

**DISSERTATION TITLE**

**A National Evaluation of Sustainability Indicators**

**DEGREE**

Magister Institutionis Agrarier: Sustainable Ecological Management

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## ABSTRACT

The presents study reflects on the multidimensional nature of sustainable development and recognizes the interdependence of the economic, social and the environmental dimensions. A total of 40 variables are used to address the meaning of sustainable development at a local level in South Africa. The relationship between indicators and their use in measuring the broad concept of sustainable development is explored. Attempt to capture the spatial dimension in the evaluation of sustainable development indicators is made.

This study shows an association between districts characterized by low percentage of functional literacy and poverty gap. Districts with high poverty gap have poor access to water and latrine facilities and high unemployment rate. Further districts with high percentage functional literacy tend to have access to latrine and water facilities. There is a positive association between an increasing urban-rural spread and population density, percentage functional literacy, and access to latrine and water services, community services and the mining intensity index. As expected districts characterized by a high population growth rate have high population density and high unemployment rate. Districts with high population growth rate also have poor access to water facilities.

Districts with high poverty gap and unemployment rate tend to be associated with low amounts of pesticide and fertilizer application. Districts with large arable land per capita are associated with low amounts of fertilizer and pesticide application, and low intensity

of cattle production. Districts with large protected areas show high population growth rate and poverty gap. Districts with low unemployment rate are associated with mining and quarrying activities. Also districts with high mining intensity index show a positive association with desirable social conditions such as the increase in percentage functional literacy, access to water and latrine water facilities.

On the overall indices of social sustainability indicate a poor state of social sustainable development in many South African magisterial districts in the Eastern Cape, KwaZulu Natal, Gauteng and Northern Province. The overall pattern of economic sustainable development shows many economically active districts in Western Cape, Free State and Gauteng Province. However many districts in the Eastern Cape, KwaZulu Natal, Northern Province, Northern Cape and some in Mpumalanga Province indicate low economic activity. Many districts show a pattern of high environmental sustainability, but districts in Eastern Cape, KwaZulu Natal, Gauteng and some in Mpumalanga and Northern Province indicate a poor state of environmental sustainability.

## 1. Introduction

The World Commission on Environment and Development (WCED) (1987) defines sustainable development as “development that meets the needs of the present without compromising the ability of the future generations to meet their own.” It requires meeting the basic needs of all and extending to all the opportunity to satisfy their aspirations for a better life. Moffat (1994) acknowledges the holistic nature of sustainable development as well as its focus on the parts and Dahl (1997) emphasizes the definition’s accountability of time and responsibility towards future generations.

Development is described (Upreti, 1994) as a process oriented at imparting the greatest improvement in the quality of people’s life, social justice and equity, the improvement in human condition and the realization of human potentials. This definition is reaffirmed by Dahl’s (1997) statement, that development is a durable rise in living standards and well being and not just an increase in financial value. Upreti (1994) states that development cannot be conceived to have social meaning if it is not directed to the satisfaction of human needs. The concept of sustainable development raises the need to look at all aspects of our society and its development in all its multiplicity, and to question its ability to last into the indefinite future.

Referring to the WCEDs definition of sustainable development, Nepal (1997) concludes that this concept is defined by the achievements of certain social and economic objectives and not just by measurement of the environment health. Adam (1990) states that the World Conservation Strategy [(IUCN, 1980)] started from the premise of the need to conserve ecosystems and sought to demonstrate why this made

economic sense. He further explained that *Our Common Future* [(WCED, 1987)] starts with the people and goes on to discuss what kinds of environmental policies are required to achieve socio-economic goals.

At the national, regional and global level, efforts have been made to explore sustainable development (see, for example, Reyers *et al.*, 1997 and van Jaarsveld, 1996). There is an expressed (Gibbs, 1994) concern on the little work undertaken to address the exact meaning of sustainable development at the local level. Measures taken at the local level accumulate to provide part of a global solution (Moldan, 1997), thus putting the concept of thinking globally and acting local into practice. This study aims to sensitize local authorities to include efforts directed at making sustainable development a reality as a main item on their agenda. This study attempts to collate a national database of sustainable development indicators at the scale of magisterial districts and to evaluate the existence of the relevant data at a national scale.

The purpose of the present study is to address the relationship between indicators, and to explore their use to measure the broad concept of sustainable development at a magisterial district scale. This study is motivated by the reasoning that the economic, social and the environmental dimensions are not only interdependent, but that they evolve together and will continue to evolve into the future (van Jaarsveld, 1996). In attempting to address the sustainable development challenge, this study adopts van Jaarsveld's (1996) co-evolutionary approach towards the evaluation of sustainable development.

Attempts to capture the spatial dimension in the evaluation of sustainable development indicators will be made. The need for incorporating such aspects is justified by the temporal nature of sustainable development as implied by the term development (Langaas, 1997). Gallopin (1997) also calls for the need for indicators of sustainable development to show changes through time and space, because of the inherent temporal dimension imbedded in the concept of sustainable development.

## 1.1 Measuring sustainable development

Dahl (1997) expressed that assembling the many specific dimensions inevitably involved in sustainable development is the challenging aspect about building a big picture of sustainable development. This approach simplifies data even further by reducing independent variables to a minimum set of indicators, thus simplifying the interpretation of the information (van Jaarsveld, 1996). Although van Jaarsveld (1996) warns that disaggregation of indicators does not guarantee good decision-making, it is acknowledged that such indicators are required to address problems specifically. This is to ensure that the real driving forces of identified problems become the targets of public policy.

The problem with this approach is that many things that are easily understood to be an essential part of development have no monetary value (Dahl, 1997). Hence Bandara (1999) states that “if we were to discard anything unquantifiable, then forget about half of the world.” A representative statement of this problem is that mineral resources could be exhausted, soils eroded, aquifers polluted, and wildlife may be hunted to extinction but measured income would not be affected as these assets disappeared (Repetto *et al.*, 1989). Recognition of the multidimensional nature of sustainable development underscores the need for indicators that reflect such varied issues as income, health, basic needs, and the environment (Moldan, 1997).

The rationale for developing a sustainable development strategy is to improve the wealth, health and welfare of the population (Gibbs, 1994). Moldan (1997) admonishes that economic development cannot be the antagonist of the environment

for long and remain sustainable. Fundamental to the concept of sustainability is the need to recognize that the economy is not separate from the environment in which we and other species live (Moffat and Wilson, 1994). It is expressed (Moldan, 1997) that the best policies for environmental protection also help further economic activity. Rutherford (1997) states that industry requires human labour and human brains, as well as natural resources.

## 1.2 The need for indicators of sustainable development

The United Nations Commission on Sustainable Development (1996a) invited the scientific community to undertake further work on identifying and assessing the linkages among the economic, social, institutional and environmental elements of sustainable development. Principle 1 of the Bellagio Principles states (Hardi, 1997) that “assessment of progress toward sustainable development should be guided by a clear vision of sustainable development and goals that define that vision.” At the workshop on Indicators of Sustainable Development (ISD) for Decision Making, in Ghent 1995, the potential uses of ISD were indicated (FPOB, 1995). Below is a list of the potential uses of ISD:

- a) They can alert decision-makers to priority issues, guiding policy formulations, simplifying and improving communication (FPOB, 1995).
- b) Fostering a common understanding of key trends with a view to predict future impacts of human activities on the environment and society to determine future and/or alternatives strategies and policies (Winograd, 1997).
- c) They can be used to assess conditions and trends in relation to goals and targets; to compare across places and situations; and to provide early warning information (Gallopín, 1997 and Tunstall, 1992, 1994).
- d) They can be useful in determining the change in the environment in relation to society and developmental process (Winograd, 1997).

- e) Diagnose the actual driving forces and effects of detected problems in order to elaborate responses and actions (Winograd, 1997).
  
- f) Sustainability indicators are useful tools for monitoring the progress that has been made on the way towards a sustainable development (Moldan and Billharz, 1997 and FPOB, 1995).
  
- g) Within various context indicators are needed to clearly show whether we are on the right track and in what direction we are headed (Moldan and Billharz, 1997).

## 2. Methods

The data used were collected from various primary and secondary statistical sources in South Africa. Appendix 1 shows the sources of data used in this study and presents a list of the collected variables together with their definitions. The choice of variables included in each analysis was restricted by the availability of data. Data analyses were conducted at a magisterial district scale, collectively on 373 South African magisterial districts. Analyses were based on 40 variables, classed into three main categories comprised of 13 social, 10 economic and 17 environmental variables.

Area dependent variables were weighted by the magisterial district area (km<sup>2</sup>) and population dependent variables by the population size of the respective magisterial districts. This procedure was conducted in order to avoid misleading results as a consequence of differences in land areas and population sizes between various magisterial districts. The data collected for this study is presented in Appendix 2.

The United Nation's Framework for Indicators of Sustainable Development (1996b) was adopted, there was further subdivision of the social, economic and environmental classes into positive and negative categories respectively (see, Appendix 3). The mean values of the positive and negative categories were calculated, in order understand the overall indication of the negative and positive indicators for the respective classes. Further the mean values of the negative indicators were subtracted from the positive indicators. The quantitative differences between the positive and negative values were used as overall performance indicators, and were recognized as indices for the respective classes.

Pearson's correlation analysis was used to quantify and explore the co-evolutionary relationships between variables without inferring any cause-effect relationships (Sokal and Rohlf, 1995). Correlation analyses was also used to explore the co-variation pattern between the data sets of positive and negative indicators with sustainable development indices. The procedure conducted to support the possible relationship between changes in sustainable development indices by positive and negative indicators respectively.

Prior to spatial analysis the classes of data sets and the respective indices were ranked in order to distill unit inconsistencies. A Geographic Information System (GIS-Arc-View) was used for data geo-referencing, an approach aimed at illustrating the general patterns of variation between the magisterial district areas. Two representative districts were sampled from each of the nine provinces of South Africa to illustrate the pattern of co-variation between positive and negative indicators, as well as indices of sustainable development.

### **3. Results**

The results of the correlation analyses conducted between social, economic and environmental sustainable development variables for South African magisterial districts are provided in Table 1. Maps showing the GIS Arc-View presentation illustrate the general patterns of variation between various magisterial district areas. Figures illustrating the pattern of co-variation between positive and negative indicators, and indices of sustainable development are presented. The most important trends that emerge from the analyses are reported.

#### **3.1 Social sustainable development indicators**

##### **3.1.1 Negative indicators**

The results indicate a negative correlation between population density and households without access to piped water. A negative correlation appears between urban rural spread and households with access to off-site water facilities. The data indicate a negative correlation between households with access to piped water and those with access to off-site water facilities, unemployment rate and population growth rate. As expected population density displays a positive relationship with population growth rate and the urban rural spread (Table 1).

**Table 1.** A correlation ( $n = 373$ ,  $P < 0.001$ ) matrix between social, economic and environmental indicators for South African magisterial districts

	<i>%FL</i>	<i>AFS</i>	<i>AOW</i>	<i>APW</i>	<i>APL</i>	<i>ABL</i>	<i>ASL</i>	<i>CS</i>	<i>PGR</i>	<i>PD</i>
Percentage functional literacy ( <i>%FL</i> )	1.00									
Access to full services ( <i>AFS</i> )	<b>0.77</b>	1.00								
Access to on-site water facilities ( <i>AOW</i> )	<b>0.19</b>	<b>0.23</b>	1.00							
Access to piped water ( <i>APW</i> )	<b>0.75</b>	<b>0.96</b>	0.13	1.00						
Access to pit-latrines facilities ( <i>APL</i> )	<b>-0.70</b>	<b>-0.92</b>	<b>-0.23</b>	<b>-0.90</b>	1.00					
Access to bucket latrine facilities ( <i>ABL</i> )	<b>0.33</b>	<b>0.40</b>	<b>0.31</b>	<b>0.29</b>	<b>-0.36</b>	1.00				
Access to septic tank latrine facilities ( <i>ASL</i> )	-0.03	0.00	<b>0.46</b>	<b>0.13</b>	-0.07	0.00	1.00			
Community services ( <i>CS</i> )	<b>0.37</b>	<b>0.37</b>	<b>-0.10</b>	<b>0.41</b>	<b>-0.34</b>	0.01	-0.03	1.00		
Population growth rate ( <i>PGR</i> )	0.02	<b>-0.15</b>	<b>-0.24</b>	<b>-0.22</b>	<b>0.18</b>	-0.05	<b>-0.36</b>	-0.09	1.00	
Population density ( <i>PD</i> )	0.09	0.06	-0.07	0.01	<b>-0.13</b>	<b>0.19</b>	<b>-0.16</b>	0.02	<b>0.13</b>	1.00
No access to piped water ( <i>NAP</i> )	<b>-0.68</b>	<b>-0.86</b>	<b>-0.14</b>	<b>-0.82</b>	<b>0.92</b>	<b>-0.37</b>	0.01	<b>-0.31</b>	0.08	<b>-0.15</b>
Access to off-site water facilities ( <i>HOF</i> )	<b>-0.64</b>	<b>-0.86</b>	<b>-0.27</b>	<b>-0.87</b>	<b>0.94</b>	<b>-0.26</b>	<b>-0.14</b>	<b>-0.34</b>	<b>0.25</b>	-0.08
Unemployment rate ( <i>UR</i> )	<b>-0.25</b>	<b>-0.34</b>	<b>-0.22</b>	<b>-0.38</b>	<b>0.38</b>	-0.07	<b>-0.23</b>	<b>-0.19</b>	<b>0.24</b>	-0.02
Urban rural spread ( <i>URS</i> )	<b>0.23</b>	<b>0.22</b>	-0.07	<b>0.19</b>	<b>-0.19</b>	0.08	<b>-0.13</b>	<b>0.35</b>	-0.01	<b>0.15</b>
Arable land per capita ( <i>ALP</i> )	0.04	<b>0.18</b>	<b>0.22</b>	<b>0.22</b>	<b>-0.21</b>	0.00	<b>0.29</b>	0.03	<b>-0.17</b>	-0.06
Species density ( <i>SD</i> )	0.10	0.05	<b>-0.12</b>	0.01	-0.08	<b>0.15</b>	<b>-0.20</b>	-0.02	<b>0.20</b>	<b>0.83</b>
Protected areas ( <i>PA</i> )	0.09	-0.03	-0.01	0.01	0.04	<b>-0.12</b>	0.04	-0.01	<b>0.21</b>	-0.05
Use of agricultural pesticides ( <i>UAP</i> )	<b>0.35</b>	<b>0.34</b>	0.04	<b>0.32</b>	<b>-0.31</b>	<b>0.13</b>	-0.08	<b>0.17</b>	-0.01	-0.01
Use of fertilizers ( <i>UF</i> )	<b>0.26</b>	<b>0.24</b>	<b>0.15</b>	<b>0.27</b>	<b>-0.23</b>	-0.01	<b>0.13</b>	0.05	-0.09	-0.05
Intensity of cattle production ( <i>ICP</i> )	0.02	<b>-0.10</b>	<b>-0.12</b>	<b>-0.12</b>	<b>0.14</b>	-0.07	<b>-0.13</b>	-0.05	<b>0.10</b>	0.02
Intensity of maize production ( <i>IMP</i> )	0.09	0.09	-0.05	0.09	-0.07	-0.08	-0.06	0.00	-0.01	0.09
Energy use in agriculture ( <i>EUA</i> )	0.00	<b>0.10</b>	<b>0.23</b>	<b>0.12</b>	<b>-0.13</b>	0.02	<b>0.34</b>	-0.01	<b>-0.16</b>	-0.05
Electricity, gas and water ( <i>EW</i> )	0.00	0.03	0.03	0.02	-0.01	-0.04	-0.01	0.03	-0.08	-0.03
Irrigation percentage of arable land ( <i>IPA</i> )	0.02	0.01	<b>0.14</b>	0.01	-0.02	0.00	<b>0.11</b>	0.02	-0.04	-0.01
Income from livestock ( <i>IL</i> )	0.02	0.09	<b>0.19</b>	0.13	<b>-0.11</b>	-0.05	<b>0.25</b>	-0.01	<b>-0.21</b>	-0.07
Agriculture, fishing and forestry ( <i>AFF</i> )	0.01	0.09	<b>0.24</b>	<b>0.17</b>	<b>-0.13</b>	0.02	<b>0.47</b>	0.05	<b>-0.28</b>	-0.09
Income from field crops ( <i>IFC</i> )	-0.01	0.05	<b>0.15</b>	0.08	-0.07	<b>0.11</b>	<b>0.48</b>	0.01	<b>-0.14</b>	-0.05
Income from horticulture ( <i>IH</i> )	0.03	0.04	<b>0.18</b>	0.08	-0.06	-0.07	<b>0.21</b>	-0.01	<b>-0.10</b>	-0.05
Mining intensity index ( <i>MI</i> )	<b>0.29</b>	<b>0.26</b>	-0.03	<b>0.23</b>	<b>-0.24</b>	<b>0.15</b>	<b>-0.15</b>	<b>0.13</b>	0.02	0.03
Mining and quarrying ( <i>MQ</i> )	0.03	0.06	0.05	0.07	-0.06	0.01	0.07	-0.01	-0.06	-0.02
Potential labor force ( <i>PLF</i> )	0.01	0.05	0.05	0.08	-0.05	-0.06	<b>0.12</b>	0.00	<b>-0.12</b>	-0.04
Paid employees in agricultural sector ( <i>PEA</i> )	0.03	<b>0.12</b>	<b>0.27</b>	<b>0.19</b>	<b>-0.15</b>	0.04	<b>0.48</b>	0.01	<b>-0.28</b>	<b>-0.10</b>
Gross remuneration of employees ( <i>PAY</i> )	0.04	0.08	0.09	0.07	-0.07	-0.06	0.05	0.04	<b>-0.11</b>	-0.02
Trade and catering ( <i>TD</i> )	0.05	0.05	0.04	0.05	-0.05	0.08	0.06	-0.01	-0.02	-0.03
Finance and real estates ( <i>FRE</i> )	0.04	0.04	0.04	0.04	-0.04	0.07	0.05	-0.02	-0.02	-0.02
Transport and communication ( <i>TC</i> )	0.05	0.10	0.08	0.08	-0.09	-0.06	0.01	0.08	-0.09	-0.01
Other producers ( <i>OP</i> )	0.03	0.04	0.06	0.06	-0.05	0.05	0.09	-0.01	-0.04	-0.03
Manufacturing ( <i>M</i> )	0.04	0.08	0.04	<b>0.10</b>	-0.08	0.07	<b>0.11</b>	0.00	-0.05	-0.03
Construction ( <i>C</i> )	0.02	0.06	0.06	0.08	-0.06	0.01	<b>0.13</b>	-0.01	-0.06	-0.03
Poverty gap ( <i>PG</i> )	<b>-0.34</b>	<b>-0.39</b>	<b>-0.20</b>	<b>-0.38</b>	<b>0.34</b>	<b>-0.25</b>	-0.07	-0.07	0.09	-0.07

