 households in 2011 and 195 730 households in 2014). Table 38 shows that the more urbanised districts in the Province had comparatively more proportions of households in both backyard and non-backyard shacks.

Table 38 Estimates of district households in informal dwellings, 2011

Estimates of district households in informal dwellings, 2011				
	Households in a non-backyard shack		Households in backyard shack	
	Number	%	Number	%
eThekweni	111 307	12	37 981	4
UMgungundlovu	11 988	4	6 399	2
iLembe	7 657	5	5 569	4
Ugu	5 816	3	2 107	1
Amajuba	2 813	3	2 286	2
Sisonke	2 458	2	1 741	2
Uthungulu	2 235	1	2 521	1
Umzinyathi	1 958	2	718	1
Umkhanyakude	951	1	1 141	1
Uthukela	931	1	1 063	1
Zululand	774	0	1 131	1
KwaZulu-Natal	148 889	6	62 658	2

Source: Housing Agency Development, 2013; calculations from Census 2011.

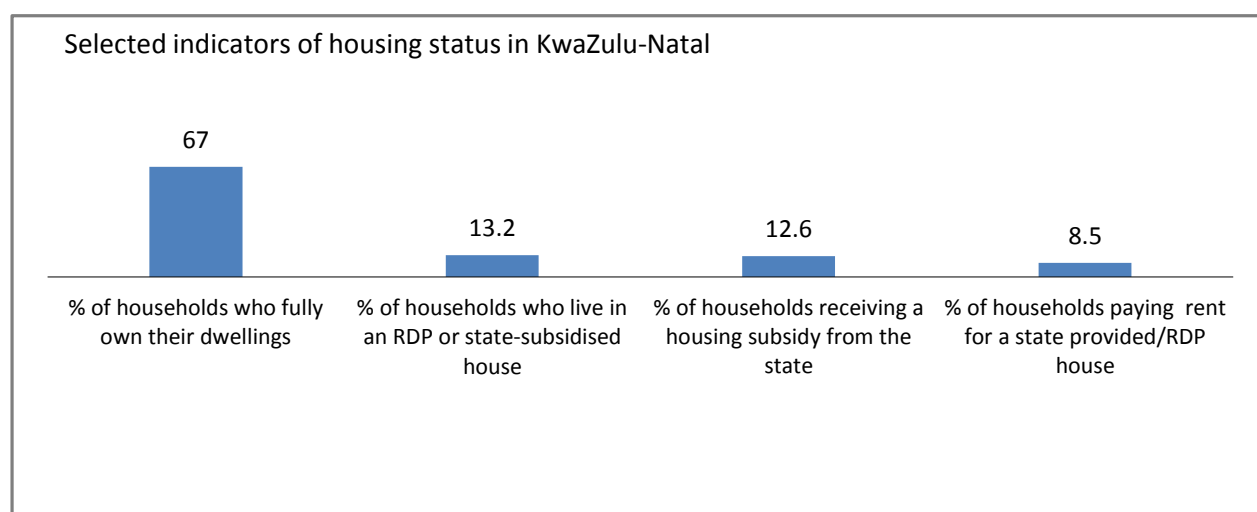
5.3.2 Ownership of dwelling unit

Sixty-seven percent of all households in KwaZulu-Natal owned their dwelling units in 2014, and 13% lived in state-subsidized houses (Figure 56). This is consistent with a recent 19% decrease in housing backlog reported by the Department of Human Settlement. Other statistics that indicate improved access to housing include an increase in the number of households with registrable forms of tenure, and an increase in social housing and rental opportunities in state-



subsidised housing programmes. Figure 56 shows the spatial distribution of households that owned and paid off their dwellings in 2011.

Figure 56 Selected indicators of housing status in KwaZulu-Natal



Source: Statistics South Africa, 2016.

Table 39 Selected indicators of human settlement (PGDP)

Selected indicators of human settlement					
Indicator	Baseline 2010 ?	AWG9	2015	2020	2030
% Housing Backlog: (% decrease) 742019 units	17.9	19% decrease	7% decrease (2012-2015)	14	14
% Households with registrable form of tenure	15	55.1	56%	57	59
% of Provincial Human Settlement budget spent on formal settlement development	36.0	60.0	37.0	42	50
Social Housing and Rental Opportunities (Baseline number 684) % increase.	684	157 units	944 units	15%	20%

5.3.3 *Women's Ownership of Land*

Women experience vulnerability in terms of access to and ownership of land. The Commission on Gender Equality has undertaken a study on women's access to and ownership of land³⁶. It argued that land – just like water – is a very important resource in alleviating poverty because people depend on it for cultivation, food production, and their livelihoods. Unequal access to land by men and women remains one of the most important forms of economic inequality; and it has dire consequences for women, both as social and political actors in society. As a result, land reform, redistribution and access are key issues that still require attention in South Africa. Data for KwaZulu Natal was received only from the House of Traditional Leaders. It became apparent from the responses received from the House of Traditional Leaders that they were not happy with the relationship they had with government. This also emerges from the situational analysis report that the majority of land in KZN belongs to the House of Traditional Leaders through the Ingonyama Trust; and this hostility stultifies programme implementation due to poor relations between government and the House of Traditional leaders. "With regard to distribution of resources such as land, the traditional leaders are of the view that government should consult with the traditional communities in defining a development trajectory for their constituencies. Traditional leaders perceive some aspects of South Africa's Constitution as militating against the African customs and practices." ³⁷

Despite the CGE's KZN province's challenge to conduct primary research in the department due to issues of access, especially from the Traditional House, secondary research revealed that the Department of Land and Rural Development in KZN had not as yet put systems in place to mainstream gender in land. There were no gender focal points when the study was conducted; no gender disaggregated data to ascertain which men and women have benefitted from the land reform programmes.

5.4 *Safety and security*

5.4.1 *Crime in the province*

Reported crime statistics in KwaZulu-Natal and all other parts of the country attract controversies about their accuracy, completeness, timeliness and details. Notwithstanding their limitations, available data provide a general picture of the state of safety in Province.

Estimates of the number of crimes per 100 000 people in the province are presented in Figure 57.³⁸ More than two hundred and eight-thousand crimes were reported in KwaZulu-Natal in 2014-2015. The crime rate declined from 3585 per 100 000 in 2005 to 3272 per 100 000 people

³⁶ Commission for Gender Equality (2006-2008/9) "A Gendered analysis of Land Reform Policy and Implementation in South Africa.

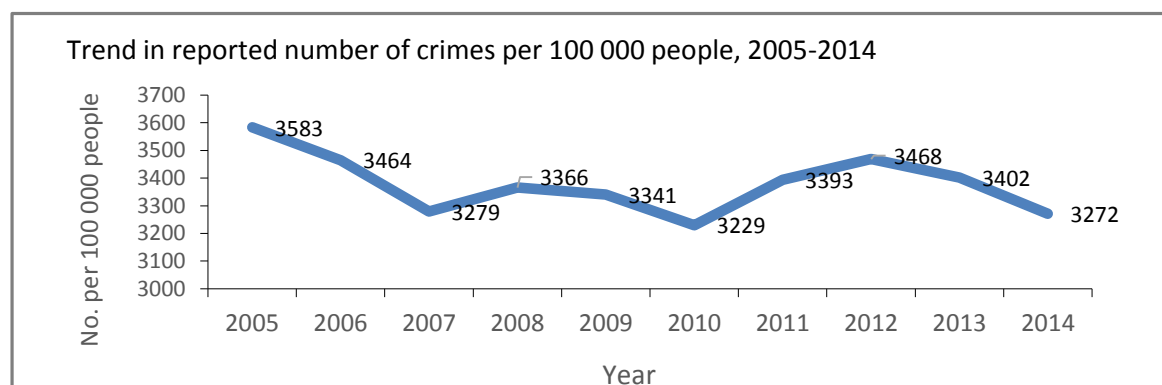
³⁷ Ibid. P. 106.

³⁸ The accuracy of these estimates depends on (i) the accuracy of the reported number provided by South African Police Services and (ii) the accuracy of provincial population estimates produced by Statistics South Africa for the relevant years.



in 2014. The statistics in Figure 57 suggest that the crime rate declined from 2005 to 2007, increased slightly in 2008/2009 and declined in 2010. This was followed by an increase in 2011 and 2012, and a downward trend in 2013 and 2014.

Figure 57 Trend in reported crime



Sources: SAPS crime statistics and STATSSA mid-year population estimates.

The number of specific types of crimes collected by the South African Police Services in 23 categories are shown in Table 40 for the most recent reporting year (2014-2015). The percent change from the preceeding year (2013-2014), the percent contribution of KwaZulu-Natal and the its rank for each type of crime are aslo presented in Table 40.

Table 40: Reported number of crimes in KZN, 2014-2015

Reported number of crimes in KZN, 2014-2015					
Crime type		Number	% change from 2013-14	% of national	Rank (national)
1	Murder	3810	5.40	21.40	1
2	Total sexual offences	9079	-8.20	16.90	3
3	Attempted murder	3918	2.20	22.30	2
4	Assault with intent for bodily harm	29291	0.80	16.00	2
5	Common assault	24011	-8.70	14.90	3
6	Common robbery	7857	-6.40	14.30	3
7	Robbery with aggravating circumstances	20881	-0.40	16.20	3
8	Arson	857	-4.70	16.70	2
9	Malicious damage to property	14605	-2.30	12.10	3

10	Burglary at non-residential premises	11032	-1.40	14.80	3
11	Burglary at residential premises	43274	-1.60	17.10	3
12	Theft of motor vehicle and motorcycle	8404	-3.10	15.30	3
13	Theft out fo ro from motor vehicle	18148	-2.50	12.50	3
14	Stock-theft	5956	3.50	23.90	2
15	All theft not mentioned elsewhere	47622	-4.50	13.20	3
16	Commercial crime	11227	-9.70	16.60	2
17	Shoplifting	14118	5.50	19.80	3
18	Car hijacking	2190	-3.20	17.10	2
19	Truck hijacking	63	37.00	4.90	4
20	Robbery of cash in transit	18	-51.40	15.40	2
21	Bank robbery	0	0.00	0.00	9
22	Robbery at residential premises	3958	-3.40	19.50	2
23	Robbery at non-residential premises	2750	2.00	14.30	2
	Total	283069			

Source: SAPS crime statistics database.

These statistics highlight four aspects of crimes in the Province. First, most categories of crime, KwaZulu-Natal was ranked either second or third position in relation to other provinces in the country. Secondly, a disturbing statistic is that KwaZulu-Natal had the highest number of murders in South Africa in 2014-2015 with a total number of 3810 murders reported in the Province. This number represents a 5.4% increase in the number of murders reported in the preceeding year (2013-2014).



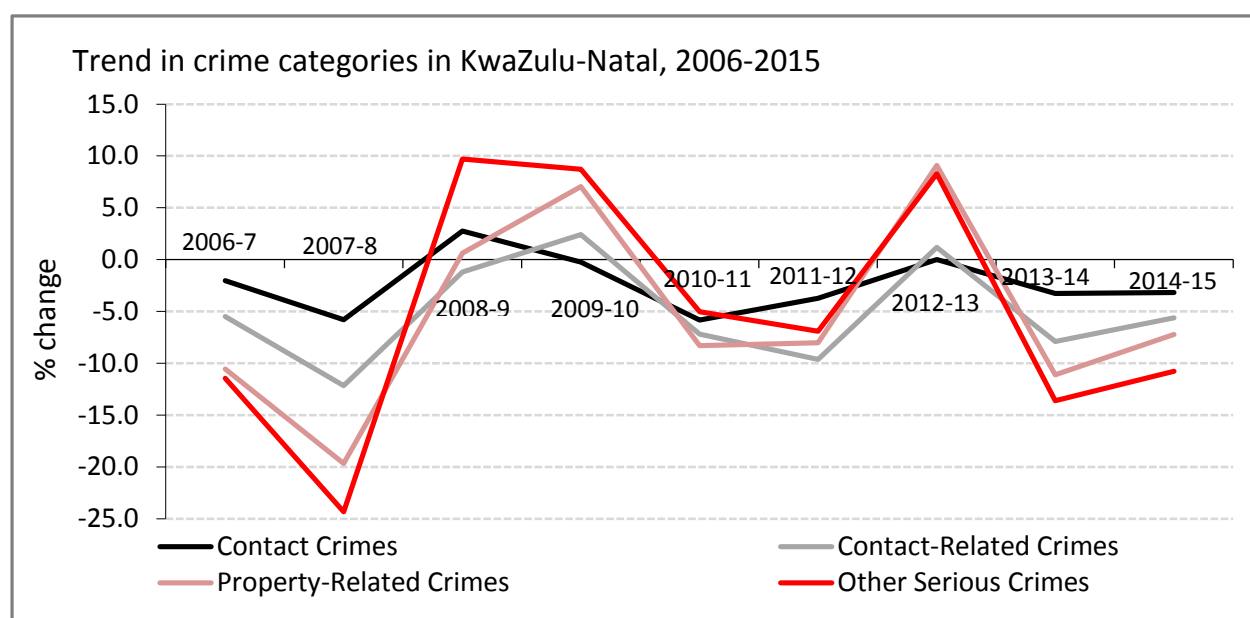
Thirdly, a related set of disturbing statistics is that the reported number of several types of crimes recorded an increase from the previous year. These categories are murder, attempted murder, stock theft, shoplifting, truck hijacking and robbery at non-residential premises.

Lastly, the statistics show that no bank robbery was reported in KwaZulu-Natal in 2014-2015. Robbery of cash in transit was reduced by more than half of the number in the previous year, and truck hijacking was reduced by 37%.

The number of sexual offences reported in 2014/2015 year in the Province is 9079, which is a decline of 8.2% from the number in 2013/2014. Available crime statistics³⁹ are not yet officially presented for detailed categories of sexual offences in ways that permit separate estimates of sexual crimes against children and sexual crimes against women.

Figure 58 is a summary of trend in categories of crimes officially reported for KwaZulu-Natal from 2005 to 2015. The data show two spikes in these crimes categories, one from 2008 to 2010 and the other from 2012 to 2013.

Figure 58 Trend in crime categories KZN 2006 - 2015



Source: Original computations and analysis of the national crime database: 2005-2015.

Table 41: Recorded number of crimes 2005 - 2015

Recorded number of crimes categories in KwaZulu-Natal, 2005-2015										
Type of crime	2005/6	2006/7	2007/8	2008/9	2009/0	2010/1	2011/2	2012/3	2013/4	2014/5

³⁹ SAPS database in the public domain.



Contact (Crimes against the person)	122953	120467	113470	116603	116305	109524	105443	105444	101983	98757
Contact-related	19851	19161	17945	17232	17693	17454	16424	16616	15850	15459
Property-related	89831	85280	78861	80311	84032	83099	84433	91128	88205	86814
Crime Detected as a result of Police action	35357	40609	41003	40883	45589	47628	55907	62908	64896	65418
Other Serious Crimes	72221	70858	67557	73692	74928	77384	78241	77601	75655	72967
Subcategories of aggravated robbery	5571	7423	9530	11392	10564	8673	7968	8983	9140	8979

Source: National crime statistics database, 2005-2015.

The statistics in Table 41 show an overall downward trend in categories of reported crimes during the the past year. Contact crime (against the person) declined in-between 2013/2014 and 2014/2015 periods. Contact-related crimes declined slightly from 15850 to 15459 in the same period. Property related crimes declined from 88205 to 86814, and other serious crimes declined from 75655 to 72967 from 2013/2014 to 2014/2015. Sub-categories of aggravated robberies also decline from 9140 to 8979 during the same period. The number of crime detected as a result of police action in the Province increased from 64896 to 65418 from 2013/14 to 2014/2015. Most points in the trend for each category of crime show a decline despite the fluctuations in trends.

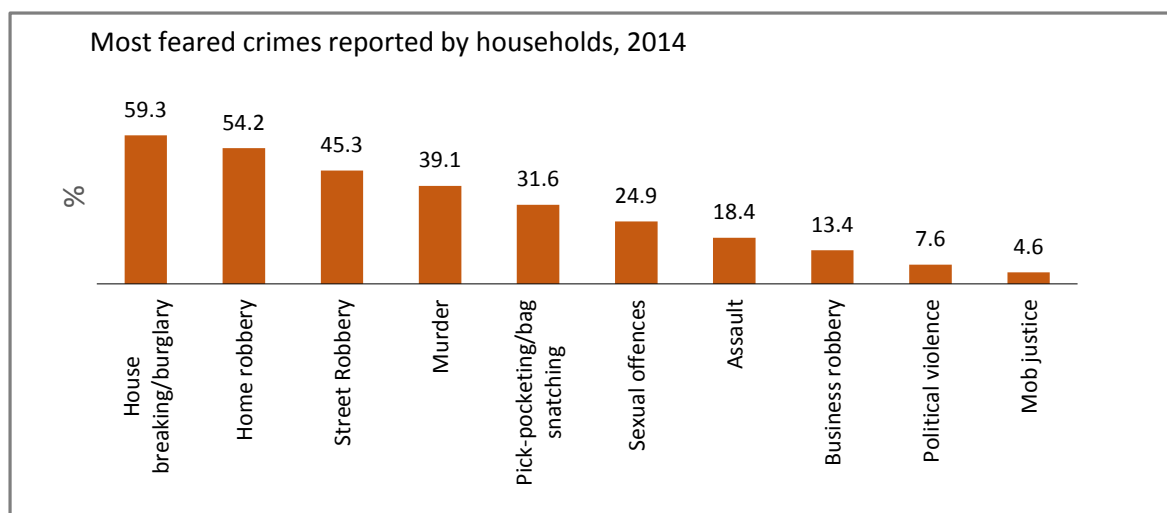
5.4.2 *Fear of crime*

Statistics from the 2014/2015 Victims of Crimes Survey⁴⁰ show that close to sixty percent of KwaZulu-Natal households feared housebreaking /burglary, and more than half feared home robbery (Figure 61). The data in Figure 98 indicate an increase in the level of fear among residents of the province concerning basic normal activities, especially among children. For instance, fear of going to open places and parks, allowing children to play outside alone, and walking to school and shops, has increased since 2011.

⁴⁰ Statistics South Africa, 2015

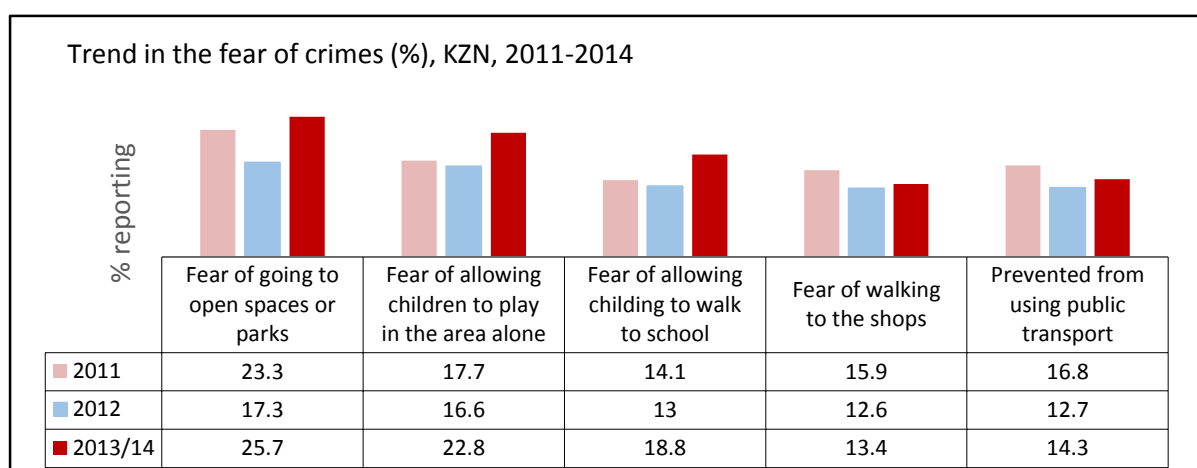


Figure 59 Most feared crimes reported



Source: Statistics South Africa. Victim of Crime Survey. 2014/2015.

Figure 60 Trend in fear of crimes

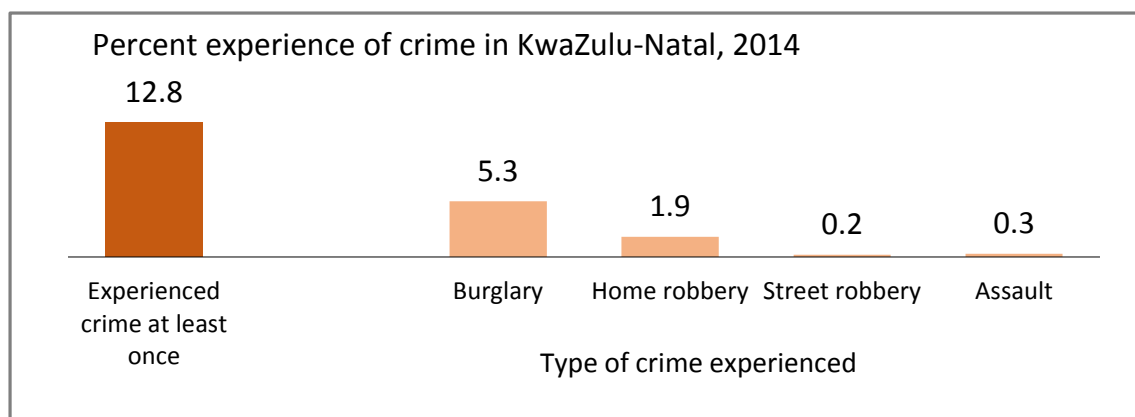


Source: Statistics South Africa. Victims of Crime Survey. 2014/2015.

5.4.3 Experience of crime

More than one in every ten people in the province experienced at least a crime in 2014 (Figure 63). Five percent of all KwaZulu-Natal households experienced burglary and two percent experienced home robbery. Some experienced street robbery (0.2%) and assault (0.3%).

Figure 61 Percent experience of crime



Source: Statistics South Africa. Victim of Crime Survey. 2014/2015.

Widowhood Rights and Rites

In 2008 the Commission on Gender Equality produced a research report on widowhood⁴¹. It highlighted the vulnerability of women when they are in a state of mourning- after losing their beloved spouses through death. The study sought to investigate the effects of widowhood on women in communities around South Africa, and ways of combating these effects. It highlighted the negative impacts of widowhood on women whose human and gender rights are routinely violated by those close to them and, in some cases by the judicial and law enforcement systems which are meant to serve and protect them during the period when they are most vulnerable. Women who live in impoverished communities become extremely vulnerable to socio-economic and cultural marginalization and discrimination; and are often excommunicated from their communities and sometimes even their families through widowhood. The CGE together with the Office of the Premier, KZN, has proposed a wide range of measures to address human rights abuses and vulnerability of widows in the province, and urges that such measures be factored into PGDP processes.

Key to this is the urgent need for a Department of Social Development-led task team to review current policies and legislation to enable widows to access various support services, including financial support, immediately after the death of their spouses and during the mourning process. The CGE is of the view that there is a need for national policy guidelines to ensure that a range of vital support services are provided and made easily accessible to widows as and when needed, including a possible DSD time-bound and means-tested special income support grant for widows and widowers, to augment their livelihoods during the mourning period.

CGE study recommendations include a call for support and advice desks with rapid response systems to assist and advise women in urgent and desperate situations, particularly those widows who are dispossessed and chased out of their homes by family members after the death of their spouses. There is also a need for public education campaigns across the country, especially in the rural areas, involving traditional leadership, to address the issue of

⁴¹ Commission for Gender Equality (2007) Widowhood Rites and Rights, CGE, Johannesburg. s

the vulnerability of widows, and their rights to personal safety and protection from harmful cultural practices. Such measures could be supported by a national Widowhood Support Structure, with the involvement of relevant government departments, to serve as a platform for widows to share knowledge and information about their experiences and ways of protecting and enforcing their right to equality. Such a structure could coordinate support from state and other institution in ensuring access to legal, financial and counselling support for victims of harmful widowhood practices.

5.4.4 *Gender Based Violence*

KZN Province experiences high levels of gender based violence (GBV) and sexual violence, including rape.

- Province has established a GBV laboratory, but the draft implementation plan resulting from consultative processes has yet to be finalised and adopted by Cabinet. This should be fast-tracked, and reviewed in light of causal factors study findings. DSD together with appropriate stakeholders should develop, cost and implement GBV prevention and awareness strategies and interventions, so that the province has an adopted, costed and implementable GBV plan.
- Likewise, the Office of the Premier has convened high level stakeholders to develop the KZN anti-rape strategy, but this has yet to be finalised, costed and implemented. This too should be fast-tracked. DSD should develop a reporting, monitoring and evaluation mechanism to review implementation of the GBV implementation plan, and revise it on an annual basis.
- Within KZN, harmful traditional and religious practices need to be identified and eradicated. COGTA and CGE in KZN have implemented a series of district dialogues with traditional leaders on forced and early marriages; and these have been documented into a report that was adopted by Cabinet in 2015. COGTA and other appropriate stakeholders should engage the traditional and religious leaders in terms of identifying harmful practices which promote GBV; and engage them through provincial and district consultative dialogues.
- The National Prosecuting Authority (NPA) provincial HPPB Task Team has developed a draft strategy on forced and early childhood marriages, which needs to be adopted by KZN Cabinet as a matter of urgency. This strategy should be finalised, adopted, and costed; and its implementation should be reflected in annual performance plans, budgets and reports of provincial departments, with appropriate monitoring and evaluation, and strategy review mechanisms implemented annually.
- South African Police Services (SAPS) and Justice officials need to respond to GBV in an informed and sensitive manner, to ensure justice and support for GBV survivors. SAPS are implementing training for police officers on GBV, Sexual Offences Act (SOA) and Domestic Violence Act (DVA), but the training is uneven in terms of content and distribution. Standardized training curriculum and programme should be rolled out by SAPS, DOJ&CD and NPA to all police officers and justice officials such as magistrates and prosecutors, and the three departments should report on, and undertake monitoring and evaluation measures to assess the effectiveness of the training programmes.



- Further, KZN needs to ensure that survivors of GBV have access to justice, and integrated and responsive and appropriately supported response mechanisms. The CGE proposes that a baseline be established of the number of sexual offenses courts operating in KZN; and that province identify where additional courts should be established and engage with DOJ&CD to roll these out. DOJ&CD should ensure that these courts are appropriately staffed and resourced. The department should regularly report on the effectiveness of these courts.
- DSD in KZN has developed a draft Victim Empowerment Programme (VEP) implementation plan which was due to have been adopted by August 2015, but has as yet, not been finalised. The KZN VEP implementation plan should be finalised and costed; and departmental reports should detail implementation of interventions and expenditure against the costed budget. Studies and reports from survivors of GBV indicate that support services to survivors of GBV are offered in an uneven and uncoordinated fashion. The Justice cluster departments (DSD, Department of Health (DOH) and DOJ&CD, SAPS, NPA and Department of Correctional Services (DSD) should enact measures to ensure that survivors of GBV receive adequate support services as per the mandate of each department such as access to places of safety such as shelters, health care facilities, counselling and legal advice. These departments should establish appropriate collaboration, referral and statistics gathering mechanisms to ensure integrated services for survivors of GBV. The departmental reports should indicate services offered, budget allocations, expenditure in implementation of services, and collaboration across departments in offering integrated response services to survivors of GBV.
- A limited number of places of safety are available to DV and SO survivors, but these are unevenly distributed across the province. DSD should determine the baseline of places of safety; their accessibility and responsiveness to the needs of the survivors of GBV. The baseline should determine if there is a need for the creation for new places of safety; and if necessary, then implement improvement interventions where required and report to Cabinet. The departments should implement monitoring and evaluation mechanisms to assess the effectiveness of response interventions, and report annually to Cabinet.

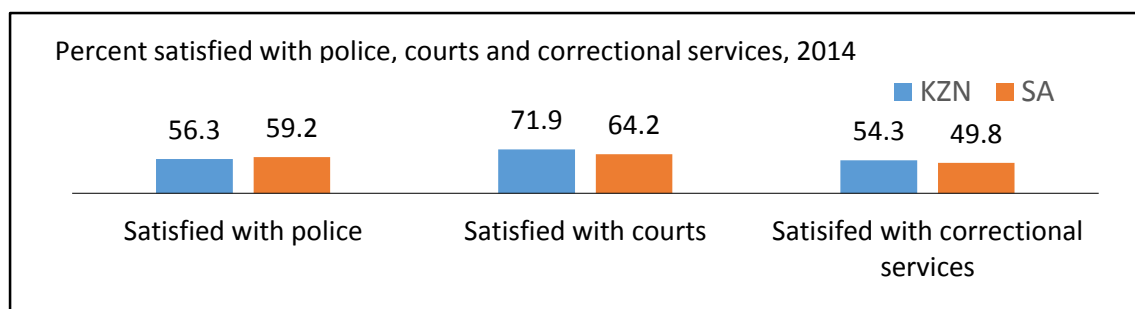
5.4.5 *Assessment of law enforcement institutions*

People in the province were more satisfied with the courts than with the police or correctional services in relation to crime (Figure 64). About seventy-two percent of people in the province were satisfied with the courts, compared to 56.3% who were satisfied with the police and 54.3% who were satisfied with correctional services. The comparatively low level of satisfaction with the police is consistent with findings in other assessment of confidence level of people in government institutions.⁴²

⁴² See Institute on Justice and Reconciliation, 2103.



Figure 62 Percent satisfaction with safety and security services



Source: Statistics South Africa. Victim of Crime Survey. 2014/2015.

Table 42 Summary of indicators of safety and security

Selected indicators of safety and security					
Indicator	Baseline	AWG9 latest	Targets		
			2015	2020	2030
Number of serious crimes reported (2013)	282 747	-	276 401	251 574	209 749
Number of crimes against women and children (2013)		-	41 465	39 757	35 938
Number of reported sexual crimes	5 205	53345	-	-	-
Number of drug related crimes reported (2013)	45 80	-	47 288	95 441	175 844

5.5 Youth development

Youth development is one of the major cross-cutting issues in the Provincial Growth and Development Plan. The size of the population classified as the youth in the Province depends on the age-group included in the definition. This can range from 40% based on the official classification which comprises people in the 14-35 age range, to 19% if the narrow age group of 15-24 years is used. There are 2.9 million people, or 26.9% of the estimated population in 2015 in the age group of 15-34 years (Table 41).

Table 43 Youth population of KZN

The youth population of KwaZulu-Natal, 2015		
Youth age	Estimated number	% of the population
15-24	2 085 548	19.1



20-34	2 937 238	26.9
14-35	4 356 721	39.9

Sources: Calculated from mid-year population, STATSSA, 2015.

Many aspects of youth issues centre on their education and skills levels, their health status and economic opportunities accessible to them as well-equipped and healthy members of the society. Internationally, challenges in these areas have been recognised as the essential elements of the demographic bonus at the disposal of societies that currently share a demographic profile that is similar to KwaZulu-Natal. Locally, these issues have been raised and extensively discussed in research and policy making circles.⁴³

5.5.1 Education and skill development

Progress made in education in the education sector stands alongside majors problems in relation to human capital development in the Province. One of such persistent problems is inequality in access to tertiary education among young people in different sub-groups of the population. Table 44 shows that only eight percent of African youth had access to tertiary education compared to 48% of young people in the White group. A similar gap of difference in access to tertiary education exists between young people in urban areas (48%) and those in informal urban (3.3%) and rural areas (4.5%). It should also raise concern that some young people in the Province, especially in rural and informal urban areas do not have any formal education.

Other problems which have been highlighted in the analysis of education and skill development include high drop-out rates⁴⁴ at secondary and tertiary educational institutions, recent poor performances of the Province in the National Senior Certificate Examination, and inadequate skills, and a mismatch in skills gained from the formal education system and the requirements in many sectors of the economy.

Table 44 Education profile of youth

Education profile of people aged 20-34 years, 2014					
Characteristics	Education level (%)				
	None	Primary	Part sec	Matric	Tertiary
20-24	0.9	5.4	43.6	44.2	5.9
25-29	1.1	5.6	39.6	41.9	11.8

⁴³ See Statistics South Africa, 2015; Youth Development Policy 2014-2019.

⁴⁴ Statistics South Africa, 2015.



30-34	1.4	8.6	41.1	36.5	12.5
African	1.1	7.0	43.9	39.7	8.3
Coloured	0.0	1.4	19.1	45.1	34.5
Indian	1.1	1.1	22.3	57.7	17.8
White	0.0	0.0	11.8	40.3	47.9
Urban formal	0.6	2.8	29.9	48.2	18.5
Urban inform.	1.3	5.9	55.3	34.1	3.3
Rural	1.5	9.9	47.1	37.0	4.5
All KZN youth	1.1	6.4	41.5	41.1	9.9

Sources: Calculated from GHS 2014 data.

5.5.2 Youth health

Slightly more than half of all young people aged 20-34 years reported excellent or very good status, and thirty-nine percent reported to be in good health in 2014 (Table 45). Only less than two percent were in poor health. Youth in urban informal areas and those in their early thirties reported poorer state of health than all others in 2014.

Table 45 Reported status of youth health

Reported status of youth health in KwaZulu-Natal, 2014				
Characteristics	Health status (%)			
	Excellent Very Good	Good	Fair	Poor
20-24	53.6	38.7	6.8	0.9
25-29	50.9	37.9	9.5	1.8
30-34	48.4	38.8	11.1	1.7
African	49.3	39.3	9.8	1.6
Coloured	75.5	19.7	4.9	0.0
Indian	63.6	34.2	2.1	0.0
White	75.4	24.6	0.0	0.0
Urban formal	54.8	36.4	8.2	0.6
Urban informal	42.3	39.6	16.5	1.6

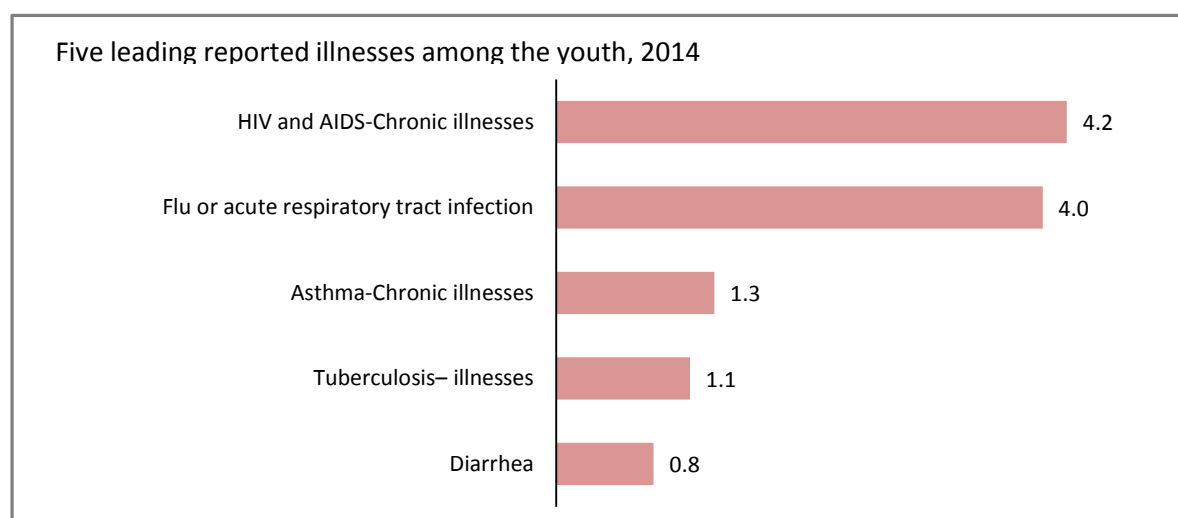


Rural	50.8	40.0	7.1	2.1
All KZN	51.1	38.5	9.0	1.4

Sources: Calculated from GHS 2014 data.

Figure 65 show the five leading types of illnesses reported among the youth aged 15-34 in 2014. HIV and AIDS-related chronic illnesses ranked highest (reported by 4.2%), followed by flu or acute respiratory tract infections (4%). Other illnesses that featured in the top five of this scale include asthma-chronic illnesses, tuberculosis-illnesses and diarrhoea.

Figure 63 Leading reported illnesses



Sources: Calculated from GHS 2014 data.

Table 46 shows a consistent pattern of differences in the two leading illnesses among the youth in 2014. HIV and AIDS related chronic illnesses were more prevalent among older youth, African group, people in informal urban and rural areas, and females. The same pattern is also true for Flu or acute respiratory tract infections.

Table 46 Reported illnesses among youth

Reported illnesses among the youth, 2014												
Reported illnesses	Age group			Population group				Residence			Gender	
	20-24	25-29	30-34	African	Coloured	Indian	White	Urban formal	Urban informal	Rural	Male	Female
HIV and AIDS-Chronic illnesses	1.2	4.9	6.8	4.6	1.8	0.0	0.0	2.8	5.7	4.8	2.2	6.0
Flu or acute respiratory tract infection	3.2	4.0	4.9	4.0	18.1	1.6	6.6	4.3	4.5	3.6	3.3	4.7



Asthma- Chronic illnesses	1.4	0.9	1.5	1.2	0.0	2.9	0.0	1.7	0.3	1.2	0.6	1.9
Tuberculosis illnesses	0.4	1.4	1.4	1.1	2.4	0.9	0.0	0.8	1.6	1.2	0.9	1.3
Diarrhoea	1.0	1.0	0.4	0.9	0.0	0.0	1.3	0.8	0.8	0.8	0.7	0.9

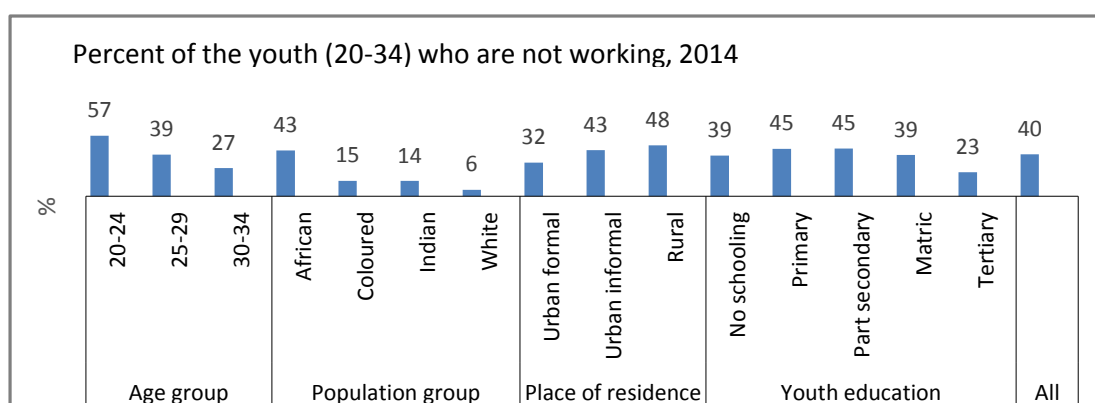
Sources: Calculated from GHS 2014 data.

Other health issues among young people in the Province that are widely recognised include substance abuse, and direct and indirect impacts of teenage pregnancy.⁴⁵

5.5.3 Youth unemployment

Many young people in KwaZulu-Natal lack of access to productive economic activities. As many as 40% of people aged 20-34 years were unemployed in 2014. The unemployment rate was as high as 57% among young people in their early twenties. African youth, those in rural areas, and young people with primary or incomplete secondary education also had relatively high rates of unemployment (Figure 66).

Figure 64 Percent of youth not working



Sources: Calculated from GHS 2014 data.

The high and persistent rate of youth unemployment reinforces economic exclusion, and gives rise to other economic and social problems that threaten the achievement of the development goals of the PGDP in KwaZulu-Natal. In a number of ways, the formal economy leaves little room for increased participation of young people, especially those with a background of historical economic, social and educational disadvantages.

Direct and indirect fallouts from this economic exclusion and marginalisation of young people are positively associated with a wide range of other problems in families and communities in the Province, including substance abuse, crimes, teenage pregnancy and sexual violence.

⁴⁵ Statistics South Africa, 2015.

Relevant provincial and national departments and institutions have produced elaborate interventions in these and other areas of youth development. The Department of Trade and Industry has developed a package of interventions that involves active collaborations with public agencies and private sector institutions in promoting youth enterprise and entrepreneurship development for 2013-2023.⁴⁶

5.6 Gender and the empowerment of women

An estimated number of 5.6 million women lived in KwaZulu-Natal in 2015. This is more than half of the estimated population of 10.9 million for the province. Gender issues should be at the centre of development priorities and intervention approaches in the Provincial Growth and Development Plan.⁴⁷

Table 47 Gender differences KZN

Gender differences, KZN 2015			
Age group	% male	% female	Sex ratio (males per 100 females)
Age group			
0-4	52.2	47.8	91
5-14	49.8	50.2	101
15-64	47.6	52.4	91
65+	31.1	68.9	52
Population group			
African	47.6	52.4	91
Coloured	44.8	55.2	81
Indian	48.4	51.6	94

⁴⁶ Department of Trade and Industries, 2015.

⁴⁷ These issues were reviewed in the 2011 edition of the KwaZulu-Natal Situational Overview.



White	49.1	50.9	97
Place of residence			
Urban	49.4	50.6	98
Rural	46.1	53.9	86
All KZN	47.9	52.1	92
N	5228062	5691015	10919077

Figure 65 Gender differences: education and work status

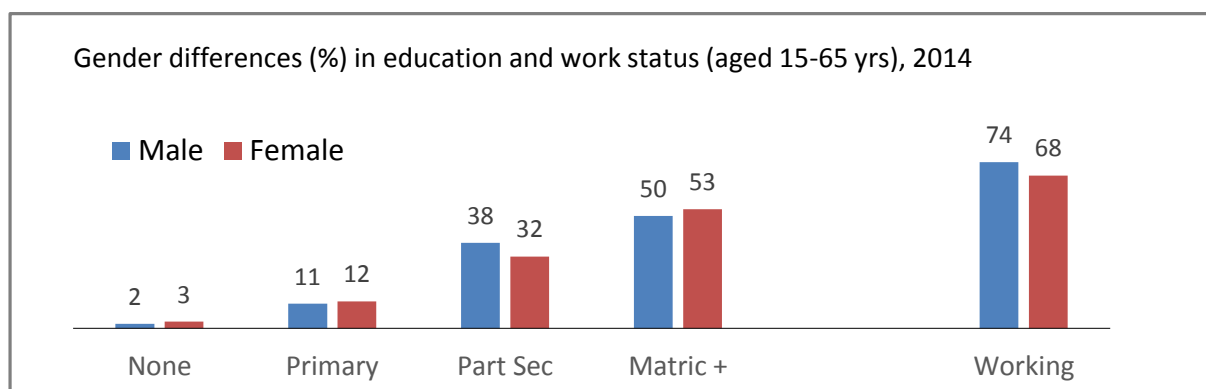


Table 48 Education differences, adult females - males

Education differences (%) among adult males and females aged 15-64, 2014												
	No schooling			Primary			Part secondary			Matric +		
	M	F	All	M	F	All	M	F	All	M	F	All
African	2.2	3.4	2.8	12.5	13.7	13.1	41.5	34.7	38.2	43.7	48.2	45.9
Coloured	0.0	0.0	0.0	4.1	0.0	2.3	18.4	17.0	17.8	77.4	83.0	79.9
Indian	0.4	0.7	0.5	1.5	4.0	2.5	27.2	14.5	22.2	70.9	80.8	74.9
White	0.7	0.0	0.4	0.0	0.9	0.4	7.5	11.6	9.4	91.8	87.5	89.7
Urban	1.0	1.0	1.0	7.7	7.5	7.6	36.1	28.7	32.7	55.2	62.8	58.6
Rural	3.7	6.1	4.9	16	19.3	17.7	41.5	36.1	38.7	38.8	38.6	38.7
All KZN	1.9	2.9	2.4	10.5	12.1	11.2	37.9	31.6	34.9	49.8	53.4	51.5

Visible constitutional and legal progress in gender equity has been recorded in many areas. Unfortunately, this progress does not always reflect in practical experiences of many women in the Province. Too often, in reality, entrenched patriarchal norms sabotage progress in gender equity, especially at the local levels and in traditional areas. This subversive role of subtle patriarchal interests makes it more difficult for women to balance cultural, legal, family and professional gender roles.

Women are less likely to be employed than men at the same level of educational qualifications. Among the youth for instance, the data in Table 47 show that slightly more women had secondary and tertiary education than men in 2014. However, this marginal educational advantage by women does not translate into gender equity in employment prospects. Figure 68 shows that in 2014, higher levels of unemployment persisted among women in all ages and population groups, and also in both rural and urban areas.

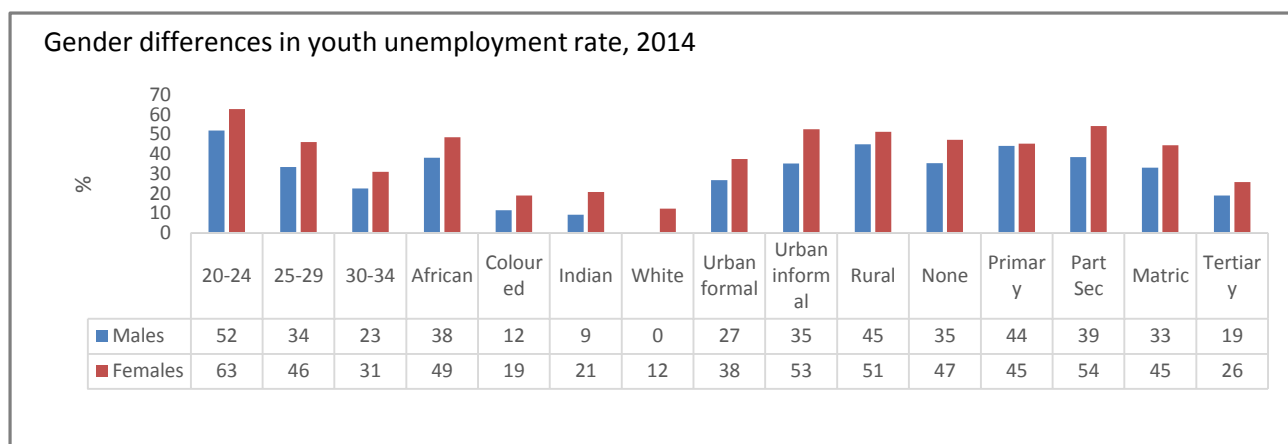
Table 49 Gender differences in youth education profile

Gender differences in education profile of youth, 2014										
Characteristic	% with education level									
	No schooling		Primary		Part second.		Matric		Tertiary	
	Male	Fem	Male	Fem	Male	Fem	Male	Fem	Male	Fem
20-24	1.0	0.8	6.3	4.5	47.5	40.0	39.9	48.3	5.4	6.4
25-29	1.5	0.6	6.4	4.7	39.9	39.3	39.8	44.2	12.3	11.3
30-34	1.4	1.4	8.6	8.5	46.3	36.4	33.5	39.1	10.1	14.6
African	1.5	0.8	7.8	6.3	46.6	41.2	36.6	42.6	7.6	8.9
Coloured	0.0	0.0	2.4	0.0	17.4	21.5	38.7	54.1	41.5	24.4
Indian	0.0	2.2	0.8	1.4	32	12.8	51.8	63.7	15.5	20
White	0.0	0.0	0.0	0.0	8.4	15.6	48.4	31.3	43.2	53.2
Urban formal	0.6	0.6	3.3	2.2	34.2	25.3	44.3	52.3	17.5	19.5
Urban inform	2.4	0.3	7.2	4.6	58.1	52.4	29.2	39.2	3.1	3.5
Rural	1.6	1.4	10.8	9.2	49.4	45.1	35.0	38.8	3.3	5.6
All Youth	1.3	0.9	7.0	5.8	44.4	38.6	38.0	44.0	9.2	10.6

Sources: Calculated from GHS 2014 data.



Figure 66 Gender differences in youth unemployment



Sources: Calculated from GHS 2014 data.

Another dimension of gender disadvantage that is related to human and community development in the Province is about household formation. Among many women in KwaZulu-Natal, this demographic process begins with non-marital, and not infrequently, teenage childbearing, that usually results in female-headed households outside a marital union. Official statistics show a gradual increase in the proportion of households headed by single females in KwaZulu-Natal, from 46% in 2001 to 47% in 2011, and to 48% in 2014. Without engaging in debates about the role of agency in family formation and building processes which fall outside of the scope of this overview, most basic research and policy assessments identify female headed households to be more economically vulnerable than others. The high and increasing trend in the number of female-headed households attracts attention in the context of development strategies and intervention approaches in the Province.

Gender-based violence is another area of concern for human and social development in the Province. Unfortunately, official statistics are not yet available in the form that permits detailed analysis of different categories and trends in gender-based violence. The report of the 2013 Gender Based Violence Indicator Study documents higher level of gender based than is usually assumed in the family, community and society in KwaZulu-Natal. For instance, as many as 36 percent of women interviewed in this study reported that they experienced gender-based violence; 41% of men interviewed admitted to having perpetrated gender-based violence.⁴⁸ Such high levels of violence create family, community and social environment that is not conducive for progress in achieving the social and human development goals of the Provincial Growth and Development Plan.

⁴⁸ See Genderlinks, 2013.



5.7 Social cohesion and social capital

5.7.1 Social cohesion

Social cohesion and social capital are related concepts in social analysis and policy discussions, especially in contexts of conflict, post-conflict reconciliation and nation-building. From a policy-making perspective, promotion of mutual acceptance, shared values, shared identity and shared aspirations are among concrete elements of practical interventions for social cohesion. The National Department of Arts and Culture favours a conception of social cohesion that places emphasis on social integration, inclusion and mutual solidarity among individuals and communities.⁴⁹ This perspective is also shared by the National Development Plan⁵⁰ which envisions a South Africa in which people embrace and promote commonalities more than racial, ethnic and other differentiating identities. A set of objective and subjective indicators are used by the Department of Policy Monitoring and Evaluation in the Presidency to track social cohesion.⁵¹

Different types of threats to social cohesion in KwaZulu-Natal usually have early warning signs in forms of poor socio-economic profile and poor social relations among subgroups of the population. Wide socio-economic inequalities, feeling of marginalisation among subgroups, limited access to meaningful participation in the mainstream economy, and poor quality of communication between the government and citizens, are examples of several factors that do not promote social cohesion in the Province. The last example, for instance, is reflected in the recently published results of the KwaZulu-Natal Citizen Satisfaction Survey.⁵² Among the findings of this survey is the fact that most citizens of KwaZulu-Natal did not rank the provincial government very highly in 2015. Only 33% of adults in KwaZulu-Natal were definitely satisfied with the overall performance of the provincial government as at October/November 2015. Furthermore, only 34% of all KwaZulu-Natal adults reported that they were not aware about aware of *Operation Sukumasakhe* which is a flagship programme of the provincial government. An even smaller percent (14%) knew about the Provincial Growth and Development Plan.

Contemporary threats to social cohesion in the Province call for a system-wide plan and collaborative interventions. Sport and recreational activities are well-known powerful means of promoting social cohesion. Even though it remains a big challenge to translate the expressions of solidarity and other positive emotions from sports and recreational activities into long-lasting degrees of social cohesion, their contributions to socioeconomic development

⁴⁹ Department of Arts and Culture, 2012.

⁵⁰ National Development Plan, 2011.

⁵¹ These include strength of the civil society, voter participation and voters per province, women who are members of legislative bodies, confident in a happy future for all races, public opinion on race relations, country going in the right direction, identity based on self-description, and pride in being South African. These are all macro-level and outward indicators. Data for these indicators are drawn from different generic and customised sources.

⁵² Statistics South Africa, 2016.



and social cohesion have been demonstrated at the national level⁵³ and in the Province.⁵⁴ All departments of the provincial government, should investigate how to promote social cohesion in the process of implementing existing and new programmes in their spheres of responsibility. Outside of the public sector, strong communication links should be established with all economic, social and cultural interest groups in the province. These should include but not limited to educational institutions, the media, cultural and religious groups, as well as political parties and business interests in the Province.

5.7.2 *Social capital*

Despite the lack of consensus about meaning and measurement, social capital is widely recognized for its actual and potential contributions to better understanding and promotion collective wellbeing. A widespread conception of social capital places an emphasis on social connections and relationships, and the associated benefits for achieving common present and future societal goals. Some dimensions of social capital around which quantifiable measures have been suggested include personal relationships, social network support, civic engagement and trust and shared values that influence how people relate to other people in the society.

The Provincial Growth and Development Plan refers to social capital as a “composite of three factors in a society, its institutions, the relationships between people and their institutions, and norms that govern the behaviour and thus the quality of the and quality of a society’s social internations.” No less than ten specific interventions are reported by the lead implementation institution, the Department of Social Development, as currently in progress for advancing social capital in the province. The baseline indicator for advancing social capital is the number of community level institutions active and participating in government programmes, with active registration status in KwaZulu-Natal. A baseline statistic for this primary indicator is recorded as 2438 (2010) with proposed targets that range from 2682 for 2015 to 3569 for 2030 (Table 50).

Table 50 Indicator of social capital (PGDP)

Indicator of social capital					
Indicator	Baseline	AWG8 latest	Target		
			2015	2020	2030
Number of community level institutions active in participating in government departments, with active registration status in KZN (2010)	2 438	1288	2682	2 950	3 569

⁵³ Department of Sport and Recreation, 2009.

⁵⁴ KZN Department of Sports and Recreation, 2012, 2013.



5.8 Strategic social issues

Choice and quality check of PGDP indicators

A strength of the PGDP is that it has clearly stated and measurable indicators at various levels for tracking performance. With specific reference to the human and community development goal, this strength also introduces attention to choice, measurement and tracking of socioeconomic and other indicators in the PGDP.

- All levels of indicators should be subjected to continuous monitoring to guarantee their accuracy and reliability for the purposes of assessing the performance of the PDGP. An example is the expectation of life at birth. The most recent available original estimates are based on the 2011 census data, and therefore refer only to 2011. Many other references of this indicator for the province or country as a whole, for other years since 2011, are no more than assumptions which may not serve as a secure basis for assessing the performance of the PGDP. Another example is the crime rate which is defined as total number of crimes reported per year for 100 000 population. Reliability of any estimate of this sensitive indicator depends on several parameters, including the reliability of reported crimes, the reliability of population estimate that serves as the denominator, and also the extent to which the SAPS reporting year is adjusted to correspond to the Statistic South Africa year of population estimate. Lastly, the PPC should investigate solutions for issues such as crimes against children and women for which there are currently little or no adequate official data on a regular basis in the Province.
- A practical step to respond to these generic indicator-related issues could be for the PPC to consider establishing a dedicated micro unit for the specialised task of quality control checks of all levels of indicators across all strategic objectives in the PGDP.

Poverty and social protection

- The biggest investment in anti-poverty programmes in South Africa is in the form of comprehensive and non-contributory grants which continue to benefit many needy people and households in the province. With this programme established and delivering services as required to target people and households, there is a need for initiatives in the Province that go beyond cushioning people against adverse effects of poverty, to encouraging them to become economically independent. Strategic plans for expansion of the provincial economy and programmes for job-creation are good progress in this direction.

Health Services Development

- The provincial Department of Health has a detailed and comprehensive strategy for the 2015-2019 operation year, which covers most health issues identified in health in the



Province. Effective and timely implementing should see direct and indirect gains in the health of people in the province.

- KwaZulu-Natal ranks poorly in a number of important health indicators compared to other provinces. There is a high prevalence of non-communicable diseases. A number of diseases are directly linked to poverty. While the provincial DOH has a solid programme for medical assault on these diseases, and the multi pronged approach of the PGDP should be strengthened in order to effectively fight diseases with preventive and promotive interventions. Existing and new multi-sector interventions that impact on health outcomes should be intensified with the leadership from the provincial Department of Health.
- A reduction in the HIV and AIDS prevalence rate that started in about 2005 is reflecting in gradual improvements in expectation of life at birth and other indicators of health in the province. At the same time, the huge burden of HIV and AIDS on the Province cannot be underestimated. Multi-sector interventions, as well as collaboration with the provincial AIDS council and other local, national and international partners should be strengthened.

Human settlement

- The scale of housing challenge in rural and urban areas of the Province dwarfs visible progress in many areas. Various models that are being explored by the provincial Department of Human Settlement include expansion of social housing and other affordable housing packages in partnership with private sector institutions.
- The sociocultural dimensions of different models of densification especially in rural and semi-urban areas should be carefully considered. Adequate and continuous consultations with local communities should constitute major components of a long-term human settlement strategy and infrastructure development in the Province.

Safety and security

- Official crime statistics indicate some improvement in the safety profile of the Province based on declines in some categories of reported crimes. This is little comfort for many ordinary people in the Province who, according to the report of the 2014/2015 Victims of Crimes Survey,⁵⁵ are prevented from a number of everyday activities for fear of crimes.
- The high murder rate in KwaZulu-Natal should be declared a provincial emergency. Extraordinary measures should be put in place by the Department of Community Safety

⁵⁵ Statistic South Africa, 2015.



to combat murder and to change the image of the Province as the murder capital of South Africa.

- There is an urgent need to improve the confidence of people in law enforcement institutions, especially the police and correctional services in the Province. The Strategic Plan prepared by the Department of Community Safety already includes an objective to collaborate with community and other structures in the fight against all forms of crimes in the Province. Practical interventions in these and other areas should be scaled-up in partnership with communities and private sector organisations.

Youth development

- With the framework of the PGDP, the Province should take advantage of the demographic opportunity by the proportion of population in young and active working ages, to build stronger foundations for socioeconomic development.
- Investments that develop well-educated youth, who are healthy and have improved and equitable work chances, will have high socio-economic development returns, and will also increase social cohesion in the Province.
- Job-creation and promotion of youth entrepreneurship should constitute essential components of youth development strategies in the Province. In this regard, intensive investigations should be in place to identify and remove barriers against meaningful participation of young people in the formal economy.

Gender equity and gender relations

- Gains made in gender equity in institutions should not be taken for granted. Public policy instruments should continue serve as means for encouraging gender equity in all public and private sector spaces. Some areas remain flashpoints of gender inequity in the Province. For instance, it should raise a development concern that among young equally educated young people aged 15-34 years, women still experience a higher rate of unemployment than men in KwaZulu-Natal. Also, the prevalence of gender-based violence should receive formal inter-departmental and cross-sector attention.
- Despite constitutional and legal progress on gender equity, aspects of gender relations still lag behind in KwaZulu-Natal especially in rural and traditional areas. In families, rural and traditional communities, gender relations raise issues of equity and equality at a close range. In such contexts, entrenched gender norms and attitudes fight to override or erode gains in gender equity. All implementing structures of the PGDP should encourage existing and new advocacy programmes that educate people about the negative human development impacts of different forms of gender problems in the Province.



Social capital and social cohesion

- Threats raised for social cohesion at the national level are active in KwaZulu-Natal. On some issues such as economic inequality, racial tension and migration, recent experiences of the Province call for urgent and escalated interventions that promote social cohesion. National strategies, interventions and monitoring indicators for social cohesion can be carefully adapted for the needs of KwaZulu-Natal within the existing framework of the PGDP. Details of this integration should follow a careful realignment of the existing framework, possibly involving an expansion of the existing *Strategic Objective number 6* to accommodate a programme of social cohesion.
- The conception of social capital and existing set of interventions within the PGDP focus somewhat narrowly on community level organisations. Many social networks, especially those at the local and community levels, are organized around interest that directly or indirectly intersect with development goals of the PGDP. These include a range of associations beyond the more widely known stokvels and burial societies. Programmes in the social and other sectors should take pro-active steps to understand and involve these social networks and groups as part of essential activities in designing and implementing programmes that affect their immediate and proximate social spaces. However, it should be pointed out that collection and storage of information about community social networks have limited value unless these activities are used as means for active interactions with these organisations concerning development issues of interest to them.



6 THE HUMAN RESOURCE DEVELOPMENT LANDSCAPE

It is widely accepted that Human Resources Development can lead to the improvement of quality of life of citizens and contributes to increase in productivity, competitiveness and supporting economic growth. The centrality of human resource development as one of the key catalysts is acknowledged in key policy documents in the country, for example the Reconstruction and Development Programme (1994); The Growth Employment and Redistribution Strategy (GEAR, 1996); Accelerated and Shared Growth Initiative for South Africa (ASGISA, 2006); National Skills Development Strategy (NSDS III, 2008); the Science and Technology Plan, 2008; the New Growth Path, 2010; the Industrial Policy Action Plan, 2010; Strategic Integrated (Infrastructure) Projects (SIPS), 2014 ; and the National Development Plan, 2011. At the centre of all these policies, is an attempt to link the education for individuals, especially the young, with labour market opportunities for the benefit of the development of society and the economy.

In spite of the various attempts made by government, both problems of effective human resources development and employment remain problematic in the country. The National Planning Commission (2011 (a)), in its diagnostic overview, acknowledges the high unemployment that exists in the country. The report identifies a range of causes for this, including the denial of African people to land; inequities in education; racial discrimination at the workplace; leading to social stratification based on colour; and barriers by Africans to becoming entrepreneurs. Even though not making direct connections, the same report points to the lacklustre economic growth in the country which has been increasingly contributing to the decline in jobs which are being created in the labour market. At the same time we know that efforts to maximise the impact of HRD interventions are hampered by bottlenecks and logjams in the skills pipeline.

This confusion on the efficacy (or lack of) of HRD interventions and plans can be explained in two ways. Firstly, the disconnection between education policies from the labour market policies. Education systems and economies involve systems and institutions that have developed separately, and tend to be studied separately. The labour market is usually studied in sociology and economics and policies are developed through industrial and trade policies and economic development. The acquisition of knowledge and skills is tackled separately in the education arena. Each is complex in its own right. In practice, the big policy questions do not fall neatly either into categories of education or labour market and the economy related disciplines. But each affects each other, in complex ways. The second way is that the old Manpower planning strategies, which assumed an accurate matching of jobs and human beings, have long been discredited. We now have emerging models which try to make projections about human resources needed in the labour market. These models are still new and the capacity to be robust using these models is still very young in South Africa.

Clearly, policy-makers need to devise strategies and pursue related investments which can influence the future path of the economy. Such choices need to be guided by robust information and intelligence, including a forward looking element. In the context of education policy, the role of information and intelligence is twofold: to assess existing skill needs and to provide a longer-term perspective, so that policymakers not only anticipate future requirements but can also actively shape them. Regular and systematic early warning systems using forecasting, scenario development and other approaches are essential. Skills are a key part of the economy's infrastructure, and right choices made by policymakers, enterprises and individuals on investment in education and skills can help drive economic development.



In its 2011 Provincial Growth and Development Strategy (PGDS), KwaZulu-Natal considers Human Resources Development as the whole education continuum:

Early childhood development, school education, artisan and technical skills and professional education rendered at University level (PGDS (2011), p.88).

In the strategy document, the linkages in relation to this continuum are emphasised; the issue of access to quality education in all areas is considered as of critical importance; and the disparities observed between education provision in rural areas and education in urban areas (including between urban settings) is highlighted. In addition, the context of enabling the skills development of relevant professionals in education is underscored and the intention is to address the challenges with respect to the delivery of a quality and accessible skills development system.

The Human Resources Development system of KwaZulu Natal happens within a context of other national plans and policies that guide the provincial initiatives. In the first place, these initiatives will be briefly presented here. The next section will contain an assessment of the PGDS implementation goals. In other words, the question asked in this section is 'how much of the goals set in 2011 has been achieved'? The last section will contain some reflections on the Human Resourced Development in the last 5 years in the province of KZN.

6.1 National Plans and Policies

On the national scene, there are various enablers in the form of policies, Acts and Strategies which are meant to enable the establishment and development of a useful human resources development system. Because these national enablers are meant to guide and direct the HRD function in each province, in this section, these will be outlined below.

6.1.1 *The National Development Plan:*

The National Development Plan (NDP) presents the HRD issue under two separate sections: Economy and employment, and Improving education and training, confirming that HRD matters are tackled separately in the policy environment. In the Economy and employment section, the plan focuses on key elements that would make the labour market to be more absorptive. Central to this is the growth of the economy, promotion of employment in labour-absorbing industries, promoting exports and competitiveness, strengthening the capacity of government to implement its economy and strategic leadership among stakeholders around a national vision. In the education and training system, the NDP is steering the nation towards a system which will:



- Provide access to Early Childhood Development for all age-appropriate children;
- Improve the low quality of the schooling system, especially in the historically disadvantaged parts of the schooling system;
- Improve access and performance of the TVET⁵⁶ and Skills Development system
- Improve the Higher Education and Training participation rates, attrition rates and provide for a curriculum that speaks to society and its need.

6.1.2 *The National Education Policy Act No. 27 of 1996*

The original Act has been amended several times from the date of its inception in the system, but remains directed to a number of intentions. The Act presents a long list of issues it wants to address through the provision of basic education. For the purpose of this exercise only those rights which underpin and are related to human resources development will be lifted here:

- Advancement and protection of the fundamental rights of every person in terms of Chapter 2 of the Constitution. The Constitution extends various rights to learners, parents and wards.
 - A right of every person to basic education and equal access to education institutions
 - Of a parent or guardian in respect of education of his child or ward;
 - Of every child in respect of his or her education
- Achieving equitable education opportunities and the redress of past inequality in education provision, including the promotion of gender equality and the advancement of the status of women;
- Providing opportunities for encouraging lifelong learning
- Achieving an integrated approach to education and training within a national qualifications framework; Cultivating the skills, disciplines and capabilities necessary for reconstruction and development
- Endeavouring to ensure that no person is denied the opportunity to receive an education to the maximum of his or her ability as a result of physical disability.

⁵⁶ In the NDP, these institutions were still known as Further Education and Training Colleges, and have since changed to TVET colleges.



6.1.3 *The White Paper for Post-School Education and Training:*

The Department of Higher Education and Training (DHET) seeks to improve the capacity of the post-school education and training system to meet the needs of the country. This White Paper sets out policies to guide the DHET and the institutions for which it is responsible in order to contribute to building a developmental state with a vibrant democracy and a flourishing economy. It sets out a vision for:

- a post-school system that can assist in building a fair, equitable, non-racial, non-sexist and democratic South Africa;
- a single, coordinated post-school education and training system; • expanded access, improved quality and increased diversity of provision;
- a stronger and more cooperative relationship between education and training institutions and the workplace;
- a post-school education and training system that is responsive to the needs of individual citizens and of employers in both public and private sectors, as well as broader societal and developmental objectives.

6.1.4 *The Human Resources Development (HRD) Strategy⁵⁷:*

The HRD Strategy Towards 2030 is the third national strategy after the HRDSA 2010-2030, with the National Development Plan (NDP), a significant component to it. The HRDSA 2010 -2030 was developed before the NDP of which the revised HRD Strategy towards 2030 incorporates targets on human resource development as outlined in the National Development Plan. HRD Strategy 2010-30 had limitations in the implementation due to the fact that it preceded many policies that impact on HRD; the funding model was not well defined; the Monitoring and Evaluation framework was not well defined, and there were very few mechanisms for this function; and success was defined mostly in numeric terms and not qualitative ones. These limitations necessitated the development of a revised HRD strategy towards 2030.

The HRD Strategy defines the HRD system as one that involves multi-stakeholder collaboration on both the demand and supply side across different levels of the National Qualifications Framework (NQF), covering education, training, skills development and knowledge creation that occurs from Early Childhood Development (ECD) following birth to that which takes place in the labour market.

⁵⁷ This is in reference to the National HRD strategy



Figure 67 The SA Human Resource Development System

NQF LEVEL	THE HUMAN RESOURCE DEVELOPMENT SYSTEM IN SOUTH AFRICA		
9/10	HIGHER EDUCATION	RESEARCH, INNOVATION, KNOWLEDGE CREATION	SKILLS DEVELOPMENT SYSTEM
8			
7			
5/6			
2-4	FET PHASE SCHOOLING TVET AND COMMUNITY COLLEGES NGOs and EMPLOYER TRAINING		
1	SENIOR PHASE OF SCHOOLING (GRADE 7-9)		
	INTERMEDIATE PHASE (GRADE 4-5)		
	FOUNDATIONAL PHASE SCHOOLING (GRADE 1-3)		
	GRADE R (AGE 5-6)		
	EARLY CHILDHOOD DEVELOPMENT (0-4)		

The HRD Council has organised its work into five programmes:

- Science, Maths, Technology and Languages: Strengthen education in Science, Technology, Maths and Languages in the school system
- Technical and Vocational Education and Training (TVET): Expand access and throughputs of quality post-school education and training.
- Higher Education and Training, Research and Innovation: Improved research and technological innovation outcomes/ higher education and training, research and innovation
- Skills for the transformed society and economy: Production of appropriately skilled transformed society and the economy
- Developmental and Capable state: Developmental and Capable state with effective, efficient planning and implementation capabilities

6.1.5 The National Skills Development Strategy:

The National Skills Development Strategy (NSDS) has seen two more revisions or updates since the original policy in 2001. The original policy was intended to guide the working of the



Department of labour's skills development vision as articulated in the 1998 Act (Department of Labour, 1998). The 3rd version, namely the NSDS III was launched at the beginning of 2011 and has the following as its objectives to:

- Establish a credible institutional mechanism for skills planning
- Increase access to “occupationally-directed programmes
- Promote the growth of a public further education and training college system
 - Improve youth and adult language and numeracy skills
 - Enhance workplace-based skills development
 - Support cooperatives, small enterprises, worker-initiated, NGO and community training initiatives
 - Strengthen public sector capacity for improved service delivery
 - Set up career and vocational guidance.

6.1.6 *KwaZulu-Natal Youth Development Strategy:*

The KZN Youth Development Strategy aims to integrate youth development through effective planning, coordination, implementation, monitoring and reporting on policies, programmes and projects leading to the holistic development of all youth in the KZN Province in collaboration with all social partners. The following goals are listed in this strategy:

- Education and Skills Development: Introduce curriculum that focus on skill areas that promote artisan development
- Social Development: Leadership development for the provision of the necessary services, support and opportunities that are critical and enable young people to develop.
- Career Development: Accessible, high quality, personalised and impartial career counselling and vocational guidance services
- Work Integrated Learning: Increase of the intake of youth into employment programmes and opportunities
- Private and Public Employment: Expand the intake of youth into public and private employment
- Economic Empowerment: Support to the creation of new ventures, SMMEs and Cooperatives by youth in the economic sector with high potential.



In addition, the various government departments have also contributed significantly in the establishment of policies that speak to Human Resources Development. For example, the Department of Trade and Industry established the **Industrial Policy Action Plan (IPAP)** (2010); The Department of Economic Development established the **National Growth Path** (2010); The Department of Science and Technology has its **Science and Technology Innovative Plan** (2011); and the Department of Economic Development is steering the **Infrastructure Development Plan (SIPS)** on behalf of the government Economic Cluster. All of the various policies cited here have huge implications for the human resource development portfolio in every province in the country.

6.2 HRD in Kwazulu-Natal – Examining Progress 2011 - 2015

The Human Resources Development (HRD) appears as Goal 2 of the Provincial Growth and Development Strategy (PGDS). HRD is seen as being that element that will improve the quality of life in the Province. It is acknowledged in the strategy document that the starting point in building an effective HRD system starts with the basic education, which then links with human development and economic growth. Further, challenges in the entire education system that must be overcome have been identified. These challenges have to do with:

- The quality of teaching
- The quality of the education institutions' results comparable with communities at similar levels of development and commensurate with resources allocated
- School facilities and amenities
- Learner drop-outs.

These challenges are not unique to KwaZulu-Natal, but can be found throughout the nation, especially provinces with huge rural communities. What is unique about KZN is that the province is home to the largest number of young people who are in school (23%), followed by Gauteng (17%). This puts a heavy burden to the province in terms of resources and effort that must be put in building a solid foundation to the human resources function.

KZN carrying the largest number of learners in the system: 23%

Gauteng second largest number in the system: 17%



The Provincial Human Resource Development therefore focuses on three strategic goals:



The following are the objective indicators for the three strategic sub-goals of the PGDS Goal 2:

Improve early childhood development, primary and secondary education	Support skills development with economic growth	Enhance skills development and life-long learning
<ul style="list-style-type: none"> Percentage of children in the 0-4 age group accessing Early Childhood Education facilities Percentage of teachers teaching subjects for which they are qualified and trained to teach Teacher -pupil ratio Percentage of population 5-19 years in school Percentage of schools meeting the standards of facilities benchmark Percentage of Principals with formal training and 	<ul style="list-style-type: none"> Percentage decrease in skills gap Collaboration initiatives between industry and tertiary institutions 	<ul style="list-style-type: none"> Number of youth learnerships Number of adults enrolled and completing Adult Basic Education courses Number of training opportunities afforded to workforce under age 35

qualifications in school management/leadership • Percentage of schools with water, sanitation and electricity • Percentage of schools with ICT / computer facilities • Percentage of Grade 12 learners passing with Mathematics and Science		
--	--	--

Assessment of Progress 2011 -2015

The education and training system is very uneven in its development, availability of data and systems' assessments available. This review therefore which is highly dependent on secondary data operated in the context of inadequate information on all the indicators that are identified in the PGDS. However, the picture that begins to emerge on the three strategic goals gives us a picture of the distances travelled in the various areas.

6.2.1 *Goal 2.1: Early Childhood Development, Primary and Secondary Education*

This goal encompasses three distinct areas of basic or foundational education, namely: Early Childhood Development (ECD); Primary Education; and Secondary Education, and these will be examined separately.

Early Childhood Development

One of the issues raised in the National Planning Commission's diagnostic report is the contribution to be made by Early Childhood Development (ECD) to improving the standards of the whole education system. ECD is an important foundation of any education system.

It is in this regard therefore that we have to understand the participation rates of pre-school age children as well as 5-year olds in Grade R in this province. Therefore, access to quality Early Childhood Development should be seen to be critical in setting the right foundation for all young people's future.

In KZN, this emphasis is put in different key planning documents, including the PGDS, the Poverty Eradication Master Plan (2014) and the Human Resources Development plan of the province. In order to assess the progress made by the province in this critical area, we will look into the number of children participating in ECD.



Table 51 Enrolments in ECD KZN by district

District	2011	District	2013
Amajuba	773	Amajuba	534
Empangeni	1316	Ethekwini Metro	3485
Ilembe	402	Ilembe	351
Obonjeni	895	Umkhanyakude	254
Othukela	960	Uthukela Metro	712
Pinetown	1556		
Sisonke	357	Sisonke	416
Ugu	738	Ugu	357
Umgungundlovu	1031	Umgungundlovu	1043
Umlazi	1898	Uthungulu Metro	652
Umzinyathi	506	Umzinyathi	132
Vyrheid	844	Zululand Metro	675
Total	11276	Total	8611

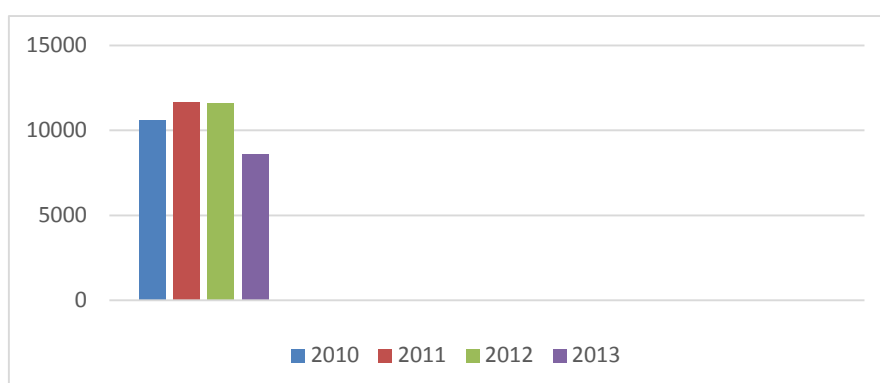
Source: Education Statistics, 2012 and 2014

Please note, the "districts" referred to here are the education districts as defined by the DOE.

Whilst it is difficult to compare enrolments district by district, because the names used are different in the two reports, where the names remain the same, the results are clear. Many districts have decreased their ECD enrolments (Amajuba, Ilembe, Uthukela Umzinyathi, Vryheid). The only district that seems to have increased enrolments significantly is Ethekwini Metro.

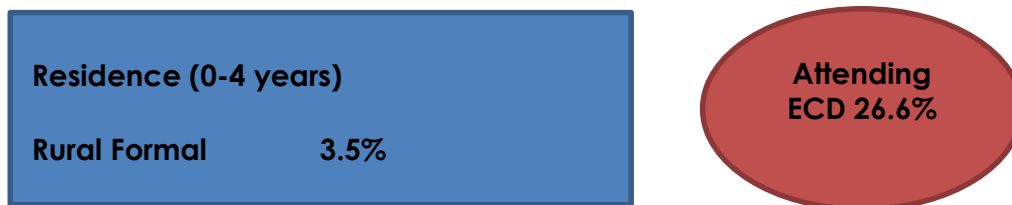
However, the total enrolments also testify to the decrease of number of ECD centres in the province over the years.

Figure 68 ECD enrolment rates 2010 - 2013



It can be seen from the graph above that overall, the enrolment numbers in the province have been decreasing instead of increasing.

According to Statistics South Africa (Stats SA, 2012), we also know that most of the children aged 0-4 years reside in the Traditional areas, and yet only a few actually participate in ECD.



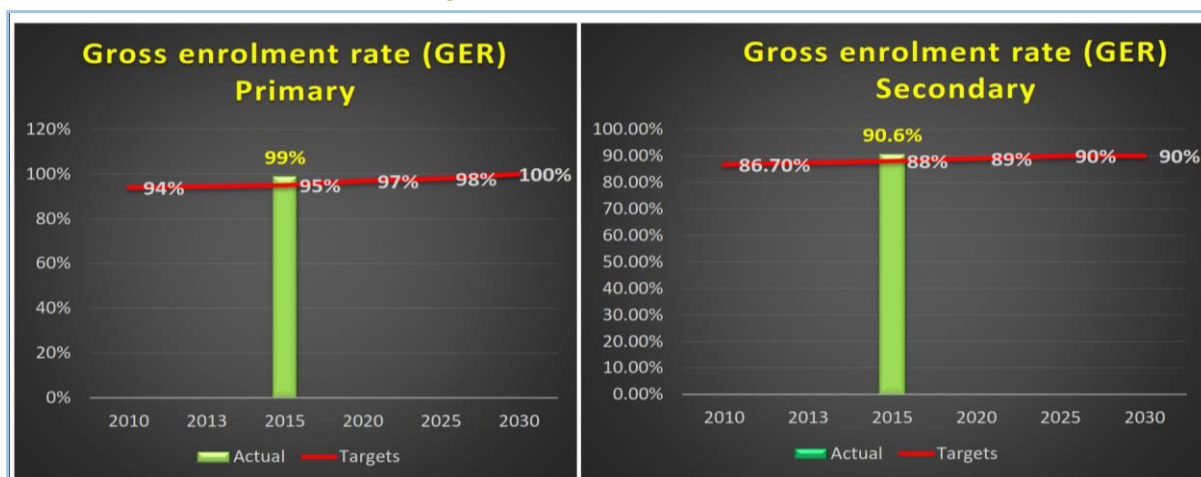
This means therefore that there are still a large number of young children who do not participate in pre-school programmes in the province as well as nationally, and this is something that has to be attended to by each province. According to the NPC diagnostic report, ECD is underfunded by government and is largely provided through support provided by donors to nongovernmental organisations. Despite the policy commitment to early childhood development, implementation in the poorest communities lags behind. This shows up in development indicators on children.

Finally, it must also be noted that not all ECD structures are under the jurisdiction of the Department of Basic Education. The province has centres that are under the jurisdiction of the Department of Social Services, but these are much fewer in comparison. What can be concluded here is that young children of KZN do not as yet have adequate access to ECD programmes in the province. This does not even speak to the quality of the programmes in existing centres as there was no information to ascertain this fact. The most important thing that has to be done in this area would be to increase the number of centres available, train the teachers and workers for ECD and establish norms and standards for running these centres.

Primary Education

Two measures will be used to ascertain progress in the primary schooling system of the province, namely enrolments and performance of learners in the Annual National Assessment tests. Research shows that South Africa can be regarded as providing universal education in the primary schooling phase and most students are retained. Statistics confirm that the province also has reached and exceeded the set targets, both for primary and secondary education.