**Table 1. Continued**

	<i>NAP</i>	<i>HOF</i>	<i>UR</i>	<i>URS</i>	<i>ALP</i>	<i>SD</i>	<i>PA</i>	<i>UAP</i>	<i>UF</i>	<i>ICP</i>
Percentage functional literacy (%FL)										
Access to full services (AFS)										
Access to on-site water facilities (AOW)										
Access to piped water (APW)										
Access to pit-latrines facilities (APL)										
Access to bucket latrine facilities (ABL)										
Access to septic tank latrine facilities (ASL)										
Community services (CS)										
Population growth rate (PGR)										
Population density (PD)										
No access to piped water (NAP)	1.00									
Access to off-site water facilities (HOF)	<b>0.75</b>	1.00								
Unemployment rate (UR)	<b>0.24</b>	<b>0.46</b>	1.00							
Urban rural spread (URS)	<b>-0.20</b>	<b>-0.16</b>	-0.02	1.00						
Arable land per capita (ALP)	<b>-0.18</b>	<b>-0.21</b>	<b>-0.10</b>	-0.04	1.00					
Species density (SD)	<b>-0.12</b>	-0.02	-0.02	0.05	<b>-0.12</b>	1.00				
Protected areas (PA)	0.02	0.03	0.00	-0.03	-0.04	-0.04	1.00			
Use of agricultural pesticides (UAP)	<b>-0.28</b>	<b>-0.30</b>	<b>-0.21</b>	0.09	<b>-0.10</b>	-0.02	-0.02	1.00		
Use of fertilizers (UF)	<b>-0.18</b>	<b>-0.26</b>	<b>-0.27</b>	-0.04	<b>-0.11</b>	0.02	0.01	<b>0.24</b>	1.00	
Intensity of cattle production (ICP)	<b>0.11</b>	<b>0.14</b>	0.04	0.03	<b>-0.12</b>	<b>0.19</b>	0.03	0.09	<b>0.15</b>	1.00
Intensity of maize production (IMP)	-0.08	-0.06	-0.05	-0.01	-0.04	<b>0.19</b>	-0.02	-0.01	0.06	0.02
Energy use in agriculture (EUA)	<b>-0.10</b>	<b>-0.14</b>	<b>-0.11</b>	-0.04	<b>0.18</b>	-0.07	0.01	-0.03	0.03	-0.05
Electricity, gas and water (EW)	-0.01	-0.02	-0.09	0.00	-0.04	-0.02	-0.01	0.01	0.06	0.01
Irrigation percentage of arable land (IPA)	-0.02	-0.03	-0.06	-0.01	0.00	-0.02	0.03	-0.01	-0.02	-0.03
Income from livestock (IL)	-0.05	<b>-0.14</b>	<b>-0.18</b>	-0.05	<b>0.16</b>	-0.08	0.02	<b>0.10</b>	<b>0.17</b>	-0.05
Agriculture, fishing and forestry (AFF)	-0.06	<b>-0.17</b>	<b>-0.21</b>	-0.07	<b>0.24</b>	<b>-0.10</b>	0.02	0.01	<b>0.15</b>	-0.03
Income from field crops (IFC)	-0.05	-0.08	<b>-0.12</b>	-0.04	<b>0.12</b>	-0.06	0.03	-0.02	<b>0.13</b>	-0.06
Income from horticulture (IH)	0.00	<b>-0.11</b>	<b>-0.21</b>	-0.04	0.03	-0.04	0.06	-0.01	0.05	0.00
Mining intensity index (MI)	<b>-0.23</b>	<b>-0.21</b>	<b>-0.13</b>	<b>0.19</b>	-0.08	-0.01	-0.05	<b>0.43</b>	0.02	0.04
Mining and quarrying (MQ)	-0.05	-0.07	<b>-0.10</b>	-0.01	0.02	-0.04	-0.03	0.04	-0.02	-0.04
Potential labor force (PLF)	-0.05	-0.05	-0.01	-0.03	-0.02	-0.02	0.00	-0.03	-0.05	0.04
Paid employees in agricultural sector (PEA)	-0.09	<b>-0.19</b>	<b>-0.23</b>	-0.07	<b>0.33</b>	-0.09	0.02	-0.04	<b>0.15</b>	0.00
Gross remuneration of employees (PAY)	-0.06	-0.08	-0.08	0.01	-0.02	0.00	-0.01	-0.01	-0.03	0.03
Trade and catering (TD)	-0.04	-0.05	-0.05	-0.02	0.02	-0.04	-0.03	-0.02	0.03	-0.03
Finance and real estates (FRE)	-0.03	-0.04	-0.04	-0.02	0.01	-0.04	-0.03	-0.01	0.03	-0.03
Transport and communication (TC)	-0.08	-0.09	-0.07	0.04	-0.02	0.00	-0.01	-0.02	-0.02	0.02
Other producers (OP)	-0.04	-0.05	-0.02	-0.02	0.04	-0.05	-0.03	-0.02	0.01	-0.04
Manufacturing (M)	-0.08	-0.08	-0.03	-0.02	0.07	-0.04	-0.04	-0.04	0.02	-0.05
Construction (C)	-0.06	-0.07	0.00	-0.02	0.07	-0.05	-0.04	-0.03	-0.01	-0.04
Poverty gap (PG)	<b>0.29</b>	<b>0.33</b>	<b>0.26</b>	-0.07	0.02	-0.06	<b>0.32</b>	<b>-0.16</b>	<b>-0.19</b>	0.06

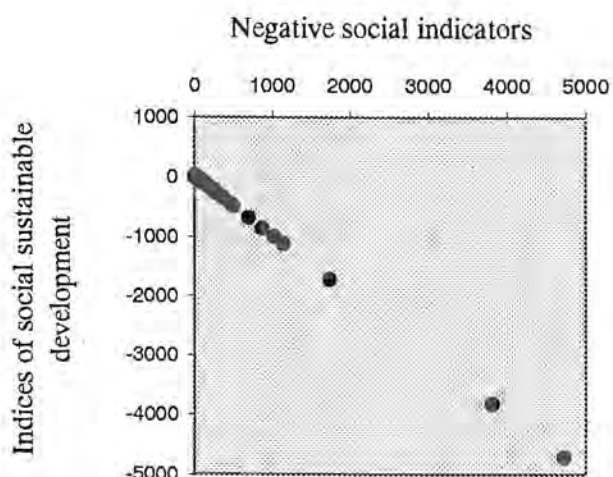
Table 1. *Continued*

	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI	MQ
Percentage functional literacy (%FL)										
Access to full services (AFS)										
Access to on-site water facilities (AOW)										
Access to piped water (APW)										
Access to pit-latrines facilities (APL)										
Access to bucket latrine facilities (ABL)										
Access to septic tank latrine facilities (ASL)										
Community services (CS)										
Population growth rate (PGR)										
Population density (PD)										
No access to piped water (NAP)										
Access to off-site water facilities (HOF)										
Unemployment rate (UR)										
Urban rural spread (URS)										
Arable land per capita (ALP)										
Species density (SD)										
Protected areas (PA)										
Use of agricultural pesticides (UAP)										
Use of fertilizers (UF)										
Intensity of cattle production (ICP)										
Intensity of maize production (IMP)	1.00									
Energy use in agriculture (EUA)	-0.01	1.00								
Electricity, gas and water (EW)	0.03	0.05	1.00							
Irrigation percentage of arable land (IPA)	-0.01	-0.01	0.00	1.00						
Income from livestock (IL)	0.00	<b>0.35</b>	<b>0.41</b>	0.06	1.00					
Agriculture, fishing and forestry (AFF)	-0.02	<b>0.47</b>	<b>0.16</b>	0.04	<b>0.58</b>	1.00				
Income from field crops (IFC)	0.03	<b>0.43</b>	0.05	0.00	<b>0.29</b>	<b>0.60</b>	1.00			
Income from horticulture (IH)	-0.03	<b>0.18</b>	<b>0.12</b>	0.00	<b>0.29</b>	<b>0.43</b>	<b>0.16</b>	1.00		
Mining intensity index (MI)	0.07	-0.06	0.01	-0.02	-0.06	<b>-0.11</b>	-0.02	-0.06	1.00	
Mining and quarrying (MQ)	-0.01	0.00	0.07	0.00	0.08	0.06	0.03	<b>0.10</b>	0.00	1.00
Potential labor force (PLF)	-0.02	<b>0.10</b>	<b>0.43</b>	0.00	<b>0.23</b>	<b>0.27</b>	0.07	<b>0.17</b>	-0.06	<b>0.51</b>
Paid employees in agricultural sector (PEA)	-0.01	<b>0.46</b>	0.09	0.05	<b>0.44</b>	<b>0.79</b>	<b>0.64</b>	<b>0.41</b>	-0.08	0.07
Gross remuneration of employees (PAY)	-0.01	0.08	<b>0.57</b>	0.00	<b>0.38</b>	<b>0.21</b>	0.02	<b>0.22</b>	-0.03	<b>0.23</b>
Trade and catering (TD)	0.04	0.03	-0.02	-0.01	0.01	0.04	0.08	0.02	-0.02	-0.02
Finance and real estates (FRE)	0.05	0.02	-0.02	-0.01	0.01	0.03	0.06	0.00	-0.02	-0.02
Transport and communication (TC)	-0.02	0.06	<b>0.51</b>	0.00	<b>0.36</b>	<b>0.15</b>	0.01	<b>0.17</b>	-0.02	0.04
Other producers (OP)	0.03	0.05	-0.02	-0.01	0.04	<b>0.10</b>	0.07	0.02	-0.03	-0.02
Manufacturing (M)	0.00	<b>0.12</b>	-0.03	-0.01	0.06	<b>0.21</b>	<b>0.22</b>	0.06	-0.02	-0.02
Construction (C)	0.01	0.06	-0.02	-0.01	0.05	<b>0.15</b>	0.06	0.04	-0.03	-0.02
Poverty gap (PG)	-0.05	-0.02	<b>0.12</b>	-0.01	0.07	-0.02	-0.01	-0.01	-0.08	-0.02



**Table 1. Continued**

	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PG
Percentage functional literacy (%FL)										
Access to full services (AFS)										
Access to on-site water facilities (AOW)										
Access to piped water (APW)										
Access to pit-latrines facilities (APL)										
Access to bucket latrine facilities (ABL)										
Access to septic tank latrine facilities (ASL)										
Community services (CS)										
Population growth rate (PGR)										
Population density (PD)										
No access to piped water (NAP)										
Access to off-site water facilities (HOF)										
Unemployment rate (UR)										
Urban rural spread (URS)										
Arable land per capita (ALP)										
Species density (SD)										
Protected areas (PA)										
Use of agricultural pesticides (UAP)										
Use of fertilizers (UF)										
Intensity of cattle production (ICP)										
Intensity of maize production (IMP)										
Energy use in agriculture (EUA)										
Electricity, gas and water (EW)										
Irrigation percentage of arable land (IPA)										
Income from livestock (IL)										
Agriculture, fishing and forestry (AFF)										
Income from field crops (IFC)										
Income from horticulture (IH)										
Mining intensity index (MI)										
Mining and quarrying (MQ)										
Potential labor force (PLF)	1.00									
Paid employees in agricultural sector (PEA)	<b>0.17</b>	1.00								
Gross remuneration of employees (PAY)	<b>0.71</b>	<b>0.15</b>	1.00							
Trade and catering (TD)	-0.01	0.05	-0.01	1.00						
Finance and real estates (FRE)	0.00	0.03	-0.01	<b>0.98</b>	1.00					
Transport and communication (TC)	<b>0.50</b>	<b>0.11</b>	<b>0.87</b>	-0.01	0.00	1.00				
Other producers (OP)	0.03	<b>0.11</b>	0.00	<b>0.88</b>	<b>0.93</b>	0.00	1.00			
Manufacturing (M)	0.03	<b>0.22</b>	-0.01	<b>0.70</b>	<b>0.69</b>	-0.01	<b>0.82</b>	1.00		
Construction (C)	0.07	<b>0.15</b>	0.00	<b>0.56</b>	<b>0.64</b>	0.00	<b>0.84</b>	<b>0.80</b>	1.00	
Poverty gap (PG)	0.08	0.00	0.04	-0.06	-0.05	0.02	-0.03	-0.01	0.00	1.00

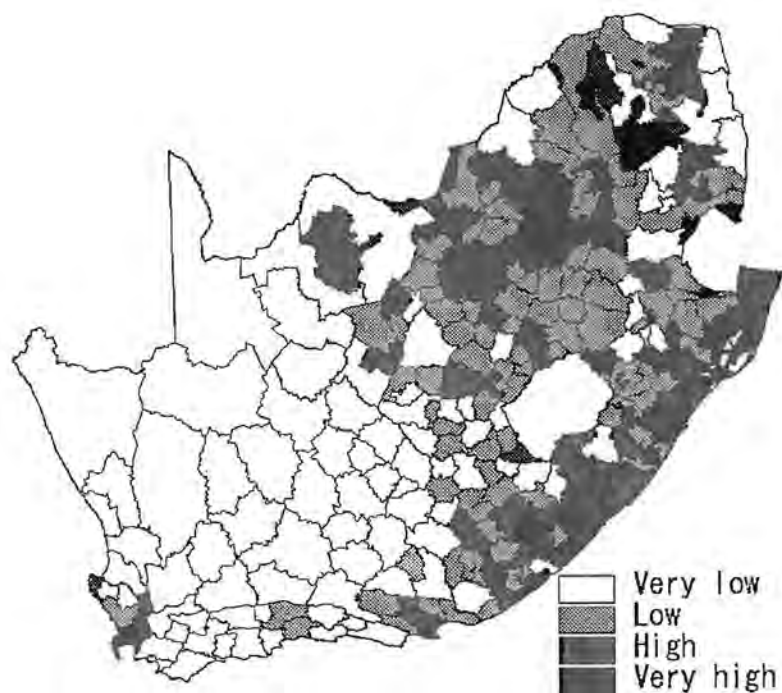


**Figure 1.** Correlation between the negative social indicators and the indices of social sustainable development

Figure 1 indicates the relationship between the negative indicators and the social sustainable development indices. The results indicate a very high significant ( $r^2 = 1.0$ ,  $P = < 0.001$ ,  $n = 373$ ) co-variation between the data sets of negative social indicators and the social sustainable development index.

Figure 2 shows the results of the data of negative social sustainable development indicators (see, Appendix 3). Each polygon on the map represents a South African magisterial district. As presented in the legend, the variation patterns range from districts indicating very low negative values to those indicating very high negative values. Districts that are indicated by very high negative values represent the South African magisterial districts with the greatest percentage of off-site water facilities and without access to piped water, the greatest urban-rural spread, greatest population density and highest unemployment rates.

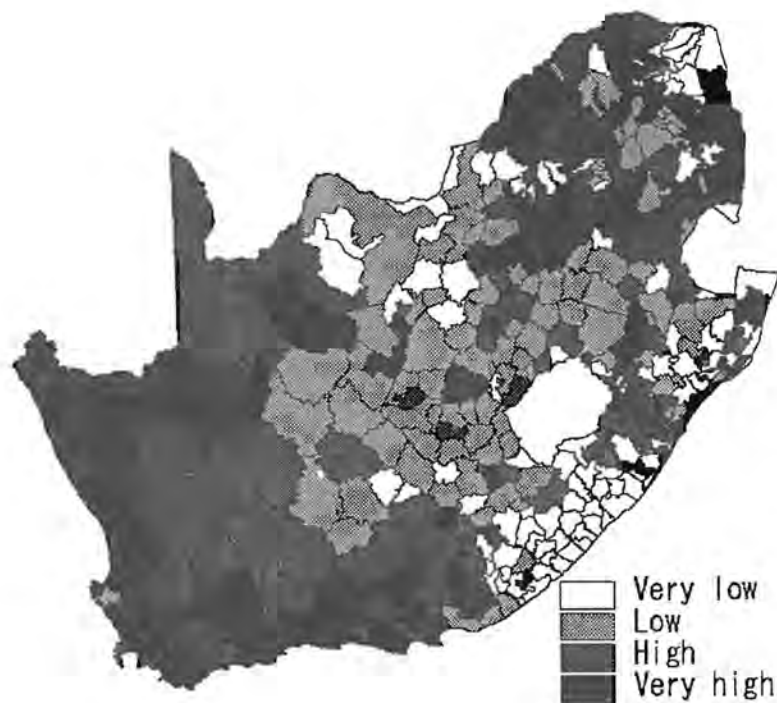
Magisterial districts with the lowest percentage of functional literacy, and the highest percentage of households with poor access to water and latrine facilities are found in the Eastern Cape, KwaZulu Natal and North West Province. In the Eastern Cape, KwaZulu Natal, Gauteng, North West and Northern Province a high percentage of districts are characterized by highest population densities and unemployment rate. In the Eastern Cape, KwaZulu Natal, Gauteng, North West and Northern Province many magisterial districts show the highest urban-rural spread (Figure 2 and 3). The map indicating the location of South African Provinces is presented in Appendix 4.



**Figure 2.** Representation of the negative social sustainable development indicators for South African magisterial districts

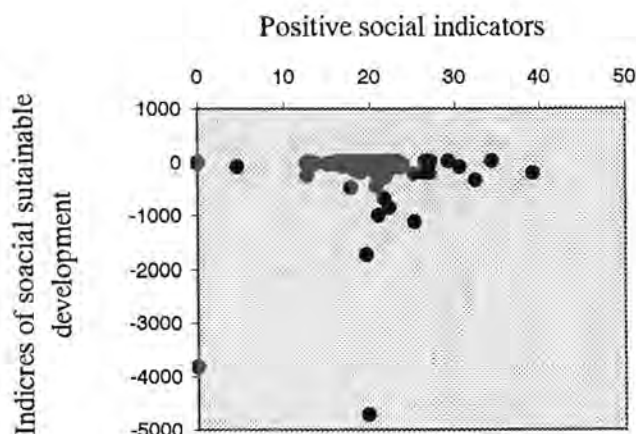
### 3.1.2 Positive indicators

The data indicate a positive correlation between most positive social sustainable development variables. Negative correlation is identifiable between households with access to pit-latrines facilities and the percentage functional literacy, households with access to full service and on-site water facilities, households with piped water and those with access to bucket latrine facilities. A negative correlation appears between community services and households with access to on-site water facilities and those with access to pit-latrines facilities (Table 1).



**Figure 3.** Representation of the positive social sustainable development indicators for South African magisterial districts

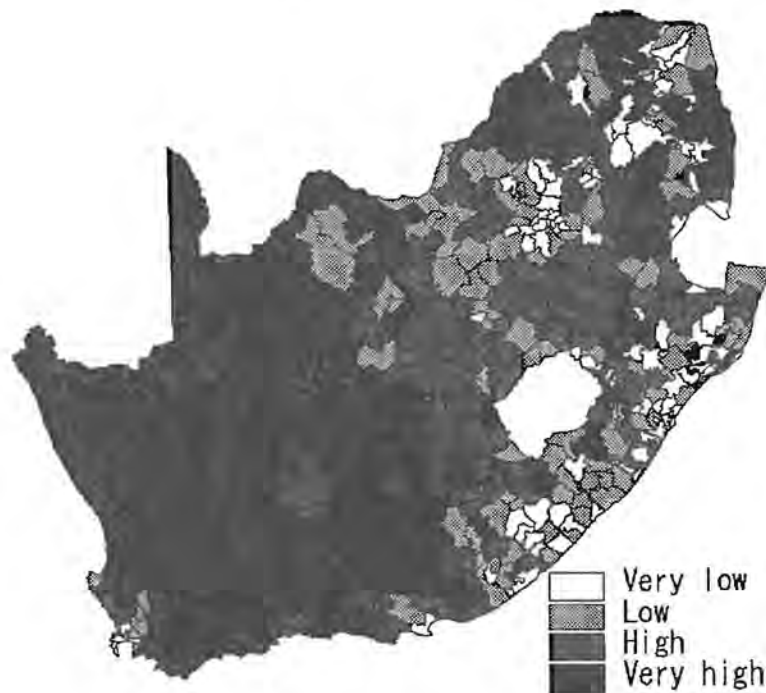
Figure 3 shows the results of the data of positive social sustainable development indicators. Districts that are indicated by very high positive values represent the South African magisterial districts with the greatest percentage of households that have access to water and latrine facilities, highest percentage of functional literacy and districts that have adequate access to community services. Figure 4 indicates the relationship between the positive social indicators and indices of social sustainable development. The results indicate the absence ( $r^2 = 0.005$ ,  $P = < 0.001$ ,  $n = 373$ ) of a co-variation between the data sets of the positive indicators and social sustainable development index.



**Figure 4.** Correlation between the positive social indicators and indices of social sustainable development

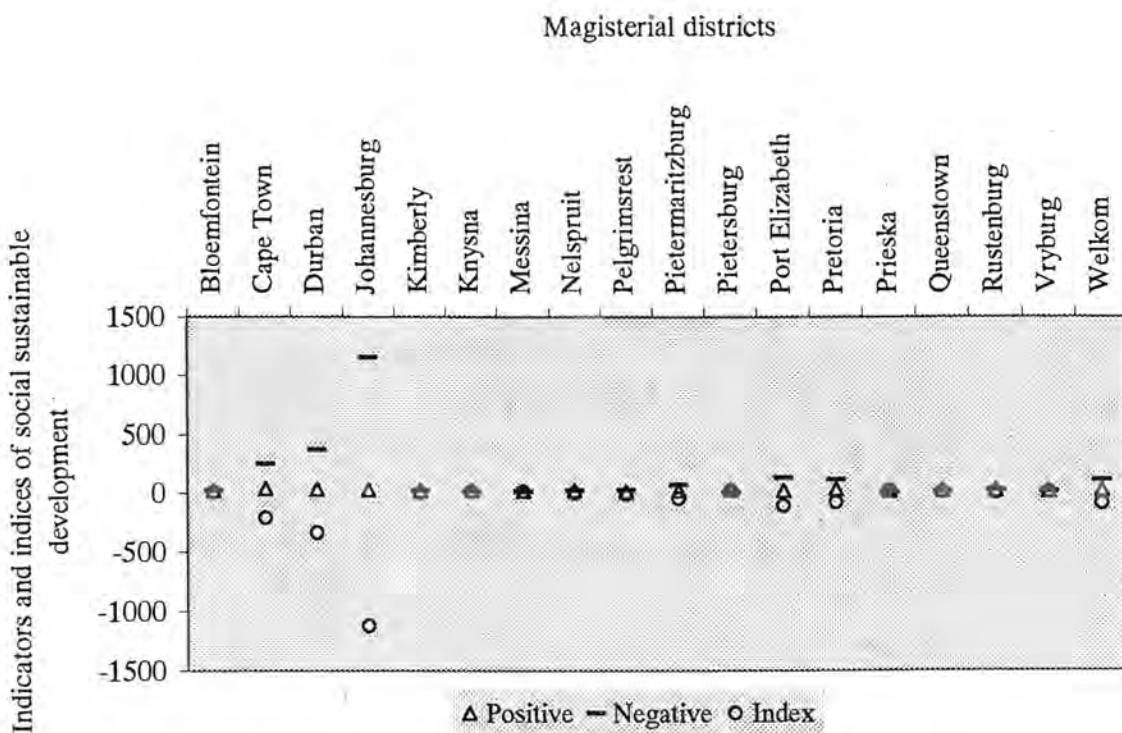
### 3.1.3 Negative and positive indicators

Most positive social sustainable development variables appear to be negatively correlated with the negative social sustainable development variables. Urban-rural spread indicates a positive correlation with the percentage functional literacy, households with access to full services, piped water and the community services. Households with access to pit-latrines appear to be positively correlated with households with no access to piped water and those with access to off-site water facilities, population growth rate and unemployment rate. Households with access to bucket latrine facilities were positively correlated with the population density (Table 1).



**Figure 5.** Representation of the social sustainable development indices for South African magisterial districts

Figure 5 shows the results of the data of indices derived from the differences between the positive and negative social sustainable development indicators. As indicated on the legend, the variation pattern ranges from districts indicating very low indices to those indicating very high indices. Districts that are indicated by a very high index represent South African magisterial districts that show a better progress towards social sustainable development and those indicated by very low index indicate a poor state.



**Figure 6.** Diagram illustrating the co-variation between negative and positive indicators, and indices of social sustainable development for South African magisterial districts

Figure 6 illustrates the co-variation pattern between the negative and positive social indicators, and the key trends determining the driving forces in social sustainable development. The results indicate that districts characterized by very high negative

indicators tend to show very low indices (see, Table 2). For example Johannesburg and Durban indicate very high negative indicators as a consequence they show very low social sustainable development indices. However Knysna, Messina, Pietersburg, Prieska, Queenstown, and Vryburg indicate very low negative indicators as a result they show high social sustainable development indices. It may further be suggested that Pelgrimsrest, Pietermaritzburg, Pretoria and Welkom represent an intermediate state relative to the above-indicated districts.

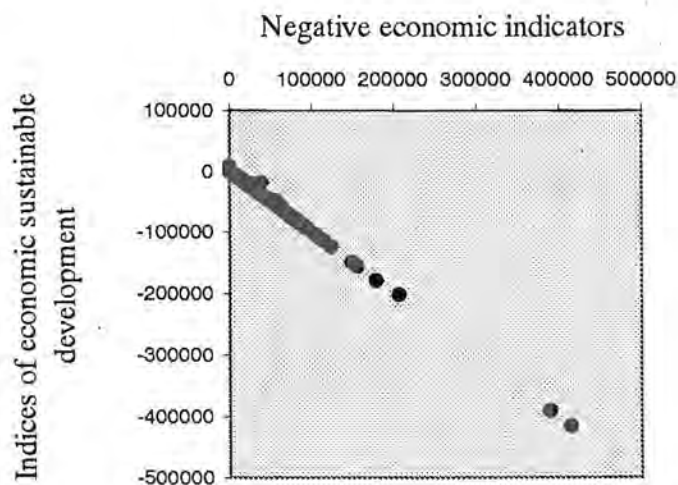
**Table 2.** The ranked values, positive and negative social sustainable development indicators and indices of social sustainable development for South African magisterial districts

District Name	Positive	Rank	Negative	Rank	Index	Rank
Bloemfontein	23.20	356	20.44	216	2.77	189
Cape Town	39.19	373	251.86	359	-212.67	16
Durban	32.44	371	374.56	364	-342.13	10
Johannesburg	25.23	361	1150.97	370	-1125.74	4
Kimberly	21.49	327	21.10	222	0.39	162
Knysna	20.92	302	10.76	80	10.16	311
Messina	18.76	196	9.90	61	8.85	299
Nelspruit	22.41	345	20.45	217	1.96	178
Pelgrimsrest	12.85	24	24.92	229	-12.06	141
Pietermaritzburg	23.90	359	72.82	328	-48.92	47
Pietersburg	27.00	366	7.75	33	19.24	371
Port Elizabeth	22.14	342	133.58	346	-111.43	28
Pretoria	30.60	370	114.54	342	-83.94	36
Prieska	18.51	173	4.61	4	13.90	355
Queenstown	20.50	285	12.64	125	7.86	286
Rustenburg	21.26	319	19.77	212	1.49	170
Vryburg	17.81	111	9.98	63	7.83	284
Welkom	20.97	306	111.72	341	-90.75	33

### 3.2 Economic sustainable development indicators

#### 3.2.1 Negative indicators

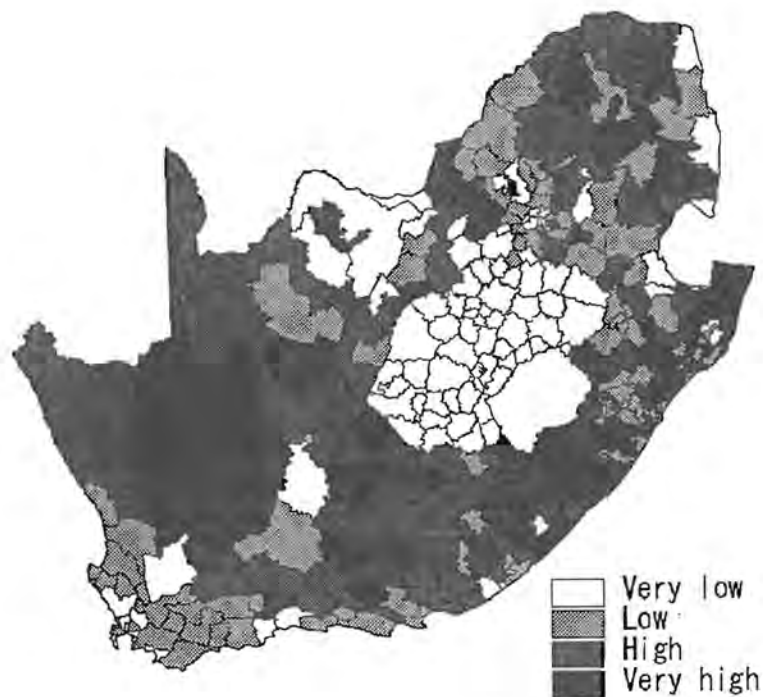
As there is only one variable used to indicate negative economic sustainable development, it could not be correlated with other negative variables (see, Appendix 3). Figure 7 indicates the relationship between the negative economic indicators and indices of economic sustainable development. The results indicate a very high significant ( $r^2 = 0.999$ ,  $P = < 0.001$ ,  $n = 373$ ) co-variation between the data of the negative economic indicators and indices of economic sustainable development.