Figure 69 Gross enrolment rate KZN

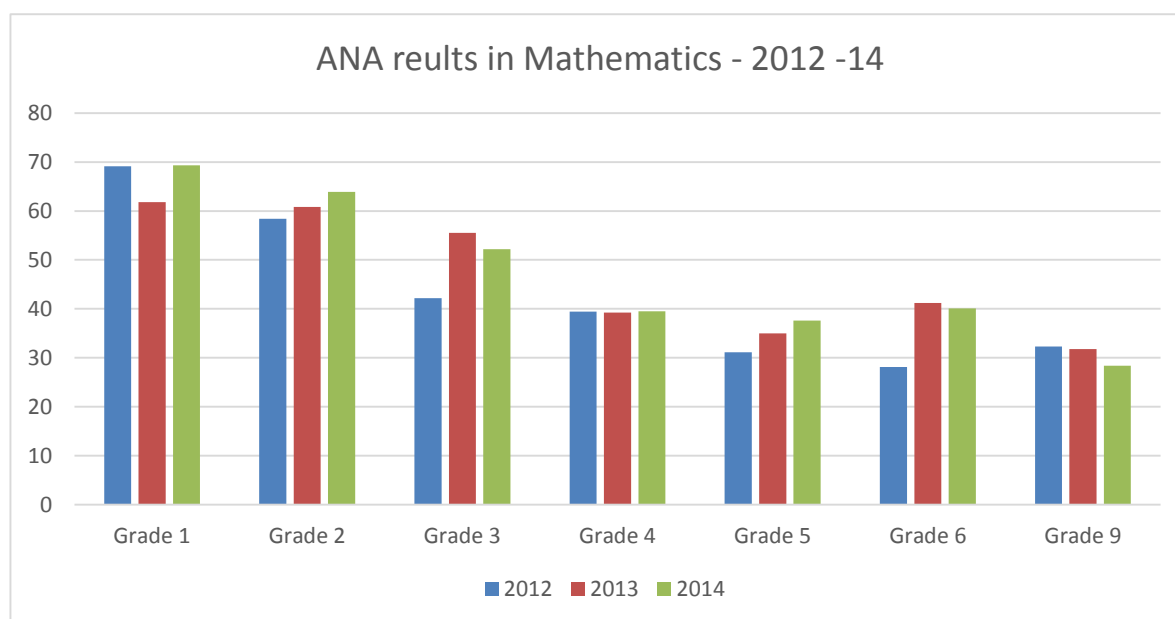


The issue that is faced about the schooling system at this phase is that of quality, especially in poor communities.

One of the interventions instituted by the democratic government is that of Annual National Assessments (ANA). ANA is a critical measure for monitoring progress in achieving set targets in terms of learner achievement. Whilst assessment by itself cannot improve learning, it provides important evidence to inform planning and development of appropriate interventions for improvement at all levels, from national through provinces and districts to individual schools. We present the provincial ANA results for the period 2012 – 14 in Mathematics and Language of Teaching (LoT).

The issue that is faced by the schooling system at this phase is that of quality, especially in poor communities. One of the interventions instituted by government is that of Annual National Assessments (ANA). ANA is a critical measure for monitoring progress in achieving set targets in terms of learner achievement. It is a testing programme that requires all schools in the country to conduct the same grade-specific Language and Mathematics tests for Grade 1 to 6 and Grade 9. We present the provincial ANA results for the period 2012 – 14 in Mathematics and Language of Teaching (LoT).

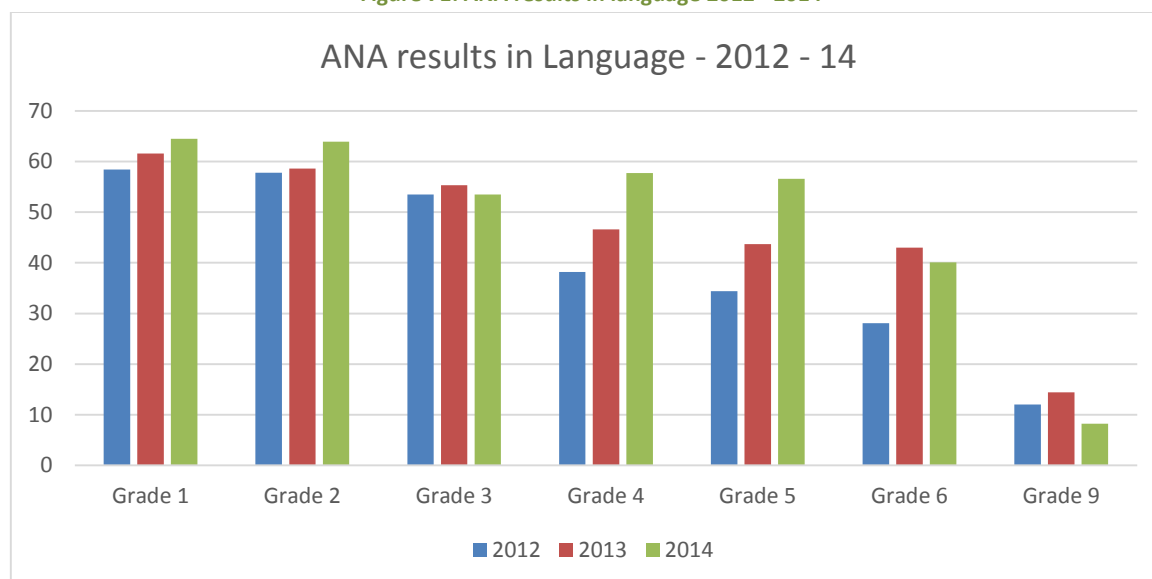
Figure 70: ANA results in mathematics 2012 -2014



Source: Department of Basic Education (2012, 2013, 2014)

From the table above, it can be seen that the performance of KZN learners, declines as students go up the grade system in school. Across the years, there seems to be slight improvements, except in Grade 9.

Figure 71: ANA results in language 2012 - 2014



Source: Department of Basic Education (2012, 2013, 2014)

Language performance is showing the same pattern as in Mathematics as there is a decline in performance with the ascending grades. Also, over time, there seems to be improvements with the exception of Grade 9. Performance in Grade 9 should be of particular concern as it is at this point that the students should be better equipped to proceed to the Senior Secondary phase and it is at this point that most students give up on their educational pursuits.

Secondary Schooling

Secondary education serves as a link between schooling and work, work-preparedness and higher education. Given that labour markets, both in South Africa and the rest of the world, have become more predisposed towards skilled workers in recent decades, there has been a corresponding requirement regarding the capacity of education systems to produce larger numbers of skilled labour market entrants. In a context where post-secondary qualifications are increasingly in demand, a secondary education qualification has become the absolute minimum requirement for those who want to improve their livelihoods through employment.

Secondary education is not only important as a necessary acquisition for trainability, but it is at this level that young people consolidate their acquisition of disciplinary knowledge that guides them through their professional lives. The imparting of such disciplinary knowledge is one of the main functions of schools, and it can be argued that it is this element of education, more than attendance, that has the capacity to equalise unequal societies. The acquisition of this 'powerful knowledge' enables children from disadvantaged backgrounds to move, intellectually at least, beyond their local and particular circumstances. There are three measures which will be used here to measure progress in the secondary education system:

- Completion rates of the secondary education phase using the survival rates
- Completion of Secondary Education using pass rates in the National Senior Certificate Examinations
- Quality of passes in the National Senior Certificate Examinations

Completion rates of the secondary education system can be measured by looking at the survival rates of the same cohort at the end of grade 12, or looking at the pass rate at the end



of the schooling system (grade 12). The National Department of Basic Education last carried out the survival and drop-out rates in the system in 2009.

The table below illustrates the survival and dropout rates of the 1980 -1984 birth cohort, who were aged 23-27 in 2007.

Table 52 Survival and drop-out rates

Grades	Mean survival rate* (calculated per thousand births)	Dropout rate
Grade 1	984	0.2%
Grade 2	982	0.4%
Grade 3	979	0.7%
Grade 4	972	1.2%
Grade 5	960	1.7%
Grade 6	944	2.8%
Grade 7	917	4.8%
Grade 8	873	7.0%
Grade 9	811	11.5%
Grade 10	717	16.1%
Grade 11	602	24.2%
Grade 12	456	

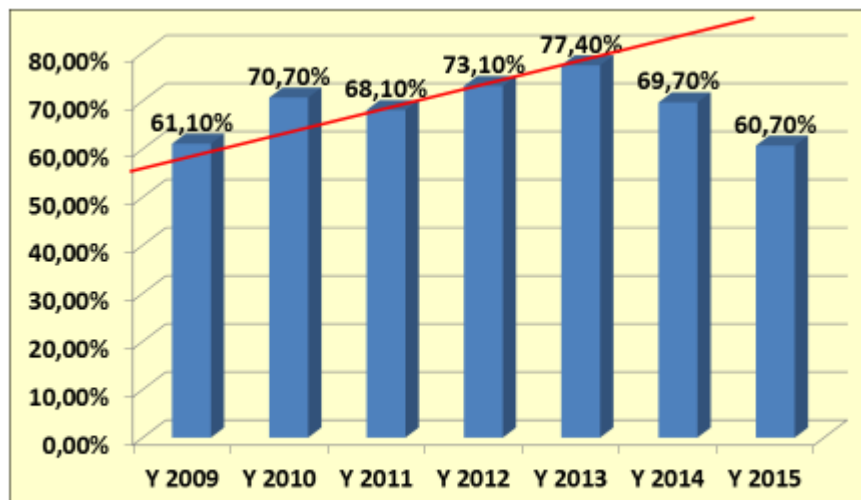
Source: Trends in Macro Education Indicators (2009)

Even though the abovementioned study is dated, information from the KZN sources show that this trend is still a problem in the province (Poverty and Eradication Master Plan, 2014), where it is said that the province faces a challenge of learner drop outs from Grade 10 onwards and is more pronounced between Grade 11 and 12. Further, girl learners seem to survive better in the system than the boy learners (Education Statistics, 2013). This is also confirmed by the numbers of girls and boys who actually write the National Senior Certificate Examinations.

The completion rate, using the National Senior Certificate pass rate is a more common measure that is understandable and this information is also easily available. From 2011 to 2013, the NSC results of the province of KZN has been on an ascending trajectory, but have since dropped to 60,70% as it can be seen from the graph below.



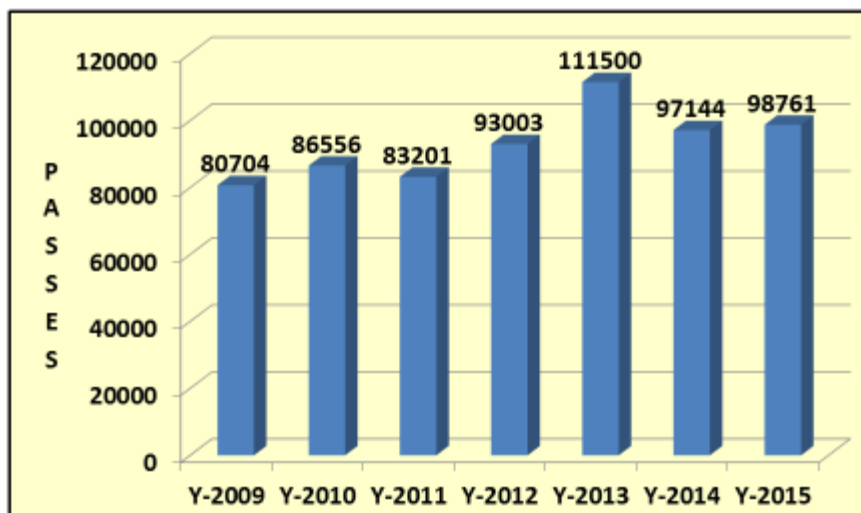
Figure 72 Provincial NSC pass rate 2009 - 2015



Whilst the pass rate has been decreasing, we can also see that the actual numbers of students who passed the NSC examination has been increasing since 2011. In 2013, the system had the largest number of students who passed. When the percentage of pass rates is going down whilst the actual numbers are growing, it can only mean that more students are able to sit for this examination as years progress.

Many students in the system can mean many things: better progression rates, or repeaters who are eventually progressed to the NSC examination. There has been some criticism that has been levelled against the policy of progressing learners to sit for the NSC even if they have not actually passed Grade 11. This is one view. The other view is the one that looks at providing equitable chances for many learners who would otherwise be casualties of the education system if not allowed to progress. Because the drop of the pass rate in Grade 12 cannot be delinked to the numbers of students who are in the system, the province has to take an educational, humanitarian and political stance in tackling this issue of growing learners in the system when looking at improving its position on the league tables.

Figure 73 Number of passes from 2009 - 2015



Because of our past racial inequalities, it cannot be avoided to look at where the different race groups are in relation to the pass rates in this important examination. As it can be seen below, Blacks continue to be at the bottom in terms of performance. It is possible that there are schools in black areas that compete well with the best, but because of the sheer numbers of this population group, it cannot be denied that black schools do pull the provincial results down. This is the weakest link in the chain that pulls the whole system down. The next two graphs demonstrate this fully.

Figure 74 Overall pass rate per racial group

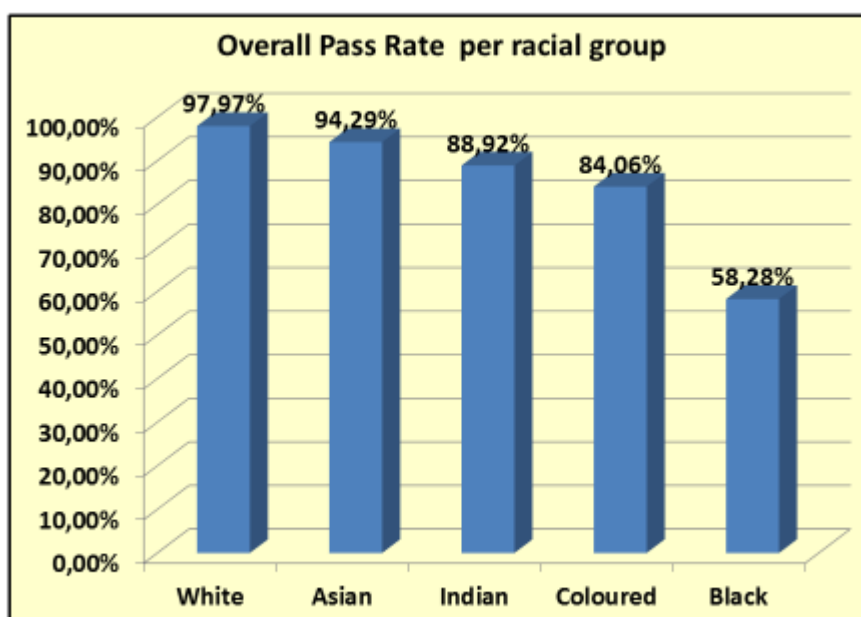
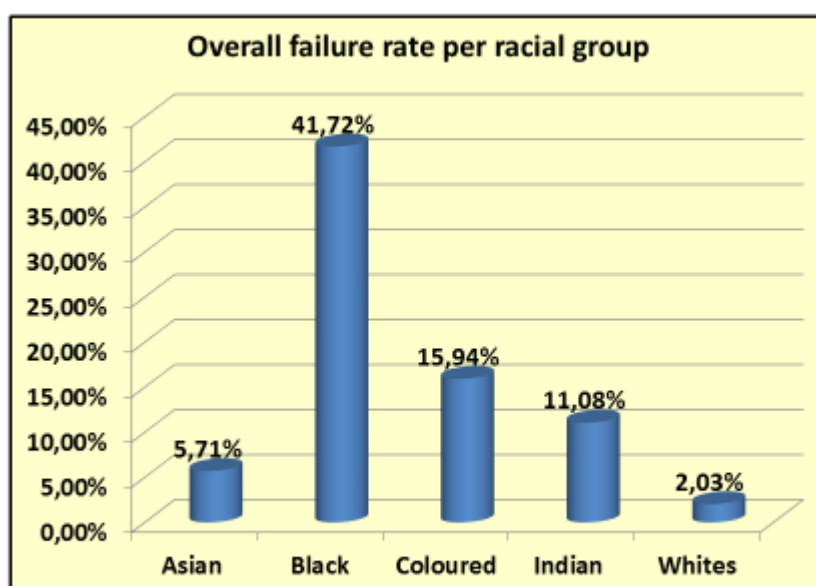
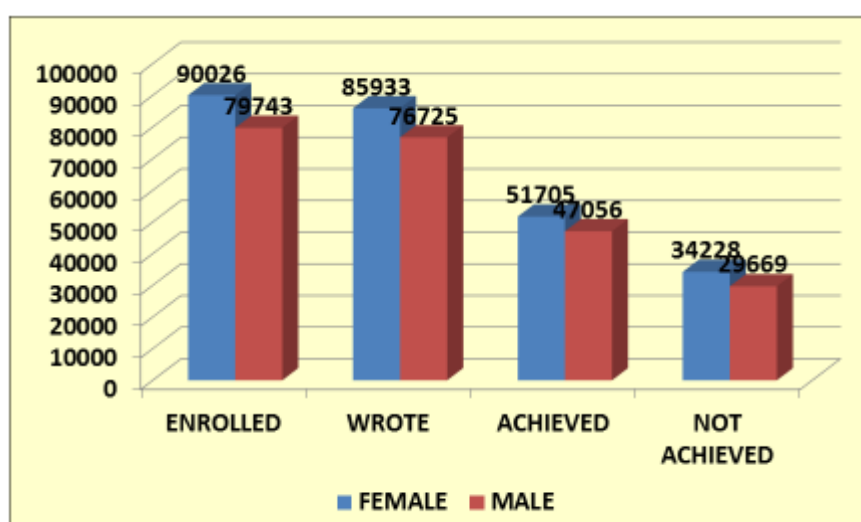


Figure 75 Overall failure rate per racial group



Earlier on, we discussed the issue of the inability of the system to retain boy learners at the same rate as the girl learners. The graph below confirms this point, where we see that there are fewer boy learners who actually enrol, write and achieve in this examination. Whilst the proportion of girls to boys in the system is not known, this is something that must be noted and followed up before it becomes a big problem.

Figure 76 Male and female performance



The quality of passes, as expressed in the number or percentage of bachelor passes, also shows the same pattern as that of overall passes and can be seen from the graph below. This decline indicates that over the last two years, high school graduates of this province have been less likely to qualify for degree studies. Further, it also can be seen that there were fewer boy learners who qualified for bachelor studies as compared to girl learners.



Figure 77 Percentage of Bachelor passes 2009 - 2015

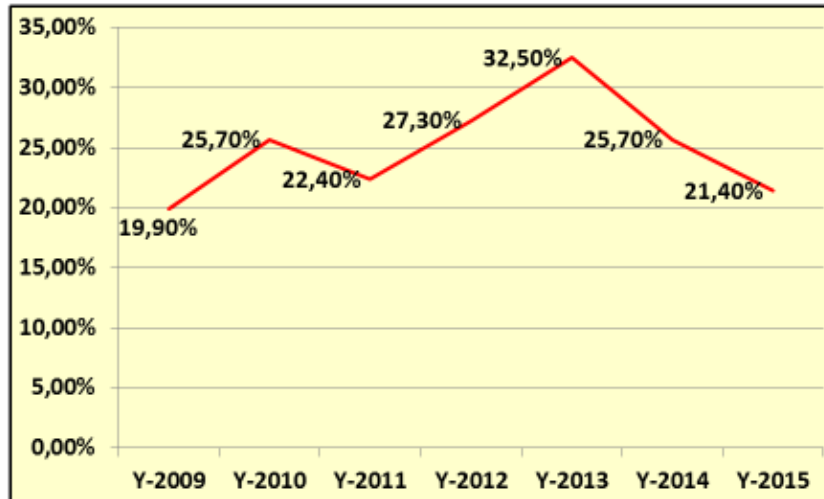


Figure 78 Comparing male and female quality of passes

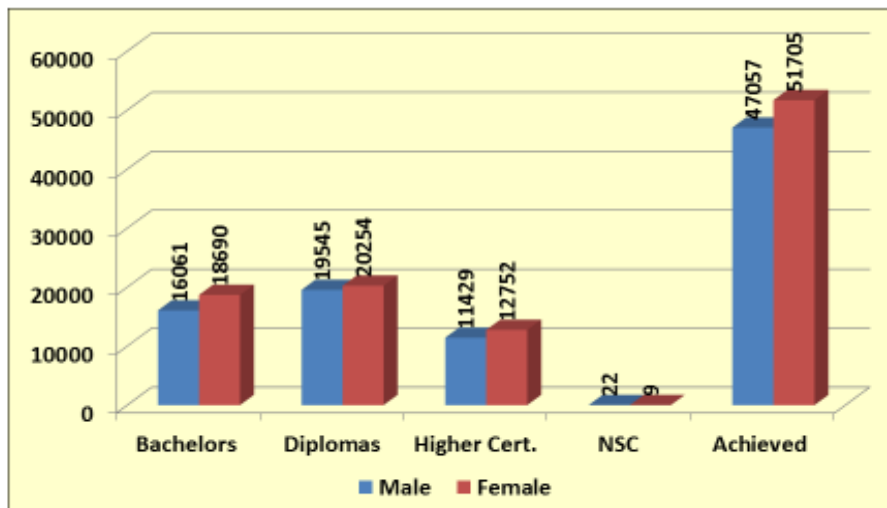
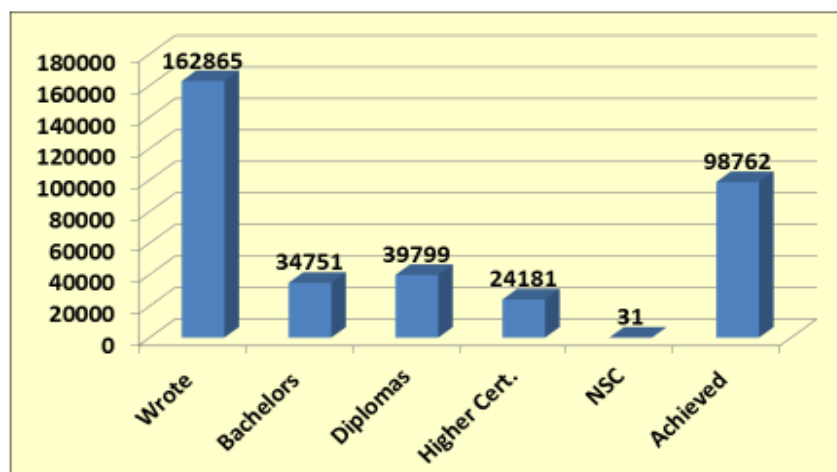


Figure 79 Performance in various educational categories 2015



The few graphs below depict the performance of the 12 educational districts in the province during the 2015 examinations. It can be seen that the rural districts continue to lag behind their



urban counterparts. However, it can also be seen that all districts have experienced consistent decline in the last 2 years without fail.

Table 53 District performance NSC 2015

District	Enrolled	Wrote	Achieved	Pass %
Amajuba	9664	9217	5415	58.75
Ilembe	9417	9141	4747	51.93
Pinetown	20759	20098	12993	64.65
Sisonke	7250	6985	4380	62.71
Ugu	12162	11910	7177	60.26
Umgungundlovu	14253	13218	8986	67.98
Umkhanyakude	14740	14054	8810	62.69
Umlazi	22784	21648	15726	72.64
Umzinyathi	10425	10047	4679	46.57
Uthukela	11398	11095	6778	61.09
Uthungulu	19266	18360	10023	54.59
Zululand	17651	16885	9047	53.58

Figure 80 KZN district performance 2013 – 2015

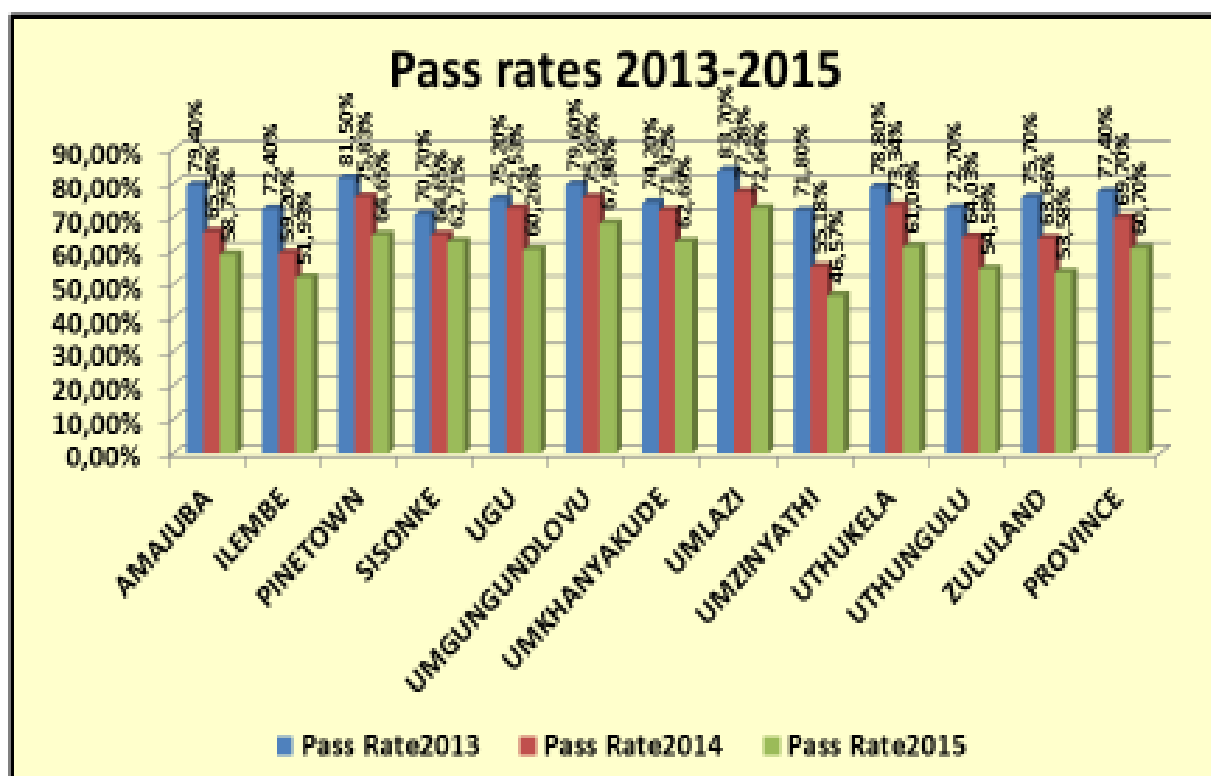
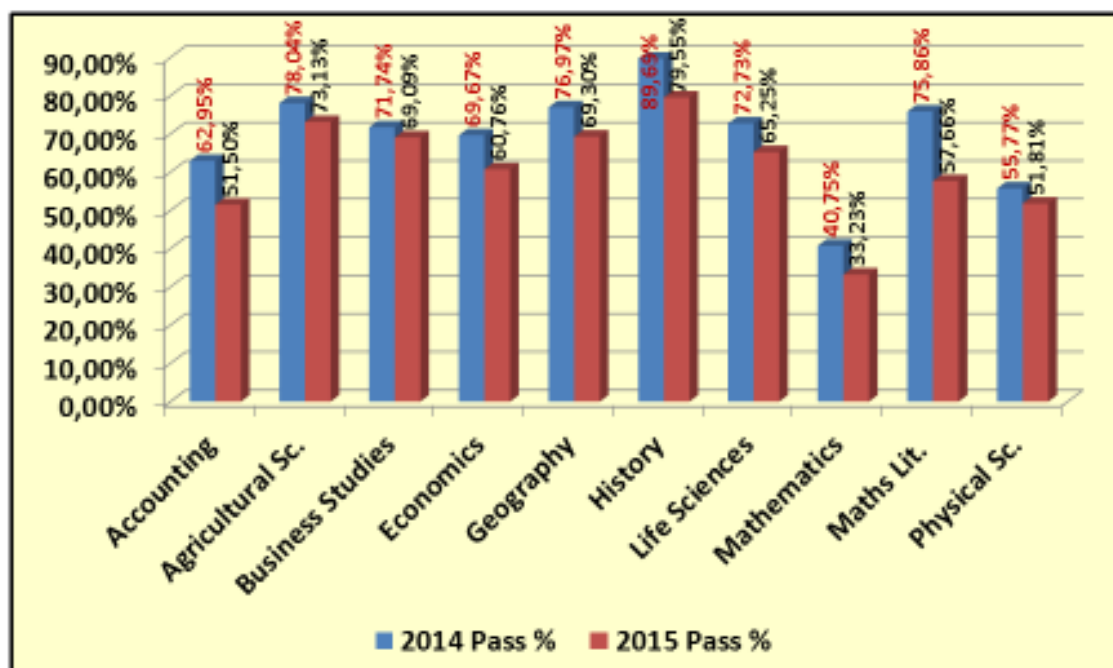


Table 54 Overall quality of passes KZN

District	Bachelor	Diploma	H-Cert	NSC	Achieved
Amajuba	1831	2153	1430	1	5415
Ilembe	1316	2061	1368	2	4747
Pinetown	5072	5204	2716	2	12994
Sisonke	1354	1770	1251	5	4380
Ugu	2316	2837	2024	0	7177
Umgungundlovu	3519	3485	1982	0	8986
Umkhanyakude	2565	3851	2392	2	8810
Umlazi	6935	6033	2757	1	15726
Umzinyathi	1456	1858	1364	1	4679
Uthukela	2389	2631	1755	3	6778
Uthungulu	3130	4307	2580	6	10023
Zululand	2868	3609	2562	8	9047
Total	34751	39799	24181	31	98762

performance of KZN students in these subjects is presented below and in all there has been a decline from 2014 to 2015. However, Mathematics seem to be the one subject where KZN students perform the poorest.

Figure 81 Performance in large key subjects



Whereas performance in Mathematics seems to be the killer subject for the province, this requires closer scrutiny which reveals interesting facts. The graph below shows that whilst KZN had the largest numbers of students who take Mathematics in the country in both 2014 and 2015, the province came last in its performance in this subject nationally. The provinces that occupy the top of the leagues are those who have fewer students taking Mathematics. This is something that the province must consider in its attempts to improve its performance in this key subject.

Table 55 National NSC Maths participation and pass rates

Province	2014 % Taking Maths	Rank	2014 Pass rate (40%)	Rank	2015 % Taking Maths	Rank	2015 Pass rate (40%)	Rank
KZN	51.4	1	24.3	9	42.3	1	20	9
EC	46	2	25.1	8	35.8	2	21.8	8
L	44	3	35.8	6	34.2	3	32.4	7
MP	39	4	35.6	7	33.5	4	36	6
NW	36.4	6	40.3	5	28.9	5	37.3	4
FS	38	5	44.5	3	28.6	6	46	3
G	35.7	7	50.7	2	24.5	7	49.8	2
WC	32	8	56.6	1	24.4	8	57.8	1
NC	27	9	42.4	4	21.8	9	36.1	5
National	42.3		35.1				42.3	

Lastly, we will not have done justice to this review without considering the state of the infrastructure in the schooling system. Education in South Africa still remains highly unequal. Decades of apartheid policy meant that previously white schools received more funding than schools in black, coloured and Indian communities. Many of the inequalities created during apartheid remain today – 21 years into our new democracy. It was against this reality that in 2007 Parliament amended the South African Schools Act. This saw the introduction of Section 5A into the Act. Section 5A provides for the Minister to make regulations prescribing minimum uniform norms and standards for public school infrastructure, and it specifies what the regulations must contain. The Amendment Act simultaneously inserted section 58C which imposes mechanisms to ensure that the provinces comply with the norms required under Section 5A by requiring MECs to annually report to the Minister on provincial progress.

In addition, Section 58C provides that Heads of Department (HODs) must comply with norms and standards by identifying resources to comply, identifying risk areas for compliance, developing a compliance plan for the province, developing protocols with the schools on how to comply with norms and standards and manage risk areas, and by reporting to the MEC on the state of compliance.

These amendments to the Act clearly indicate the conscious and deliberate intention of Parliament to ensure that all learners in South Africa attend schools where the infrastructure conditions meet the minimum standards required to enable effective teaching and learning, and that progress towards these should be reported to ensure accountability. The purpose and meaning of the sections of the Act that deal with norms and standards is also evident from the Preamble to the Act, which states that “it is necessary to set uniform norms and standards for the education of learners at schools throughout the Republic of South Africa”.

In 2014, the Department of Education in KZN has reported the following infrastructural backlogs in its school system:



Table 56 Infrastructure backlogs in the school system

Category	Backlog
No water (number of schools)	181
No sanitation (number of schools)	64
No electricity (number of schools)	628
Inappropriate: entire school (number of schools)	0
Standard classrooms required -after new school scenario has been applied	3492
Grade R classrooms required	3552
Insufficient water (infrastructure to all facilities)	3010
Insufficient sanitation (number of toilets seats required)	47112
Perimeter / fencing/security (number of schools without)	185
Libraries /Media centres (number of school without)	2550
Laboratories (number of schools without)	4109
New schools (excluding inappropriate schools) required – based on growth	88
New schools required – based on a percentage of overcrowded classrooms	120
Inappropriate spaces (partial)	206
Nutrition centres (Quintile 1,2,3 only)	2808
Multi-purpose classrooms (number of schools without)	4502
Admin areas (number of schools without)	2621
Computer rooms required (number of schools without)	2621
Physical education – sport and recreation areas (number of schools without)	1553

The need for the improvement of infrastructure in the province is high as it can be seen from the table above. However, it must be noted that sanitation remains the single biggest challenge in the schooling system in KZN.



Synopsis of strategic HRD issues – ECD and Schooling

Summary of findings on Strategic Objective 2.1:

Improving early childhood development, primary and secondary education

Early Childhood Development:

- ECD enrolments have been declining over the years. It is not clear whether this is due to declining child births or because non-funded ECD centres are closing down.
- There are more 0-4 year olds in Traditional areas and yet more children are enrolled in ECD programmes in urban areas.
- Since there are no Norms and Standards nor Monitoring and Evaluation of ECD provision, the quality of the programmes remain an unknown entity.
- The number of children enrolled in Grade R has increased significantly since this component has been incorporated in public schools

Primary School Education:

- The set enrolment targets for primary schooling has been achieved and exceeded
- According to the ANA results, performance in earlier grades is good and has been improving. In general, performance in higher grades has been poorer. In Mathematics, poor performance is noted from Grade 4-9 where it is consistently under 40%. In language, the poorest performance is noted in Grade 9.

Secondary School Education:

- Secondary school education is still plagued by non-completion
- Drop-outs contribute significantly to non-completion of secondary school education and are significant in Grades 10 and 11.
- Failure rates in Grade 12 contribute significantly to non-completion of secondary education. NSC pass rates in the province have been declining in the last 2 years.
- The actual numbers of students who pass the NSC examinations have been increasing, pointing to a possibility of repeaters and progressed learners in the system
- Many black schools are still not doing well in the NSC examination and contribute the largest numbers of failures in the system
- Girls are doing slightly better than boys in the NSC examination
- The quality of passes in the province is decreasing



- Passes in the education districts ranged from 46,57% (Umzinyathi) to 72,64% (Umlazi) in 2015
- Mathematics is still posing as the biggest challenge in the province, contributing to the high failure rate in the NSC examination. This is worth noting as the province fields the largest percentage of candidates for this subject in the country.

School infrastructure:

- The province has recently compiled a register of needs for its schooling system infrastructure. The need is high, but sanitation remains the single biggest challenge of all of them.

6.2.2 *Goal 2.2: Skills alignment to Economic Growth (KZN HRD Strategy focus)*

In this goal, the province undertook to intervene in both the supply and demand sides of the human resource development landscape by:

- Developing skills plans to lead economic sectors per district municipality based on skills demand and implement in partnership with tertiary institutions
- Assess functionality of technical training institutions, and
- Offer school counselling & vocational guidance in schools.

Skills Planning:

In the past, the function of skills planning has been delegated to the Sector Education and Training Authorities (SETAs). This function was never executed effectively as SETAs used methods that could not give the country reliable information about future demands. They based their current skills plans on current jobs. The Department of Higher Education is funding two huge Skills planning projects, one based at the Researching Education and Labour (REAL) centre of the University of Witwatersrand and the other based at the Human Science Research Council (HSRC). Both these two projects are still at the development stages, although the REAL has begun training individuals whose responsibility is skills planning at all levels of the government system. It is therefore important that the province follows these developments closely, and be involved in building its capacity to undertake this function in the near future.

The functionality of training institutions:

The major institutions for delivering technical and vocational training in the nation are the 50 TVET colleges, of which KZN has 9 institutions, and thus the highest number of TVET institutions in the country.



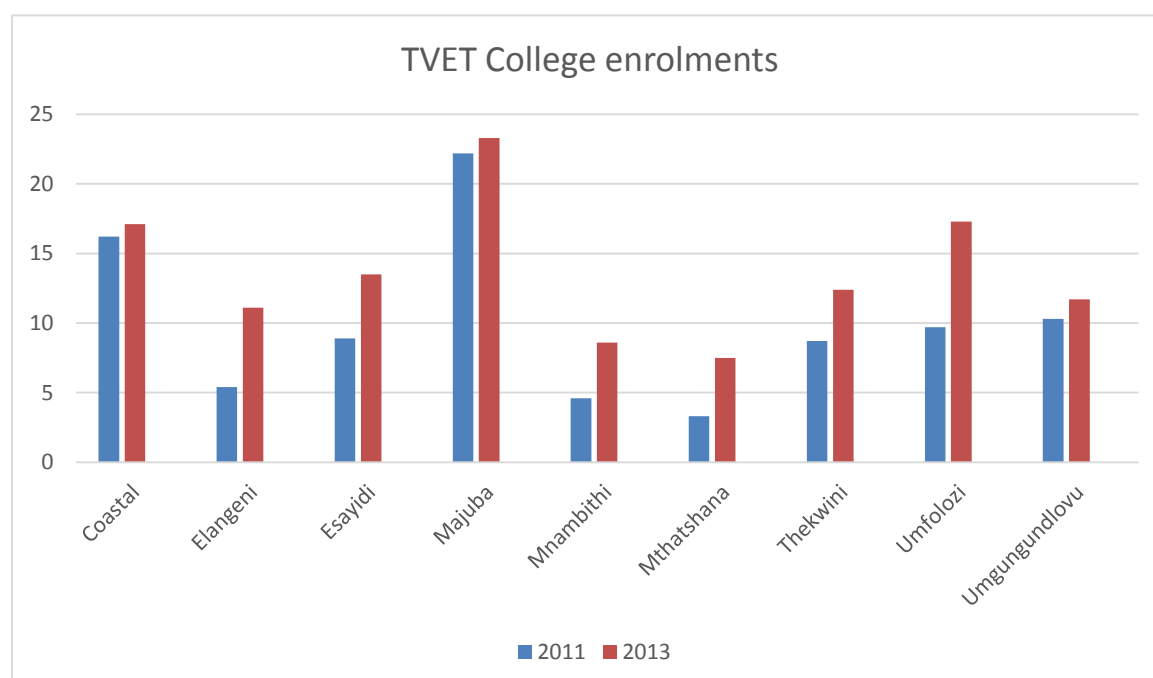
The recent function shift from the provinces to the Department of Higher Education and Training has created a lot of uncertainty on the actual role of provinces over these institutions. Some might argue that these institutions were always overshadowed by the enormous task of providing oversight over the schooling system whilst they remained a provincial responsibility. They remain still the institutions through which the province will realise its technical and vocational skills requirements and also equip its citizens with skills for meaningful livelihoods. In order to assess the functionality of these institutions in the province, the following criteria will be used:

- a. The size and growth of the institutions
- b. Range of programmes offered
- c. Throughputs

According to the White Paper on post-school education and training (DHET, 2012), Colleges cater mainly for those who have left school – whether they have completed secondary school or not – and who wish to do vocational training or complete their schooling. The college sector is central to the provision of post-school education and training, and is the area targeted by the DHET for the greatest expansion and diversification. Currently, despite significant growth, colleges still enrol fewer students than universities. This is not ideal for the development of a skilled and educated population or for meeting the needs of an economy which suffers a serious shortage of mid-level skills.

The KZN TVET college system has experienced the following growth in the past few years:

Figure 82 TVET college enrolments 2011 - 2013



The growth in the TVET colleges which is presented above represents thousands of students enrolled between 2011 and 2013. As it can be seen, all colleges demonstrated significant growth in terms of students enrolled from year to year, with the historically small colleges almost doubling their efforts in this area. It has been the stated intention of DHET to expand these institutions considerably since the takeover from the provinces.

The second area for assessing the functionality of these colleges is that of range of programmes offered in these institutions. According to the White Paper on post-school education, Colleges should be rooted in their communities, serving community as well as regional and national needs. They should primarily – although not exclusively – provide education and training to members of their own and nearby communities and develop skills for local industry, commerce and public-sector institutions. They should constantly strive to be seen by their communities as providers of skills that offer a route out of poverty and that promote personal or collective advancement. They should also be seen as institutions that can assist communities to meet some of their cultural and social needs.

However, the funding norms for this sector militate against the intended diversification of programmes that respond to local employment, individual and community needs. The following programmes are dominant throughout the TVET college system in the nation as they remain the only Ministerial programmes which are funded from the public purse.

- Report 191 – N1-3
- Report 191 – N4-6
- National Certificate Vocational (NCV) -levels 2-4.

This situation curtails all colleges from being responsive with their provision and the recent Ministerial Committee on the Funding of Colleges should assist in rectifying this situation, hopefully. Intervention in programmatic offerings should also assist in steering the TVET Colleges towards:

- ✓ strengthened working relationships with employers
- ✓ integration and articulation with the rest of the post-school system

Lastly, the issue of throughputs in the TVET college system has always been a big challenge. The following is the certification rate in the KZN TVET colleges in the 3 Ministerial programmes in 2015.

Figure 83 Overall certification rates: Engineering

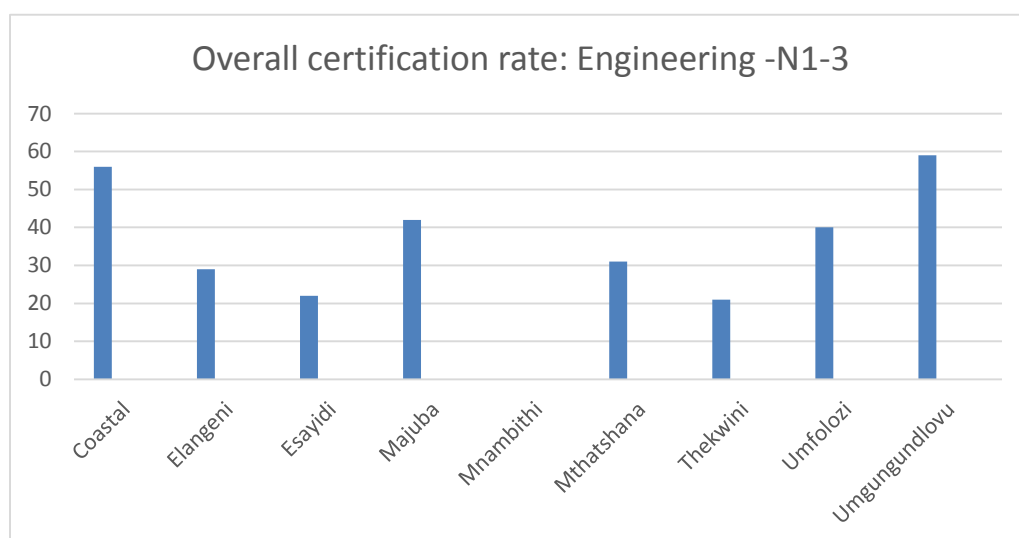


Figure 84 Overall certification rate: Business studies



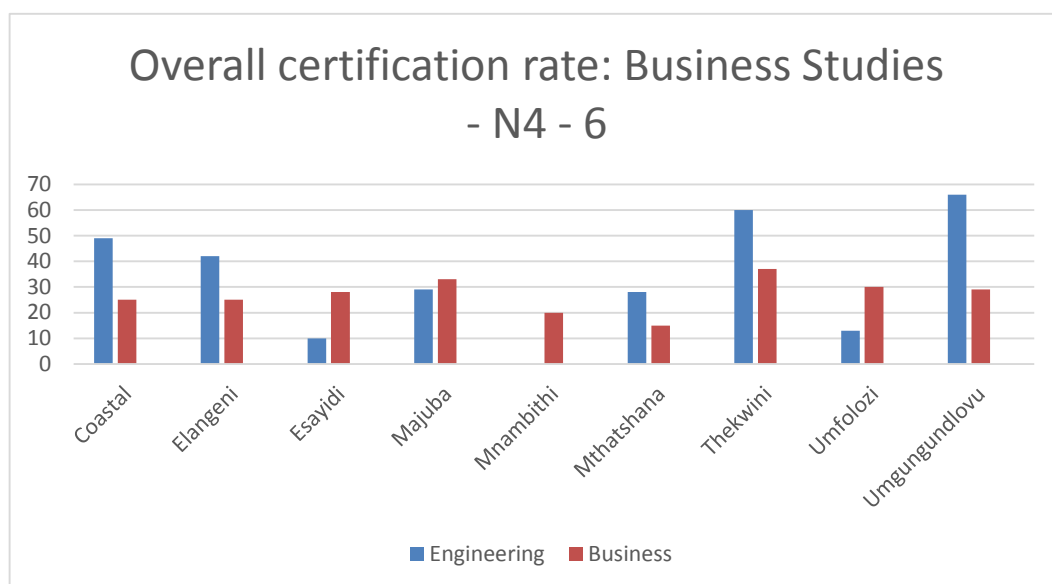
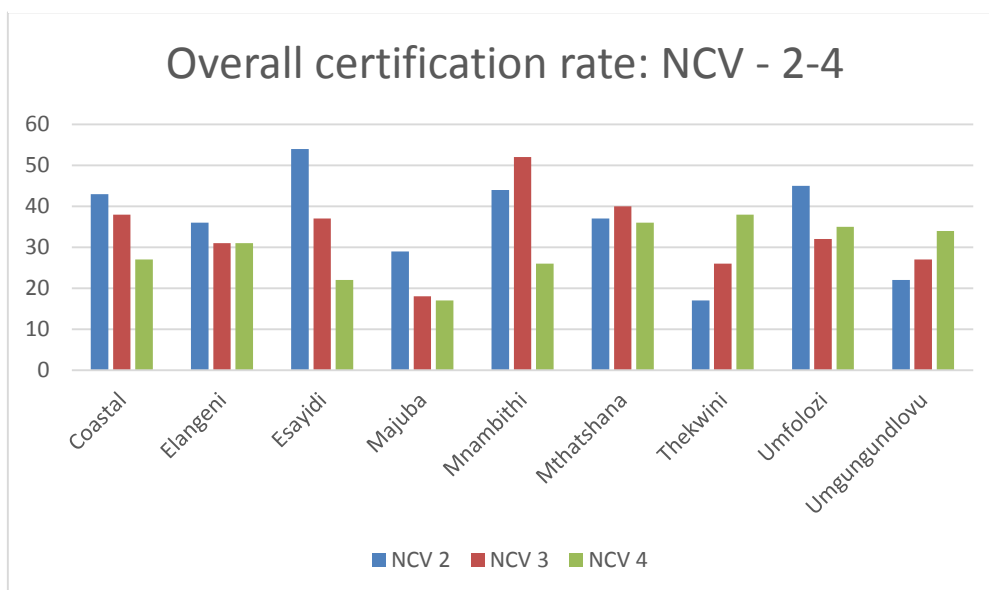


Figure 85: Overall certification rate: NCV



Overall the performance of the KZN TVET colleges is not strong. Many colleges seem to be doing better on the NCV programmes than the N-courses that were abandoned and returned to a few years back. The lacklustre performance in this province is also confirmed by the fact that many of the colleges do not appear in any list of the top performing colleges in the country.

Table 57 KZN TVET Performance in Ministerial Programmes

Programme	College	Position
N1	Esayidi	12



N2	Majuba	11
N3	Umgungundlovu	5
	Coastal	9
	Majuba	18
N4 Engineering	Mthathshana	1
	Umgungundlovu	2
	Coastal	4
	Thekwini	15
	Umfolozi	18
N5 Engineering	Thekwini	5
	Esayidi	8
	Umgungundlovu	10
N6 Engineering	Umgungundlovu	2
	Thekwini	4
	Coastal	6
	Elangeni	10
N4 -6 Business Studies	None	
NCV 2	Esayidi	9
	Umfolozi	16
	Mnambithi	17
NCV 3	Mnambithi	14
NCV 4	None	

Counselling and vocational guidance in schools

Many of the well-off schools have guidance counsellors who help individual students with their personal problems. However, this is still a big challenge for the schools which are less endowed. The schooling system has established units of career guidance in its curriculum in the Life Orientation subject. This is meant to standardise the information received by students throughout the system and not to depend on the strength of the school or teachers. The curriculum is well structured and useful to students who are facing questions about their future vocational directions. Life Orientation starts in Grade 8 in schools and builds up to Grade 12. However, because of the status of Life Orientation in the Secondary school curriculum, especially in relation to the 'gateway' subjects, schools and students often pay lip service to this subject.

Synopsis of strategic HRD issues – Post school training and education

**Summary of findings on
Strategic Objective 2.2: Skills alignment to Economic Growth (KZN HRD Strategy focus)**



Skills' planning is still a young concept in the country and therefore it can be expected that the province is also still lagging behind in its initiatives towards acquiring competences in this function. But it is important that the province monitors closely the developments and start building its capacity

The functionality of the TVET colleges as the major technical and vocational education training institutions is mediocre at best. The institutions have been growing, with the smaller institutions almost doubling their enrolments. Programmes offered are largely limited to the Ministerial programmes and therefore constraining these institutions in their ability to respond directly to the local economy and communities. Overall the certification rate in the TVET colleges remains poor.

Counselling and vocational guidance is offered in the Life Orientation subject in the school and in colleges, and yet the status of this subject makes it vulnerable as its weight is not the same as those subjects considered to be gateway subjects.

6.2.3 *Goal 2.3: Youth Skills Development and Life-long learning*

Realising the plight of youth Not in Employment, Education or Training (NEET), the interventions planned by the province for this goal were as follows:

- ✓ Establishment of programmes for life-learning through training to skill the unskilled;
- ✓ Establishment of community Adult Basic Education and Training (ABET) and Life Skills programmes.

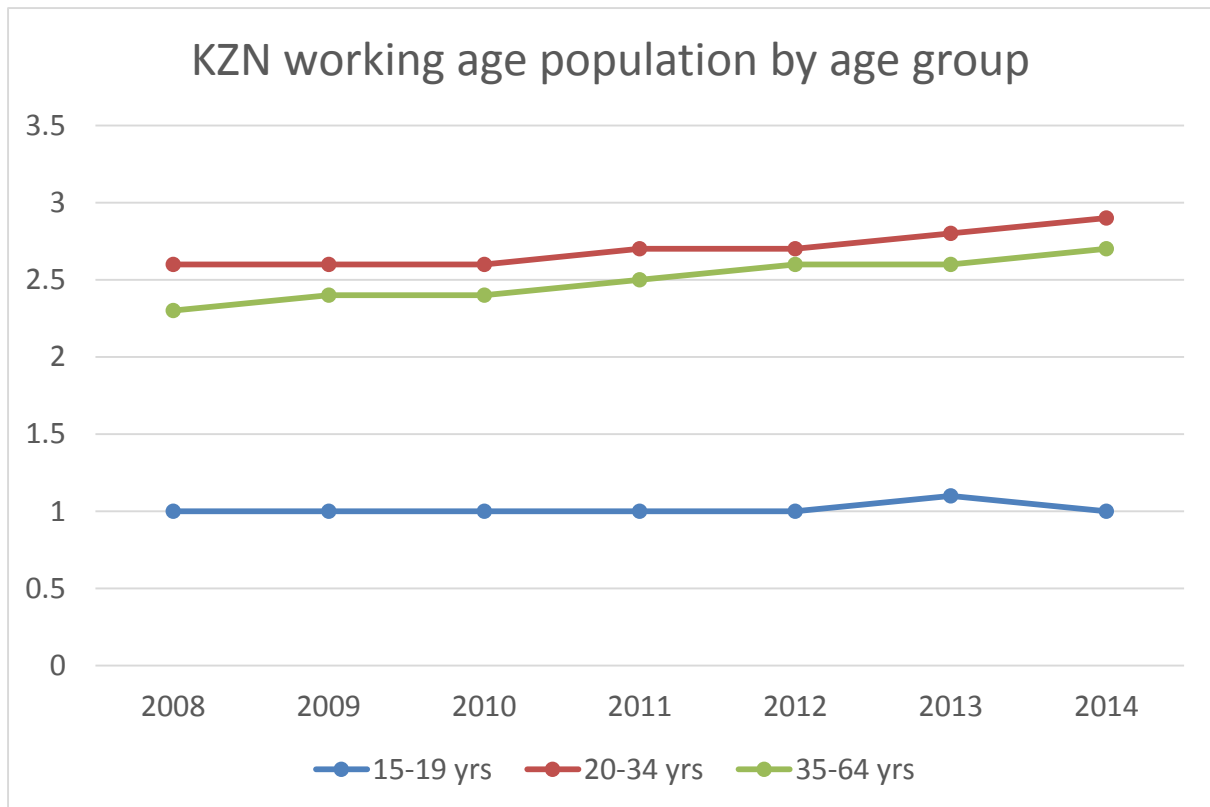
Youth Skills programmes (Learnerships, apprenticeships, Internships)

The education and training system had to find ways to cater for the needs of the millions of adults and youth who are unemployed, poorly educated and not studying. The expansion of the university and college systems has made an important difference, but has not been sufficient to meet all the needs. In any case, they are not designed for this. There are many who would not qualify to enter a university or TVET college.

Statistics South Africa characterise the working age population in KZN as follows:

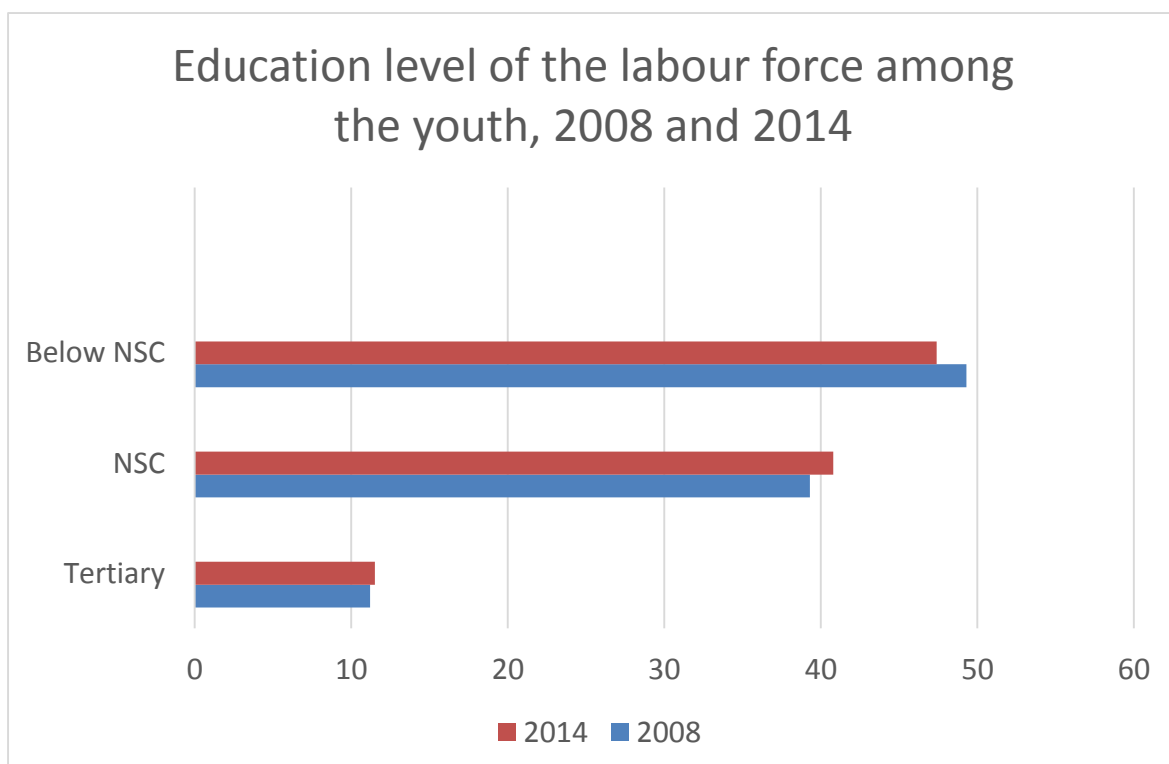


Figure 86 KZN working age population by age group



In the first place the graph above shows that there are a significant number of young people of the ages 15-19 in the province. It is hoped that this group of young people are still in school or undertaking some form of training. On the other hand, statistics show us that the educational levels of youth in the labour force in the province is as follows:

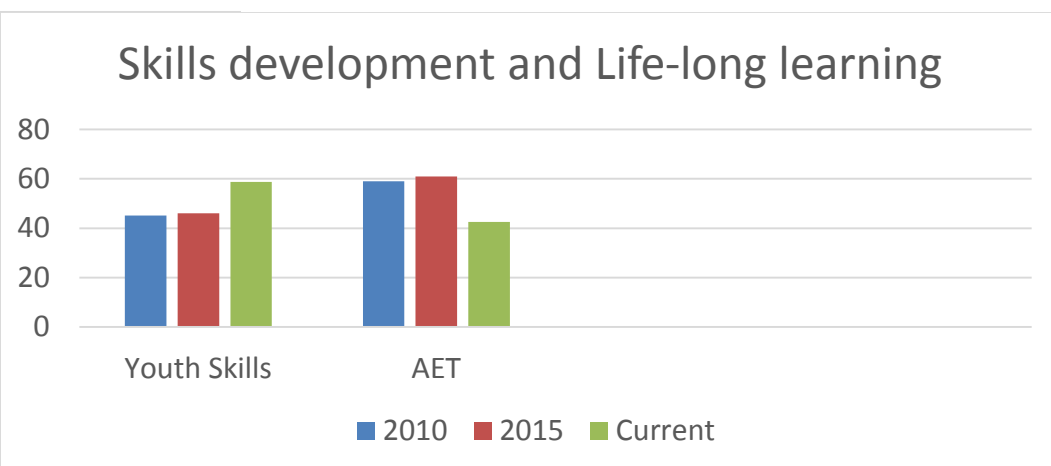
Figure 87 Labour force – youth education level



This means therefore that the province still has more workers with less than the National Senior Certificate than any other group. However, since 2014 there is a beginning of slight decrease of workers without an NSC qualification in the labour market whilst those with the NSC are beginning to grow slightly.

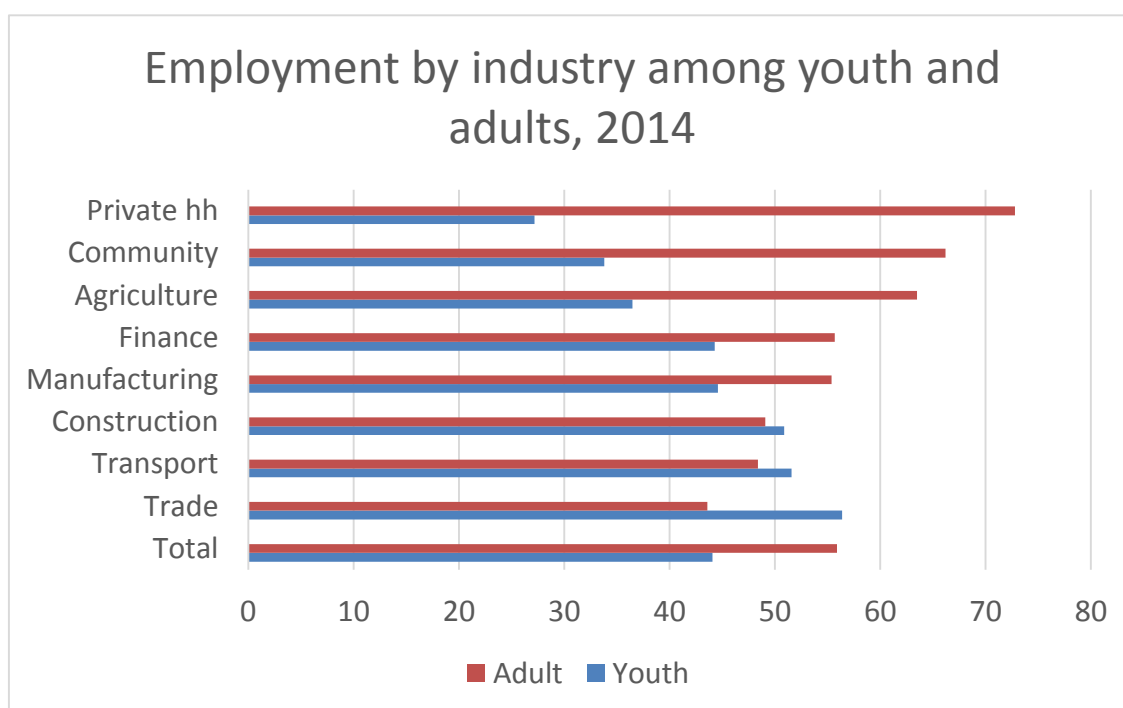
Information on skills development and life-long learning is scant and not rigorously collected. However, the PGDP Action working Group reports the following statistics in its planning document:

Figure 88 Skills development and life-long learning



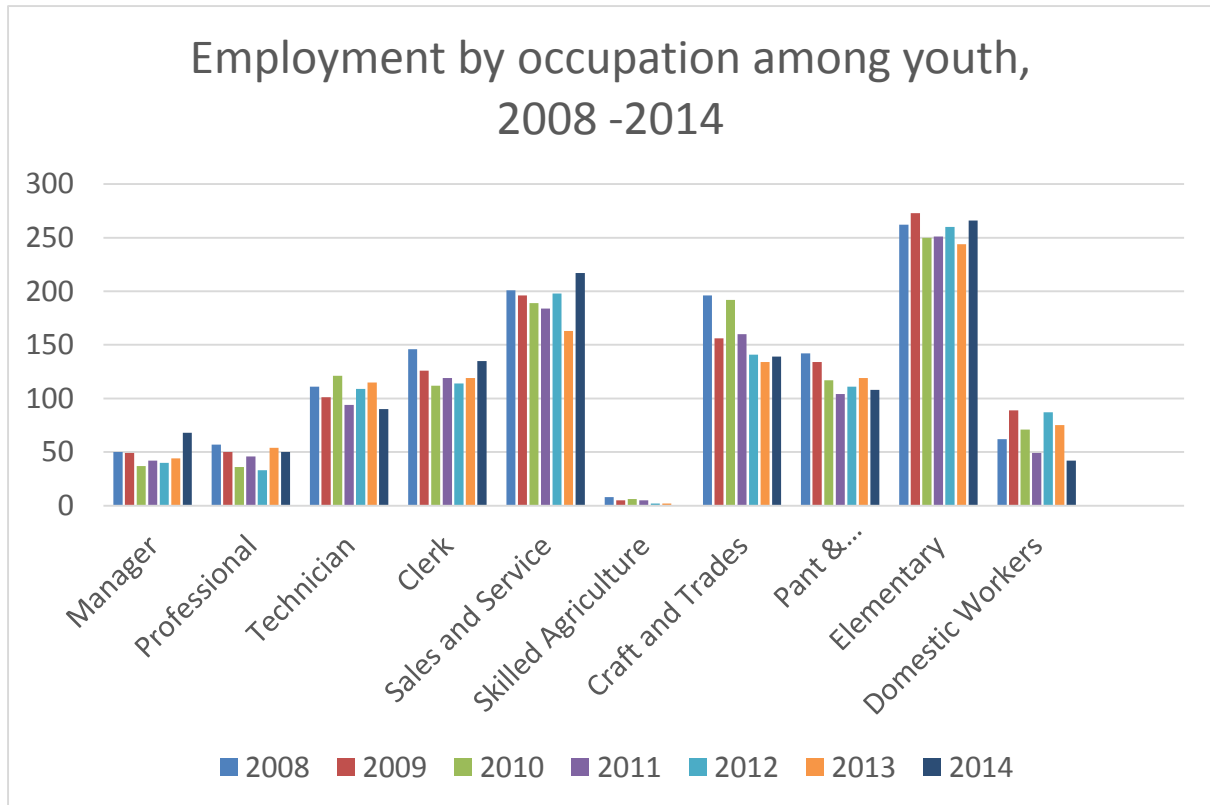
The participation of KZN youth in the labour market has been changing over time.

Figure 89 Employment by industry – youth and adults



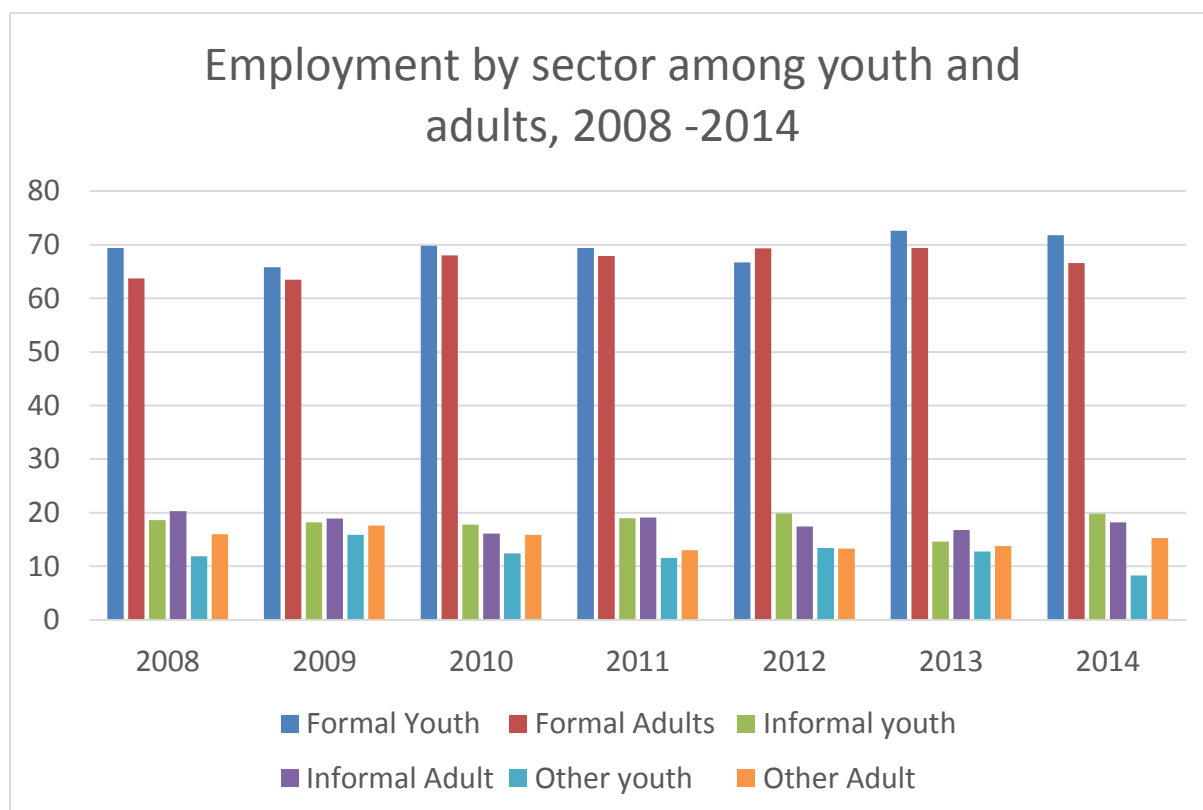
There is a noticeable shift between the sectorial employment of youth as opposed to that of adult counterparts in the province, with young people moving into trade and transport aggressively than private households, community services and agriculture.

Figure 90 Youth employment by occupation



In spite of the sectorial shifts observed above, the top three occupations in which youth are found are those classified as elementary, sales and service. Whilst there has been an emphasis on craft and trades, there seems to be a decline of youth participation in this area. There is a definite move away from skilled agricultural occupations by youth and this must be questioned.

Figure 91 Youth eEmployment by sector

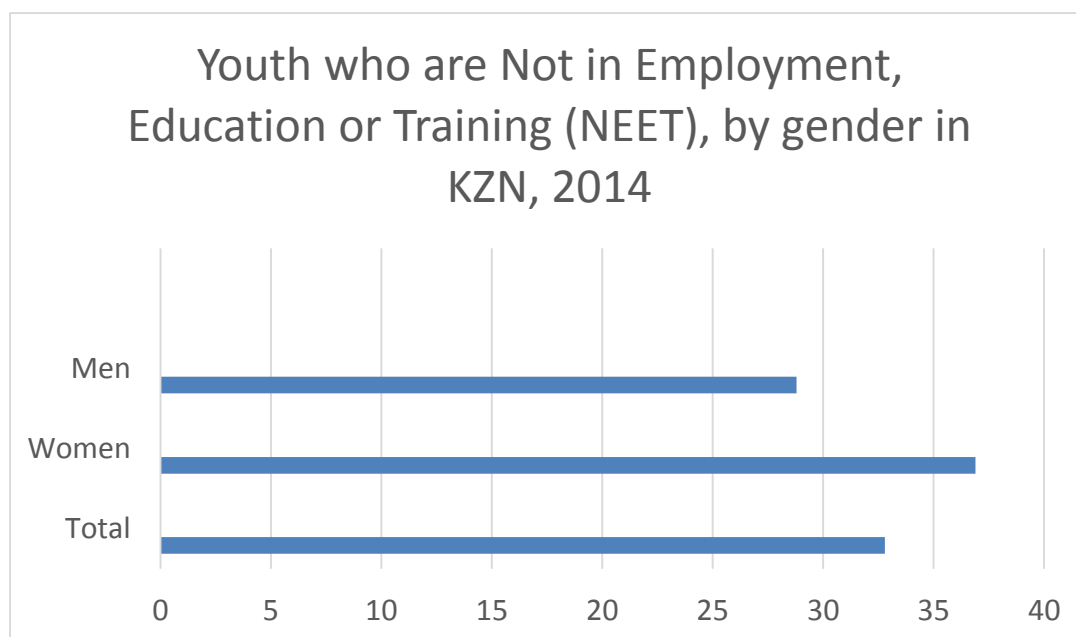


When it comes to formal versus informal sector employment, formal employment still constitutes the largest sector where youth employment is found. In fact there has been a slight increase of employment of young people in the formal sector between 2013 and 2014.

Community Adult Education and Life Skills Programmes

According to the 2011 census, 3.2 million young people between the ages of 15 and 24 were not in employment, education or training (Cloete, 2009); 523 000 of these had only achieved a primary school education or less, and nearly 1.5 million had less than a Grade 10 education. Many of these young people are likely Not to be in Education, Employment and Training (NEET). In KZN, we have the following information about this group:

Figure 92 Youth not in employment, education or training by gender



Women are more likely to be in the NEET group than men. This state of affairs requires a province that can provide adequately for adult education and life skills programmes. The following information is about provision of adult education in the province:

Table 58 Number of learners, educators and institutions in public AET centres in KZN in 2012

Learners	Educators	Institutions
47 961	4 871	702

Table 59 Number of learners in public AET centres in KZN by programme in 2012

AET Level 1	AET Level 2	AET Level 3	AET Level 4 (NQF 1)	Grade 10 (NQF 2)	Grade 11 (NQF 3)	Grade 12 (NQF 4)	Other / Skills Development	Total
6 435	7 530	8 571	21 651	45	125	3 364	240	47 961

The patterns of adult education provision in KZN reflect to a large extent the patterns of provision nationally. There has been a history of investments in Kha Ri Gude, nationally and the participation rates are an evidence of opportunities for literacy programmes. However, the highest numbers are observed at the ABET Level 4, and this also matches the efforts that have been put by provinces in getting adult learners to get the GETC certificate and this is often a prized qualification for those who exited the school without a qualification. The next prized qualification, seems to be that of Grade 12, and this is not surprising as there is always a high need by those who would like to complete this gateway qualification. What has to be asked



is whether or not KZN has the capacity to provide for the needs of all its citizens who are currently not in school, not in TVET colleges and not in Higher Education institutions through its system of adult education. The White Paper on Post-School education expects a much more expanded Community Education and Training College system in all provinces.

The Education districts in the province enrol the following numbers in their Grade 12 programmes:

Table 60 Enrolment in AET Grade 12

DISTRICT	2013	2014	2015	2016
Amajuba	1588	1250	1155	759
Ilembe	344	383	396	686
Pinetown	1018	697	3176	3659
Sisonke	N/L	-	12	103
Ugu	349	208	479	524
Umgungundlovu	161	144	148	240
Umkhanyakude	327	346	67	-
Umlazi	321	1637	1448	1006
Umzinyathi	109	61	89	90
Othukela	1660	-	67	94
Uthungulu	552	578	100	578
Zululand	193	208	20	-
TOTAL	6622	5512	7157	7739

From the table above, it looks like Adult Education and Training participation rates are higher in urban areas than they are in rural areas.

The focus of Adult Education and Training in the province has been more on the GETC qualification since out-of-school learners writing the NSC examination have always been considered as private candidates of the school system, not adult learners.

Table 61 GETC qualifications

	Wrote GETC	Full	Passed full	Certification%
2011	5553		2746	49,5
2013	14952		7803	52,2



The numbers have been growing of both those who write and those who pass. In the country, KZN has been taking a lead in pass rates in this country. There is something that is working here whilst in the rest of the country the past rates for this qualification are almost dismal.

Synopsis of Strategic Issues: Youth skills development and life-long learning

Summary of findings on Strategic Objective 2.3: Youth Skills Development and Life-long learning
<p>It is difficult to quantify the progress made on improvements in the provision of Skills development for young people because there is no reliable data that can be analysed. However, there are shifts that are noticeable in the labour market in terms of economic sectors and occupations where young people are participating. Their training is not necessarily linked to where the changes in the labour market.</p>
<p>Adult Education has historically catered for adults and not for youth who have some education. This approach has ignored the needs of young people who have to be introduced to a system of life-long learning in a context of a diversified curriculum. However, the province has been doing relatively better than all provinces even in this limited range of provision.</p>



7 THE ECONOMIC LANDSCAPE

The economy of KwaZulu-Natal has, since the last Situational Analysis (2011), remained the second largest within South Africa. The Province contributes approximately 16% to national Gross Value Added (GVA).

The economic base within the Province is diverse, being driven largely by the manufacturing sector, and supported by tertiary services such as tourism, finance, insurance and business, transport, storage and communication. The province however continues to under-perform relative to its population share, and is faced with three structural constraints to growth, namely; an increasing inactive population, increasing youth unemployment and high levels of inequality. Also, while the poverty rate has dropped to around 45% from 48.4% in 2012, six out of ten of the country's poorest districts are in the province. More than 60% of the poor are under the age of 25 moreover.

These constraints are important and push the focus sharply onto job creation, particularly as the manufacturing sector is growing less rapidly than other economic activities since the economic crisis of 2008. Of concern with regards to employment is also a rise of informal employment and a higher incidence of those that used to be employed in manufacturing and that are in long term unemployment. Pressures on individuals and households to cope with the current economic situation are possibly evident in a recent decline in the number of discouraged work seekers.

Generally, the province faces specific challenges in growing quality jobs and in preventing job losses in particular economic sub-sectors. Job creation thus remains a key concern for the Provincial Growth and Development Strategy, including in key sectors. In parallel, business retention and expansion (BR&E) initiatives, which have shown some success in the province, will have to be expanded in particular sectors to prevent a permanent loss of capabilities.⁵⁸

Stagnating investment into agriculture and a sharp decline of investment in manufacturing directly after the 2008 crisis, in spite of a recovery in that sector, will affect employment growth in the short to medium term time horizon. Investment has generally grown but is not translating into growing employment. Thus, while there is the potential for improved level of growth in the Province going forward, the growth trajectory that is emerging does not appear clearly to be a labour-inclusive growth path. Priority must therefore remain with strengthening the key sectors of manufacturing and in expanding agriculture, tourism and the green economy that are labour intensive. Priority must also be with enhancing the skills of the workforce to make employees technologically capable and to catalyse the performance of special zones designed to boost development (e.g. hubs, special economic zones, etc.) as they are being further developed. Agriculture is showing latent productivity improvements but land tenure remains problematic and it is unclear as to whether land is used optimally in the province.

The province's industrial base was shaken with the 2008 crisis. Recovery is under way but some sectors, such as Textiles, clothing, leather and footwear and Furniture that are relatively labour intensive have been markedly affected; these sectors are currently stagnant or contracting.

⁵⁸ At present there is no institutionalised BR&E policy in place in Municipalities and a number of municipalities have weak and/or only informal engagement with businesses.



Also the province is displaying poor performance on its economic activities in water and electricity. Large challenges remain in these sub-sectors which could undermine a proper recovery of economic, including agricultural, activities.

Other challenges are in rural development with an increase in agricultural activities that is still not in line with what is required for food security purposes. Tourism is also showing signs of contraction particularly with regards to international tourist numbers though spending and the duration of stay of these tourists seem to be on the rise. Unlike the previous period, some service sectors (e.g. Community, social and personal services, and Transport and storage) are still growing but at much reduced growth rates.

Expanding employment in agriculture is still possibly constrained by issues related to good cooperation across a range of parties that would allow traditional land to be better utilised. Some projects are in place but data shows that there is a relative stagnation in the size of livestock, a major agricultural asset in the province.

Positively, serviced and zoned industrial land has become a key focus area. Legislation has been passed that has firmly established two Special Economic Zones in KZN. These state of the art zones are being developed rapidly. Linkages between special investment and export zones and other areas in the province are being operationalized through carefully identified economic hubs in each District Municipality of the province though feasibility studies are still to be conducted for some hubs.

Noting a number of substantial developments which have taken place in the province, a number of critical projects are being unpacked; they have thus not yet yielded the benefits which they are meant to provide. The relatively high cost of capital and other input costs (i.e. machinery, electricity and labour), skills shortages, and the inflexibility of labour continue to be challenging and greater efforts are now essential to help existing businesses expand and to change the provincial business base. Businesses need to be significantly better equipped to confront growing international competition and reduced market space in order to properly develop and to generate new jobs in net terms.

Within the spatial context, the economic contribution to provincial gross value added (henceforth GVA) is largely driven by eThekweni (53%), uMgungundlovu (12%) and uThungulu (8%). Economic activities, as such, remain dominated by the three cities of Durban, Pietermaritzburg and Richards Bay, with the remainder of the smaller towns and rural areas contributing less than 30% to total GVA. This pattern is only slightly altered from 5 years ago. While the previous Situational Analysis saw this as largely the result of insufficient economic infrastructure within less dominant towns, the trends would suggest that limited progress has been in infrastructure development translating into visible economic development away from the main economic centres. However, economic activities have grown in the smaller Districts of KZN. Large infrastructure projects are also progressively coming to conclusion that should have some impact over the medium-term.

The Province has a number of elements in place that position it well nationally and internationally. These elements include the Durban and Richards Bay Ports, the Dube TradePort, the Richards Bay IDZ, vast agricultural land, and a relatively strong industrial base though parts of this base have been weakened since 2008. These advantages have allowed the province to resist some of the worse effects of the crisis. But, the fact remains that the Province is far from having reached its full economic potential. The difficult international and national growth context means that there is lots of uncertainty for the future. The assets that



are in the province have to be used effectively and KZN is showing that it is now an established gateway within South Africa as well as the rest of Africa.

The requirements to achieve such success remain numerous but include an educated and skilled labour force, a reduction of bureaucracy and red-tape surrounding development, a strong policy direction from the public sector, and confidence from the private sector. This is in a context in which confidence is generally down in South Africa.

7.1 Overview of KZN Economy in the Global Context

In the last five years the global economy has been markedly shaped by a profound economic crisis. This crisis – which is associated with a slump in consumer demand and in business confidence in the large traditional developed markets – has spilled over into most countries in the world and has made it difficult for many economies to penetrate other markets through exports.

Protectionist tendencies have re-emerged in many of the more established markets but also elsewhere in the emerging and developing economies in the last five years, a number of which have not been dealt with at the multilateral level. A recent development has also been with a number of developing countries rethinking either their industrial or sectorial policies. In parallel, whereas new financial controls have been put into place to tighten the global financial architecture, new controls are being looked into, in a context of growing fiscal and current account deficits, to help curb capital outflows and reduce reliance on volatile capital from abroad.

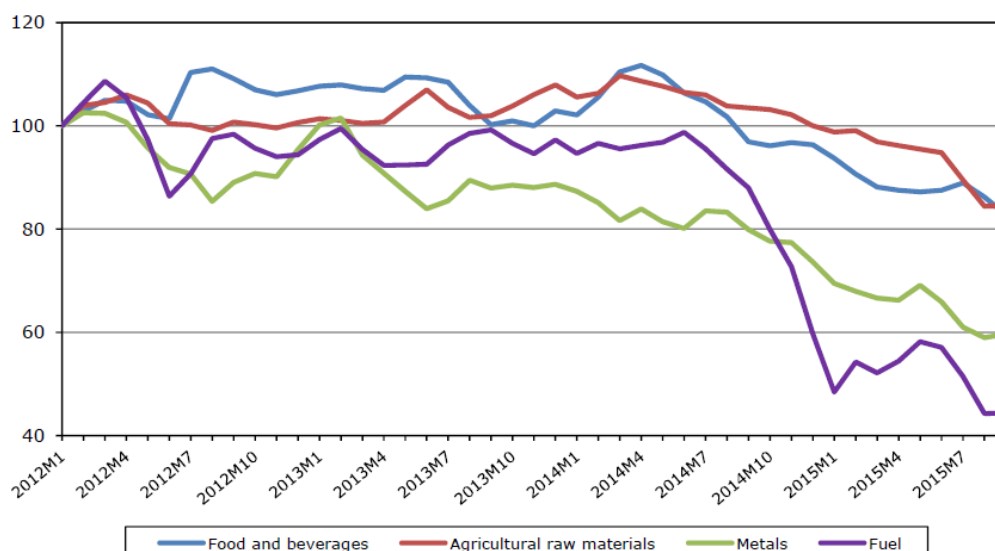
The global economy has also been, in the last five years, shaped by the rise of particular economies. These countries where growth has been at high levels are described as the emerging economies. These countries, with consumers whose demand profile is not yet similar to the profile of consumers in the developed countries, offer new prospects for goods from countries at lower levels of development. They also offer high returns from cooperation.