**Figure 7.** Correlation between the negative economic indicators and indices of economic sustainable development

Figure 8 shows the results of the data of negative economic sustainable development indicators. Districts indicated by very high negative values represent the South

African magisterial districts with the highest poverty gap. Many districts in the Eastern Cape, KwaZulu Natal, Northern Cape and Northern Province show the highest levels of poverty gap. However many districts in the Western Cape, Free State, and Gauteng Province show the lowest levels of poverty gap.



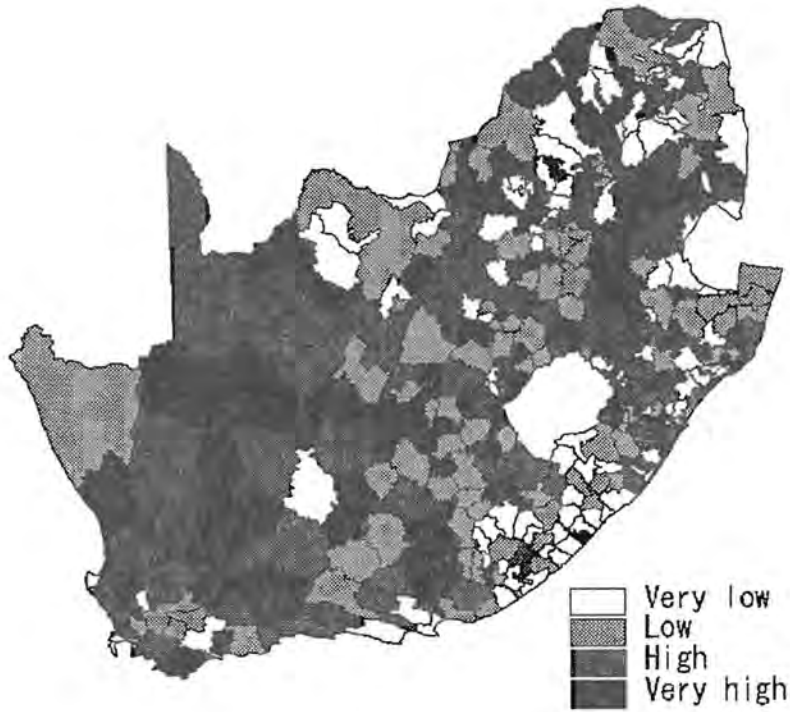
**Figure 8.** Representation of the negative economic sustainable development indicators for South African magisterial districts

### 3.2.2 Positive indicators

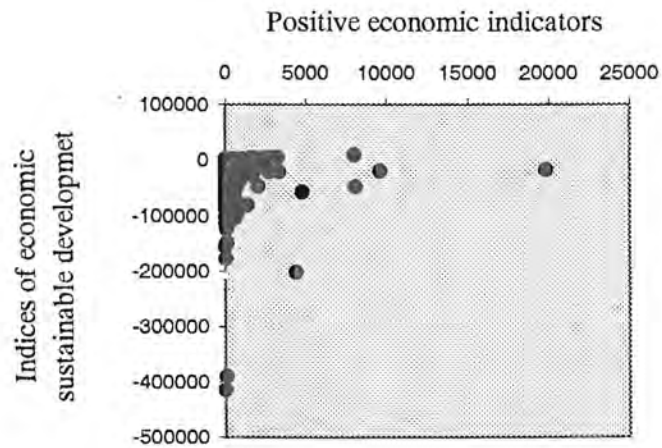
Positive economic sustainable development variables indicate a very high positive relationship between each other. A positive correlation exists between the potential labor force and the paid employees in the agricultural sector and the gross remuneration of employees. Manufacturing, construction and the income from other producers correlates positively with the paid employees in agricultural sector, trade and catering, finance and real estates. Transport and communication appeared to be positively correlated with potential labor force, paid employees in agricultural sector and the gross remuneration of employees (Table 1).

Figure 9 shows the results of the data of positive economic sustainable development indicators. Districts that are indicated by very high positive values represent the most economically active South African magisterial districts. Whereas those that are indicated by very low positive indicators represent South African magisterial districts with very low economic activities (see, Appendix 3). Many districts in the Eastern Cape, North West and Northern Province and some in KwaZulu Natal and some districts in Gauteng Province appear to be less economically active.

Figure 10 indicates the relationship between the positive economic variables and indices of economic sustainable development. The results indicate the absence ( $r^2 = 0$ ,  $P = < 0.001$ ,  $n = 373$ ) of a co-variation between the data sets of positive economic indicators with economic sustainable development indices.



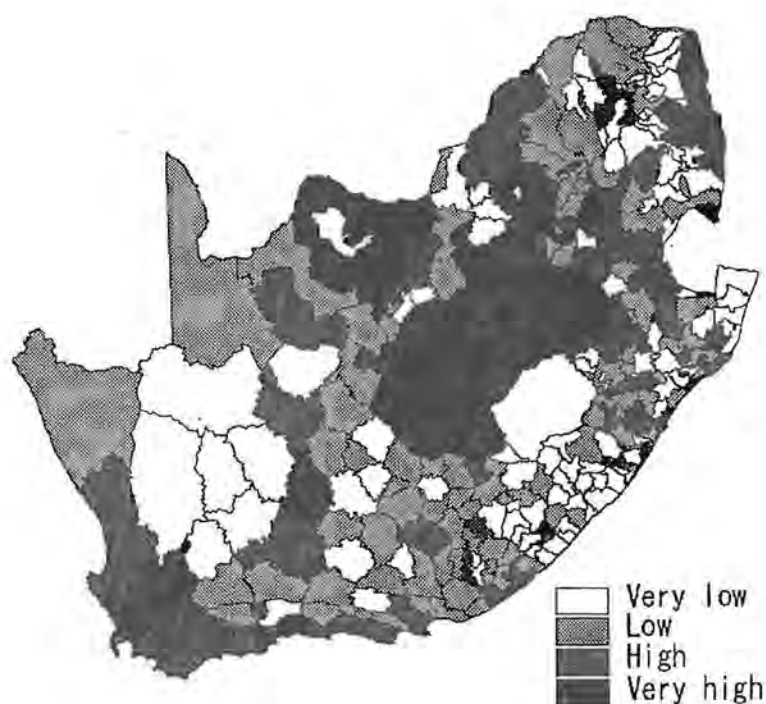
**Figure 9.** Representation of the positive economic sustainable development indicators for South African magisterial districts



**Figure 10.** Correlation between the positive economic variables and indices of economic sustainable development

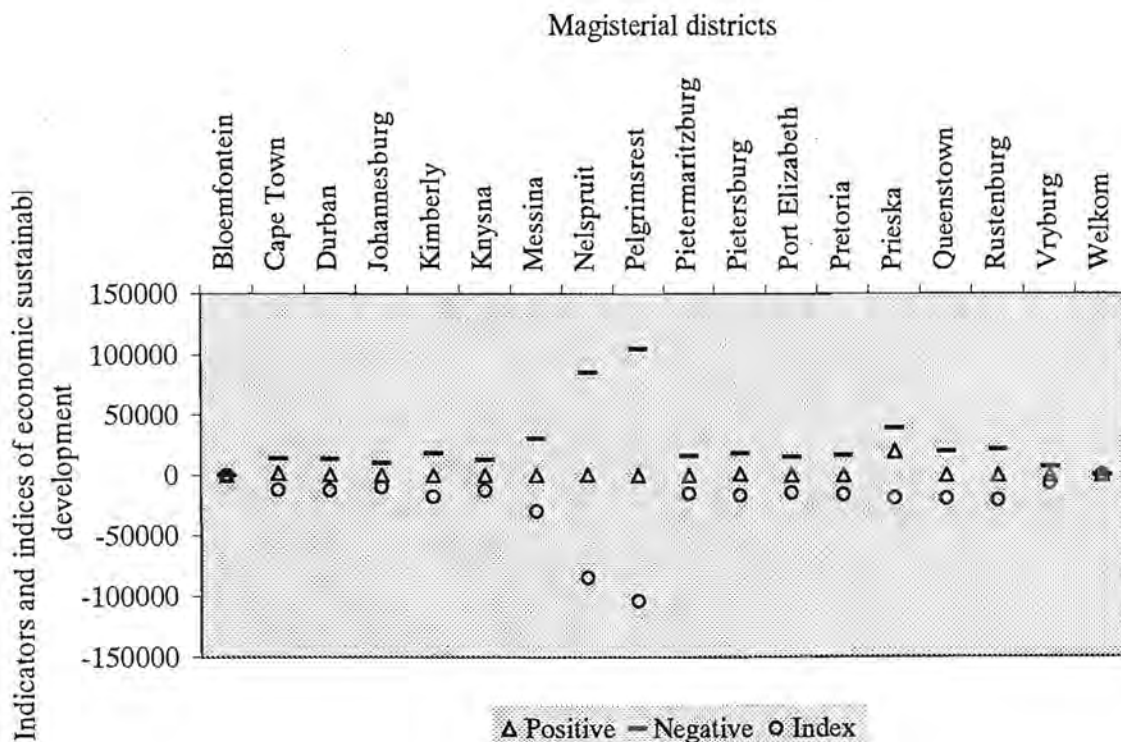
### 3.2.3 Negative and positive indicators

The data indicates a very low correlation between negative and positive social sustainable development variables. Figure 11 shows the results of the indices derived from the difference between the positive and negative economic sustainable development indicators. As indicated on the legend, the variation pattern ranges from districts indicating very low indices to those indicating very high indices. Districts that are indicated by very high indices represent South African magisterial districts that show a better progress towards economic sustainable development and those that are indicated by very low index indicate a poor economic state (Table 1).



**Figure 11.** Representation of the economic sustainable development indices for South African magisterial districts

Figure 12 illustrates the co-variation pattern between the negative and positive economic sustainable development indicators and the key trends determining the driving forces in economic sustainable development. The results indicate that districts characterized by very high negative indicators tend to indicate very low indices (see, Table 3). For example Nelspruit and Pelgrimsrest indicate very high negative values as a consequence they show very low economic sustainable development indices. However Bloemfontein and Welkom indicate very low negative indicators as a result they show high social sustainable development indices. It may further be suggested that Johannesburg, Knysna and Vryburg represent an intermediate state relative to the above-indicated districts.



**Figure 12.** Diagram illustrating the co-variation between negative and positive indicators, and indices of economic sustainable development for South African magisterial districts

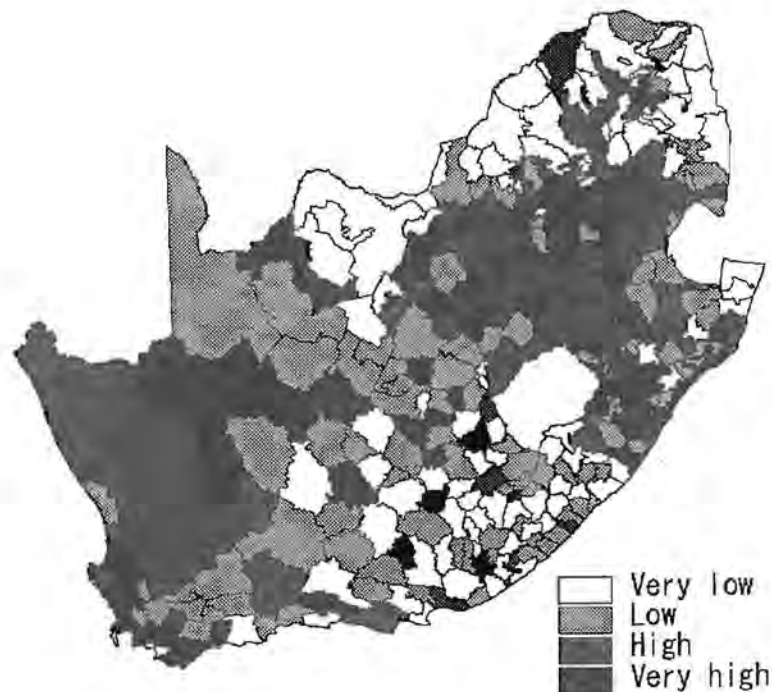
**Table 3.** The ranked values, positive and negative economic sustainable development indicators and indices of economic sustainable development for South African magisterial districts

District Name	Positive	Rank	Negative	Rank	Index	Rank
Bloemfontein	170.72	262	0.08	9	170.64	357
Cape Town	1375.93	355	13818.31	107	-12442.38	276
Durban	579.61	335	13394.03	101	-12814.43	274
Johannesburg	166.53	257	10138.32	82	-9971.79	291
Kimberly	151.55	245	18188.72	143	-18037.17	233
Knysna	113.34	219	13057.80	98	-12944.46	273
Messina	180.99	266	30523.81	228	-30342.82	143
Nelspruit	359.97	318	85041.19	352	-84681.22	22
Pelgrimsrest	67.30	156	104379.89	361	-104312.59	12
Pietermaritzburg	33.81	114	15766.05	117	-15732.24	254
Pietersburg	980.43	348	18170.86	142	-17190.43	241
Port Elizabeth	1.78	8	14840.63	111	-14838.85	262
Pretoria	13.00	63	16777.27	125	-16764.28	247
Prieska	19836.42	373	38948.94	279	-19112.52	225
Queenstown	12.25	61	19574.92	152	-19562.68	219
Rustenburg	5.16	19	21546.46	167	-21541.30	205
Vryburg	26.96	95	6894.93	71	-6867.98	303
Welkom	1.94	9	0.05	8	1.89	317

### 3.3 Environmental sustainable development indicators

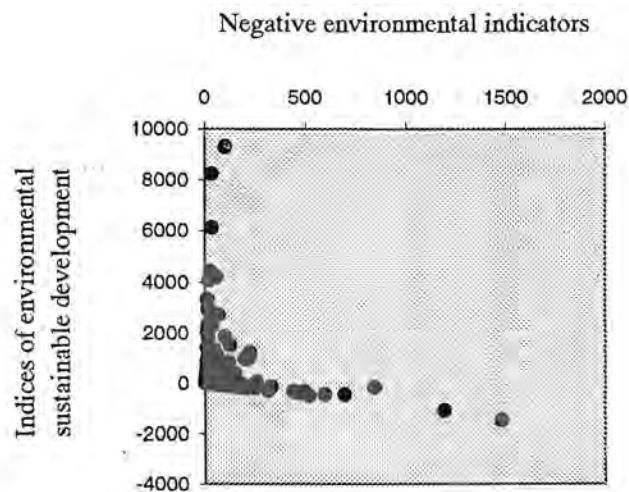
#### 3.3.1 Negative indicators

The data indicates a positive correlation between most variables related to agricultural production: use of fertilizers, energy use in agriculture, electricity, gas and water, income from livestock and field crops, horticulture and income from agriculture, fishing and forestry. The use of agricultural pesticides indicates a positive correlation with the use of fertilizers, income from livestock and the mining intensity index. The use of fertilizers indicates a positive correlation with the intensity of cattle production. Income from horticulture indicates a positive correlation with mining and quarrying (Table 1).