With very large markets and a long period of sustained growth, Brazil, the Russian Federation, India, and notably China, described as the BRIC countries (BRICS excluding South Africa), stand out. These are experiencing a demand boom. China has, moreover, also shaped its growth on commodities.

Whereas signs of cooling have emerged in these large emerging countries, a number of economies on the African continent continue to expand though the pattern and speed of expansion of these countries in a globalised world remain shaped by external conditions. Countries on the African continent are diversifying their production base, but they remain heavily dependent on demand for their commodities and the resulting international price of particular commodities. In this regard, there are issues with the fact that commodity prices have declined recently although some declines (e.g. fuel prices following new sources of supply) offer new production opportunities and some relief from inflationary pressures.



Figure 93: Prices of Primary Commodities (2012 – 2015, Index January 2012=100)



Source: WTO (2015) - Director General Report (November 2015)

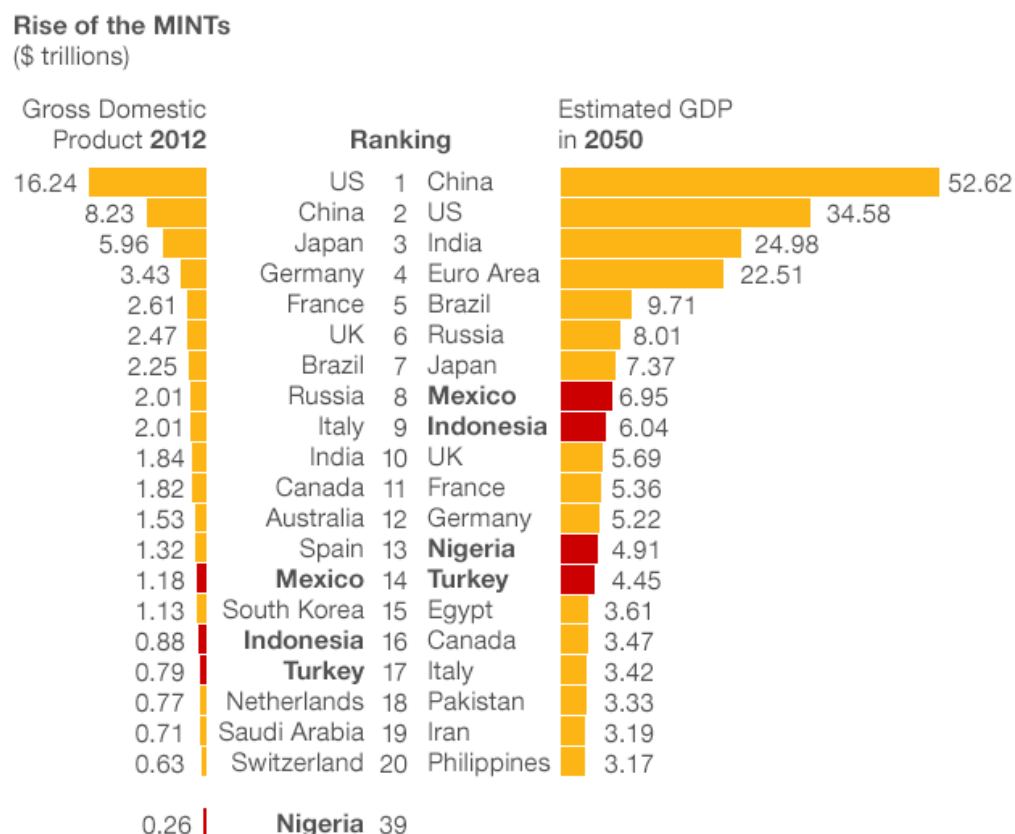
Noting a number of challenges for economic growth, the Continent as a whole (as indicated by some key documents from the African Union (AU) and from its technical body, the New Partnership for Africa's Development (NEPAD)) is seeking to change its agricultural and industrial trajectory. This is firmly set in motion through a number of initiatives and strategies, including through greater processing of commodities directly in the national economies and through enhanced regional integration. Also, African countries have a young and growing middle class population that is driving the demand for new goods and services. They are thus attractive markets for investors and exporters.

While partnerships between countries are critical for the development of African economies, including that of South Africa, a number of countries are growing in a notable manner on the continent. Nigeria is considered as part of the set of new emerging giants. It is part of another subset of countries that also includes Mexico, Indonesia and Turkey (the MINT countries) and that offer good growth prospects; these are seen as the new countries to look into as they have a young population that has good education and that is slowly entering the labour market.

Another group of countries that has been of interest to those examining the growth performance of countries internationally has been the CIVETS countries and which are Colombia, Indonesia, Vietnam, Egypt, Turkey as well as South Africa. (This classification of countries with strong growth prospects pre-dates the identification of the MINT countries.) These countries share similar characteristics to the MINT countries in terms of their population and thus expanded market potential. Political instability tends to affect a number of countries in the various groupings, including that of CIVETS however. The type of economies that have strong growth prospects varies, as such, over time.

There are, indeed, risks associated with a focus on emerging economies as shown by China's slowing down (and, more recently, a stagnation of economic growth in the Russian Federation). Of note is that a number of such economies are showing signs of vulnerability, including political and social vulnerabilities. There are thus some warnings about an over-reliance on positive predictions. However South Africa and KwaZulu-Natal are well placed to take up the new opportunities that are associated with these various markets.

Figure 94: GDP of Established & Emerging Countries (2012) and long GDP Forecasts (2050)⁵⁹



Source: World Bank, Goldman Sachs

South Africa has developed excellent relationships with the new emerging countries. It is an active participant in a number of key international and continental fora (e.g. the World Economic Forum, the AU and NEPAD, etc.). The nation has, in parallel, developed strong links with the BRIC countries following the BRICS (sometimes referred to as BRICS+) agreement.

KwaZulu-Natal, with its large and strategically placed ports, its borders and connection with a number of Southern African countries and through its strategic focus on being a Gateway to the African Continent has, in fact, critically supported South Africa's international position. Whereas concretely a number of policy-defining multilateral and international conferences have taken place in the province, the province is also developing its own links with emerging markets.

The linkages, which KwaZulu-Natal is developing with the rest of the world are strongly shaped by the broader efforts undertaken nationally in the development of infrastructure and in spreading the benefits of such developments to the smaller regions within the province. The impacts of the new national, provincial or local strategies and interventions vary. But, in aggregate, how the Province develops in the medium term horizon is strongly defined by its people and its own resources as well as by its uptake of national policies and strategies.

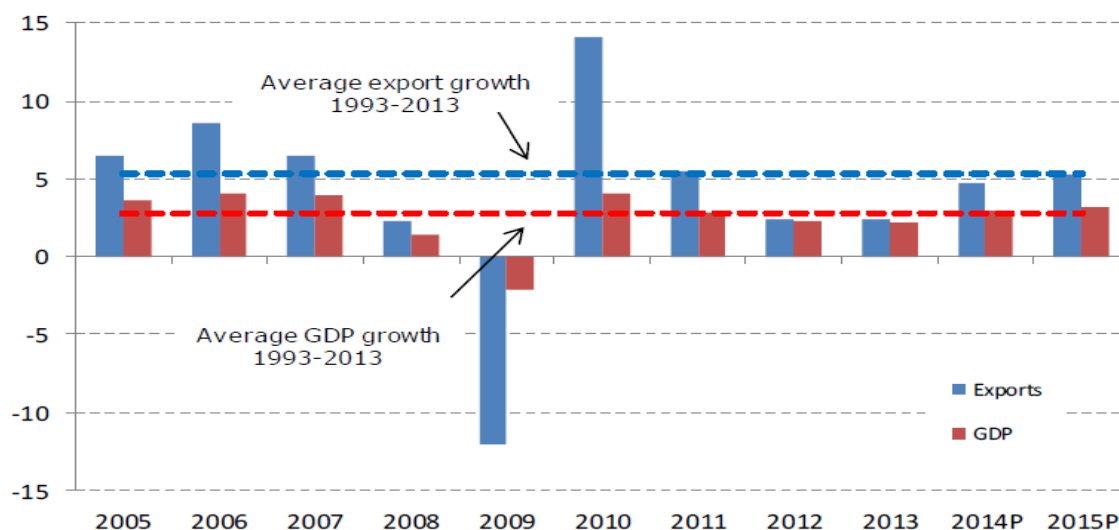
⁵⁹ Extracted from <http://www.bbc.com/news/magazine-25548060>, January 2016.



Nevertheless, the province is also strongly shaped by international developments. South Africa has, in this regard, been deeply affected by the 2008 crisis as well as by new international developments. Notably, high levels of production and growth achieved by countries such as China have placed strong pressure on the whole of South Africa and on other countries who seek to compete in international markets to rapidly adapt. Fluctuations and a trend of decline in commodity prices have markedly shaped the ability for economic activities to expand. GDP growth rates, in South Africa and elsewhere, have tended to be regularly revised downward accordingly. Fundamentally, the world is a different place with different challenges than 5 years ago.

Internationally, world trade has continued to expand in volume terms. Nevertheless, with sluggish import demand, world exports have grown at relatively low levels. Challenges are markedly growing in this regard. The figure below shows how the crisis dampened export volume in 2009 as well as what was anticipated in export volume for 2014.

Figure 95: Growth in Volume of World Merchandise Exports & GDP, 2005 -2013 & Projections

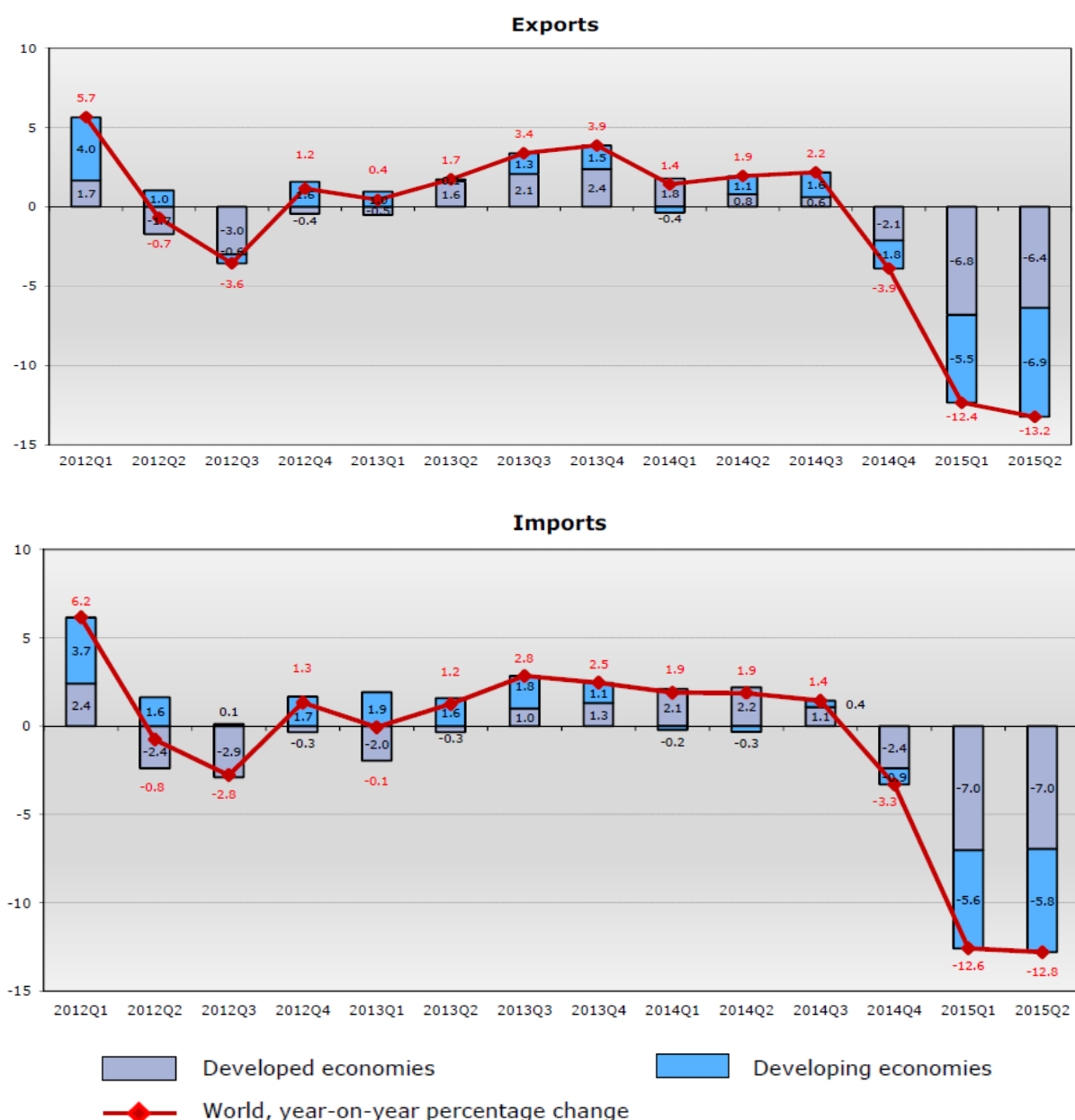


Source: WTO (2014)

There has been actual growth of world trade in volume after 2009 but as the estimates have not been reached, world trade has been revised downward; world merchandise volume trade has been set to grow at 2.8% for 2016, well below was anticipated a few years ago as can be seen by comparing the latest revisions with Figure 95 above.

Also, adverse developments have emerged in value terms. The figures below show what is happening in terms of the growth of world merchandise exports and imports in value terms. The data reflect what is happening with the appreciation of the US\$ in 2015 and that has impacted on developing and developed countries similarly. Cheaper imports are good for growth. But, lower export revenues are bad for development and for countries and regions, like South Africa and KZN that are seeking to push exports.

Figure 96: Contributions to Year-on-Year Growth in World Merchandise Trade (2012 -2015Q2, Percentage Change from Data in US\$ values)



Source: WTO (2015) - Director General Report (November 2015)

It is generally clear that competition over accessing the growing markets, which was already pronounced in the past, is becoming very intense. This means that elements that were set out in the 2010 Situational Analysis remain even more valid now than before, particularly in a context in which foreign direct investment is also generally comparatively sluggish.

As such, the point of the 2010 Situational Analysis can be re-iterated: that the Province needs to keep pace with increasingly sophisticated, albeit fragmented, global production value chains and related new production processes.

Moreover, with the shift in economic power towards emerging Asian economies firmly in place, South Africa and KZN have not yet been able to take advantage of all the new opportunities in these economies. In parallel, the opportunities offered through addressing climate change

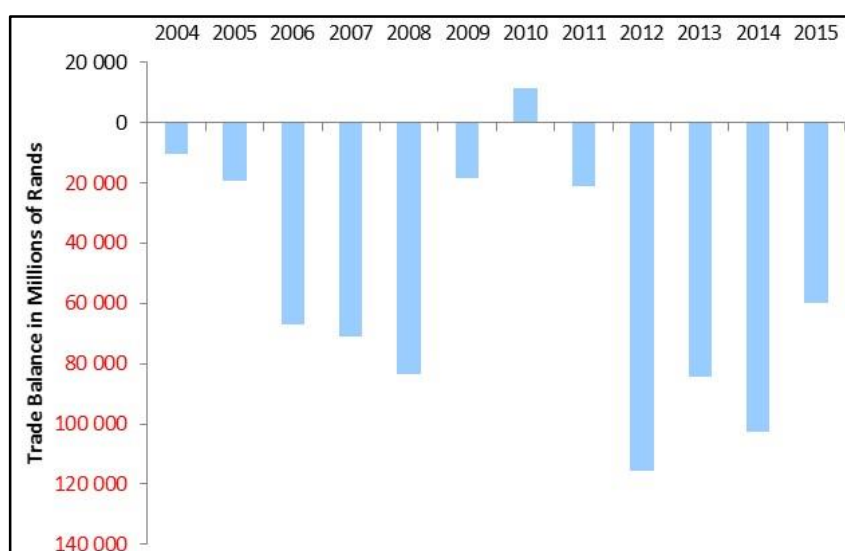
and around the introduction of energy-saving technologies and renewable energy generation have not yet been fully taken up.

The challenges around sustainable resource management that were drawn upon in the previous situational analysis remain but substantial progress has been made in climate change mitigation and adaption in the main city of Durban in the Province and in terms of setting in motion a greater protection of the marine resources.

Although a number of the main shifts that are still required need to be undertaken by the private sector, the authorities have a key role to play in ensuring that the environment is conducive to economic activities. This means that: red tape has to be reduced and kept low; that what private investors required to initiate or to expand investment is in place; that information about new opportunities is easily accessible to investors; and that new opportunities are properly identified and unlocked. This is a challenge of its own for the public sector. But, another related challenge is in terms of a greater efficiency of public spending as government budgets tend to remain small compared to the scope and scale of the interventions that are required for a new growth trajectory.

There are positive changes on this. Moreover, from an international perspective, KwaZulu-Natal has, according to Trade Investment KwaZulu-Natal (TIZKN), managed to progressively grow its trade with its African as well as with its BRIC partners.⁶⁰ The top 10 leading markets for the province now contain 50% African economies, 10% other developing economies (i.e. China), and 40% developed economies. But, The Province, which contributes 11.5% of South Africa's total trade, has displayed a trade deficit in the last 5 years however as can be seen from the figure below

Figure 97: KZN Trade Balance (2004 – 2015)



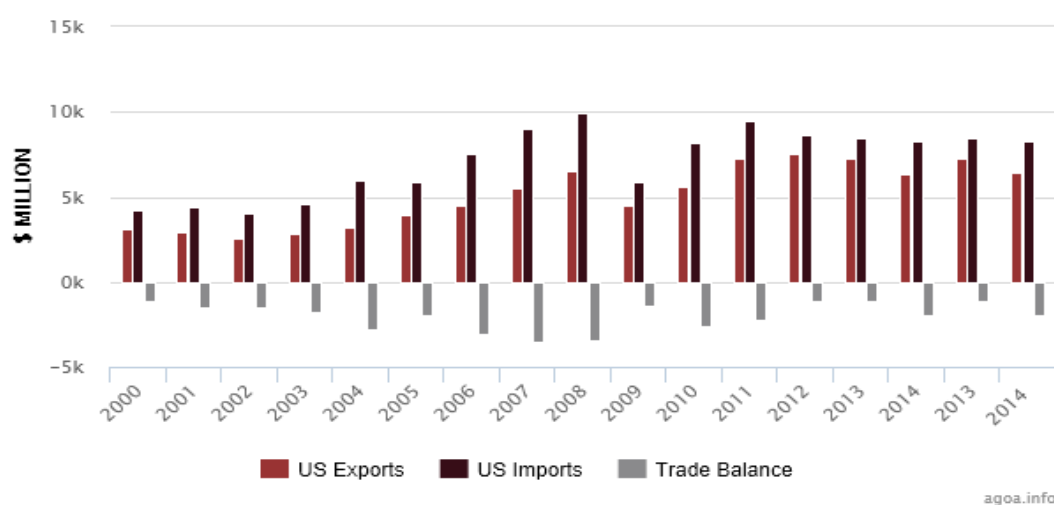
Source: KZN Provincial Treasury (2016) - Data prepared by Clive Coetzee

⁶⁰ Quantec trade data (in Rand and at current prices) suggests that KZN's share of exports to BRIC countries would have remained relatively stable between 2010 and 2013 but dropped in 2014 (to 9.1%). The share of KZN exports to Africa has, in contrast, notably increased – it stood at 25.5% in 2009 and reached 35.9% in 2014.



More widely, the Province has specific opportunities around existing trade arrangements and deals and through miscellaneous cooperation and marketing agreements that are in place. Notably for the province trade opportunities around the African Growth and Opportunity Act deal (AGOA) are set to 're-emerge' with an extension of the import duty preferences which South African exporters obtain in the USA market approved for another 10 years. Yet, at the time of writing of this situational analysis report serious challenges remain with South Africa agreeing on allowing meat imports (effectively poultry meat) from the USA; there is currently a deadlock on the side of South Africa that is linked to disagreements over sanitary and phytosanitary requirements.⁶¹ The AGOA deal is particularly attractive for automotive exporters (notably original equipment manufacturers (OEMs)) and for agricultural produces. The USA is, at present a major export market for KZN.

Figure 98: South Africa – USA Trade (Exports, Imports & Trade Balances, 2000 - 2014)



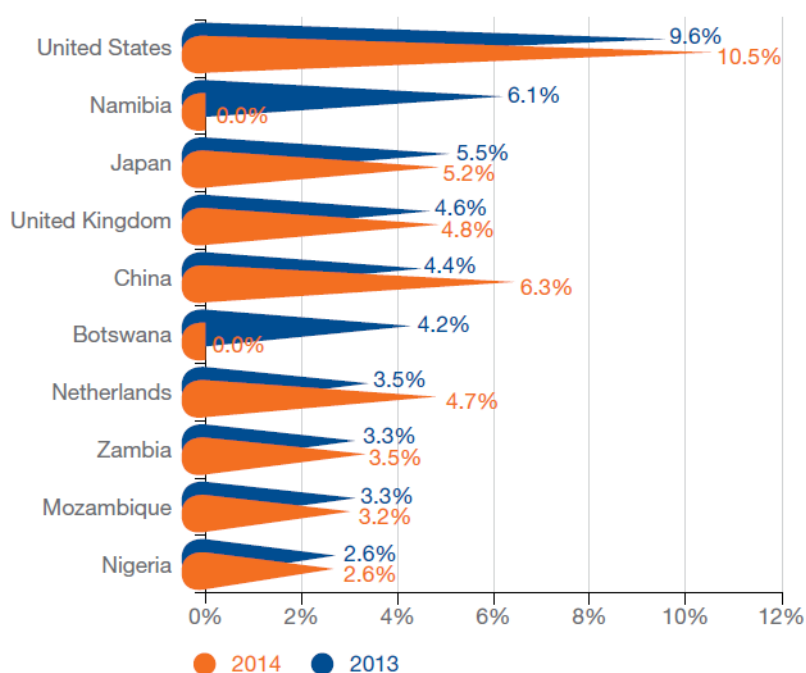
Source: agoa.info (consulted January 2016)

Separate trade opportunities are emerging on the Continent with the Tripartite Cooperation Agreement. This agreement underlies the formation of a large regional Free Trade Area (FTA) that is currently comprised of the Common Market for Eastern and Southern Africa (COMESA), the East African Community (the EAC) and the Southern African Development Community (SADC). The Agreement was launched in 2011 but the Tripartite Free Trade Area was launched recently, in June 2015.

Much technical work remains to be completed on the Tripartite FTA. However, the FTA is moving on and the deal represents 26 countries which account for 51% of the African Continent GDP and a combined population of 632 million.

⁶¹ There are also issues about displacement of poultry producers in South Africa with the USA a major exporter of poultry meat. Imports from the USA have been subject to a relatively recent dumping case. South Africa has until March 2016 to finalise its position on meat.

Figure 99: KwaZulu-Natal's Leading Export Markets (2013 & 2014, % of total exports)



Source: TIKZN (2015) - TIKZN Annual Report

The question of whether the province will successfully take up the remaining or new opportunities will depend on the current challenges being overcome and on pushing productivity improvements further. The latter matters given that while South Africa has progressively been closing the productivity gap with many other countries, the gap remains large, particularly for labour productivity (OECD, 2011).

In addition, investment, in particular domestic private investment, has remained sluggish. Both the country and the province continue to under-invest in new technology, equipment and machinery as well as in skills.

In contrast to the above, South Africa and the Province have engaged in high levels of public investment, particularly in infrastructure. Special economic zones are being made ready for new investors to come in. Industrial hubs have been identified in KZN and progress is being made on planning and establishing these. Also importantly, the Municipalities are looking at ensuring that well serviced land is available to new investors, as emphasised in the KZN Investment Strategy. KZN has also put into place a number of catalytic projects. These will help attract new private investors as well as help a more spatially balanced platform of production for exports to emerge. Location advantages are progressively materialising and will be deepened further going forward provided demand continues to grow and businesses properly recover from the economic crisis. Negatively, between 2010 and the latter part of 2015, there has been a lack of business confidence in KZN (KZN Provincial Treasury, KZN Economic Data prepared by Clive Coetzee, 2016)⁶² Consumer confidence has also been low, indicating that

⁶² Business confidence increased somewhat between March 2010 and November 2015 (from 43 to 48 but is below the 50 level which indicates neutrality). The index is based on the proportion of business people that rates prevailing conditions.

the economic environment has deteriorated for durable goods purchases in the 2010 – 2015 period.⁶³

The Province has a location advantage for its gateway to Africa position. The Province is well endowed in goods that are required in the region and elsewhere on the African continent. Opportunities remain, in some sectors, for new investors to tap onto. Opportunities are also in place in generating exports to new Asian markets as well as to the traditional large trade partners. A challenge for the Provincial Planning Commission is in ensuring that all the markets that have growth prospects are leveraged in the medium-term and that efforts to attract the private sector are deepened to help that sector expand. The business community does not consider that economic conditions are currently buoyant, which will be a challenge in ramping up exports. However, some foreign markets offer good prospects compared to the local market.

7.2 Overview of the KZN Economy Compared to Other South African Provinces

7.2.1 Growth of Economic Activities in KZN relative to other South African Provinces

A prerequisite to undertaking an assessment of the provincial economy is to provide an overview of the KwaZulu-Natal provincial economy relative to what is happening in other provinces of South Africa. This section provides a brief assessment of the performance of each of the provincial economies in order to contextualise the current position of KwaZulu-Natal.

We start by stating from the onset that:

- According to Quantec data, the value of economic activities (Gross Value Add or GVA⁶⁴ at 2005 constant prices stood at R 292 750 million in 2013 (2013 is, the last year for which Quantec provides GVA data);⁶⁵

⁶³ There are also signs from the business cycle data for KZN that economic activities have now entered a downward part of the cycle (KZN Provincial Treasury, KZN Economic Data prepared by Clive Coetzee, 2016)

⁶⁴ GVA is a measure of the value of goods and services produced in an area, industry or sector of an economy, and is useful when measuring the Gross Regional Domestic Product for entities smaller than a whole economy. The GVA measure is for GVA at basic prices.

Unless specified otherwise all value data looked at in this section of the Situational Analysis report are at constant prices. With the exception of import and export data, value data from Quantec are at 2005 constant prices.

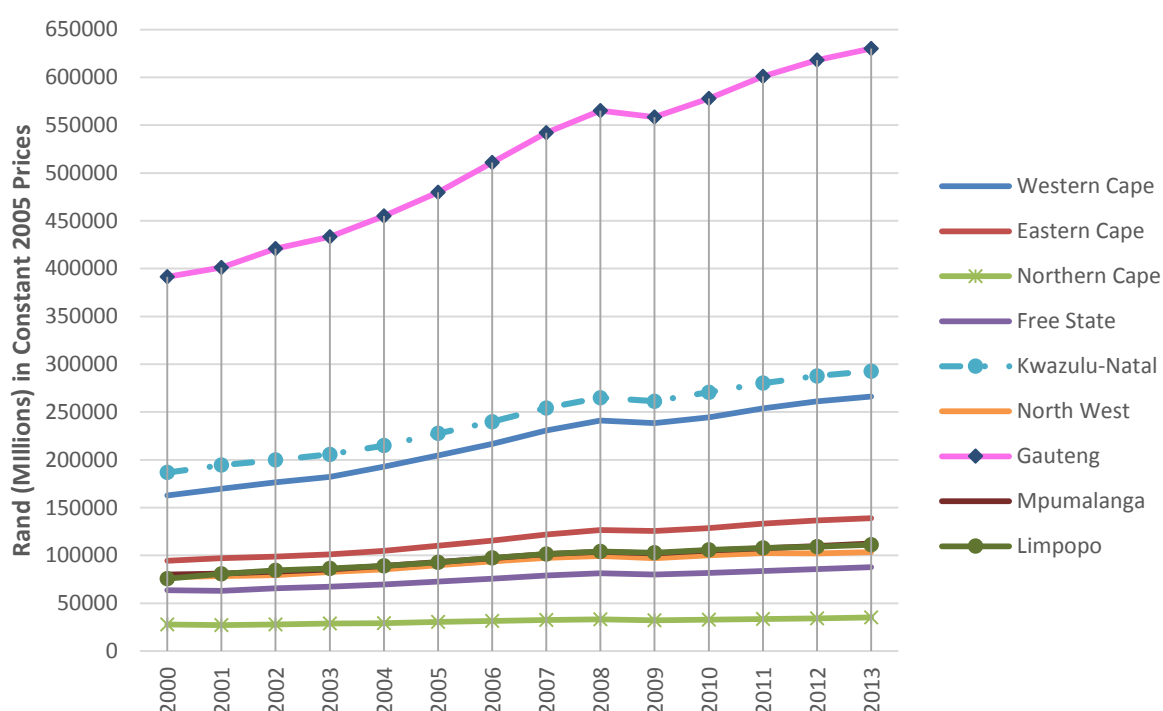
⁶⁵ Provincial GDP data for 2014 will only be released by Statistics South Africa in March 2016.



- According to Global Insight data,⁶⁶ GVA in 2013 at 2005 constant prices (with 2010 constant price data converted using a GDP deflator from StatsSA) would have stood at R 297 225 million. The figure using the value added deflator from StatsSA is R280 119 million. The figures between Quantec and Global Insight are relatively comparable.
- According to Global Insight, KZN's GVA in 2014 would have stood at R 302 640 in 2014 converted to 2005 constant prices using the GDP deflator from StatsSA; it would stand at R285 222 using the value added deflator. They estimate GVA to be at R305 573 million and at R287 986 million for 2015 (at 2005 constant prices) using the GDP and value added deflator respectively.

The figure below reports the total GVA for each of the provinces between 2000 and 2013:

Figure 100: GVA per Province of South Africa (2000 – 2013)



Source: Quantec Database – Standardised Regional Dataset (2015)

The following points are to be noted, from the Quantec data, about KZN:

- KZN is the second largest provincial economy after Gauteng, contributing just over 16.5% of national GVA in 2013, equivalent to R292 billion in GVA. With 19.8% of the total national population in KZN, the province continues to be underperforming relative to other SA provinces.
- KZN has been more markedly affected by the 2008-2009 crisis than Gauteng and the Western Cape which have more tertiary economic activities than other provinces. With

⁶⁶ Data kindly provided by EDU, eThekweni Municipality.



the exception of the Northern Cape Province, economic activities resumed their growth after 2010 across the provinces of South Africa.

Table 60 reports how economic activities have grown in KZN, in Gauteng, in the Western Cape and in South Africa as a whole between (i) 2000 and 2009, (ii) 2009 and 2013 and between (iii) 2000 and 2013.

Table 62: Annual Growth Rate of Gross Value Addition of Selected South African Provinces by Main Periods (% per year)

67

Province	Annual Growth Per Annum 2000-2009	Annual Growth Per Annum 2009-2013	Annual Growth Per Annum 2000-2013
Gauteng	4.60%	3.13%	3.98%
Western Cape	4.84%	2.92%	4.06%
Kwazulu-Natal	4.28%	2.94%	3.72%
South Africa	4.14%	2.75%	3.54%

Source: Quantec Database – Standardised Regional Dataset (2015)

Relative to other provinces of South Africa:

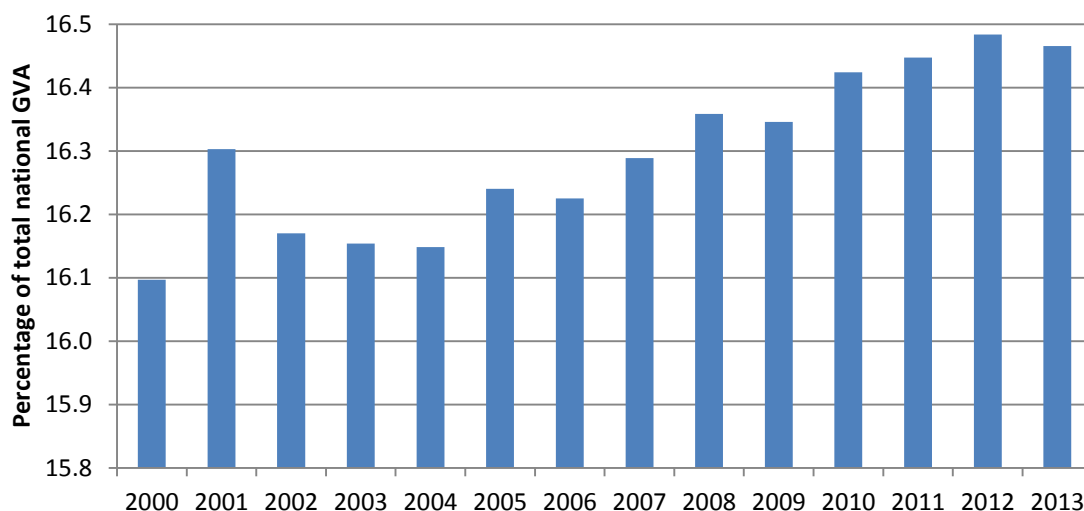
- The Western Cape Province which contributes almost 15% to national GVA remains a close second after KwaZulu-Natal. However, between 2009 and 2013, KZN with an annual growth of 2.94% is performing slightly better than the Western Cape Province that then grew by 2.92% per year.
- Post crisis, KZN grew faster than South Africa as a whole, with an average annual growth of 2.94% compared to 2.75% per year. However, it is increasingly lagging behind Gauteng.
- Moreover, with a strong pre-2008 performance of the Western Cape Province and of Gauteng, KZN has a lower growth between 2000 and 2013 than Gauteng and the Western Cape. The difference is likely to be caused by a number of factors, but include, as noted earlier, the fact that these other provinces have a large financial service sector. Gauteng with its large area has a significant transport service sector moreover. More specifically, the Western Cape tends to have some large company headquarters located there (e.g. retail firms in Cape Town). Gauteng is the main base for company headquarters even those that have branches in KZN.

⁶⁷ The growth rates are calculated with reference to a line fitted to the data. This allows for the variations across years within a particular period to be taken into account.



Figure 101101 displays the provincial share of total national GVA from 2000 to 2013.

Figure 101: KZN Share of National GVA (at Basic Prices at 2005 constant prices)



Source: Quantec Database (2015) – Standardised Regional Dataset

- The province has remained fairly stable in terms of national GVA contribution, ranging between 16.0% and 16.5% of national GVA. There are however, small increases in the contribution of KZN after 2009.
- Decline in some industries such as mining and quarrying have been offset by a growth of other sectors, notably from the tertiary sector of the Province (e.g. trade and finance and business services activities).

Table 63 below displays the GVA Per Capita at 2005 constant prices for each of the provinces in order of highest to lowest for 2013.

Table 63: GVA Per Capita Per Province (2013)

Province	GVA per capita for 2013 at 2005 Prices
Gauteng	49500
Western Cape	44425
Total: South Africa	33558
Free State	31860
Northern Cape	30404
North West	28727
Kwazulu-Natal	27996
Mpumalanga	27224
Eastern Cape	20978
Limpopo	20161



Source: Quantec Database (2015) – Standardised Regional Dataset & StatsSA mid-year population estimates used for KZN

- In 2005 constant prices, Gauteng has a per capita GVA of almost R50,000, followed by the Western Cape with just over R44,400.
- In current prices, Gauteng has a per capita GVA of almost R81,400, followed by the Western Cape with near R72,000. The remainder of the provinces all fall under R60,000 per capita, with KZN at R45,939 per capita – the third lowest per capita income nationally. KZN has not changed its relative position on GVA per capita since 2009.
- Of importance is the disparity between the province's position as the second largest economy, and the province's position as the third-lowest per capita income province. This indicates that the province still under-performs relative to the size of the residing population and strategic economic assets. Economic assets need to be expanded or need to be used more fully in order to help the people in the province attain a higher income per capita.
- Table 64 below reports how the GVA per capita at 2005 prices changed between 2010 and 2013 for South Africa and KZN.

Table 64: GVA Per Capita for KZN and for South Africa (2010 – 2013, Data at 2005 Prices)

	2010	2011	2012	2013
South Africa	32951	33681	33388	33558
Kwazulu-Natal	25415	25901	28021	27996

Source: Quantec Database (2015) – Standardised Regional Dataset & Mid-Year Population Estimates Data from Stats SA

Note: The data vary depending on which population estimates are used; the choice was made to use the mid-year population estimates from yearly StatsSA population publications

- The table shows that there are variations in terms of how much GVA per capita changes over time. Nevertheless, there was little that was gained by each person from the economic activities in both the province and South Africa between 2010 and 2013. In some years, moreover, inflation erodes how much is earned on a per-capita basis.

Table 63 Table 65 reports how real GVA per capita has evolved over three periods in the various provinces of South Africa.



Table 65: Annual Growth Rate of Gross Value Addition per Capita by Main Periods (% per year)

Province	Average Annual Growth Per Annum	Average Annual Growth Per Annum	Average Annual Growth Per Annum
	2002 - 2009	2009 - 2013	2002 - 2013
Western Cape	3.3%	1.2%	2.2%
Eastern Cape	3.0%	1.3%	2.1%
Northern Cape	1.7%	1.4%	1.2%
Free State	2.9%	1.7%	2.2%
KwaZulu-Natal	3.1%	1.3%	2.2%
North West	1.9%	0.0%	0.9%
Gauteng	2.8%	1.2%	1.9%
Mpumalanga	2.0%	0.8%	1.2%
Limpopo	2.1%	0.4%	1.3%
South Africa	2.9%	1.2%	2.0%

Source: Quantec Database (2015) – Standardised Regional Dataset and Mid-Year Population Estimates Data

- Positively, real GVA per capita has grown, since 2009, faster in KZN than in many other provinces of South Africa. This suggests that the value of economic activities is growing faster than the population though population growth in some other provinces of South Africa is influenced by in-migration.
- Nevertheless, the crisis has markedly dampened the value each South African gets from growing economic activities.
- More importantly, as an apex indicator for economic activities, is what has happened to GDP per capita in the Province. Noting that GDP is value added plus taxes minus subsidies, the data reveal that GDP per capita has grown, between 2005 and 2013 at only an average of 1.9% per year per annum. In current terms, the GDP per capita would have grown by about 9% on average per year. Between 2009 and 2013, GDP per capita would have grown by 0.5% per year on average in real terms and by an average of 6.9% per year in nominal terms. This is a poor performance that suggests that only a little impact would have been made in enhancing the economic situation



of each person in the province. The data are however sensitive to important fluctuations across the years with a dampening of GDP per capita directly after the crisis.⁶⁸

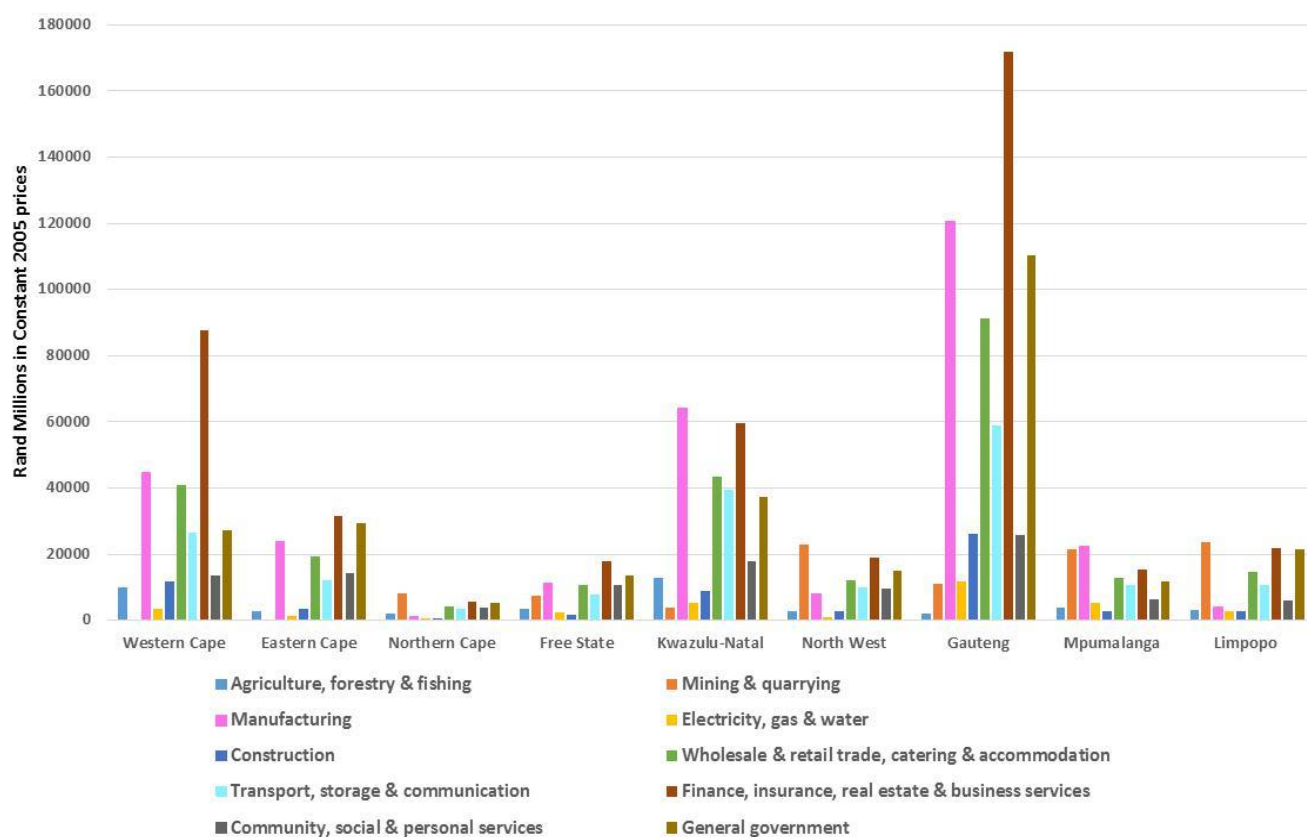
Table 66: KZN GDP Per Capita (in Current and 2005 Constant Prices)

	2005	2006	2007	2008	2009	2010	2011	2012	2013
GDP per capita at current prices (Rand)	27318	30122	34265	38865	39112	40754	44415	50957	54053
GDP per capita converted to 2005 constant prices (Rand)	27318	28367	29619	30870	28918	28324	28930	31480	31489

Source: StatsSA (2014) and mid-year population estimates from KZN Province Treasury.
Conversion at 2005 prices using StatsSA deflator

Noting the above, the graph below displays the GVA per industry within each of the provinces:

Figure 102: GVA per Industry and Province



Source: Quantec Database (2015) – Standardised Regional Database (2015)

⁶⁸ This is taking average annual growth rates. Taking into account fluctuations across the years and using fitted trend data gives better growth rates; these would be at 9% and at 2.8% in nominal and in 2015 constant prices respectively.



- KZN is comparatively strong within the national manufacturing industry, contributing almost 21.5% to total manufacturing GVA in the country.
- KZN is the second province in terms of the contribution of manufacturing to economic activities in South Africa, after Gauteng. Also, KZN is distinct from the provinces of Gauteng and Cape Town with manufacturing more important, in economic terms in the province, than finance and business services. KZN has, as such, and in this regards a good platform for long-term growth, including for agriculture that links to manufacturing.
- KZN is the top contributing province in terms of agriculture, producing approximately 29% of total agricultural GVA.
- With the exception of mining, the province contributes over 16% to total GVA across all other sectors, specifically contributing 22% to total GVA in the national Transport and Logistics sector.
- Although the Western Cape contributes less than KwaZulu-Natal to national GVA within the manufacturing, agricultural and logistic sectors, the Western Cape contributes more in the construction and in the Finance, insurance, real estate and business services sectors.

With regards to total GVA growth and sectoral growth rates, the tables below display the average annual real growth rate in GVA for all industries, and for each of the sectors between 2000 – 2013, for the country and each province.

Table 67: Annual GVA Growth (2000 – 2013 & 2009 - 2013)

Region	GVA Growth (2000 – 2013)	GVA Growth (2009 – 2013)
South Africa	3.5%	2.7%
Western Cape	4.1%	2.9%
Eastern Cape	3.2%	2.6%
Northern Cape	2.0%	2.3%
Free State	2.7%	2.4%
Kwazulu-Natal	3.7%	2.9%
North West	2.5%	1.5%
Gauteng	4.0%	3.1%
Mpumalanga	2.8%	2.4%
Limpopo	2.9%	1.9%

Source: Quantec Database (2015) – Standardised Regional Dataset

- The country has achieved an average annual growth rate of 3.5% since 2000, while KZN has achieved a slightly better performance than the national average at 3.7%. While



growth is significantly lower in 2009 – 2013 than before, KZN has, again, achieved a better performance than the national average.

- The Western Cape and Gauteng which performed the best, with growth rates of 4.1% and 4.0% respectively between 2000 and 2013 both experienced a slow down between 2009 and 2013. However, between 2009 and 2013, KZN GVA grew faster than the GVA of the Western Cape.
- The North West and Limpopo have seen their economic growth markedly affected by the crisis. Between 2009 and 2013, growth in these provinces was at 1.5% and 1.9% per year respectively. This is down from an average annual growth of 3.2% and 3.6% per year between 2000 and 2009 respectively.
- With regards to sectoral growth performance, the province has generally, with the exception of Electricity, gas and water, performed in line with other provinces as well as with the national average in most sectors.

Table 68: Annual GVA Growth per Sector (2000 - 2013)

	Primary Sectors		Secondary Sectors			Tertiary Sectors				
	Agriculture, forestry & fishing	Mining & Quarrying	Manufacturing	Electricity, gas and water	Construction	Wholesale and retail trade, catering and accommodation	Transport, storage and communication	Finance, insurance, real estate and business services	Community, social and personal	General government
South Africa	2.0%	-0.3%	2.4%	1.9%	7.6%	3.6%	4.4%	5.6%	2.9%	3.2%
Western Cape	2.3%	-1.5%	2.3%	2.5%	7.4%	3.8%	4.5%	5.6%	2.9%	3.2%
Eastern Cape	1.6%	-1.1%	2.4%	0.7%	7.5%	2.5%	3.7%	4.9%	2.9%	2.8%
Northern Cape	2.4%	-1.5%	2.9%	0.6%	5.2%	3.4%	3.7%	4.3%	3.4%	3.0%
Free State	0.7%	-0.1%	2.1%	1.6%	4.9%	2.8%	3.0%	4.9%	2.7%	3.0%
Kwazulu-Natal	2.2%	-1.3%	2.5%	0.7%	6.4%	4.1%	4.6%	5.9%	3.0%	3.2%
North West	1.8%	-0.3%	2.8%	2.7%	5.7%	2.4%	3.9%	6.0%	3.0%	2.8%
Gauteng	0.8%	-2.1%	2.4%	2.2%	8.9%	4.0%	4.7%	5.8%	3.1%	3.5%
Mpumalanga	1.0%	0.5%	3.0%	2.0%	7.5%	3.0%	4.4%	5.4%	2.5%	2.9%
Limpopo	4.3%	0.6%	2.2%	2.9%	5.7%	3.2%	4.1%	5.3%	2.9%	2.6%

Source: Quantec Database (2015) – Standardised Regional Dataset



- Although KZN contributes almost 30% to total **agricultural** GVA, growth has been less than in Limpopo, the Northern and Western Cape, indicating that more can be done within the province to stimulate growth within this sector though KZN is more comparable to the Eastern Cape than to the aforementioned provinces in its share of agriculture in economic activities.
- The province contributes very little to the **mining sector**, and there has been a general contraction of the sector in the period 2000 – 2013 that is more pronounced in KZN than in South Africa as a whole.
- In **manufacturing**, the province has performed better than other provinces. KZN achieved a 2.5% GVA growth rate in Manufacturing between 2000 and 2013, just above the 2.4% national average. Although KZN's performance is a little above the national average this is an important development to deepen and strengthen the linkages between manufacturing and other economic sectors.
- KZN ranks 4 in manufacturing however, a ranking that can be improved given the large contribution that this sector makes to provincial GVA. This indicates that the Province needs to do more to achieve greater levels of growth within the manufacturing sector in order to stimulate employment in the sector and outside it through linkages.
- KZN has experienced a slow growth in **electricity, gas and water**. Only the Northern Cape has performed worse than KZN for this sector.
- The Province has been successful in achieving the highest growth rate nationally within the **wholesale, retail, catering and accommodation sector**, with an average annual GVA growth rate of 4.1%.
- In terms of **transport, storage and communications**, KZN has experienced a 4.6% average annual growth rate, slightly below Gauteng but above the national average annual GVA growth of 4.4%.
- For the **finance, insurance, real estate and business services**, growth in KZN has also been above the national average. Its average annual growth of it is below the North West in its performance, with a 5.9% annual growth is only slightly less than that of the North West.
- Generally services have grown notably in South Africa. KZN is no exception to this.

The above assessment of each province has highlighted the significance of the KwaZulu-Natal economy within the national context, contributing just over 16% to total GVA, as well as over 21% of national GVA in manufacturing, 29% of GVA in agriculture and 22% in transport, storage and communication. However, it was also emphasised that KwaZulu-Natal is far behind most of the other provinces with regards to GVA per capita, which indicates that more needs to be done to transfer the economic benefits of the province to the people.

The challenge is important given that the 2000 – 2013 performance is driven by pre-crisis results.

Table 67 reports the recent performance of economic activities, that is, how economic activities grew between 2009 and 2013, the period under scrutiny.



Table 69: Average Annual GVA Growth per Sector (2009 - 2013)

	Primary Sectors		Secondary Sectors			Tertiary Sectors				
	Agriculture, forestry & fishing	Mining & Quarrying	Manufacturing	Electricity, gas and water	Construction	Wholesale and retail trade, catering and accommodation	Transport, storage and communication	Finance, insurance, real estate and business services	Community, social and personal	General government
South Africa	1.1%	0.7%	2.8%	0.3%	1.5%	3.7%	2.4%	3.4%	1.8%	3.0%
Western Cape	0.7%	1.4%	2.6%	0.9%	1.6%	3.8%	2.3%	3.5%	1.8%	3.3%
Eastern Cape	1.3%	3.9%	2.8%	-1.1%	0.9%	3.2%	2.0%	2.9%	2.1%	2.9%
Northern Cape	0.8%	1.7%	2.0%	-1.1%	0.4%	3.4%	1.8%	3.3%	2.1%	3.3%
Free State	2.0%	1.4%	1.8%	1.0%	0.1%	4.8%	1.6%	2.8%	1.5%	2.6%
Kwazulu-Natal	2.0%	3.4%	3.0%	-0.7%	1.7%	3.9%	2.6%	3.4%	1.9%	3.1%
North West	0.3%	-1.9%	2.1%	-0.4%	0.4%	2.7%	2.1%	3.9%	1.6%	2.8%
Gauteng	0.2%	-0.5%	3.2%	0.3%	1.7%	3.9%	2.9%	3.7%	1.6%	3.2%
Mpumalanga	0.6%	2.9%	2.2%	1.0%	1.2%	2.6%	2.0%	3.0%	1.4%	3.1%
Limpopo	0.0%	1.1%	2.0%	1.5%	1.6%	3.0%	1.7%	2.7%	1.6%	1.9%

Source: Quantec Database (2015) – Standardised Regional Dataset

- Focusing on the recent trends shows that KZN has managed to do well across sectors except in **electricity, gas and water**. KZN ranked first or second positions in its recent growth performance in most sectors.
- KZN experienced a decline **electricity, gas and water** between 2009 and 2013 that puts it in the third worst performing province in South Africa in the sector (after the Northern and Eastern Cape provinces). However, the performance of South African in that sector has been mediocre since the crisis.
- KZN growth has been in **agriculture, forestry and fishing** way above that for South Africa as a whole. KZN has been the fastest growing agricultural province in South Africa since 2009. Compared to the pre-crisis performance, there are signs that the sector is being markedly unlocked in the province. It is now markedly outperforming the Eastern Cape.



- A reversal seems to also be taking place in **mining**, suggesting a recent recovery of activities in that sector in the province. However, this is a small economic sector for the province.
- In **manufacturing**, the province has continued to perform well, with a 3% annual growth between 2009 and 2013, still slightly above the national average of 2.8%. The province KZN now ranks 2 in manufacturing. It has now fallen behind Gauteng however.
- The Province has also recently fallen in second position, after the Free State, in the **wholesale, retail, catering and accommodation sector**, though the Free State has a lower starting position in terms of the share of this sector in its economy.
- The **wholesale, retail, catering and accommodation sector** is now the fastest growing sector, following a cooling of **construction** activities.
- A less pronounced growth is also seen in **transport, storage and communications**. KZN still remains second, in the growth of this sector, after Gauteng.
- Economic activities in **finance, insurance, real estate and business services** have not grown as fast as before 2008. KZN has lost its second place in terms of its growth performance in that sector. The growth of the sector at 3.4% per year is similar to the national average. The North West remains the top performer in terms of the growth of this particular sector.
- Generally a balanced pattern of growth, with the exception of electricity, gas and water remains in the province. The crisis has altered the relative performance of sectors however.

7.2.2 *Labour Market: Job Creation in KZN*

The growth of economic activities might not be accompanied by a growth in employment but rather by new capital investment. Also, the state of the labour force is indicative of future growth prospects. In this section we set out the position of the labour market in the province in comparison to the rest of the country.

7.2.2.1 *Employment and Unemployment in KZN*

Table 68 presents the key employment and unemployment indicators in South Africa and in the various provinces of South Africa for 2013, the last year for which Quantec provides the relevant data at the time of writing of this Situational Overview. Quantec data are, as such, complemented by data from other sources.



Table 70: Employment and Unemployment per Province

Percentage Contribution	South Africa	Western Cape	Eastern Cape	Northern Cape	Free State	Kwazulu-Natal	North West	Gauteng	Mpumalanga	Limpopo
Working Age Population (percentage of total population)	64.3%	63.7%	61.4%	66.0%	69.8%	61.6%	62.9%	67.7%	67.3%	62.4%
Employed (Formal and informal as percentage of working population) ⁶⁹	44.6%	53.4%	35.2%	33.7%	43.3%	39.9%	40.4%	54.0%	30.6%	37.7%
Unemployed (as percentage of working age population)	14.7%	17.3%	13.8%	17.1%	19.4%	10.6%	12.7%	18.7%	17.1%	8.2%
Non-participation (as percentage of working age population)	40.7%	29.3%	51.0%	40.2%	37.3%	49.5%	46.9%	27.3%	36.9%	54.1%

Source: Quantec Database (2015) – Standardised Regional Dataset

Notes:

- Non-participation refers here to those not-economically active. These are people who are not seeking work (e.g. students as the largest category, those who care for children, but also discouraged work seekers)

- Those between 15 and 64 years of age are of working age.

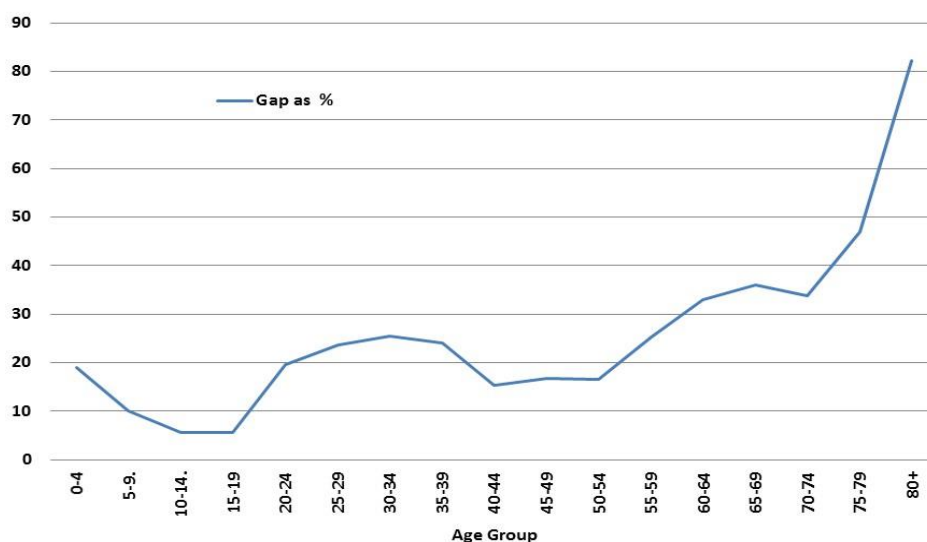
- Approximately 62% of the province's population was, in 2013, within the working age bracket (15 – 64 years of age), in comparison to 64.3% in the country. However, the population of working age is growing, in KZN, faster than the labour force. This is indicated by the Quantec data but more notably by detailed data from KZN Provincial Treasury.

⁶⁹ This is also described as the absorption rate.



The figure below shows how the number of those in a particular age group has changed between 2002 and 2015. The change is represented as a percentage of the number of those in a particular age group compared to the 2002 numbers (the "gap"). As shown in the figure, while the number of those of retirement age has grown, they are significantly more people in the 20-39 age group in 2015 compared to 2002.

Figure 103: Relative Changes in the Number of Those in Age Group in KZN between 2002 and 2015

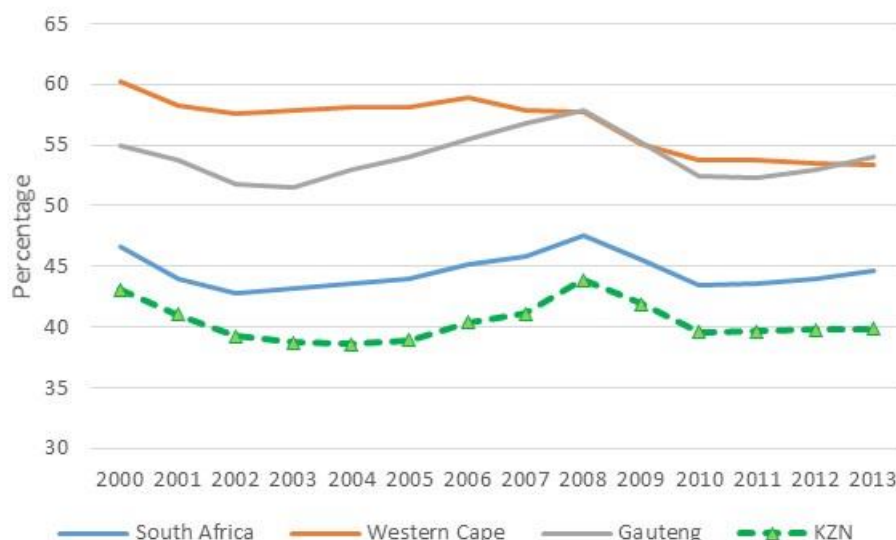


Source: KZN Provincial Treasury (2016) – KZN Economic Data, Data prepared by Clive Coetzee

Table 68 also shows that:

- Of the working age population, 39.9% were employed, in 2013, either formally or informally, compared to almost 45% within South Africa. With the rate of absorption – the proportion of those employed in those of working age - in South Africa below what is observed in other emerging economies, the proportion of those of working age that are employed is low in KZN.
- The proportion of those of working age in employment is much lower than in Gauteng (54.0%) and in the Western Cape (53.4%). The province is continuing to lag in terms of employment creation relative to the main competing provincial 'metro' economies.
- Data for recent years moreover suggests stagnation in the proportions of those of working age that are employed in KZN. Figure 104105 shows this relative to other province using data from Quantec.

Figure 104: Employed as Percentage of Working-age Population (2000 – 2013)

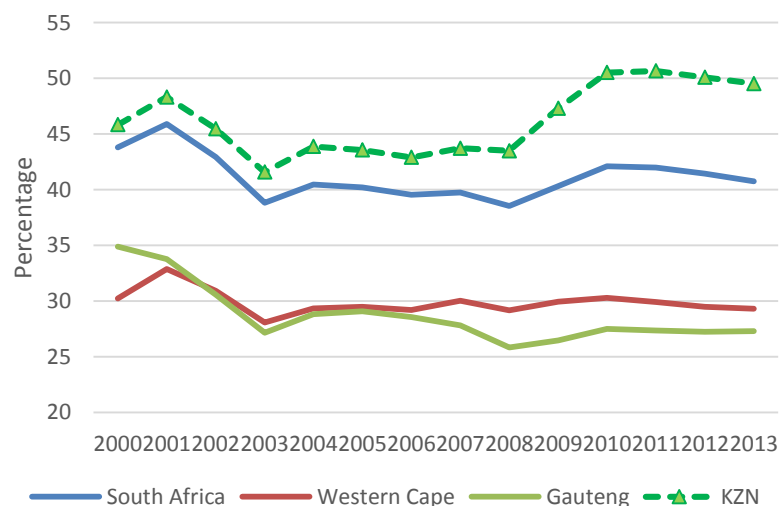


Source: Quantec

Database (2015) – Standardised Regional Dataset

- Although the province has the second lowest proportion of unemployed individuals of working age in South Africa after Limpopo (10.6% of the working age population), it has the third highest proportion of not-economically active persons in its working age population in the country.
- Almost half of the potential workforce is not economically active. Worryingly, the proportion of those of working age that are not economically active is growing in KZN faster than in South Africa.

Figure 105: Non-participation as Percentage of Working-age Population (2000 – 2013)



Source: Quantec Database (2015) – Standardised Regional Dataset

Note: Non-participation refers here to those not-economically active.

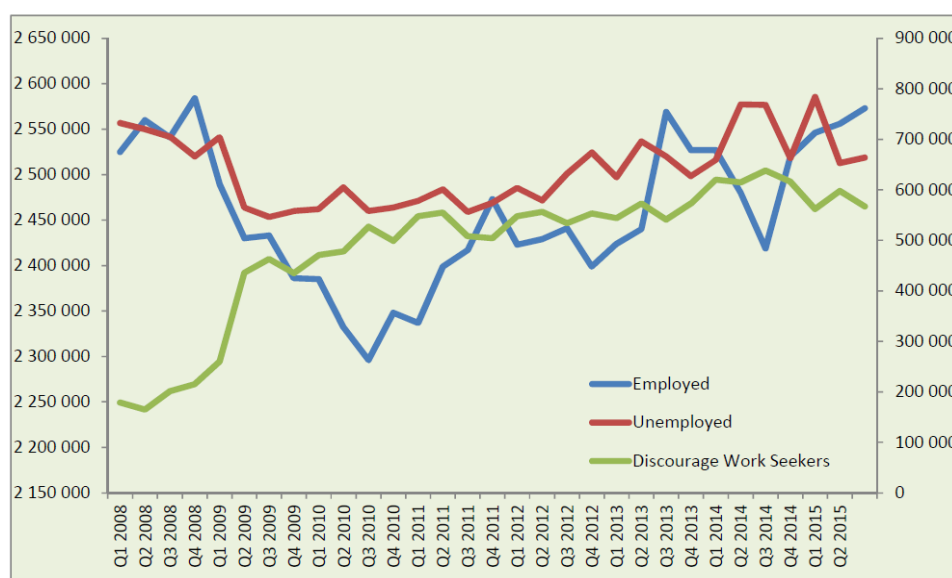
- Generally, considering all the points raised above and looking at more recent data suggest that particularly adverse labour market dynamics are emerging in KZN. A



tremendous increase in the demand for labour is needed to improve the economic situation of those of working age. This points, amongst others, towards:

- the continued importance of implementing a comprehensive Human Resource Development (HRD) Strategy, as well as enhanced demand-driven skills development and training, including apprenticeships and internships, especially for the youth.
 - Also, further unlocking entrepreneurship would be a critical strategy to help those of working age undertake own business activities as self-employed.
 - Helping business as a whole, including the larger firms that tend to keep their workforce longer than other type of firms, is becoming more critical however.
- Indicative of the pressure and contributing to a thinning of the resources of those that are employed to support those that are unemployed within households is the fact that the number of discouraged work seekers would have started to decline in 2014. This is likely to indicate that people are experiencing strong financial pressure and have had to start looking for work to survive. Towards the end of 2015 (quarter 3), the figure for those discouraged stood at 520 753.

Figure 106: Number of Employed, Unemployed & Discouraged Work Seekers in KZN



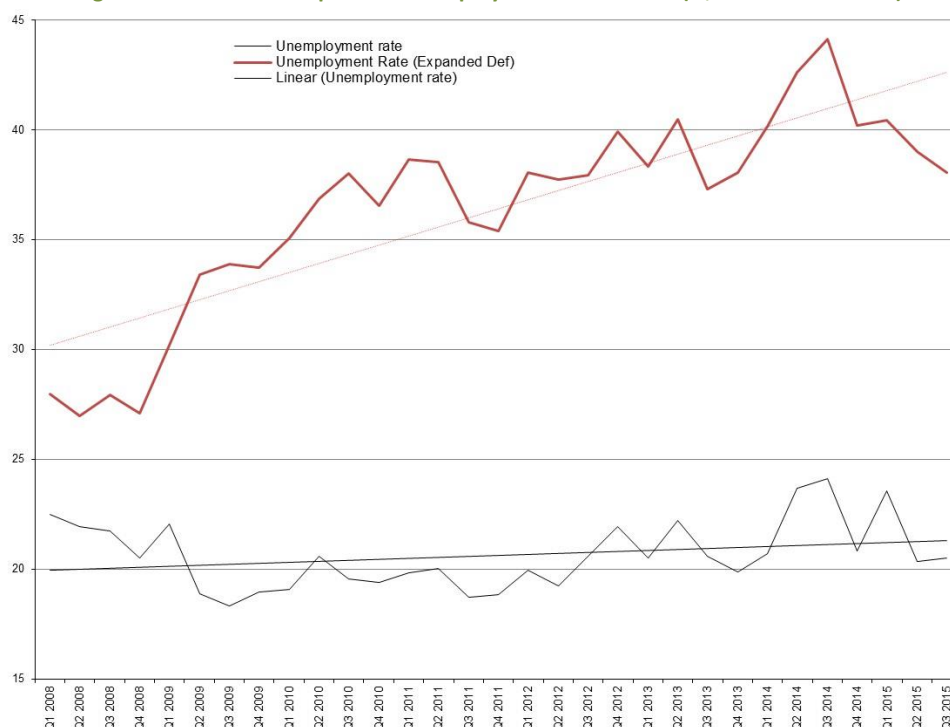
Source: KZN Treasury (2015)

Note: Number of unemployed and of discouraged work seekers reported on the right hand side axis; number of those employed reported on the left hand-side axis of the figure

- Of note about those that are discouraged job seekers is that these are included in the expanded definition of unemployment. Taking these into account show that unemployment would have increased since the crisis (Figure 107).



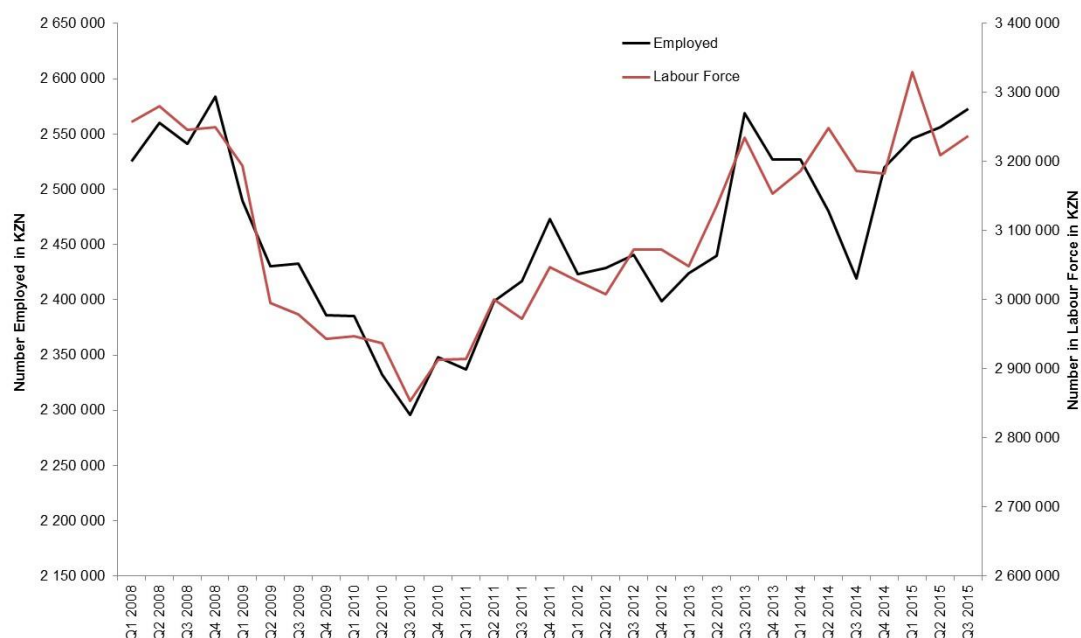
Figure 107: Narrow & Expanded Unemployment Rate in KZN (% , Q12008 – Q32015)



Source: KZN Provincial Treasury (2016) – KZN Economic Data, Data prepared by Clive Coetzee

- Positively, Figure 108 shows that there has been a recovery in the number of those employed however.

Figure 108: Number Employed and Number in the Labour Force (Q12008 – Q32015)



Source: KZN Provincial Treasury (2016) – KZN Economic Data, Data prepared by Clive Coetzee

- In the third quarter of 2015, 2 573 000 people would be employed in KZN according to StatsSA data (QLFS, 3rd Quarter 2015 by StatsSA)



Focusing on some key aspects of unemployment provides further insights that are relevant to assess economic activities in the Province.

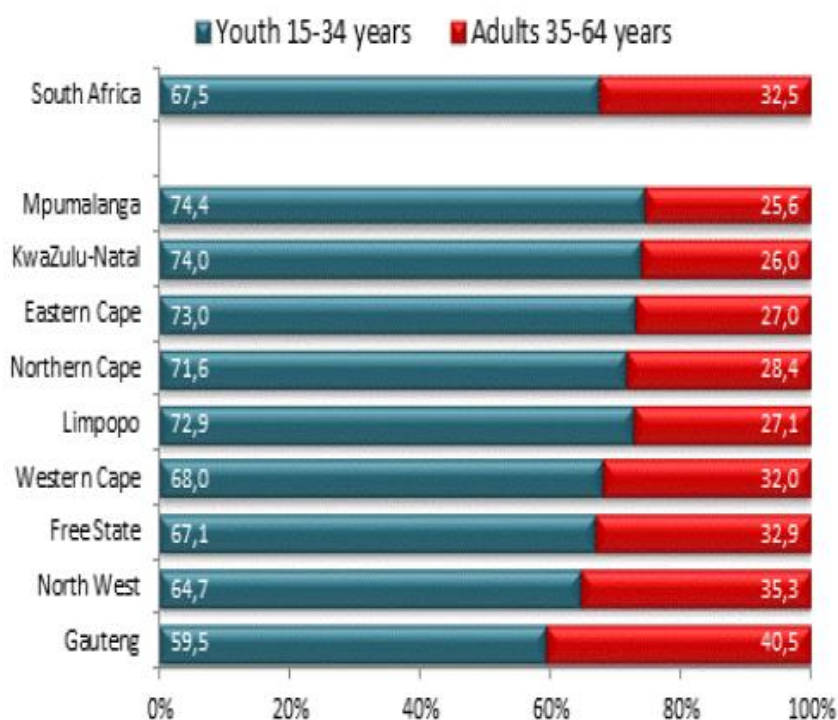
- Sectorially, a large number of jobs have been shed in transport, community and social services, construction and manufacturing. The following are the number of job losses per industry reported in KZN Treasury (2015) for the third quarter of 2015:
 - Agriculture: 16 298
 - Mining: 6 495
 - Manufacturing: 36 151
 - Utilities: 2 573
 - Construction: 45 832
 - Transport: 63 110
 - Trade: 14 093
 - Finance: 37 376
 - Community and social services: 40 807
 - Private households: 29 411

The data show that some sectors have fared better than others with regards to keeping employment.

- Amongst the unemployed, 74% would be between the age of 15 and 34 in KZN. The proportion is significantly higher than the 67.4% of those unemployed in that particular age group nationally. This means that new jobs have to be found/created for those in that age group, particularly since the largest group of those that are recorded as non-economically active are students.



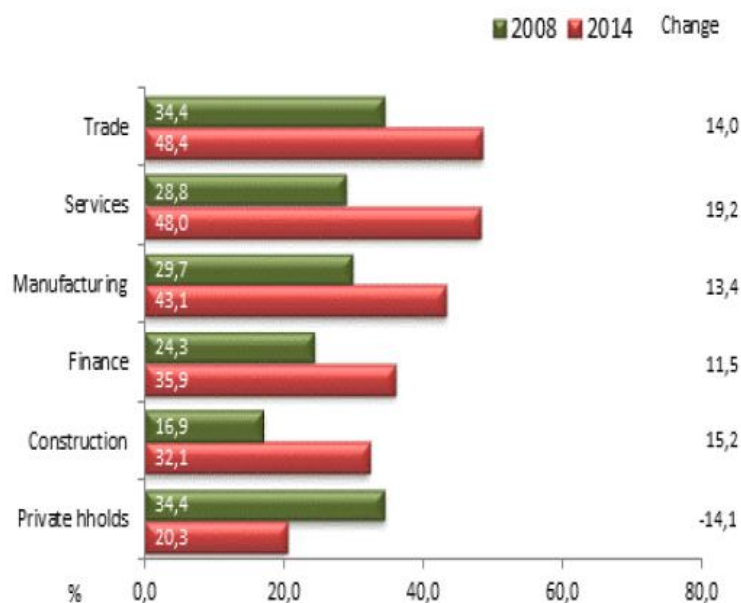
Figure 109: Provincial Distribution of Total Unemployment by Age-group (2014, %)



Source: StatsSA (2015)

- Long term unemployment is increasing, in KZN, amongst those that have tertiary education.
- Long term unemployment has grown markedly in KZN between 2008 and 2014 for those between the age of 15 and 24.
- Workers previously employed in trade, in community and social services and in manufacturing industries had higher incidence of long term unemployment in 2014 than before. These are sectors in which jobs are increasingly hard to find again by those who were formerly employed in the sector but that have lost their job for a long time.

Figure 110: Incidence of long-term unemployment by previous industry, 2008 and 2014



Source: StatsSA (2015)

7.2.2.2 Female Employment and Unemployment

We have drawn above elements that suggest a vulnerable position of the young in the labour force. A number of key employment and unemployment features also have a gender dimension. These features are to be noted for the purpose of ensuring that the manner in which KZN's growth is supported ensures an inclusive growth trajectory.

There is a race and gender dimension to employment and to unemployment in South Africa. Focusing on the economically active population (EAP), that is those that are either employed or those that are unemployed but actively seeking employment:

- Statistics suggest that, at the end of 2014, 45% of women were in the EAP compared to 55% of males in South Africa. The female EAP contained 35% of African women compared to 41.7% of African males then in the EAP for males.
- In KZN, a slightly higher proportion of women than in the whole of South Africa were amongst those economically active (45.5% compared to 54.5% for males in KZN). KZN also had a higher proportion than the national average (39.7%) of African women amongst the 45.5% of EAP females.
- Generally, women are un-represented in top positions. As can be seen from the Table below, only around 20% of those in top management positions are women.
- Although the proportion of women's representation increases at lower 'top occupation' levels, these are still under-represented in South Africa at the skilled technical level.
- KZN fares better than South Africa at the professionally qualified and at the skilled technical levels in terms of women in positions at these levels. However, the province fares worse than South Africa at the top and at the senior management levels. Of note is that African women tend to be in these positions in the government rather than in the private sector.



Table 71: Gender Breakdown by High Level Occupations in South Africa and in KZN (2014)

	SA Males	SA Females	TOTAL	KZN Males	KZN Females	TOTAL
Top Management	79.1%	20.9%	100%	80.0%	19.9%	100%
Senior Management	67.9%	32.1%	100%	69.6%	30.5%	100%
Professionally Qualified level	57.1%	42.9%	100%	55.3%	44.7%	100%
Skilled Technical level	54.7%	45.3%	100%	45.3%	54.6%	100%

Source: Compiled from data from DoL (2015) based on 14% of all employment equity reports received by the Department from KZN

- In turn, there is a race dimension to the positions which employed women occupy. Thus, African women fare poorly in KZN compared to men in top and senior management positions, up to the professionally qualified level:

Table 72: Gender and Race Breakdown by High Level Occupations in KZN

	Male				Female				Foreign National		Row TOTAL
	African	Coloured	Indian	White	African	Coloured	Indian	White	Male	Female	
Top Management	10.00%	1.40%	17.60%	48.70%	3.90%	0.70%	5.50%	9.50%	2.30%	0.30%	100%
Senior Management	12.40%	2.60%	19.90%	32.70%	5.80%	1.70%	8.70%	13.90%	2.00%	0.40%	100%
Professionally Qualified level	21.20%	2.40%	14.60%	15.90%	20.40%	2.10%	10.90%	11.00%	1.20%	0.30%	100%
Skilled Technical level	27.90%	2.00%	9.50%	5.20%	38.70%	2.10%	8.40%	5.20%	0.70%	0.20%	100%

Source: Compiled from data from DoL (2015) based on 14% of all employment equity reports from KZN

- Positively, there has been consistent progress in KZN in terms of African and of Indian (in particular) women increasingly occupying top positions between 2010 and 2014. White women and white men are over-represented in the top and senior management positions relative to their representation in the working population and as their share in the EAP:



Table 73: Change in Workforce profile by Race and Gender

OCCUPATIONAL LEVELS	MALE				FEMALE				FOREIGN NATIONAL		TOTAL
	A	C	I	W	A	C	I	W	MALE	FEMALE	
TOP MANAGEMENT											
2010	9.0%	1.3%	15.5%	55.0%	3.0%	0.6%	4.0%	9.5%	1.8%	0.3%	100.0%
2012	9.1%	1.5%	16.6%	52.5%	3.2%	0.5%	4.5%	9.7%	2.2%	0.3%	100.0%
2014	10.0%	1.4%	17.6%	48.7%	3.9%	0.7%	5.5%	9.5%	2.3%	0.3%	100.0%
SENIOR MANAGEMENT											
2010	10.1%	2.6%	18.6%	39.9%	4.1%	1.6%	6.9%	14.8%	1.3%	0.2%	100.0%
2012	11.2%	2.7%	19.0%	36.9%	4.5%	1.6%	8.0%	14.3%	1.5%	0.3%	100.0%
2014	12.4%	2.6%	19.9%	32.7%	5.8%	1.7%	8.7%	13.9%	2.0%	0.4%	100.0%
PROFESSIONALLY QUALIFIED											
2010	15.3%	2.5%	15.8%	21.8%	17.7%	1.9%	10.1%	12.3%	2.0%	0.6%	100.0%
2012	15.6%	2.5%	15.9%	19.7%	18.0%	2.1%	11.0%	12.6%	2.0%	0.6%	100.0%
2014	21.2%	2.4%	14.6%	15.9%	20.4%	2.1%	10.9%	11.0%	1.2%	0.3%	100.0%
SKILLED TECHNICAL											
2010	25.8%	3.4%	14.5%	10.2%	24.1%	3.2%	9.1%	8.6%	0.7%	0.2%	100.0%
2012	29.2%	2.9%	14.1%	8.4%	24.9%	3.0%	9.1%	7.2%	1.0%	0.2%	100.0%
2014	27.9%	2.0%	9.5%	5.2%	38.7%	2.1%	8.4%	5.2%	0.7%	0.2%	100.0%

Source: DoL (2015)

- But, "The constant decrease of the Coloured population in terms of the percentage representation at [the Professionally Qualified level and at the Skilled Technical level] ... remains a worrying factor. The progress made at these two levels does not seem to reflect positively towards achieving equitable representation in terms of gender or the designated groups anytime in the near future." (DoL, 2015, p. 40).
- The Commission for Employment Equity notes that "efforts are required to prioritise the representation of coloured people in various high occupational levels" in KZN (DoL, 2015, p. 41).
- There are, however, sector-specific nuances in terms of where women are concentrated at the higher occupational level. Generally women in top management positions are in sectors that are conceived as the preserve of women (e.g. community, social and personal services and catering, accommodation and other trade). Government is a leading employer for women, particularly for African women at high occupational levels.
- More broadly, StatsSA (2013) found
 - that *within each population group*, the proportion of women employed is lower than that of men; and,
 - that there is a larger proportion of women than men in the not economically active.
 - Women tend to be engaged in non-market activities (unpaid work) and when employed are concentrated in unskilled occupation moreover.
- Women are more likely than men to be working in the informal economy. In the informal sector - which we describe below – women are concentrated in trade activities (58.4%



of all women in the informal sector compared to 35.8% of all men in the informal sector for South Africa in 2011);

- African women are the less likely to be employed compared to all other race and gender groups.
- The absence of schooling particularly penalises women's employment prospects compared to men.

Focusing on unemployment:

- Women are more likely to be unemployed than men across all types of geographical areas of South Africa but the highest rate of female unemployment *relative to male unemployment* has been found to be in (i) urban informal areas and (ii) in rural areas.
- Generally, StatsSA (2015) reports that a slightly higher proportion of women in KZN would be in long term unemployment and in unemployment than the national average: 52.9% of women would be in long term unemployment (that is unemployed for one year or longer) in KZN compared to 52.5% in South Africa; 49.3% of women would be unemployed in the province compared to 49.2% for South Africa.⁷⁰
- More women are in long term unemployment than men in South Africa and in KZN. In other words, women tend to find it harder to get back into work in KZN than in other provinces of South Africa.⁷¹

7.2.2.3 Formal & Informal Employment

The informal economy is a broad term used to describe a very large and growing sector of the global economy where the world's working poor earn a living. The term seeks to capture the reality of the large share of the global workforce that remains outside the world of full-time, secure, stable and protected jobs and in many cases with no form of social protection.

For StatsSA, informal employment in the Quarterly Labour Force Surveys⁷²

identifies persons who are in precarious employment situations irrespective of whether or not the entity for which they work is in the formal or informal sector. Persons in informal employment therefore comprise all persons in the informal sector, employees in the formal sector, and persons working in private households

⁷⁰ Data from StatsSA (February 2015) "National and provincial labour market: Long-term unemployment, Q3: 2008–Q3: 2014", Statistical release P0211.4.4.

⁷¹ Long-term unemployment is important from a policy-intervention perspective as it indicates an erosion of skills.

⁷² See for instance, for the quoted definition, p. 8 of StatsSA (2014) "Labour Force Survey Quarter 4, 2013", Statistical Release P0211. Pretoria: StatsSA.



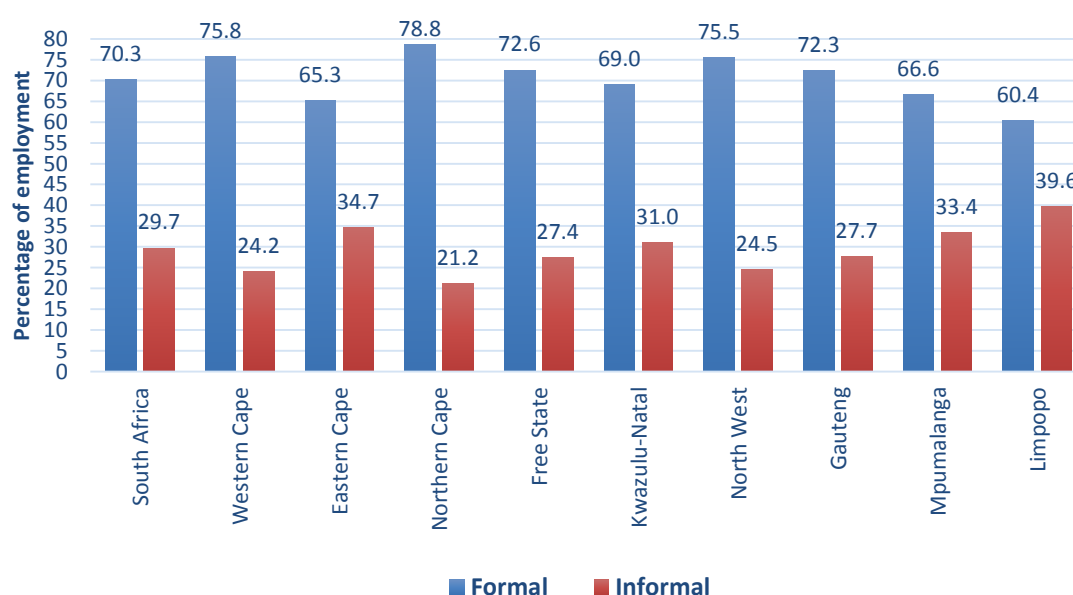
who are not entitled to basic benefits such as pension or medical aid contributions from their employer, and who do not have a written contract of employment.

The **Informal sector**, has, for **StatsSA** the following components:

- i) Employees working in establishments that employ fewer than five employees, who do not deduct income tax from their salaries/wages; and
- ii) Employers, own-account workers and persons helping unpaid in their household business who are not registered for either income tax or value-added tax.

Noting the above definitions, Figure 111 below reports on employment broken down into the formal and informal sectors in the provinces of South Africa.

Figure 111: Formal and Informal Employment by Province



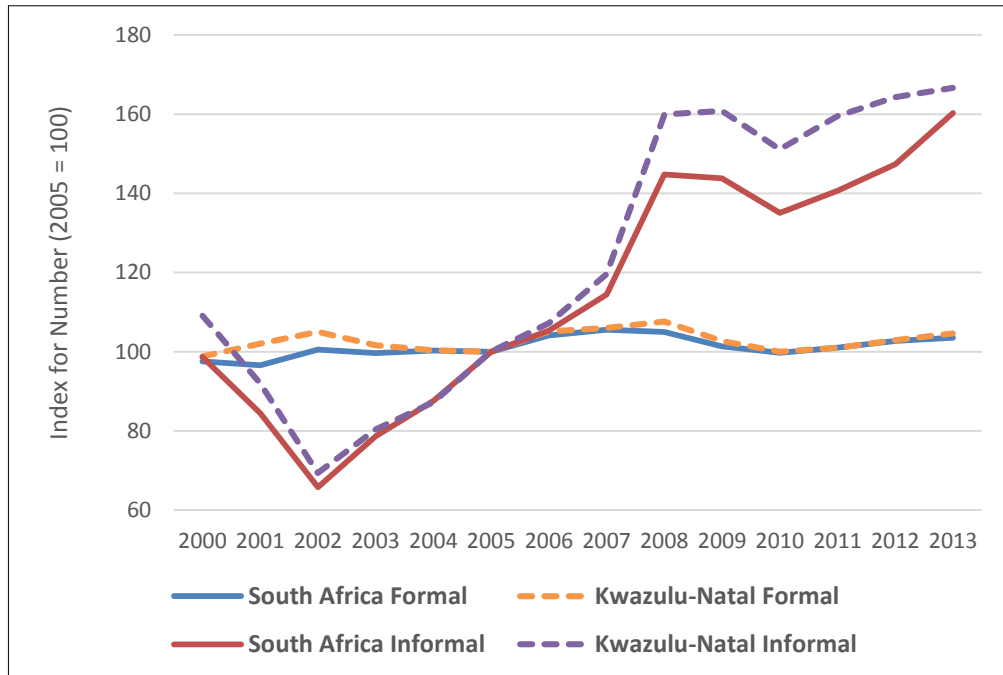
Source: Quantec Database (2015) – Standardised Regional Dataset

- Almost 70% of those employed are employed in the formal sector, while the remaining 31% are informally employed in KZN.
- This is very similar to the national trend although the proportions vary substantially across provinces. Limpopo, the Eastern Cape and Mpumalanga have a larger percentage of the population employed in the informal sector (39.6%, 34.7% and 33.4% respectively).
- Of concern is that the proportion of those informally employed has increased markedly in KZN compared to South Africa as a whole. With informality associated with survivalism, the trends call for the identification of how a greater proportion of the KZN people can benefit from the growth of economic activities and how vulnerable those currently in the informal economy actually are in terms of income and protection.
- Since large parts of the informal economy absorb retrenched workers, Business Retention and Expansion (BR&E) programmes need to continue to be rolled out but would need to also be effectively institutionalised at the local level beforehand.



- Efforts to strengthen the informal economy are currently deployed in South Africa and in KZN, including as part of the national Nine-Point Growth Plan.

Figure 112: Trends in Formal and Informal Employment in KZN and in South Africa (2000 – 2013)



Source: Quantec Database (2015) – Standardised Regional Dataset

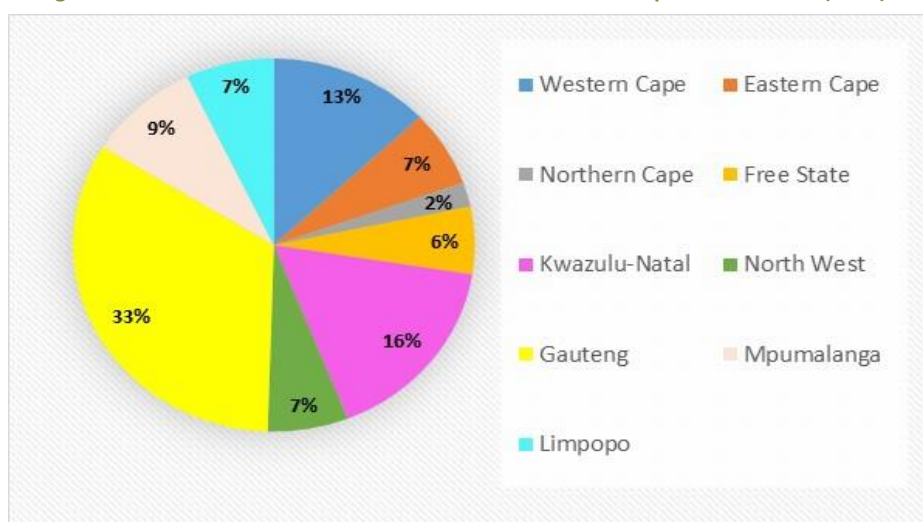
7.2.3 *Economic Factors that Influence the Expansion of Economic Activities*

For economic activities to expand, assets in the form of equipment, land and skills have to be in place. We detail in this section how KZN fares on these relative to South Africa and other provinces.

7.2.3.1 Domestic Fixed Investment

Figure 113 below displays the contribution of each province to total domestic fixed investment in 2013. This picture is similar to the GVA contributions of the national total.

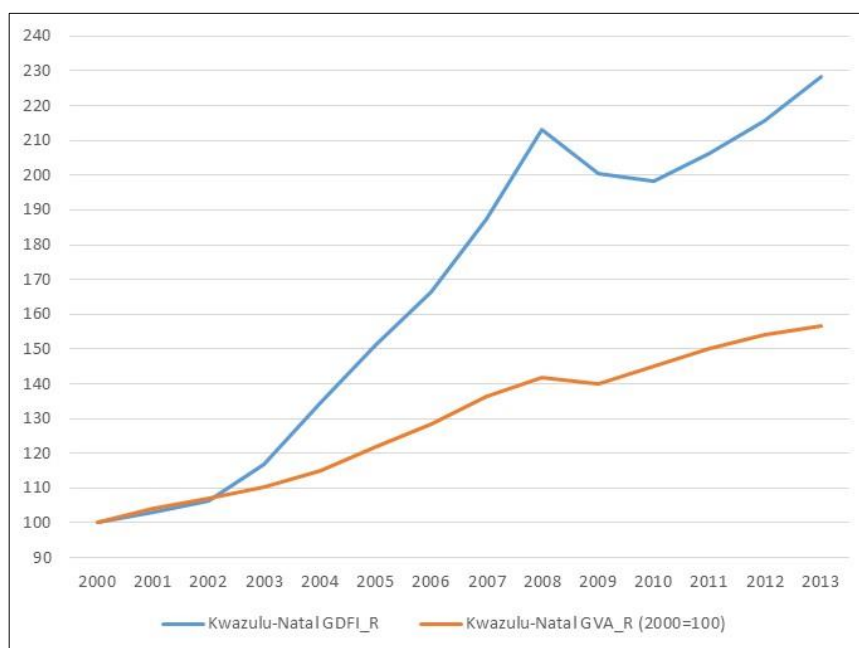
Figure 113: Provincial Contribution to Total Domestic Fixed Capital Investment (2013)



Source: Quantec Database – Standardised Regional Dataset

- Gauteng has succeeded in capturing a third of total domestic fixed capital investment, followed by KwaZulu-Natal with 16.5%, and Western Cape with just 13%.
- The remainder of the provinces collectively contribute the remaining 37.3% of total domestic fixed capital investment.
- KwaZulu-Natal's contribution remains below the relative population contribution of 20%, indicating the continued need to enhance the province's contribution of domestic fixed capital investment.
- This highlights the continued importance of enhancing efforts to expand investment and thus the effectiveness of investment promotion and attraction activities and of Business Retention and Expansion (BR&E) programmes.
- While domestic fixed capital investment has grown in KZN in a manner that is similar to what is observed for South Africa as a whole, they have grown faster than the value of economic activities.

Figure 114: Trends in Domestic Fixed Capital Investment in KZN relative to Economic Activity changes (2000 – 2013, Indices, 2000=100)

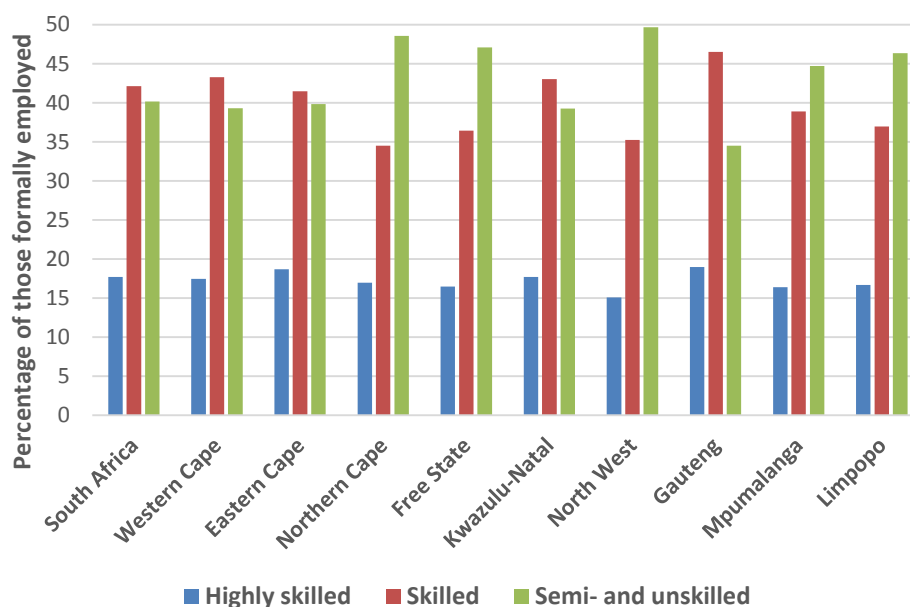


Source: Quantec Database (2015) – Standardised Regional Dataset and population estimates

7.2.3.2 Labour Skills: Skills Profile

Of importance is the position of the province with regards to skills in the formal employment sector.

Figure 115: Skills Profile of Formally employed per Province



Source: Quantec Database (2015) – Standardised Regional Dataset

- KwaZulu-Natal sits on the national average with regards to highly-skilled individuals, with 17.7% of formally employed individuals in that skill category, while Gauteng has the highest proportion of highly-skilled workers amongst its formally employed workforce (about 19%). KZN is behind the Eastern Cape on its share of those formally employed that are highly-skilled; 18.7% of those formally employed in the Eastern Cape are highly skilled.
- With regards to skilled individuals, again the province is relatively similar to the national average (42.1%), with 43% of those formally employed being classified as skilled. Gauteng has the highest proportion of skilled workers amongst its formally employed workforce (46.5%). The Western Cape comes second in this regards (43.25% of those formally employed skilled).
- Over 39% of those employed are semi- or un-skilled, again indicating the need to enhance the effectiveness of education and skills development, and the promotion of demand-driven training.
- Although about 18% of all those formally employed that are skilled and another 18% of those formally employed that are semi-skilled in South Africa are in KZN, the proportions of highly-skilled and skilled individuals set out above are influenced by the fact that 19% of all those in the informal economy in South Africa are in KZN. Since people in the informal economy tend to predominantly be unskilled, the proportion of those semi- or un-skilled individuals in the workforce would be higher than that reported above.

7.2.3.3 Land & Land Use Change for Economic Activities

Land use matters in order to optimise agricultural production and allow for a sustainable expansion of agricultural activities. From the perspective of industrial and service activities access to land and the amount and quality of services associated with property development as well as the costs associated with service provision influence where firms locate and what kind of production activities can take place.

The physical and environment sections of this report present some key characteristics that matter for agriculture. In what follows, we set out some additional information on land management that matters for agricultural and for industrial development in KZN.

Agriculture: Ownership & Tenure Issues

Agricultural production in South Africa is still reported to be predominantly with large commercial farms. However, a large proportion of land in KZN remains traditionally owned. Such land matters for a great proportion of rural households but enhancing the use of such land is influenced by the setting up of and the uptake of government-led projects and initiatives by the Traditional Authorities (TAs).

A number of issues around projects driven from outside the TAs area are raised in various provincial documents. While there are a number of projects and initiatives on traditionally-owned land and while there is land with high agricultural potential in the traditional areas, such land is hard to regulate with communication issues reported between parties. These communication issues affect the process of engaging new agriculture projects (including those that are critical to enhance food security) and of unlocking agriculture for commercial purposes on such land. Counter to this view is the position that the applicable tenure in these



areas is inclusive with household and communal decision-making processes governing land rights allocation as well as land use. Also, as stressed above, a number of varied projects are taking place in these areas. It remains that there are communication and decision-making bottlenecks when external parties and external decision-makers are involved in land use change in TAs area.

Some communication issues are around driving agricultural development through changes in agrarian practices on TAs.⁷³ Beyond agricultural use, the Ingonyama Trust Board (ITB) who manages the land under TAs and the Municipalities need to engage with each other for land planning and new property development projects (e.g. retail centres). There is, on this, at times, complex and difficult decision-making as traditional leaders have authority on how the land is used and how land use is changed. This can generate some unpredictability on new property development projects as well as on land use change though this has recently been markedly addressed through the Spatial Planning and Land Use Management Act (SPLUMA)'s final version of 2015 which clarifies the principles for a set a provincial laws that will regulate planning and that sets clear regulates on the powers of traditional councils with regards to planning and land use and the responsibilities of the traditional councils in terms of their relationships with the municipalities.

Large parts of KZN are under traditional decision-making. The map below shows where land under the ITB is located in KZN. The map shows that, for some district municipalities in KZN, a large proportion of the land falls under the jurisdiction of the ITB. This is land that was part of the former homeland system with the Trust set up to transfer the land to the Trust, to be managed for the rural traditional communities. This map is important for land management as it is traditional leaders that decide on how land is to be used in the former homeland.

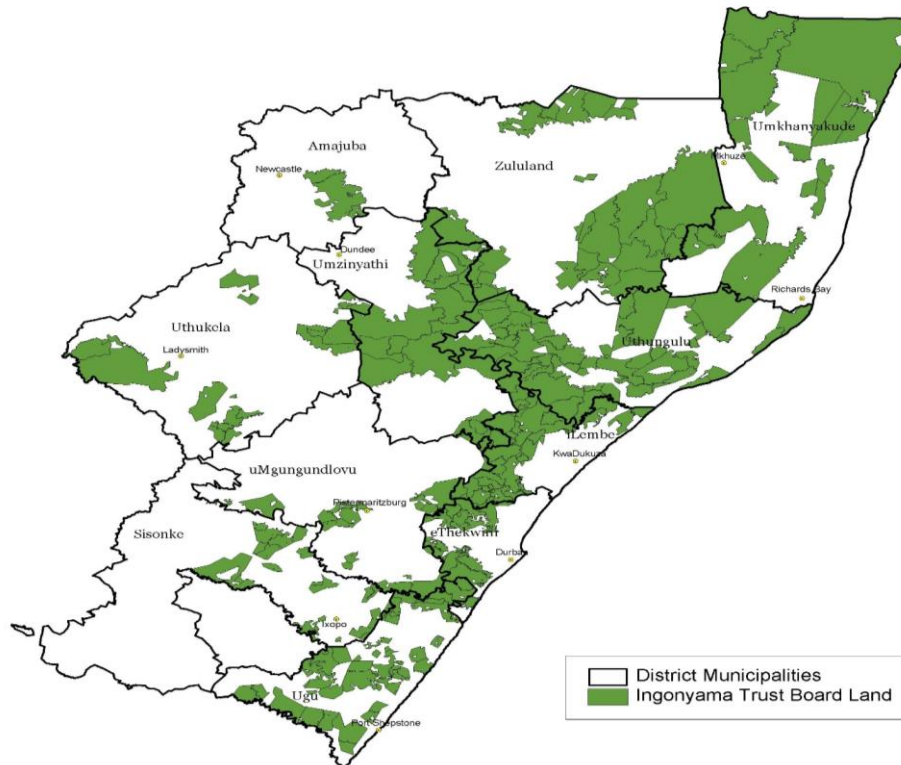
Estimates vary about the quality of ITB land of but it is assessed that around 300 000ha of arable land in KZN would be under it. More broadly between 40% to 50% of KZN's land would be under the ITB.⁷⁴

⁷³ Problems pertaining to more efficiently developing agriculture and agricultural communities on TAs land is acknowledged by the provincial Department of Agriculture and Rural Development for instance.

⁷⁴ Estimates vary depending on the source as new land is restituted or returned to traditional communities when land claims are successful.



Map 42: Ingonyama Trust Board Land (2011)



Noting the problem with ITB land as set out above, there are other areas of uncertainty regarding land tenure management and arrangements.

Firstly, there remains some uncertainty in the area of policy around Communal Property Associations (CPAs), though this is progressively resolved. A second area is in terms of new lands claims emerging with the windows for land-claims having been re-opened in 2014 and with a number of land claim cases still unresolved from the first window.⁷⁵ We focus on CPAs in what follows and briefly on land claims in the discussion of agricultural activities and simply note here that the initial target in South Africa was to have 30% of commercial land redistributed by 2014.

CPAs are landholding institutions that were established under the Communal Property Associations Act No. 28 of 1996. CPAs were created for groups who needed to organise themselves as legal entities in order to be able to receive title deeds to land under the restitution and redistribution programmes.

The policy on CPAs is evolving as a draft Amendment Bill was put forward in 2014 that seeks to address particular shortcomings, notably that, as stated in the Restructured Draft Policy Paper on CPAs by the Department of Rural Development and Land Reform (DRDLRD), it can effectively create communal areas within communal areas, including in communal areas

⁷⁵ The first window for land claims was closed in 1998. New land claims can now be lodged for 5 years.

administered by TAs. Effectively, this is because CPAs can become owners of property, including land, via the CPA.⁷⁶ The bottom line is that there are CPAs that have been established in communal areas under TAs. Tensions then emerged as some traditional leaders rejected the idea of CPAs as these were seen to seemingly challenge TA leadership.

The importance of CPAs follows the 2011 Green Paper on Land Reform that called for an overhaul of the land reform programme to more effectively tackle issues related to social and economic exclusion, inequitable access to land, underdevelopment and food insecurity. This came after the Communal Land Rights Act was struck down by the Constitutional Court in 2010. CPAs were formed as part of a change in land reform that is the domain of the DRDLRD.

The policy on CPAs was progressively looked at. In the May 2014 Restructured Draft Policy document on CPAs, it is specified that "New CPAs will be established in areas where no Traditional Authorities exist". For new CPAs, communities will play a key role in the decision making process with 60% of households needing to approve the CPAs decisions. The problem of dual land management in TAs has thus been removed.

Of note in the CPA policy revision is that it links to a developed rural economy transformation model. Land ownership tensions have been clarified and the Communal Land Tenure Policy suggests a new model for communal tenure reform. The model is seeking to "reconstitute the deteriorated accountability of traditional community structures to the communities and households they service ...".

The model incorporates

a partnership between the municipality and the traditional authority. The traditional authority administers the land and has the responsibility to ensure compliance is met based on the household's decisions, while the municipality provides for sector plans, integrated development and spatial plans. These are accompanied by by-laws that determine land use as well as norms and standards. Both support and co-govern public-private partnerships in communal areas based upon decisions made through substantive quorums by the community.

Moreover,

In the context of institutionalisation as determined by the Constitution and wall-to-wall municipalities, local municipalities (and by extension democratically elected governments) have executive authority over assigned responsibility areas.

Though SPLUMA help in regulating planning, the rural economy transformation model incorporates the collaboration of the private sector. This collaboration is to be put into place in traditional areas that observe customary laws. This collaboration is between the community, the public and private sectors and landowners and businesses set up a joint venture/holding

⁷⁶ In principle, CPAs were previously designed to "serve the needs of disadvantaged groups generally, especially aimed ... at those receiving land under redistribution programmes or under the Restitution of Land Rights Act. Under section 2(1)(d), however, the scheme was also available, on a voluntary basis, to other communities acquiring land".



company as part of this collaboration; the proceeds of the private investment are to be shared for development of households, of the community and for growth.

The above is a general discussion of some recent agrarian transformation changes. The changes are clearly relevant for KZN and point to the removal of some uncertainty around land use planning in traditional areas. Although accountability concerns are still expressed around decisions, it is unclear whether land is used optimally and sustainably in these areas, how many joint-ventures or share-equity arrangements models are currently in place and how these are impacting on the growth of the communities involved.

Industry & Businesses: Serviced land & Special zones

Industrial Development Zones (IDZs), set up as part of a programme established in 2000 in South Africa, are special zones that provide administrative support to foreign firms and to national manufacturing firms that are export oriented. That is, IDZ do not provide exemptions on pieces of national legislation but they are special areas (estates or parks) where firms that benefit or add value to South Africa's natural resources and where exporters are specifically looked after.

Firms in IDZs however benefit from duty-free imports on the inputs and equipment required for the production of the goods to export. As such the areas that are set as IDZs have dedicated customs services and a customs controlled area. The controlled area and the presence of customs officials help prevent cheaper imports to be diverted onto the national market; the customs arrangements help accelerate exports. Some VAT exemptions are also provided on supplies purchased in South Africa. IDZs are designed so as to promote, facilitate and enhance exports.

IDZs are important given the need, as set out in the NPC Diagnostic for the Economy for South Africa to grow investment as well as value exports. Investment, specifically foreign investment, is a driver of development by bringing special technologies and skills which, if integrated or shared with other local or national firms can spill-over onto a geographical area and beyond. The IDZ estates are, accordingly, set up in strategic locations where there are development potentials through multiplier effects.

The zones have links with an international port of entry moreover. The zones in which IDZs are located provide efficient communications and logistics networks. Infrastructure support is a key aspect of the IDZ, together with linkages. Thus, another aspect of the IDZ estates/parks is their connectivity with other parts of the economy. At a broader level IDZs offer firms a competitiveness advantage over other areas. This is because IDZ industrial estates are set up with world-class facilities.

While IDZs require a mobilisation of financial, human and physical resources, linkages with smaller businesses (SMMEs) are established within and outside the zones. A diversity of firm types in one location is, as such, a key feature of IDZs.

One of five IDZs set up for South Africa, Richards Bay (RBIDZ), was in the Province until the Dube TradePort was designed as an IDZ in July 2014. The Province thus now has 2 IDZs.



The RBIDZ is developing and is reported to have attracted large investment projects though some hurdles remain.⁷⁷ This IDZ incorporates a customs controlled area linked to the port. The zone is a brownfield development neighbouring an already existing industrial area comprising a total of 345 hectares of land over 5 sites, with future potential of more than 1000 hectares. The RBIDZ is seeking to cluster smaller, downstream manufacturing businesses around the existing major industries already established locally or new small-medium industrial operations.

The Dube TradePort has a distinct focus from the RBIDZ as set out above; it has a research and development focus. However, in terms of industry sectors, a mix of high-tech, high value added sector (e.g. aerospace and aviation-linked manufacturing and related services; electronics manufacturing and assembly; medical and pharmaceutical production and distribution) are targeted together with agriculture and agro-processing, inclusive of horticulture, aquaculture and floriculture; and, clothing and textiles from a high value addition perspective.

Although the South African Department of Trade and Industry (the **dti**) reports to be currently working on assessing new Special Economic Zones (SEZs), SEZs relate to a transformation of IDZs with the relevant legislation endorsed in 2013. SEZs, unlike IDZs, offer a tax incentive for firms that locate in these special areas with a corporate tax rate of 15%, which is lower than the national tax rate which is currently at 28%.

SEZs are important to expand the range of industrial capabilities available in South Africa but government is currently seeking through them to enhance the *manufacturing* of value-added goods. With supplier development programmes and localization supported in SEZs, firm linkages are actively pursued, with the view to help unlock industrial clusters. Business clusters emerge when groups of complementary businesses locate in an area that supports the expansion of particular industrial activities. Clusters help increase productivity.

Noting this development, the **dti** is currently setting up a capacity building programme in government agencies to help unlock SEZs (IPAP 2015 or IPAP 7). The **dti** is also looking to market SEZs so as to boost the development of targeted industrial clusters further.

SEZs are fundamentally about attracting new investment – of a foreign as well as domestic nature - in a region. However, a specific outcome of the SEZ programme to expand its manufacturing impact is around the development of additional *industrial* hubs so as to help diversify industries in regions. The approach is noteworthy as economic activities are still heavily concentrated in a few parts of the province.

In practice, the RBIDZ is set to be transformed into an SEZ. The province has also seen the Dube TradePort approved to become another SEZ. This will help new investment and new jobs emerge in another part of KZN in the near future. The Dube TradePort should also, in the process, with direct and indirect connections to a large number of international markets become transformed into a major logistics platform in Southern Africa. The new international flight routes that emerge from King Shaka International airport will be a major development for the province in this regards.

77

See: <http://pressoffice.mgafrica.com/richardsbayindustrialdevelopmentzone/PressRelease.php?StoryID=259163>, accessed January 2016.



With two SEZs in the making, the province is heading for a shift of its growth trajectory in the future. These developments are in progress however and it has been infrastructure development that has been a catalyst for growth between 2010/11 and 2015/16 as the situational analysis is updated.

With many special zones the world over, the success of the SEZs will rely, according to research from the World Bank (see Farole, 2011), on all the major constraints that affect businesses being addressed – e.g. access to electricity and water infrastructure, trading across borders, access to an educated workforce, and efficient government amongst other critical factors of competitiveness.

Of note is that in parallel to the development of special zones for exports, a variety of hubs, a group of activities that complement or support each other and grow through specialisation, are being put into motion in KZN for the domestic markets. These hubs are to be linked with the SEZs where goods are either further transformed or moved, generating a broad platform of production and trade opportunities.

Primary and secondary industrial hubs have been identified for each district in the province through an analysis of competitive and comparative advantages. Feasibility studies have been completed and the relevant municipalities have been tasked to identify and provide suitably located, affordable serviced land for the industrial development by the private sector. Separately, serviced land is also set out in the KZN Investment Strategy that is being rolled out.

Finally, South Africa and the Province are gearing, as noted earlier, for the setting up of a new type of arrangement, Agri-Park, to boost the linkages between agricultural producers and consumers. Agri-Parks, which cluster agricultural enterprises with tenants and owners operating under a common management structure, are effectively “transition or buffer zones between urban and agricultural uses”.⁷⁸ They have specific elements however. Agri-Parks follow a number of specific principles, including, amongst others: that they must be farmer-controlled; that they will be the catalyst for rural industrialization; that they involve government support for a long time period (10 years) to help develop a market; that they maximise the use of existing agro-processing, bulk and logistics infrastructure, including having availability of water, energy and roads. Also, while agri-parks have multi-service provision elements, they require a strong engagement by the municipalities. They also rely on support by all government stakeholders in order to be unlocked.

⁷⁸ Department of Rural Development and Land Reform / DRDLRD (2015, p. 16).



Table 72 below relates the Agri-park sites and commodity priorities for the various Districts of KZN as identified to date.

Table 74: KZN Agri-Parks: Site & Commodity Priorities (Feb 2016)

District	General Site areas subject to feasibility assessments	Prioritized Commodities
Ilembe	<ul style="list-style-type: none"> • KwaDukuza 	<ul style="list-style-type: none"> • Vegetables • Sub-Tropical fruit • Poultry • Sugar
Umgungundlovu	<ul style="list-style-type: none"> • Umgeni LM area 	<ul style="list-style-type: none"> • Maize grain/Soybeans • Vegetables • Beef • Poultry (broilers and layers)
Ugu	<ul style="list-style-type: none"> • Horseshoe Farm -Izingqoleni area • Port Shepstone Fresh produce market site 	<ul style="list-style-type: none"> • Vegetables • Macadamia • Subtropical fruit • Essential oils • timber
Mzinyathi	<ul style="list-style-type: none"> • Dundee 	<ul style="list-style-type: none"> • Beef / Soya/ Maize(Endumeni) • Vegetables Livestock (goats) (Msinga)
Zululand	<ul style="list-style-type: none"> • Vryheid/ Coronation 	<ul style="list-style-type: none"> • Livestock production (beef, piggery, grains • Vegetables
Amajuba	<ul style="list-style-type: none"> • Dannhauser 	<ul style="list-style-type: none"> • Maize/ Soya • Ground nuts • Livestock (Poultry, Piggeries, Dairy?, Beef)
Harry Gwala	<ul style="list-style-type: none"> • Ebutha farm (state land), Umzimkhulu 	<ul style="list-style-type: none"> • Maize • Vegetables • Soya and dry beans • Sheep & dairy • Timber
Uthungulu	<ul style="list-style-type: none"> • Eshowe 	<ul style="list-style-type: none"> • Vegetable • Poultry • Livestock (cattle, piggery)
uThukela	<ul style="list-style-type: none"> • Okhahlamba LM area – Bergville etc. 	<ul style="list-style-type: none"> • Maize • Dry Beans • Soya Beans • piggery • Vegetables
Umkhanyakude	<ul style="list-style-type: none"> • Mkhuze 	<ul style="list-style-type: none"> • Vegetables, Sugar cane, Ground nuts • Amarula, cotton • Beef • Many others suggested.

Source: KZN Department of Agriculture and Rural Development (2016)

One aspect to note about with agri-parks is that they “provide networks of contacts between producers, markets and processors” as well as “the physical infrastructure required for the transforming industries.” Agri-parks are “linked to the district gateways or growth points (within a 50km radius) so as to maximise opportunities for all value chains connected to [a] Mega agri-park.” (Department of Rural Development and Land Reform / DRDLRD (2015, pp. 15-16).



Similarly for SEZs and economic hubs in light of attempts, internationally, to set up special zones is that for these zones to have optimum growth and development impact requires a number of interventions. Typically, good service provision is the main element required to attract investors in particular areas. However, a good infrastructure base is also required together with a labour force that has the relevant level of education or training.

Infrastructure development has been markedly unlocked in South Africa and in KZN. However, there are issues currently in term of the services municipalities provide and the fees charged for these services. Recent research by provincial government together with COGTA⁷⁹ has identified, amongst others:

- Un-transparent municipal tariff formulaes across a number of KZN municipalities;
- A wide range of municipal tariffs applicable to the range of goods and services provided by the Province together with a wide range of property rates, development and land use change fees/charges;
- Some municipalities are charging rates and/or tariffs that are too low to cover the costs of operations and of maintenance, thereby threatening the provision of particular basic services in the medium to longer term.

Research has also identified challenges with waste recovery in most municipalities in KZN. Some municipalities are however using rebates / deductions on charges or they are using location incentives to attract particular investors in their region.

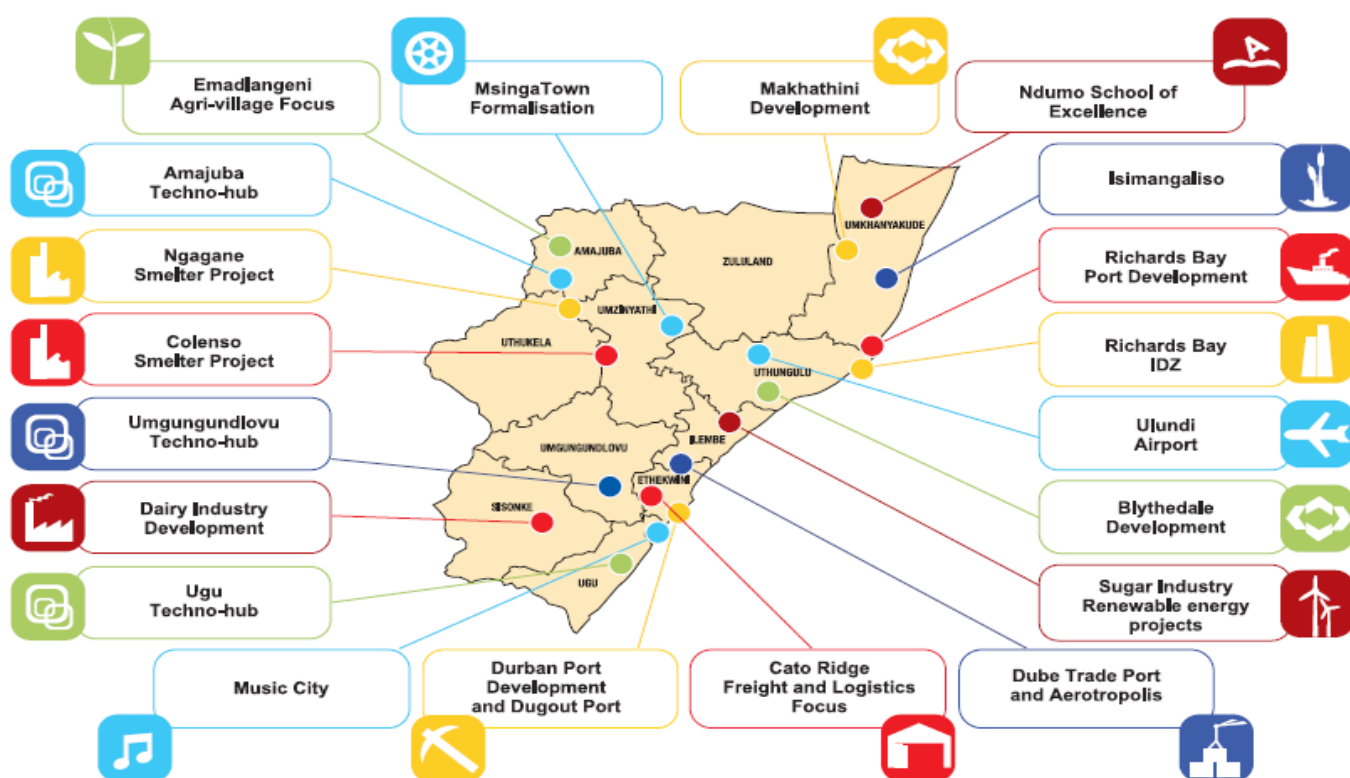
The development of special zones to shift industrial growth and related job creation to new levels is complemented by a range of catalytic projects. The main projects, which are represented on the map of KZN below, span a range of activities; each project has a particular main focus that is suited to the conditions which prevail in each main region of the province.⁸⁰

⁷⁹ EDTEA & COGTA (2016, forthcoming) "Need for Uniform and Standardised Approach on Administered Prices for Public Goods and Services", Draft Discussion paper (January 2016).

⁸⁰ A full list of catalytic projects can be found in the 2015 PGDP.



Map 43: Catalytic Projects as Major Enablers in KZN



Note: The map does not represent the recent Drakensberg Cable Car catalytic project.

Source: <http://www.kznppc.gov.za/images/downloads/kzncatalyticprojects.pdf>,
accessed November 2015⁸¹

It is unclear, for many of the projects, how far progress has been made to date. Still, the projects, as with other schemes being put into place, are designed so as to generate new investment and jobs across the province; and, they tend to complement other schemes which are focused on industry.

The map shows the Richards Bay IDZ as a catalytic project. It also shows specific hubs and property development schemes (e.g. the Blythedale Coastal development which is a beach tourism project) as catalytic projects. In the case of the Dube TradePort and Aerotropolis, good progress has been made that link to agricultural production. A separate agrarian transformation, an agri-village, is also being set up in the province. The list is not exhaustive but serves to illustrate that a number of projects that are innovative and that have large potential impacts are being rolled out in the Province. A number of the projects are labour intensive and inclusive in principle.

⁸¹ See PGDP (2015) for the list of catalytic projects as well as for a classification of catalytic projects.

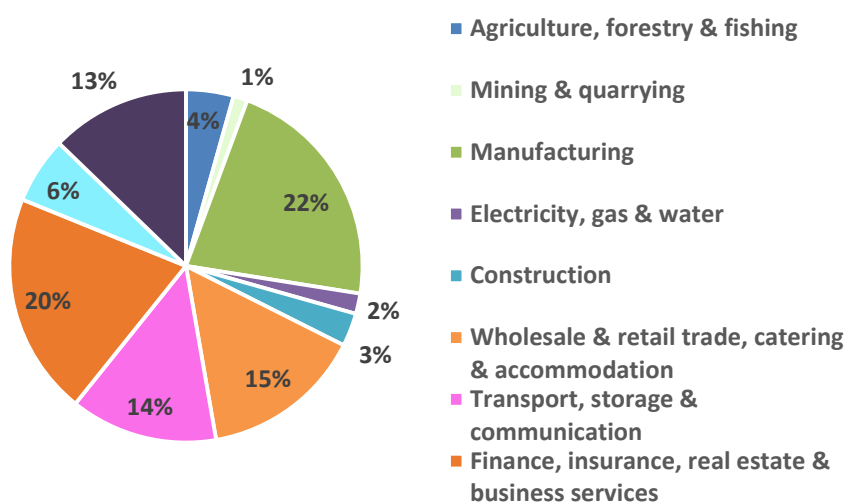
7.3 Overview of KZN District Economies

7.3.1 General Economic Overview

KwaZulu-Natal's Economic Profile identifies key sectors' opportunities and constraints and provides a synopsis of the levels of investment, growth and beneficiation processes, as well as employment in key sectors within the provincial economy.

Figure 117 below shows the contribution of the main economic sectors.

Figure 116: KZN Economy Overview



Source: Quantec Database (2015) – Standardised Regional Dataset

The figure reveals that:

- The four largest economic sectors in KwaZulu-Natal are:
 - Manufacturing (21.85%);
 - Finance, Real Estate and Business Services (20.4%);
 - Wholesale and Retail Trade, Hotels and Restaurants (14.85%); and,
 - Transport and Communications (13.5%).
- The other important economic sectors in the province are: General Government Services (12.8%), Community, Social and Other Personal Services (6.1%), Agriculture, Forestry and Fishing (4.4%), and Construction (3%).
- Small contributions are made by Electricity and Water (1.9%), and Mining and Quarrying (1.3%).
- Tourism, which is not classified as a separate economic sector but which cuts across hotels and restaurants and transport and communication, is also a major contributor to



KwaZulu-Natal's economy, contributing about 5.5% of the provincial economy (TKZN, 2014)⁸².

The province's gross value added (GVA) for detailed economic sectors is indicated below. The table is devised to show the long-term growth trends (2000-2013) and the recent short-term growth trends (2010 – 2013) which we contrast to the pre-2009 trends.

Table 75: Provincial GVA Growth Rates

Provincial GVA Growth	2000 - 2013	2000 - 2009	2009 - 2013
Agriculture, forestry and fishing	2.2%	2.0%	2.0%
Mining and quarrying	-1.3%	-2.5%	3.4%
Food, beverages and tobacco	3.3%	3.8%	1.9%
Textiles, clothing and leather goods	2.7%	3.2%	0.5%
Wood, paper, publishing and printing	1.2%	1.2%	3.3%
Petroleum products, chemicals, rubber and plastic	2.8%	2.8%	4.5%
Other non-metal mineral products	0.8%	1.4%	4.7%
Metals, metal products, machinery and equipment	2.0%	3.7%	3.4%
Electrical machinery and apparatus	3.5%	4.1%	1.9%
Radio, TV, instruments, watches and clocks	5.1%	5.5%	6.6%
Transport equipment	3.8%	4.5%	4.6%
Furniture and other manufacturing	1.4%	2.4%	-0.3%
Electricity	0.5%	2.0%	-1.4%
Water	1.1%	0.8%	0.6%
Construction	6.4%	7.4%	1.7%
Wholesale and retail trade	4.1%	4.6%	3.9%
Catering and accommodation services	4.1%	4.1%	3.9%
Transport and storage	3.5%	4.7%	2.0%
Communication	7.2%	8.3%	3.8%

⁸² TKZN (2014) *Statistics of Our Tourism Sector 2014*.



Provincial GVA Growth	2000 - 2013	2000 - 2009	2009 - 2013
Finance and insurance	6.7%	8.4%	4.4%
Business services	5.5%	6.5%	2.9%
Community, social and personal services	3.0%	3.7%	1.9%
General government	3.2%	2.9%	3.1%

Source: Quantec Database – Standardised Regional Dataset

From the data presented the following recent trends are evident:

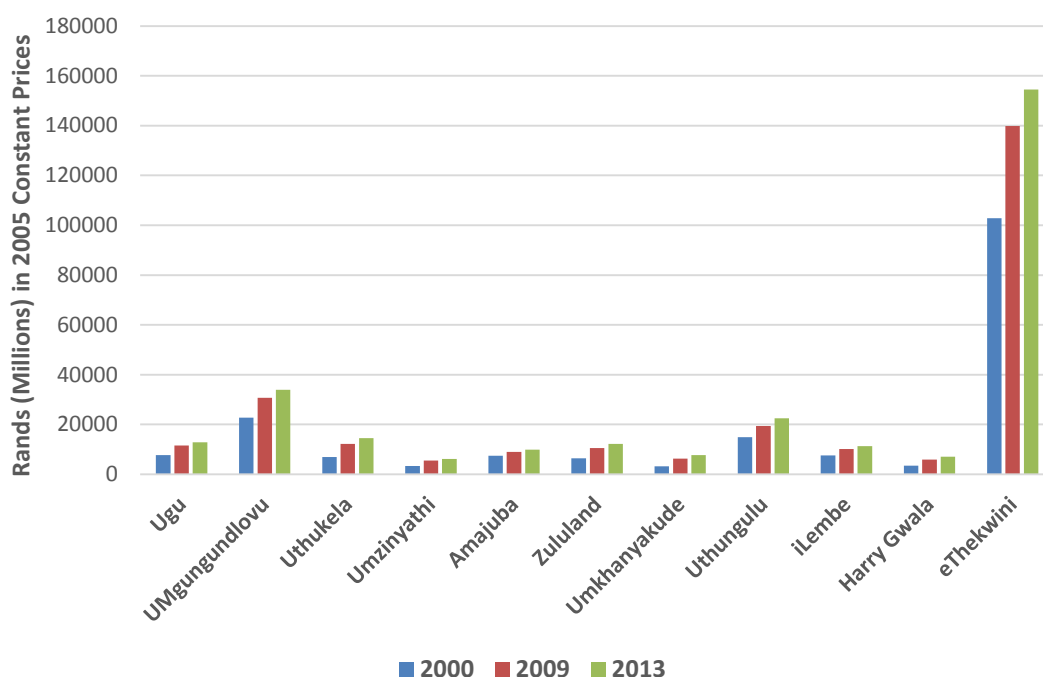
- Agricultural growth rates have, on average, been consistent in the short-term;
- There has been a recovery in mining and quarrying in the province;
- In manufacturing:
 - There is a relative recent stagnation in food and beverages and in textiles, clothing and leather. These are two large manufacturing sectors in KZN;
 - Notably as the textiles, clothing, leather and footwear sector has withstood severely adverse competitive pressures from producers in and exporters from Asia, the sector did well until the crisis. Future growth should resume in that sector when favourable demand conditions re-emerge provided KZN firms remain internationally competitive;
 - Petroleum products chemicals, rubber and plastic growth has recently improved;
 - Radio, TV, instruments, watches and clocks is the manufacturing sector that is experiencing the fastest growth recently although this is a small economic sector in KZN;
 - There has been a contraction in furniture and manufacturing activities other than those reported in the list;
- Economic activities in Electricity and water have contracted;
- The growth in construction is at much lower levels post-crisis than pre-crisis. This is likely linked to the conclusion of the large infrastructure projects required in preparation for the 2010 World Cup as well as for the development of Bridge City, the King Shaka Airport and Dube TradePort. It also reflects a slowing down of construction projects generally though property confidence has progressively trended positive since 2012 (FNB/BER Building Confidence Index, 2014);
- The service sectors have all grown but the recent growth has been reduced after 2008. A slower recent growth is notable in:
 - Communication;
 - Finance and Business Services.
- Government sector GVA growth has remained after 2008 though this growth has been reduced after the crisis.



7.3.2 General Economic Activities in KZN Districts

The following figure represents the Gross Value Added at a district level.

Figure 117: GVA Per District



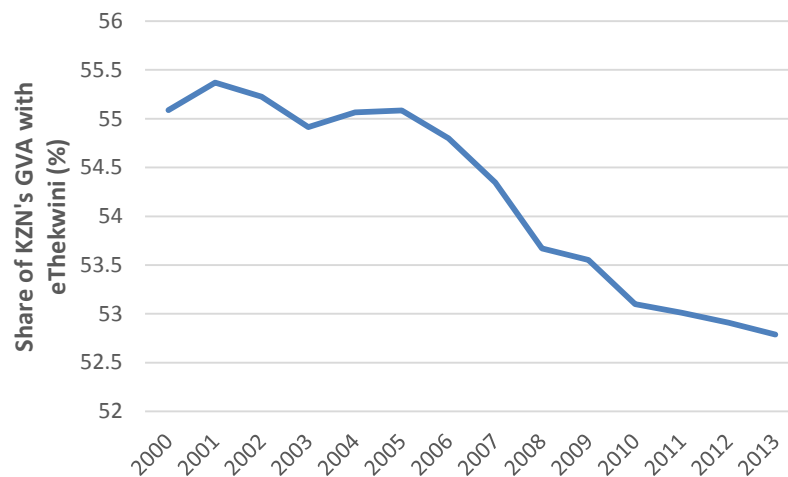
Source: Quantec Database (2015) – Standardised Regional Dataset

The figure shows that:

- All municipalities have experienced increases in value addition though the increases were notable from 2000 until the crisis. Some municipalities have struggled to notably improve their GVA between 2009 and 2013.
- 52.8% of KZN's total GVA is with eThekweni. The other main districts are (i) uMgungundlovu where the town of Pietermaritzburg is located and (ii) uThungulu where the town of Richards Bay is located. These account respectively for another 11.6% and 7.7% of the value of economic activities in KZN.

The figures below show the contribution of eThekweni to KZN's GVA between 2000 and 2013 and the relative contribution of district municipalities other than eThekweni to provincial GVA in 2000, 2009 and 2013.

Figure 118: Trend in the Share of KZN's GVA with eThekweni Metro Municipality



Source: Quantec Database (2015) – Standardised Regional Dataset

Figure 119: Trend in the Share of KZN's GVA with District Municipalities other than eThekweni Municipality



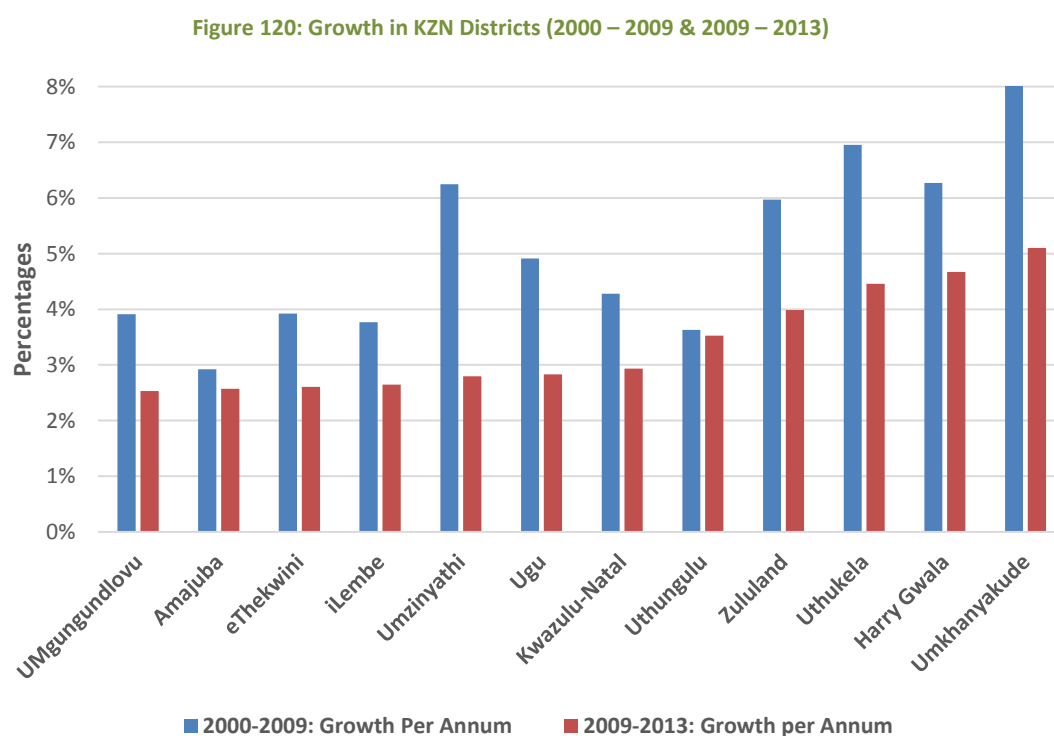
Source: Quantec Database (2015) – Standardised Regional Dataset

- KZN's economic activities are progressively expanded outside eThekweni. This shift emerged from 2005 onward;



- The shift out of eThekweni slowed down after 2009 however.
- In terms of how GVA is spread across other district municipalities, a shift has been in favour of the smaller municipalities.
- Notably, uThukela, Zululand, uMkhanyakude (notably) and Harry Gwala are absorbing a growing share of the value of economic activities. These four District Municipalities went from a combined share of 24% of KZN's GVA in 2000 to a share of 30.1% in 2013.
- A relative displacement of economic activities in the province has been in favour of uMkhanyakude and of Harry Gwala between 2009 and 2013. There is notable change for the other Districts in the Province.
- The district municipalities that are not performing well **in relative terms** in KZN are iLembe and Amajuba. The contribution to KZN's GVA of iLembe dropped from 9% to 8.15% between 2000 and 2013; that of Amajuba declined from 8.9% to 7.2%.

The Figure below shows how growth has changed pre- and post-crisis in the Districts of KZN.



Source: Quantec Database (2015) – Standardised Regional Dataset

- All KZN districts have seen their growth reduced after the 2008 economic crisis though the crisis has had the least pronounced impact on uThungulu.
- uMgungundlovu has displayed the slowest growth amongst all districts in 2009 – 2013.

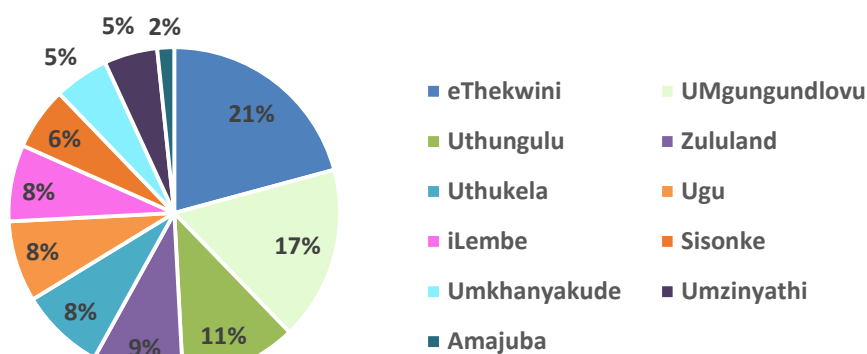


7.3.3 Economic Activities: Sector performance in KZN Districts

7.3.3.1 Primary Sector Activities

The figure below shows how the value of activities in agriculture, forestry and fishing are distributed across KZN Districts.

Figure 121: KZN Districts' Contribution to KZN Agricultural GVA

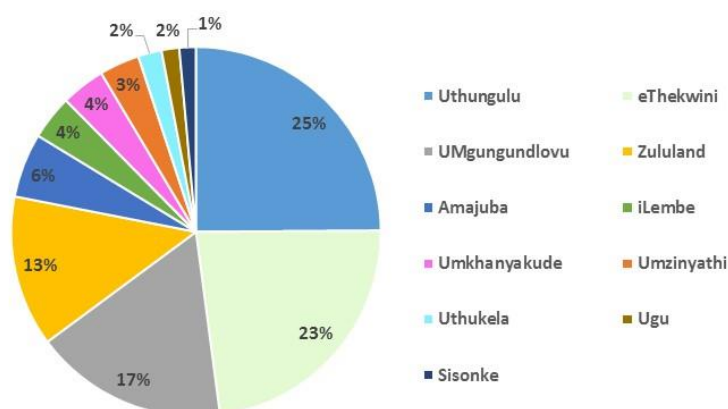


Source: Quantec Database (2015) – Standardised Regional Dataset

- The eThekweni Metro, the Districts of uMgungundlovu and that of uThungulu - housing the main cities of KZN- dominate the share of KZN agricultural production. The large population in these districts create demand for agricultural production.
- Amongst the smaller districts, Zululand, uThukela, Ugu and iLembe each contribute around 8% of KZN's agricultural GVA.
- Amajuba is the smallest contributor to KZN GVA. This district requires special attention to help boost agricultural production.

Figure 122 123 represents the contribution of each KZN district to total mining and quarrying GVA.

Figure 122: KZN Districts' Contribution to KZN Mining & Quarrying GVA

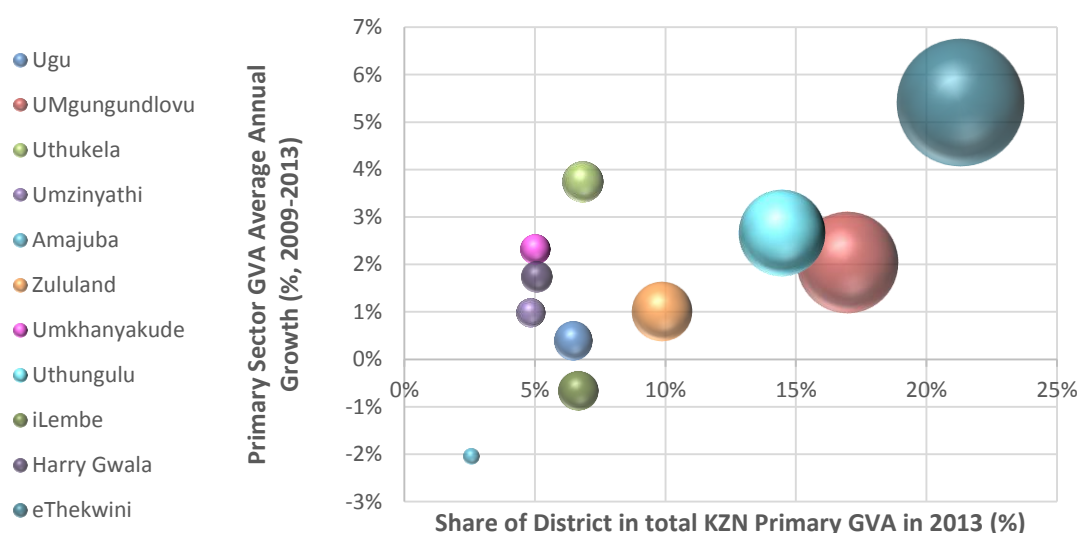


Source: Quantec Database (2015) – Standardised Regional Dataset

- Mining and quarrying activities are markedly concentrated in uThungulu, eThekwini, uMgungundlovu and in Zululand. Although mines are located outside of the main cities of KZN, it is likely that goods are moved to be transported for further processing in the larger cities.
- Noting some queries on what the data for mining and quarrying actually capture here, 6% of mining and quarrying activities would be in Amajuba.

Figure 124 shows how KZN districts have grown their primary sector, that is, the sector which captures agriculture and mining as extractive activities, between 2009 and 2013. The figure sets this growth against the share of the districts in the total primary sector. The width of the bubbles represents the value of GVA in the primary sector in each district.

Figure 123: Growth of Primary Sector in KZN Districts



Source: Quantec Database (2015) – Standardised Regional Dataset

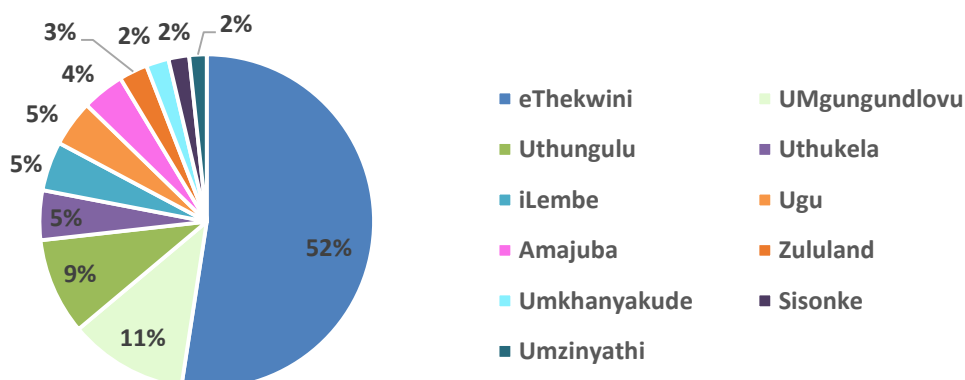
- There is some variation in the performance of the districts although growth has tended to be better for the districts that make a larger contribution to KZN primary activities between 2009 and 2013.
- Primary activities as a whole are contracting in the Amajuba district. This contraction pre-dates the crisis. This is driven by a decline in mining activities.
- iLembe is undergoing a recent but small contraction of its primary sector. This is driven by a contraction of agriculture, forestry and fishing.

7.3.3.2 Secondary Sector Activities

As economies grow, they transit from the primary sector that is the backbone of agrarian societies to the secondary sectors where products are transformed into new products that are finished and usable. Manufacturing forms parts of the secondary sector together with electricity, gas and water and construction.

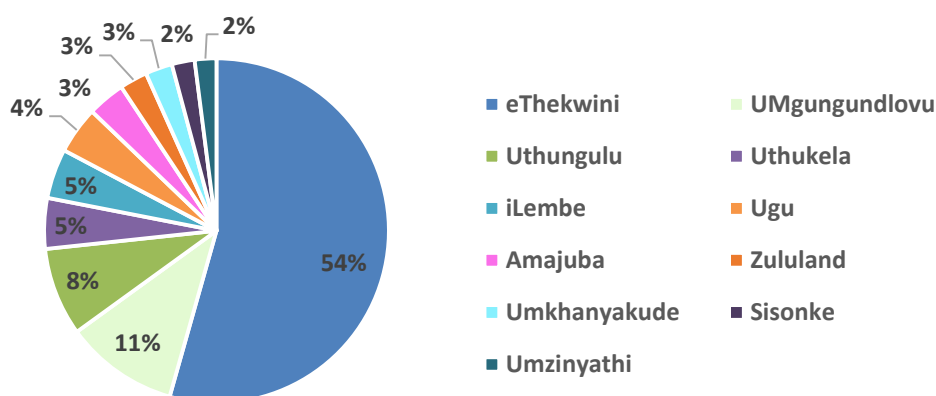
Figures 125 and 126 represent the contribution by KZN district to the value of manufacturing and construction activities in KZN.

Figure 124: KZN Districts' Contribution to KZN Manufacturing GVA



Source: Quantec Database (2015) – Standardised Regional Dataset

Figure 125: KZN Districts' Contribution to KZN Construction GVA



Source: Quantec Database (2015) – Standardised Regional Dataset

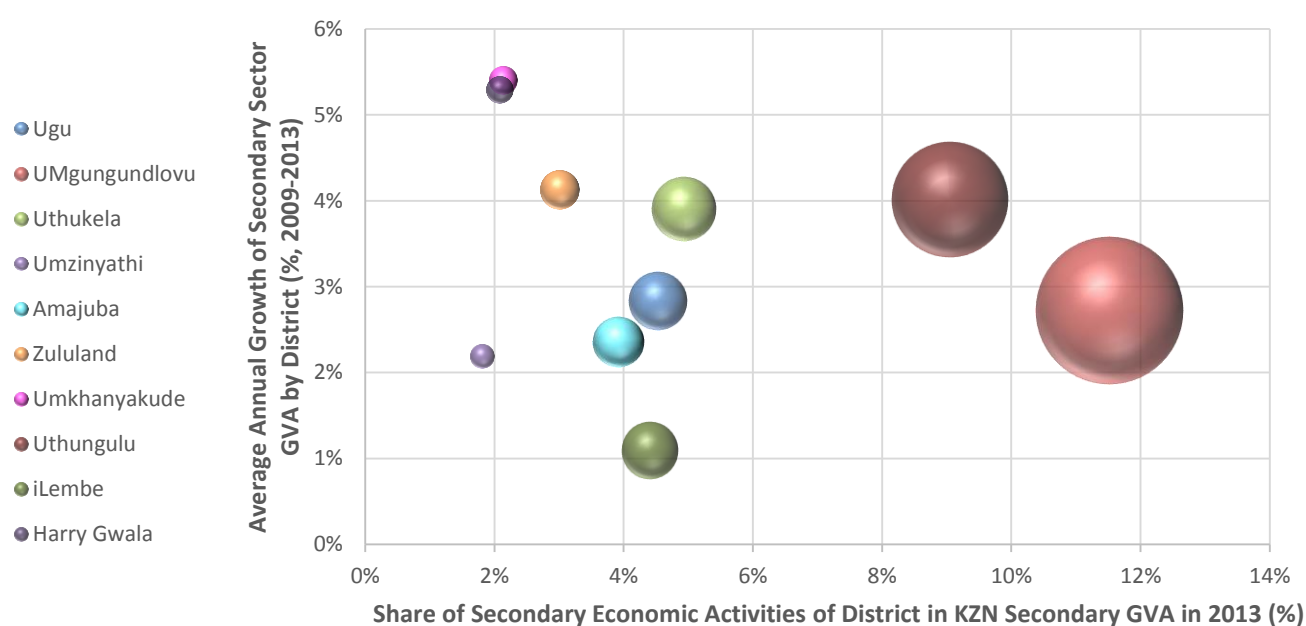
- The shares of each district in construction and in manufacturing appear to be relatively similar. eThekweni markedly dominates in both, construction and manufacturing with a share of 52% of manufacturing activities in the Metro and a share of 54% of all construction activities of KZN in eThekweni.
- eThekweni is followed, albeit at a long distance, by uMgungundlovu and uThungulu.



- uMzinyathi has the smaller share of manufacturing and of construction activities (1.7% and 2% respectively).

Figure 126 shows how KZN districts other than eThekweni have grown their secondary sector between 2009 and 2013. The figure sets this growth against the share of the districts in the total secondary sector. The width of the bubbles represents the value of GVA in the secondary sector in each district excluding eThekweni. eThekweni is excluded in the picture given its strong contribution to the total GVA of the sector in KZN.

Figure 126: Growth of Primary Sector in KZN Districts (excluding eThekweni)



Source: Quantec Database (2015) – Standardised Regional Dataset

- No district has experienced a negative growth of their secondary activities between 2009 and 2013.
- There is dispersion in performance across districts with some districts which make small contributions to KZN secondary sector GVA growing rapidly. In the secondary sector, the fastest growing district between 2009 and 2013 was Umkhanyakude. This growth follows from fast growth pre-crisis.
- Generally iLembe is, relative to its secondary sector contribution to KZN, underperforming growing at only 1.1% per annum since 2008.
- The growth of UMgungundlovu at 2.7% per year is below that of Uthungulu (at 4% per year).
- Although not reported on the figure, the growth of the secondary sector in eThekweni stood at a mediocre 1.9% per year between 2009 and 2013.

The table below shows how district growth in manufacturing and construction has changed before and after the crisis.



Table 76: Growth in Manufacturing and Construction in KZN Districts by main periods (% Per Annum)

Provincial GVA Growth		2000 - 2009	2009 - 2013
Manufacturing	Kwazulu-Natal	3.1%	3.0%
	Ugu	7.3%	3.3%
	UMgungundlovu	3.5%	3.1%
	Uthukela	4.2%	4.7%
	UMzinyathi	11.5%	2.6%
	Amajuba	1.9%	2.8%
	Zululand	12.8%	5.0%
	Umkhanyakude	16.4%	6.2%
	Uthungulu	3.0%	4.6%
	iLembe	2.5%	1.1%
	Sisonke	11.9%	6.6%
	eThekwini	2.0%	2.4%
Construction	Kwazulu-Natal	7.4%	1.7%
	Ugu	7.2%	1.4%
	UMgungundlovu	7.4%	1.7%
	Uthukela	11.7%	2.9%
	Umzinyathi	11.6%	3.0%
	Amajuba	4.1%	1.6%
	Zululand	12.2%	3.1%
	Umkhanyakude	11.7%	2.9%
	Uthungulu	7.4%	1.8%
	iLembe	6.2%	1.4%
	Sisonke	11.2%	3.0%
	eThekwini	6.7%	1.4%

Source: Quantec Database (2015) – Standardised Regional Dataset

- Growth has been markedly lowered in manufacturing and in construction in most KZN districts after 2008.
- Growth has, in the recent past, been markedly slower in construction than in manufacturing however.
- A marked reduction in the pace at which manufacturing is expanding has occurred in uMzinyathi.
- Manufacturing is growing more rapidly post crisis in eThekwini, uThungulu, Amajuba, and uThukela.



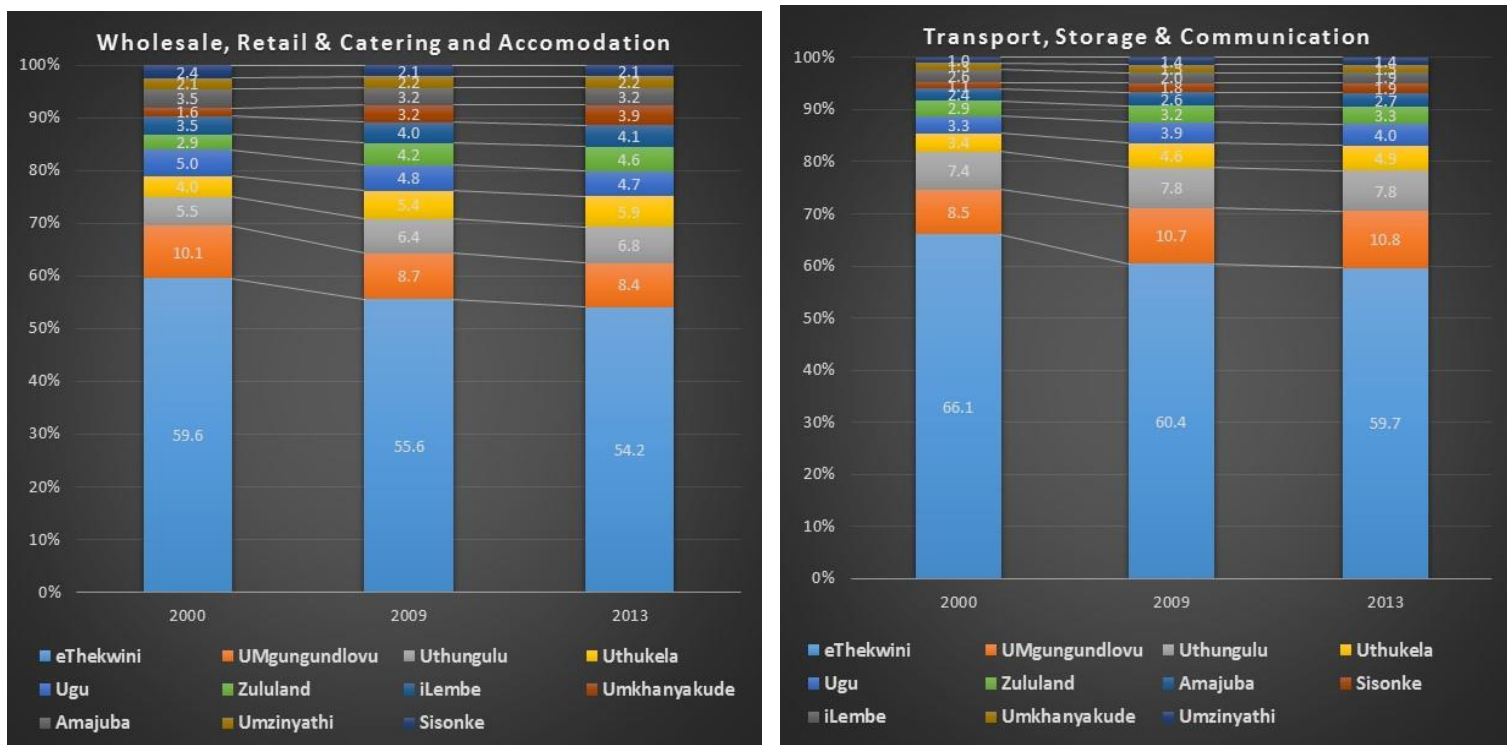
- A marked reduction in the pace at which construction is expanding has taken place in in uMkhanyakude, Zululand, Sisonke, uMzinyathi and uThukela.

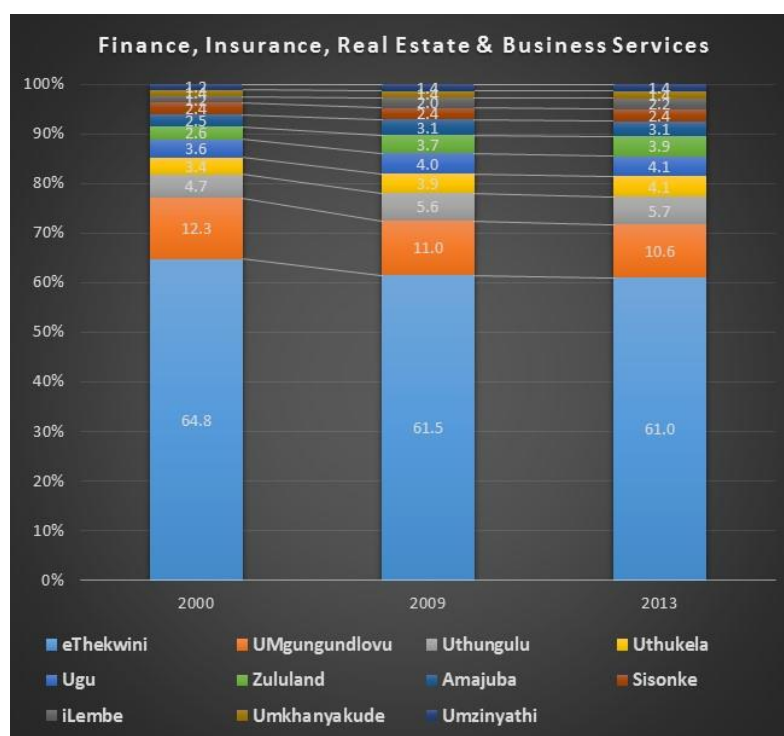
7.3.3.3 Tertiary Sector Activities

Services to consumers fall under the tertiary sector. There is a wide range of such services, including government services.

The following graphs indicate where particular sectors are located across districts and their share within the districts – representing wholesale, retail, catering and accommodation, transport, storage and communication and finance, Insurance and business services. The figures are for three years: 2000, 2009 and 2013. These three sectors represent, combined, almost half of the value of KZN's economic activities.

Figure 127: Distribution of Main Tertiary Sectors GVA across KZN Districts (2000, 2009, 2013)





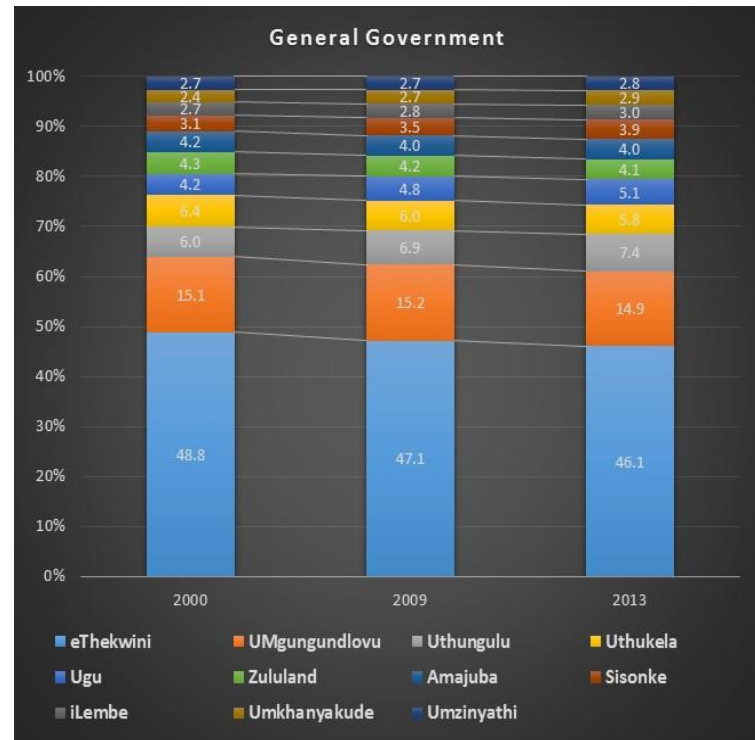
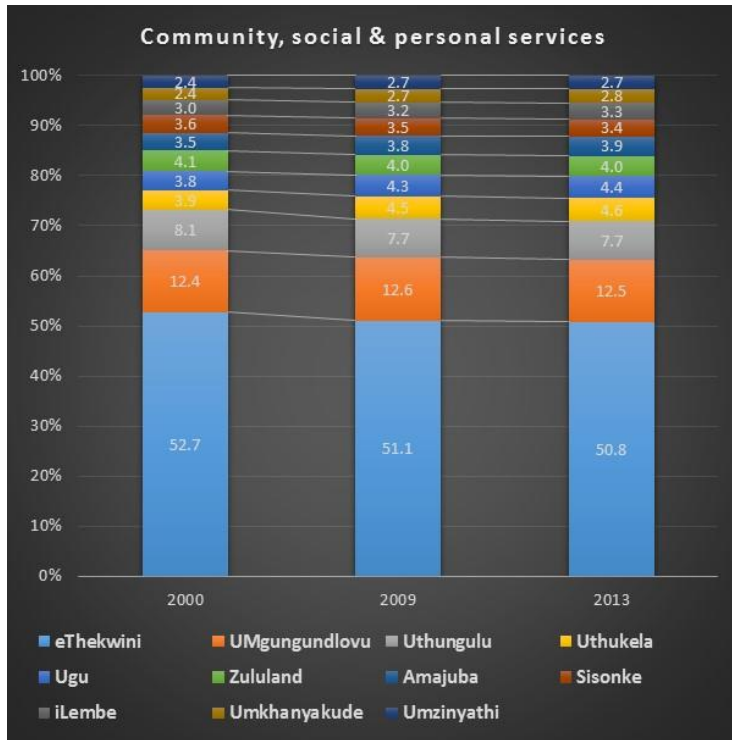
Source: Quantec Database (2015) – Standardised Regional Dataset

- eThekweni dominates the three main service sectors with between 54% and 61% of the value of all KZN services that involve the private sector located in that Metro Municipality.
- While the proportion of service activities are, in each case, above the Metro's share of the KZN population, the large number of people in cities mean that these are the areas where trade, finance, business services and transport and storage tend to locate. Accordingly, uMgungundlovu and uThungulu where the two other large cities of KZN are located are also important regions for private services.
- Interestingly, the eThekweni Metro has seen its share decline over time. In other words services are expanding elsewhere within KZN faster than in eThekweni. However, the displacement of eThekweni has slowed down post-crisis.
- The uMgungundlovu and uThungulu District Municipalities have not systematically seen their relative share of wholesale, retail, catering and accommodation, of transport, storage and communication services and of finance, insurance and business services markedly change over time.
- The small shifts which translated into an overall displacement of eThekweni in private services have been across a range of smaller districts.



The following graphs represent where community, social and personal services and where general government services activities are located in KZN. The graphs show this for 2000, 2009 and 2013. These two service sectors represent 29% the value of all of KZN's economic activities.