**Figure 13.** Representation of the negative environmental sustainable development indicators for South African magisterial districts

Figure 13 shows the results of the data of negative environmental sustainable development indicators. Districts indicated by very high negative values represent South African magisterial districts that uses the greatest amount of pesticides and fertilizers, those that mine most natural resources and consume most energy, and those with the greatest population growth rate. The data indicates low intensity of agricultural production, mining and energy consumption in many districts of Eastern Cape and Northern Province, and some districts in the North West Province. However districts in KwaZulu Natal and Mpumalanga, and some in Gauteng and Free State Province indicate a high intensity of agricultural production, mining and energy consumption.

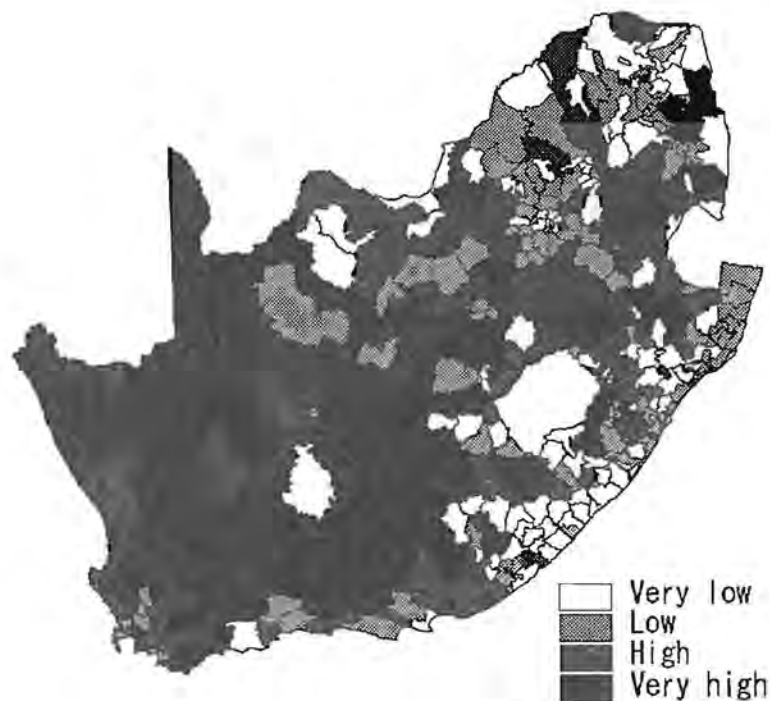


**Figure 14.** Correlation between the negative environmental indicators and indices of environmental sustainable development

Figure 14 indicates the relationship between the negative environmental indicators and indices of environmental sustainable development. The results indicate a very low significant ( $r^2 = 0.028$ ,  $P = < 0.001$ ,  $n = 373$ ) co-variation between the data sets of the negative environmental indicators with environmental sustainable development index.

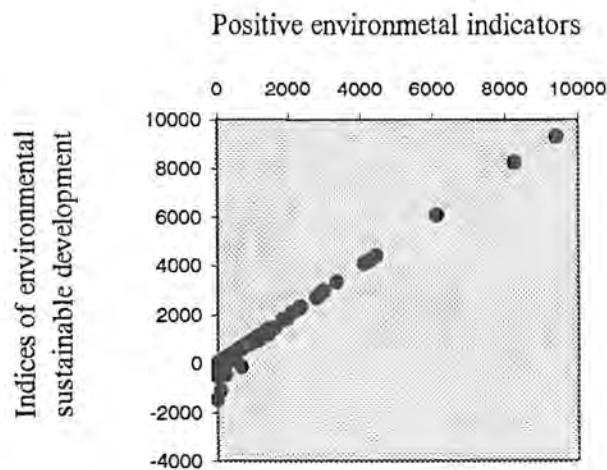
### 3.3.2 Positive indicators

The positive environmental variables indicate a negative correlation between species density and the arable land per capita (Table 1). Figure 15 shows the results of the data of positive environmental sustainable development indicators. Districts that are indicated by very high positive values represent South African magisterial districts with the largest arable land per capita, protected areas and highest species density. In the Eastern Cape, KwaZulu Natal, Gauteng and the Northern Province many districts appear to have low positive environmental sustainable development indicators.



**Figure 15.** Representation of the positive environmental sustainable development indicators for South African magisterial districts

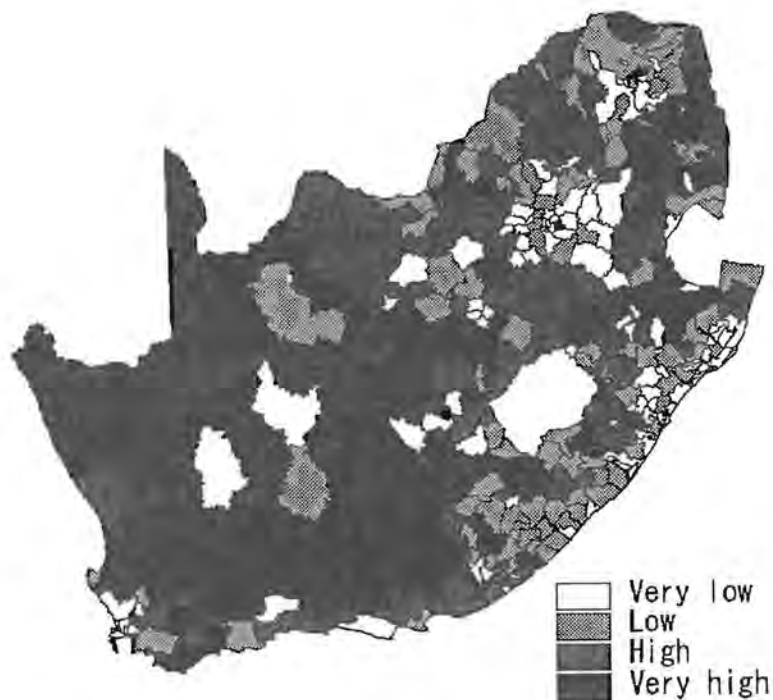
Figure 16 indicates the relationship between the positive environmental indicators and indices of environmental sustainable development. The results indicate a very high significant ( $r^2 = 0.978$ ,  $P = < 0.001$ ,  $n = 373$ ) co-variation between the data sets of positive environmental indicators with environmental sustainable development index.



**Figure 16.** Correlation between the positive environmental indicators and indices of environmental sustainable development

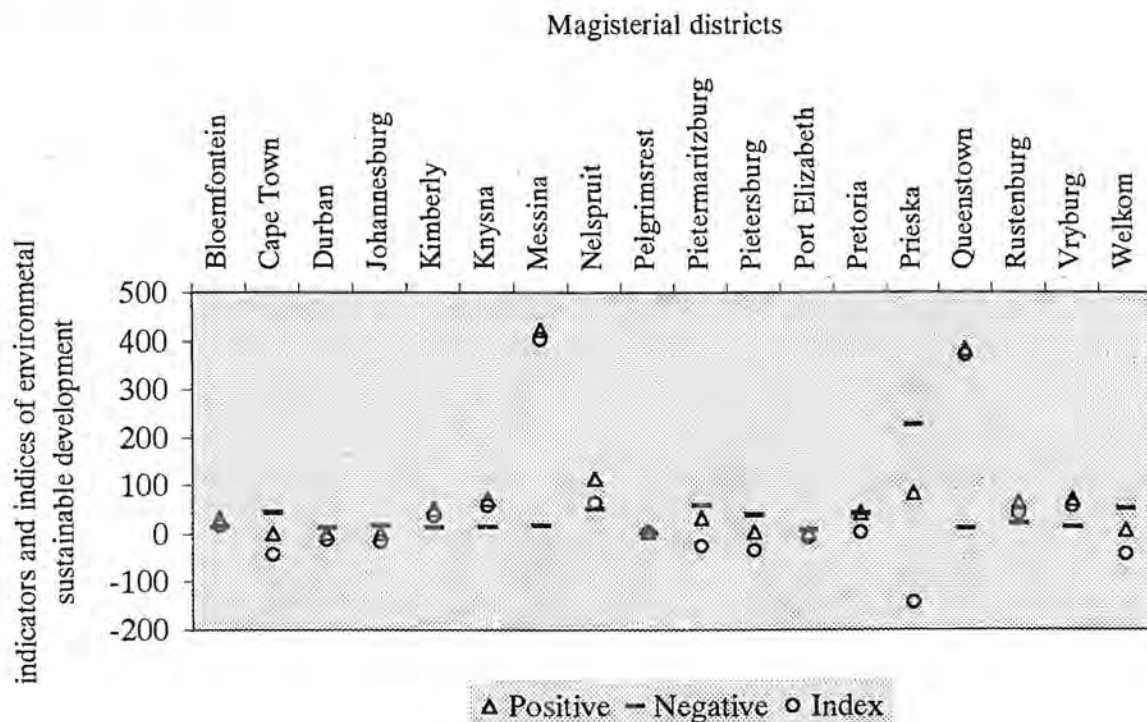
### 3.3.3 Negative and positive indicators

Arable land per capita indicates a positive correlation with the energy use in agriculture, income from livestock, field crops, agriculture, fishing and forestry. Species density indicates a positive correlation with the intensity of cattle production and the intensity of maize production. Species density indicates a negative correlation with agriculture, fishing and forestry. A negative correlation appears between the arable land per capita and the use of agricultural pesticides, fertilizers, intensity of cattle production and the population growth rate.



**Figure 17.** Representation of the environmental sustainable development indices for South African magisterial districts

Figure 18 illustrates the co-variation between negative and positive indicators, and indices of environmental sustainable development for South African magisterial districts. The results indicate that districts characterized by low negative indicators tend to indicate high environmental sustainable development indices (see, Table 4). For example Messina and Queenstown indicate very low negative indicators as a consequence they show very high environmental sustainable development indices. However Prieska indicates very high negative indicator as a result it shows a low environmental sustainable development index. It may be suggested that Bloemfontein, Pelgrimsrest and Pretoria represent an intermediate state relative to the above-indicated districts.



**Figure 18.** Diagram illustrating the co-variation between negative and positive indicators, and indices of environmental sustainable development for South African magisterial districts

**Table 4.** The ranked values, positive and negative environmental sustainable development indicators and indices of environmental sustainable development for South African magisterial districts

District Name	Positive	Rank	Negative	Rank	Index	Rank
Bloemfontein	31.33	160	14.14	93	17.19	207
Cape Town	1.23	97	43.74	222	-42.52	65
Durban	0.82	79	12.73	80	-11.92	124
Johannesburg	0.75	72	16.65	111	-15.90	111
Kimberly	50.98	181	13.61	88	37.37	224
Knysna	71.45	201	14.35	95	57.10	236
Messina	421.76	320	17.66	116	404.10	324
Nelspruit	113.69	239	51.25	241	62.44	239
Pelgrimsrest	4.03	119	1.68	14	2.36	188
Pietermaritzburg	32.25	162	58.04	253	-25.79	85
Pietersburg	3.40	117	38.84	206	-35.44	75
Port Elizabeth	0.77	74	8.52	55	-7.75	141
Pretoria	43.12	172	41.06	214	2.06	187
Prieska	83.12	212	226.81	357	-143.69	21
Queenstown	381.58	314	10.47	68	371.12	319
Rustenburg	62.33	194	21.19	138	41.13	226
Vryburg	69.70	199	13.32	86	56.38	235
Welkom	7.62	130	50.83	240	-43.21	64

## **4. Social and economic sustainable development indicators**

### **4.1 Negative correlation**

Population growth rate indicates a negative correlation with the potential labor force and the gross remuneration of employees. Paid employees in agricultural sector indicate a negative correlation with access to pit latrine facilities, off-site water facilities, population growth rate, population density and the unemployment rate. A negative correlation appears between poverty gap and the percentage functional literacy, households with access to full services, access to piped water, on-site water facilities and those with access to bucket latrine facilities (Table 1).

### **4.2 Positive correlation**

A positive relationship is identifiable between the paid employees in agricultural sector and the households with access to full services, on-site water facilities, piped water and those with access to septic tank latrine facilities. Income from manufacturing indicates a positive correlation with households with access to piped water and those with access to septic tank latrine facilities. Transport and communication appear to be positively correlated with the households with access to full services. Households with access to septic tank water facilities show a positive correlation with the potential labor force and construction. Poverty gap indicates a positive correlation with access to pit latrine facilities, off site water facilities and households with no access to piped water and the unemployment rate.

## **5. Environmental, social and economic sustainable development indicators**

### **5.1 Negative correlation**

The negative correlation appears between mining intensity index and households with access to pit and septic-tank latrine facilities, those with no access to piped water, access to off-site water facilities, unemployment rate and the income from agriculture, fishing and forestry. Mining and quarrying indicates a negative correlation with the unemployment rate. Income from livestock, agriculture, fishing and forestry and energy use in agriculture are negatively correlated with access to pit latrine facilities, population growth rate, and households with access to off-site water facilities and unemployment rate. The energy use in agriculture indicates a negative correlation with households with no access to piped water.

Use of agricultural pesticides and fertilizers indicate a negative correlation with households with no access to pit-latrine facilities, piped water facilities, off-site water facilities, unemployment rate and the poverty gap. Income from field crops and horticulture indicate a negative correlation with the population growth rate and unemployment rate. Income from horticulture appears to be negatively correlated with households with access to off-site water facilities. Population growth rate indicates a negative correlation with households with access to full services, on-site water facilities and septic tank latrine facilities.

## 5.2 Positive correlation

There appears to be a positive relationship between the percentage functional literacy, households with access to full services and the use of agricultural pesticides, fertilizers and the mining intensity index. Mining and quarrying indicates a positive correlation with the potential labor force and gross remuneration of employees. The use of agricultural pesticides and the mining intensity index are positively correlated with the access to bucket latrine facilities and the community services. The positive correlation is identifiable between the use of fertilizers and access to on-site water facilities, septic tank latrine facilities and paid employees in agricultural sector. Income from field crops is positively correlated with access to bucket latrine facilities, paid employees in agricultural sector and manufacturing.

Intensity of cattle production correlates positively with access to pit-latrines facilities, off-site water facilities and household with no access to piped water and the population growth rate. The arable land per capita and the energy use in agriculture indicate a positive correlation with paid employees in agricultural sector, households with access to full services, on-site water facilities, piped water and the septic tank latrine facilities. A positive relationship appears between the income from agriculture, fishing and forestry with the households that have access to piped water, potential labor force, paid employees in agricultural sector and gross remuneration of employees, general government, manufacturing and construction and income earned by other producers.

Energy use in agriculture indicates a positive correlation with the potential labor force and the manufacturing. The urban rural spread indicates a positive correlation with the mining intensity index. Species density indicates a positive correlation with the households with access to bucket latrine facilities, population growth rate and population density. A positive correlation is identifiable between the poverty gap and the consumption of electricity, gas and water. Protected areas indicate a positive correlation with the population growth rate and poverty gap.

## **6. Discussion**

### **Literacy**

The notion advocating education as a potential investment has been widely expressed. It is stated that poverty resulting from the failure to invest in education and to provide people with the basic necessities of livelihood is as much a kind of debt as a financial one (The Economist, 1999 and Dahl, 1997). The results of the present study suggest that South African districts characterized by low percentage functional literacy tend to indicate a high poverty gap.