Figure 128: Distribution of Government and Social & Personal Services GVA across KZN Districts (2000, 2009, 2013)



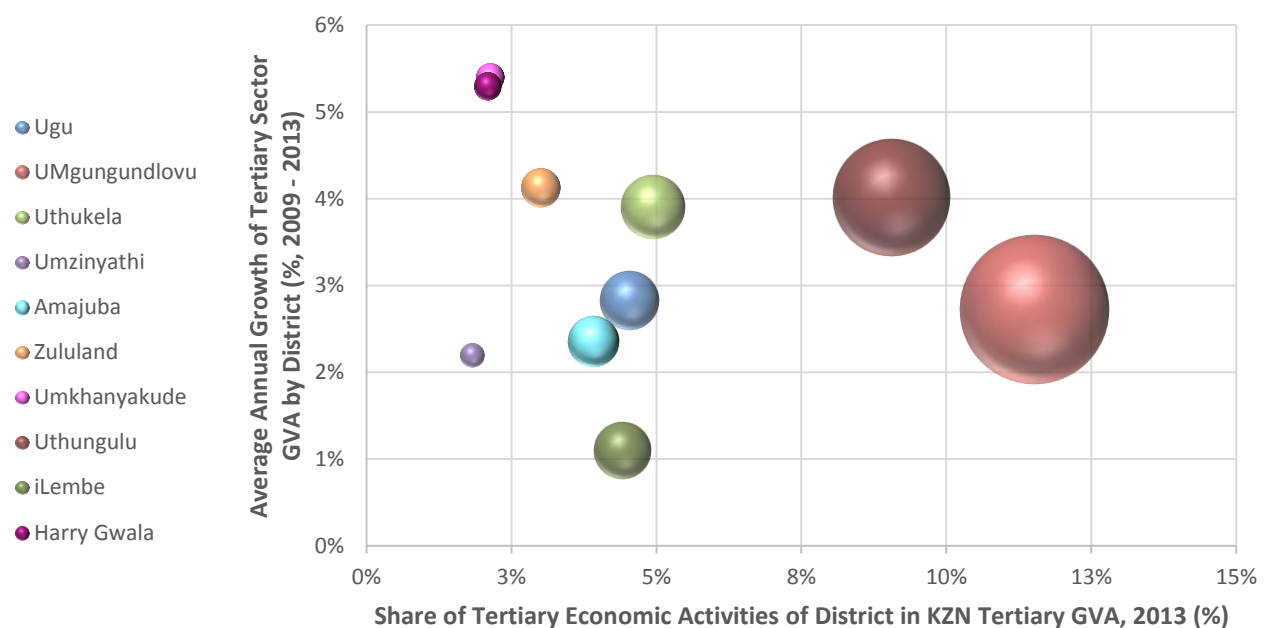
Source: Quantec Database (2015) – Standardised Regional Dataset

- eThekweni still dominates the value of community, social and personal services and the value of general government services although to a lower extent than is the case for other services.
- The shift away from eThekweni towards other areas of KZN is more pronounced with general government services than with community, social and personal services.

The figure below represents how the tertiary sector has fared in terms of expansion between 2009 and 2013.

Figure 129 shows how KZN districts other than eThekweni have grown their tertiary sector between 2009 and 2013. The figure sets this growth against the share of the districts in the total tertiary sector. The width of the bubbles represents the value of GVA in the tertiary sector in each district excluding eThekweni. eThekweni is excluded given its strong contribution to the total GVA of the sector in KZN.

Figure 129: Growth of Tertiary Sector in KZN Districts other than eThekweni Metro Municipality



Source: Quantec Database – Standardised Regional Dataset

- Two Districts, uMkhanyakude and Harry Gwala are experiencing a fast growth of their tertiary activities. While this growth is from a small base and thus fragile since reflecting some catching up, it is positive to see that these districts are expanding their activities.
- iLembe is underperforming in the tertiary sector relative to the contribution the district makes to the total value of tertiary activities in KZN.



- The regions that have a larger share of the tertiary sector, that is uThungulu, uMgungundlovu and eThekweni (not represented on the figure) are growing their tertiary sector at a slower rate, that is at 4%, 2.7% and 2% respectively. This is a positive but sluggish growth for services.

7.3.4 *Profile of KZN Districts*

In what follows we make specific comments on the detailed performance of economic activities between 2009 and 2013 in each KZN district.



Table 77 District performance in economic activities 2009 - 2013

	Ugu	uMgungundlovu	uThukela	uMzinyathi	Amajuba	Zululand	Umkhanyakude	uThungulu	iLembe	Harry Gwala	eThekwini
Agriculture, forestry and fishing	0.2%	0.6%	3.9%	0.9%	-1.0%	2.1%	2.7%	2.6%	-1.7%	1.7%	5.1%
Mining and quarrying	3.4%	7.8%	1.9%	1.6%	-2.8%	-1.3%	0.7%	2.7%	8.5%	2.8%	6.5%
Food, beverages and tobacco	1.8%	1.0%	4.2%	2.3%	2.8%	4.8%	6.0%	1.2%	-0.3%	7.0%	1.3%
Textiles, clothing and leather goods	2.3%	1.3%	2.6%	4.4%	-1.7%	2.7%	-1.3%	-0.2%	0.7%	3.2%	0.1%
Wood, paper, publishing and printing	4.7%	1.4%	6.5%	4.9%	2.1%	7.0%	7.6%	4.8%	1.3%	9.8%	2.1%
Petroleum products, chemicals, rubber and plastic	7.9%	6.5%	9.8%	0.2%	2.3%	5.3%	8.1%	3.3%	2.8%	1.8%	4.0%
Other non-metal mineral products	4.8%	3.9%	2.8%	5.1%	4.9%	4.9%	11.7%	4.1%	5.2%	1.1%	4.9%
Metals, metal products, machinery and equipment	3.6%	3.9%	2.1%	4.5%	5.0%	4.8%	5.1%	6.7%	1.0%	5.6%	1.2%
Electrical machinery and apparatus	2.8%	2.1%	1.8%	2.8%	2.0%	3.6%	2.9%	2.7%	1.6%	3.8%	1.7%
Radio, TV, instruments, watches and clocks	12.8%	6.1%	6.0%	9.7%	3.6%	12.8%	21.5%	8.6%	5.2%	18.0%	4.3%
Transport equipment	5.0%	5.0%	6.7%	6.0%	4.6%	6.7%	6.3%	5.3%	4.3%	8.0%	4.3%
Furniture and other manufacturing	-0.8%	-0.5%	-0.1%	-1.3%	0.3%	-1.6%	-1.4%	-0.3%	-0.7%	-1.6%	-0.2%
Electricity	-0.9%	-0.2%	-1.1%	-3.9%	-1.1%	-1.9%	-3.6%	-1.2%	-0.1%	-3.2%	-1.7%
Water	1.3%	1.4%	-0.5%	0.1%	0.4%	0.4%	1.2%	0.8%	0.5%	-1.2%	0.6%
Construction	1.4%	1.7%	2.9%	3.0%	1.6%	3.1%	2.9%	1.8%	1.4%	3.0%	1.4%
Wholesale and retail trade	3.5%	2.8%	5.6%	4.2%	3.3%	6.2%	7.9%	5.3%	4.9%	4.2%	3.3%
Catering and accommodation services	1.8%	1.2%	10.2%	3.8%	2.0%	11.0%	13.1%	6.9%	5.3%	4.7%	1.9%
Transport and storage	2.6%	2.2%	4.0%	2.9%	2.6%	3.0%	3.4%	2.3%	0.7%	5.9%	1.4%
Communication	3.9%	3.7%	3.5%	3.8%	4.6%	3.7%	3.7%	3.7%	3.8%	3.4%	3.8%
Finance and insurance	5.1%	2.9%	5.4%	4.1%	4.5%	4.8%	5.8%	5.2%	6.6%	7.4%	4.1%
Business services	3.1%	2.3%	4.3%	2.9%	3.5%	2.9%	3.7%	3.3%	3.9%	5.9%	2.7%
Community, social and personal services	1.9%	1.7%	2.7%	2.3%	1.5%	2.6%	2.7%	1.9%	2.7%	2.5%	1.8%
General government	2.9%	2.6%	5.1%	3.4%	2.4%	5.1%	5.4%	2.4%	4.5%	5.1%	2.5%

Source: Quantec Database – Standardised Regional Dataset

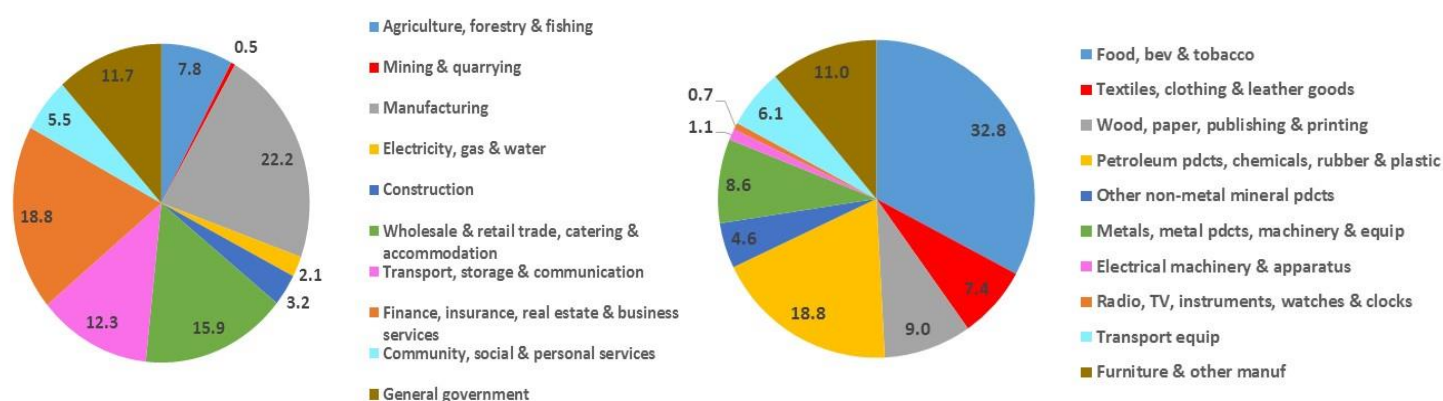


7.3.4.1 Ugu

While agriculture is relatively stagnant in Ugu, the district is experiencing a growth in mining and quarrying. While Ugu is seeing some contraction of some secondary sectors, the district economy is showing growth in a range of manufacturing sectors, including in more skills and capital intensive sectors such as petroleum, chemicals and plastic products and some radio, TV, instruments and the like. Finance and insurance services are growing well in the district moreover (at 5.1% per year).

The figure below shows the sectoral distribution of economic activities by main sectors and by manufacturing sub-sectors for Ugu. The Figure shows that economic activities are dominated by manufacturing (22%). Food and beverages is the dominant sector in manufacturing in the District.

Figure 130: Distribution of Economic Activities GVA by Main Economic Sectors and in Manufacturing in Ugu



Source: Quantec Database (2015) – Standardised Regional Dataset

Ugu's chosen industrial hub is perishables processing. Positively, data indicate that food and beverages are growing, albeit at a small rate. Transport and communication is also growing, a sector that is important to move perishable goods if the hub was to go ahead. A preferred site for this hub has been identified in the feasibility study in Umdoni (in close proximity to the N2) and to the border of eThekwinini and Ugu.

7.3.4.2 uMgungundlovu

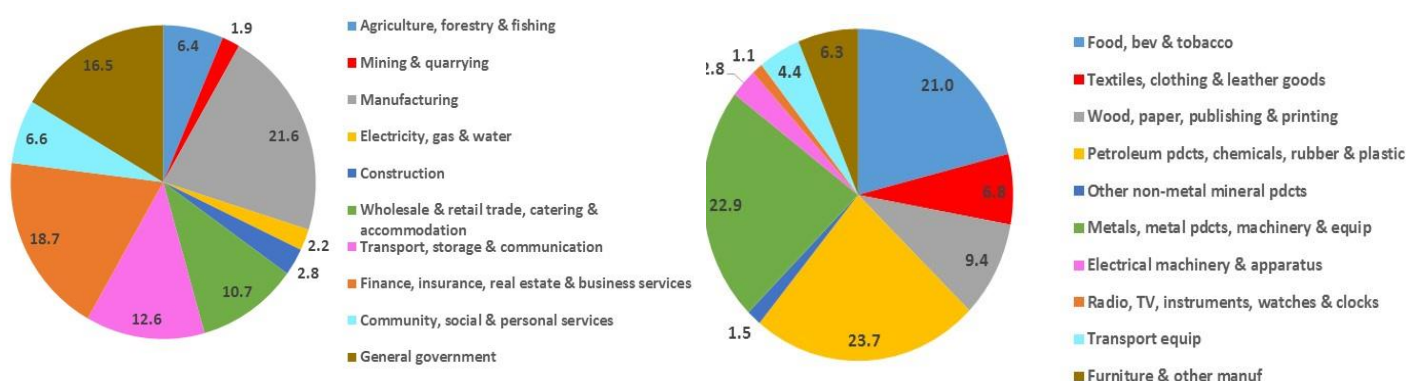
Mining is the fastest growing sector in uMgungundlovu. Agriculture is, in contrast, stagnant. While communication was growing notably prior to the crisis in uMgungundlovu, the growth in this sector has been markedly reduced. Furniture and other manufacturing has contracted. The district is experiencing a relatively fast growth of 'petroleum, chemicals and plastic products' and of 'radio, TV, instruments, watches and clocks'.

The figure below shows the sectoral distribution of economic activities by main sectors and by manufacturing sub-sectors for uMgungundlovu. The figure shows that economic activities are



dominated by manufacturing (22%). Petroleum, chemicals and plastic products are the dominant sector in manufacturing in the District.

Figure 131: Distribution of Economic Activities GVA by Main Sectors and in Manufacturing sub-sectors in uMgungundlovu



Source: Quantec Database (2015) – Standardised Regional Dataset

A leather processing industrial hub has been the chosen option for the District. Textiles, leather and footwear are still growing in uMgungundlovu. This is a positive development for the Industrial Economic Hub but agriculture is currently growing very slowly in the district. The feasibility study has identified two potential sites for the hub: one in Plessislaer, Edendale and another one in the Georgetown area of Edendale

7.3.4.3 uThukela

uThukela is continuing to experience good growth off a low base; notably agriculture, construction, and finance and insurance are performing well since the crisis, riding on a high growth of these sectors pre-crisis. The fastest growth is in catering and accommodation services however. This sector is growing at a little more than 10% per annum since 2009 suggesting that some major investments are continuing to take place in that sector in the district. Wholesale and retail activities have also been growing at 5.6% per year since 2009. Within manufacturing, the 'petroleum, chemicals and plastic', the transport equipment and wood and paper sectors are doing well. However, the public sector is still growing very fast, more rapidly in fact post-crisis than compared to pre-crisis.

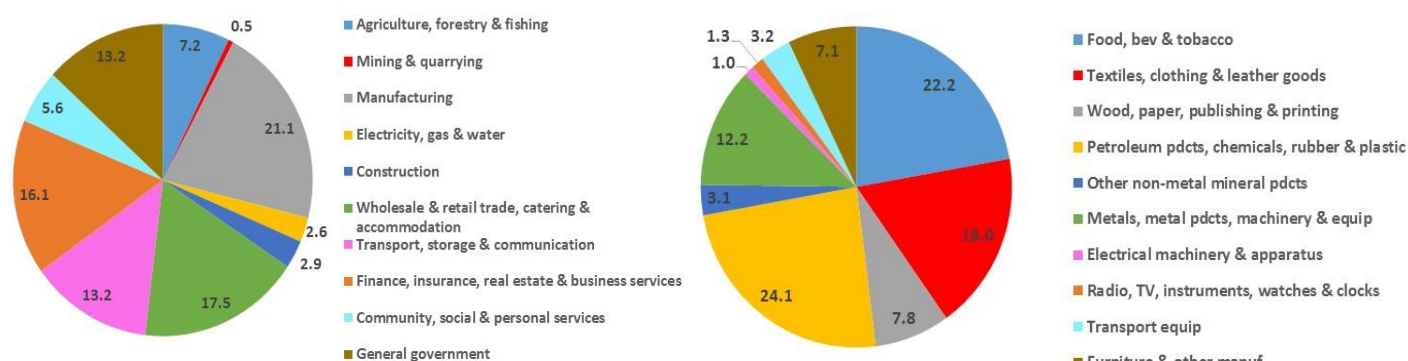
uThukela is doing comparatively well in its expansion of textiles and clothing. It is doing particular well in food and beverages. The growth of the two aforementioned sectors bodes well for the industrial economic hub that is being developed in the district.

The figure below shows the sectorial distribution of economic activities by main sectors and by manufacturing sub-sectors in uThukela. The Figure shows that economic activities are



dominated by manufacturing (22%). Petroleum, chemicals and plastic products are the dominant sector in manufacturing in the District.

Figure 132: Distribution of Economic Activities by Main Sectors and in Manufacturing in uThukela



Source: Quantec Database – Standardised Regional Dataset

An electronics industrial hub has been put forward for uThukela. The hub will consist of four key pillars:

- Electronics Systems Design and Manufacturing Clusters
- Test Laboratory
- Research and Development
- Skills Development Centre

The feasibility study for the hub considers Ladysmith to be a good location for it.

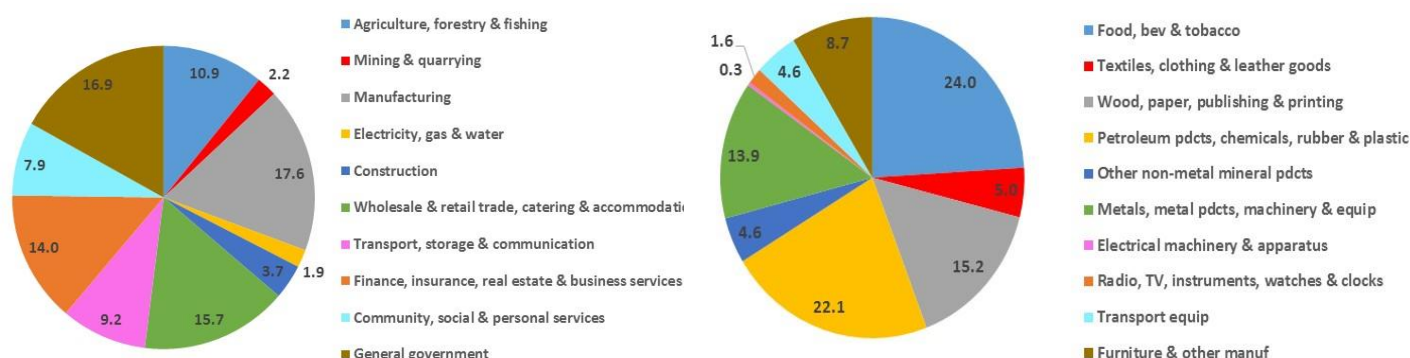
7.3.4.4 uMzinyathi

The district, which is a small contributor to KZN's total economic activities, is facing a number of challenges: the agricultural sector is sluggish; service provision is much lower post- than compared to pre-crisis moreover. Furniture and other manufacturing sectors have also contracted in uMzinyathi. Positively, the 'metals, metal products, machinery and equipment' and the 'other non-metal mineral products' sectors are growing soundly. The 'radio, TV, instruments, watches and clocks' sector is the fastest growing sector but uMzinyathi is the district that is undergoing the fastest expansion of textiles, clothing footwear and leather moreover. The main service sectors are growing at between 3% and 4% per year.

The figure below shows the sectoral distribution of economic activities by main sectors and by manufacturing sub-sectors in uMzinyathi. The Figure shows that economic activities are dominated by manufacturing (17%). Food and beverages is the dominant sector in manufacturing in the District.



Figure 133: Distribution of Economic Activities GVA by Main Sectors and in Manufacturing in uMzinyathi



Source: Quantec Database – Standardised Regional Dataset

Mining is growing at a slow rate in uMzinyathi. The coal beneficiation industrial economic hub that has been proposed would offer new growth and development opportunities to the District if implemented.

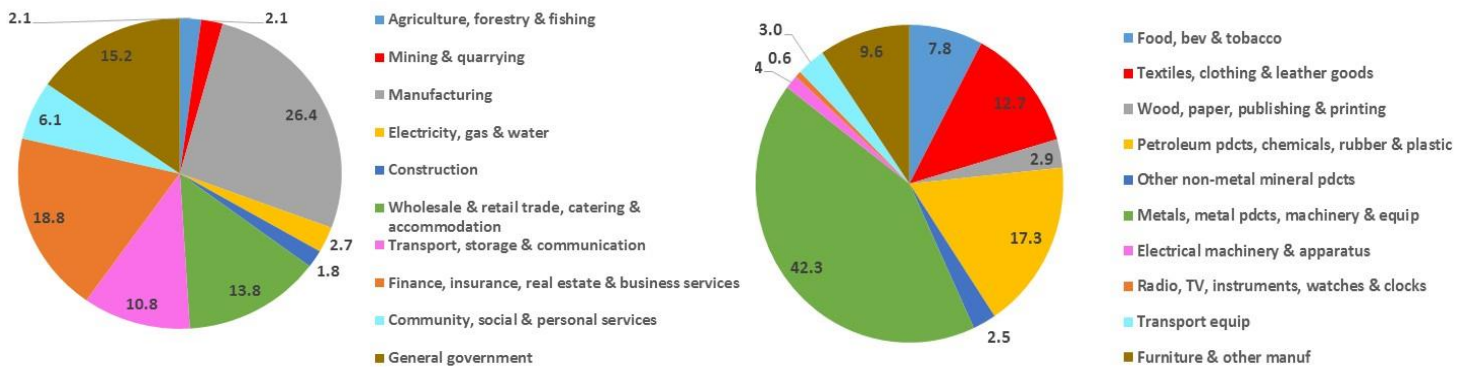
7.3.4.5 Amajuba

Amajuba has, post crisis, continued to experience a contraction of two historically key sectors in the region, Agriculture and Mining. Growth in manufacturing has also been generally lacklustre with a contraction of Textiles, clothing, footwear and leather activities although metals, metal products, machinery and equipment and transport equipment are doing well. The growth of the metals, metal products, machinery and equipment sector is notable when compared to the pre-crisis trends. 'Other non-metal mineral products' was in fact a sector in decline prior to the crisis. The tertiary sector, notably Financial and Insurance Services and Communication, continues to experience relatively good levels of growth, suggesting that there are some service skills in place in the district that can be tapped upon for an expansion of tertiary activities.

The figure below shows the sectoral distribution of economic activities by main sectors and by manufacturing sub-sectors in Amajuba. The Figure shows that economic activities are dominated by manufacturing (26%). Metal, metal products, machinery and equipment is the dominant manufacturing sector in the District.



Figure 134: Distribution of Economic Activities by Main Sectors and in Manufacturing in Amajuba



Source: Quantec Database (2015) – Standardised Regional Dataset

Textiles and clothing have been contracting post-crisis in the District. Understanding the causes of this contraction would be important for a manufacturing sector that is important to the district economy and that has been the chosen option as the potential industrial hub.

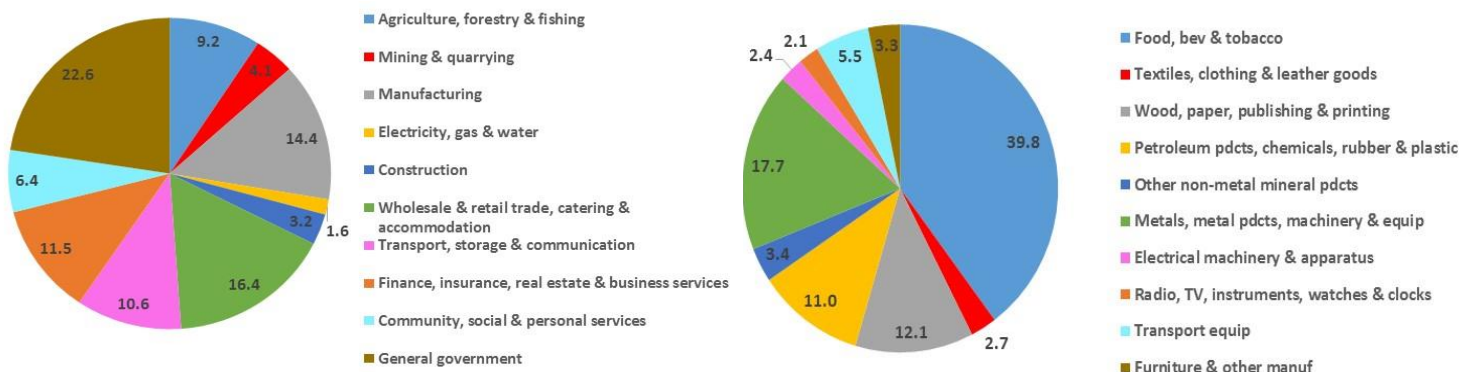
7.3.4.6 Zululand

This area has a good growth of agriculture but a contraction of mining and quarrying. While furniture and other manufacturing has contracted after the crisis and following a long period of growth, some sectors have continued to grow at good levels, including wood and paper and miscellaneous metal and equipment sectors. Wood and paper appears to be growing post crisis faster than pre-crisis. Food and Beverages have continued to show a good growth performance in adverse conditions. The fastest growing sector is radio, TV, instruments, watches and clocks however. Services, notably accommodation and catering are growing significantly, in line with expanded tourism development in the district. Government services are growing faster post than when compared to during the pre-crisis period. The district is generally doing well across the three main sectors but is, like many other districts experiencing a contraction of electricity and a stagnation of its water-related activities. Zululand, is displaying the fastest growth of construction of the whole of KZN.

The figure below shows the sectoral distribution of economic activities by main sectors and by manufacturing sub-sectors in Zululand. The Figure shows that economic activities are dominated by general government (23%) and by retail and hotels in services. Food and beverages is the dominant manufacturing sector in the District.



Figure 135: Distribution of Economic Activities GVA in Main Sectors and Manufacturing sub-sectors for Zululand



Source: Quantec Database (2015) – Standardised Regional Dataset

Agro-processing has been the chosen option for an industrial economic hub in Zululand. This would build on the currently strong food and beverage base which the District has, allowing further specialisation and linkages with agriculture and transport and logistics services along the way.

7.3.4.7 uMkhanyakude

The district has good levels of growth in a number of economic sectors, notably within manufacturing and services. uMkhanyakude is nevertheless experiencing a continued stagnation of mining.

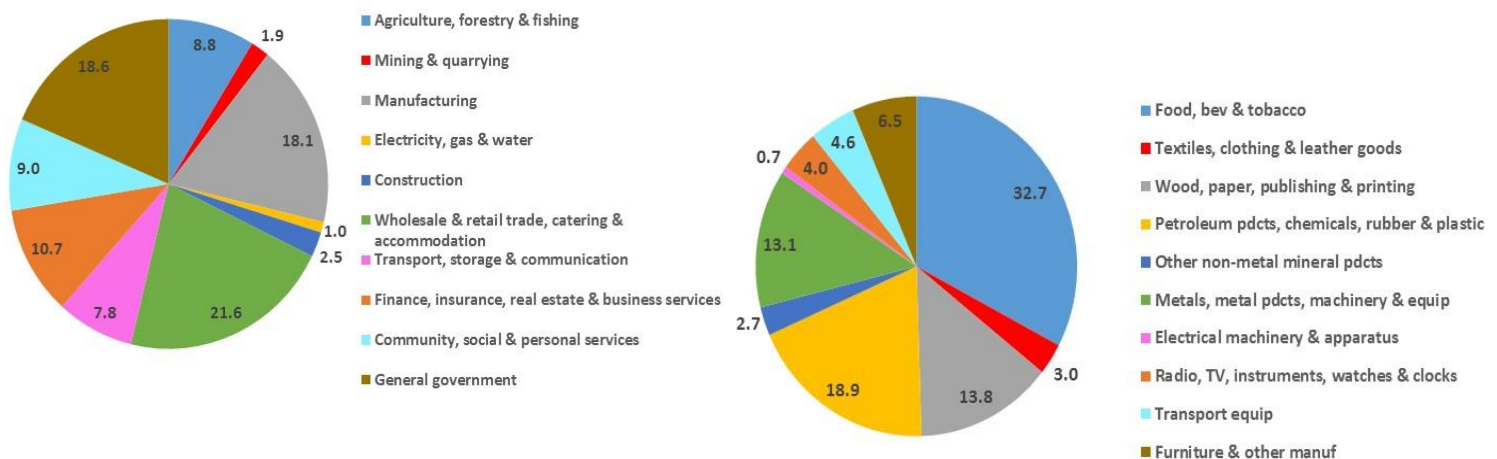
Within manufacturing while some sectors have grown in a relatively notable manner post-crisis (in a number of cases following pre-crisis trends), the textiles, clothing, leather and footwear sector and the furniture sector are now contracting after a period of sharp expansion pre-crisis. The adverse developments observed in these sectors are related to external factors; these sectors display intense international competition.

In services, growth remains notably high in accommodation and catering. Government services have been, since the crisis growing at levels above those that were observed prior to the crisis however.

The figure below shows the sectoral distribution of economic activities by main sectors and by manufacturing sub-sectors in Umkhanyakude. The Figure shows that economic activities are dominated by retail trade and hotels in services. Food and beverages is the dominant manufacturing sector in the District.



Figure 136: Distribution of Economic Activities GVA by Main Sectors and by Manufacturing Sub-sectors in uMhanyakude



Source: Quantec Database (2015) – Standardised Regional Dataset

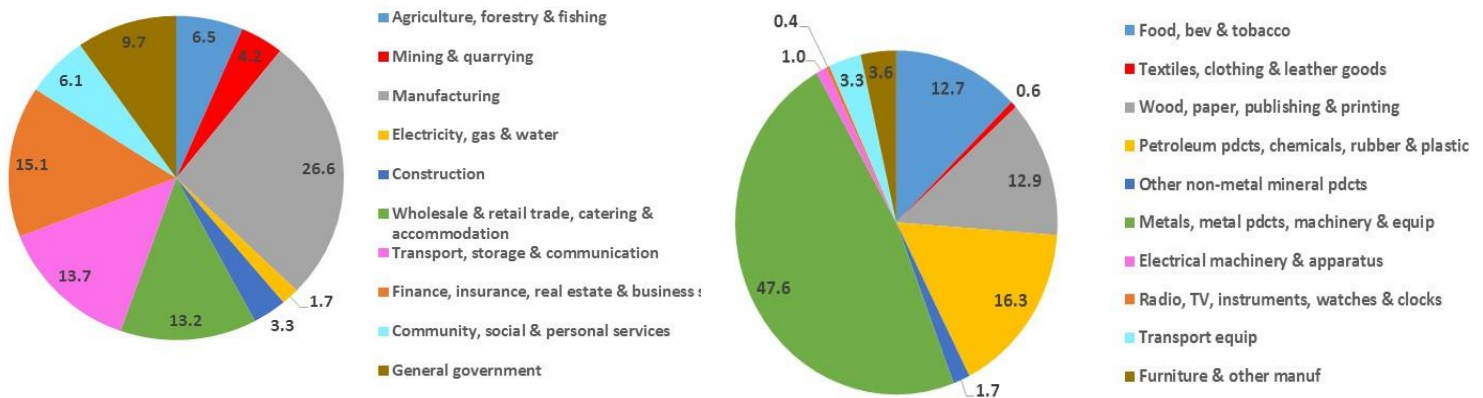
In the composition of manufacturing activities, uMkhanyakude would appear to have the right skills for its chosen industrial hub that is agricultural mechanisation. Agricultural, forestry and fishing is growing in the district moreover, together with Wood and paper products.

7.3.4.8 uThungulu

uThungulu's decline in mining was reversed post-crisis. The district is experiencing a growth of both primary sectors, that is of agriculture and mining, that is above what was observed prior to the crisis. It is in an in-between position in terms of the performance of its secondary sector activities and the district is exhibiting good growth of a number of tertiary sectors. uThungulu's growth in catering and accommodation and in wholesale and retail are very much on par with pre-crisis growth trends.

The figure below shows the sectoral distribution of economic activities by main sectors and by manufacturing sub-sectors in uThungulu. The Figure shows that economic activities are dominated by manufacturing (27%). Metals, metal products machinery and equipment is the dominant manufacturing sector in the District.

Figure 137: Distribution of Economic Activities by Main Sectors and in Manufacturing in uThungulu



Source: Quantec Database (2015) – Standardised Regional Dataset

Various projects have been put forward as the chosen industrial hub option. With metal products experiencing a strong growth, with mining growing, the District is well set for a variety of projects linking with the RBIDZ moreover.

7.3.4.9 iLembe

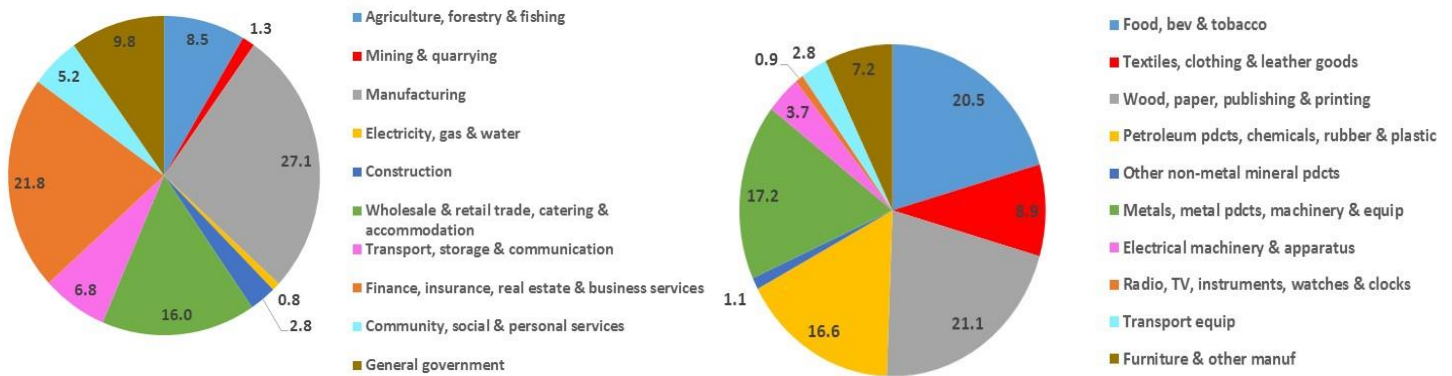
iLembe is undergoing declines in a range of primary and secondary sectors. Agriculture is contracting further and its growth of a number of manufacturing sectors, whilst positive, is below that experienced in many other KZN districts. iLembe's best manufacturing performance is in Radio, TV, instruments, watches and clocks products and in non-metallic mineral products. Within services, finance and insurance is the fastest growing sector. The pre-crisis growth trends appear to have markedly dampened post-crisis, suggesting some vulnerability of the businesses that expanded in the district pre-crisis. Positively, local mining and quarrying activities are growing rapidly.

Manufacturing (27%) is the main economic sector in the District. Within manufacturing, wood and wood paper products dominate.

The District has a renewable energy hub planned. With Food and beverage activities declining in iLembe, the industrial hub would offer a new manufacturing and service base in the District Municipality. The hub is being developed in Isithebe Industrial Estate.



Figure 138: Distribution of Economic Activities by Main Sectors and in Manufacturing in iLembe



Source: Quantec Database (2015) – Standardised Regional Dataset

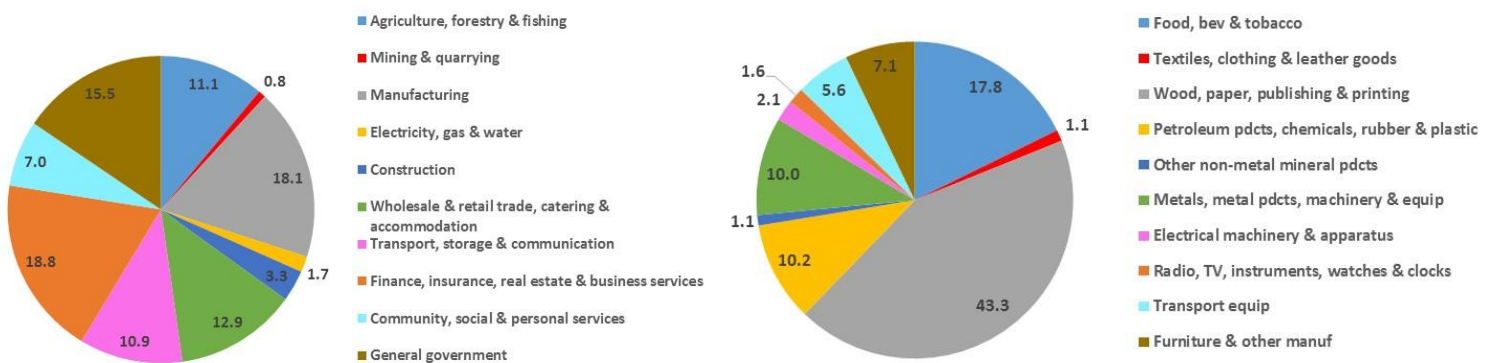
7.3.4.10 Harry Gwala

Harry Gwala is doing well off a very low base in a range of sectors, notably within manufacturing in Radio, TV, instruments, watches and clocks and in wood and wood products. It is also growing well in Food and Beverages. Within services, finance and insurance, business services, and transport and storage services are growing at a notable rate. In total, growth in GVA has been maintained at slightly below 6%, however off a very low base comparatively.

Government services are growing rapidly in the district well above community, social and personal services.

Finance and business services are the main economic sectors. Wood dominate the manufacturing activities in the District.

Figure 139: Distribution of Economic Activities GVA by Main Sectors and by Manufacturing Sub-sectors in Harry Gwala



Source: Quantec Database (2015) – Standardised Regional Dataset

A wood processing industrial hub, which is the chosen option for the District, would help further the District's specialisation in its wood activities.

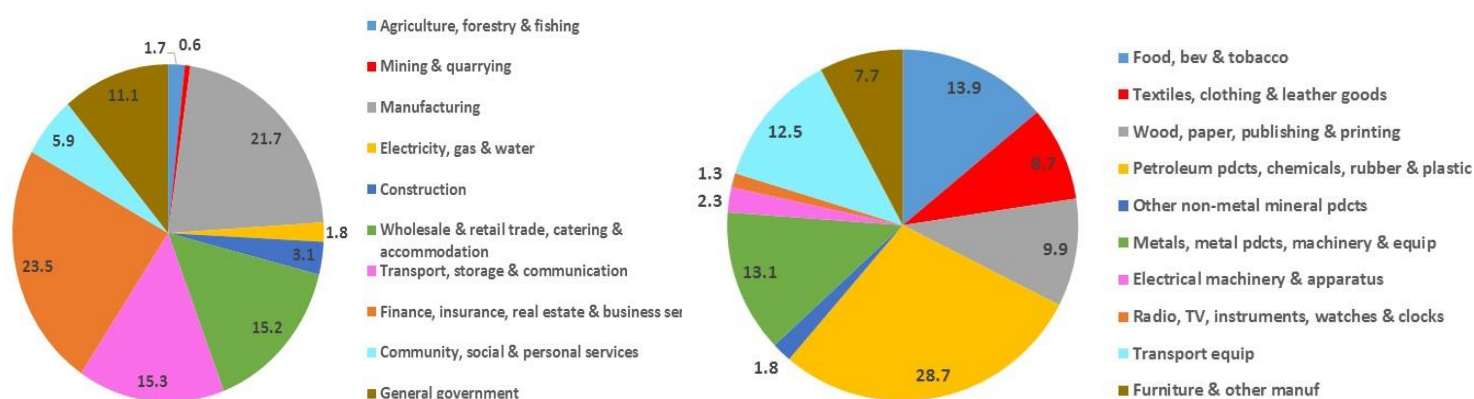
7.3.4.11 eThekweni

With its highly urbanized setting, eThekweni's agriculture is experiencing the fastest growth in KZN. A number of manufacturing sectors are experiencing a growth that is above that pre-crisis though furniture, which was more or less stagnant pre-crisis is now contracting. Textiles, clothing, leather and footwear are also stagnating. Construction growth has markedly slowed down. Many tertiary service sectors are growing but at lower pace post-crisis than pre-crisis. The fastest growing tertiary sector remains finance and insurance services however.

Finance, real estate and business services are important economic activities in eThekweni. Petroleum, chemicals and rubber products are the dominant sector within manufacturing in the Metro. Petroleum and chemical products have shown sound and sustained growth.

An automotive park together with various other projects has been the chosen hub option for eThekweni. The Metro Municipality has a strong automotive base and strong linkages between parts and components producers and OEMs already in place. Automotive has strong spill-over effects onto a range of other sectors and contribute to the development of more advanced technical capabilities.

Figure 140: Distribution of Economic Activities GVA by Main Sectors and Main Manufacturing Sub-sectors in eThekweni



Source: Quantec Database (2015) – Standardised Regional Dataset



7.4 Overview of KZN Economic Nodes⁸³

Economic activity in KwaZulu-Natal remains concentrated in three main centres, namely, Durban, Pietermaritzburg and Richards Bay. Below is an overview of these three economic centres.

7.4.1 *Durban*

Durban, which falls within the jurisdiction of the eThekweni Municipality, is South Africa's third largest city after Gauteng and Cape Town respectively. Durban is the biggest city on the east coast of the African continent, covering a land area of 2,292 square kilometres. The city of Durban is connected to the other major economic hubs of South Africa, namely, Pietermaritzburg and Richard's Bay in KwaZulu-Natal, and Johannesburg and Pretoria in Gauteng Province by road and rail. It is also connected to the latter by road. Durban is connected to these cities and to a number of other cities by air.

The other major economic features of Durban include:

- The largest and busiest port in Africa: As a result, Durban is a major importer of both raw materials and manufactured goods. Furthermore manganese, chrome ore, coal, sugar, and grain are exported through the city;
- A modern, world-class international airport;
- A world-class convention centre, which has hosted many international events and conferences. This centre has been voted the best in Africa at least six times. It is also amongst the top 10 in the world;
- A well-developed physical infrastructure; and
- A variety of other attractions ranging from busy shopping malls, to sunny beaches and gardens.

7.4.2 *Pietermaritzburg*

Pietermaritzburg in uMgungundlovu District Municipality is the capital city and administrative/legislative centre of KwaZulu-Natal. Situated approximately 80 kilometres north-west of Durban, Pietermaritzburg lies astride the N3 highway between Durban and Johannesburg. The N3 is the busiest development corridor in South Africa. Pietermaritzburg is the second largest city in KwaZulu-Natal. As a capital city, Pietermaritzburg has a strong services sector and is the central location for different inland towns and settlements in KwaZulu-Natal. The city is also host to many parastatals and government departments.

⁸³ Largely drawn from *KZN Investment Strategy (2011)*



Pietermaritzburg is a regionally important industrial centre and offers a wide range of products, including timber products, dairy products, footwear, and cloth. The city is also host to a large number of motor-component producers (15). Various types of motor vehicles and a truck brand are assembled in the city. Furthermore, Pietermaritzburg is also host to the main operations of one of the largest producer of rolled; extruded and other semi-fabricated and finished aluminium products in Africa.

7.4.3 Richards Bay

Richard's Bay is one of the fastest growing industrial areas in KwaZulu-Natal. It is the centre of operations for South Africa's aluminium industry operations, producing over 4% of the world's aluminium exports. All of South Africa's aluminium is produced at one of the world's largest smelters in Richards Bay and several of the world's industrial giants are also located in the city. The largest production facility for the manufacture of phosphoric acid in the Southern hemisphere is located in the uMhlathuze Municipality.

The city is located near large sugar cane and timber plantations. It is also located near conservation areas that are significant. Richard Bay presents itself as being an ideal location for light-medium, resource-intensive industry, agro processing concerns and tourism projects. Manufacturing is highly specialised and export-orientated, largely concentrated on basic iron and steel, paper and printing, as well as food and beverages. The sector is characterised by highly sophisticated manufacturing processes.

The large-scale industrial strengths of the uMhlathuze centre comprise a varied industrial base of coal terminals and aluminium smelters, coupled with an impressive number of industries including mining companies and paper mills, forestry, production of materials handling equipment, as well as fertilizer and special chemicals production.

The City of uMhlathuze is rich in mineral resources, including ilmenite, rutile, zircon and pig iron. The mining of these minerals meets all of South Africa's demand for titanium dioxide and zircon and almost all of the country's pig iron requirements. Other natural advantages are evident in the diverse and intensifying agricultural production of the sub-region which have resulted in linkages with numerous agro-processing industries.

The Richards Bay Coal Terminal, which is located in this town, is the largest coal handling export facility in the world. This terminal has been instrumental in securing South Africa's position as the second-largest exporter of steam coal in the world. Furthermore, Richards Bay Minerals is one of the largest sand-mining and mineral-processing operations in the world.

Richards Bay has one of the country's largest harbours. The Port is the largest deep-water port on the African continent. It imports and exports the highest volume of bulk cargo of all African ports and has double the capacity of the Port of Durban, handling in excess of 75-million tons of cargo annually. The bulk-handling facilities of the harbour are world-class and the trade links with international economies through the port have been the prime impetus for large-scale industrialisation in the area.

The Port of Richard's Bay is South Africa's premier bulk cargo handling port. The port is well situated to serve the KwaZulu-Natal and Mpumalanga coal fields, and has expanded into other bulk and break-bulk cargos including timber and granite from as far away as the Eastern



Cape and Northern Cape. The port handles in excess of 85 million tons of cargo per annum and is one of the few South African ports with the flexibility to expand with demand to become one of the largest ports in the world. Exports remain the main activity of this port.

The Richards Bay IDZ presents a number of opportunities for the expansion of industrial development within uMhlathuze. However, a number of constraints such as the high initial capital cost, environmentally sensitive areas, as well as high levels of existing pollution are reducing the potential of the IDZ to make a dramatic impact. The attraction of investment to the IDZ is of critical importance for growth and development of the region, not to mention the province.

7.4.4 *Summary of the City Economies*

KZN's current economic composition clearly indicates that economic activity is largely concentrated in the three abovementioned urban centres, with these cities dominating the share of provincial GVA.

This suggests that more needs to be done to establish or strengthen other smaller urban-nodes to distribute economic activity more evenly within the province, and create opportunities outside of these three leading cities – while at the same time, ensuring that investment into these existing economic powerhouses continues to support the growth and development of the province.

7.4.5 *Other Centres of Economic Activity in KwaZulu-Natal*

The map below illustrates the locations of the major economic activities in the KwaZulu-Natal Province, including those discussed above.



Figure 141: The District Municipalities and Main Towns/Cities within KZN



- In addition to the three main economic centres, there are a number of smaller economic centres that are generally supported by the surrounding rural and urban settlements.
- To the north-west of the province are Newcastle and Ladysmith, which both have substantial manufacturing capacity.
- On the south coast, Port Shepstone is an economic node that has a strong light-industrial sector as well as a significant trade and commerce sector.
- To the north of Durban is the iLembe District which has, more recently, experienced a substantial amount of investment in hotel properties and other high-end residential estates, retail, and office and light-industrial capacity.
- The Stanger town centre has a strong business sector as well as a fair amount of industrial activity.

7.5 Detailed Economic Sector Review

7.5.1 Agriculture, Forestry and Fishing

7.5.1.1 Overview

KwaZulu-Natal's agriculture, forestry and fishing sector is the smallest contributor to the provincial economy, still contributing about 4.4% to the province's GVA.

The sector has experienced a decline in its contribution to the provincial economy over a long period of time but the sector's relative contribution has remained stable over the last few years, at least prior to the recent drought that is severely affecting agricultural production. Moreover, KZN has been doing better than South Africa as a whole in terms of the expansion of the sector. Agriculture, forestry and fishing in KZN is the leading contributor to the national output in this sector, with a contribution of 29.4%. This excludes the sector's economic contribution through Food and beverage and through Wood and paper in manufacturing.

In terms of the relative contribution of agriculture, forestry and fishery, it is worth noting the dominance of agriculture. Forestry would only account for a small proportion of the value of economic activities of the sector as a whole given that, nationally, it only contributes in its primary form to 0.6% of South Africa GDP and to about 9% of total agricultural GDP.⁸⁴ However, the sector remains important given that: (i) it offers employment in rural areas where jobs are scarce; and, given that (ii) the skills required by the sector tend to be low.

While there is little evidence of significant fishing activities in the province, there is some fresh water species aquaculture activities currently occurring in the province. Some fishing tourism also takes place, including trout fishing in river streams. Aquaculture might have peaked in 2008 in South Africa (on the basis of information by the national Department of Agriculture, Forestry and Fisheries dating from 2011 – DAFF, 2011) and it is a small economic sector nationally dominated by the Western Cape; the sector would account for less than 2% of the value of all agricultural activities in the province though the province does export fish products (with increasing value in current Rand terms since 2009).

Aquaculture is a sector that is being carefully scrutinised under operation Phakisa that is currently setting a growth of aquaculture production by 6.5% per year.

Having set some key aspect of agriculture, forestry and fisheries, the province's agricultural sector remains focused mainly on the following:⁸⁵

⁸⁴ These are values expressed in real terms with nominal value deflated by consumer price index (with CPI index for 2012/13 = 100). See http://www.forestry.co.za/uploads/File/industry_info/statistical_data/Oct%202015%20-%20South%20African%20Forestry%20&%20Forest%20Products%20Industry%20Facts%20-%201980%20-%202013%20%28PDF%20version%29.pdf, accessed December 2015.

⁸⁵ This is according to TIKZN.



- ✓ **Crops:** Sugar and maize though new projects have progressively emerged towards higher value added crops such as soya beans and chicory with the production of these crops expanding and / or taking off;
- ✓ **Horticulture:** Sub-tropical fruits especially pineapples and bananas, cashew nuts, potatoes, and Vegetables;
- ✓ **Animal Husbandry:** Beef, sheep (mutton and wool), pigs, poultry with dairy farming expanding and offering good prospects in the Province.

In terms of the key trends on agriculture production, the province has experienced some production increases - at least towards the end of 2010 - though there are crop specific price (absolute and relative) and weather effects in the trends:

Table 78: Commercial Production of Selected Crop for Selected Years (1000 tons)

	Maize	Soya Beans	Sunflower Seeds
2006/07	359	45.1	110.0
2007/08	489	44.0	300.0
2008/09	521	75.6	298.0
2009/10	524	73.5	175.2
2010/11	450	92.0	310.3
2011/12	516	81.6	172.5

Source: Department of Agriculture, Forestry & Fisheries (2013) "Abstract of Agricultural Statistics".

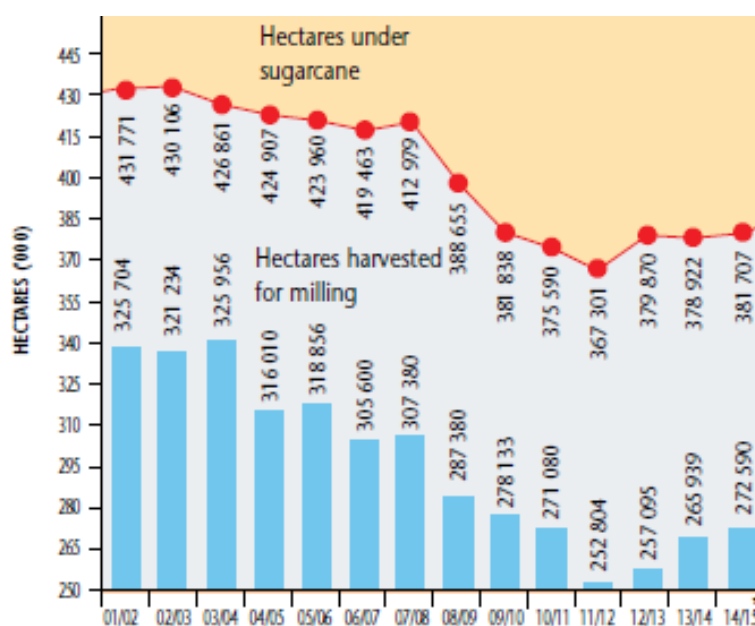
7.5.1.2 Sugar

In the case of sugar, a major agricultural production crop in KZN:

- there has been a progressive decline in the total area under sugar crop from the mid-2000s but which accelerated from 2007/08 onward to become stable over the last 5 years;
- The area harvested for milling has, in contrast, somewhat increased in the last 5 years however:



Figure 142: Total Sugar Cane Crop Area (2001/02 to 2014/15 estimates)



Source: SASA, Facts & Figures - <http://www.sasa.org.za/>, accessed January 2016.

Sugar is an important, albeit vulnerable, economic sector – it is a R12 Bio industry directly employing around 79 000 people (equivalent to about 11% of the workforce in agriculture according to the South African Sugar Association (SASA)). An extra 7 000 people would be in the sugar milling sector.⁸⁶

However, the sector is confronted to:

- subsidies put into place in other countries that cause over-production and that depress international sugar prices;
- Moreover, barriers to entry (e.g. high import tariffs and/or restrictive import quotas) are in place in some major markets, including to protect the developing countries through preferential arrangements.⁸⁷

Nevertheless, around 40% of production is exported⁸⁸ to a range of countries (including in Asia) but sales to Southern African Customs Union (SACU) countries⁸⁹ dominate and have tended to

⁸⁶ A total of 14 sugar mills are in South Africa, including 2 in Mpumalanga.

⁸⁷ Positively, import quotas against sugar are to be dismantled by the EU in 2017.

⁸⁸ The sector is a net exporter and export proceeds are redistributed under an equitable export obligations scheme that is guided by the Sugar Act and the Sugar Industry Agreement.

⁸⁹ Botswana, Namibia, Lesotho and Swaziland are SACU members.



grow over time until these became comparatively stagnant in the last 5 years. Most (almost 80%) of the sugar produced in South Africa is sold onto SACU markets.

The sugar sector is currently supported by government. Protection takes two forms: a tariff protection of the domestic market that comes into place when international sugar prices are low – to prevent an import surge; and a SADC sugar cooperation agreement that protects the SADC region against external imports as well as supports cooperation between SADC sugar producing countries so that these economies can develop competitive sugar industries regionally.

Of note in terms of the sector's contribution to rural development, outside its job creation role, are the following facts:

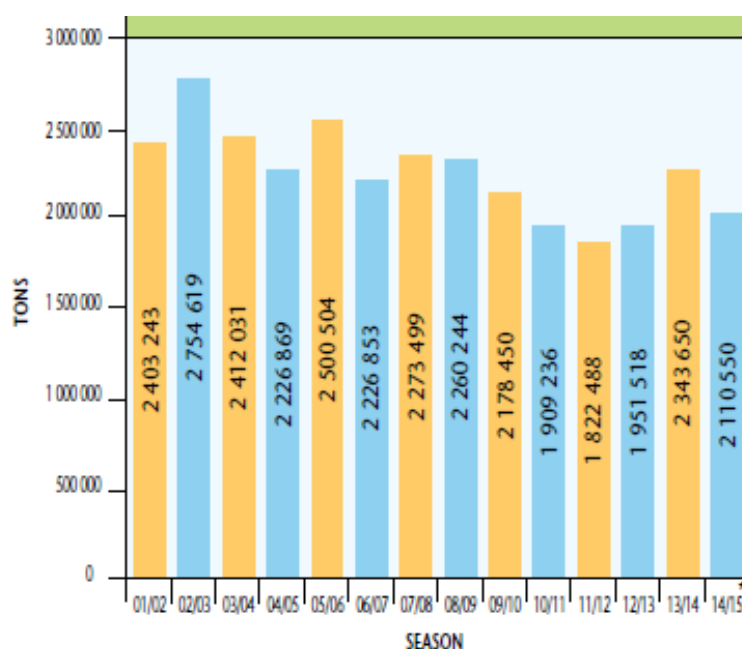
- Firstly, the sector has a large number of small growers – more than 21 000. These small growers provided, in the 2014/15 sugarcane crop year, almost 9.5% of all the total sugarcane crop production in South Africa;
- Although there are over 1 300 large scale growers, almost one-fourth of those are black emerging farmers;
- The milling companies that have own estates produced around 7.9% of the crop in 2014/15.
- A land reform entity (Inkezo Land Company) has been set up to help reach the target of 30% of freehold sugarcane land to be under black ownership in 2014. The company has numerous support and facilitative roles and functions but it notably provides pre- and post-settlement support as well as support to small scale farmers on tribal land.
- The sugar sector supports increased ownership of black people in the manufacturing segment of the sector.

Sugar yields from sugarcane crop are perceived to be declining.⁹⁰ While researchers are still looking at data to properly confirm this, sugarcane production is affected by rainfall levels. Noting weather effects, sugar production in South Africa, with the bulk of sugar produced in KZN, has been displaying a slightly downward trends since 2001/02. This is illustrated by the figure below.

⁹⁰ A particular growers' payment mechanism (that is "recoverable value") that is in place at the mills since the early 2000s is considered to incentivise improved sugar yields of sugar cane production moreover.



Figure 143: Total Sugar Production in South Africa (2001/02 to 2015/15 estimates)

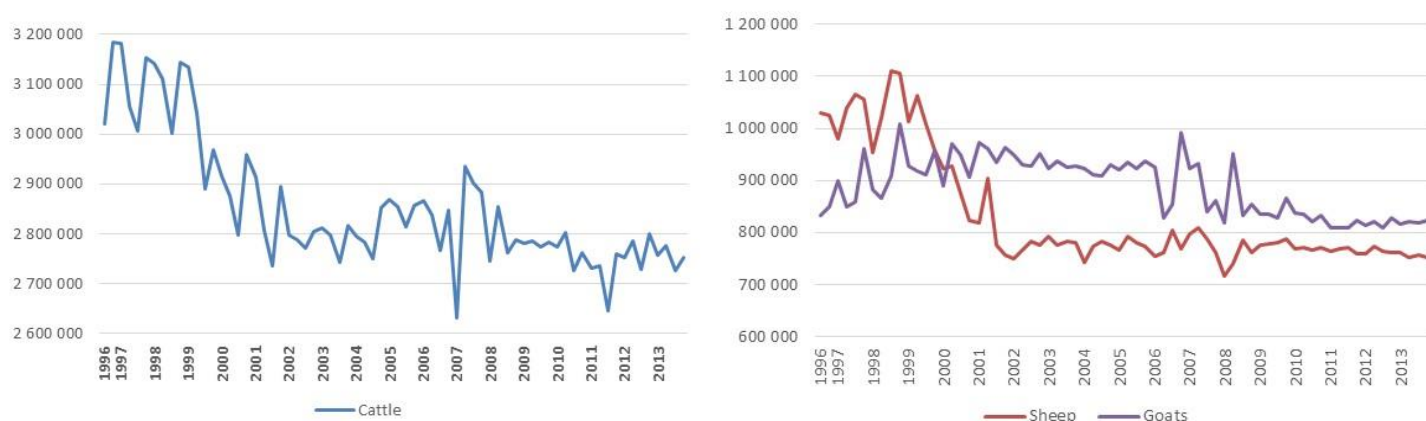


Source: SASA, Facts & Figures - <http://www.sasa.org.za/>, accessed January 2016.

7.5.1.3 Livestock

Shifting attention to livestock reveals a relative stagnation with regards to the main livestock in KZN:

Figure 144: Selected Livestock Growth Trends



Source: KZN Department of Agriculture and Rural Development, Livestock Statistics (extracted on line in December 2015)

The trend of a stagnant livestock seems to also have been experienced by other provinces of South Africa as KZN has maintained its share of livestock in the total livestock of South Africa:



- KZN share of all of South Africa's number of cattle has remained stable at around 19%-20% since 2010;
- The province's share of all of South Africa's sheep has been stable at around 3% though the share slightly dropped from 3.1% of the total 5 years ago; its share of goats has also been stable at around 13.2%-13.5%.
- Although pigs are small portion of the total livestock, KZN has around 10% of South Africa's pig stock.

In parallel, the number of milk producers has progressively declined in the Province, though this decline has been observed everywhere across South Africa. As such, relatively, KZN has become a much more important milk producing region, currently accounting for almost 27% of national milk production:

Figure 145: Milk Producers & Milk Production in KZN

Province	Jan '08	Jan '09	Jan '11	Jan '12	Jan '14	Jan '15	Aug '15
Western Cape	815	795	683	647	529	533	515
Eastern Cape	407	387	314	283	264	262	256
Northern Cape	34	37	28	21	25	14	16
KwaZulu-Natal	373	373	323	322	281	267	262
Free State	919	884	601	535	389	328	281
North West	549	540	386	352	233	222	191
Gauteng	228	217	127	126	109	100	98
Mpumalanga	302	286	201	164	117	94	92
Limpopo	38	32	23	24	14	14	12
TOTAL	3 665	3 551	2 686	2 474	1961	1 834	1728

Province	% Distribution of milk production	
	Dec 1997	Oct 2014
Western Cape	22,9	26,8
Eastern Cape	13,8	27,7
Northern Cape	1,2	0,8
KwaZulu-Natal	15,7	26,8
Free State	18	7,3
North West	12,6	4,2
Gauteng	4,4	2,3
Mpumalanga	11	3,3
Limpopo	0,4	0,8
TOTAL	100	100

Source: SA Milk Producers' Organisation Statistics, *LactoData*, Vol. 18, No. 2, November 2015.

- The Provincial Department of Agriculture and Rural Development is currently looking to improve livestock production in the province;
- It is also set to increase production as well as productivity in prioritised areas and value chains given that the growth of food and beverages rely on a growing agricultural base. Opportunities in the transformation of raw products for further processing are, in beverages, with fruit juices, craft beers, wine and spirits. In food, further processing



opportunities are around snacks, ready meals, dairy and organic products, gluten-free as well as vegetarian products. There has been specific investment in each of the aforementioned suggesting stronger linkages between agriculture and manufacturing in the province.

- Particular and separate opportunities are being unlocked in indigenous medicinal plants, specifically to increase the commercialisation and export of medicinal plant products. This sub-sector, which is worth R62 million in trade per year, a figure that is more significant than the annual maize harvest in the province according to TIKZN (TIKZN, 2015b) is currently traded informally, particularly in eThekweni Municipality. The Municipality has set up particular interventions in the sector to further promote value addition to this sub-sector.
- Finally, essential oils are also taking off in KZN though progress is still required on improving the quality standards of the oils produced. More broadly, national government, in the form of the Department of Trade and Industry is looking for beneficiation and commercialisation of Southern African plant (mega) biodiversity for the cosmetics sector.
- A particular large scale comprehensive project currently in place in KZN is that of the Makhathini Flats Project. Although the project is part of an integrated approach of collaboration between government departments, this project is set to boost sugar, cotton and vegetable production in the Makhathini area through major repairs to the infrastructure, notably that for irrigation for agriculture are first required for this to happen.

7.5.1.4 Forestry

For **forestry**, the following are key tree species in KZN: South African pine, black wattle, eucalyptus, and poplar.

- Forestry plays an important role in the economy and large plantations are found in the northern part of the province though the sector is affected by relatively stagnant planted area. Area under plantation, influenced by national legislation and water conservation efforts would have only increased by around 0.7% per annum over the long term (since 1980) in KZN. This is slightly above the equivalent 0.4% increase for the five main provinces under plantation and which are Mpumalanga, Limpopo, KZN and the Western and Eastern Cape provinces.
- About 40% of all tree planted area in South Africa would be in KZN.
- The industry reports decline in productivity in plantations from the mid-2000s.
- Timber production by the primary processors has remained stagnant across South Africa over a long period of time in volume terms. An expansion of timber production in KZN currently relies on afforestation plants that occurred in the late 2000s, and which are concentrated in the Zululand region with 15 000 jobs created with this project. Positively, at 2012/13 constant prices, timber production has increased by about 1.4% per annum since 1980. 'Chip mill residues' is the product that has seen the most significant increase in value.



- The pattern of trade in forestry products remains unbalanced in South Africa as the country is experiencing a trade deficit in paper production, a large trade surplus in pulp and a smaller surplus in solid wood products (Forestry SA, 2015).

7.5.1.5 Fisheries

In **fisheries**, currently a small sector in KZN, the following developments are to be noted:

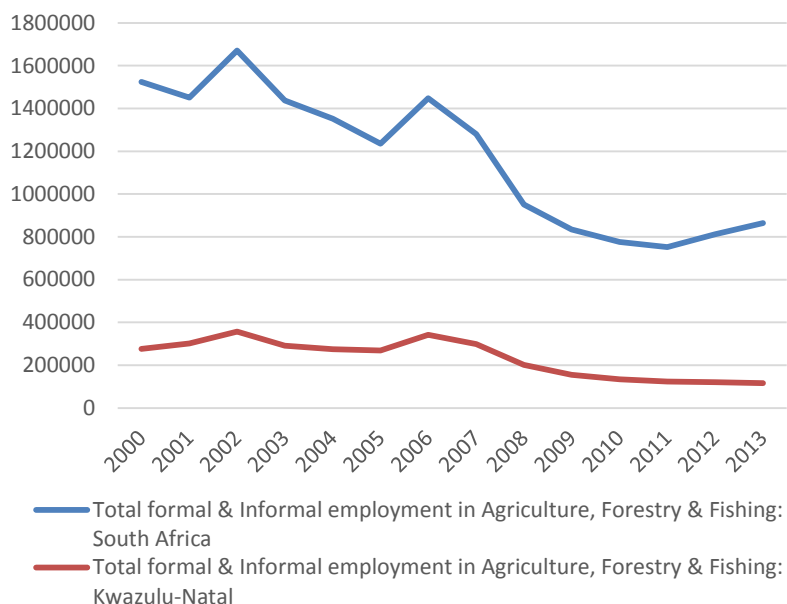
- The marine life is diverse in KwaZulu-Natal, and it makes sea-fishing a highly popular activity along the entire KwaZulu-Natal coastline. Fishing as a sport is set out as one of important reason why tourists visit the province.
- Currently, the local fishing industry is regulated by Marine and Coastal Management although total allowable catches are set with special provisions made for historically disadvantaged individuals. There is also a general policy on the allocation and management and policy of fishing rights (of 2013) though new draft policies relevant to the sector have been gazetted (e.g. on fishing rights). Noting these pieces of legislation, between 2% and 3% of all fish and aquatic invertebrate exports from South Africa are from KZN according to the national Department of Agriculture, Forestry and Fisheries. These exports would be predominantly from eThekweni and from Ugu. Yet, there are fluctuations over time in how much fish and aquatic products are exported over time however suggesting that businesses in KZN export as a response to *ad hoc* orders from abroad.
- A major project that is being set in motion is through operation Phakisa that is looking to unlock South Africa's Ocean potential. While operation Phakisa for the blue economy has many pillars, two projects are set for KZN in aquaculture:
 - Amatikulu kob aquaculture project with 20% of the initiative activities that are due now completed;
 - The sea cage farming of dusty kob in Richards Bay with 13% of the initiative activities that are due now completed.
- Other projects related to the sea that are of relevance to the fisheries sector are in terms of marine protection, that is, with services governance improvements.



7.5.1.6 Employment in Agriculture, Forestry and Fishing

Employment in the agricultural sector has been steadily declining at both a national and provincial level.

Figure 146: Formal and Informal Employment in Agriculture in South Africa and in KZN



Source: Quantec Database (2015) – Standardised Regional Dataset

- The graph above clearly illustrates the sharp decline experienced in agricultural employment since 2000 at a national level, with an approximate 58% decline in the total persons employed in agriculture between 2000 and 2013 in KZN (compared to a 43% decline for South Africa in that period).
- Employment in the sector has notably declined amongst those formally employed, particularly since the mid-2000s.
- Employment losses appear to have now stabilised somewhat.

It is believed that a major reason for the agricultural employment decline is linked to:

- The lack of value-adding to agricultural and other primary sector goods within the country and KZN in particular.
- Stagnant *labour* productivity in agriculture. Positively, *overall* productivity has increased (as evidenced in the fact that the sector is growing at a constant rate) but the productivity has been around better input use.
- Another possible reason for the decline in agriculture remains the large amount of land under the Ingonyama Trust Board (about 40% of the land within the province), and the lengthy process of negotiating transfer of this land for agricultural development



although the ITB has important projects in livestock, sugar cane, citrus, fresh produce and essential oils.

Positively, the deepening of linkages between the primary and secondary sectors is being addressed through enhanced transformation of raw agricultural produces but a main concern remains with food security. Rural transformation is pushed by national government moreover.

Employment in agriculture is currently being boosted by a number of initiatives:

- Agricultural co-operatives and small scale farmers are being supported (with skills development, training, marketing assistance) in the rural areas.
- Also, the crop massification programme (in place since 2009) encourages small-scale farmers to farm collectively as cooperatives on consolidated larger parcels of land. Another similar programme is in place for livestock moreover.
- Farmers have access to infrastructure and input support through the Comprehensive Agricultural Support Programme (CASP),⁹¹ a grant funding provided by the national Department of Agriculture, Forestry and Fisheries that helps provide post-settlement support to the targeted beneficiaries of land reform and to other emerging or commercial farmers/producers who have acquired land through private means. There is however insufficient funding to support new entreating black commercial farmers. Moreover, KZN Department of Agriculture and Rural Development (2015) notes that the grant model is an inadequate model of support.
- A small number of cooperatives have managed to secured government tenders. Others have successfully become directly involved with the private sector, including in placing orders with larger retailers (e.g. cut flowers), including with support from provincial government.
- The Provincial Department of Agriculture and Environmental Affairs is assisting commercial farmers to develop bridges with other types of farmers.⁹²

⁹¹ However delays on CASP funding (as transferred to some provinces) have been reported. (See for instance Department of Agriculture, Forestry and Fisheries / DAFF (2015) "Department of Agriculture, Forestry and Fisheries, Quarter 1 2015/16 Performance report", Presentation to the Portfolio Committee on Agriculture, Forestry and Fisheries, August 2015.)

⁹² This is carefully laid out in KZN Department of Agriculture and Rural Development (2015) which summarises the imperatives associated with a support to support the rural economy as articulated in the Medium Term Strategic Framework, the NGP, the NDP, the PGDS, the DRDLRD and the Agricultural Policy Action Plan. A number of key policy documents looked at in the report specify priority agricultural sectors, including commercial agricultural commodities. The programmes which are listed in the document for a process of agrarian transformation further



- The Provincial Department of Agriculture and Rural Development emphasises that agriculture offers an active labour market solution for young people with low skills.
- In the area of resource use the Department is more broadly focusing on the revitalisation of irrigation schemes and efforts to use water efficiently.
- Schemes by plantation and sugar farm owners to increasingly help support emerging farmers are in place although some of the new arrangements cannot help with extreme drops in production as these farmers are very vulnerable to weather changes and large fluctuations in prices.
- Notably a number of transversal initiatives are in place to enhance rural development (e.g. in tourism, infrastructure and housing development, small enterprise development, green economy, etc.).

7.5.1.7 Food security

- Currently, the highest numbers of those that are food insecure ('below the bread line') are KZN in South Africa. That is, a total of 3 million people in the province according to some estimates - or more than one third of the population of the province according to some other estimates - are food insecure though the factors that drive food insecurity are still being unpacked.
- The province has a number of schemes in place (including linking with community gardens) to help eliminate food security. Young children in schools are targeted through the relevant initiatives (including through the Expanded Public Works Programme and the National School Nutrition Programme).
- Also, as noted above the crop massification programme is in place that encourages small-scale farmers to farm collectively as cooperatives on consolidated larger parcels of land. The programme forms part of the 'One Village One Product' campaign, which focuses on ensuring that communities are empowered to produce to first meet their food requirements.
- The Provincial Department of Agriculture and Rural Development (DARD) has is focusing on helping those on communal land to cultivate and grow agricultural production. It is more broadly supporting small-holder production. The Department also provides implements and infrastructure as part of a broader food security and agrarian reform programme;
- However, having established that food security at a subsistence level has not enhance agricultural sector development, DARD is currently following a new approach of

include references to the growth of the agro-processing sector. Partnerships are generally critical for the purpose of implementing an Agrarian Transformation.



agricultural communal estate that has sustainable profitability objectives. DARD would fully support the relevant community investments.

- KwaZulu-Natal became a net importer of agricultural products that matter for food security over a long term period. Exports have declined in South Africa relatively to imports, at least between 1991 and 2011, contributing to the decline in employment in that period. However, exports remain at good levels in a number of key products in demand outside the borders in Southern Africa and beyond (e.g. in citrus, maize, apples and pears, and grapes) while importing rice, wheat, palm oil, poultry meat, and soya-bean oil-cake.
- There are Communal Property Associations (CPAs) in the province. These have a key role to play in rural development. However, there are some challenges in terms of their operations and issues of compliance: 317 out of 350 CPAs registered for KZN are currently not compliant (in terms of what is required of them with regard to constitutional requirements, provision of information or reporting, etc.).
- CPAs are also not ideal mechanisms for business operations.
- There are some successes with the cooperatives though the broader performance of agricultural co-operatives and their role in enhancing nutrition and helping alleviate food security is sparingly documented.
- The Provincial Department of Agriculture and Rural Development trains cooperatives to help them access market.

7.5.1.8 Land tenure issues

Land Tenure in KwaZulu-Natal continues to have a major impact on agricultural production and development within rural areas.

On this KZN Department of Agriculture and Rural Development (2015, p. 24) notes

... land reform has not gone the way it was initially proposed and many newly settled black farmers happened to be worse off after acquiring access to land Essentially due to the lack of a seamless alignment of both pre and post-settlement support services from the government and agricultural sector ...

Noting this outcome little data is available on the situation with regards to land claims, and no information could be found on how outstanding land claims have evolved in the last five years since the Communal Land Rights Act was struck down by the Constitutional Court in 2010, there have been outstanding land claims in the Province, at least in early 2013. Also, government appears far behind its initial target with only 9.2% of 82m ha (or a third of the initial goal to 2014) having been redistributed or restituted. Land claims remain – including on protected nature conservation areas - and the window to lodge land claims has been re-opened in 2014 with new claims to be lodged up to 2019.



Noting a lack of general data on land claims in KZN, the table below provides some information about land restitution between 1995 and March 2013.

Table 79: Land Restitution Statistics (1995 to March 2013)

Province	Claims	Households	Beneficiaries	Hectares settled	Financial compensation chosen	Hectares not settled	Total hectares
ECAPE	16 444	65 139	244 514	136 753	1 644 201 185	227 525	364 278
FSTATE	2 682	7 614	49 100	55 747	265 046 110	113 004	168 751
GAUTENG	13 324	14 320	67 208	16 964	674 381 918	10 382	27 346
KZN	15 161⁹³	85 421	500 524	764 358	1 871 176 249	103 438	867 796
LIMPOPO	3 641	48 492	245 091	603 641	486 827 620	502 836	1 106 477
MPUM	2 848	53 525	238 600	460 964	453 174 795	524 815	985 779
NCAPE	3 713	21 900	116 549	569 341	867 667 472	454 903	1 024 244
NWEST	3 737	44 268	216 668	399 407	374 195 368	40 343	439 750
WCAPE	15 784	27 411	125 730	4 140	954 449 479	15 283	19 423
RSA	77 334	368 090	1 803 984	3 011 315	7 591 120 197	1 992 530	5 003 845

Source: Politics Web (November 2013) referring to Land Claims Commission Statistics

The table indicates that about 20% of all restitution claims in South Africa would be in KZN but that about 28% of all land restitution beneficiaries would be in the Province. Also, 26% of the area claimed for restitution and that has been settled between 1995 and March 2013 was in the province. About 12% of the area in the province that was put forward for restitution had still not been settled in early 2013.

In terms of land surface, KZN had, in 2012/2013, a total of 1 483 141 hectares restituted and redistributed. This then amounted to 36.5% of 1996 commercial farmland. For purpose of comparison, 10.8% of 1996 commercial farmland was redistributed or restituted across the whole of South Africa. A relatively large area of formerly commercial farmland would have

⁹³ The figure quoted for mid-2015 in KZN Department of Agriculture and Rural Development (2015) is 15 237 claims.



been, as such, redistributed in KZN. Almost 16% of the land in KZN would have been redistributed or restituted as of 2013 (since 1995).⁹⁴

KZN Department of Agriculture and Rural Development (2015) reports that, since 1994, 549 401 hectares had been redistributed between 1994 and mid-2015.

The province has now a number of CPAs in place. Noting that CPAs are under-resourced, there are currently 350 CPAs registered in KZN with the Department for Rural Development and Land Reform. Of these, 318 are for redistribution; the others are restitution of land rights CPAs. KZN has a high proportion of redistribution CPAs when compared to other Provinces. No other information could be found on CPA operations.

7.5.1.9 Constraints & Opportunities in Agriculture & Forestry

Constraints to the Agricultural Sector

- Destruction of high value agricultural land;
- Indications that water use / irrigation system and water practices are sub-optimal.
- Issues around land use planning though these have been clarified together with engagement with the parties on the ground by the KZN Department of Agriculture and Rural Development.
- There is also some uncertainty with regards to agricultural expansion and development by external parties on TA land with issues of engagement across parties to help enhance agricultural production, food security and to improve land quality, particularly as land that is degraded cannot be restored to its initial state;
- Food security remains a serious challenge in the province;
- Insufficient production on small scale and lack of small-scale agri-industries compounded by wrong varieties produced for raw product processing purposes; and,
- Lack of economies of scale by small and medium scale producers; and,
- Limited skills development in the agricultural sector, particularly in forestry;
- Inappropriate funding and finance for entrant farmers;

⁹⁴ Of note is that KZN has seen a decline in commercial farm numbers since 2002, declining from 4038 farms to 3574 farms by 2007 (DAFF, 2013, Abstract of Agricultural Statistics). However, levels of absolute production have not followed a similar decline across the board. No recent data could be located on the current number of commercial farms in KZN.



- Migration by the youth to urban settlements; and,
- Lack of evaluation of the performance of agricultural cooperatives with issues in access to funding still prevailing for infrastructure development that would directly impact on the sector;
- A lacklustre growth of food and beverages as well as of wood and wood product activities in KZN in the recent past.
- In turn, international competition remains with the subsidisation of most international farmers, including in BRIC partner countries (see OECD, 2015);
- Uncertainty around AGOA as a major issue for meat/poultry which reflects intense competition in some agricultural sub-sectors outside South Africa as well as dispute over the "right" sanitary and phyto-sanitary standard;
- Net-import of agricultural goods due to highly specialised mono-cropping practices abroad; and,
- The use of sanitary and phyto-sanitary standards as protection against exports from KZN and elsewhere in South Africa.
- The recently introduced tax on sugared beverages might dampen demand for sugar.

Opportunities in Agriculture

- Rapid unlocking of Agri-parks and strong support to those. Importance of partnerships furthermore emphasised for these parks to operate effectively;
- Identification of commodities by the KZN Department of Agriculture and Rural Development of the commodities (crops and livestock) that are suitable for each KZN District Municipality.
- Identification of the principles underlying agrarian transformation in KZNN;
- Identification of the business model options and selected focus for the development of agro-processing;
- Agro-industry development through beneficiation activities (notably dairy, bio-fuels, timber and sugar) and involvement with commercial farmers to help set up bridges across farmers;
- New high value agriculture exports – agri-hubs and processing hubs at key points like the Dube Trade Port with spillover effects.
- Raising export standards through the agri-hubs;
- Supporting rural development and small-scale agricultural activities to retain and grow the rural agricultural skill base and rural agricultural output;



- Development of agri-villages following their conceptualisation in 2009 as a response to a deficient delivery of rural services. Agri-villages are sustainable rural settlements (new or as existing) that have a key role to play in alleviating food insecurity;
- In parallel an access to finance programme is been set up in the province for small rural economic actors;
- Development of commercial communal estate with strategic partners;
- Creating access to local and international markets for all farming operations and co-operatives;
- Aquaculture development;
- Some diversification towards particular agricultural produces that have a strong impact on income (e.g. from sub-tropical fruit production).
- Continued support to black commercial farmers and reform projects undertaken by the Agribusiness Development Agency (ADA);
- The development of a number of programmes to help develop the rural areas holistically (e.g. Revitalisation of Small Rural Towns, Rural youth based skills development and job creation programme through the National Rural Youth Service Corps, etc.).

7.5.2 *Manufacturing*

KwaZulu-Natal's manufacturing sector (21.3% of national manufacturing GVA) is the second largest in the country, after the Gauteng Province (40.2% of national manufacturing GVA).

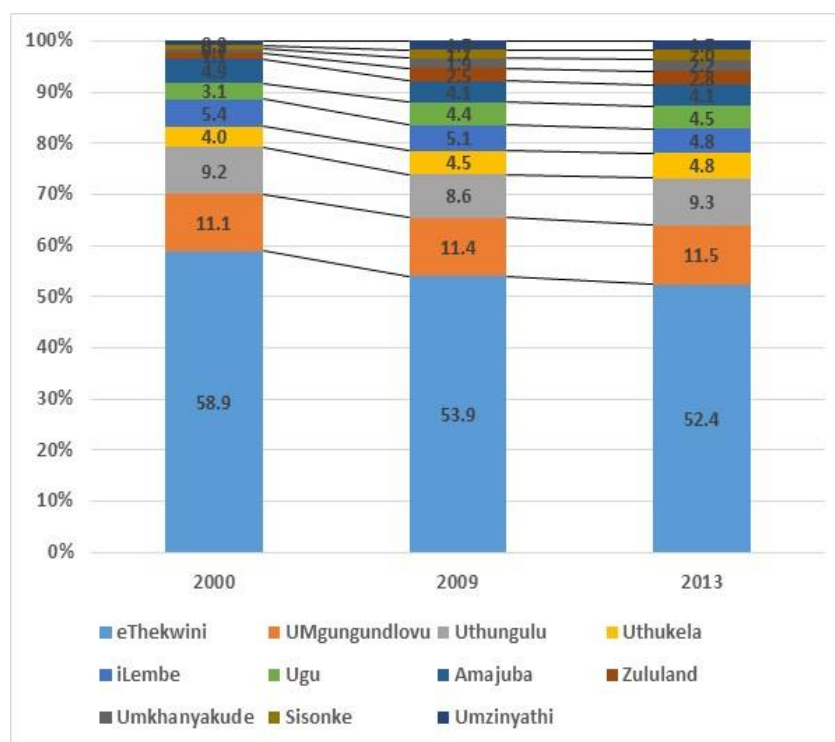
The manufacturing sector is geared for export, with about a third of South Africa's manufactured exports from KwaZulu-Natal.

The diversified nature of manufacturing is significant in the province's economic growth, and generates approximately 11% of total formal and informal employment in the province and 14% of formal employment.

- The manufacturing sector is the largest component of the broader industrial sector of KwaZulu-Natal. As the largest economic sector in KwaZulu-Natal, the manufacturing sector contributes a steady 21.3% to its GVA.
- The potential for further development in the province's industry and manufacturing sector is anchored by the nodes of eThekweni and Umhlatuze. The corridors between these two nodes and extending up to Howick form the primary zone of industrial development in the province though industries are increasingly present in other regions.
- The cities of Newcastle, Ladysmith and Port Shepstone serve as important secondary nodes of industrial development potential.



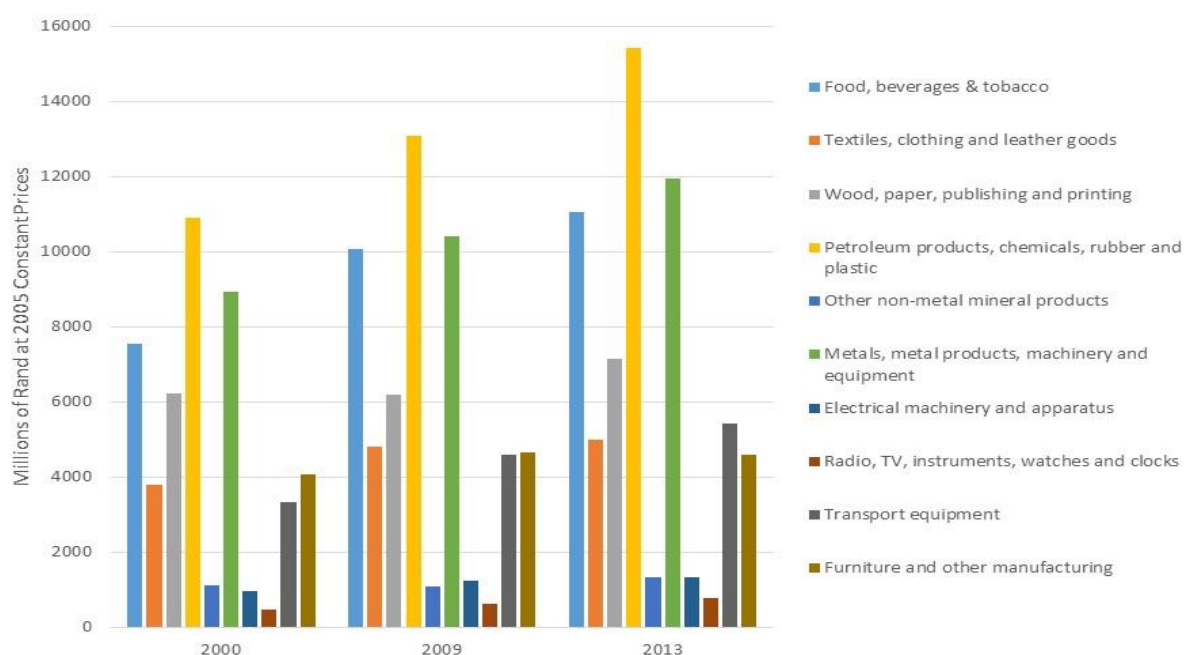
Figure 147: Change in the location of manufacturing activities across KZN Districts



Source: Quantec Database (2015) – Standardised Regional Dataset

The graph below shows the levels of gross value add (GVA) in the province which indicates the intrinsic levels of value-added to the provincial economy.

Figure 148: Manufacturing GVA in KZN



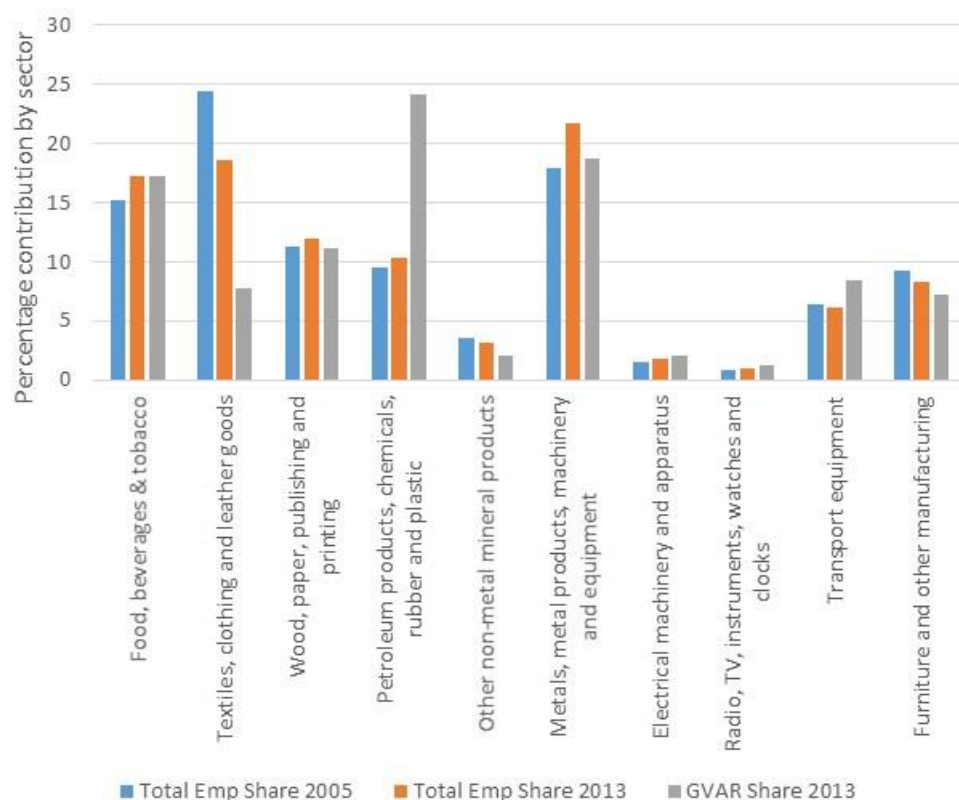
Source: Quantec Database (2015) – Standardised Regional Dataset



- Petroleum products, chemicals, rubber and plastics dominate, account for 24% to total value added in the manufacturing sector.
- The next largest grouping of GVA is metals and machinery production at 19%, and food, beverages and tobacco production at 17% of total value added.
- Sub-sectors that contribute less to the province's GVA include motor equipment though this has grown faster post-crisis than when compared to prior to the crisis. The South African vehicle-manufacturing industry has created a considerable multiplier effect in component and service providers. An outstanding feature of transport equipment is that the sector has grown in spite of severely adverse conditions.
- Wood, paper and publishing, which account for 11% which accounts for KZN's value addition has managed to grow faster post-crisis than compared to the crisis.

The Figure below shows the contribution of each manufacturing sector to total GVA in 2013 and to total (formal and informal) employment in KZN in 2005 and in 2013.

Figure 149: Contribution of Manufacturing Sectors to GVA and to Employment



Source: Quantec Database (2015) – Standardised Regional Dataset

- Employment is concentrated in Metal, metal products, machinery and equipment, in Textiles, clothing, leather and footwear and in Food, beverages and tobacco.



- The situation in Textiles, clothing, leather and footwear characterised by relative stagnation suggest that attention should be paid onto the economic situation of those employed in the sector as this is a sector that has low skill and capital requirements.
- About 41% of those employed in Textiles, clothing, leather and footwear would be currently informal.
- About 16% of Metals, metal products, machinery and equipment employment would be informal. Another 13% would be in Food, beverages and tobacco. In other words those that are engaged in some growing sectors would be informal.
- A growing proportion of people are informally employed. Together with more short term duration contracts reported for South Africa, those employed are increasingly vulnerable.

Noting important fluctuations over the years in the physical volumes of manufacturing production, KZN Provincial Treasury finds that production volume indices for the sector in KZN have improved between January 2009 and August 2013 before declining slightly. However, volumes of production grew again at the end of 2015.

Constraints in the Manufacturing Sector

The recent trend within almost all to the abovementioned industrial centres has confirmed a declining manufacturing base in South Africa. In KZN, manufacturing remains constrained by:

- A shortage of zoned and serviced industrial land although lands is available for particular investors, including foreign investors and all hubs are now at the phase of looking for tenants and/or negotiating sites;
- Inconsistency and cost of bulk services; moreover, the cost of service provision is high in some Municipalities. The quality of service provision also varies across Municipalities which would affect the performance of manufacturing in some parts of KZN.
- Lack of seamless logistical networks;
- Great distances between where those who work reside and where they work;
- High cost of capital and relatively rigid – by international standards - labour arrangements;
- Lack of information on localisation and beneficiation opportunities;
- Still limited progress on the buy local campaign;
- Out-migration of skilled persons to other cities but namely to Johannesburg and to Cape Town.
- Low levels of export from local industry and, recently, limited uptake of the currency depreciation effect to secure new orders from outside South Africa's borders. These suggest that firms in the province confront difficulties in engaging with foreign buyers /



marketing their goods abroad though (i) logistics costs are very high in South Africa by international standards and (ii) international competition is intense in many manufacturing sectors present in the province;

- Difficulties in KZN products in breaking onto BRIC markets where aggressive industrial and/or SMME policies are being pursued; and,
- Government funding has run out for some support programmes.
- Finally, the cost of doing business remains high (in South Africa and in the main cities of the province where such costs have been documented).

Opportunities in Manufacturing

The following potential opportunities towards promoting change in the manufacturing sector can be identified:

- Areas with excellent provision of zoned and serviced industrial land; moreover government is revamping major state-owned industrial estates, including three in the province;
- Clearly defined industrial hubs and strategies around hub development; and, progress on the hubs;
- Development of coastal-based industries such as the Richards Bay IDZ;
- Effective and focused foreign and domestic investment promotion;
- Effective export promotion;
- Cluster developments that are proving successful (e.g. chemical, fashion); and,
- support to firms to help reduce capital inputs costs through the IDC;
- Competitiveness support measure in place;
- Promotion of knowledge and innovation sectors;
- Emergence of large businesses, including foreign firms in the Green Industries; and,
- Support of large and small domestic firms through the Black Industrialist programme and through miscellaneous domestic policies (e.g. procurement);
- Localisation policy in place.
- Generally an environment that offers a wide range of support to firms as well as strong support through a well-established national industrial policy (and related industrial policy action plans). Particular initiatives (e.g. the tooling centre of excellence) are focused on the strength of particular areas and sectors of the province.



7.5.3 *Tourism*

The Tourism industry is a key contributor to development in South Africa and in the KwaZulu-Natal economy. Tourism is a varied sector that can be developed instrumentally for the development of more remote or under-developed rural areas. Generally, the sector is directly important because of its labour intensity and because it requires relatively little skills and can accommodate relatively low levels of education. The sector also has linkages with a number of other sectors such as food and beverages in manufacturing, construction, and transport and finance services amongst others. In turn, prospects for tourism rely on the state of various forms of transport as well as of the road and tourist infrastructure.

South Africa has developed excellent standards for international tourists and KZN is particularly attractive to domestic as well as to international tourists in terms of its assets. The province's tourism attractions, which are increasingly known internationally as the province is being well marketed through international media, are outstanding. Aspects of KZN that are attractive to tourists are:

- The coastal holiday areas;
- Sunshine, boating, surfing and fishing;
- The wildlife game parks, in the northern part of the province;
- The historical battlefields;
- Two World heritage sites have been declared recently, namely, the Greater Lucia Wetlands, and Park, and uKhahlamba/Drakensberg Mountain Reserve.

Below is a Map of the main tourism regions within KZN (Map 44).

The tourism products of provincial importance are:

- Arts & crafts routes in Midlands Meander and Albert Falls Amble;
- Durban, south coast and north coast beach tourism linked to cultural tourism in the interior;
- The Drakensberg region;
- iSimangaliso Park;
- Game Parks of the North Coast;
- The Zulu Heritage & Cultural Trail; and,
- The Battlefields Route.



Map 44: KZN Main Tourism Regions



Source: TKZN (2014) *Statistics of Our Tourism Sector 2014*.

In KwaZulu-Natal, tourism is assessed to contribute to around 5% of the KZN GDP. The sector's contribution stands at around R39.3 billion in terms of total contribution and at around R28 billion in terms of *direct* contribution to the provincial economy.

The province currently attracts about 850 000 foreign visitors and 6.39 million domestic tourism trips⁹⁵ on an annual basis. The numbers are currently markedly down to what they were a few years ago with expenditure on travel having declined since the crisis. This is a challenge for the job creation target sets in the Tourism Master Plan going forward.

⁹⁵ Data from the *Domestic Tourism Survey* from Statistics South Africa aggregating day and overnight trips though a tourist for StatsSA is defined as a person who at least stays one night in a location other than home. Both StatsSA and South Africa Tourism conduct surveys but the focus of these two surveys is different.



There are two broad main types of tourist, those coming from overseas and those coming from South Africa and who choose KZN as their travel destination. However, noting that the tourism market segmentation is complex, Tourism KwaZulu-Natal (TKZN) has in place different strategies to target tourists from different overseas regions.

Focusing on foreign tourists:

- Overseas arrivals to South Africa have been declining markedly post-crisis (including following changes to the visa requirements) but KwaZulu-Natal is still visited by approximately a third of all South Africa's international air arrival visitors. There has been relatively little change to this proportion from 5 years ago.
- Surveys indicate that foreign visitors spend, on average, 8.5 nights in South Africa, slightly up from 5 years ago and twice the average of a domestic tourist (TKZN, 2014).
- Most foreign tourists are recorded to come from the Southern African region. About 38% of all foreign tourists in the province would be from Swaziland and Zimbabwe ;
- Well below the share of tourists from Southern Africa are tourists from the United Kingdom, then the USA and the main overseas markets that are the UK and Germany are important source market (6.5%, 6.2% and 5% respectively in 2013) though there has been a marked decline in tourist numbers from these regions between 2014 and 2015 (SAT, 2015). There have been methodological changes to what is being captured by SAT in the data prior and after 2014 however.
- Australia is another source market;
- Notably, however, 3.2% of all foreign tourists would be from India.
- In KZN the average international tourist night stay is lower than the national average, at 6.8 nights. This is because foreign tourists and tour operators typically include in trips what is regarded as the core icons in a typical South African itinerary such as Cape Town, the Garden Route and the Kruger National Park.

In terms of domestic tourism, recent surveys indicated that:

- KwaZulu-Natal remains the most popular destination of all provinces, capturing around 12% of all domestic tourism trips in the country (on the basis of an overnight stay, StatsSA, DTS 2014).
- KwaZulu-Natal has however seen a slightly lower share of the domestic tourist market in terms of trips with overnight stay between 2014 and 2015 (15.3% and 14.7% respectively).



The table below reports the destination of foreign tourists within KZN with region defined by the tourism agencies.

Table 80: KZN Tourist Destinations by Foreign Tourists, 2013

Durban	70.4%
Pietermaritzburg/Midlands	5.3%
Zululand	5.2%
Drakensberg	2%
Elephant Coast	5.2%
North Coast	0.7%
South Coast	0%
Battlefields	1.9%

Source: TKZN (2014) *Statistics of Our Tourism Sector 2014* referring to SAT data

- Besides Durban, the Zululand and the Elephant Coast regions are the main destinations visited for foreign tourists.
- The activities which are undertaken by foreign tourists vary depending on whether the tourist is from Africa (coming to KZN by land or air) or from the rest of the world.
- Focusing on visitors from regions other than Africa, then:
 - A mix of motives ranging from visiting national attractions, shopping, etc. is reported by around 60% of such tourists as activities which they have undertaken.
 - Almost 53% of such tourists report having been to the beach; 39% report having gone on wildlife activities.
 - 20% of foreign tourists are involved with business activities whilst in KZN.
- Tourists from Africa:
 - Prioritise nightlife and shopping activities;
 - Yet, almost 50% of such tourists have been involved with beach activities during their stay in KZN.
 - 37% of those who come from Africa by air are in KZN on business activities.
- With shopping and a range of other activities important to foreign tourists, foreign tourists contribute to the economic development of the province but particularly directly to the trade (that is wholesale and retail) activities;
- Beach activities are important to foreign tourists, an important aspect of tourism for the coastal municipalities in KZN. As coastal areas remain under-developed, the KwaZulu-

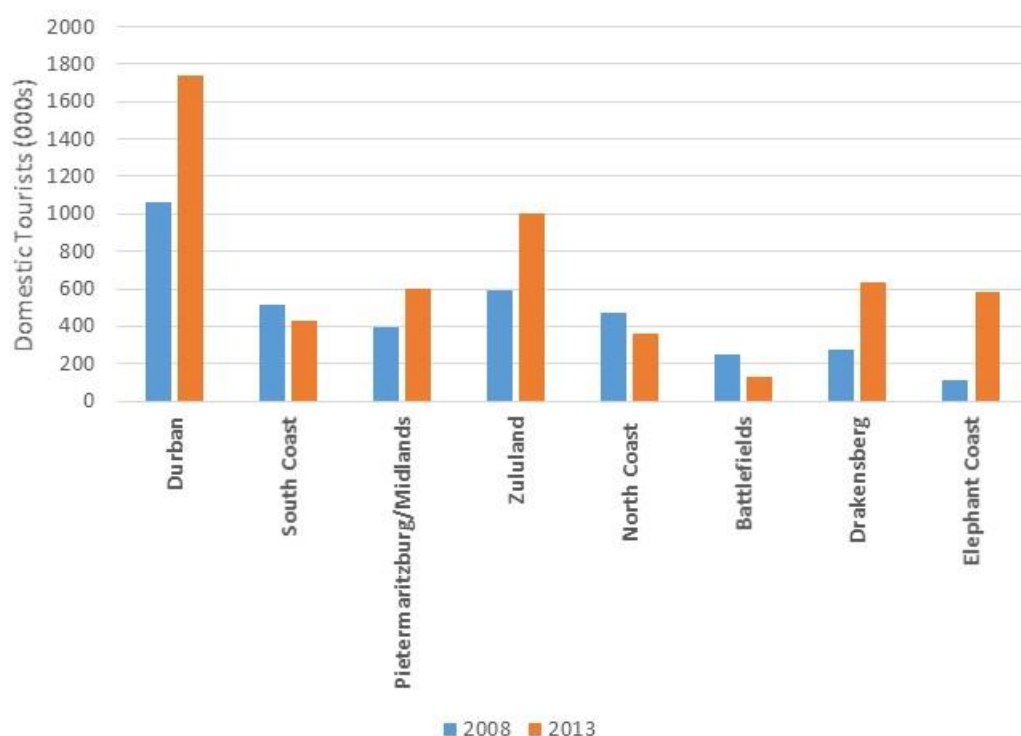


Natal coast will continue to draw tourists for many years to come due to its beaches, excellent weather, golf courses and shopping facilities.

- Business activities reflect the success of the MICE (Meetings, Incentives, Conferences and Exhibitions related to the events industry) activities that are being expanded in KZN, particularly in Durban. It is also a sign of KZN's growing integration with other foreign economies.

The figure below reports the destinations visited in KZN by domestic tourists.

Figure 150: KZN Destinations by Domestic Tourists, 2008 & 2013



Sources: SAT (2009) for 2008 data and TKZN (2014) *Statistics of Our Tourism Sector 2014* referring to SAT data for 2013

- Durban is the most visited destination by domestic tourists in KZN followed by Zululand and the Drakensberg and the Elephant Coast.
- Durban has, as a domestic destination, expanded markedly though:
 - domestic tourists are predominantly from KZN followed by Gauteng; and,
 - the purpose of visits of domestic tourists is dominated by visits to friends and relatives (72% of all visit purposes reported). Domestic tourists are engaged with a range of activities however while on such visits.
- The number of domestic tourists to Zululand has grown markedly but The Elephant Coast and the Drakensberg are the KZN regions that have experienced the most pronounced increases in the number of domestic tourists to these areas – tourist numbers to these areas have more than doubled between 2008 and 2013.



An overwhelming number of domestic visitors preferred, in 2014:

- ✓ The beach (83% markedly up from 53% in 2008);
- ✓ Live sport events (33%, notably higher than 14% in 2008);
- ✓ Museums/galleries/historical buildings (30%, markedly up from 16% in 2008);
- ✓ Nature/wildlife/game reserve (24%).
- ✓ Live show/theatre/concert (26% significantly up from 12% in 2008);

Moverover:

- ✓ A range of other activities are mentioned as undertaken by domestic visitors while in KZN with a greater mix of activities progressively emerging over time.
- ✓ Of note is that around 21% of domestic tourists report visiting an African township or a cultural village on a tour whilst in KZN.
- ✓ 19% report attending a conference/workshop or training.
- ✓ Outdoor activities of the form of hiking or mountain climbing are reported by 16.5% of domestic tourists.
- ✓ Only 6% of domestic tourists report doing a tour of the battlefields.

In terms of strategy, with R880 per day spent by a foreign tourist compared to R210 per day spent by a domestic tourist, it is important to increase the number of foreign tourists. Moreover, because foreign tourists are more engaged with the more rural areas of KZN, such tourists are attractive from a development perspective.

The Province has engaged a number of drivers to increase tourism. These include:

- Expanding events including through public entities (e.g. TIKZN) to attract tourists from new source markets or to help grow the number of visitors from economically important partners (such as BRIC) in the province.
- A number of congress meetings that are attended by agents from all over the world (e.g. involving Travel Agent Federations) and direct large tourism Indaba events have been organised, including with support from the Southern African Tourism Services Association (SATSA). The Tourism Indaba that takes place in Durban every year is a major event in Africa with more than 8000 meetings having taken place between attending parties just prior to the last 2015 Indaba.
- Continued work on integrated packages while taking into account differences in demand. Joint marketing agreements with key outbound tour operators in key source markets have been put into place and joint marketing agreements have been set up.
- Standards continue to be raised and investments have been in new facilities in KZN. Training in the industry is also being improved.



- More critically is the fact that a number of new international flights (direct and indirect) are now operating from King Shaka International Airport. This is a success of the strategy of placing KZN at the Tourist Gateway to Africa.
- The strategy has been successful in terms of helping position KZN as a regional hub to other African countries.
- Cruise tourism has also grown from Durban while it is also set to benefit Richards Bay in the near future through a new passenger terminal.

Constraints within the Tourism Sector

- Tourism is a sector that is vulnerable to economic conditions. This makes it hard for those that operate in the sector to plan for and cope with downturns. This is an issue for the smaller operators in the industry that need to make a living.
- Competition in the tourism sector, because of the low investment requirements, remains intense with standards and standard expectations rising over time.
- Although the key attractors represent a quality tourism base, it still bears largely on beach attractions, natural environment and cultural tourism product and there is a significant need to not only diversify offerings in this sector, but also to better integrate the various products with each other at competitive prices.
- Nature tourism, albeit increasing in importance, is still relatively low.
- Eco-tourism opportunities are still poorly identified.
- A number of secondary economic nodes have poor, outdated tourism product meaning that tourism spending remains concentrated in particular areas within the province.
- Integration in terms of accessing other touristic countries in the region (e.g. Mozambique) is still required.
- Difficulties in increasing tourist numbers from some source countries such as China and Russia within BRIC which are currently top generators of tourists.
- Concerns remain with the lack of the spread of tourism benefits presented by this potential investment to impoverished communities, as well as expanding the geographical spread of tourism activities from the current attractors to the lesser known inland areas with significant tourism potential.
- Product diversification remains a challenge with the overwhelming purpose of visits of domestic tourists linked to visits to family and friends.



Opportunities in Tourism:

- Resort development;
- Struggle Heritage Tourism;
- Adventure Tourism;
- Capturing Local Emerging Markets with expenditure amongst those at higher living standard measure (LSM 8-10) increasing their total expenditure while on tourism trips;
- Development of Health Tourism though demand for this in KZN is still with foreign tourists from outside Africa;
- Promoting Better Universal Accessibility;
- Renewal and Differentiation of Tourism Products (especially for the South Coast);
- Rural Community Based Tourism development;
- Encourage KZN-loyal tour operators.
- Opportunities are generally being opened up given recognition of the sector as opening up important development opportunities nationally.
- In turn, a Provincial Tourism Committee has been set up to help assist municipalities develop tourism policies (amongst other). District and local tourism fora are being developed;
- A KZN Community Tourism Association is in place that plays a role in enhancing tourism products and information available to tourists.

7.5.4 *Finances and Business Support Services*

7.5.4.1 Finance Services, Financial Inclusion and Access to Finance

The South African banking sector has long been rated among the top 10 globally. All the major banking groups in the country, namely ABSA, First Rand Bank, Nedbank and Standard Bank, operate in various parts of KwaZulu-Natal. All of these banking groups have considerable assets, own retail distribution and electronic banking networks, which include internet facilities. They offer a wide variety of banking and financial services. In recent years, many foreign banks and investment institutions have set up operations in South Africa. A significant number of them have branches in KwaZulu-Natal, especially in Durban.

Additional to the commercial banks, there are a number of development banks and financial institutions that have been set up to provide funding and other financial assistance to investors. These include the Development Bank of South Africa (DBSA), the Industrial Development Corporation (IDC), The KZN Growth Fund, and iThala Development Finance Corporation though the latter had to engage with some turnaround strategy in the recent past.



A number of issues still remain in South Africa with regards to the banking sector and these are in terms of financial inclusion and access to finance though the two themes are related: access to finance contributes to financial inclusion that helps individuals or households deal with income shocks. The issue is one of a context of adults and households in South Africa carrying a high level of debt by international standards.

South Africa is fairly inclusive in terms of its banking arrangements with over 50% (as a lower percentage as the statistics vary on this) of adults with a formal banking account. South Africa fares, on this, better than the BRIC countries (BRICS excluding South Africa); good dedicated products are also available from the main banks to poorer customers.

Generally however, South Africa is displaying more unevenness or inequality in terms of financial account penetration than the BRIC countries. The issue in this regard is that a relatively high proportion of the poor, that is those in rural and traditional areas are financial excluded. With 39% of those in traditional areas and another 52% of those in urban areas currently financial excluded in South Africa the problem is important for the expansion of economic activities in the traditional areas and around the informal settlements and townships in KZN. Moreover, KZN has a number of people operating in the informal economy.

Table 81: Financial Exclusion in South Africa

	Number of excluded	
	2014	2015
Total	14% (5,358,463)	13% (4,850,520)
Urban	51% (2,743,221)	52% (2,533,153)
Farms	6% (340,752)	9% (437,627)
Traditional	42% (2,274,489)	39% (1,879,741)

Source: FinScope South Africa (2015) "Consumer Survey Launch Presentation"

A weakness of the South African financial sector is that it lacks, relatively, institutions that cater for those at the lower end of economic activities, that is for new small businesses and for informal businesses. That particular market is constrained, not only by the fact that the banking sector is concentrated nationally,⁹⁶ but also with the fact that it is more risky for the banks to provide services to those that lack collateral and financial recordings.

Where lending is available to the smaller business and entrepreneurs, loans are comparatively expensive. This dimension is one which the **dti** is seeking to address by its close partnership and work with the development finance institutions. Yet, the fact remains that private banks in South Africa and KZN are reluctant to use movable assets as collaterals. This is because there are risks associated with recovering a loan through such assets. In turn, the regulatory environment makes it relatively difficult to make room for the emergence of micro- finance

⁹⁶ The top three banks control more than 70% of the banking sector assets and the top five banks control more than 95% of these assets. However, smaller players (e.g. Capitec) have emerged and grown by investing in the retail banking infrastructure.



and lending institutions. Lending has also been better controlled through the enactment of the Consumer Protection Act. This protects the consumers but it takes out some informal borrowing channels and/or place some of these underground.

Although progressively developing through new legislation to help address the main problems described above, the cooperative banking sector is still reported as insignificant in the country though cooperatives, as legal entities, are recognised as institutions with rights.

People still rely on informal credit in South Africa with, in parallel, almost a third of South African adults saving through community saving clubs. Also, informal savings is in assets that are directly relevant to the people in communities (e.g. livestock).

Issues of indebtedness remain and households that are facing financial pressure in the country have been faced with a reduction of money sent by others recently, that is, between 2014 and 2015. Also, households have reduced their demand for insurance as insurance costs have increased and as money is being spent on more urgent necessities.

While almost a third of households rely on government grants, FinScope reports that KZN has witnessed the largest increase of individuals getting credit between 2014 and 2015; an extra 600 000 people have received credit, in the province, between 2014 and 2015. The motives driving the request for credit are unclear however. Positively, the province has recorded an 18% increase in the number of people saving between 2014 and 2015. It is however unclear what the savings (and lending) trends are in KZN however.

Access to finance matters: for survival and for income shocks. It also matters for the development of entrepreneurship in South Africa. This is a recurring theme for the Global Entrepreneurship Monitor (GEM). However, financial literacy is also critical to ensure that small new businesses take off and survive. Support at the local level for businesses, in the form of help with red tape and with business support, are found to be generally lacking in South Africa.

Also of note is that only 25% of young entrepreneurs use banks as a source of funding for their business according to GEM.

7.5.4.2 Business Support Programmes and Investment Incentives

There are a variety of business support programmes that are offered by the **dti** that are aimed to encouraging investment in South Africa and KwaZulu-Natal. In addition, the **dti** offers a wide range of fiscal and non-fiscal incentives to domestic and foreign companies investing in strategically targeted sectors of the economy. These business support programmes and incentives are:

- Miscellaneous enterprise investment incentives (e.g. the 12i Tax incentive, the Manufacturing Investment Programme);
- Black Business Supplier Development Programme (BBSDP)
- The incubation support programme for SMMEs
- The Critical Infrastructure Programme (CIP)



- Business Process Outsourcing and Offshoring (BPO and O)
- The Sector Specific Assistance Scheme (SSAS)
- Film Production Incentives
- Foreign Investment Grant
- Skills Support Programme
- SMME Development Programme
- The National Exporter Development Program (NEDP)
- Export Marketing and Investment Assistance (EMIA)
- The Manufacturing Competitiveness Enhancement Programme (MCEP)
- The Capital Projects Feasibility Programme (CPFP)

The Small Enterprise Development Agency (SEDA) has specific programmes such as the Co-Operative Incentive Scheme (CIS) and the Shared Economic Infrastructure Facility (SEIF). The agency has a number of programmes geared towards expanding SMMEs not only within the country, but also in the province.

The National Empowerment Fund is also extremely active in supporting emerging businesses and initiatives in the Province.

Noting the above particular Business Retention and Expansion initiatives have been rolled out in the Province driven by TIKZN across the Province and by other agencies in the Municipalities (e.g. the Durban Promotion Agency in eThekweni). Partnership with third parties have been sought and put into place very successfully in some cases through BR&E programmes. BR&E is a key element of KwaZulu-Natal investment strategy but it needs to be rolled out on a bigger scale across Municipalities to help maintain or expand jobs. Separately, TIKZN helps the smaller businesses by helping these businesses to become linked to larger businesses. In parallel, a red tape steering committee is in place in the province to help SMMEs. A KZN SMME Academy is currently being set up.

Government is currently actively supporting youth-owner micro enterprises with R25 million disbursed to 765 such businesses between 2014 and 2015 by the National Youth Development Agency (NYDA). The NYDA has partnered with the Industrial Development Corporation and the Small Enterprise Finance Agency to create a R2.7-billion fund specifically for young people.

A new focus on SMMEs in cities is emerging around support to township enterprises being unlocked. SMMEs and township enterprises are pushed forward and prioritised as part of the Nine-Point Growth Plan.

7.5.4.3 Business Services as an Economic Sector

Business services are an important sector in South Africa with, moreover, exports of the sector. This sector absorbs, moreover, a number of those that are highly skilled.



This sector, which was growing rapidly pre-crisis in KZN is still growing but below Finance and insurance.

About 12% of all those employed in KZN would be employed in business services. Almost 17% of all those highly skilled in the province would be in this sector moreover. Employment in the sector grew sharply between 2005 and 2008. Employment numbers have been, since then, relatively stable.

7.5.5 *Wholesale and Retail Trade, Hotels and Restaurants (Trade and Commerce)*

KwaZulu-Natal offers a range of shopping experiences from mega-malls, such as Gateway Shopping Centre, to rural micro-markets. The on-going construction of new shopping malls and the expansion of existing ones across the Province is evidence that retail trade is continuing to expand.

The sector is expanding faster than all economic activities in South Africa suggesting growing competition between shopping / retail centres moreover. The crisis has, nevertheless, cut back the growth of the sector. The sector remains vulnerable to general growth conditions and to disposable income levels by consumers.

- The expansion of wholesale and retail and of hotels and restaurants is associated with the growth of the middle class. This is in the main economic nodes as well as in other economic activity centres. We have detailed above that, until 2009, the sector was spreading within KZN. Since 2009, only Umkhanyakude has taken a growing share of the sector.
- Noting the concentration of the sector in the more established cities, the increasing middle class is contributing to the surge in consumerism in KwaZulu-Natal, including in many of the smaller towns of the province.
- Brands are growing and access to new markets is occurring on an incremental basis. Branded chains such as Engen, Standard Bank, Kentucky Fried Chicken are found on the main roads, which form centres of business activity.
- The sector offers a number of franchise opportunities – franchises have been established to be labour intensive and requiring comparatively little capital investment by the IDC.
- The sector tends to be associated, however, with high level of indebtedness though the Consumer Protection Act has addressed a number of issues in this regard.
- Social grants tend to be increasing accessed through shopping centres.
- Small towns and communities benefit from projects which allow them to produce and sell arts and crafts. This is of particular relevance to the upliftment of women in the rural areas and smaller towns who often have relatively few skills and little opportunity to find employment.
- Moreover, investigation by the South African Competition Commission has revealed exclusive lease arrangements by some supermarkets that conflict with small business interests. Measures have taken on this issue that will help small businesses integrated

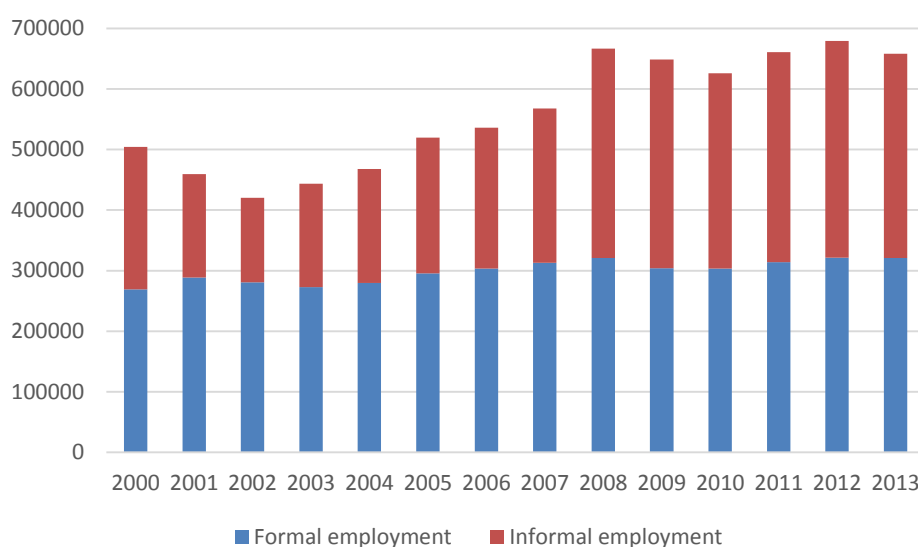


with bigger retailers and in retail space. More broadly, larger shopping centres in the smaller cities and outlying suburbs of the large cities in KZN are acting as anchor tenants, allowing smaller enterprises to capture the passing trade, and be a focal point through further investments are actually taken place around retail/shopping centres. (This however also means that the smaller enterprises are vulnerable to contraction of the retail activities.)

- KwaZulu-Natal's hotels and restaurants are of a varied type and occupancy has recently grown.
- Beyond staying with family and friends, hotels dominate the type of accommodation used by domestic tourists. Guesthouses are however preferred in South Africa by foreign tourists, slightly ahead of hotels. KZN has about 380 guesthouses and 270 hotels. A growing number of lodges have opened in the northern parts of KZN, some of which are managed together with local communities.
- The wholesale and retail trade sector is largely driven by the private sector though access to the land for new Greenfield projects remains a challenge in some Municipalities for the expansion of the sector.
- Municipalities that use surface for their building plan fees calculations tend to generate high property development fees.
- 25% of all employment would be in trade and commerce in KZN.
- One aspect of the sector is that it is dominated by women employees.
- Formal employment has remained relatively stagnant compared to informal employment however. A high proportion, 47% of those employed would be informally employed in the sector. However, because of its relatively low skills requirements, the sector is adapted to the level of skills that prevails in semi-urbanised areas.
- As should be clear, the sector overlaps with the informal economy which is dominated by small trade activities. Trade activities play a key role for the survival of a great number of households.



Figure 151: Formal and Informal Employment in Wholesale, Retail, Hotel and Restaurants in KZN



Source: Quantec Database (2015) – Standardised Regional Dataset

7.5.6 Mining and Quarrying

There is some mining of coal and iron ore taking place in KwaZulu-Natal.⁹⁷ However, the contribution of this sector to the provincial economy is low. More broadly, KZN only accounts for 3.8% of all South Africa's mining and quarrying activities. However, notable is the growth of employment in the sector. From about 14 000 employees in 2000, 33 000 are now currently employed in the sector in KZN according to Quantec data. About 1.3% of total KZN employment would currently be in mining and quarrying.

With pockets of special (including rare) ores and minerals, there are some beneficiation opportunities. These have been focused on together with the possibility to expand the existing collieries in the province which have closed down. An expansion of colliery is linked to the fact that there is demand for coal in particular international markets, including India, although the slowing down of the Chinese economy generates some concerns over future prospects and international price trends. New smelters, including for steel, are to be set up in the province moreover. This is important given that there is a great appetite for steel internationally as well as on the domestic market.

⁹⁷ There are, moreover, some illegal mining and quarrying activities are taking place on ITB land.

Of note is oil and gas exploration through operation Phakisa. As part of operation Phakisa, KwaZulu-Natal is also exploring opportunities in the offshore oil and gas industry. A number of companies have been conducting deep water seismic surveys, and should they uncover economically viable reserves, could transform the economic landscape of the province.

Extensive sand mining and quarrying is evident throughout the province. In many instances this is not a formally recorded activity, which has negative environmental consequences. There is potential to formalise sand mining and quarrying in order to ensure sustainable supply to the local construction industry.

Constraints in Mining and Quarrying:

- Ecological and environmental degradation if not accurately managed;
- Application for mineral rights licensing process is long and arduous and managed at a national level, and is not transparent enough;
- There is considerable risk of land tenure for local communities as well as the constraint of unsettled land claims;
- Mining vs Tourism potential along coastal areas.
- South Africa was recently hit by its most protracted industrial action since the end of apartheid in the mining sector. With the strikes reflecting issues by workers in the sector over their benefits, foreign mining firms have announced cutting employment and/or reduced investments in South Africa. There is currently a lot of uncertainty around mining which would affect new investment in the sector.

Opportunities in Mining and Quarrying:

- Highly labour intensive sector with good job growth potential;
- Community mining and quarry is already extensive and can be, in some cases, formalized and enhanced;
- Small-scale coal mining;
- Attraction of investment into new technologies for cleaner extraction and re-processing;
- Further expansion of building material mining;
- Incentivise the beneficiation of minerals, particularly as commodity prices are low. In this regard, it should also be noted that beneficiation has focused on developing particular value chains, a number of which are set to shift to high-value added products to be commercialised. KZN is currently focused on aluminium, iron and steel, coal and phosphate in this regard but the transformation of particular minerals has also been emphasised under the Nine-Point Growth Plan.



- Catalytic projects that are turned toward (greater) beneficiation have been set up in the Province.

7.5.7 Property Development (& Construction)

After the end of the housing boom in 2008, South Africa's house prices bounced back until 2012 to eventually slow down. This is due to the fact that a number of the drivers of property development are currently not in place to ensure that the sector is buoyant: the availability of banking finance, economic expansion and general confidence in parallel to stagnating household disposable income and gradually rising interest rates though interest rates have been relatively low in the last 5 years (when looked at from a historical perspective).

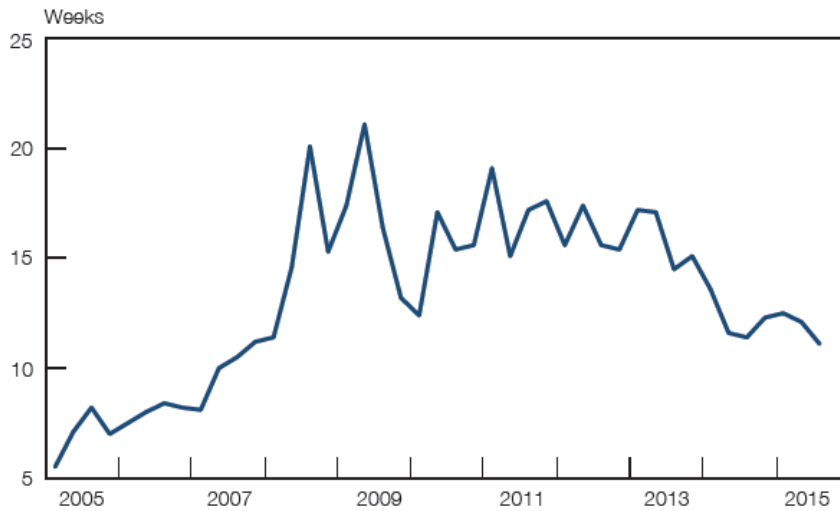
Figure 152: House Price Changes (% over a year earlier, 2007 - 2015)



Source: Global Property Guide – referring to data from ABSA, online data for South Africa, <http://www.globalpropertyguide.com/real-estate-house-prices/S>, accessed December 2015

- Generally while residential property prices have gone up in nominal terms for over half a decade in the early part of 2000s, the market is currently relatively stagnant in real terms; That is, inflation in residential house prices is in line with consumer price inflation.
- Positively, however, the time a residential property stays on the market is starting to reduce since 2013. By the end of 2015, a residential property was on the market for around 11 weeks, the lowest average time since 2007.

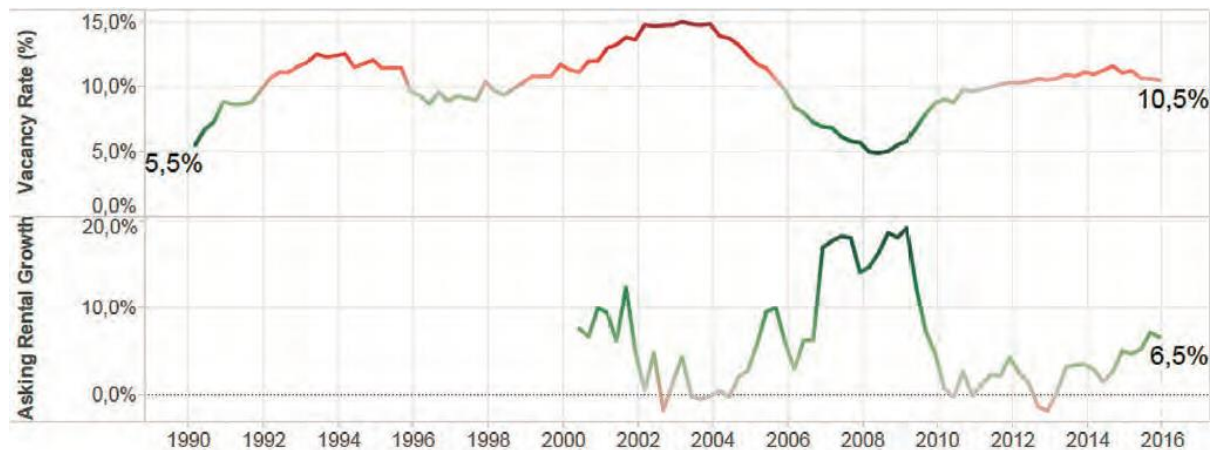
Figure 153: Time Residential Properties Remain on the Market on Average (number of weeks)



Source: FNB reproduced in SARB Quarterly Bulletin, December 2015

- However, commercial property development is growing again in 2015 as indicated by acceleration in commercial mortgage credit growth according to SARB (2015). Also, mortgage advances have recently tended to be in favour of this type of property market segment. This trend appears to be partially driven by some large companies diversifying their portfolios away from the bond market.

Figure 154: Vacancy Rate & Asking Rental Growth

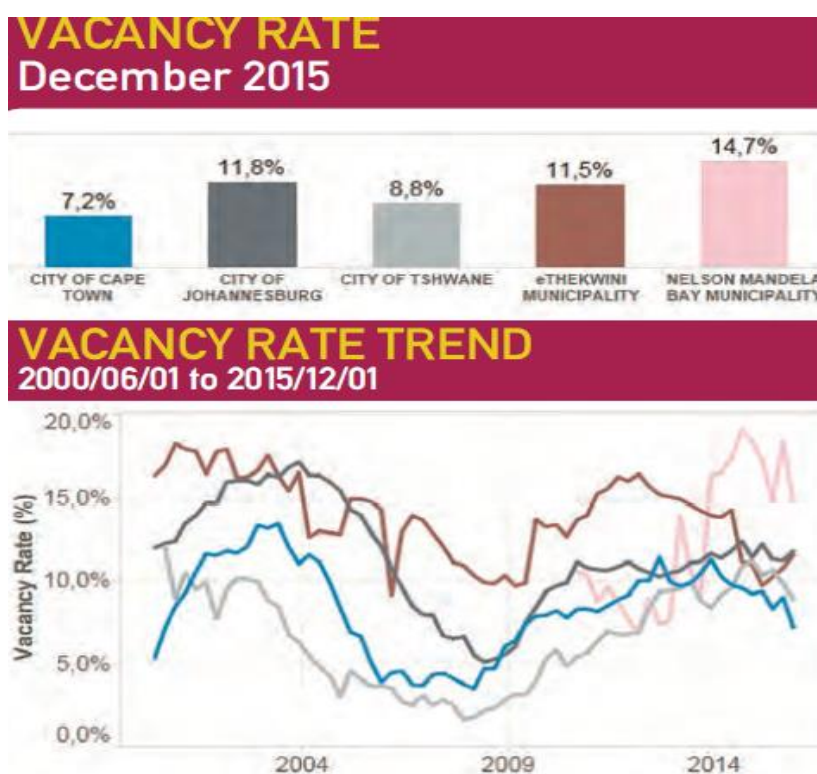


Source: SAPOA (2015b), December 2015, *Office Vacancy Report*.

- The vacancy rate for non-residential properties, which markedly increased after the crisis has started to decline a little since the end of 2014 though no clear downward trend is yet apparent in the data. It is currently at 10.5% in South Africa.
- Rental growth has also increased recently above inflation though the South African Property Owners Association (SAPOA) warns, in its latest *Office Vacancy Report* of December 2015 that the provision of better quality office space accounts for the

change. Moreover, office rentals are down by 15% since 2011 with rentals have grown at only half the rate of inflation for the 2011 – 2015 periods.

Figure 155: Vacancy Rate in Main South Africa Metros



Source: SAPOA (2015b)

- Noting that data from SAPOA are only available for the larger urban areas (and only for the greater eThekweni area in KZN), the office vacancy rate has recently improved in some Municipalities, notably Durban. The figure for Durban, which is currently at 11.5%, hides variations between inner and outer city vacancy rates.
- The rate of office vacancy for the Durban CBD would be at 15%, almost twice the rate for Gauteng inner city. Durban inner city office vacancy rate was, in 2014, at 20%, reflecting a move out of the city by tenants to new areas. The vacancy rates of inner cities is currently at twice the level of vacancy for decentralised nodes.
- There is some uncertainty in terms of future trends in terms of property markets. Negatively:
 - Non-residential properties approved building plans have been relatively stagnant, in value terms, in the larger Municipalities of KZN since 2011 (KZN Provincial Treasury, KZN Economic Data 2016);
 - The property markets continue to be affected by the affordability of houses in a context in which household debt relative to disposable income has remained high (household debt is standing at around 80% of disposable income) and



cannot be easily curbed in a context of a growing number of non-economically active.

- This, combined with a tightened bank lending regime for mortgages, is generating a large gap in the mid-level residential property rental market. This affects those that are employed on small salaries that cannot purchase new property but cannot afford the high rents that is the result of the property boom of the mid-2000s.
 - Urbanised areas in KZN remain subject to complex settlement dynamics that need to be addressed. Those in informal settlements need to be catered for. According to the South African Cities Network (SACN & CSIR, 2015), new informal settlements have a poorly established “platform” for new investment and activities with substantially lower levels of public and private investment than other types of townships.
 - Separately, the construction sector is being affected, after a period of boom or countercyclical infrastructure development in South Africa and KZN, by a collapse in the demand and of lack of civil engineering activities. This is manifest in the larger construction firms shedding large number of informal workers and of permanent employees (of the order of up to 15% to 20% of the workforce laid off in some cases).
- Positively:
 - There is a growing middle class presents in townships that offers new property opportunities in these areas.
 - Residential properties approved building plans have increased, in value terms, in the larger Municipalities of KZN since 2012 (KZN Provincial Treasury, KZN Economic Data, 2016);
 - Industrial parks and hub development offer new non-residential property opportunities together with large developments around the Bus Rapid Transport system in KZN.
 - For *House Price South Africa*, the residential market appears to be in the “back to normal” phase of the property cycle.⁹⁸
 - South Africa has still a growing middle and upper class that is shaping the quality of some housing / residential segments of the property market. As the middle class is growing in the smaller cities in KZN, the property market, as indicated by the trends in the construction sector in some of these areas, is growing well in some smaller cities.

⁹⁸ See: <http://www.housepricesouthafrica.com/>, accessed December 2015.



- The value of building plans is increasing which suggests that better properties and/or more properties on sites (densification) are being built or developed. This is particularly the case for residential buildings with important building plans for additions and alterations submitted. In contrast, the value on the building plans for *non-residential* properties is increasing more slowly.
- Nationally, major investigations by the South African Competition Commission are generating greater competition in the construction sector. Following the identification of collusive practices and price rigging by giants on large construction projects and action taken against construction cartels, prices in the construction sector will be kept down and space is made for SMMEs to expand in the construction sector.
- Recently, there are signs that mortgage advances are growing, reaching, at the end of 2015, levels last seen in 2009. Building confidence has been on an upward trend since 2012.
- Improving conditions in the property market also resulted in steady growth in credit extension to the construction sector in 2014 and 2015.
- The situation with the property market is important as taxes on properties and property rates are a major source of government revenue. About one fourth of Municipal revenues would be with property rates (South African Cities Network, 2015) second to revenues raised from electricity tariffs.
- A more balanced pattern of economic activities and a better spread of economic activities are emerging around the outlying suburbs / new settlements around the formal parts of the cities. There are large investments for the development of new nodes and the integration of spatial activities headed by local government. Government is pushing investments in mixed used commercial and residential areas in KZN, notably in the large urban centres.
- In parallel, there is changing demand by township residents. Expenditure of such resident is towards more frequent convenience shopping and a greater demand for retail shopping through rising middle class and income from government grants in township areas.

7.5.8 *Logistics and Communications*

Transport, logistics and communications accounts for 21.8% of the GVA of the province, and equates to approximately R43.5 billion. More than one fifth (22%) of the value of South Africa's logistics, storage and communication activities would currently be with KZN.

There remain numerous constraints facing the sector but these are largely caused by the fact that the platform for intermodal freight movements was poorly integrated for a long time. There also remain important problems around the migration from road to rail of heavy freight which adversely impact on the state of road in the province. Also, the global slow-down caused some delays in the development of the Dube TradePort area.

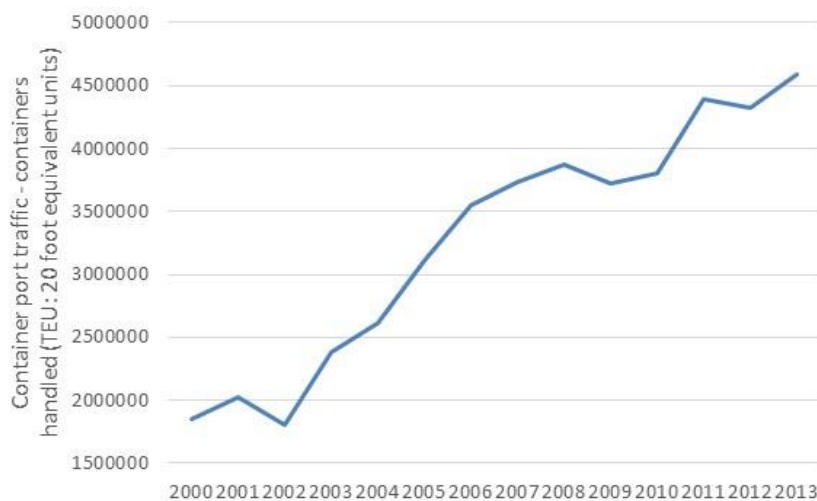


Moreover, the connectivity of new industrial parks is a critical aspect of new projects being set up or expanded. Multi-nodal and multi-functional interlocking is central to the Aerotropolis, to the IDZs/SEZs, to the industrial hubs and to a number of catalytic projects. Logistic hubs are considered in new highway and corridor developments in the Province moreover. Interventions in the Medium Term Strategic Framework (MTSF) are about developing rail capacity and linking KZN with other provinces in South Africa (e.g. with Mpumalanga). Public transport infrastructure investments have also been engaged with and more than R10 billion Rands have been spent by the Province on infrastructure development. KZN is focusing on strategic infrastructure development projects.

The developments as described above are badly required following under-investment in road, airport and harbour expansion projects.

As can be seen in the freight movements depicted in the graphic below, container traffic has increased in South Africa.

Figure 156: Containerised Cargo Handled in South African Ports



Source: World Bank, World Development Indicators (2015)

Most containers are handled from Durban in South Africa; in 2014, the port handled 81.888 million tonnes (mt), around 62.5% of which was with imports (50.695 mt) and the residual (30.503 mt) for exports. The container terminals in Durban handled 2 664 330 twenty foot equivalents contained (TEU) in 2014, half of which were for exports. Containers handled at Durban then represented 58% of the total number of containers handled at South African ports according to Ports & Ships (60% according to eThekweni Municipality).

Growth in the number of containers would reflect that trade from South Africa is growing again. However, of note is that while container traffic has grown, the containers that are moving are not full. Noting a challenge in light of the need for firms to reduce transport costs, the growth of containers suggests that port expansion and upgrading are important.

Ports are being expanded in South Africa and in KZN. Richards Bay that is focused on the sea transport of goods in bulk is undergoing expansion with specific interventions (e.g. the improvement of the Richards Bay Coal Terminal) that are geared to help smaller mining companies export raw commodities; the Durban dig-out port which is meant to address some

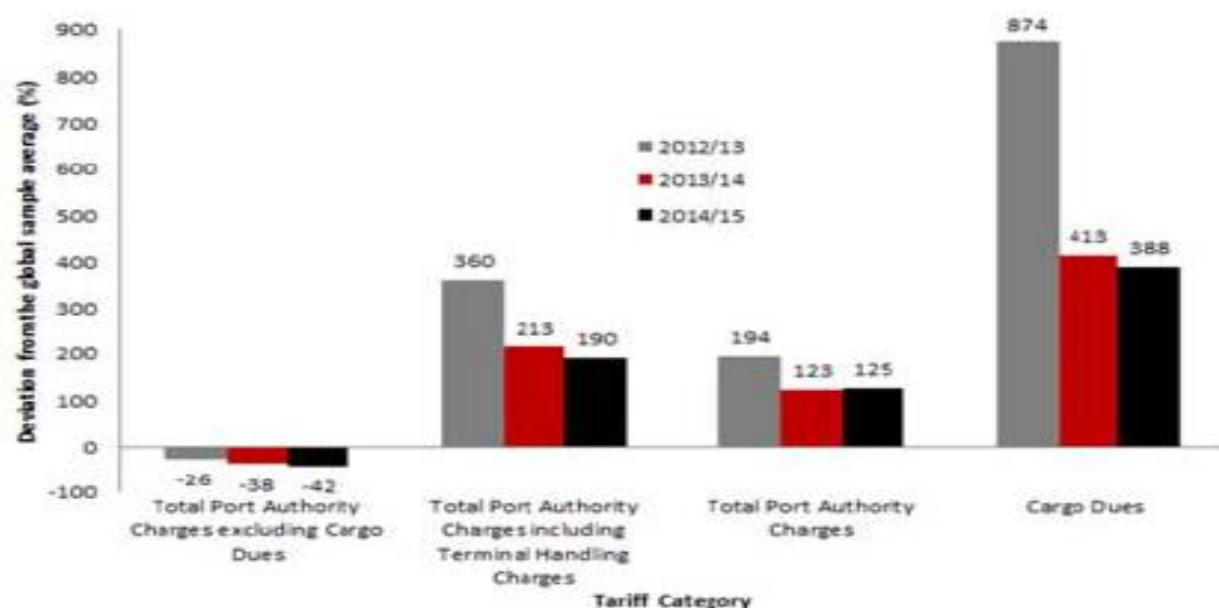


logistics link challenges is progressing as part of a corridor development, that of the Durban-Free State-Gauteng corridor (Strategic Integrated Project 2 or SIP2). The dig-out port is seeking to improve the linkages between Durban and Gauteng as well as raise the efficiency of import and export operations (eThekweni Municipality, 2014).

The expansion of the Durban port is linked to the fact that that port is reported as close to or above capacity (Richards Bay is still operating below capacity in terms of design capacity but is near capacity in terms of installed capacity) (Ports Regulator of South Africa, 2014/15). Moreover, both Richards Bay and Durban are reported to be above capacity with regards to berth requirements. Yet some experts have challenged the need for physical expansion given that South African ports are not operating efficiently compared to other international ports. Moreover, land remains relatively scarce in big South African cities.

However, one worrying dimension to report about South Africa that is relevant to businesses in KZN is, according to the World Bank, with high port charges. Tariffs at Durban would be 360% greater than the world average. However, the causes of these high tariffs are not with terminal handling charges and port dues but related to cargo dues. In effect, the port of Durban is one of the most expensive in the world. Costs at the port of Durban are moreover used to cross-subsidise other less profitable ports.

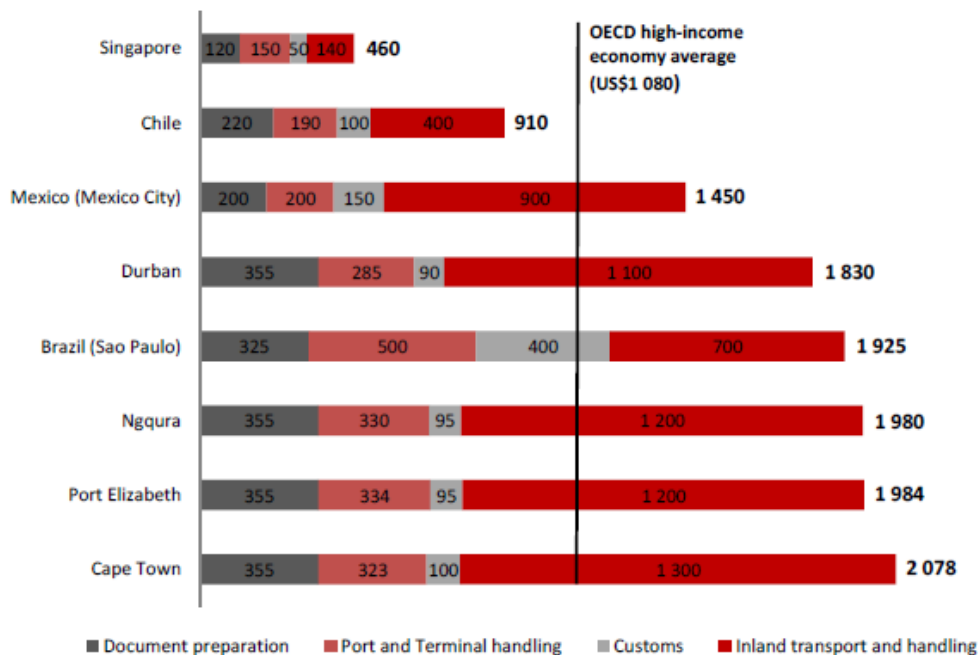
Figure 157: Deviation of SA container costs compared to a global sample average by main tariff category element (%)



Source: World Bank (2016) – Pieterse, D.; Farole, T.; Odendaal, M. and Steenkamp, A. "Supporting Export Competitiveness through Port and Rail Network Reforms: A Case Study of South Africa", World Bank Policy Research Working Paper WPS 7532

The issue of high sea transport needs to be set in the broader context of other costs. The figure below shows inland transport and handling costs at high levels in Durban compared to the OECD average as well as compared to the performance of a number of other countries. Durban is faring better than Cape Town however.

Figure 158: Cost to export a 20ft container (US\$), 2015



Source: World Bank (2016) – Pieterse, D.; Farole, T.; Odendaal, M. and Steenkamp, A. "Supporting Export Competitiveness through Port and Rail Network Reforms: A Case Study of South Africa", World Bank Policy Research Working Paper WPS 7532

What this means is that getting goods across South Africa's borders remains expensive. This is a challenge to the Province's Gateway vision.

Separately, South Africa has reduced its performance on its Logistics Performance Index between 2012 and 2014. With the Index ranging between 1 for a poor performance to 5 for a good performance, South Africa dropped from 3.67 to 3.47 in that period. While the country fares relatively well on timeliness of shipments in reaching destination within the scheduled or expected delivery time with a score of 3.88, its worse score is on the efficiency of the clearance process (i.e. speed, simplicity and predictability of formalities) by border control agencies, including customs. On the latter, South Africa's score is 3.11. The infrastructure score is 3.2; this score takes into account the quality of trade and transport related infrastructure (e.g. ports, railroads, roads, information technology). South Africa scored 3.79 on infrastructure in 2010.

In the area of communication, while cost have markedly decreased, while digital migration is now in operation, while the reach of mobile broadband services has been notably expanded in the province, communication costs still have to be reduced markedly.

Also, the uptake of broadband has been slow and there has been no strategic usage of broadband to solve pressing societal problems. Currently broadband penetration is estimated

to stand at 17% in South Africa.⁹⁹ Internet penetration is higher, standing at almost 50%. The current market structure is reported to be inefficient and costly and there is duplicate infrastructure in urban areas. Currently the system in place cannot roll-out ICT infrastructure and services to reach all South Africans in line with the long term vision of a connected society.

World Bank data reports that fixed broadband subscription (per 100 people) is still low standing at 3.2 in South Africa compared to: 17.5 in the Russian Federation; about 14 in China; 11.5 in Brazil; 9.8 on average for the world.

Noting a number of current problem areas that remain in communication, large foreign call centres have set up in KwaZulu-Natal. In addition, the mobile sector penetration is very good standing at over 86%. Mobile phones are a major tool for the youth to access the internet. But, again, prices are relatively high in South Africa for cell phone usage. This has some dampening effect on communication services.

Constraints in Logistics and Communications

- Delays in some integrated networks of road, rail and harbours networks projects while there are disruptions as these projects are taking place;
- Slow progress on the shift from road to rail transport and in cost effective general freight rail transport;
- Congestion remains at the main port;
- Issue of transport costs being very high for goods to reach other markets, nationally and internationally;
- Uneven quality of network being built with issue on future maintenance and budgets needed for future maintenance of the network. The question is to be raised in a context in which municipalities, which have declining internally generated funds, are now highly dependent on grants to finance capital expenditure. This means fewer infrastructure projects are funded from municipalities' own revenue sources with threats on the current economic infrastructure in place.
- General issues in infrastructure development, particularly in smaller Municipalities through delays in project registration, Absence of project management units, Lack of capacity, Delays with contractors and "Limited multi-year budgeting and political interference in the capital procurement processes" (according to National Treasury documents) that makes for an uneven logistics development

⁹⁹ National broadband coverage is at around 30% in terms of geographic coverage and at 75% in terms of population coverage.



platform that maintains the pattern of concentration of economic activities in the larger Municipalities.

- Logistics activities currently remain concentrated in particular areas within the province;
- Telecommunication costs are still high and fixed broadband subscription is still low in South Africa.
- Issue of skills availability in more modern logistics equipment and communication technologies in more rural areas. IT Literacy is low.

Key Opportunities in Logistics and Communications

- Further Port Development and Expansion (Durban Dig-Out Port);
- Durban-Richards Bay Corridor;
- New SEZ opportunities, including around particular logistics projects that are turned toward foreign market (e.g. the Lebombo Border Dry Port that is about the establishment of a SEZ and the development of a Logistics Precinct for goods to and from Mozambique.).
- New broadband opportunities and Optic Fibre application in the Province, including in connecting government services.
- New opportunities for more remote SMMEs through communication that is further rolled out;
- Broadband roll out is the subject of attention under the Nine-Point Growth Plan.
- New investment opportunities directly in the sector that will directly help costs to become reduced. These add to investment opportunities around innovation hubs.
- Good penetration rate of mobile telephony which lower communication barriers for smaller entrepreneurs.
- Effective ICT Incubators are in place in the province and new ICT incubators are being set-up (e.g. in Ugu District Municipality)

7.5.9 *The Green Economy*

The green economy refers to the development of an economy that is "low carbon, resource efficient and socially inclusive". In a green economy, "growth in income and employment [should be] driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services." (UNEP, 2016). Partnerships have to be in place for a green economy, particularly with the private sector.



The Green Economy is developed around the notion that there does not need to be a trade-off between environmental sustainability and economic development, but rather that the two are mutually beneficial. In fact, there is growing firm evidence that establishes that a green economic offers significant job creation potential, particularly around renewable energy (of the form of solar energy) production.

The green economy is, in fact, being pursued in a growing number of developing countries that are adopting new strategies and policies. The shifts in the developing countries are in terms of a push towards / support of new investment and assets that are focused on: green technologies; resource efficient/saving infrastructure, developing green skilled labour and enhancing the quality of ecosystems.

The above makes it clear that the green economy is cross-cutting. This is clear from a KZN DEDT report entitled "Unlocking the Green Economy" which identified the following priority areas: Greening tourism; Greening food production; Greening energy production; Greening water production; and, Supporting the development of the Green Services Sector.

Noting the priority areas and the fact that the cross cutting nature of what is defined as the green economy means that progress towards such an economy is hard to quantify, there has been some uneven development in the green economy in KZN. In some cases, there seems to be significant progress however.

7.5.9.1 Renewable Energy

Renewable energy is a large sector with the province offering particular opportunities, notably with regards to its wind performance and biomass endowments.

Solar and wind resources in the province have been mapped with the view to entice public and private investment in the sector, including around renewable energy development zones in the country.¹⁰⁰ Although, the second phase of the wind and solar atlas has only been initiated and will expand to KwaZulu-Natal going forward, a number of feasibility studies have been completed for wind and solar energy production in parts of the province.

A Biomass Resource Atlas has been initiated that will be completed in 2016. However, critically, the province has been successful in the independent power producer tendering round with one biomass project. Although this is one of the few projects for which the province has been able to see an independent power producer (IPP) emerge by the third renewable energy IPP bid window (in its Independent Power Producers Procurement Programme, REIPPPP), it is the

¹⁰⁰ As reported by the Department of Environmental Affairs (DEA): in support of Strategic Infrastructure Project 8 (SIP 8; Green Energy in support of the South African Economy) and to facilitate infrastructure development in the country, it introduced a Wind and Solar PV Strategic Environmental Assessment (SEA). The primary objective of the SEA is to streamline regulatory processes for new RE power plants, without compromising the environment. Based on the SEA, 8 REDZs [Renewable Energy Development Zones] were identified but no REDZ is (at present) in KZN.



only biomass project in the country;¹⁰¹ 17 megawatts of electricity will be generated through this project although it was still only at the before financial close (pre-FC) phase in June 2015, the Department of Energy reports this capacity to currently be on line (Department of Energy, National Treasury & DBSA, 2015).

The province has also put in motion a Renewable Energy (RE) Action Plan that has 3 pillars:

- RE generation (including biofuels);
- RE manufacturing with the setting up of a manufacturing hub for renewable energy; and,
- energy efficiency with a first thrust around public buildings through sustainable public procurement

Opportunities are being unlocked around a RE hub set for Ilembe. This hub is a RE components hub that is focused on the manufacturing of RE and energy efficiency components and related services. The hub which has a product and service mix includes R&D facilities. The hub is to be completed in 2017 and implemented in 2018. The project is set to attract more than R2 billion in private investments.

EThekweni Municipality has an important landfill gas-to-electricity project. The ideas, which were identified in the mid-1990s, were put in motion in 2003 with support from the World Bank. The project, operationalized in 2010, operate on two landfill sites which form the first landfill gas-to-electricity project in Africa. The project is also the second registered Clean Development Mechanism (CDM) project in South Africa. The CDM allows for emission reduction projects to be financially rewarded. The project, which was a learning project, is currently set to expand as waste volumes reaching the sites are growing. It is yet a project which, given the large waste volumes required to be sustainable, cannot be easily replicated in other parts of KZN.

A Municipal Waste to Energy Protocol is currently reported to be in place in KZN.

RE is a major focus area for the province with green economy studies launched to inform the Green Economy Strategy for KZN. The province is actively exploring and supporting development of both utility-scale and rural RE projects. The KZN Sustainable Energy Forum is in place and operational as an information and networking platform.

7.5.9.2 Low Carbon Transport

New public transport infrastructure investment has tended to directly emphasise low carbon transport.

Indirectly, low carbon transport opportunities are with manufacturing, particularly around the automotive sector where there are synergies. The province is generally well set with regards to

¹⁰¹ A wind project and a landfill gas projects are also in KZN.



two sectors around which they are green economy manufacturing opportunities: automotive; and, metal and metal products.

7.5.9.3 Green Buildings/green infrastructure

There are some challenges with the current state of the property sector around new green buildings. However, new projects like the Dube City have secured a top rating from the Green Building Council of South Africa.

Green building efforts are important for tourism though cost pressure in the building sector tends to mean that greener buildings are more prevalent in new real estate development. A number of new such property developments are taking place in the province.

7.5.9.4 Waste Management & Waste Recovery

Recycling provides a livelihood for a great number of people in urban areas. Although no statistics appear to be available on the numbers of those involved with waste collected as their main economic activity and their socio-economic characteristics, it is estimated that 85 000 people make a living as waste pickers in the country. Research by the Institute of Waste Management of South Africa reveals that the average South African waste picker can earn an income of up to R120 per day. Asiye eTafuleni (AeT), a Durban based NPO working with waste pickers, assesses that waste pickers in Durban earn between R2,400 and R3,360 per month. This is a substantial income that can be generated from collecting, sorting and selling re-usable/recyclable materials. The waste sector is currently valued at R50 per year in South Africa.

Noting an information challenge about current waste recovery activities in KZN, efforts appear to be on waste recovery outside eThekweni in the province. Positively, the Expanded Public Work Programme (EPWP) has a number of programmes that are directly relevant to the Green Economy, including Working for Waste.

The EPWP has engaged with all aspects of the waste value chain, including the construction of waste transfer stations, the construction of buy back/recycling centres, of material recovery facilities and of composting facilities. It is unclear how far this programme has gone in KZN however.

While waste for energy has been discussed above, the provincial government has drafted a Waste To Energy Technologies Guideline for municipalities. The Province has an Integrated Waste Management Plan moreover.

7.5.9.5 Water Resource Management

As indicated in the environmental section of the report, there is a large gap between water actually supplied and water demand with a deficit in place. This makes water resource management critical in the province. A number of key programmes and projects revolving around the rehabilitation of the irrigation system and of water resources for agricultural purposes have been discussed under the Agricultural Activities section. However, for the green



economy it needs to be stressed that water preservation and more efficient water use is currently actively pursued by the provincial Department of Agriculture and Rural Development around the rehabilitation of water canals, boreholes and the broader irrigation system. The province is also encouraging rain water harvesting and rehabilitating water sources.

The Expanded Public Work Programme has a Working for Water programme that has been extremely visible and that is now well established in the province.

7.5.9.6 Sustainable Agriculture

Sustainable agriculture is an important area which requires investments in the natural environment. Sustainable agricultural development needs to meet the needs of rural households, while minimizing environmental impacts and promoting approaches to commercial agriculture that enhance food security, maximize labour absorption and reduce negative impacts. This is a difficult challenge but sustainable agriculture, because it requires functional ecosystems and biodiversity, is part of a broader strategy of preservation of the environment.

Various sustainable agriculture programmes and training are taken place at tertiary education and training institutions in the province in the area of sustainable agriculture.

The provincial Department of Agriculture and Rural Development by working with small-holders has a key role to play with regards to sustainable agriculture. Food security programmes in place also play a role in sustainable agriculture including through the setting up of small community/communal gardens. Agri-villages are also being carefully looked at and an agri-village has been set as a catalytic project in KZN.

7.5.9.7 Constraints and Opportunities

A number of constraints as well as future opportunities of the sector identified in the "Unlocking the Green Economy" report and reported in the previous situational analysis remain though there have been progress in a number of areas. A number of points listed next are from that report though additional elements are listed in this revised Situational Overview as they are pertinent.

Constraints in Developing The Green Economy

- South Africa has a complex legal and policy framework for green economy development;
- But there is a lack of regulations and standards in some parts of The Green Economy – e.g. around organic farming - that affects the prospects for new markets.
- Government support is needed to help unlock some sectors. For instance while the Ministry of Energy has set mandatory blending of biofuels with other type of fuels that



was set to be effective from October 2015,¹⁰² sugar refineries need to be reconfigured to build distilleries onto existing sugar mills to shift to fuel grade ethanol – this reconfiguration is reported to be expensive and only one sugar cane company is reported to have obtained the license for bioethanol;

- Small funding available to help assess and initiate green projects¹⁰³;
- but there appears, in any case, to be little awareness of the incentives that are in fact in place in support of the green economy;
- EIAs are lengthy and costly requiring input from experts;

- Lack of technology and / or research and development;
- the absence of growth in electricity and growing energy services sector;

- Lack of understanding and awareness which means that new larger scale green economy projects require intense community and stakeholder education;
- Lack of skills and capacity, including institutional; moreover, expensive monitoring and verification associated with carbon credits and difficulty and limited stake in policing (emissions);

- Lack of demonstration effect. Government is not leading the way by example. Also while green technology development has been promoted as a part of the province's ICT focus, procurement is still away from sustainability criteria as this would risk penalising the smaller enterprises. Also, provincial and district environmental rule enforcement remains weak;

- Service provision not also achieved in environmentally sustainable manner;
- Infrastructure that would support a green economy is lacking in particular areas: in many informal settlements, only an estimated 25% of waste reaches the formal waste stream;
- Lack of institutional support;

- High risk associated with some important green economy projects.
 - Externally: Fluctuations and uncertainty around the carbon price for projects seeking get carbon credits. This is in a context of limited access to capital and high cost of capital for smaller new projects with which banks are lacking familiarity;

¹⁰² See <http://www.energy.gov.za/files/media/pr/2013/MediaStatement-Mandatory-Blending-of-Biofuels-with-Petrol-and-Diesel.pdf>, accessed February 2016.

¹⁰³ R2.5 million only available as grant fund through the Green Economy Assistance Fund established for particular green projects in the province. The Fund was initiated in 2012 that provides support of up to 50% for EIAs, scoping, feasibility studies, etc. Funding could also be used for payment for ecosystem services.



However a main problem area for carbon credits to be secured is the absence, currently of data on green-house gas emissions by KZN;

- Internally, prospects of land claims and related settlements could dampen investor's appetite in RE projects that rely on biomass;
- Limited market demand;
- Food insecurity promotes non-sustainable harvesting in protected areas;
- Promotion of nodes of heavy and dirty industry affecting quality of life;
- Will need to provide alternative to extraction activities that are contra-green economic principles.
- There is also a lack of statistics on the number of those involved with particular activities (e.g. waste collectors) which renders those involved invisible to the policy-making community;
- Poor work conditions and protection prevail in a number of green jobs that are survivalist jobs (e.g. waste picking). This is counter to the concept of green economy;
- Constraints that are emerging around the looming introduction a carbon tax in South Africa and an airline emission tax in the European Union with discussion of similar tax in the maritime transport sector are currently not in the policy-making thinking. The implementation of such taxes could severely reshape the performance of the KZN economy. However, Green Economy related policies and programmes in South Africa are recent.

Opportunities for Developing the Green Economy

- A large number of economic opportunities remain from the management of natural resources and their harvesting and transformation into goods and services (e.g. medicinal tea, indigenous plants, subsistence fisheries and coastal recreation and leisure, rainwater harvesting). Significant job creation opportunities are through the Expanded Public Work Programme with payment for the rehabilitation of ecosystems and new opportunities, including with the private sector and large companies as sponsors (e.g. beverage companies in the Working for Water programme).
- Organic farming, especially for emerging farmers and in traditional authority areas, food security initiatives linked to rural housing programmes, and re-investment in our prime agricultural assets;
- Areas of potential within the tourism sector include green tourism accreditation, the clustering of tourism activities, niche tourism, and sourcing products from local communities;
- In energy: wind and biomass energy with, going forward, a planned increase in the number of IPP bids for renewable energy. Foreign direct investors have started to markedly emerge in the sector. Opportunities also remain for the forestry in reframing itself as an energy industry relating to biofuels and carbon trading; neighbourhood mini-



grids; and a carbon fund for the province. Demonstration projects have been set up in the province in biofuels (e.g. bamboo biomass);

- There also exists the potential to completely transform the building and construction supply chain through the development of green building materials, retrofitting existing buildings, and creating decent jobs through the reintroduction of apprenticeships;
- Likewise in the transport sector, there is scope for the development of alternative road materials and fuels, to improve efficiencies in freight movement (particularly from road to rail), the reform of public transport, and the greening of road construction activities. The mandatory blending of conventional fuel with biofuels represent a potential opportunity to further rural development in KZN as the province¹⁰⁴ has a large biomass asset;
- At the broader level of cities and towns, a continued effort to bring sustainability into planning and development activities is required through training and capacity-building;
- Within the retail and manufacturing sectors, opportunities exist for foreign investment in greening initiatives, especially niche markets, but also around supporting informal traders and co-operatives that operate in the green economy sector;
- The waste management sector provides particular potential for socially orientated programmes such as buy-back centres, 'Waste for Food', as well as reuse and recycling (e.g. the recycling of building components). Currently with the recovery rates the lowest in plastic (17% against 25% for glass, 59% for paper and 69% for cans), there is scope to further improve waste recovery rates. Moreover, new recycling opportunities are around tyres, e-waste etc. KZN has led the way in setting up a (compact fluorescent lights) recycling plant but significantly more efforts are required in this sub-sector.
- The environmental consulting, policy and research sector grows as the green economy grows;
- Across sectors, green procurement and tendering processes provides a considerable growth opportunity for the green economy as does the potential for corporates and for the government itself to invest in green social responsibility projects.

In addition:

¹⁰⁴ See: <http://www.esi-africa.com/news/biofuels-in-south-africa/> and <http://mg.co.za/article/2012-02-20-r2bn-ethanol-plant-planned-for-completion-by-2014/>, accessed February 2016.



- Promote sustainable and ecologically friendly agriculture, forestry, freshwater, and fisheries methods to help conserve soil fertility and water resources in KZN with a special focus on supporting subsistence farming.
- New marine governance arrangements are being put into place through Phakisa.
- Durban has developed a climate change adaptation and mitigation strategy (finalised and adopted by the full eThekweni Council). It has an Adaptation Charter (the Durban Adaptation Charter) that commits local governments to local climate action that will assist their communities to respond to and cope with climate change risks thereby reducing vulnerability. Durban has, as such, concrete strategies in place that can be looked at and evaluated to be expanded further. The activities of Durban also act as a catalyst for new green economy projects in the province.
- SALGA has developed a knowledge programme for local government on the Green Economy which it has been rolling out since 2013.
- There is a plethora of schemes in the Expanded Public Works and in the Community Work Programmes (EPWP and CWP respectively) that are highly relevant to KZN. These programmes are critical for job creation by low-skilled female and the youth in the Green Economy.

The EPWP has the following programmes in place: Working for the Coast, Working for Water, Working for Waste, Working for Land, Working for Wetlands, Working on Fire, Youth Environmental Services, Youth Jobs in Waste, Groen Sebenza Jobs Fund Partnership, the Eco Furniture Programme, Working for Energy, Working for Ecosystems, Working for Forests, and People and Parks.

While both the EPWP programme and CWP have a poverty alleviation role, they contain some element of training and of empowerment.

7.5.10 *The Informal Economy*

The informal economy is assessed to contribute 28% to GDP in South Africa.¹⁰⁵ While the figure is an estimate and while how much of KZN's GDP is with the sector is unknown, the importance of the informal sector in the province is underpinned by the concrete fact that over 31% of those employed are employed informally / are in informal employment. Moreover, the sector is critical to those that are economically vulnerable although informality is complex because it refers not only to employees that are vulnerable, but also to the economic activities of those that are not recorded as involved with economic activities because they are not registered. In other words, Informal work traverses many occupations, including self-employed and own-account workers, migrant, casual and temporary workers. Noting this broad heading, the term

¹⁰⁵ Proportion put forward by the LED (local economic development) network.



has evolved over time to focus internationally on those that have poor (including unsafe) employment conditions.¹⁰⁶

Having set out a broad presentation of informality:

- Informal employment is a population-based definition. It includes informal wage employment outside informal sector. To be precise, casual workers in formal sector, employers in informal enterprises, own-account workers in informal enterprises, unpaid family workers both in formal as well as informal enterprises.
- Informal sector as production-based definition includes employment and production that take place in small and unregistered enterprises.