It has been categorically expressed (Dahl, 1997) that people require education and training to develop their potential to become productive members of the society. The present study shows that South African districts with high percentage functional literacy tend to have many households with access to latrine and water facilities. However districts indicated above tend to have less households with access to pit latrine facilities. These results may be explained by Becker's (1998) statement, that "education assists in furthering knowledge of sustainable development and in improving quality of life through such means as knowledge of hygiene, nutrition, job training and communication."

### **Population growth rate**

Sustainable development in developing countries means controlling population growth, eliminating poverty, and increasing the capacity of rural peoples to influence

and control their future (Upreti, 1994). In evaluating attitudes towards population growth and the environment, Holl *et al.* (1993) observed that fewer Costa Rica students compared to USA students acknowledged the human population growth/environment quality link. In addition more Costa Rica students perceived the need for population growth to support the economy. The present study indicates that districts characterized by a high population growth rate appear to have high population densities and high unemployment rate. The identified positive association between the potential labour force and paid employees in the agricultural sector may suggest a largely agrarian economy.

This study shows a negative association between population growth rate and most variables related to agricultural production. Further, it appears that districts characterized by high population growth rate have many households with poor access to water facilities. These trends may further be contrasted with the indicated positive association between an increasing urban-rural spread with the percentage functional literacy, access to latrine and water services, community services, population density and the mining intensity index. Based on these results it may be suggested that urban areas are characterized by better access to water and latrine facilities, more functional literate persons and high population densities.

### **Urban-rural spread**

The South African Resource Conservation and Quality Control (1999) reported that about 16 million South Africans live in poverty. It also indicated that about 72 % of poor people live in rural areas, and that about 70 % of the rural people are poor. The

present study indicates a negative association between the population growth rate with the gross remuneration of employees and the paid employees in the agricultural sector. These results may suggest that areas with high population growth rate have a low number of employees in the agricultural sector and generally reward low remuneration to employees.

Referring to the rural exodus to squatter settlements of the burgeoning cities and the increasing incidence of disease, Moffat (1994) considers such condition to be part of the spiral of unsustainable development that is affecting over 80% of humanity and much of the world's land resources. This concern is relevant to the results of the present study, where districts characterized by high poverty gap appear to have many households with poor access to water and latrine facilities. In addition, districts characterized by high poverty gap indicate high unemployment rate, access to pit latrine facilities and poor access to water facilities.

### **Arable land per capita**

The present study indicates a positive association between arable land per capita and the variables related to agricultural production. Further shows a positive relationship between arable land per capita and variables associated with desirable socio-economic conditions; paid employees in the agricultural sector, households with access to full services, piped water, on-site water facilities, and those with access to septic tank latrine facilities. These results may suggest a positive social development resulting from employment opportunities provided by the agricultural sector and the income earned from agricultural products and services.

It has been indicated (Ebohon, 1996) that in African agriculture the environmentally polluting chemicals and fertilizers are sparingly used, because of cost. The World Bank (1994) indicated that Africa's share in total global fertilizer consumption remains negligible. The present study also shows that South African districts characterized by high poverty gap and high unemployment rate tend to be associated with low amounts of pesticides and fertilizer application. In addition districts with large arable land per capita appear to be associated with low amounts of fertilizer and pesticide application and low intensity of cattle production. Ebohon (1996) associates the use of chemicals and fertilizers exclusively with the cash crop sector.

### **Species density**

Pringle *et al.* (1994) indicates the inadequacy of Western Australia's current network of reserved lands to represent many ecosystems. The authors state that the existing reserves have not been planned on the basis of extensive biological survey. The present study shows a negative association between species density and the arable land per capita, income from agriculture, fishing and forestry. The results also indicate that districts with high species density tend to have many households with access to bucket latrine facilities, high population growth rate and high population density.

Pastoralism has been identified as a threat to biological diversity of some ecosystems (Curry *et al.*, 1994). In the present study districts characterized by high intensity of cattle production tend to be associated with high amounts of fertilizer application. However districts indicating high species density appear to have high intensity of cattle and maize production.

## Protected areas

Emphasizing the necessity for the human self-interest in the protection of the natural systems, upon whose services human society depends, Cairns, Jr., (1998) indicated that humans couldn't kill every species on the planet without killing themselves. Even then, Nepal (1997) expresses the contribution of the establishment of protected areas in increasingly marginalizing the livelihood needs of local communities. In the present study districts with large protected areas appear to have high population growth rate and high poverty gap. Hence the integration of community development in conservation poses a great challenge for the management of protected areas.

Becker (1998) warns that the protection of parks resources would not serve the global interests if the local communities were so deprived that they must infringe on protected resource or requires outside support. Owing to the rapid increase in wildlife and nature-based tourism in South Africa, stakeholders have seen protected area tourism as a significant source of revenue while local communities view it as an opportunity to improve their livelihood. Despite the use of guards and other exclusionary measures, people will take what they need from the protected areas for survival if the minimum resources are not available to them (Berkmuller, 1990).

It is argued (Nepal, 1997) that with tourism becoming a principal activity at the local level, and one that does not encourage other productive activities linked to the local resource base, local communities will have the tendency to rely more on tourism. As a consequence local communities become increasingly vulnerable to sudden local and national fluctuations in the tourism market. At the village level and household level, a

large mass of people become even more dependent on the few, but powerful, elite groups who have a bigger share in the local tourism business.

Goodland *et al.* (1990) suggest that the employment opportunities for members of the local communities help sustainability by reducing pressures on local resource use. However Becker (1998) considers the quality of jobs provided by protected areas to be an essential function to improving rural economic well being. Nepal (1997) reported that local people are often left with petty-trading and menial jobs, with a limited scale and impact. Therefore the linkages between economic benefits and protected areas and environmental protection should be clearly visible.

### **Transport and communication**

The implication of advanced telecommunication development to present opportunities for teleworking and rural revival is of importance (Gibbs, 1994). This study shows that districts with more transport and communication services tend to have many households with access to full services, potential labour force, paid employees in the agricultural sector and the gross remuneration of employees. These results may suggest a positive indication about the transport and communication sector's ability to absorb labour and thus lead to an improvement in socio-economic conditions.

### **Mining**

This study shows an association between low unemployment rate and districts characterized by mining and quarrying activities. In addition such districts appear to

have high labour force and indicate high gross remuneration for employees. South African magisterial districts with mining and quarrying show a low percentage of households with poor latrine and water facilities. On the other hand the mining intensity index shows a positive association with desirable social conditions such as the high percentage of functional literacy, access to water and latrine water facilities. It may be suggested that districts with mining and quarrying provide employment opportunities and are associated with better socio-economic conditions.

## 7. Conclusion

The Hague Development Cooperation Information Department (1997) indicates that in many countries non-sustainable activities are often a result of poverty and a lack of resources or organization. At the 1999 International Forum titled “The Future for the Youth, Humanity and the Earth”, by the Nomura Center for Lifelong Integrated Education in Japan, the participants concluded that until poverty is alleviated, sustainable development shall never be attained.

The fact that all development takes place at a certain spot on earth makes development one hundred percent spatial and territorial (Langaas, 1997). On the overall indices of social sustainability indicate a poor state of social sustainable development in many South African magisterial districts in the Eastern Cape, KwaZulu Natal, Gauteng and Northern Province. It can be concluded that the progress towards social sustainable development has been slow in many districts of the above-indicated South African provinces.

The overall pattern of indices of economic sustainable development shows many economically active districts in Western Cape, Free State and Gauteng Province. However many districts in the Eastern Cape, KwaZulu Natal, Northern Province, Northern Cape and some districts in Mpumalanga Province indicate low economic activity. Many South African magisterial districts show a pattern of high environmental sustainability, but districts in Eastern Cape, KwaZulu Natal, Gauteng and some in Mpumalanga and Northern Province indicate a poor state of environmental sustainability.

Indicators are alerting the local governments to priority issues and guiding policy formulations in order to redress the poor state of socio-economic and environmental sustainable development. Goodland and Daly (1993) state that poverty alleviation reduces the need for welfare, transfer of resources and subsidies, thereby eventually lightening demands on governmental budgets. This study shows that in many districts of Eastern Cape, KwaZulu Natal and Northern Province an immediate action is required to redirect the state of development. When a majority of people remain in economic deprivation, illiteracy, and the need to struggle desperately to meet their physiological needs, they cannot effectively deliver their judgement freely as to what constitutes their interest and right (Upreti, 1994).

Policy measures to make available the minimum health care facilities, drinking water, educational and employment opportunities in urban and rural areas of South Africa are required in order to move towards sustainable development. In Japan, for example, the improved education and the overall rise in income levels have brought low rates in population growth. Community development projects related to health and sanitation, education and training, job creation and environmental protection from tourism can contribute towards sustainable development. Further Nepal (1997) stresses the need to balance protected area tourism and conservation while at the same time bringing positive changes to local livelihoods.

Despite all the social and economic benefits of the mining and quarrying the sustainability of the ground resources and the long-term impact of the effluent discharged during the mining process are questionable. Moldan (1997) warns that the excessive use of the ecosystem as a pollution sink is likely to undermine the health of

the ecosystems, impose constraints on economic development, and above all jeopardize human health. The levels of chemical and fossil fuel inputs are used as indicators to determine health impacts on employees and the surrounding community (Becker, 1998). Therefore comprehensive study aimed at addressing the above-indicated concerns will be valuable for the evaluation and monitoring of South African sustainable development.

Stressing the need for a continuous monitoring and evaluation of sustainable development, MacGillivray's (1997) questions whether once the prerequisites of sustainable development have been achieved, people go on to live worthwhile lives in the society? The present study reveals the complexity involved in the evaluation of sustainable development and prompts the need for an integrated and multidisciplinary approach to addressing environmental problems and socio-economic challenges. As demonstrated in this study, monitoring and evaluation of sustainable development requires the use of alternative approaches.

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## APPENDIX 1

### Sources of data

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CSIR, Water, Environment and Forestry Technology. South Africa

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## A. Social variables

*Community service:* The sector of the economy defined as service producing and is distinguished from the goods-producing sector. Community service includes the industries involved in public utilities, insurance, professional and personal services such as health care, accounting, entertainment, education, and food services (1994).

*Households with access to bucket latrine facilities:* The occupants of the house regarded as a unit that can reach the bucket lavatory as a percentage of the total number of housing units available per magisterial district (1991).

*Households with access to full services:* The occupants of the house regarded as a unit that can reach piped water and are connected to a pipe for carrying off drainage water and sewage as a percentage of the total number of housing units available per magisterial district (1991).

*Households with access to off-site water facilities:* The occupants of the house regarded as a unit that can get water outside the parameters of their immediate surrounding as a percentage of the total number of housing units available per magisterial district (1991).

*Households with access to on-site water facilities:* The occupants of the house regarded as a unit that can get water inside the parameters of their

immediate surrounding as a percentage of the total number of housing units available per magisterial district (1991).

*Households with access to septic tank latrine facilities:* The occupants of the house regarded as a unit that are not connected to a pipe for carrying off drainage water and sewage, but with a device that treats sewage from their dwellings which has to be pumped out periodically. The number of such units as a percentage of the total numbers available per magisterial district (1991).

*Households with access to piped water:* The occupants of the house regarded as a unit connected to pipes for carrying water as a percentage of the total number of housing units available per magisterial district (1991).

*Households with access to pit-latrines facilities:* The occupants of the house regarded as a unit that are not connected to a pipe for carrying off drainage water and sewage, but with a hole that accumulates sewage from their dwellings which has to be replaced when filled up. The number of such units as a percentage of the total numbers available per magisterial district (1991).

*Households with no access to piped water:* The occupants of the house regarded as a unit connected that are not connected to pipes for carrying water as a percentage of the total number of housing units available per magisterial district (1991).

*Percentage functional literate:* The percentage of the population per magisterial district that can read and write (1991).

*Population density:* The total number of people per magisterial district (1995).

*Unemployment rate:* The percentage of people in the labor force, which is composed of adults who either have or are seeking jobs, who are without a job for which one receives money or other compensation (1991).

*Urban rural spread:* The ratio of the urban population to that of the rural population (1991).

## B. Economic variables

*Construction:* Total income earned from building work-related activities per magisterial district (1994).

*Potential labor force:* All adults within a population who work or seek work (1991).

*Finance and real estates:* Finance concerns acquisition of funds and the management of these funds for various operations. Sources of finance are trade credit, commercial bank loans, selling stock, and debt or bonds. Real estates are anything that can be possessed and disposed of in a legal manner. Ownership of property and can be classified as either private or public (1994).

*Gross remuneration of employees:* The total amount of money paid to employees for services rendered per magisterial district (1994).

*Manufacturing:* Income from the processing of raw materials, fabrication of components and assembling into finished products per magisterial district (1994).

*Other producers:* Income from other persons, communities and companies that generate raw material that can be bought and sold per magisterial district (1994).

*Paid employees in agricultural sector:* The total numbers of employees who receive money for services rendered in agricultural sector per magisterial district (1993).

*Poverty gap:* Poverty is a lack of goods and services necessary to maintain a minimal adequate standard of living. It is measured by the distance of the poor below the poverty line, as a proportion of the line. The non-poor is counted as having a zero poverty gap (1991).

*Trade and catering:* Income earned through buying, selling and by companies supplying food for social events (1994).

*Transport and communication:* The movement or conveying of persons and goods from one location to another by railroads, motor vehicles, pipelines, shipping and aviation. Communication is a means of connecting different places; it involves the practice of transmitting and the exchange of information (1994).

### C. Environmental variables

*Agriculture, fishing and forestry:* Food production through cultivation and rearing of animals. The capturing of marine fish, freshwater fish and shellfish, and their processing for market. Forest uses, which remove little from the forest, include watershed protection, wildlife and fish habitat, recreation, and aesthetic uses. Consumptive uses involve the extraction of products from forests; this often requires the harvesting of trees (1994).

*Arable land per capita:* Arable land area, which is land allocated to perennial crop production, in a magisterial district expressed as per capita basis (1993).

*Electricity, gases and water:* The amount of electricity and gases consumed per person for the generation power. The amount of water consumed per person for the purpose of ingestion, hygiene, cooking, gardening, washing of utensils and for domestic animals (1994).

*Energy use in agriculture:* This energy released in the form of heat when the fuel sources such as wood, coal, oil and natural gases are burned. It is expressed as a ratio of energy inputs and agricultural production per magisterial district (1993).

*Intensity of cattle production:* The total number of cattle produced per magisterial district area (1990).

*Intensity of maize production:* The total amount (tons) of maize produced per magisterial district area (1993).

*Irrigation percentage of arable land:* Land area under irrigation as a percentage of total arable magisterial district land area (1993).

*Mining and quarrying:* Income from extraction of minerals (coal, metals, salt, iron, and so forth) from ore deposits (coal, petroleum, and uranium). Glass sands, gems, fertilizers such as potash, phosphates, and nitrates are also mined, as well as petroleum and natural gas. Increasingly, the ocean is being mined for manganese nodules (cobalt, copper, and nickel) and other minerals. Quarrying is the extraction of stone, either in blocks or as aggregate (sand and gravel), from open excavations (1994).

*Mining intensity index:* The relative degree of extraction of minerals per magisterial district (1993).

*Population growth rate:* The average annual change of population size during 1980-1991.

*Protected areas:* Percentage of land area that having scientific reserves, national parks, provincial parks, natural monuments, natural landmarks containing unique geological formations, special animals and plants (1994).

*Species density:* The total number of species in various taxonomic classes per magisterial district area. The data covered the following species: birds,

butterflies, buprestid beetles, termites, neuropterans, and mammals, snakes tortoises, other reptiles (e.g. lizards), frogs and scarab beetles (1994).

*Total income from field crops:* Income earned from the produce of cultivated cereal plants (1993).

*Total income from horticulture:* Income earned from the produce of cultivated garden-plants such as fruits, vegetables, ornamental trees, bushes, and flowers (1993).