As noted above, the employment conditions are, in many cases, outside an organisation or agency of any type. It refers to those self-employed. As such, the informal economy also comprises different sectors - apart from street vendors, informal market vendors and hawkers, there are also waste collectors, home-based, informal transport and agricultural workers.

- In KZN, the informal economy's employment level is indicated to stand at 31% of the total employed population, and involving around 840 000 persons¹⁰⁷. This figure represents a significant share of the employed; and, it has considerable implications for safe working environment considerations, for tax revenue collection and for the integration of this economy into the formal economy.
- Although the number and proportion listed above are large, South Africa has a small informal sector when it is set against other countries that have similar levels of unemployment.
- While informal activities tend to be associated with those without a business, the StatsSA Survey of Employers and the Self-employed (SESE) identified that there were 1.5 million persons running non-VAT registered businesses with as many as 1.4 million in the informal sector in 2013.

It emerged that the crisis has markedly increased the number of people running informal businesses. These are people with the lowest levels of education. Unemployment was the main reason for the increase. However, KZN has a stable proportion, over time and since 2005, of non-VAT registered businesses in South Africa's total stock of non-VAT registered businesses.

Less 5% of the working age population in KZN was involved in running informal business. This is a low proportion when set against Gauteng, Mpumalanga, and Limpopo but above the South Africa's average of 4.3%.

¹⁰⁶ For further clarification of the meaning of informality, see: <http://wiego.org/informal-economy/concepts-definitions-methods>

¹⁰⁷ Quantec (2016), Standardised Regional Dataset: Employment KZN



Most informal businesses were in trade though there has been a progressive increase of the share of informal businesses in construction as well as in community and social services.

Constraints within the Informal Economy

- Little control over informal working environments (health and safety; worker rights and levels of exploitation);
- Little control of the legality of economic activity undertaken;
- Local government dealing with informality through by-laws and difficulty in balancing the location of informal traders spatially. Generally the regulatory environment around informality is complex and lacking solutions;
- Formalisation of informal sector workers would, in the long-term, assist in contribution to the regional tax base but careful thinking is needed on how to help such a transformation as it is easy to fail to understand the root cause of informality and its persistence. Moreover, given the definition of informality, more or less regulated activities can be captured by the concept. The distinction between the formal and the informal has been set aside by those who work with township economies moreover (SACN, 2015).
- Informality is dominated by trade (street trading or informal businesses), a sector in which competition is intense.

Informal Economy Opportunities

- The Province has a positive inclusive vision that considers that “informal economy actors who are survivalists and micro entrepreneurs are regarded as contributors in improving people’s lives through poverty reduction, job creation and economic growth” (Draft Policy for the Informal Economy, KZN).
- General recognition of the importance of the sector to help with poverty alleviation and entrepreneurial dynamism and intervention programmes put into place through the KZN Small Business Development Agency.
- Business support and training (including enacted through the SETAs (Skills Education Training Authorities)) in place to provide informal businesses and entrepreneurs with the skills to expand, and eventually move into the formal sector.
- Economic multipliers through the informal sector.
- Important opportunities identified in township areas around personal and household services, property and retail development, tourism and agriculture. A number constraints (e.g. lack of skills) means that some economic activities are not well suited to township areas.

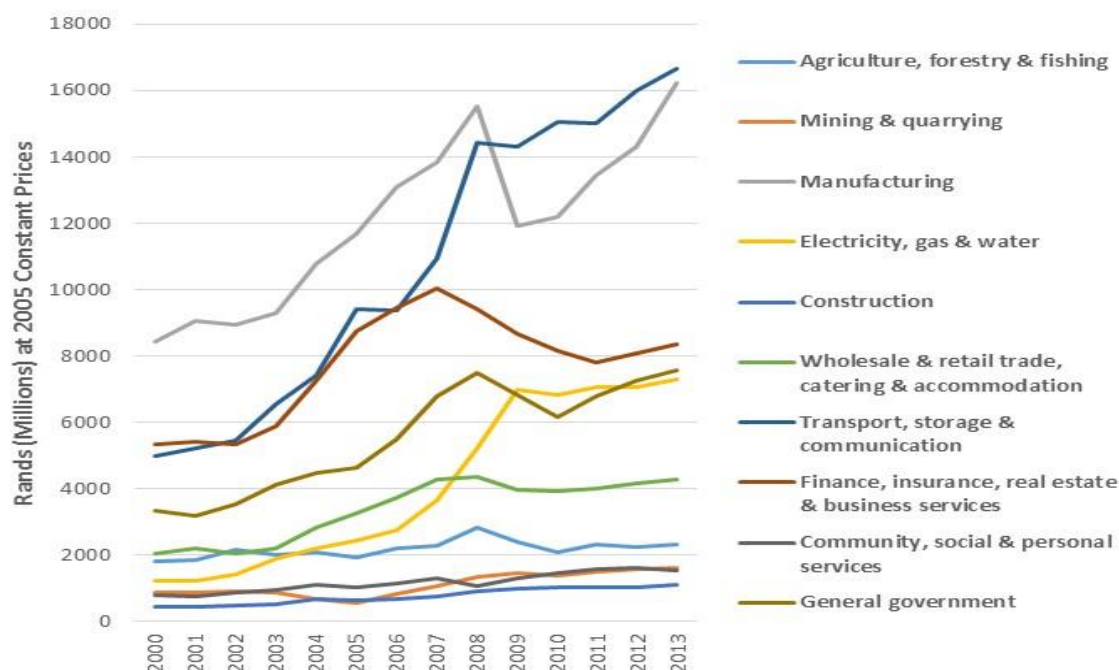


7.6 Investment in KZN

7.6.1 Domestic Fixed investment

This section briefly reviews the amount of fixed investment (i.e. plant, buildings, transport equipment and transfer) that each key sector has experienced in the province between 2000 and 2013.

Figure 159: KZN Gross Domestic Fixed Investment per Industry



Source: Quantec Database (2015) – Standardised Regional Dataset

- The transport, storage and communication sector has experienced a massive expansion of investment level since 2000. This is due to trade goods being transported via road haulage in KZN, most notably from the Ports of Durban and Richards Bay. The province has a key position with regards to the movement of goods. Investment in transport, storage and communication accounts for almost 25% of all investment made in KZN in 2013;
- Investment growth in transport, storage and communication has markedly slowed down post-crisis however.
- In other services, such as trade and finance and business services, investment declined prior to or from 2008 onward to remain low, at least compared to their pre-crisis levels.
- Investment in construction has been relatively mediocre. The fact that investment in the sector has, since 2009, only grown at 2.9% per year compared to 3.5% per year across all sectors does not bode well for the growth of the property sector in the medium time

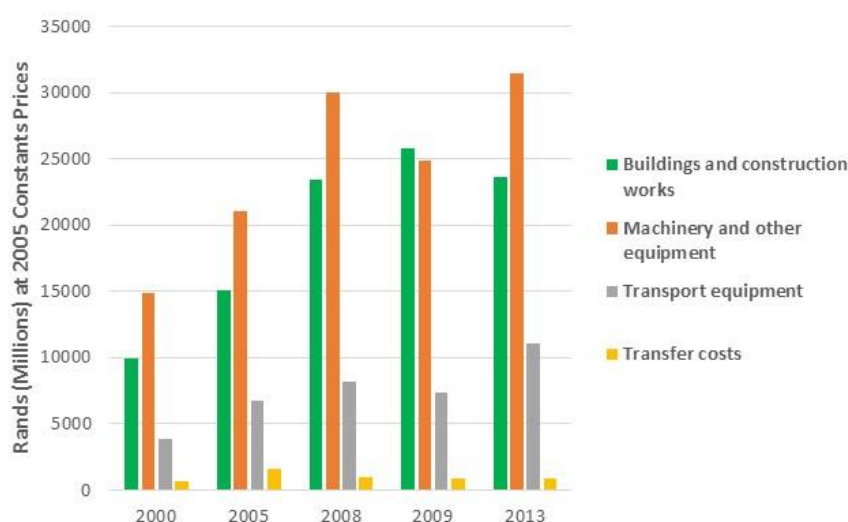


horizon. A pronounced slowing of investment in the industry before and after the crisis occurred though not visible from the figure because of its low starting level.

- Manufacturing has experienced a sharp decline in investment between 2008 and 2010 before private investment resumed again. Investment in 2013 is just a little above its 2008 level. Investment in Manufacturing accounts for 24.2% of all investment made in the province in 2013.
- Manufacturing is the sector that is experiencing the fastest level of investment growth amongst all economic sectors. This is good for the sector but not necessarily for job creation as the firms might be engaging in labour saving investment. Employment trends in the province in the light of a non-fully used capacity in the sector would suggest this to be partially the case.
- General government has expanded on fixed investment, notably in additional buildings and social service related resources, although this spending too has tapered in 2009;
- Electricity, gas and water stopped being a major factor in fixed investment after the crisis. This is particularly worrying development as it indicates that provincial backlogs in service delivery around the sector have been dealt with;

This sectorial spend is indicated in terms of the categories of fixed domestic investment.

Figure 160: KZN Gross Domestic Fixed Investment Per Category



Source: Quantec Database (2015) – Standardised Regional Dataset

- Investment in buildings and construction works grew progressively until 2009. Investment in this category reduced post crisis to become overtaken again by investments in machinery and other equipment;



- The stagnation of investment in buildings and construction work in the province does not bode well for property development.
- In spite of economic pressure, investment in machinery and other equipment has resumed with 52% of investment in such goods emanating from the secondary sector and another 40% from the tertiary sector.
- Worryingly, only 7.4% of machinery and other equipment investment would have been from the primary sector in 2013.
- Investment in transport equipment has grown steadily since 2009.
- Although not depicted here, KZN investment trend follows closely that observed for South Africa in the Quantec data; KZN is however progressively behind South Africa as a whole, particularly for machinery and equipment investment.
- The above suggests that private investment needs to be pursued more actively directly. The unlocking of investment in the District Municipalities through the setting up of investment promotion and facilitation agencies at this level would help enhance investment further provided capacity is available for this and provided there is co-operation with the various agencies engaged in attracting and facilitating investment.

7.6.2 *Foreign Direct Investment*

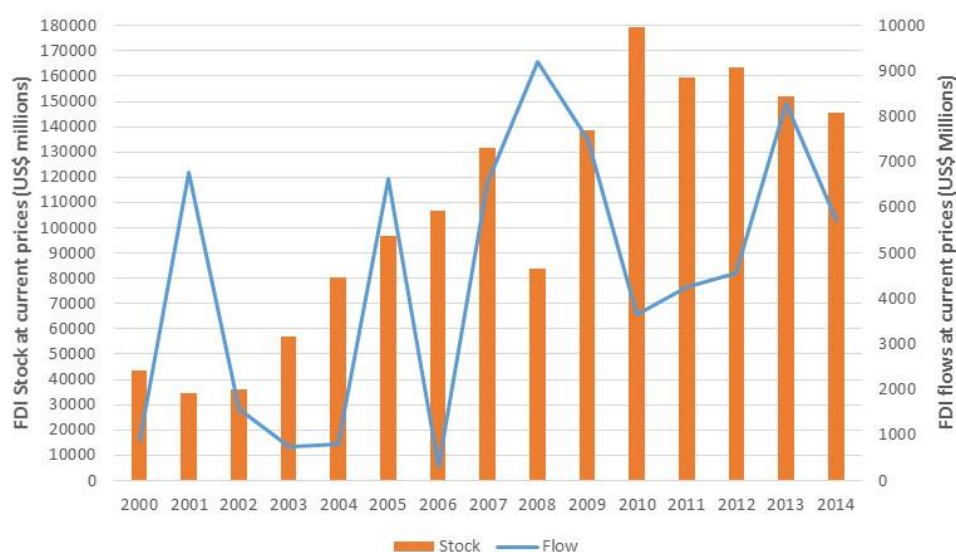
Data are currently not available to the authors of the Situational Overview that would help review the level and impact of foreign direct investment (FDI) in KZN. While the South African Reserve Bank (SARB) has data on FDI flows, the data are for South Africa as a whole rather than disaggregated to the level of South Africa's provinces. Trade Investment KwaZulu-Natal (TIKZN), who, amongst other, promotes the Province as a destination region for foreign direct investors and who facilitates the setting up of foreign firms deals with a subset of foreign investors. This section briefly presents, as such, some FDI trends and key points for South Africa as a whole. Whenever possible some information for the province is also reported.

A few key features of FDI into South Africa are to be noted:

1. South Africa is a large recipient for FDI on the African continent; although South Africa's relative ranking varies over the years, it was, in 2013, the top FDI recipient on the African Continent.
2. South Africa's FDI trends have, since 2000, tended to increase but the country experienced a peak in FDI in 2008 for flows and in 2010 for stock. South Africa's FDI stock has tended to decrease since 2010 although the level of FDI stock was, in 2014, slightly above the pre-crisis level using data at current prices. There are great fluctuations in flows but generally FDI flows into South Africa are on an upward trend.



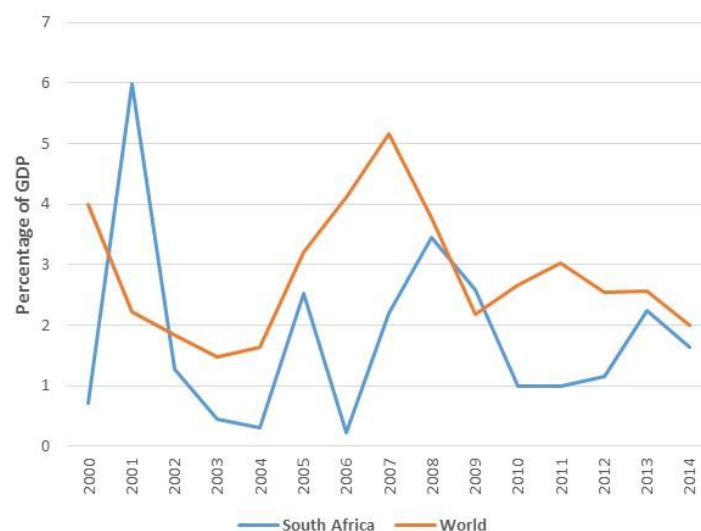
Figure 161: FDI into South Africa (Flows & Stocks)



Source: UNCTAD FDI database (2015), <http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx>, accessed November 2015

- Upward FDI flows bode well for an increase of FDI stock over the medium time horizon. Yet, FDI has been declining internationally recently, particularly from the main established regions. Moreover, South Africa is experiencing marked FDI outflows. In terms of net inflows as a percentage of GDP, South Africa has tended to be below the world average.

Figure 162: Net FDI Inflows as % of GDP for South Africa and the World (2000 – 2014)¹⁰⁸



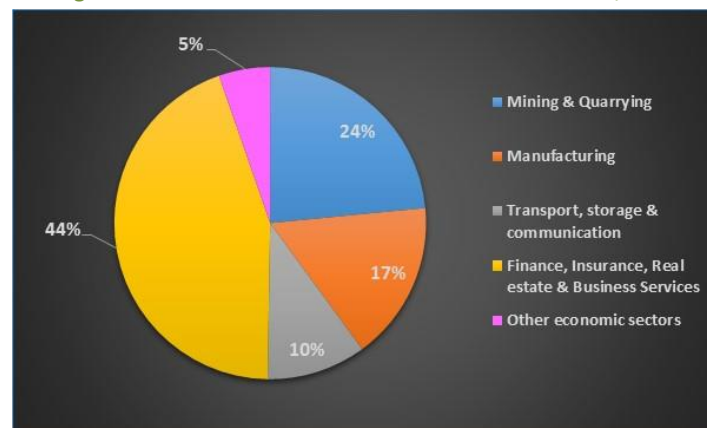
¹⁰⁸ The World Bank defines FDI net inflows as the value of inward direct investment made by non-resident investors in the reporting economy.



Source: World Bank, World Development Indicators (2015)

4. Compared to a range of other countries at similar level of development and/or with similar economic conditions, South Africa is underperforming in attracting FDI onto its market.
5. In terms of sectors, FDI in South Africa is currently concentrated in 4 main economic sectors (out of a total of 9 main economic sectors). Noting fluctuations over the years, the figure below reports in which sector FDI was located in 2014/15.

Figure 163: Sectoral Distribution of FDI into South Africa, 2015



Source: SARB (December 2015)

The figure shows that Finance, insurance, real estate and business services was, in 2015, the dominant FDI sector. This was followed by mining and quarrying. Only 17% of FDI was in manufacturing. Positively, **the dti** reports in IPAP 2015 that important investments happened in renewable energy. FDI was also, albeit to a much lesser extent, in automotive and chemicals.

6. Internationally, FDI is increasingly located in services. More than 60% of world FDI stock would be with services compared to 26% in manufacturing. Services have progressively gained prominence since the 1990. South Africa, as shown above, also has FDI predominantly in services. However, it has about one fourth of its FDI still in the Mining and quarrying sector.
7. Developing countries, particularly those from Asia and in that region China and India are major FDI source countries for the developing countries (UNCTAD 2015 *World Investment Report*). However the UK, the USA and Germany are the dominant market though new players are emerging on the South African FDI scene from the Middle East.
8. "Junk status" rating with the credit rating agencies could be a major setback to new foreign investment projects, particularly for those in services that are more footloose.



Focusing on KZN, the former situational analysis report¹⁰⁹ identified fluctuations over the years in terms of FDI (flows) in the province. It identified a peak in 2008 when looking at data for the 2003-2009 period. FDI in the province stood, in 2008, at R13 246 million. In 2009, FDI had dropped to R907 million. Using information from TIKZN reveals that TIKZN successfully committed R1.7 billion in 2014/15, over 12 projects suggesting that FDI has increased in the province post-crisis.

The projects, which were in eThekweni, and in Abaqulusi, uMsunduzi, Zululand and Ugu Municipalities are presented below.¹¹⁰ However, projects tend to remain concentrated in eThekweni and surrounding area. A total of 4500 jobs have been created with these projects though the number of jobs associated with each project varies widely depending on the sector.

Figure 164: TIKZN Committed Projects 2014/15

NO	PROJECT NAME	VALUE R' million
1	uMzimkulu Industrial Holdings	187.2
2	Eureka Capital	120
3	Samsung	221
4	Menzengwenya Mbazwana & Mabaso Plantations	100
5	Miracle Communications	70
6	J Strickland	25
7	Heatwave	3.8
8	Abaqulusi Hospital	90
9	East Coast Call Centres	150
10	Quindel	250
11	Burcap Plastics	50
12	KMA – SA	50
	Total new projects	1 317

Source: TIKZN Annual Report 2014/15

More recently, KZN's FDI has tended to yield a high number of jobs with a number of call centres setting up in the province (call centres are labour intensive). This would be in line with the shift noted above, internationally, towards FDI in services. Previously, FDI projects were in a range of manufacturing sectors with a number of foreign firms having set up in the province in the automotive sector as KZN has a cluster of firms serving some large original equipment manufacturers (OEMs) in the Province.

¹⁰⁹ The previous Situational Overview provided information on FDI for KZN with reference to data from a private data company (*fDi Markets.com: Crossborder Investment Monitor, 2010*) complemented by information from Urban Econ for January to June 2010.

¹¹⁰ The former situational analysis report identified that FDI was relatively heavily concentrated in eThekweni (at around 50%-60%), with another 16% in Pietermaritzburg and Richards Bay with the residual spread across a number of smaller cities in the province.



7.7 Synopsis: Strategic Economic Issues

The province of KZN has confronted large challenges in the post-crisis period. A number of challenges remain but a number of positive developments have emerged. A particularly positive development to emphasise for the province is growth having resumed until relatively recently, at least for the period for which data is available and noting that many indicators looked at for the situational analysis are not available post 2013.

- In terms of challenges, the main challenge is with serious **threats arising on the labour market front.**

KZN is seeing a growing number of youngsters joining the labour force while the labour absorption has remained low. Women are particular vulnerable in the job markets and constitute a large group in the unemployed. Moreover, those that are unemployed are increasingly unemployed for a long time, particularly if they were previously engaged with manufacturing. In other words, jobs are scarce, particularly in some growth-inducing sectors such as manufacturing. This is in a context in which national demand for goods and services is low; this low national demand base is observed not only through regular downward GDP revisions for South Africa but through the fact that the Province has been, post-crisis, growing faster than South Africa as a whole. Internationally, the economic context is not particularly buoyant and adverse developments are emerging in many countries; the value of world exports has been stagnant for a number of years and has, more recently, been decreasing.

A key concern is that while enhancing labour absorption in the economy is a central aspect of the NGP, a number of sectors that are labour intensive, such as textiles and clothing and furniture appear to be stagnant. Also, some sectors, such as agriculture and forestry that have experienced a growth in the total value of activities have either shed labour or not grown their workforce.

There is a serious threat in these developments as poverty has been progressively reduced in the province. Going forward, attention will need to be paid to the fact that unemployment increases the vulnerability of households to further economic shocks. Also, of note is that a high proportion of the poor are young, less than 25 years of age. It is harder for a youngster with only secondary education to obtain a job now than before moreover. And the longer a person is without a job, the longer this person remains unemployed.

Growing unemployment means that those that are employed are also becoming more vulnerable. On this, data shows that the number of those in informal employment is growing rapidly in the province, faster than in the whole of South Africa. Although what is informal employment is complex, this would indicate, amongst other, strong cost pressures on the firms in the province. This comes after the period for which the NPC identified that high wages for new labour market entrants curbed the demand for such employees. In other words, getting youngsters to be employed is much harder now than before. Women are also badly placed in terms of their probability of finding employment again while unemployed, particular African women.

Generally there are indications that the KZN production platform is weak and needs to be reinforced. Strategically addressing this problem area requires a further push around private sector development. This is critical as the private sector is a major source of *sustainable* rather



than temporary new jobs and for the retention of existing jobs. Job loss associated with firm closure, in turn, means a reduction of productive capabilities with the eventual threat of the complete disappearance of some economic sub-sectors from the province and, in the long term, from South Africa (e.g. electrical).

Investment has to be expanded more markedly than is currently the case. Investment also has to be in labour-intensive sectors and areas; a number of small green economy sectors and projects are relevant for this and need to be developed accordingly. The growth of domestic investment that is taking place in the province together with the growth observed in many sectors would suggest that firms are turning to a mix of capital and labour rather than to more markedly to labour for production, particularly in manufacturing.

In turn, a stronger expansion of rural development as it is currently set out and pushed by the Province is required. Cooperatives and small scale agricultural projects have a key role to play in supporting the development of rural communities and in reducing food insecurity. There is on this however limited information on the total scale and sustainability of the projects in this area though a great number of projects have been put into place and are being expanded in rural areas. New ideas are still being tested and it is too early to see the impacts of a number of these. But, presently social cohesion in some rural communities is relatively fragile with some rural areas exhibiting high crime levels and troublesome relations between different types of agricultural actors.

Although tourism offers benefits to a large number of people, international tourist numbers have dropped recently. Although the spending by each foreign tourist is relatively high and benefit a large number of people in the province, tourism facilities are vulnerable to strong fluctuations in revenues (e.g. hotels and catering establishments). Positively, domestic tourists' spent has increased and domestic tourist numbers are good; but, these tourists tend to locate around beach/coastal areas rather than penetrate the less developed parts of the Province (e.g. the Battlefield Route). Of interest is however the fact that tourists are diversifying their product demand in such a way so as to benefit a larger number of people than 5 years ago. Tourism demand is also becoming increasingly turned to what rural and peripheral urban areas have to offer.

Beyond sectorial efforts are particular efforts to develop SMMEs (including cooperatives). Financial literacy is a major obstacle in the growth of smaller businesses together with access to finance. However, what is currently curbing the growth of other firm types and employment growth also needs to be considered properly to help new businesses. Also, the scale of efforts (financial and in terms of human resource development) to help new small business properly take off is rather enormous.

- A second challenge which the province confronts is in terms of **growing the value of economic activities** so as to help reduce inequality. With relatively small increases of the value of economic activities per capita, there is little scope for a notable dent to be made in inequality.

The data also suggest that economic activities with high returns have not yet set up in KZN. Despite the fact that economic activities are growing faster than the number of people in the province, there are no clear cut sign of value addition taking place across economic sectors.



It is difficult to understand the bottlenecks that might be in place that constrain an increase in value addition and of economic activities in general. Possibly, the issue is that the very large infrastructure investments that are being unlocked in the Province have not yet had their full impact. In turn, while the skills base of the province appears relatively similar to that of South Africa, the skills might not be the right skills to jump start a new high value added growth path in the Province. Also, investments in machinery and equipment in the province have grown slightly less rapidly than in South Africa as a whole. Foreign investment will play a role on this going forward together with attracting a particular type of innovating firms in the province. However, foreign investment is increasingly towards services. And, for investors to come, world class business support services as well as world class facilities have to be provided. *Cost of Doing Business* indicators suggest that more can be done on this in South Africa. Moreover, there are still issues in terms of land use and in terms of public service provision and administered prices in the province.

In parallel, the Province is still underperforming relatively to its asset base. This is seen through the gap between the province's contribution to national economic activities and its population and its low GVA per capita position when compared to other provinces. KZN is increasingly displaced by Gauteng.

- A third problem area is in terms of the fact that **economic activities are still concentrated in the three main economic hubs of the Province**. Notably, there has been little shift in the aggregate in the last five years in favour of the smaller economic regions of the province. Though shifts have happened, they are relatively uneven and small in scale with the exception of a few District Municipalities. They are moreover around the tertiary and primary sectors rather than around manufacturing.

This means that, whereas the district municipalities of KZN appear to develop along their own growth path, they are still unable to notably attract new economic players, particularly in industry. Nevertheless, the fact that there is growth generally in the districts of KZN is positive news and means that development is taking place in the smaller areas of the province.

- The data also shows that **a few District Municipalities appear to be experiencing some economic weaknesses**: Uthungulu has seen a contraction of its primary sector activities; Umzinyathi is not performing notably well for its small economic base; Ilembe's manufacturing performance has been relative lacklustre between 2009 and 2013; Amajuba, which has been the smallest contributor to agricultural production in KZN, might need attention to help boost its agricultural production further. A few District Municipalities in KZN also see general government services dominate their economic activities. This is worrying for a future growth of economic activities which rely on private sector taking over the economic space.
- A fourth problem area that could undermine future growth prospects is in a **stagnation of economic activities in electricity and water**. KZN has about one-fifth of electricity available nationally but the sector has grown very little in the last five years when investments are badly needed following long period of under-investment; economic activities in water have stagnated while water is critical for agriculture and other human



activities in a water-scarce country. Investments in water and electricity have grown very little since the crisis moreover. There are nevertheless, on this, signs that investment in the sector has increased recently in South Africa, at least in the RE sector for private investors.¹¹¹

A number of notably positive developments are worth noting for the province for the last 5 years.

- ✓ Firstly, KZN has been growing faster than South Africa as a whole. Between 2009 and 2013, the province grew more rapidly than the Western Cape.
- ✓ Secondly, KZN has performed well on its growth across main economic sectors, with the exception noted above of water and electricity. It is in a first or second position in South Africa. Notably, agriculture and forestry is a sector that is growing steadily. With employment being shed in the sector, this would suggest that productivity gains are being reaped around better production processes and input use, at least by the larger commercial farmers.¹¹²
- ✓ Thirdly, investment has grown in a number of sectors. Investment in manufacturing is expanding, but has just caught up with its pre-crisis level.
- ✓ Fourthly, innovative projects to grow economic activities in the districts and to connect the District Municipalities through production linkages are well developed (e.g. with sites already identified in the case of hubs).
- ✓ The report further identifies a range of sectorial opportunities. It also lays out a range of constraints. Nevertheless, notable for all sectors is that the province has engaged with a great number of initiatives/programmes/projects. How successful these are on the ground in their impact and how co-ordination problems are overcome when a number of stakeholders are involved with the initiatives is less clear however. A risk for the province is one of fragmentation with many small projects yielding small rather than large scale impacts.

¹¹¹ See: <http://www.bdlive.co.za/opinion/editorials/2016/03/09/editorial-data-show-up-sas-big-deficits>, accessed 10 March 2016.

¹¹² This is more generally reported in KZN Department of Agriculture and Rural Development (2015). The report further notes that the sector is affected by a lack of scale in order to help leverage for lower input prices moreover.



8 THE INFRASTRUCTURE LANDSCAPE

The 20+ year vision for the PGDS has review intervals of 5 years and 2016 marks the first year of that review. As we reflect on the infrastructure landscape for the Province of KZN, we recognise the strides that have been made and the more miles that we still need to travel.

As in 2011, infrastructure is still seen as both hard (road, rail, harbours, airports) and soft (skills development) and as being central to the growth and development ethos of the Provincial Strategy. Infrastructure development has and will continue to be a central driving force behind reducing service delivery backlogs as well as growing our economy.

As we reflect on the 2011 PGDS, arguably, two central themes start emerging as areas that require new approaches to dealing with the manner and pace at which we deliver infrastructure. These are impacts of urbanisation with its greater demand for more, liveable space, more demand on serviceable land and the second theme, being resource provision. The energy as well as the drought crisis requires that we review current and future resource provision for both energy and water. The response of both these aspects to growth and development determine the desired spatial patterns of the province.

In this review of the infrastructure landscape, several significant spatial development projects currently being developed will be discussed as they indicate a major shift to the spatial transformation of the Province as well as the associated infrastructure that will be required to realise the above. These are:

- Aerotropolis
- Special Economic Zones (Dube Trade Port);
- Strategic Infrastructure Projects;
- District Industrial and Technology Hubs;
- KZN Regional Airports;

The manner and pace in which the above unfolds will largely depend on our response to the:

- Energy and Water crisis: short, medium and long terms plans;
- The acceleration of our transport (rail and road), logistic and communication programmes particularly as they relate to the rural spaces of KZN;
- Waste Management Programme again particularly in our growing urban areas as well as rural spaces;
- The expansion of the two strategic ports situated in Durban and Richards bay will strengthen our domestic and international linkages.

The above elements are just some of the key strategic infrastructure aspects and by no means exhaustive. Social infrastructure like clinics, schools, tertiary institutions, libraries all require investigation and will certainly impact on liveable spaces within KZN.



8.1 Water and Sanitation

In October 2014, following a protracted period of drought, the KwaZulu-Natal (KZN) Department of Cooperative Governance and Traditional Affairs (CoGTA) recommended to the Provincial Executive Council (Executive Council) to declare a state of disaster in all affected regions of the province.

The most drought-stricken regions were uMkhanyakude, uThungulu, ILembe, Zululand, uMgungundlovu, Harry Gwala, uMzinyathi and uThukela. All of them had received rainfall well below normal and this had affected water levels in various catchments areas.

The preliminary assessment of the extent of damage to the Province, especially to livestock and crops, stood at above R400 million at the time. The farming community, comprising of both commercial and subsistence farmers, has been one of the hardest hit segments of our population. Some 40 000 head of cattle have perished as a result of this drought. This bears testimony to the extent of the crisis facing the Province.

Several communities responded to water shortages with sporadic incidents of protests in some of the affected areas. The KZN provincial government appealed to the affected communities to give government time for appropriate intervention as the evolving situation on the ground was well beyond the control of municipalities.

The formal declaration of disaster in October 2014 dramatically changed the course of events. It enabled a hotline to the Department of Water and Sanitation (DWS), thereby unlocking additional funding for KZN from the national government.

The initial allocation of R352.4 million was first announced last year and channelled to KZN municipalities. The implementation of specific drought relief projects is ongoing in all municipalities, and they are being reimbursed by DWS on receipt of invoices.

8.1.1 *Drought-related Interventions undertaken by Provincial Government*

The KZN Executive Council directed CoGTA to ensure that all allocated funds are disbursed and used timeously for the intended purpose.

From the outset, the KZN Provincial Government adopted a multi-pronged approach to this crisis. On the one hand, the government is assisting communities that are in immediate danger through its disaster management teams and in conjunction with municipalities to whom affected residents are encouraged to apply for help as their first point of call. In the longer run, the department is exploring far-reaching measures to conserve water and convey the urgency of this to the public through targeted awareness programmes, again in conjunction with individual municipalities.

Delivery of water with tankers, drilling of boreholes and installing of water washers are but three forms of emergency assistance and are stop gap solutions to ensure that all our communities continue to have access to water until more sustainable solutions, such as large scale water harvesting and desalination, are found through adequate water infrastructure. Water tankers are provided by both DWS and District Municipalities on the basis of need and upon application. It is clear, however, that demand for them is fast outstripping the available supply.



Despite the sporadic rainfall in some parts of KZN, but mostly outside its catchment areas, the remaining water resources are only expected to last several weeks. As a result of this, stringent rationing is being rolled out to the affected communities. Water restrictions have been imposed on all users of these water systems. These restrictions are increasing in intensity as the dam levels continue to drop. Despite all these efforts, only partial success has been achieved in reducing the level of water consumption from the most affected dams.

The KZN provincial government anticipates that it will become necessary to increase the restriction levels as the storage levels decline and to utilize more mandatory methods to enforce these restrictions. To achieve this, the Department has been running targeted public awareness campaigns that have been tailor-made to the needs and circumstances of the affected municipalities.

The summary of government intervention and progress made thus far can be summarized as follows:

- The purchase of water tankers (15) started at Hluhluwe on 1 October 2015;
- The delivery of water by tanker services;
- The installation of static water tanks (200) - 81 completed so far and additional tanks are being procured;
- The protection, refurbishment and upgrades of springs;
- The drilling of production boreholes to support households livestock and game;
- Augmentation of Ntshongwe-Malobeni Scheme, supplying kwaQondile and all the way up to Mbazwana and Mngqobokazi;
- Shemula water scheme, repairing all the detected leaks, to supply water all the way up to Manguzi;
- Jozini water works upgraded to 40 mega liters to assist with the capacity to supply all the current demand;
- The Mandlakazi scheme is being fast tracked and reticulation simultaneously built;
- The department of agriculture has made available funds to assist with scooping of communal dams to assist with livestock;
- Feed and other agricultural extension services are made available to support affected farmers;
- Ezemvelo Wildlife has started carting water to the game reserves to sustain tourism activities;
- Engineers are being deployed to assist with the rollout of water infrastructure in the districts; and
- Desalination plants will be constructed shortly to augment water capacity in the coastal municipalities.



8.1.2 *KZN Water Supply*

While the drought has certainly impacted on the pace at which water infrastructure has been delivered in the Province, the DWAS has implemented the following major bulk water projects to ensure supply of water.

The following dams are also various stages of construction and will augment water supply in the region. These are:

- **The Phase 1 Lower Thukela Regional Bulk Scheme** which is scheduled for completion in June 2016 would provide additional 250 million m³ per annum, while phase 2 would provide additional 40million m³ per annum;
- **The raising of the Hazelmere Dam** is to augment the water supply to the KZN North Coast by increasing the yield of the dam for medium term supply. The dam will provide an additional 19.8 million m³ per annum. The uThongathi River transfer scheme has been successful in supporting the Hazelmere Dam, and provides a daily quota of 8 ML per day.
- A further scheme is currently under construction to transfer water from the Hlimbitwa River to Maphumulo in the Ilembe District Municipality.
- **Bulwer Dam** in Harry Gwala DM is currently under construction and would provide 3.5 million m³/annum to about 94 000 people.
- **The 2014 completed Spring Grove Dam** brought the Umgeni Water Supply systems back into near balance where supply would meet demand. The system benefits Ethekwini, Msunduzi, uMgungundlovu and Harry Gwala municipalities.
- **The proposed uMkhomazi Water Project** (uMWP-, Smithfield Dam) is the recommended augmentation option to support the Umgeni River System.

The table below reflects the current water supply and demand figures as at September 2014 and reflects that current water requirements can be meet, with Ugu, uThungulu, Zululand Districts showing a deficient is supply.



Table 82 Water supply and demand

District Municipality	Supply System	Water Resource	Bulk Water Supply (million m3/a) Updated	Current water requirements (million m3/a) Updated	Out of Balance Updated
Various	Mgeni	Mgeni River, Mooi river	489.00	380.00	
Uthungulu	Richards Bay	Lake Msingazi; Mhlataze Water	23.73	17.26	
Various	Mdloti	Water Resource	20.00	20.00	
Ugu	Uzimkhulu/Bhoboyi Supply area	St Helens; Umzimkulu River; Umtamvuna WTW	19.71	20.11	1
Uthungulu	Esikhaweni	Lake Cubhu	12.41	7.17	
Uthukela	Ladysmith supply area	Klip River, Spioenkop Dam, Tugela River	9.73	7.43	
Uthungulu	Empangeni	Lake Nsezi	9.13	8.79	
Uthukela	Ezakeni supply area	Tugela River, Spioenkop Dam	8.98	8.79	
Uthukela	Estcourt	Bushmans River (Wagensdrift Dam)	8.48	5.03	
Ilembe	Sundumbili Water Supply Area	Tugela River	7.00	6.52	
Zululand	Vryheid	Bloemveld; Grootgewardcht; Klipfontein; groundwater	6.35	6.36	
Uthungulu	Upper Nseleni	City of Mhlataze (SLA), Nseleni River; Boreholes; Mfolozi River	5.65	5.65	1
Zululand	Nkonjeni Regional Scheme	White Mfolozi River	7.29	9.40	1
Ugu	Umtamvuna supply area	Umtamvuna River	7.30	6.60	
Ilembe	Umgeni Northern Feeder Supply Area	Umgeni Water	5.04	4.84	
Various	Mvoti	Water Resource	5.00	10.00	1
Umzinyathi	Dundee/Glencoe	Several small dams, Buffalo (Ngagane Dam); Tayside weir	4.67	5.77	1

The table is an indication of the Province's ability to supply the water in the region. It does mean that the fundamentals in the water sector need to review current practices and perhaps turn back to basics of water resource and demand management.

The table below is a consolidated District profile of water and sanitation backlogs in the province, with projected financial costs to address these. DWSA has undertaken Water Reconciliation Strategies for all Districts. Some Districts have undertaken their own surveys and thus have the most updated figures; in instances where these were not available, the 2011 census data was used.



8.1.3 Water and Sanitation backlogs

Table 83 Water and sanitation backlogs

BASED ON CENSUS DATA 2011					BASED ON ENGAGEMENTS WITH DM		COST OF ERADICATION	
District	Number of Households (Backlog)	Water Backlog	Number of Households (Backlog)	Sanitation Backlog	Water Backlog	Sanitation Backlog	Water	Sanitation
Amajuba	23914	29%	23914	29%	N/A	N/A	R 927 022 088.00	N/A
Umkhanyakude	36439	35%	25034	24%	N/A	N/A	R 5 360 103 641.00	N/A
Zululand	44473	28%	56757	36%	N/A	N/A	R 4 797 717 979.00	N/A
uThukela	96 113	TBC	31907	29%	N/A	N/A	R 4 968 798 729.00	N/A
Ugu	16540	14%	8429	7%	N/A	N/A	R 1 415 983 390.00	N/A
Sisonke	51895	46%	66099	59%	27%	21%	R 140 981 500.00	N/A
iLembe	48533	31%	90457	57%	11%	7%	R 307 000 000.00	N/A
Umgungundlovu	36599	13%	103299	38%	4%	52%	R 224 115 757.00	N/A
Umzinyathi	51426	45%	59824	58%	18%	24%	R 346 878 744.00	N/A
uThungulu	43313	37%	4899100	41%	17%	24%	R 813 096 807.00	N/A

Source: Department of Water Affairs and Sanitation 2014/2015



8.1.4 *Challenges in the Water Sector*

The drought in South Africa and the Province has raised questions around water supply and delivery. The questions relate to the current water strategy and its implementation and the fundamental basis upon which the strategy was designed, i.e. the planning principles that look at regional catchment areas, and perhaps should look at quaternary catchments areas per District. There is a study currently underway, driven by the KZN PDC that hypothesises that planning at quaternary catchments levels is a more accurate basis and will demonstrate that KZN has sufficient water to supply all users. Other questions being raised relate to the different strategy Water Services Authorities have employed to improve water infrastructure in their areas. Again the study by the KZN PDC has highlighted that the over-reliance on boreholes as a means to extract ground water is both impractical and has delayed the supply of water infrastructure. In addition, the building of new dams in parts of the province has not occurred at the pace that it should have been in spite of adequate water in these areas to store this water. In addition the questions raised include the over-reliance on surface water and not understanding scale and resilience of ground water. In addition, there are questions around water users and how we manage demand and supply and on what time-frames.

The growing inefficiencies in the various water institutions have also been questioned. These related to institutional capacity of water services authorities both from water resource management to operational and maintenance. The argument being raised here is that while water authorities have been able to develop water demand plans; they have not necessarily considered water resource or supply in their areas. In addition, it is argued that despite being a water scarce country, South Africa faces high levels of water wastage and inefficient use. In municipalities, non-revenue water (wastage) is at more than 37% on average, and in many irrigation and municipal supply schemes it is worse, with estimated losses of up to 60%. Such schemes often have no formal record or measurement of actual losses.

The bigger questions being to what extent should the Department and or Water Boards begin to contribute to water resource management. The unit cost of water supply is escalating and the think tanks of in the water business need to develop both funding and business models that ensure sustainable and equitable supply of water to address backlogs and grow the economy.

The National Water Resource Strategy (2013) adds that water is scarce and it requires careful management to enable provision of basic water services and equitable allocation, while meeting the needs of inclusive economic growth without threatening the integrity of aquatic ecosystems. The water resources planning, infrastructure and development theme indicates that surface water sources are limited in many catchments, as indicated by Reconciliation Strategies and that infrastructure and the costs of construction and maintenance is restricted. South Africa has to prioritise, considering the mix of options available, to supply the huge water demands for equitable allocation for development and economic growth. The country will thus consider other potential sources, which include re-use, desalination, ground water utilisation, water conservation and water demand management measures, rainwater harvesting, recovering water from acid mine drainage and the import of water intensive goods. Ground Water for example, is arguable a significant source and is often the only water source in many parts of the country, although local yield are usually quite low. The most recent estimate of sustainable potential yield of groundwater resources at high assurance is 7500 million m³/a, while current groundwater use is estimated at around 2000million m³/a. Allowing

for an underestimation on groundwater use, about 3500m³/a could be available for further development.

There is an argument that water use currently in the country is disproportionate and that this is an aspect of water resource management must be addressed. The Agriculture sector In South Africa and in Kwazulu-Natal is regarded as the significant employer of people with nationally about 8.5 million people directly or indirectly dependent on agriculture for employment and income (GCIS, 2011). In KZN while this sector has significantly decreased, it is still a major employment sector in the rural areas. The sector contributes about 3% to the GDP and 7% to formal employment. In KZN the GDP contribution is 4,4% which is slightly higher than the national contribution. The agricultural sector is made up of commercial farmers and subsistence farmers and about 1.3 million ha is irrigated. The New Growth Path (NGP) has set a target of 300 000 households in small holder schemes by 2020 and 145 000 jobs to be created in agro processing by 2020 (DED, 2010). The PGDP (2011) has projected target of 200 000 jobs in 2020 and 350 000 jobs in 2030. Irrigated agriculture is the largest single user of water in South Africa (60%) and it has a huge potential socio-economic impact in rural communities. Water is the major limiting factor in the growth of this sector and poor water quality has a negative impact on agricultural exports and associated foreign income.

Energy sector: Although only using 2% of available water, this sector contributes about 15% to the GDP of South Africa and creates jobs for 250 000 people (GCIS, 2011). The sector generates about 95% of South Africa's electricity needs and exports to countries in Africa. Power generation remains a water use of strategic importance.

Mining sector: The contribution of this sector to the provincial economy is low. More broadly, KZN only accounts for 3.8% of all South Africa's mining and quarrying activities. However, notable is the growth of employment in the sector. From about 14 000 employees in 2000, 33 000 are now currently employed in the sector in KZN according to Quantec data. About 1.3% of total KZN employment would currently be in mining and quarrying.

According to the Chamber of Mines of SA, the mining sector contributed 8.8% directly and 10% indirectly to South Africa's GDP in 2009 (GCIS, 2011). The Sector creates about one million direct and indirect jobs. The sector accounts for approximately one third of the market capitalisation of the Johannesburg Stock Exchange (JSE) and it is the major attractor for foreign investments. The NGP has set a potential employment target of 140 000 new jobs by 2020 for the mining sector (DED, 2010). Mining and related activities require significant quantities of water and impact on the environment through associated potential pollution. The mining sector is also faced with legacy issues of past pollution, for example, acid mine drainage. The development of new mines in water-scarce areas requires planning to make arrangements for the transfer of water and the development of new sources, with appropriate attention to waste processing and remediation.

Manufacturing sector: KwaZulu-Natal's manufacturing sector contributes (21.3% of national manufacturing GVA) is the second largest in the country, after the Gauteng Province (40.2% of national manufacturing GVA). The manufacturing sector is geared for export, with about a third of South Africa's manufactured exports from KwaZulu-Natal. The diversified nature of manufacturing is significant in the province's economic growth, and generates approximately 11% of total formal and informal employment in the province and 14% of formal employment. Nationally the manufacturing sector contributed 15.5% to the GDP and 13.3% to jobs in 2009



(GCIS, 2011).The NGP has set a target of 350 000 new jobs for this sector by 2020. Water is required in manufacturing processes and is used for cooling.

Tourism sector: The Tourism industry is a key contributor to development in South Africa and in the KwaZulu-Natal economy. Tourism is a varied sector that can be developed instrumentally for the development of more remote or under-developed rural areas. Generally, the sector is directly important because of its labour intensity and because it requires relatively little skills and can accommodate relatively low levels of education. The sector also has linkages with a number of other sectors such as food and beverages in manufacturing, construction, and transport and finance services amongst others. In turn, prospects for tourism rely on the state of various forms of transport as well as of the road and tourist infrastructure. In KwaZulu-Natal, tourism is assessed to contribute to around 5% of the KZN GDP. The sector's contribution stands at around R39.3 billion in terms of total contribution and at around R28 billion in terms of *direct* contribution to the provincial economy. Nationally, in 2009, the tourism sector directly and indirectly contributed 7% to the GDP and created 575 000 jobs (GCIS, 2011). This sector is earmarked for high economic growth, which is expected to generate a significant number of new jobs. Drinking water quality that matches international standards and reliable water supply and sanitation services are critical to the success of this sector. Many tourism sites require on-going attention to aquatic ecosystems.

Energy sector: Energy production capacity is expected to increase as the Department of Energy is planning significant investment in new power generation capacity. Current plans include building dry-cooled coal-fired power stations that will be more water efficient. However, these power stations are located in water scarce areas, and would strain available water resources. The return to service of older power stations, which are wet-cooled, has further burdened available water resources.

The All Towns Strategies showed that, in most cases, water supply deficits are not the result of water resource shortages but rather of poor water supply management. Improved management will solve most of the immediate problems. Typical water management problems are:

- A lack of metering information, resulting in WSAs having limited information on how much water is used or wasted
- A large wastage of water
- Per capita use, which is much too high
- Free water being provided far above the indigent level obligations
- Poor cost recovery
- Lack of proper maintenance and skilled operators
- Low technical competency

The All Towns Strategies also showed that groundwater is a very important resource for towns. The water resource situation for all towns indicates that 30% of towns are currently in deficit and therefor require immediate intervention.

Water is life; and water is a gendered issue, in that its access to, and control affects men and women differently. The United Nations-Water: Water and Gender report stipulates that among the many water-related challenges worldwide, the crisis of scarcity, deteriorating water quality, the linkages between water and food security, and the need for improved governance are the most significant in the context of gender differences in access to, and control of water resources. "Involving both men and women in the design and implementation



of interventions leads to effective new solutions to water problems; it helps governments to avoid poor investments and expensive mistakes; makes projects more sustainable; ensures that infrastructure development yields maximum social and economic returns; and furthers development goals such as reducing hunger, child mortality, and improving gender equality."

113

In 2011 the CGE completed a national study on gender mainstreaming in the water sector.¹¹⁴ The challenges surfaced were prevalent in all provinces, but the following issues were of specific relevance to KZN province, where Ethekwini Metropolitan municipality (urban) and Sisonke District municipality (rural), as well as Umgeni Water Board were selected as case studies. The following challenges were identified by participants who participated in the focus group discussions:

- The majority of households with access to piped water in both municipalities were getting free water services while others paid up to R25.00 per month for their water consumption
- Much of the water was accessed through water tanks, communal taps and stand pipes. For some communities such as Ixopo, complete lack of access to clean piped water has meant accessing water from local streams, with its attendant health risks. For those with access to water from water taps, this was not accessible at all times. The quality of the water from tanks was not good as the tanks were not always closed properly thus creating risks of contamination and water borne diseases.

The above questions must mean that the KZN Province/ South Africa is ready for a New Water Investment Strategy?

8.2 Energy and Electricity

The national energy crisis was a stark reality of a lack of adequate supply for electricity among a growing demand from an urbanising country. In the recent months South Africans have been spared the dreaded load shedding programme. National Government has responded in several ways to ensure short, medium and long terms planning to ensure that we have a managed supply of electricity to deal with backlogs as well as economic growth. About 95 percent of the nation's electricity is supplied by state-owned Eskom Holdings SOC Ltd., which had installed generating capacity of 44,262 megawatts during 2015. More than 85 percent of the utility's output comes from coal-fired plants.

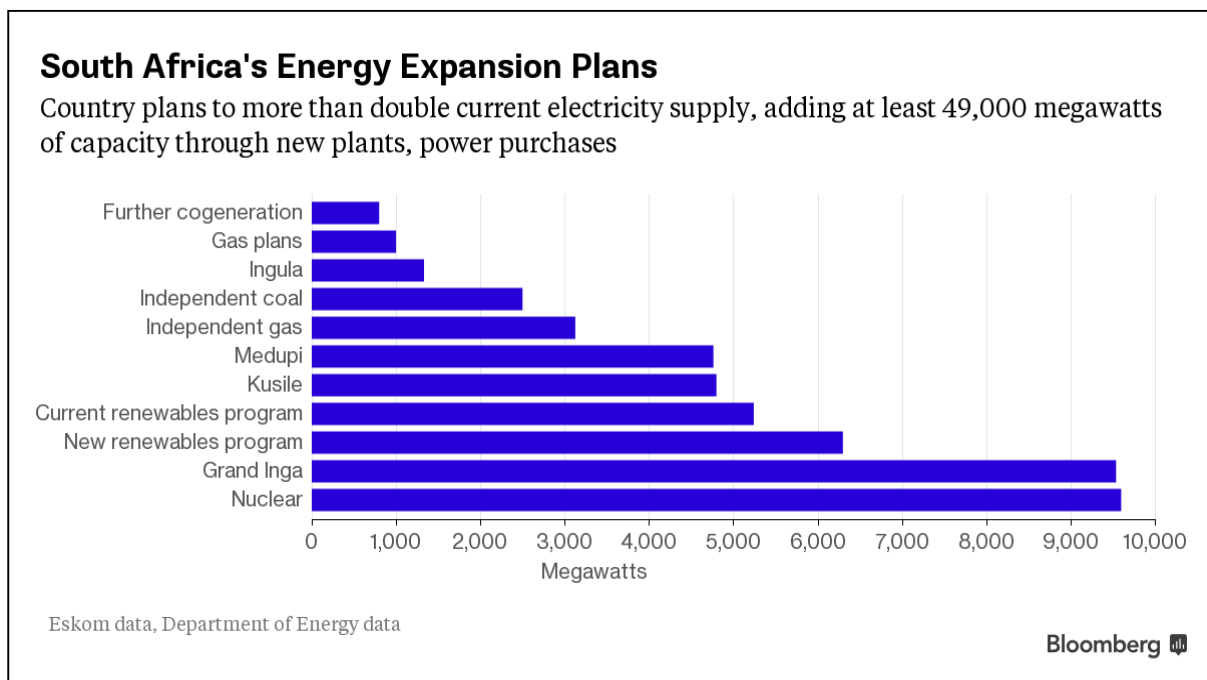
Here's what's being done to bolster power supply and diversify the energy mix:

¹¹³World Water Development Report, 2012 accessed from unwater.org on 19/03/16

¹¹⁴ Commission for Gender Equality, "Gender Mainstreaming in the Water Sector: Evaluating Progress by Municipalities and Provincial Water Boards, a National Report", p.25-26, 2011.



Figure 165 SA Energy expansion plans



8.2.1 Coal

Eskom is building two new coal-fired plants - Medupi and Kusile - that will jointly add 9,564 megawatts of power to the national grid. Medupi's first 794-megawatt unit came online in 2015. The initial output from Kusile's first 800-megawatt unit is expected in August 2017 and from Medupi's second facility a month later. The plants, which will cost a projected 223.5 billion rand are running about four years behind schedule. The feasibility of building a third new coal-fired plant, with an initial budgeted cost of 111.1 billion rand, is being investigated. Private companies have been invited to bid for contracts to supply 2,500 megawatts of coal-fired power. The deadline to submit proposals closed August 2015.

8.2.2 Nuclear

The government plans by the end of March to award bids to build power plants that will supply 9,600 megawatts of atomic energy to the grid. While it wants the first facility to be operational in 2023, it remains unclear how it will finance such an endeavour.

8.2.3 Hydropower

Work on the 25.9 billion-rand, 1,332-megawatt Ingula pumped storage facility is nearing completion, with its four units scheduled to be connected to the grid between May and August of 2016. South Africa has signed a treaty with the Democratic Republic of Congo to buy electricity from the planned Grand Inga hydropower plant. Under the accord, South

Africa is guaranteed a minimum of 9,540 megawatts and a maximum of 13,060 megawatts, with further supplies subject to negotiation. Construction work has yet to begin on Inga, which is expected to generate 40,000 megawatts of electricity.

8.2.4 *Gas and Diesel*

The government is seeking bids from private companies to supply 3,126 megawatts of power generated from gas. Eskom is revamping two existing open-cycle turbines to enable them to use gas as well as diesel. The project will probably be completed in 18 months and cost about 1.8 billion rand. A 300-megawatt diesel plant in the Eastern Cape Province is due come online in October, while a 700-megawatt facility in the KwaZulu-Natal province is scheduled for completion in May 2016. The plants will be used during peak demand periods.

Durban to Johannesburg pipeline (DJP)

During the 1960s the existing railway lines from Durban and Mozambique did not have sufficient capacity to meet the demand of the Gauteng hinterland for refined petroleum products. By 1965 a multi-product 12 inch pipeline, generally known as the DJP, was constructed. The pipeline has reached the end of its technical and economic life and is currently being replaced by a new 24 inch Multi-product Pipeline, the MPP24. The DJP is currently utilised for transporting petrol from Durban to the inland network, and both petrol and diesel to Ladysmith, Bethlehem and Kroonstad. This will continue until the MPP24 is ready to transport multi products from 2015 upon completion of the accumulator terminals. The DJP can transport jet fuel to OR Tambo International Airport (ORTIA) if required, but it is not currently part of the normal operational pattern, however, the option is available for strategic security of supply purposes. The current operating capacity of the DJP is 3,72 billion litres per annum. Decommissioning of the pipeline is planned when the MPP24 becomes fully operational.

8.2.5 *Wind and Solar*

Independent producers have been awarded contracts to supply more than 6,000 megawatts of solar- and wind-generated power to the grid. The government intends procuring a further 6,300 megawatts of green electricity. Eskom's 100-megawatt Sere wind farm became operational in February 2015.

8.2.6 *Cogeneration*

Eskom is buying 827 megawatts of power generated during industrial processes by private companies. The government has called for bids from companies to supply it with a further 800 megawatts of co-generated power.



KZN Bulk Infrastructure Programme

A number of bulk infrastructure projects are being implemented by Eskom in the FY 2015/16 which range from MV Line upgrades to the construction of new substations. The total value of these projects is R 519 million. Of particular interest is Ndumo Substation (R 125 million) that has been recently confirmed as complete by Eskom and set to release 15 000 household connections in the Jozini area. This has positive implications for future electrification projects in uMkhanyakude District especially in the Jozini area. The Manguza Network Normalisation (R15 million) has also been recently confirmed as complete by Eskom and is set to release about 2000 household connections in the Mhlabyalingana area. The above mentioned projects are a positive step in addressing network capacity problems in uMkhanyakude District which has the highest electrification backlogs in the province.

As indicated above, Eskom has identified and is implementing several key strategic electricity projects in KZN. Action Work Group 14 that deals with Energy supply is monitoring the implementation of these projects. The shortage of funds as well as the slow implementation of bulk infrastructure remains the main risk for future electrification project implementation.

Challenges in Energy Supply

While it would appear that there is a handle on energy supply in the country, there are also concerns. The growing electricity price increase is necessary to finance new investment in electricity supply, but this high cost must be managed in a way that it does not impact negatively on low-income families. A new funding models must be considered and development quite urgently to ensure a reliable supply of electricity. It is estimated that current peak demand is approximately 39 000MW and this is likely to grow to about 60 000 MV by 2025. A further 6 900 MW of old capacity will be retired, meaning that an additional demand of 28 000MW needs to be met. The two new coal power stations being built will each contribute about 4 8000 MV. South Africa is consider of the highest carbon dioxide emitters in the world and Eskom is under pressure not to build any more new coal plants within the 15 year planning horizon. This is underpinned by our voluntary Copenhagen emission reduction target which implies that the country would need to cap its emissions at about 550 megatons carbon dioxide equivalents. The challenge is that currently we may have exceeded this emission rate and that the two coal power station will push this further beyond 55o megatons. In addition the further challenge will be in managing the emission in non-electricity sectors like coal to liquid fuel, produced by Sasol.

Local grid networks have also not been aggressively developed and while the supply of electricity is been managed, the lack of adequate grid network will impact supply to electricity users. The uncertainty around this has meant underinvestment in both physical and human capital by both municipalities and Eskom. A funding model and sustainable capacity building programme must be developed to ensure local network supply and the necessary capacity to maintain the systems by municipalities.

The green economies not prioritised by province as yet and consequently have not had much progress in this area. The Green Economy Strategy is undermined by government not aggressively driving this. An example is seen the procurement policy of government which still use conventional methods of supply. This would have the biggest impact on making necessary



changes in the green economy. There is still a lack political and institutional willingness to drive this process. In addition, PGDS target for green economy have no institution to drive it and it has no budget allocated. In addition, it is argued that the province has not made this space a renewable energy investment friendly, with three windfarm projects in rural areas been rejected. It is further argued that without an institutional “home” that enforces green targets we will continue not to have government departments drive such targets. There is an argument that perhaps the Premier’s Office should drive the Green economy like in Eastern and Western Cape.

8.3 Port Development

The Transnet 30 year Port development framework was released in September 2014 and demonstrates the ambitious growth and development plans of all ports in South Africa. The 30 year development framework illustrates in short-medium and long terms of each of the ports and the anticipated budgets associated with each port. The ports anticipated capital expenditure for Durban within the next seven years is expected to be R9.7 billion and Richards Bay at R2.9 billion.

8.3.1 The Durban Port

Durban has 46 berths providing 10 933m of berth length. Eight berths make up the container terminal, which has a current capacity of 3.6 million twenty –foot equivalent unit (TEUs) per year (Pier 1 and 2). Break-bulk occupies 14 berths (total current capacity 4 (metric tonnes per annum (mtpa), dry bulk nine berths (11 mtpa), liquid bulk nine berths (21 million kilolitres) and three vehicles berths (520 000 units per year). Durban also has an offshore crude oil import with a capacity of 24 million kilolitres per year. The average number of vessel calls for a calendar year total 4 000 vessels (or 11 per day). The largest number of calls (2 700 vessels) was in the small to handy max range, of which the majority were for dry and break-bulk.

Durban’s container volumes are forecast to grow over seven years from 2,7 million TEUs handled in 2014, to 3,5 million TEUs, and thereafter to rise to 8,8 million TEUs in 2043. Durban is forecast to handle 380 000 vehicles

through the Point Ro-Ro terminal in 2014. This figure is forecast to grow to 720 000 units by 2043. Minor dry bulk volumes are forecast to increase only

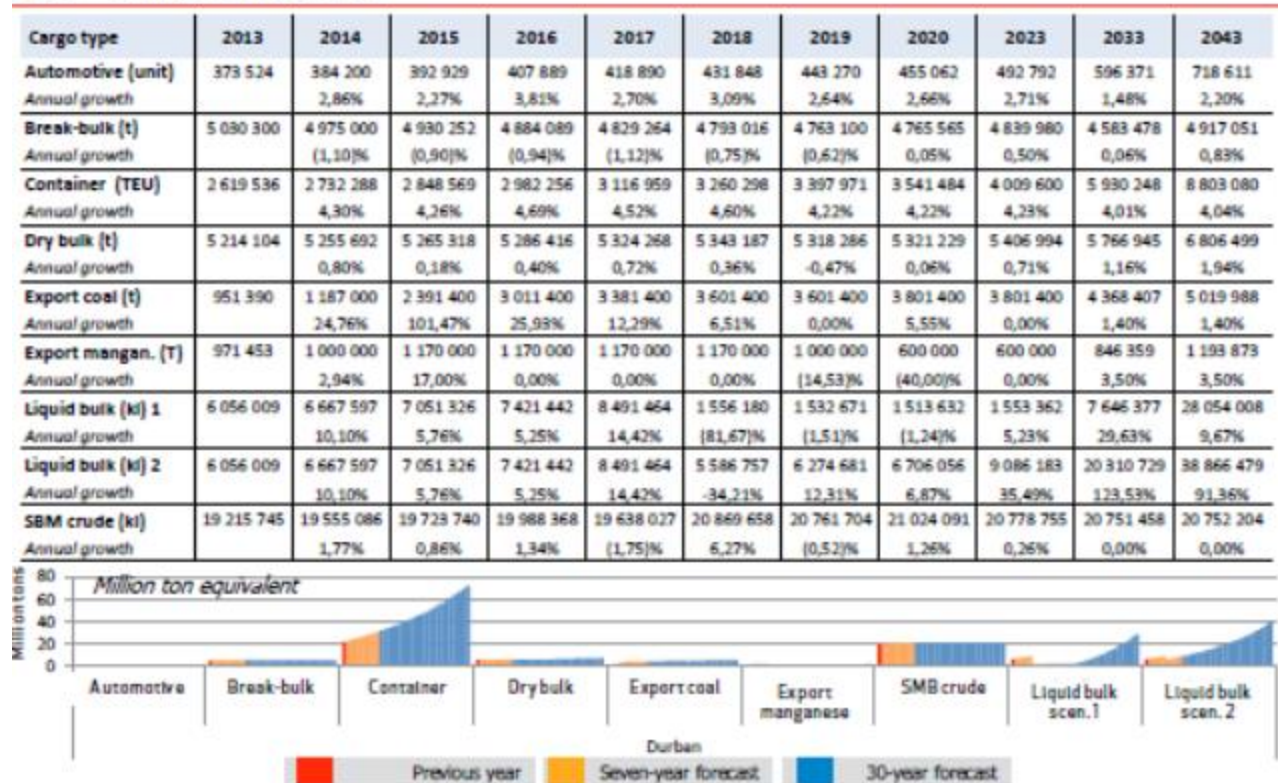
slightly from the 5,25 mtpa handled in 2014 to 6,81 mtpa in 2043. A significant increase, however, can be seen in the demand for coal exports as values increase from 1,2 mtpa to 5 mtpa over the 30-year period. Liquid bulk volumes are forecast to grow from the 6,7 million kilolitres currently handled, to 28 million kilolitre in 2043. The bulk of these volumes are petroleum products and chemicals handled at Island View, with smaller volumes handled at Maydon Wharf.



Demand

The 30-year demand forecast for Durban is summarised in the figure below:

Figure : Durban demand forecast



Source: Transnet 30 year Port Development Plan (September 2014)

8.3.2 Richards Bay Port

Richards Bay is the newest of the eastern ports and is South Africa's premier bulk port, with its main hinterlands comprising northern KwaZulu-Natal, Gauteng and Mpumalanga. The port is the largest in South Africa by tonnage, handling around 98 million tons of cargo per year, which equates to 40% of South Africa's total port demand. The 30-year forecast predicts around 184 million tons of cargo per year. Major growth areas for the port are seen to be coal export and other dry bulk cargo handling. Bulk operations in the port currently focus on four major activities: export coal, dry bulk, break-bulk and liquid bulk. The port has a world-class coal export terminal, a general purpose dry bulk and multi-purpose terminal and a liquid bulk terminal. Other services include bunkering and minor ship repairs and facilities for service and recreational craft. In addition to providing bulk facilities for a broad South African hinterland, the port plays a significant role in the local economy of the City of Umhlatuze, with its growing industrial base and proposed IDZ. The primary challenge for the port will be to accommodate growing demand for the handling of bulk cargo. The major medium-term project sees the 600 series break bulk basin expanding to include two new break bulk berths. The complementary regional grouping of Durban and



Richards Bay allows the rational and complementary allocation of cargo between the two ports. Richards Bay will focus on coal export and other dry bulk handling, while Durban will focus on container, automotive and liquid bulk handling.

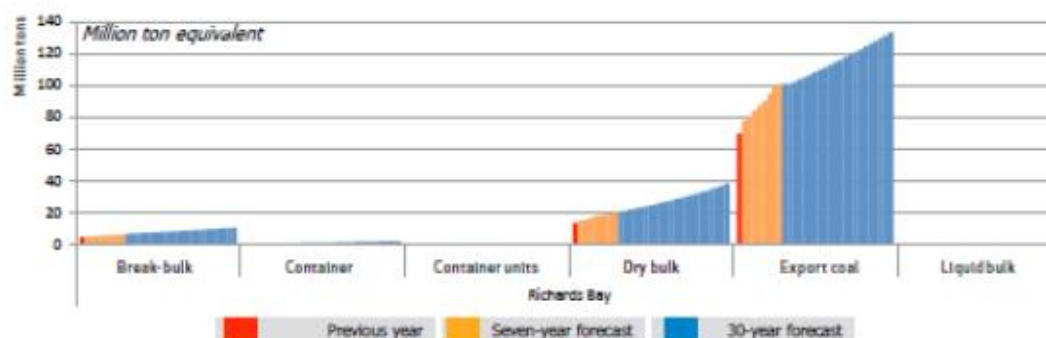
Richards Bay Coal Terminal (RBCT) will export coal and the grow is expected from current 78mtpa to 133mtpa by 2043. All other dry bulk volumes are forecast to grow from 14mtpa to 38mtpa over the 30-year horizon. Other dry bulk volumes include coal, sulphur, petroleum coke and salt imports, chrome ore, titanium slag, woodchips, and some unspecified ore exports. Break-bulk will grow from the current 4,8mtpa to 10,5mtpa by the end of the 30 years with liquid bulk volumes set to remain steady around 0,23 million kilolitres over the forecasted period. Container volumes experience a significant growth from 25 000 TEUs in 2014 to 175 000 TEUs in 2043, although still a small portion of the freights handling demand.

Demand

The 30-year demand forecast for Richards Bay is summarised in the figure below:

Figure : Richards Bay demand forecast

Cargo type	2013	2014	2015	2016	2017	2018	2019	2020	2023	2033	2043
Break-bulk (t)	4 572 591	4 832 343	4 998 636	5 171 331	5 353 134	5 548 286	5 748 691	5 958 631	6 651 792	8 436 633	10 543 570
Annual growth		5,68%	3,44%	3,45%	3,52%	3,63%	3,61%	3,63%	3,78%	2,22%	2,28%
Container (TEU)	19 584	34 765	27 573	30 626	34 062	37 957	42 210	46 939	64 532	110 327	174 918
Annual growth		26,56%	11,25%	11,07%	11,22%	11,43%	11,20%	11,20%	11,20%	4,72%	4,72%
Dry bulk (t)	13 473 384	14 712 525	15 367 660	16 549 021	17 812 066	18 254 553	18 815 551	19 201 912	21 030 313	28 256 381	37 831 617
Annual growth		9,20%	4,45%	7,69%	7,63%	2,48%	3,07%	2,03%	2,80%	2,87%	3,03%
Export coal (t)	69 592 172	78 007 400	80 644 434	84 108 570	87 199 131	90 242 051	94 341 895	100 446 732	100 793 757	115 827 900	133 104 488
Annual growth		12,09%	3,38%	4,30%	3,67%	3,49%	4,54%	6,47%	0,12%	1,40%	1,40%
Liquid bulk (kl)	268 766	267 896	267 012	266 113	265 199	264 272	263 330	262 374	259 421	248 676	236 595
Annual growth		(0,32)%	(0,33)%	(0,34)%	(0,34)%	(0,35)%	(0,36)%	(0,36)%	(0,38)%	(0,45)%	(0,53)%



Source: Transnet 30 year Port Development Plan (September 2014)

Cautionary Reflection on the Transnet Expansion Projects

Transnet expansion programmes must be viewed cautiously, given the slow global and domestic economic growth. This in view of the fact that their funding model was also dependant on internal loan financing as well as increasing private investment. In addition, new analysis is indicating that the projections first presented by Transnet may not be accurate within this declining economic context and so the demand for additional container space may be far less than earlier anticipated. In addition, delays in implementation of projects are having a significant financial impact on the cost of infrastructure. The Khangela Bridge which was completed in 2010 is quoted as having cost Transnet R200 million against the R70 million originally projected due to delays in this project.



8.4 KZN Road and Rail

8.4.1 Road Transport

The Department of Transport's 2014 Service Delivery Plan highlighted the following status of road network in the Province:

The African Renaissance Roads Upgrading Programme (ARRUP), the Roads for rural development (RRD) are just some of the programmes driving enhanced access and mobility to people of KZN, particularly people in rural areas. The above programmes have ensured the provision of agricultural link roads in rural areas serving nodes of agricultural activity and potential. Roads have been surfaced and tracks upgraded to departmental gravel road standards. These programmes, have also improved the building of access roads, bridges, causeways and pedestrian bridges. The Roads for Rural Development programme has advanced a more balanced road network throughout KwaZulu/Natal while simultaneously creating new business opportunities for underdeveloped communities and improving rural communities' access to service.

The Table below reflects 2014 status of road infrastructure.

Table 84 Status of road infrastructure 2014 (Service Delivery Achievement 2009-2014, DOT)

ACTIVITY	MEASURE OF UNIT	2009-2010/2013-2014
Number of km of surfaced road rehabilitated	km	552
Kilometres of gravel road upgraded to surfaced roads	km	433
No of road bridges built	No	23
No of pedestrian bridges constructed	No	48
Number of square metres of surfaced roads resealed	m ²	8,409,665
Number of kilometres of new gravel roads constructed	km	1,511
No. of m ² of blacktop patching (including pothole patching)	m ²	1,351,581
No. of causeways constructed	No	138
No. of km of gravel road re-gravelled	km	9,678
No of km of gravel road bladed	km	451,691



The table below illustrates construction of roads per District and the Capital Expenditure 2010-2014 (Service Delivery Achievement 2010-2014 Plan; DOT)

Figure 166 Construction of roads per District

DISTRICT	BUDGET SPEND	JOBS	KM CONSTRUCTED
Ethekwini	R732,6 mill	858	
Ugu	R1,4 billion	4031	141,2 km new access road and 39 vehicle and pedestrian bridges constructed
Umgungundlovu	R844 mill	391	213,60km new access roads and 11 vehicle and pedestrian bridges constructed
uThukela	R527,3 mill	1276	72,1 km new access roads and 6 vehicle and pedestrian bridges constructed
Umzinyathi	R775mill	2274	156km new access roads built and 13 vehicle and pedestrian bridges constructed
Amajuba	R210 mill	4282	116,85km new access roads built and 3 vehicle pedestrian bridges constructed
Zululand	R1,1 billion	2697	180,75km of new access roads built and 13 vehicle and pedestrian bridges constructed
Umkhanyakude	R536,9mill	752	138,1km new access roads and 5 vehicle and pedestrian bridges constructed
Uthungulu	R760mill	2198	792,2km were maintained and 38 vehicle and pedestrian bridges constructed
Ilembe	R1,06 billion	970	134,5km new access roads were built and 15 vehicle and pedestrian bridges constructed
Harry Gwala	R1,6 billion	1179	253,93km new access roads built and 20 vehicle and pedestrian bridges were constructed



The Department of Transport has made significant strides in addressing road backlogs as well as developing new road infrastructure. However, a lack of strategic infrastructure planning and fiscal crisis will mean that the pace of road maintenance projects as well as new infrastructure will reduce the pace of infrastructure development. In the previous financial year, the department required R 9 billion to fund operation and maintenance programmes and in reality received R3,8 billion. In addition, there is an argument that local municipalities, including the metro, do not budget adequately for road maintenance. In addition, there are challenges of alignment between Provincial and District level strategic planning means that road infrastructure which serves communities and economic growth are expressed at local level but may not be priority for Provincial government.

It is widely acknowledged that inadequate road conditions can have many negative effects on the logistics cost and operations in a country. Various studies proved that a strong correlation exists between the condition of roads and the vibrations experienced by the vehicles travelling on the roads. These increased vibrations could potentially result in structural damages to vehicles, leading to increased vehicle maintenance and repair costs and consequently higher logistics costs⁴³. In addition, these increased vibrations are also experienced by the goods transported on the road, leading to additional freight damages during transportation⁴¹. The entire national road network of South Africa is paved and under the jurisdiction of SANRAL. Conversely, the provincial road network is under the jurisdiction of provincial authorities and about 25% of these roads are paved. Of the remaining roads in South Africa, it is estimated that 400 000 km is managed and maintained by various metros and municipalities in the country, and approximately 140 000 km of gravel roads are currently not under the jurisdiction of any authority. The overall condition of South Africa's primary road network has generally been acceptable in the past decade or so, which is unfortunately not the case for the country's secondary road network.

8.4.2 Rail Transport

Transnet Freight Rail has developed and is implementing a major new strategy which is part of the Transnet's greater "Market Demand Strategy" (MDS), which was finalised in 2012. The key element of this strategy is a shift of traffic from road to rail. Rail friendly traffic may be defined as freight that typically includes heavy minerals and mining commodities being conveyed over long distances (Coal, Manganese, Iron Ore, Magnetite, Chrome and Rock phosphate) but also includes agricultural products and containerised commodities and goods. In accordance with the strategy, the company has committed itself to railing more than 350.3 million tons of cargo a year by 2018 / 2019, the financial year when the MDS will reach its maturity.

To address the legacy structural imbalances in the freight transport system, significant tonnages of freight are conveyed by road rather than rail which contributes to high logistics costs (compromises country competitiveness) and to the cost of externalities. Greater tonnages of traffic being transported by rail would make a significant contribution to reducing the number of heavy trucks on roads; overall transport and logistics costs; cost of externalities such as road damage, road accidents, road congestion, noise pollution, carbon emissions and the impact of rising fuel prices.



The benefits of the new Market Demand Strategy are:

- Improved infrastructure can lower supply-chain costs of business in South Africa
- Upgrades and expansion will improve efficiency
- The switch from Road transport to Rail will reduce costs and carbon emissions of transport and doing business in the region
- We will address capacity constraints in many sectors of the economy –most significantly in the mining sector.
- Addressing underdeveloped freight system will enable S.A to be competitive
- Foreign investors are keen to invest in the programme
- Our overall infrastructure development programme will reduce the overall costs of doing business in South Africa

While the Transnet Market Demand Strategy furthers the policy intention of more rail than road, it is argued that this relates more to containerised coal, manganese and chrome rather than general freight and there is no indication which lines carry more loads. In addition, while Transnet has invested in more locomotives and wagons, there has been little investment in new lines, instead "investment" has been largely for maintenance.

CSIR 10th State of Logistic reports indicates that Transnet new strategy will also have to first deal with backlog in the industry. For example, indications are that many branch lines are being reinstated after being 'closed' for a number of years²⁵. Originally branch lines were closed due to unprofitability and the demise of the 'single wagon load' business model, but these lines played a critical role in serving rural communities and the agriculture industry. Together with changes in regulation to control freight on road, much freight shifted from rail to road in these parts. This shift onto road had a massive negative impact on the condition of provincial roads that were not geared for it. For a developing country, where rural development needs to be stimulated, government should play a bigger role in ensuring these rail links to the rural areas remain operational by providing the required financial support to ensure financial viability of the branch lines.

Overview of Public Transport

Investment in rail, road, port, pipeline and airport infrastructure continues to be a high priority for the country with hundreds of billions of rand invested annually in various projects. As is the case globally, funding for mega infrastructure projects is a significant constraining factor, thus public private partnerships (PPPs) are becoming essential to realise the country's ambitious infrastructure expansion plans. Transnet in particular is actively pursuing private sector engagement. The private sector is greatly interested in working together with the public sector to invest in infrastructure development, but great consideration must be given to the risk, level



of involvement and true financial viability of projects before companies can commit to partnerships.

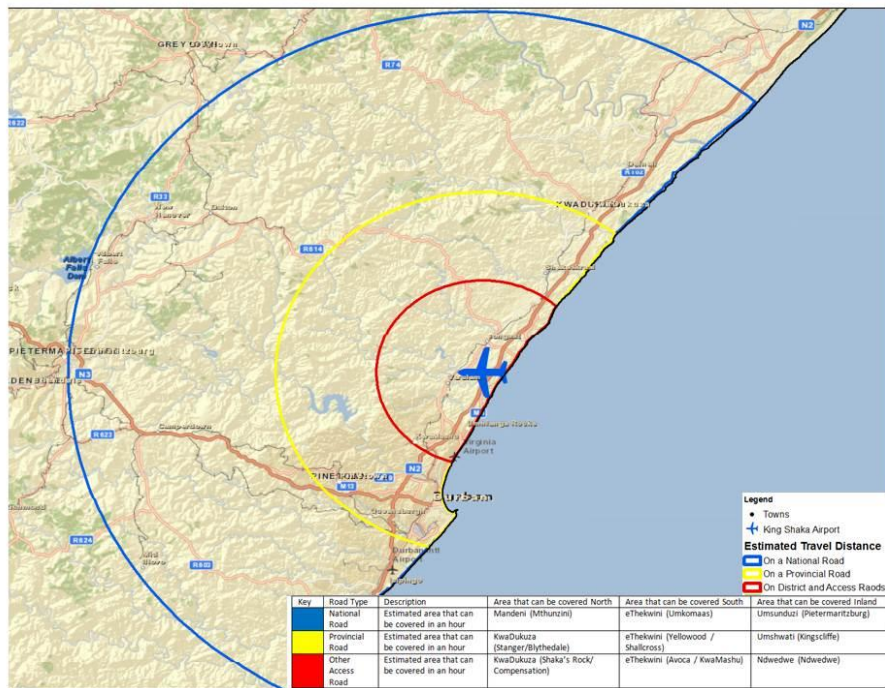
Transnet's aggressive strategy to win back rail-friendly cargo over the past few years is starting to show results in the annual freight-flow statistics. By providing additional capacity and improving reliability on the bulk mining and agriculture lines, many tonnes will be shifted from road back to rail. The country's national road network has remained in a good condition between 2009 and 2013 under the jurisdiction of SANRAL. Unfortunately many provincial road networks have deteriorated considerably – partly due to the accelerated wear caused by trucks carrying rail-friendly freight. Analyses show that by focussing first on upgrading 'Poor' and 'Very poor' sections to a 'Fair' condition will save more vehicle operating costs than upgrading 'Fair' roads to a 'Good' or 'Very good' condition. The institution of the Provincial Road Maintenance Grant (PRMG) on 1 April 2014 is expected to spur a turnaround in provincial road asset management.

8.5 Aerotropolis

The Aerotropolis area contemplated in the Integrated Aerotropolis Report covers almost all of the eThekweni Municipality and some parts of iLembe and uMgungundlovu municipalities. The catchment area for the aerotropolis is the one-hour travel distance from King Shaka International Airport (KSIA). The footprint indicates that Durban Aerotropolis cuts across a number of municipal boundaries. The aim, therefore, is to ensure that people can travel with ease between the airport and various destinations and reduce the travel time. These destinations could be places such as Pietermaritzburg, Mtunzini, and to some extent Port Shepstone. For this to be achieved there has to be efficient ground connectivity characterised by speed and agility. As such, for Durban Aerotropolis to work there is need for government to continue to invest substantially in road and rail infrastructure to achieve ground connectivity and widen KSIA catchment area. The Aerotropolis boundary defined in the figure below is based on the concept of one hour travel radius for national roads, provincial roads and district roads.



Map 45 Aerotropolis catchment area



The Dube Aerotropolis Development Framework [Rev 4 July 2011 – provides an account of the spatial framework for investment in the wider region. In terms of future land release, development within the Aerotropolis region has already commenced in earnest. At the hub of the Aerotropolis, the Dube Trade Port has already completed its first phase of development. Comparative studies indicate that the functional area of impact of an Aerotropolis is a radius of approximately 30km from the airport with more direct impact within the 15km radius. In the case of King Shaka International Airport the 30km radius stretches from Stanger in the north to the City Centre in the south and the 15km radius from Ballito in the north to Umhlanga in the south.

Map 46 Aerotropolis 15km and 30km radius



The development strategy for the Aerotropolis is based on the region's potential for vastly improved international connectivity via direct international flights to other parts of the globe. Connectivity to the world via direct air travel provides numerous growth opportunities including:

- Increased perishable and non-perishable freight movement e.g. Organic and non-organic vegetables, cut and potted flowers, plantlets;
- Logistics, transport sector and support facilities through improving the relativity and timing of freight movement and reducing transport costs e.g. Logistics and freight forwarders; Land with multi-modal transport options and linkages; Rail and road transport operators; World class IT solutions.
- Increased number of passengers e.g. Business, corporate head offices, research and development, health tourism, active tourism, site seeing tourism, hospitality and support facilities.

The impact of the Aerotropolis as mentioned above will be felt beyond the eThekweni boundaries to include the Ilembe District and its local municipalities Ndwedwe and Kwadukuza Local municipality. To this end the Kwadukuza local municipality has embarked on a strategic spatial investigation which argues that it has the criteria to become a secondary city. International research into the economic drivers of successful secondary cities found four categories of such towns (City Alliance, 2014): Four categories of successful secondary cities, three of which are applicable to Kwadukuza, namely, it is a town close to metropolitan area, it has prominent cultural or heritage assets and is adjacent to vast natural resources. The one element which the local municipality did not meet was access to a tertiary institution. This document will be finalised later in the year and will set the blueprint for this municipality city development alongside the development of the Aerotropolis.

The PGDP Action Work Group 12 (Rail) is monitoring the implementation of the Development of the fast-rail from KwaDukuza through Dube Tradeport/Airport, Gateway/Umhlanga, to Durban as well as potential extension to Pietermaritzburg. This project is been driven by PRASA.

8.6 Special Economic Zones

In 2014, it was announced that KZN would in fact have two Special Economic Zones, namely Dube Trade Port and the Richards Bay IDZ

The Dube Trade Port was declared a Special Economic Zone (SEZ) in 2014. The SEZ formed part of the broader aerotropolis and therefore has land uses that typically surround major airports. A study conducted on the SEZ concluded that approximately 435 ha of net land would be required in order to realise the full potential of this zone. This land would need to incrementally be available over the next 10 to 15 years to meet the growing demand for housing, business parks and offices, logistics, education and training facilities among other support services.

The study further concluded that these support services are to be located within 10km vicinity of the SEZ. The main land uses identified within the area that needed to be accommodated within the SEZ were as follows:



- Agricultural Production and Agro-processing,
- Electronics (including Aerospace and renewable energy Equipment and machinery),
- Textiles/clothing,
- Pharmaceuticals, health and beauty products, sports supplements and cleaning materials,
- Transport Equipment (Aerospace).

The study also concluded that apart from the main uses identified above, there was also a need for supplementary activities and or support services that were deemed to contribute to the functioning of the SEZ. These included the following:

- Business Parks
- Logistics Services
- Research and Technology facilities
- Exhibition and Conference Facilities
- Training Facilities
- Childcare facilities
- Incubation facilities and
- Information and Communication Technology (ICT)

It must however be noted that it is not possible to accommodate all support services within the SEZ due to limited land availability and various other land constraints. Therefore the land outside the SEZ has been targeted for the provision of the support services.

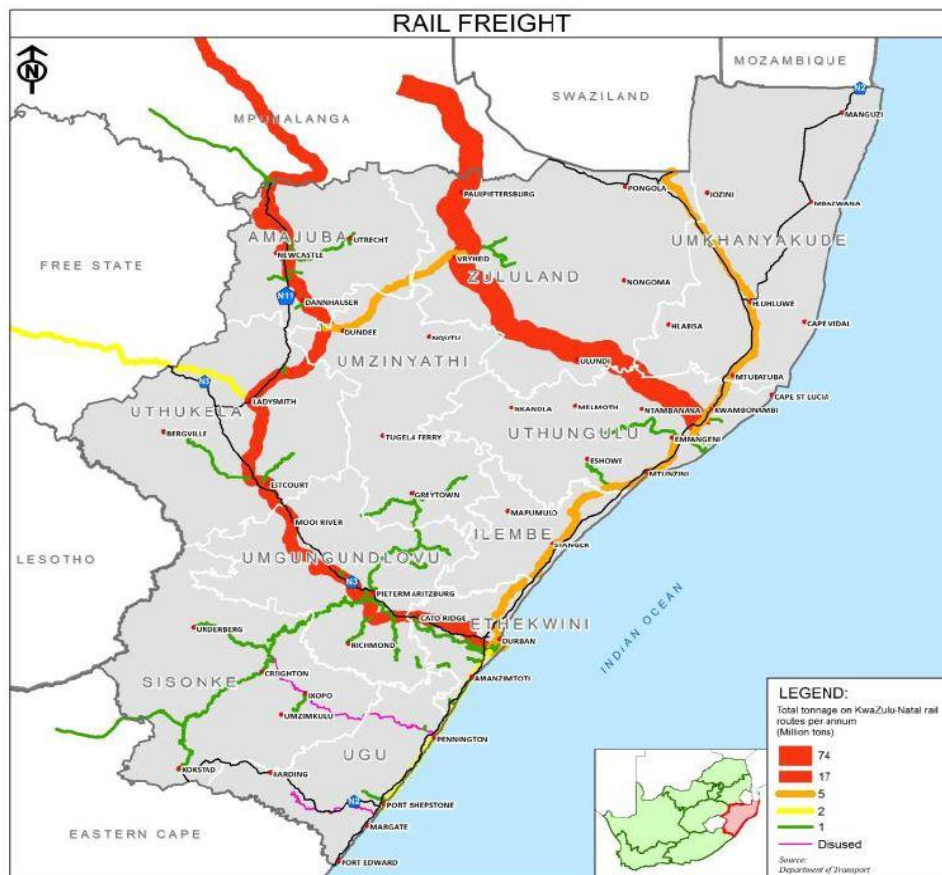
8.7 Strategic Infrastructure Projects

8.7.1 *SIP 1: Unlocking The Northern Mineral Belt With Waterberg As The Catalyst*

The primary objective of this SIP1 is to unlock the mineral potential in Limpopo with exports via an expanded Richards Bay coal / rail / harbour facility. Investment in rail, water pipelines, energy generation and transmission infrastructure is required. This SIP has the potential to create thousands of direct jobs across the areas unlocked. Waterberg potentially can emerge as the first post-apartheid urban centre which could be developed as a green development project. An increase in rail capacity to Mpumalanga and Richards bay and consequently a shift from road to rail in Mpumalanga. A logistics corridor then emerges which connects Mpumalanga and Gauteng.



Map 47 Schematic representation of SIP 1 logistics corridor



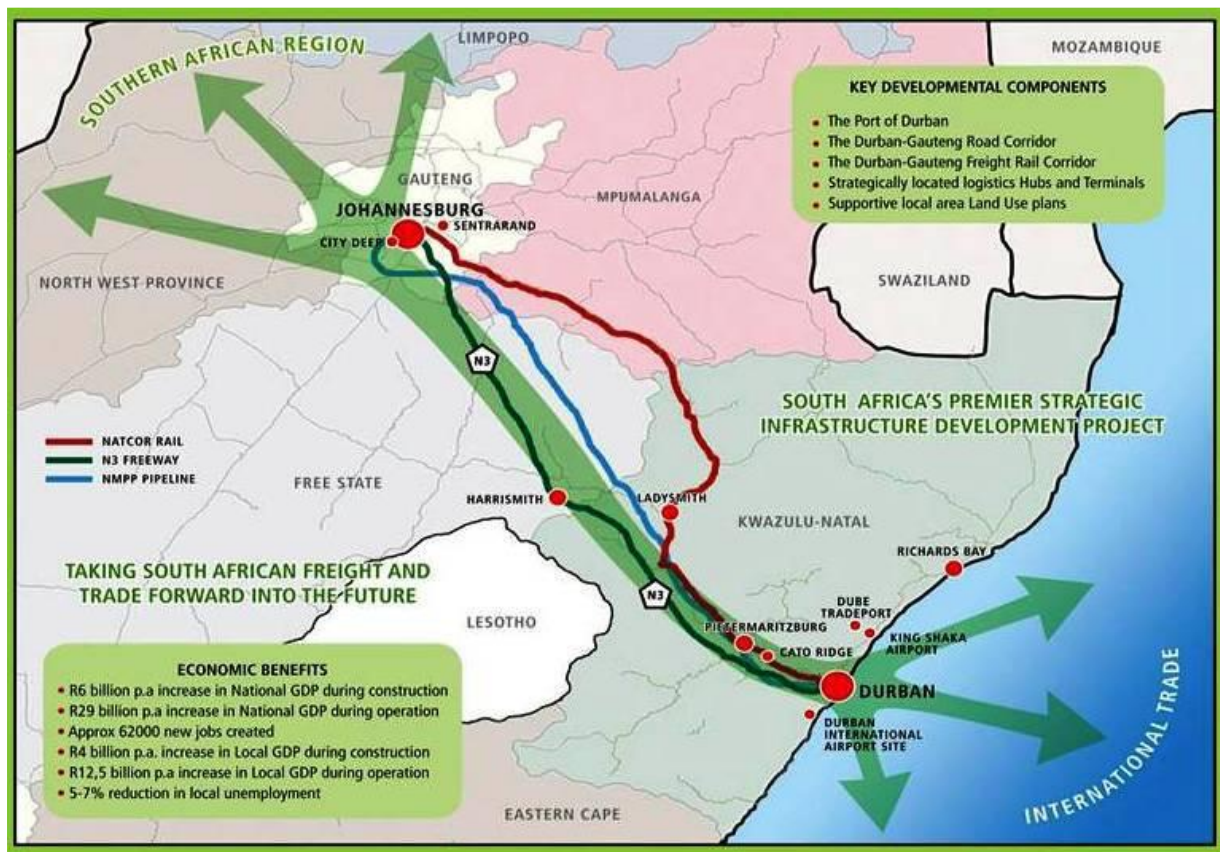
8.7.2 SIP 2: Durban-Free State-Gauteng logistics and industrial corridor

The primary potential of this SIP is to strengthen the logistics and transport corridor between SA's main industrial hubs. To improve access to Durban's export and import facilities and to integrate the Free State Industrial Strategy activities into the corridor. In addition, this SIP has the potential to integrate the marginalised rural production centres surrounding the corridor that are currently isolated from the main logistic systems.

This SIP is also structured to focus on port developments in Durban, corridor developments on road, rail and pipelines as well as inland terminals and infrastructure, notably within Gauteng but also en route, for example Harrismith.

The project is also focused on developing the Dig Out Port at the Old International Airport site, pipeline infrastructure and unlocking development along the corridor.

Map 48 Schematic representation of SIP 2



Map 49 Aerial view - Durban Dug-out Port



Action Work Group 12 (AWG) which deals with Harbours is currently implementing several key projects which are driving the implementation of SIP 2 programme. These projects are Pier 1 Phase 2 Salisbury Island Infill and Pier 2 Berth Deepening as a part of the Durban Port expansion. The value of the investment is in excess of R20 billion.

8.8 KZN Industrial and Technology Hubs

According to the KZN DEDT "An industrial Economic Hub (IEH) is a strategically planned concentration of industrial activity and economic linkages. The industrial activity is typically manifested in a community of manufacturing business seeking enhanced economic performance through collectively managed resources like energy, water, sewer reticulation services among others. A hub seeks to use this manufacturing node to encourage economic growth and employment. Beyond manufacturing what identifies a hub are the other ancillary activities such as trade, research and development, enterprise development and economic transformation."

An initial screening indicated that at least 7 hubs are feasible, with four located in the SIP 2 corridor. The table below reflects the Districts and primary and secondary hubs associated with the Districts.

Table 85 Outcomes of Industrial Economic Hubs feasibility studies

District	Primary Hub	Secondary Hub	Chosen Hub	Feasibility Study Outcome
Amajuba	Metals	Clothing and	Clothing and	Feasible
Ugu	Furniture	Telecommunications	Perishables	Feasible
uMgungundlovu	Leather and	Agro - Processing	Leather	Feasible
Zululand	Meat and Hide	Coal and Anthracite	Agro - Processing	Feasible
uMzinyathi	Meat and Hide	Coal and Anthracite	Coal beneficiation	Not feasible [#]
uMkhanyakude	Green Energy	Agro -	Agro -	Not feasible [#]
iLembe	Agro-	Green Technology	Renewable	Feasible
eThekweni	DTP IDZ	Petrochemical Hub in the South Durban	Automotive Park*	Feasible
uThungulu	Richards Bay			Various
Uthukela	Clothing and	Electronics	Electronics	Feasible
Harry Gwala	Agro-	Furniture	Wood Processing	Not feasible [#]



Technology Hubs

In line with the objectives of the KZN Growth and Development Strategy to enhance the knowledge economy of the province, the KZN Provincial government commissioned a study in 2012 to assess the feasibility of establishing technology hubs in KZN. The study concluded that technology hubs are both feasible and desirable. The proposed locations of such hubs have been identified as Pietermaritzburg, Newcastle, Port Shepstone and Richards Bay. Detailed designs have already been done for the Newcastle and Pietermaritzburg hubs. Two of the Hubs are located in the SIP 2 Corridor.

The PGDS Action Work Group (AWG) 13 that deals with Information Technology is monitoring the development of a leading-edge technology fibre optic telecommunications network leading to increased connectivity and usage, decreased costs, and stimulating growth and development. The Mzundusi Local Municipality is the project owner.

8.9 KZN Airport Strategy

In 2014, the KZN Provincial Government finalised the KZN Airport Strategy, which is in line with the objectives of the KZN Growth and Development Plan.

The following vision is proposed for the KZN Aviation Strategy:

"The creation of a network of KZN airports, with KSIA as the hub, that sustainably, efficiently and effectively, provides commercial, private and public service air routes, connecting economic and administrative regions to each other and to national and international air routes, thereby creating business opportunities and generating new jobs."

In a memorandum to Cabinet the key strategic goals of the KZN Airport strategy are:

- Goal 1: KZN airports contribute to effective functioning of an integrated, yet differentiated, airport network within a broader aviation system
- Goal 2: KZN airports contribute both business and employment growth to the local and regional economy
- Goal 3: KZN airports and the broader aviation infrastructure and services sector provide enhanced access to public services across the Province.

Small airports and airfields have the potential to contribute effectively towards sustainable and equitable development through increasing connectivity to markets and places. Airfields play an important role in health and in disaster management for delivering equipment and relief aid.

There are nine regional, or secondary, airports in KZN owned by municipalities and operated either as part of a municipal department, or by an appointed management company, or in one case by a concessionaire.

The established Action Work Group 12 which deals with Airports as part of the implementation of the KZN Growth and Development Plan monitors the implementation of several key projects. The value of which is in excess of R2 billion. These projects are for the Msunduzi Municipality as



well as Ladysmith respectively. The Msunduzi Municipality are a short term project that will see the extension of the existing runway and terminal buildings. This will allow for larger aircraft to make use of the facility, thereby attracting additional operators and increasing numbers through the airport. The Ladysmith Municipality is dealing with the upgrade of the existing Aerodrome to a regional airport.

8.10 KZN Information and Communication Technology Strategy

8.10.1 *Connectivity*

KZN produced a Provincial Broadband Strategy that highlights necessary interventions and involves a comprehensive roll-out for all parts of the province and to ensure that all segments of society can extract the benefits of broadband services. It was the first province to produce a broadband strategy. The strategy was endorsed by the KZN Provincial Cabinet and National Government. The KZN Broadband Project was then adopted by the National government to commence the national roll-out of broadband for the entire country. Currently the first phase is almost complete.

Most of the main towns in KZN now already have broadband infrastructure and services which are provided by both private and public infrastructure. The second phase will see efforts concentrated in largely rural areas.

At national level the government is currently finalizing its national broadband policy, national strategy and implementation plan and the Broadband Funding Strategy. Recently a more structured approach for the roll-out of the country's infrastructure programmes has commenced with the formation of the Strategic Projects Programme. ICT and Broadband has a dedicated SIP led by the Department of Communications and CSIR.

8.10.2 *Digital Access*

The province has worked closely with USAASA (Universal Service Agency of South Africa) to produce a provincial Digital Community Hub Strategy, the implementation of which is a combined effort of USAASA, KZN Department of Arts and Culture, COGTA and DEDT. To date 122 of the targeted 300 public digital access centres have been rolled out largely in underserved areas. These digital access centres provide our people from previously marginalized communities to access ICTs and extract its benefits.

8.10.3 *ICT SMME Development*

KZN Province developed a provincial ICT SMME Strategy which was largely led by SmartXchange and its partners. Relevant interventions to create an enabling environment for ICT SMMEs to develop were included in the strategy. The establishment of incubators and incubator programmes were seen as important for assistance to be provided to SMMEs and their progress. To date Durban has established a successful ICT incubator viz. Smartxchange. Recently an Innovation incubator called Innvotech has been established and is situated on



the campus of Durban University of Technology. Currently an ICT incubators are being established in Richards Bay (will be ready in October 2013, in Port Shepstone and in Newcastle. Other programmes such as Enablis are assist ICT SMMEs that have progressed from incubator stage to the next level. SEDA a national agency established to assist in Enterprise Development has a provincial office in KZN. They assist wherever possible according to their mandate and resources

Apart from incubators there are a number of funding opportunities from which ICT SMMEs can be assisted. There is the Ithala Fund, KZN Growth Fund, SEFA, Incentives from DTI, Innovation Fund, SPII, THRIP, Gijima, IDC, DBSA , Venture Capital and programmes from other large multinationals such as Microsoft, CISCO, Dimension Data and Google.

8.10.4 *ICT Skills Development*

Skills development programmes require interventions in the ICT as a sector itself, its cross-cutting nature and for citizens to function in the digital age. Skills development in KZN is being done both via private initiatives and public efforts. While there are a number of institutions that provide ICT skills of differing levels largely at universities, FET Colleges, private institutions, schools and specially established public institutions there is still a need for more training institutions .

In an effort to increase the skills development efforts in KZN the province established the Moses Kotane Science and Technology Institute in 2008. The institute since its inception has undertaken a number of programmes and have churned out a critical mass of skills viz. in the ICT and BPO sectors in the province. The programme targeted to training 10 000 students in ICT skills over a five year period. To enable this the Moses Kotane Institute established 8 ICT Training centres at FET colleges and the DUT PMB campus. Some of the students that have completed their training have gone to international ICT companies in India for a one year internship programme. This part of the programme was funded by the government of India. Funding for skills development programmes are made available from the National Skills development Fund via the relevant SETA's that being mainly MICT and Services SETA.

8.10.5 *E-government*

KwaZulu-Natal have completed a provincial e-government strategy that was led by the Office of The Premier. A key intervention is the establishment of a Nerve Centre.



8.11 KZN Waste Management Strategy

The KZN Waste Management Plan was developed in 2012 which up until then was dependant on legislation from Department of Health. The provincial strategy is also guided by National Legislation. A quick over view of the status of waste management plans is KZN indicates the following:

- There are 32 designated waste management officers in KZN (out of 61 municipalities);
- There is an established KZN Waste Management Forum;
- 6 of the 10 districts have active District Waste Management Forums;
- 6 District municipalities and 22 local municipalities have developed IWMP;
- Compliance is generally good with larger municipalities that have fewer sites, while rural municipalities that have more site is still a challenge;

Table 86 Summary of District Waste Management facilities and policies 2012

District	IWMP	Waste Disposal Facilities	Policies/legislation and Bylaws
Ugu	Adopted: October 2012 Next Review: October 2017	Three landfill sites: <ul style="list-style-type: none"> • Oatlands landfill site (16 years airspace) • Humberdale landfill site (+6 years) • Harding landfill site (10 Years not authorised) • Thongazi waste transfer facility Source: Water Services Development Plan	<ul style="list-style-type: none"> • Hibiscus (2008) • Umdoni (2006)
Umgungundlovu	Reviewed: March 2012	<ul style="list-style-type: none"> • New England Road landfill (6 years) • Curry's Post landfill Site • Richmond landfill Site 	<ul style="list-style-type: none"> • uMshwati – solid waste bylaws (not aligned to legislation) • Msunduzi – solid waste bylaws (not aligned to legislation) • Richmond – solid waste bylaws (not aligned to legislation)
uThukela	Draft IWMP 2010	<ul style="list-style-type: none"> • Acaciavale landfill site • Ekuvukeni landfill site • Bergville landfill site • Umtshezi landfill site 	No waste management Bylaws or policies



uMzinyathi	Adopted 2006	<ul style="list-style-type: none"> • Pomeroy landfill site • Tugela Ferry site • Nondweni landfill site • Nquthu site • Dundee Landfill • Glencoe Landfill Site • Kranskop transfer station • Greytown transfer station • Dundee transfer Station 	<ul style="list-style-type: none"> • Umvoti – Outdated Bylaws • Endumeni – Outdated Bylaws
Amajuba	Draft 2010	<ul style="list-style-type: none"> • Newcastle Waste Disposal Site • Emadlangeni landfill site • Dannhauser landfill site (30 years) 	Newcastle - Outdated bylaws
Zululand	Solid waste, management master plan (2002)	<ul style="list-style-type: none"> • Phongolo disposal site • Belgrade disposal site • Vryheid disposal site • Mondlo disposal site • Louwsburg disposal site • Alpha Village Landfill site (20 years) • eDumbe disposal sites (private) • Bilanyoni Disposal Site • Babanango Disposal site • Nongoma disposal site • Ulundi Transfer Station (20 years) 	<ul style="list-style-type: none"> • eDumbe – Outdated Bylaws • Phongolo – Outdated Bylaws • Abaqulisi – Waste Management Bylaws • Ulundi – Outdated Bylaws
Umkhanyakude	Adopted in 2004	<ul style="list-style-type: none"> • Mtubatuba (No permit) • St. Lucia (is within a heritage site) • Hlabisa • Hluhluwe • Mkuze • Jozini • Ingwavuma • Ndumo • Manguzi • Mbazwana • Sodwana 	No established bylaws
uThungulu	Adopted in 2005	<ul style="list-style-type: none"> • uThungulu Regional Landfill site (40 years) • Gingindlovu Dump Site (15 years) 	• Mfolozi – Generic Bylaws that do not



		<ul style="list-style-type: none"> • Melmoth Landfill (35 years) • Nkandla Landfill Site • Mtubatuba Landfill Site (illegal) • Kwambonambi Transfer Station • Buchanana Transfer Station • Mtunzini Transfer Station 	<p>comply with the Waste Act.</p> <ul style="list-style-type: none"> • uMhlathuze – Bylaws do not comply with the Waste Act. • Umlalazi – Outdated Bylaws • Mthonjaneni – Adopted Bylaws
iLembe	Adopted 2004	<ul style="list-style-type: none"> • KwaDukuza Landfill • The Sappi Thukela Landfill 	<ul style="list-style-type: none"> • Mandeni – Adopted Bylaws in 2010 • KwaDukuza – Removal of refuse Bylaws adopted in 2010 • Ndwedwe – Draft waste management bylaws
Harry Gwala	Adopted 2010	<ul style="list-style-type: none"> • Creighton (illegal) • KwaSani Transfer Facility • UMzimkhulu land fill site (illegal) 	No Bylaws
eThekweni	Adopted 2004	<p>Managed by Durban Solid Waste:</p> <ul style="list-style-type: none"> • Bisasar Road Landfill Site (12 years) • Marianhill Landfill Site (15 years) • Buffelsdraai Landfill Site • Shallcross- Garden and Building Landfill <p>Private Landfill Sites</p> <ul style="list-style-type: none"> • Shongweni Landfill Site • BulBul Drive Landfill Site (7 years) • Industrial Landfill Sites (number of industrial landfill sites not specified) • 6 transfer stations 	Refuse removal bylaws



8.12 Youth Development and Infrastructure

SIYAZENZELA YOUTH DEVELOPMENT PROGRAMME

The Department of Education, launched the Siyazenzela Youth Development Programme at Umthombowesizwe High School, KwaNongoma, 22 September 2015. The Siyazenzela Youth Development Programme, which is implemented in partnership with the Office of the Premier, seeks to create job opportunities to more than 200 young people from Kwanongoma and Uphongolo areas. This maintenance programme also aims to alleviate infrastructure challenges in the Department at the same time.

The youth that are going to benefit from this programme are going to be given much needed skills in construction, carpentry, painting, welding, glazing, flooring and many other skills. These young people are going to start working in 60 schools at Kwanongoma and 40 schools at Uphongolo. They are going to be given a stipend of R1500 every Month.

This programme is done in partnership with KZN Coastal TVET College (where these young people are going to be trained), Construction SETA as well as NYDA.

KZN DEPARTMENT OF PUBLIC WORKS

The Department of Public Works has programmes in place that address the interests of the youth. These programmes include amongst others the following:

Expanded Public Works Programme:

As the lead Department in rolling out government infrastructure, Public Works is central to the job creation objectives of government. The Expanded Public Works Programme provides employment opportunities to unskilled and unemployed people and increases the economic growth by means of improving skills levels through education and on-site training.

KZN Integrated Greening Programme:

This is a partnership programme which focuses on greening activities through employment creation for unskilled people thereby enabling communities to take charge of the environment and by so doing become economically independent. The programme provides for: 3 "Treepreneurs" – growing and planting indigenous and edible plants "Waste-preneurs" – collecting recyclable waste "Green-preneurs" – trading bicycles, water tanks, solar energy devices, reforestation projects, restoring community forest assets.

Positive Results through National Youth Service Training Programme:



The National Youth Service (NYS) programme is one of the sub-programmes of the Expanded Public Works Programme (EPWP). The NYS focuses mainly on skills training and youth development through a formal and accredited skills programme consisting of four months of theory and eight months of practical active participation on a construction site. Among others, the youth receive training in bricklaying, carpentry, plastering, as well as business and entrepreneurial skills to ensure that the beneficiaries are put in a position to establish and run their own businesses in the future.

8.13 Synopsis Strategic Infrastructure Issues

Several key strategic infrastructure projects that are changing the spatial patterns of the Province have a high demand for co-ordinated implementation of infrastructure. These projects are:

- Aerotropolis, which stretches from King Shaka International Airport the 30km radius stretches from Stanger in the north to the City Centre in the south and the 15km radius from Ballito in the north to Umhlanga in the south;
- SEZ: Dube Trade Port will require land incrementally to be available over the next 10 to 15 years to meet the growing demand for housing, business parks and offices, logistics, education and training facilities among other support services;
- Strategic Infrastructure Projects (SIP 1 and 2) has the potential to integrate the marginalised rural production centres surrounding the respective corridors that are currently isolated from the main logistic systems. They are central to the enhance connectivity provincially as well as nationally to improve road and rail connectivity from respective harbours and ports;
- Industrial Development Zones, feasibility studies are finalised and several of these are considered feasible. The Department of Economic development and Tourism has also initiated several projects that will see the development of these within the next few years;
- All of the above to be realised with required the necessary infrastructure like Energy. Government in response to the crisis has implemented a multi-pronged approach to energy conservation using a combination of on and off grid supply. These include, among other coal, gas and petrol.
- A number of bulk infrastructure projects are being implemented by Eskom in the FY 2015/16 which range from MV Line upgrades to the construction of new substations. The total value of these projects is R 519 million.
- Water supply is essential to realisation of the above projects and domestic consumption. The most drought-stricken regions were uMkhanyakude, uThungulu, ILembe, Zululand, uMgungundlovu, Harry Gwala, uMzinyathi and uThukela. All of them had received rainfall well below normal and this had affected water levels in various catchments areas. The preliminary assessment of the extent of damage to the Province, especially to livestock and crops, stood at above R400 million at the time.



- The response to the drought has also been a multi-pronged approach with investigations into tinkering of water, borehole investigations, water restrictions, enhancing maintenance programmes of Water Service Authorities of existing infrastructure;
- In addition, the DWSA has also continued to implement key bulk water infrastructure projects which would contribute approximately 314m³ of water to province.
- The Durban and Richards Bay port expansion programmes will continue to be accelerated with capital expenditure within the next seven years estimated at R9,7 million to R2,9 million respectively.
- Road and Rail expenditure during this review has been significant with approximately 17 000 jobs being created within this review.
- The rail authority has invested over 200 billion over the next seven years to accelerate the road to rail ratio.
- The continued delivery of the above infrastructure will be hampered by poor economic performance which will impact on government's expenditure.
- Funding strategy for infrastructure will be need to be a discussion point in the PGDS as well as a co-ordinated institutional mechanism to ensure the infrastructure with the key infrastructure projects within the province are delivered in a co-ordinated manner.



9 GOVERNANCE AND POLICY LANDSCAPE

What is “governance”?

There are many different definitions of “governance”, and the meaning of governance generally depends on the context in which it is used, e.g. whether in a public government context, or a private corporate context, or a community organisation context. In our context of provincial level planning most experts would agree that *governance* refers to the traditions and institutions by which authority in a defined area/institution is exercised for the common good. This includes:

- the process by which those in authority are selected, monitored, and replaced (the political dimension);
- the government's capacity to effectively manage its resources and implement sound policies (the economic dimension); and
- the respect of citizens and the state for the institutions of that defined area (the institutional respect dimension)

These three dimensions of *governance* are useful points of reference for our review of the governance landscape in KwaZulu-Natal, as they also link coherently with the *strategic objectives* regarding governance which were identified in the 2011 Provincial Growth and Development Strategy, which are:

- *Strategic Objective 6.1* : Strengthen policy and strategy coordination and inter-governmental relations
- *Strategic Objective 6.2* : Build government capacity
- *Strategic Objective 6.3* : Eradicate fraud and corruption
- *Strategic Objective 6.4* : Promote participative, facilitative and accountable governance.

How is “governance” measured internationally?

Although this is contested terrain, the majority of countries seem to have adopted the use of “The Governance Indicators” created by the World Bank, which now cover more than 200 countries and are based on more than 350 variables. The Governance Indicators capture six key dimensions of institutional quality or governance, and measure, through two indicators each, the political, economic, and institutional dimensions of governance described above.

The following six dimensions are measured:

1. *Voice and accountability*—measuring political, civil and human rights;



2. *Political instability and violence*—measuring the likelihood of violent threats to, or changes in, government, including terrorism;
3. *Government effectiveness*—measuring the competence of the bureaucracy and the quality of public service delivery;
4. *Regulatory burden*—measuring the incidence of market-unfriendly policies;
5. *Rule of law*—measuring the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence;
6. *Control of corruption*—measuring the exercise of public power for private gain, including both petty and grand corruption, and state capture

Although all of these factors are used in the discussions below, the “*Governance and Policy Landscape*” of the Situational Overview does not apply these six indicators in their strictest sense. This is partly because these six dimensions all have within them some level of unavoidable subjectivity, and must be interpreted through the lens of the local context and people of the society in which they are being used. Thus the element of peoples’ perceptions of what these dimensions mean must be factored into the definitions and the measures of these dimensions.

Thus, for example, in the KwaZulu-Natal context, measuring the dimension of “*Voice and accountability*” leads us not only to check if citizens’ civil and human rights are respected, but also to assess whether Government and the social partners of development in the province (in particular Provincial Government, Local Government, Business organisations, Labour organisations and Community/NGO organisations) have in place all the institutional and policy instruments, capacity and relationships to collectively implement a progressive growth and development strategy.

As regards the “policy” assessment of this landscape, it is important to state upfront that this is *not* an assessment of all Government policies, nor does this section motivate for new policies that may be required – as such motivations are covered in the relevant subject sections of the other landscapes in this Overview. Instead, this section tries to assess whether there is coherence in the policies that are in place or which have been adopted by Government and its institutions and whether these policies collectively optimise the chances of achieving the vision, the goals and the objectives of the *Provincial Growth and Development Strategy*?

In undertaking this assessment, five key questions have been asked:

1. Is there a good level of coordination of **policy** within Government?
2. Is the **inter-governmental relations (IGR)** system within Government working at an optimal level?
3. Does Government have sufficient **capacity** to deliver on its service delivery and developmental responsibilities?
4. Are there sufficiently high levels of **good governance** within Government, especially as regards levels of fraud and corruption?



5. Are Government structures and systems designed and operating in a way which **promotes participation** of Government's social partners (Business, Labour, Communities, the academia and other significant interest groups) in the development strategies and processes of KZN?

The challenge with the issues raised in the questions above is the challenge of "measurement"? How does one "objectively" measure :

- The effectiveness of policy coordination and inter-governmental relations?
- The delivery capacity of Government?
- The real levels of fraud and corruption?
- The level of public participation?

The "*Institutional and Policy Landscape*" chapter of the 2011 KZN Situational Overview noted that the Province had, by 2011, developed a stable governance framework. Key features of this framework which were noted, included:

- The Provincial Executive had established the "Cabinet Cluster System:", which allowed for an improvement in the level of coordination in the planning and intervention processes of Provincial Government;
- A Provincial Planning Commission was being established, which would hopefully provide stronger guidance and support to Provincial and local government and non-government institutions towards more integrated and sustainable planning and development;
- Provincial public entities, with specific focus areas, had develop specialist expertise to improve their service delivery and this had a positive impact on development;
- The KwaZulu-Natal Economic Council was providing a forum where Provincial Government (and Local Government represented through KZN SALGA) could engage with the social partners of Business, Organised Labour and Civil Society to build agreement on the programmes for economic growth and development in the Province;
- Local municipalities were coming to grips with the process of making their Integrated Development Plans (IDPs) respond to the aspirations and needs of their communities;

Whilst noting these positive developments, the 2011 analysis simultaneously pointed to a number of weaknesses in the institutional and governance framework in the Province, and highlighted areas in need of innovation and/or improvement. Many of these weaknesses continue to exist and hamstring accelerated development and some are therefore worth repeating here. These include :

- Continuing weakness in local government capacity and performance
- Lack of strong and consistent institutional coordination between provincial government and local government



- Lack of meaningful participation of citizens in the processes of planning and implementation of programmes of provincial government departments and public entities
- Lack of tangible benefit flowing from the social partnership forums of provincial government and its social partners
- Limited progress with resolving an improved role for the Ingonyama Trust Board in pursuing accelerated and optimal development in partnership with provincial and local government institutions
- Limited progress in developing a skilled and professional public service in the province, and addressing long-standing capacity constraints.

All of these weaknesses have been again assessed in this 2016 *Situational Overview*. However the most appropriate starting point for assessing the state of governance is to see what the citizens of the Province feel about how well (or poorly) Government has been performing.

In its analysis of the challenges facing the country as regards institutions and governance, the National Planning Commission noted that “*Providing high-quality public services is the single most important thing that can be done to overcome the inequalities of apartheid. Education, health, social security and infrastructure services enable people to develop their capabilities, enhancing both their quality of life and economic opportunities available to them*”. Thus, in assessing the performance of Government in KZN as regards levels of governance, it is critical to use the KZN Citizens Satisfaction Survey of 2015, as this covered both governance and service delivery levels.

9.1 KZN Citizens’ Level of Satisfaction with Governance and Service Delivery

It was generally agreed during the 2011 PGDS formulation process, that the most relevant and accurate indicator of how Government and its partners were fairing in the governance and institutional landscape would be the “KZN Citizens Satisfaction Survey”. This survey was undertaken by Statistics SA in October 2015, and the first set of results were published on the 4th February 2016.

Key findings

(1) General Level of Satisfaction with Government performance

Provincial Government performance		
36% ☹ dissatisfied	31% 😐 partly satisfied	33% 😊 satisfied



Local Government Performance

49% ☹ dissatisfied

26% ☹ partly satisfied

25% ☺ satisfied

In 6 of the 11 districts ...and 35 of 51 local municipalities – majority (+51%) of the respondents were dissatisfied.

(2) Rating of Government Performance in key service delivery areas

Table 87 Rating of KZN performance on selected service delivery areas

Rating of KZN performance on selected areas	Poor	Fair	Good/Very good/excellent
<i>Provision of basic education</i>	16%	22%	63%
<i>Provision of health care</i>	21%	30%	49%
<i>Maintenance of provincial roads</i>	25%	52%	52%
<i>Eradicating poverty and improving social welfare</i>	27%	35%	38%
<i>Promoting agriculture</i>	29%	30%	41%
<i>Improving household food security</i>	32%	37%	31%
<i>Provision of safety and security</i>	33%	34%	33%
<i>Promoting accountable government</i>	35%	33%	32%
<i>Enhancing entrepreneurship and SMMEs</i>	36%	34%	30%
<i>Eradicating fraud and corruption</i>	49%	29%	22%

Table 88 Level of satisfaction with municipal performance

Local government			
Level of satisfaction with the overall performance of local municipalities	Dissatisfied	Somewhat satisfied	Satisfied
	49%	27%	25%
Top five critically important municipal services	Not important at all / somewhat important	Important/very important	Critically important
<i>Water services</i>	2%	46%	52%
<i>Electricity services</i>	2%	58%	40%
<i>Municipal clinics</i>	2%	59%	39%
<i>Sanitation services</i>	4%	60%	36%
<i>Affordable housing</i>	5%	61%	34%

(3) Rating of Government's implementation of "Batho Pele" principles



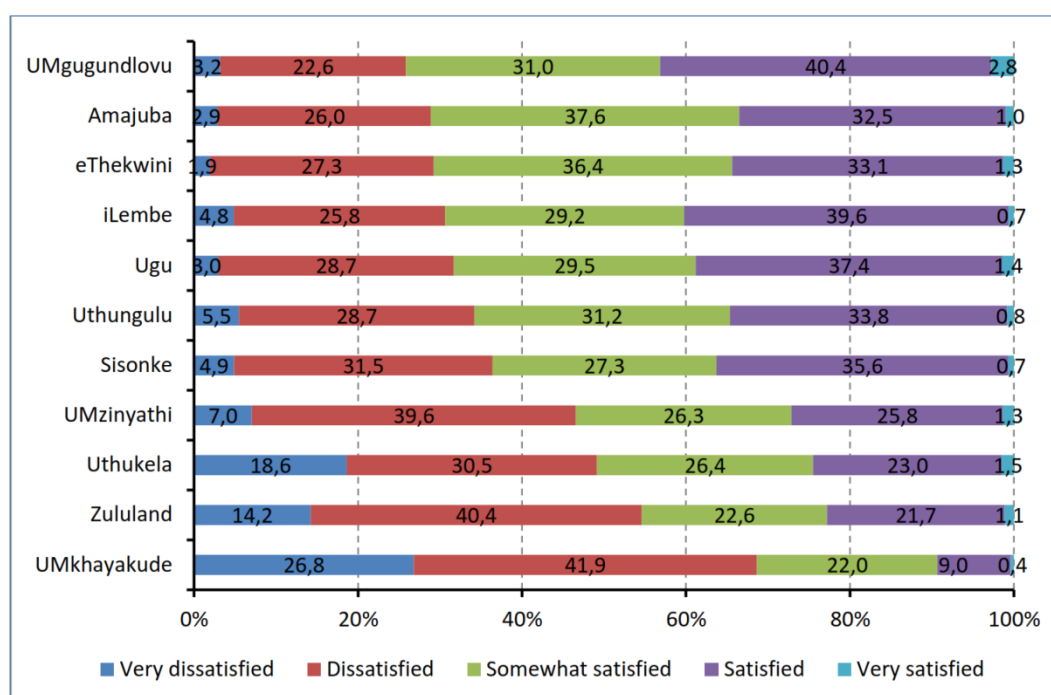
The Batho Pele initiative, ("Batho Pele" meaning "Putting people first"), launched by Government, nationally and provincially in 1997, was meant to get public servants committed to serving people, working at their full capacity and treating state resources with respect. It also called on the general public to hold public servants accountable for the quality of the service provided. The survey found the following:

Table 89 Rating on Batho Pele principles

<i>Whether [or not] KZN provincial government implements Batho Pele Principles</i>	Agree	Disagree
<i>Consultation</i>	59%	41%
<i>Service standards</i>	59%	41%
<i>Equal access</i>	45%	55%
<i>Value for money</i>	34%	66%

(4) Level of Citizens' Satisfaction with Governance of KZN Province - per District

Figure 167 Satisfaction with governance per district



(5) Citizens' view of top priorities

The survey revealed that the issue of "job creation" was by far the most important priority that the province should focus on, whilst "provision of housing" was the second most important. Whilst "job creation" was the number one priority amongst all population groups, there were differences amongst these groups as regards the second and third priorities as shown below.



Table 90 Citizen's view of top priorities

	Priority 1	Priority 2	Priority 3
African	Job creation	Provision of housing	Provision of housing
Coloured	Job creation	Education & skills development	Poverty eradication
Indian/ Asian	Job creation	Crime prevention	Fighting corruption
White	Job creation	Education & skills development	Fighting corruption

It is also interesting to note that although there are variations in the second and third priorities, citizens in every single municipal area of the province, as well as across all household income levels, ranked "job creation" as the number one priority.

It is not appropriate in this *Situational Overview* to try to analyse each of the above survey outcomes in detail because the survey is a snapshot of public opinion, and the respondents are not available to be interrogated as to their reasons for their opinions, which may be many and varied. However, in looking at the results of the 2015 KZN Citizens Satisfaction Survey, and in assessing the latest progress reports of Government departments, public entities, municipalities and indeed the PGDP Action Working Groups, stakeholders must try to collectively answer the following key questions:

9.2 Assessing policy coherence and optimising conditions for achieving PGDS Goals

1. Is there a good level of coordination of policy within Government?

This is of course a subjective question. What are the best and most objective indicators of a "good" level of coordination, other than a public opinion survey? Admittedly, Government has made great strides forward in prioritising coordination, in particular through :

- (a) requiring all spheres of Government and all departments and public entities to use the 12 national priority outcomes declared in 2010 as the starting point for their strategic planning; and
- (b) adopting the detailed National Development Plan in 2012, and again requiring all components of Government to use the NDP as a primary reference point in strategy and planning.

However there is still a need for much more effective coordination within Government, as the Citizens Satisfaction Survey shows that the test of good coordination is ultimately much improved service delivery and public sector performance.

2. Is the inter-governmental relations (IGR) system within Government working at an optimal level?

The 20-Year Review undertaken in 2014 by the National Department of Planning, Monitoring and Evaluation, as well as the documents of the National Planning Commission have already discussed this question in great detail. In KZN, the recent formulation of the District Growth and



Development Plans by each district in the Province, show that there is still a long way to go to achieve good levels of coordination and collaboration between the various components of Government. The Office of the Premier has drafted a new Inter-governmental relations Strategy for the Province, but it is yet to go through intensive consultative processes, before it can be passed and implemented. This itself is evidence of the need for IGR to be raised as a priority matter within the public sector. The indicators and targets for improved IGR in the Province will need close scrutiny and defining so that the social partners of Government, and civil society in general become party to exerting pressure on Government institutions, leaders and officials to drive better IGR as a leading tool for accelerated development.

3. Does Government have sufficient capacity to deliver on its service delivery and developmental responsibilities?

The NDP and the background papers informing the 20-Year Review of Government have discussed this matter in detail, pointing out that there is no quick fix to the challenges of Government capacity. In KZN Government has started to invest in increased training and skills development for public servants in the Province, as shown in the progress being made through the KZN Public Service Academy. However, again the 2015 KZN Citizens Satisfaction Survey shows that the gap between the current capacity and what is needed and expected by citizens is great. This area will need much more focused attention in the PGDS review in terms of developing indicators which more closely correspond to outcomes of service delivery improvement than numbers of people trained.

4. Are there sufficiently high levels of good governance within Government, especially as regards levels of fraud and corruption?

Over the last five years within the public sector great emphasis has been placed on the reports of the Auditor General as indicators of improving governance and clean administration, and in this regard the Province of KZN has shown major improvement, with the number of municipalities receiving clean audits increasing from 5 in 2011, to 22 in 2015. These statistics however conflict with the general impression amongst the citizenry that Government is performing poorly in combatting fraud and corruption (as measured through the KZN Citizens Satisfaction Survey and media reports. Again the National Planning Commission and the 20 Year Review reports point to the fight against fraud and corruption as one of the most critical challenges facing the public sector, and more accurate and reliable measures of the incidence and levels of fraud and corruption need to be developed and factored into the reviewed PGDS.

5. Are Government structures and systems designed and operating in a way which promotes participation of Government's social partners (Business, Labour, Communities, the academia and other significant interest groups) in the development strategies and processes of KZN?

Over the past 5 years, Government has attempted to improve dialogue with its key social partners regarding the development strategies being pursued. Where there have been formal forums or structures in place, some success has been achieved, the most notable of these being the KZN Economic Council, which has managed to formalise three chapters of the KZN



Social Accord since 2011. The success in implementation of these agreements remains to be fully assessed. There has arguably been less progress in developing action-oriented partnerships in the other key social partnership for which are operational, these being:

- The KZN Council on Climate Change and Sustainable Development
- The Provincial AIDS Council, and
- The KZN Human Resources Development Council.

In 2011 the CGE completed a national study on gender mainstreaming in the water sector.¹¹⁵ where eThekweni Metropolitan municipality (urban) and Sisonke District municipality (rural), as well as Umgeni Water Board were selected as case studies. The challenges surfaced were prevalent in all provinces, but of specific relevance to KZN province was the finding that the communities did not see the benefits of participating in IDP processes, as their needs and expressed preferences and priorities were usually ignored by their municipality. For the participants from KwaXimba, the participants could hardly recall participating in IDP processes. This lack of communication was highlighted by the participants, suggesting that either communities are not included in such important processes of planning for the provision of services in their municipalities, or that such planning processes are driven by other priorities and not those of citizens.

In addition, representatives of civil society have argued for the formation of better structures for engagement and partnership around social development issues. In particular there are strong concerns that space is not created to allow the voices and interests of women, youth and people with disabilities into the policy and strategy development processes. These issues will be further discussed in the PGDS review process.

9.3 Strategic Issues for consideration

1. No Quick Fix

One of the most important elements of the *Diagnostic* of the National Planning Commission (NPC) in 2011 regarding the issues of Governance, which formed the basis of the contents of the National Development Plan, is that there are no “quick fixes” to the questions of deepening democracy and improving service delivery in our country. The NPC was at pains to argue that the quick-fix approach tends to divert attention away from the complex institutional issues that need to be addressed, and can be unproductive and demoralising for staff of institutions who are exhausted from un-ending “restructuring”. The NDP therefore advocated a focus on long-term planning and institutional collaboration around development planning, implementation and coordinated monitoring and evaluation. This need for better collaboration and coordination remains a central and relevant theme in KZN’s governance and policy

¹¹⁵ Commission for Gender Equality, “Gender Mainstreaming in the Water Sector: Evaluating Progress by Municipalities and Provincial Water Boards, a National Report”, p.25-26, 2011.



landscape today, as evidenced in post-2011 research about citizen's perceptions of service delivery. This needs to be addressed in the review of the PGDS.

2. Cabinet Cluster System Effectiveness

Although there has not been any independent or objective study of the efficacy of the Cabinet Cluster system in Provincial Government, one is able to use the “scorecard” of Government in terms of the achievement of the 2015 targets of the Provincial Growth and Development Plan (PGDP) as a measure of the extent to which the Cabinet Cluster system is working successfully, since this system was meant to be the “engine room” for driving the implementation of the Plan. This report card shows that whilst there have been some areas of success, there are still many areas of under-performance. There will thus need to be some reflection on whether improvements in the Cabinet Cluster system can contribute to addressing performance levels of PGDP implementation.

3. Coordination between Provincial and Local Government

The National Planning Commission noted: “The provinces are required to play a supporting and oversight role with regard to municipalities. Yet, while the metros generally have a good working relationship with the provinces, many districts and municipalities complain of poor or inadequate support from provinces, especially with regard to planning and local economic development. They also cite the problems created by the burden of regulation from both provincial and national government particularly with regard to reporting requirements. This can hinder local government's ability to fulfil its developmental mandate, as an excessive burden of paperwork imposes a strain on local government's limited financial and administrative resources.”

Many provincial departments have increased their presence and levels of activity in programme implementation at municipal level since 2011. This is evident in the increase in the number of physical offices of provincial departments at local level. However a cursory review of the *district growth and development plans* of the various districts suggests that there is still much to be done to ensure a high level of alignment between:

- (a) The PGDP and district growth and development plans; and
- (b) The service delivery plans of provincial government departments (and their respective public entities), and the IDPs and annual implementation plans of district and local municipalities.

Even with the big cities of EtheKwini, Msunduzi and uMhlatuze, there are inconsistent processes of coordinated planning and implementation, where some departments work very closely with the local leadership and others not. The proposed *KZN Inter-governmental Relations Strategy* can be a key instrument for bringing more meaningful coordination which is measured and reported on in a systematic way through the PGDP process.

4. Local Government Capacity



The South African Local Government Association (SALGA) has identified several key factors affecting how well municipalities perform in the area of service delivery. These include the ability to attract and retain skilled staff; the existence of appropriate IT, financial and other systems; inculcating a culture of service delivery; and good working relationships between political and administrative leaderships with clear delineation of their respective roles.

5. Collaboration between Government and Social Partners in KZN

Whilst the Province can boast of the existence of a number of partnership fora/institutions where Government and its social partners jointly discuss strategy and issues of common concern, the most notable of these being :

- The KZN Economic Council
- The KZN Council for Climate Change and Sustainable Development, and
- The KZN Human Resources Development Council,

There is still much to be done to embed a truly collaborative relationship amongst the social partners. Anecdotal evidence suggests that the agenda and tenor of discussions at these forums are dominated by Government and its programme of action, leading to the forums rather being consultative vehicles with little space available for the weaker, but important, partners to add real value and create innovative strategies or partnerships which reach more of the people and improve the participation of citizens in their own development. Again, the process of building these partnerships and the social partnership vehicles is not an easy or quick process, but the value of it has been proven in countries where such collaboration amongst the leadership of the social partners has become entrenched as the preferred way of planning, coordination and delivery of development. This needs further thought and discussion in the PGDS review process.

6. Role for Planning Commissions

As the Provincial Planning Commission has led the way with the facilitation of processes that led to the PGDS and PGDP, so there may be a role to be defined for “planning commissions” at a local level (district or local municipal level). Ethekwini has notably taken the lead in establishing its City Planning Commission and defining the scope of its support for the long-term planning, coordination and advisory body. The strategy review phase of the PGDS perhaps needs to look into whether this vehicle for facilitating better integrated planning and coordination should not be rolled out elsewhere in the Province, noting the warnings of the NPC that there are no institutional quick fixes, and no one-size-fits-all approach when it comes to strategies to accelerate development.



10 KZN FUNDING LANDSCAPE

But before we get into the funding landscape it is important to articulate what determines the fiscal space within which funding can or cannot be made available. The main determinant is economic growth. In 2009, the US economy experienced a crash in the financial markets as a result of sub-prime lending practices. Since then, the global economic performance – measured in global domestic product (GDP) has remained sluggish. In 2006, the global economic growth rate was 5.3 percent. During the financial market crash in 2009 the growth rate shrunk to -0.7 percent. Since then, this rate has averaged 3 percent (*Index Mundi.com*). The financial crisis in the US spread across the financial markets worldwide like wildfire, and affected the productive side of economies, including South Africa's. Although South Africa showed some resilience to the effects of the crisis, registering a “not-so-bad” GDP growth rate of 3.2 percent in 2011, the effects of the crisis have now caught up with the domestic economy. In 2013, the economy registered 1.5 percent growth rate. In 2015, the economy grew by a mere 1 percent, and this is expected to decline further to 0.7 percent in 2016.

A lacklustre economic growth results in the reduction of tax receipts as corporate profits shrink, and consumer spending declines resulting in less VAT collection. This creates a significant public funding gap and increases the borrowing requirements. To reduce the funding gap, government has to reduce its spending plans, and that is what it has done in the 2016/17 MTEF. In total, R25 billion has been deducted from the entire baseline of government, and KZN has had a share of this deduction. This is elaborated further in the sections that follow as we discuss the fiscal consolidation programme currently underway in the country.

1. Changes in the (national) funding framework for provinces and KZN in particular since 2011

In terms of the vertical division of revenue, the share of nationally collected revenues which is allocated to provinces has shown a marginally declining trend since 2010/11. This is shown in Table 1 below where the share has declined from 43.6 per cent as shown in 2010/11 to 42.9 per cent in 2016/17, with this share expecting to increase slightly to 43.3 per cent in 2018/19. The share allocated to National departments and to the Local government sphere has shown an increase in the percentage shares over the same period.

Table 1: Division of revenue between spheres of government, 2010/11 to 2018/19

Percentage shares	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
National departments	48.2%	46.7%	47.9%	47.9%	48.2%	48.9%	48.1%	47.5%	47.4%
Provinces	43.6%	44.6%	43.4%	43.4%	43.2%	42.2%	42.9%	43.4%	43.3%
Local government	8.2%	8.7%	8.7%	8.7%	8.6%	8.9%	9.0%	9.1%	9.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

In terms of the horizontal division of revenue, where the share allocated to the provincial sphere is then divided among the 9 provinces, KZN has also seen a significant decline in the



funding received while remaining the province that receives the highest share in aggregate, followed by Gauteng. This is discussed in more detail here.

Table 2 illustrates the weighted average share of the equitable share allocation received by provinces from the 2010/11 MTEF to the 2016/17 MTEF.

Table 2: Distributing the equitable shares by province, 2010/11 MTEF to 2016/17 MTEF

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Eastern Cape	15.2%	15.1%	15.0%	14.2%	14.0%	14.0%	14.0%
Free State	6.0%	6.0%	5.8%	5.5%	5.6%	5.6%	5.6%
Gauteng	17.4%	17.8%	17.9%	19.4%	19.5%	19.5%	19.7%
KwaZulu-Natal	22.0%	21.9%	22.0%	21.3%	21.3%	21.3%	21.2%
Limpopo	12.6%	12.3%	12.5%	11.8%	11.8%	11.8%	11.8%
Mpumalanga	8.1%	8.0%	8.0%	8.2%	8.2%	8.2%	8.2%
Northern Cape	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.6%
North West	6.7%	6.8%	6.7%	6.9%	6.9%	6.9%	6.9%
Western Cape	9.3%	9.4%	9.4%	10.0%	10.0%	10.0%	10.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

As can be seen in the table, KZN's portion of the equitable share allocated to provinces remained fairly constant between 2010/11 to 2012/13 at around 22 per cent, before showing a significant decline in 2013/14 to 21.3 per cent. The 2013/14 MTEF's equitable share formula was updated using data from the 2011 Census which showed that KZN had a proportionately lower population, and this resulted in a significant shift in the equitable share allocation from KZN, with Gauteng and the Western Cape being the main recipients of the funding that KZN lost. This shift can be clearly seen in Table 2 when looking at the equitable share percentage for KZN, Gauteng and the Western Cape and particularly when comparing 2012/13 and 2013/14.

The impact of using the 2011 Census data to update the equitable share formula over the 2013/14 MTEF saw an unprecedented reduction in KZN's equitable share allocation and the effects of this is depicted in Table 3 below which shows the amounts that KZN's equitable share allocation was reduced by commencing from the 2013/14 MTEF. As can be seen in Line 1 of Table 3, the reductions amounted to R1.124 billion in 2013/14, R2.387 billion in 2014/15 and R3.261 billion in 2015/16. As this reduction informs the provincial baseline going forward, the reductions continue to affect the province in 2016/17, 2017/18 and beyond. Also depicted in the table is the fiscal consolidation strategy that National Treasury commenced with in 2013/14 by introducing 1, 2 and 3 per cent budget cuts over the 2013/14 MTEF, followed by National Treasury not funding any aspects of the shortfall of the 2014/15 above-budget wage agreement (not shown in table), as well as effecting further fiscal consolidation cuts over the 2015/16 MTEF (as shown in Line 6 of Table 3).



Important to note is that National Treasury provided some buffer funding to those provinces who were severely negatively affected by the data update of the equitable share formula using the 2011 Census data and this is depicted in Lines 2 and 7 below. These funds were provided as it was clear that the fiscal shock of such significant reductions could severely destabilise the provinces affected by these cuts.

Table 3: Equitable share allocation cuts since 2013/14 MTEF

	2013/14	2014/15	2015/16	2016/17	2017/18	TOTAL
1. Census data cuts	(1 123 908)	(2 387 435)	(3 260 935)	(3 410 938)	(3 567 841)	(13 751 057)
2. Provision to buffer the impact of the 2011 Census	289 915	656 600	1 224 143	1 280 454	1 339 354	4 790 466
3. KZN's baseline reductions after buffer	(833 993)	(1 730 835)	(2 036 792)	(2 130 484)	(2 228 487)	(8 960 591)
4. 1%, 2% and 3% cuts	(170 703)	(358 424)	(554 928)	(580 455)	(607 156)	(2 271 665)
5. Total Census data and 1%, 2% and 3% cuts	(1 004 696)	(2 089 259)	(2 591 720)	(2 710 939)	(2 835 642)	(11 232 256)
6. Equitable share cut (Fiscal Consolidation by NT)	-	-	(561 725)	(843 789)	-	(1 405 514)
7. Buffer funding received for further year from NT	-	-	-	321 958	-	321 958
8. Total cuts of KZN's ES since 2013/14	(1 004 696)	(2 089 259)	(3 153 445)	(3 232 770)	(2 835 642)	(12 315 812)

National Treasury has continued with its fiscal consolidation province over the 2016/17 MTEF with the intention being to cut government expenditure by R25 billion over the 2016/17 MTEF across all three spheres of government. In addition, provinces were requested to protect the provincial Departments of Health from the effects that the declining Rand will have on the procurement of medicines and medical supplies, which are largely imported.

Table 4 is included to show the effects of the fiscal consolidation cuts implemented by National Treasury, the updates of the data that informs the equitable share formula which once again resulted in a decline for the province, updates in the provincial own revenue, the exchange rate pressures, as well a few provincial priorities which required funding over the 2016/17 MTEF. These funds were sourced by cutting the baselines of all departments, with the exception of the Departments of Education and Health which were protected in this process.

Table 4 : Total funding requirement over the 2016/17 MTEF

R thousand	2016/17	2017/18	2018/19
1. ES and OR updates	(654 413)	1 732 211	2 247 515
2. Round 1 and 2 cuts	(319 107)	(1 231 825)	(1 611 422)
3. Total ES impact	(973 520)	500 386	636 093
4. Vote 7 - NHLS shortfall	(310 495)	(329 124)	(348 872)
5. Vote 7 - Exchange rate pressures	(785 696)	(1 640 311)	(1 648 372)
6. Vote 7 - Hospital linen	(80 000)	-	-
7. Drought relief - Agric and COGTA	(200 000)	-	-
8. Total provincial priorities requiring funding	(1 376 191)	(1 969 435)	(1 997 244)
9. Total funding requirement over the 2016/17 MTEF	(2 349 711)	(1 469 049)	(1 361 151)



Besides the equitable share allocation received from National Treasury, the province also receives conditional grant funding. This funding is allocated to provinces for specific purposes as detailed in the annual Division of Revenue Act. Some funding is also sourced through provincial own revenue collections and this is discussed in more detail later in this document. Table 5 shows the equitable share allocation received by the province, as well as the conditional grant funding and the provincial own revenue.

Table 5 : Analysis of total receipts

	Audited Outcome			Adjusted Appropriation 2015/16	Medium-term Estimates			Average Annual Growth	
	2012/13	2013/14	2014/15		2016/17	2017/18	2018/19	2012/13- 2015/16	2015/16- 2018/19
R thousand									
Transfers from national	82 590 160	88 230 571	94 195 075	100 012 826	105 386 733	113 083 767	120 065 693		
Equitable share	68 638 663	73 926 587	78 138 477	83 131 565	87 897 580	94 051 218	99 449 582		
Conditional grants	13 951 497	14 303 984	16 056 598	16 881 261	17 489 153	19 032 549	20 616 111		
Own revenue	2 669 540	2 772 190	3 148 995	2 995 146	3 031 768	3 183 572	3 338 439		
Total receipts	85 259 700	91 002 761	97 344 070	103 007 972	108 418 501	116 267 339	123 404 132		
% of total revenue									
Transfers from national	96.9	97.0	96.8	97.1	97.2	97.3	97.3		
Equitable share	80.5	81.2	80.3	80.7	81.1	80.9	80.6		
Conditional grants	16.4	15.7	16.5	16.4	16.1	16.4	16.7		
Own revenue	3.1	3.0	3.2	2.9	2.8	2.7	2.7		
Nominal growth (%)									
Transfers from national		6.8	6.8	6.2	5.4	7.3	6.2	6.6	6.3
Equitable share		7.7	5.7	6.4	5.7	7.0	5.7	6.6	6.2
Conditional grants		2.5	12.3	5.1	3.6	8.8	8.3	6.6	6.9
Own revenue		3.8	13.6	(4.9)	1.2	5.0	4.9	3.9	3.7
Total		6.7	7.0	5.8	5.3	7.2	6.1	6.5	6.2
Real growth (%)									
Transfers from national		1.0	1.1	0.8	(1.2)	1.1	0.2	0.9	0.0
Equitable share		1.8	0.1	1.0	(0.9)	0.8	(0.2)	0.9	(0.1)
Conditional grants		(3.1)	6.3	(0.2)	(2.9)	2.5	2.2	0.9	0.6
Own revenue		(1.9)	7.6	(9.7)	(5.1)	(1.1)	(1.0)	(1.6)	(2.4)
Total receipts		0.9	1.3	0.4	(1.3)	1.0	0.2	0.9	(0.0)

Table 5 shows that the equitable share allocation is the largest revenue source for the province at 81.1 per cent in 2016/17, followed by the conditional grant allocation at 16.1 per cent, with the provincial own revenue only contributing 2.8 per cent. The equitable share and the provincial own revenue sources show negative real growth of 0.1 per cent and 2.4 per cent, respectively from 2015/16 to 2018/19 while the conditional grant allocation shows marginal real growth of 0.6 per cent over the same period.

2. Deployment of financial resources

Here we look at shifts in the way that the province of KZN has deployed its financial resources i.e. capital vs recurrent expenditure, split among the different functions and departments, and what the rationale for these shifts is.

Table 6 provides an analysis of the allocation of the provincial budget to the three social sector departments, namely Education, Health and Social Development with all other departments' budgets summarised under the category Other Functions.



Table 6 : Analysis of payments and estimates by major vote

	Audited Outcome			Adjusted Appropriation	Medium-term Estimates			Average Annual Growth	
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2012/13-2015/16	2015/16-2018/19
R thousand									
Education	34 556 731	37 156 042	39 146 083	43 162 870	45 464 373	47 528 559	50 249 078		
Health	27 390 533	29 531 410	31 245 510	33 969 992	36 578 637	39 541 537	42 183 873		
Social Development	1 985 386	2 329 906	2 487 432	2 713 250	2 778 162	3 004 633	3 174 108		
Other Functions	20 678 033	22 593 732	23 967 382	24 845 797	24 184 869	25 639 733	27 102 155		
Total expenditure	84 610 682	91 611 090	96 846 407	104 691 909	109 006 041	115 714 462	122 709 214		
% of total expenditure									
Education	40.8	40.6	40.4	41.2	41.7	41.1	40.9		
Health	32.4	32.2	32.3	32.4	33.6	34.2	34.4		
Social Development	2.3	2.5	2.6	2.6	2.5	2.6	2.6		
Other Functions	24.4	24.7	24.7	23.7	22.2	22.2	22.1		

From this table it is clear that the province has increased its focus over the 2016/17 MTEF towards protecting the baseline of the social sector departments despite the fiscal consolidation plan implemented by National Treasury.

Education's share of the provincial funding increased from 41.2 per cent in 2015/16 to 41.7 per cent in 2016/17 while Health's share increased from 32.4 per cent in 2015/16 to 33.6 per cent in 2016/17. The Other Functions have shown a decline from 23.7 per cent in 2015/16 to 22.2 per cent in 2016/17. The stance taken by the provincial government when the next phase of National Treasury's fiscal consolidation plan was implemented was to ensure the protection of the social sector departments as these are at the forefront of providing services to the poor. Any decreases in the budget would have severely impacted these services.

When the Census data updates were effected, as discussed in paragraph 4.3, these cuts were proportionately effected across all provincial departments. The decision at the time, though, was to assist only Education and Health by funding part of the shortfall related to the above-budget wage agreement. When the 2016/17 MTEF fiscal consolidation cuts were effected, Education and Health were not cut and, in addition, funds were added to Health to assist with the exchange rate pressures emanating from the deteriorating Rand and the impact this has had on the procurement of medicines and medical supplies.

In view of the uncertainty experienced with regard to KZN's funding in view of the equitable share being negatively affected by the data updates that inform the equitable share formula, as well as the fiscal consolidation plan currently being implemented, any additional funding given to departments over the past few MTEF periods has largely been for projects and programmes which required once-off funding. Programmes or projects which have carry-through costs have not been funded through the provision of additional funding, largely because of the decline in the province's funding stream. Having said this, though, departments and public entities were able to fund projects and programmes through reprioritisation of their existing baselines.

The focus of the province has also been for departments, as far as possible, to not effect any of their budget cuts against their capital or infrastructure budget allocation. There were instances where departments were left with little choice but to effect the cuts against the capital budgets, but this was not encouraged. The focus was to effect the cuts on consumption spending and, since the 2016/17 MTEF, to limit growth in expenditure on *Compensation of employees*.



The rationale behind the protection of the capital budgets is that investment in capital lays the foundation for economic development and growth, which then has a positive impact on revenue collection for the country as a whole. Infrastructure projects are also useful in terms of job creation and thereby help a society increase its wealth and its citizens' standard of living.

While the drive by government has been for departments to protect their infrastructure budgets from the budget cuts, the ever-increasing wage bill, fuelled by unsustainable wage increments, has started crowding out other expenditure areas, including capital expenditure.

Table 7 : Analysis of payments and estimates by economic classification

	Audited Outcome			Adjusted Appropriation	Medium-term Estimates			Average Annual Growth	
	2012/13	2013/14	2014/15		2016/17	2017/18	2018/19	2012/13-2015/16	2015/16-2018/19
R thousand									
Current	66 314 557	71 965 078	76 555 901	84 512 797	90 254 597	95 682 631	101 911 632		
Transfers	9 764 582	11 420 899	12 054 854	11 986 342	10 820 225	12 004 799	12 667 527		
Capital	8 520 531	8 186 603	8 229 669	8 034 729	7 771 970	7 887 531	8 129 804		
Financial assets	11 012	38 511	5 983	158 041	159 249	139 501	252		
Compensation	49 323 014	54 093 872	57 993 392	63 476 315	67 877 302	72 186 659	76 633 071		
Non-compensation	35 287 668	37 517 219	38 853 015	41 215 594	41 128 739	43 527 803	46 076 143		
Non-compensation (excl. transfers)	25 523 086	26 096 320	26 798 161	29 229 252	30 308 514	31 523 004	33 408 616		
Non-compensation non-capital (NCNC)	26 767 137	29 330 616	30 623 346	33 180 865	33 356 769	35 640 272	37 946 339		
NCNC (excl. transfers)	17 002 555	17 909 718	18 568 492	21 194 523	22 536 544	23 635 473	25 278 812		
Total expenditure	84 610 682	91 611 090	96 846 407	104 691 909	109 006 041	115 714 462	122 709 214		
% of total expenditure									
Current	78.4	78.6	79.0	80.7	82.8	82.7	83.1		
Transfers	11.5	12.5	12.4	11.4	9.9	10.4	10.3		
Capital	10.1	8.9	8.5	7.7	7.1	6.8	6.6		
Financial assets	0.0	0.0	0.0	0.2	0.1	0.1	0.0		
Compensation	58.3	59.0	59.9	60.6	62.3	62.4	62.5		
Non-compensation	41.7	41.0	40.1	39.4	37.7	37.6	37.5		
Non-compensation (excl. transfers)	30.2	28.5	27.7	27.9	27.8	27.2	27.2		
Non-compensation non-capital (NCNC)	31.6	32.0	31.6	31.7	30.6	30.8	30.9		
NCNC (excl. transfers)	20.1	19.5	19.2	20.2	20.7	20.4	20.6		
Nominal growth (%)									
Current		8.5	6.4	10.4	6.8	6.0	6.5	8.4	6.4
Transfers		17.0	5.6	(0.6)	(9.7)	10.9	5.5	7.1	1.9
Capital		(3.9)	0.5	(2.4)	(3.3)	1.5	3.1	(1.9)	0.4
Financial assets		249.7	(84.5)	2 541.5	0.8	(12.4)	(99.8)	143.0	(88.3)
Compensation		9.7	7.2	9.5	6.9	6.3	6.2	8.8	6.5
Non-compensation		6.3	3.6	6.1	(0.2)	5.8	5.9	5.3	3.8
Non-compensation (excl. transfers)		2.2	2.7	9.1	3.7	4.0	6.0	4.6	4.6
Non-compensation non-capital (NCNC)		9.6	4.4	8.4	0.5	6.8	6.5	7.4	4.6
NCNC (excl. transfers)		5.3	3.7	14.1	6.3	4.9	7.0	7.6	6.1
Real growth (%)									
Current		2.6	0.7	4.8	0.1	(0.1)	0.5	2.7	0.2
Transfers		10.5	(0.1)	(5.6)	(15.4)	4.5	(0.4)	1.4	(4.1)
Capital		(9.2)	(4.8)	(7.3)	(9.3)	(4.4)	(2.7)	(7.1)	(5.5)
Financial assets		230.5	(85.3)	2 407.0	(5.5)	(17.5)	(99.8)	130.1	(89.0)
Compensation		3.7	1.5	3.9	0.3	0.2	0.2	3.0	0.2
Non-compensation		0.5	(1.9)	0.7	(6.4)	(0.3)	(0.1)	(0.3)	(2.3)
Non-compensation (excl. transfers)		(3.4)	(2.8)	3.5	(2.8)	(2.0)	0.0	(0.9)	(1.6)
Non-compensation non-capital (NCNC)		3.6	(1.1)	2.8	(5.7)	0.6	0.5	1.7	(1.6)
NCNC (excl. transfers)		(0.4)	(1.8)	8.3	(0.3)	(1.2)	1.0	1.9	(0.2)

Table 7 indicates how the province's capital budget has declined from 10.1 per cent in 2012/13 to a projected 6.6 per cent in 2018/19, with this category showing negative real growth of 5.5 per cent from 2015/16 to 2018/19. It is for precisely this reason that government has taken a very firm stance with regard to controlling the personnel numbers in the public service. In KZN, all vacant posts have been frozen, with only critical posts permitted to be filled, with a submission in this regard having to be made by the Executive Authority to the Premier and the MEC for Finance before a post may be filled. This also applies to attrition posts. Some categories



in Education and Health have been excluded from this process to ensure that there is no interruption to essential services at a classroom and health care level.

3. Changes since 2011 in the extent and type of funding of infrastructure in KZN – economic vs social infrastructure, etc.

Tables 8 and 9 are taken from the 2016/17 MTEF Estimates of Provincial Revenue and Expenditure and show the infrastructure budgets, per department and per infrastructure category, respectively, from 2012/13 to 2018/19.

The infrastructure budget remains fairly steady at between R11 billion and R12.8 billion. The departments with the largest infrastructure budgets are Education (for the provision of school infrastructure), Health (for the provision of health facilities) and Transport (for the maintenance and expansion of the road infrastructure).

Table 8 : Summary of infrastructure payments and estimates by vote

R thousand	Audited Outcome			Adjusted Appropriation	Medium-term Estimates			% share
	2012/13	2013/14	2014/15		2016/17	2017/18	2018/19	
1. Office of the Premier	16 271	24 272	10 049	10 779	3 108	2 916	2 275	0.0
2. Provincial Legislature	4 796	11 338	8 587	6 400	4 490	5 110	4 995	0.0
3. Agriculture and Rural Development	176 722	162 293	209 013	184 687	162 844	138 563	146 504	1.1
4. EDTEA	415 613	559 655	540 775	632 186	463 691	493 524	530 513	4.1
5. Education	2 716 925	2 553 784	2 212 374	2 485 931	2 452 129	2 120 705	2 194 343	17.1
6. Provincial Treasury	28 012	21 085	31 665	10 280	-	-	-	0.0
7. Health	2 349 724	1 976 758	1 654 845	1 510 747	1 536 515	1 773 683	1 873 537	14.6
8. Human Settlements	133 693	66 334	144 922	182 631	138 531	112 473	113 714	0.9
9. Community Safety and Liaison	-	312	-	500	-	-	-	0.0
10. Sport and Recreation	33 835	50 466	62 375	54 964	59 609	60 130	50 787	0.4
11. COGTA	24 225	39 069	41 689	76 601	76 596	61 674	71 450	0.6
12. Transport	5 567 450	5 805 930	6 506 106	6 509 069	6 771 540	7 063 395	7 497 775	58.5
13. Social Development	173 546	203 739	152 152	159 139	137 701	152 751	161 364	1.3
14. Public Works	87 999	84 143	108 762	77 373	72 618	70 625	70 225	0.5
15. Arts and Culture	53 636	42 825	56 466	129 335	99 000	133 030	102 952	0.8
Total	11 782 447	11 602 003	11 739 780	12 030 622	11 978 372	12 188 579	12 820 434	100.0

Education has seen a decline in the budget allocated to infrastructure by this department. As mentioned, the growing Compensation of employees bill has had a crowding-out effect on this category of expenditure and this is especially evident between the 2012/13 and 2014/15 financial years. The decline from 2016/17 to 2017/18 is because the Education Infrastructure grant has become an incentive-based grant and the incentives are allocated to provinces on an annual basis after departments have submitted the required information to National Treasury and the information has been assessed.

The decline in Health's budget from 2012/13 to 2015/16 was due to the effects of the Census data budget cuts. The department's budget shows growth over the 2016/17 MTEF.

Transport's infrastructure budget shows growth over the entire period.



Table 9 shows that the majority of the budget is allocated to *Existing infrastructure assets* over the entire period. This category includes *Maintenance and repair*, *Upgrades and additions* and *Rehabilitation and refurbishment* of the province's existing infrastructure asset base. The allocation towards *New infrastructure assets* declines from 2012/13 to 2015/16, and remains fairly steady thereafter. This indicates the intention to improve existing infrastructure to prevent deterioration of the existing asset base, as this can lead to more costly interventions at a later stage.

4. Development in terms of the province's revenue generation strategies and outcomes over the last 5 years

The province has focussed on various revenue enhancement strategies over the past few years, and some of these are detailed below:

4.1. Revenue forums

Provincial Treasury introduced revenue forums that serve as a platform for revenue practitioners to share best practices. These forums are held by Provincial Treasury and are attended by the CFOs and Revenue units from the various departments and are used as

Table 9 : Summary of infrastructure payments and estimates by category

R thousand	Audited Outcome			Adjusted Appropriation	Medium-term Estimates		
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Existing infrastructure assets	8 741 114	9 049 188	9 425 207	9 421 057	9 603 629	9 692 172	10 245 453
Maintenance and repair: Current	3 413 945	3 290 201	3 445 411	3 907 822	4 361 572	4 368 136	4 778 594
Upgrades and additions: Capital	3 815 037	4 088 100	4 258 895	3 535 396	3 071 705	3 312 909	3 443 307
Refurbishment and rehabilitation: Capital	1 512 132	1 670 887	1 720 900	1 977 839	2 170 352	2 011 127	2 023 551
New infrastructure assets: Capital	2 408 248	1 865 053	1 638 042	1 744 519	1 776 975	1 863 510	1 913 843
Infrastructure transfers	615 401	668 611	656 531	843 657	576 483	610 596	637 597
Infrastructure transfers: Current	4 950	3 322	3 300	2 450	2 000	1 650	1 650
Infrastructure transfers: Capital	610 451	665 289	653 231	841 207	574 483	608 946	635 947
Infrastructure: Leases	17 684	19 151	20 000	21 390	21 285	22 301	23 542
Total	11 782 447	11 602 003	11 739 780	12 030 622	11 978 372	12 188 579	12 820 434
<i>Capital infrastructure</i>	<i>8 345 868</i>	<i>8 289 329</i>	<i>8 271 068</i>	<i>8 098 960</i>	<i>7 593 515</i>	<i>7 796 492</i>	<i>8 016 648</i>
<i>Current infrastructure</i>	<i>3 436 579</i>	<i>3 312 674</i>	<i>3 468 711</i>	<i>3 931 662</i>	<i>4 384 857</i>	<i>4 392 087</i>	<i>4 803 786</i>

a platform to brainstorm new revenue sources and to learn from best practices.

4.2. Assist the Department of Health (DOH) in the development of a Revenue Enhancement Strategy (RES)

In the past, DOH showed sub-optimal revenue collection trends, which pointed to a myriad of challenges troubling its institutions. These challenges, *inter-alia*, included the following:

- Poor integration of revenue functions among subdivisions of the department.
- Poor IT systems for patient administration and billing, and for lodging timely claims to debtors such as medical aid schemes.
- Lack of adequate senior management support of the revenue function.
- Insufficient human resources in the revenue units.



4.3. Outcomes of the RES

Some of the benefits of the RES are as follows:

- The department has since turned the corner and in the 2015/16 financial year benefitted from the Provincial Treasury initiative to incentivise more revenue collection. This initiative saw DOH surpass its Patients fees budget which resulted in PT allowing them to retain R30.479 million to be spent on revenue enhancement activities within Health.
- DOH has appointed a service provider to assist in the recovery of Road Accident Fund (RAF) claims.
- Improved revenue audit outcomes for the department.
- In general, the RES managed to cultivate a business ethic and appreciation of the benefits of revenue generation across the department.

4.4. Revenue Retention Incentive Strategy

This strategy sought to incentivise departments to generate more revenue as they would be allowed to retain a portion of the over-collection. Provincial Treasury piloted this strategy with DOH, and the department benefitted in receiving R30.479 million of the over-collection, as mentioned above. DOH has committed these funds to purchasing Patient verification and Billing systems, among others, which are in-line with the RES. By making the billing system less manual, it is anticipated that revenue collection should show a further upward trend. In future, Provincial Treasury envisages rolling out this strategy to other departments and entities.

4.5. Amendment of the KZN Gaming and Betting Tax Act

In 2012, Provincial Treasury amended the KZN Gaming and Betting Tax Act by introducing tax bands. The new tax regime saw a marked increase in revenue. The new tax rates for a given gross gaming revenue band, make it sensitive to business cycles. In a booming economy, the Casino licensees pay more while their tax obligation is reduced in a depressed environment.

In recent years, *Casino taxes* and *Horse racing taxes* have been under-performing due to the depressed global economic conditions. On the contrary, a relatively new category, namely sports betting taxes, is on the rise due to increased growth in the sector. Provincial Treasury continues to work closely with the board in order to seek innovative ways to increase their revenue generation capacity.

4.6. Amendment KZN Liquor Licensing Act

In February 2014, the KZN Liquor Licensing Amendment Act, together with the Regulations, was promulgated. This resulted in higher revenue collection due to the higher tariffs and revised licence types in the amended framework. Provincial Treasury continues to work closely with the Liquor Authority to ensure that it achieves its revenue targets.

4.7. Standardisation Motor Vehicle Licence (MVL) fees



Due to the disparities in the motor vehicle licence fees across provinces, KZN has seen many of its motorists registering their vehicles in neighbouring and much cheaper provinces. KZN continues to lobby for the standardisation of MVL fees throughout the country to prevent further loss of potential revenue.

4.8. Introduction of tender documents fees

In the past, not all departments charged for tender documents. Since July 2013, all departments in KZN are charging tender document fees thus increasing revenue collection for the province.

5. How the Province is approaching the funding needs of the different streams of development in KZN e.g. funding needs of economic zones/estates/assets

In view of the Census data budget cuts, the ability for the provincial fiscus to add further funding to the development of special economic zones has been severely compromised. Having said this, though, the fiscus was able to allocate funds to both the Dube TradePort Corporation (DTPC) and the Richards Bay Industrial Development Zone (RBIDZ) over previous MTEF periods. This, together with the parent department reprioritising funds towards these two entities, has resulted in the baseline over the 2016/17 MTEF for DTPC amounting to R384.223 million in 2016/17, R415.167 million in 2017/18 and R452.905 million in 2018/19. The RBIDZ receives R126.370 million, R127.605 million and R129.530 million over the same period.

The province's expenditure and budget for these projects from 2003/04 to 2018/19 is R7.659 billion for DTPC and R1.132 billion for RBIDZ.

6. Potential for more extensive use of private sector funding of development and/or PPPs

PPPs will remain an alternative funding source in the province. Currently however, there is only one project that is funded through a PPP model in the province, and that is Inkosi Albert Luthuli Hospital. The province is considering financing the proposed government precinct via this model.



11 CONCLUSION

The Situational Overview presents a brief picture of the various sectors of KwaZulu-Natal's social and economic life – the strengths and the constraints. The information is presented as a base upon which to build responses to the challenges and opportunities in the Province and will be updated as more information becomes available.