*Total income from livestock:* Income earned from animal production for food, power, fiber, hides, and skins (1993).

*Use of agricultural pesticides:* The total amount spent for purchasing pesticides per magisterial districts (1993).

*Use of fertilizers:* The total amount spent for purchasing fertilizers per magisterial districts (1993).

Appendix 2

District Name	Population	Area km <sup>2</sup>	%FL	AFS	AOW	APW	APL	ABL	ASL	CS	PSI	PGR	PD	NAP	HOF	UR	URS
ABERDEEN	9567	6799.4	34.0	35.7	13.5	31.3	19.3	1.1	8.4	8.3	19.0	-0.4	1.4	9.3	10.2	23.0	2.2
ADELAIDE	22196	1540.0	41.0	29.0	8.1	29.8	31.2	3.7	7.2	3.5	19.2	-0.4	14.4	12.2	20.8	28.0	1.9
ALBANY	100345	4370.8	56.0	42.2	6.4	39.7	12.1	1.6	1.9	6.6	20.8	-1.5	23.0	5.6	6.1	24.0	2.6
ALBERT	24253	4003.4	34.0	25.8	8.8	25.3	39.7	1.9	6.8	4.8	18.4	-1.4	6.1	20.0	20.1	15.0	1.4
ALBERTON	631062	103.5	61.0	38.9	12.3	26.9	19.6	2.5	0.0	6.9	21.0	3.2	6097.2	2.6	19.2	28.0	0.0
ALEXANDRIA	35132	2337.1	31.0	22.4	10.7	19.9	47.9	1.5	5.7	2.6	17.7	-1.5	15.0	20.7	26.2	17.0	0.7
ALFRED	11083	128.9	40.0	28.6	11.8	28.9	32.8	0.8	9.3	6.4	19.8	-0.9	86.0	17.9	12.8	3.0	0.7
ALIWAL-NOORD/NORTH	42220	1983.3	43.0	30.4	6.7	27.1	34.4	2.3	2.4	24.2	21.3	1.7	21.3	17.2	18.6	21.0	3.9
AMERSFOORT	53501	1786.7	27.0	9.9	9.9	11.5	71.7	2.7	5.9	5.1	18.0	1.6	29.9	34.5	34.3	26.0	2.3
BABANANGO	3527	1365.6	22.0	0.0	9.0	10.4	85.2	0.0	15.4	0.0	17.8	-4.5	2.6	40.3	40.3	12.0	0.0
BAFOKENG	160579	1004.0	0.0	14.5	2.3	13.4	67.9	2.0	1.1	0.0	12.7	1.9	159.9	38.1	31.7	4.0	0.3
BALFOUR	53726	2256.9	34.0	21.3	14.5	15.8	49.1	1.5	6.6	2.5	18.2	-1.7	23.8	21.3	27.1	15.0	0.7
BARBERTON	91533	3763.7	35.0	15.6	6.8	23.5	55.5	1.1	12.2	4.2	19.2	0.1	24.3	27.1	27.0	3.0	0.4
BARKLY-OOS/EAST	17520	3657.4	29.0	21.6	10.2	20.1	49.8	0.8	6.0	2.8	17.6	0.2	4.8	21.5	26.6	11.0	0.7
BARKLY-WES/WEST	47162	6690.8	33.0	24.6	10.9	22.1	42.9	2.0	5.9	1.7	17.9	1.0	7.0	18.9	23.5	24.0	1.2
BATHURST	47836	1421.3	39.0	31.9	9.2	27.1	31.2	2.2	2.6	4.1	18.4	-0.3	33.7	13.0	18.7	23.0	1.6
BEAUFORT-WES/WEST	38616	16586.7	47.0	43.0	4.3	43.0	9.9	0.7	3.5	4.7	19.5	1.0	2.3	4.9	4.9	21.0	4.8
BEDFORD	24123	2603.7	41.0	27.7	8.1	28.6	33.7	3.7	7.2	14.9	20.6	2.0	9.3	13.1	22.6	29.0	2.1
BELFAST	39218	3067.2	36.0	25.0	7.1	26.9	41.9	1.1	7.1	4.2	18.7	-1.0	12.8	17.4	23.6	12.0	0.8
BELLVILLE	311055	459.6	72.0	47.3	2.1	47.2	3.5	1.2	0.5	39.3	26.6	2.3	676.8	1.6	1.9	10.0	15.1
BENONI	471894	290.7	63.0	42.4	9.1	34.3	12.1	3.0	0.0	10.9	21.8	2.8	1623.3	3.2	11.1	24.0	121.2
BERGVILLE	25814	1297.0	34.0	5.1	8.2	6.6	84.4	0.0	5.5	1.9	18.2	-2.1	19.9	39.8	40.3	22.0	0.0
BETHAL	104941	2357.5	44.0	22.4	7.5	22.1	48.6	2.4	4.2	7.2	19.8	-1.0	44.5	23.7	24.3	10.0	1.0
BETHLEHEM	117288	3731.9	46.0	31.7	6.2	29.7	32.4	1.4	2.8	7.6	19.7	-0.2	31.4	11.6	20.8	15.0	1.6
BETHULIE	13668	2578.9	39.0	33.6	6.2	32.1	26.9	2.7	3.1	2.3	18.2	-1.0	5.3	10.4	17.7	34.0	3.0
BIZANA	176979	1814.0	0.0	0.5	5.3	0.1	96.5	0.1	2.5	0.0	13.1	0.2	97.6	59.3	34.9	20.0	0.0
BLOEMFONTEIN	443590	5631.1	66.0	42.7	8.4	35.4	12.8	1.3	0.4	18.6	23.2	1.6	78.8	2.5	10.9	16.0	12.8
BLOEMHOF	22086	1739.5	31.0	30.6	9.2	27.1	32.2	2.9	3.8	11.7	18.6	1.4	12.7	13.3	19.9	30.0	1.8
BOCHUM	174160	2196.4	31.0	0.0	6.1	0.4	97.0	0.0	3.0	0.0	17.2	4.0	79.3	39.4	54.1	44.0	0.0
BOKSBURG	297313	195.2	66.0	44.1	2.7	42.3	9.2	2.6	0.0	8.7	21.9	2.1	1523.1	2.3	8.6	14.0	0.0
BOLOBEDU	234106	1093.5	29.0	3.7	4.8	3.6	89.7	0.7	2.2	0.0	16.7	4.3	214.1	32.6	55.4	27.0	0.0
BOSHOF	41170	9339.9	25.0	17.8	12.4	18.8	52.5	1.4	10.6	1.6	17.5	-2.0	4.4	24.9	26.2	11.0	0.4
BOTHAVILLE	78183	2795.9	37.0	24.1	14.0	18.6	43.5	1.3	7.0	2.8	18.5	-0.8	28.0	16.4	26.9	26.0	0.9
BOTSHABELO	330127	111.7	42.0	32.4	12.7	20.4	29.1	6.1	0.0	0.1	17.8	12.9	2955.5	7.4	27.0	34.0	0.0

Appendix 2 Continued

District Name	Population	Area km <sup>2</sup>	%FL	AFS	AOW	APW	APL	ABL	ASL	CS	PSI	PGR	PD	NAP	HOF	UR	URS
BRAKPAN	209702	229.7	60.0	42.5	7.7	35.4	13.2	1.8	0.0	9.1	21.2	4.2	912.9	1.2	13.2	26.0	0.0
BRANDFORT	33610	3870.0	36.0	24.7	11.3	21.6	41.9	2.6	6.1	2.5	18.3	-1.9	8.7	18.3	24.1	19.0	1.0
BREDASDORP	25637	4047.6	56.0	38.4	7.7	38.5	16.1	0.4	6.7	8.7	21.6	3.1	6.3	8.2	7.2	7.0	1.7
BRITS	148238	2628.3	46.0	22.4	9.2	22.2	47.4	1.5	6.3	5.3	20.0	3.4	56.4	22.6	23.6	24.0	0.9
BRITSTOWN	7924	7289.3	35.0	32.8	11.6	32.2	23.1	1.4	9.9	5.9	19.0	0.3	1.1	10.2	13.1	21.0	1.9
BRONKHORSTSPRUIT	47851	2330.3	39.0	20.3	9.0	20.4	52.6	0.5	6.3	8.7	19.6	1.9	20.5	24.5	25.8	11.0	0.4
BULTFONTEIN	40893	3160.3	34.0	21.6	15.6	15.3	47.0	2.7	7.2	3.6	18.4	0.3	12.9	21.0	26.5	20.0	0.9
CACADU	278301	3049.0	0.0	6.1	3.9	5.6	84.8	1.3	1.9	0.0	12.9	2.3	91.3	50.9	33.5	39.0	0.3
CALEDON	88708	3782.0	50.0	31.0	12.3	31.1	26.3	0.9	10.8	5.3	20.9	2.7	23.5	12.3	13.4	2.0	0.9
CALITZDORP	7337	1114.3	42.0	32.4	11.4	34.0	22.9	0.3	12.0	3.5	19.8	0.3	6.6	11.5	10.7	4.0	0.8
CALVINIA	20320	37196.1	42.0	37.2	8.8	39.2	15.3	0.3	9.9	8.6	20.2	-0.3	0.5	7.7	7.2	9.0	1.8
CAMPERDOWN	42721	720.0	42.0	22.8	7.1	26.9	45.8	0.2	8.3	6.2	19.9	0.5	59.3	24.2	19.0	10.0	0.4
CAPE	211189	181.0	77.0	49.9	2.6	47.4	3.4	0.1	0.0	133.2	39.2	-1.4	1166.8	0.0	0.1	13.0	332.7
CARNARVON	10900	15918.2	39.0	36.8	8.5	38.4	16.9	1.2	8.3	5.0	19.2	-0.4	0.7	8.4	7.9	22.0	2.2
CAROLINA	38847	3875.2	34.0	18.0	9.2	20.8	54.0	1.2	8.8	5.1	18.9	-0.5	10.0	24.4	27.7	10.0	0.4
CATHCART	20299	2531.1	29.0	22.4	9.6	20.9	47.1	2.3	5.8	1.8	17.4	-2.7	8.0	20.5	26.6	23.0	0.6
CENTANI	105912	1125.6	0.0	0.7	5.1	0.4	96.3	0.1	2.4	0.0	13.1	1.2	94.1	57.7	36.2	22.0	0.0
CERES	52736	9878.0	47.0	27.5	13.6	28.8	19.7	0.3	14.1	3.3	19.3	2.4	5.3	14.7	15.4	2.0	0.7
CHATSWORTH	201770	72.1	66.0	49.8	3.2	47.1	0.0	0.4	0.0	0.1	20.8	-1.0	2798.5	0.0	0.0	20.0	0.0
CHRISTIANA	18687	1787.8	36.0	29.4	6.9	28.8	33.9	3.1	4.3	2.3	18.1	0.3	10.5	17.5	17.5	12.0	1.4
CLANWILLIAM	30534	7385.9	47.0	28.8	13.6	29.4	47.0	0.2	13.0	7.5	23.3	0.9	4.1	15.0	13.2	6.0	0.8
CLOCOLAN	25611	1065.9	36.0	21.4	11.7	16.8	50.0	2.8	4.5	3.5	18.3	-1.7	24.0	21.9	28.3	17.0	0.7
COFIMVABA	125032	2195.5	0.0	1.2	3.4	0.2	96.6	0.2	1.0	0.0	12.8	1.1	56.9	29.2	66.1	91.0	0.0
COLESBERG	22951	5337.8	34.0	33.3	15.2	24.3	25.9	2.4	5.1	3.1	17.9	-0.1	4.3	10.4	16.7	24.0	3.2
COLIGNY	28052	1528.7	26.0	17.9	18.6	16.8	47.7	0.6	16.0	3.5	18.4	0.0	18.4	21.9	24.7	15.0	0.3
CRADOCK	52781	5929.9	40.0	33.0	10.3	29.4	25.9	2.3	5.6	3.7	18.8	-0.4	8.9	10.5	16.8	28.0	2.6
CULLINAN	39520	2191.9	47.0	12.4	8.7	14.9	66.9	1.6	6.8	5.0	20.4	0.1	18.0	32.5	31.5	5.0	0.4
DANNHAUSER	17168	690.0	44.0	25.5	11.2	20.9	44.9	1.0	3.3	8.9	20.0	-2.4	24.9	24.2	18.2	5.0	0.4
DE AAR	32857	3234.0	50.0	44.7	2.3	44.2	8.1	1.3	1.2	8.5	20.0	0.8	10.2	2.8	6.0	21.0	14.6
DELAREYVILLE	43453	3180.6	24.0	14.1	15.0	16.4	56.8	0.9	14.0	4.8	18.2	0.8	13.7	29.3	25.1	12.0	0.2
DELMAS	70739	1194.1	38.0	32.3	15.7	23.2	28.7	1.6	5.2	7.2	19.0	0.2	59.2	10.3	18.5	13.0	1.4
DEWETSDORP	18225	2429.2	31.0	19.2	11.3	19.0	50.9	2.2	8.6	1.6	18.0	-1.0	7.5	23.6	27.0	16.0	0.5
DITSOBOTLA	210477	2385.9	0.0	5.9	3.0	5.8	85.7	1.1	1.4	0.0	12.9	3.8	88.2	41.2	44.0	9.0	0.2
DUNDEE	44364	1782.8	45.0	37.4	4.2	38.3	20.3	1.9	2.9	8.7	19.8	-0.6	24.9	9.0	11.1	17.0	1.8

Appendix 2 Continued

District Name	Population	Area km2	%FL	AFS	AOW	APW	APL	ABL	ASL	CS	PSI	PGR	PD	NAP	HOF	UR	URS
DURBAN	594109	265.9	73.0	49.7	2.8	47.4	0.0	0.5	0.0	86.0	32.4	-0.9	2234.3	0.0	0.0	14.0	0.0
DZANANI	39224	1219.6	0.0	1.8	3.5	0.5	95.3	0.3	0.9	0.0	12.8	2.3	121.6	29.5	64.8	36.0	0.0
EAST LONDON	350525	1504.9	0.0	0.2	5.6	0.4	98.0	0.0	2.0	0.0	13.3	2.4	232.9	41.5	52.2	0.0	0.0
EDENBURG	9723	2085.4	36.0	28.8	5.1	30.8	34.6	2.7	5.1	0.7	18.0	-1.8	4.7	14.6	20.6	24.0	1.4
EERSTEHOEK	232782	1158.8	35.0	3.6	9.9	3.4	88.3	0.4	4.1	0.0	18.1	10.8	200.9	49.4	33.7	42.0	0.1
ELLIOT	20734	1957.0	27.0	19.1	9.3	17.9	53.8	2.5	21.7	2.4	19.2	-1.1	10.6	26.5	27.1	20.0	0.9
ELLISRAS	28782	7895.3	48.0	30.0	4.9	34.7	32.1	0.3	7.5	16.3	21.7	0.9	3.6	16.0	14.4	0.0	0.7
EMBUMBULU	325323	769.8	47.0	2.1	4.1	1.6	93.9	0.4	1.4	0.0	18.8	3.1	422.6	33.6	58.6	5.0	0.1
EMNAMBITHI	286994	1023.2	39.0	11.6	4.7	9.2	73.6	1.9	1.2	0.0	17.6	2.6	280.5	29.6	44.9	40.0	0.5
EMPUMALANGA	354094	548.0	47.0	14.0	9.4	7.0	68.5	2.7	0.7	0.0	18.7	5.4	805.7	22.8	46.7	45.0	0.6
EMZUMBE	253776	1234.0	31.0	0.0	4.1	0.2	97.9	0.0	2.2	0.0	16.9	1.6	205.7	33.3	62.3	54.0	0.0
ENGCOBO	208321	2460.9	0.0	1.1	5.4	0.4	95.3	0.2	0.5	0.0	12.9	2.4	84.7	57.6	35.5	45.0	0.0
ENSELENI	255912	1792.9	34.0	3.5	4.1	3.9	89.1	0.7	3.1	0.0	17.3	2.5	164.6	30.1	58.4	46.0	0.1
ERMELO	158693	7321.6	41.0	35.3	10.2	30.2	25.0	0.9	3.3	5.9	19.0	-0.8	21.7	11.4	12.9	14.0	1.3
ESHOWE	3696	549.8	42.0	34.6	9.5	34.9	22.1	0.3	8.3	6.4	19.8	-0.6	30.4	12.2	8.8	5.0	0.8
ESTCOURT	53538	3315.3	40.0	26.9	8.1	25.1	41.6	0.9	3.7	4.5	18.8	-0.1	17.7	19.0	21.0	15.0	0.4
EXCELSIOR	24762	1884.3	37.0	20.7	7.8	20.4	51.3	2.4	5.0	2.3	18.3	-1.6	13.1	22.5	28.6	24.0	0.7
EZINGOLWENI	258317	644.2	31.0	1.9	4.0	1.5	94.5	0.3	1.4	0.0	16.8	1.3	401.0	33.7	58.9	50.0	0.1
FAURESMITH	11564	4906.6	32.0	25.7	17.1	19.4	38.5	1.7	8.3	3.9	18.3	-1.2	2.4	18.1	19.8	14.0	1.0
FICKSBURG	53034	1334.5	42.0	26.2	10.1	21.0	41.5	3.2	2.9	2.4	18.7	0.8	39.7	17.2	25.5	16.0	1.1
FORT BEAUFORT	36646	1485.5	49.0	30.3	9.1	25.1	33.6	3.4	3.9	5.5	20.0	1.1	24.7	16.3	19.1	29.0	4.6
FOURIESBURG	21696	1159.1	29.0	13.9	8.2	14.2	65.2	2.1	4.9	1.0	17.3	-0.9	18.7	29.4	34.2	13.0	0.3
FRANKFORT	64453	3385.0	37.0	24.6	11.2	19.6	44.2	2.8	3.8	1.7	18.1	-0.2	19.0	19.5	25.1	19.0	1.0
FRASERBURG	4737	11487.3	33.0	32.9	11.7	36.0	19.9	0.3	14.0	15.1	20.4	-0.8	0.4	9.5	9.9	11.0	1.2
GANYESA	75485	5689.7	0.0	0.0	3.5	0.0	98.7	0.0	1.6	0.0	13.0	4.1	13.3	43.1	53.4	38.0	0.0
GATYANA	123940	1418.3	0.0	0.6	2.9	0.2	97.8	0.1	0.5	0.0	12.8	0.8	87.4	29.6	66.8	89.0	0.0
GCUWA	123049	687.7	0.0	16.2	5.6	12.1	64.0	3.1	1.5	0.0	12.8	-0.1	178.9	18.6	47.4	13.0	0.6
GEORGE	119362	2486.1	58.0	42.5	6.5	40.0	0.0	0.8	2.9	12.8	20.4	4.0	48.0	5.4	5.7	16.0	4.2
GERMISTON	219561	158.8	75.0	49.7	1.5	48.8	0.0	0.5	0.0	35.7	26.4	0.2	1382.6	0.0	0.0	8.0	0.0
GIYANI	257022	2781.1	26.0	3.7	4.0	3.4	90.4	0.7	1.5	1.3	16.4	6.5	92.4	30.5	58.5	33.0	0.1
GLENCOE	23355	612.8	49.0	38.8	4.1	40.6	17.4	2.9	2.0	2.6	19.7	-1.4	38.1	8.3	8.2	12.0	1.8
GOODWOOD	311678	59.4	66.0	49.8	1.7	48.5	0.7	0.4	0.0	11.2	22.3	1.0	5247.1	0.0	0.0	20.0	0.0
GORDONIA	136353	53966.5	46.0	30.6	8.9	31.4	29.9	1.2	7.5	5.2	20.1	1.7	2.5	15.0	14.0	20.0	1.3
GRAAFF-REINET	43173	6814.5	46.0	41.6	6.4	39.3	12.0	1.4	5.2	6.9	19.9	1.0	6.3	4.7	7.9	22.0	5.7

Appendix 2 Continued

District Name	Population	Area km <sup>2</sup>	%FL	AFS	AOW	APW	APL	ABL	ASL	CS	PSI	PGR	PD	NAP	HOF	UR	URS
GROBLERSDAL	66224	2636.0	33.0	12.6	7.5	20.1	62.4	0.2	12.2	9.7	19.7	1.6	25.1	28.7	31.1	7.0	0.1
HANKEY	30066	1623.4	36.0	23.4	14.4	22.2	40.9	2.2	8.9	1.7	18.7	1.0	18.5	19.2	20.8	13.0	0.8
HANOVER	5852	3644.6	27.0	31.7	9.7	29.9	27.6	2.9	6.0	0.3	16.9	-1.6	1.6	11.7	17.0	22.0	2.2
HARRISMITH	87846	7493.1	37.0	25.8	6.2	25.9	42.5	2.0	3.9	3.3	18.3	-1.4	11.7	18.7	23.4	17.0	0.9
HARTSWATER	36654	741.1	32.0	28.5	15.9	22.9	34.7	0.3	8.0	7.7	18.7	0.1	49.5	18.0	14.7	15.0	0.7
HAY	13076	12786.9	29.0	28.6	13.3	29.6	29.2	0.9	12.9	4.4	18.5	-0.3	1.0	13.8	14.7	20.0	1.1
HEIDELBERG (CA)	12562	1895.8	45.0	34.6	11.8	33.9	14.4	0.9	9.5	2.0	19.0	1.0	6.6	9.3	10.4	14.0	2.0
HEIDELBERG (G)	119504	1194.8	46.0	27.1	8.1	23.8	40.4	2.8	2.5	5.5	19.5	5.1	100.0	20.4	20.6	27.0	4.1
HEILBRON	56601	3632.4	35.0	24.7	10.4	21.5	44.4	1.1	5.0	4.3	18.3	0.3	15.6	18.4	25.0	15.0	0.8
HENNENMAN	35424	591.7	49.0	28.6	7.1	27.2	36.8	2.4	3.7	3.5	19.8	1.9	59.9	16.7	20.3	10.0	1.0
HERBERT	30927	7571.8	26.0	23.6	16.0	20.1	41.2	1.1	10.4	2.5	17.6	1.8	4.1	18.4	21.9	13.0	0.7
HERMANUS	25469	729.9	66.0	46.4	3.6	45.2	6.8	0.5	1.5	14.4	23.1	3.5	34.9	2.5	2.3	10.0	7.6
HERSCHEL	144958	1734.0	0.0	0.5	5.3	0.1	96.5	0.1	0.8	0.0	12.9	0.8	83.6	59.2	34.9	13.0	0.0
HEWU	113362	1222.1	0.0	21.2	7.4	15.9	55.7	1.4	0.6	21.5	15.5	1.7	92.8	22.8	32.8	43.0	0.4
HIGHVELD RIDGE	232339	1448.0	27.0	1.3	4.5	2.0	94.1	0.1	3.2	0.0	16.5	3.5	160.5	31.1	61.1	10.0	0.0
HLABISA (KZN)	200983	1420.8	35.0	14.0	5.0	23.7	59.4	1.9	10.8	0.7	18.8	-3.6	141.5	25.6	31.8	52.0	0.3
HLABISA (KZN)	21560	1943.6	30.0	2.0	4.2	1.7	94.4	0.1	1.5	0.0	16.7	4.9	11.1	33.7	58.4	34.0	0.0
HLANGANANI (GAZA)	150147	478.7	33.0	0.0	5.5	0.1	97.9	0.0	2.0	0.0	17.3	3.8	313.7	39.9	54.5	51.0	0.0
HLANGANANI (KZN)	115309	1452.9	52.0	39.1	11.2	30.0	18.5	2.0	1.2	0.0	19.3	1.4	149.9	4.5	15.1	25.0	2.9
HOFMEYR	6962	2378.2	22.0	23.9	12.9	22.2	39.7	3.4	56.2	0.2	22.6	-1.5	2.9	16.5	24.5	16.0	0.9
HOOPSTAD	36424	3570.1	23.0	14.3	17.5	11.6	58.8	0.8	12.0	1.5	17.4	0.1	10.2	27.4	29.2	8.0	0.4
HOPEFIELD	9759	1356.3	58.0	38.6	4.7	38.8	3.3	0.3	3.6	0.8	18.5	1.8	7.2	9.3	8.6	16.0	1.9
HOPETOWN	12984	8330.7	32.0	34.5	14.6	31.4	20.0	0.3	10.5	4.7	18.5	-0.6	1.6	10.1	9.3	15.0	1.6
HUMANSDORP	52377	3721.5	51.0	34.7	10.6	31.6	23.6	1.3	0.5	11.8	20.6	3.7	14.1	11.7	11.4	18.0	1.5
IDUTYWA	110047	1226.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	89.7	0.0	0.0	0.0	0.0
IMPENDLE	3206	1310.9	35.0	0.0	15.4	10.7	78.5	0.0	22.1	0.2	20.2	-6.3	2.4	39.9	34.0	2.0	0.0
INANDA	339879	375.6	64.0	47.8	1.8	47.2	3.4	0.5	0.5	5.1	21.3	6.6	904.9	1.7	1.6	18.0	14.1
INDWE	14556	686.7	30.0	25.6	6.2	25.0	41.4	4.0	11.0	2.8	18.2	-0.1	21.2	15.9	27.3	33.0	1.4
INGWAVUMA	169546	4130.9	15.0	0.2	5.2	3.5	93.0	0.0	6.7	0.0	15.4	2.9	41.0	30.5	60.7	50.0	0.0
INKANYEZI	210275	1417.2	32.0	4.8	4.2	5.2	86.7	0.6	3.2	0.0	17.1	2.1	148.4	29.7	56.2	37.0	0.1
IXOPO	26493	1705.5	33.0	11.1	7.7	17.0	67.0	0.0	10.8	6.5	19.1	-2.6	15.5	29.3	35.0	15.0	0.1
JACOBSDAL	12049	2598.0	29.0	17.4	12.9	19.5	51.6	1.4	12.3	1.8	18.2	-0.3	4.6	25.0	25.2	18.0	0.5
JAGERSFONTEIN	9975	1229.8	42.0	33.8	22.5	15.3	25.8	3.7	2.9	3.3	18.7	0.4	8.1	8.9	19.5	27.0	5.3
JANSENVILLE	12754	4507.0	36.0	31.0	11.1	30.0	26.7	3.2	17.5	9.3	20.6	-1.4	2.8	10.9	17.0	26.0	2.1

## Appendix 2 Continued

District Name	Population	Area km <sup>2</sup>	%FL	AFS	AOW	APW	APL	ABL	ASL	CS	PSI	PGR	PD	NAP	HOF	UR	URS
JOHANNESBURG	3716700	593.7	67.0	43.0	4.8	38.8	11.4	2.6	0.0	34.3	25.2	0.3	6260.2	2.9	10.5	24.0	607.9
JOUBERTINA	15029	1250.6	40.0	26.8	12.8	29.9	31.2	1.3	2.6	5.2	18.7	0.3	12.0	15.7	14.8	3.0	0.8
KEISKAMMAHOEK	48405	570.6	0.0	5.0	3.2	4.4	88.9	0.3	1.0	0.0	12.8	-0.8	84.8	31.1	56.3	42.0	0.0
KEMPTON PARK	589304	415.0	63.0	41.7	13.2	29.2	13.5	3.1	0.0	10.8	21.8	2.6	1420.0	3.5	12.5	21.0	168.4
KENHARDT	12391	36671.0	43.0	35.8	13.3	35.4	15.9	1.5	11.0	15.7	21.4	-0.7	0.3	7.6	8.0	20.0	2.2
KIMBERLEY	239547	3569.3	60.0	42.1	4.7	38.6	12.9	2.4	0.5	10.7	21.5	0.7	67.1	3.9	10.7	24.0	20.2
KING WILLIAM'S TOWN	39836	714.1	60.0	46.5	5.4	42.7	5.6	0.5	6.7	49.9	27.2	0.2	55.8	2.6	2.7	18.0	6.4
KIRKWOOD	42119	1694.0	37.0	25.1	12.1	23.9	39.9	1.3	1.5	11.4	19.0	-0.4	24.9	17.4	21.5	19.0	0.8
KLERKSDORP	482455	3541.3	52.0	39.5	10.6	31.8	17.3	2.1	1.6	13.3	21.0	2.0	136.2	8.7	9.4	34.0	3.0
KLIPRIVIER	82847	3078.8	52.0	38.9	8.8	32.1	20.9	0.2	1.1	11.1	20.6	0.0	26.9	9.4	10.8	19.0	1.4
KNYSNA	61004	2056.9	58.0	40.4	7.7	37.2	15.5	0.8	2.9	4.9	20.9	3.0	29.7	7.6	7.1	14.0	3.1
KOFFIEFONTEIN	15760	1897.5	45.0	34.4	6.1	32.7	25.1	2.8	3.2	3.4	19.1	0.3	8.3	9.6	17.1	24.0	4.2
KOMGA	18684	1399.0	26.0	30.4	13.5	23.1	35.1	0.3	7.1	2.7	17.3	-2.3	13.4	17.3	15.7	18.0	0.5
KOPPIES	25813	1551.4	34.0	16.7	13.2	14.1	58.2	0.9	7.4	2.0	18.3	-1.8	16.6	26.6	29.3	16.0	0.4
KOSTER	37006	2664.2	34.0	13.7	14.3	13.7	60.1	1.7	10.8	1.4	18.7	0.3	13.9	29.4	29.0	13.0	0.3
KRANSKOP	8723	495.7	25.0	6.3	8.8	12.2	76.0	0.0	11.5	4.5	18.0	0.4	17.6	33.9	38.7	6.0	0.1
KROONSTAD	167874	4197.6	54.0	34.8	8.6	29.1	26.9	1.5	2.0	6.3	20.4	0.4	40.0	8.0	19.4	22.0	2.8
KRUGERSDORP	292232	1332.9	59.0	41.2	5.5	38.1	14.5	1.2	1.8	10.7	21.5	1.5	219.2	4.1	11.0	17.0	4.6
KUDUMANE	150863	9657.1	0.0	1.7	2.8	1.7	95.6	0.1	1.3	2.8	13.2	2.7	15.6	35.6	58.3	14.0	0.0
KUILSRIVIER	158416	140.4	63.0	48.7	2.1	47.4	1.9	0.3	0.4	0.0	20.5	9.7	1128.3	0.9	0.9	12.0	27.6
KURUMAN	27944	17814.9	38.0	31.4	9.8	32.4	27.9	1.3	8.0	6.1	19.3	-2.5	1.6	13.1	13.3	8.0	1.3
KWA MAPUMULU	269982	1587.5	30.0	0.0	5.7	0.2	97.4	0.0	2.6	0.0	17.0	3.0	170.1	39.0	55.0	51.0	0.0
KWABHACA	142438	1750.1	0.0	0.8	2.4	0.8	97.3	0.2	0.5	0.0	12.7	1.9	81.4	29.8	66.3	48.0	0.0
LADISMITH	13809	3641.9	45.0	26.0	15.6	25.8	34.1	1.6	12.4	4.4	20.6	1.2	3.8	15.1	17.6	9.0	1.2
LADY GREY	10649	1402.4	28.0	24.8	8.0	25.1	41.2	3.3	23.9	0.0	19.3	0.5	7.6	17.2	24.9	15.0	1.0
LADYBRAND	41622	2198.5	41.0	24.3	5.5	24.6	46.1	1.6	3.7	2.9	18.7	-0.7	18.9	17.5	28.2	13.0	0.8
LAINGSBURG	6289	8770.6	42.0	32.3	10.6	34.5	23.4	0.3	11.7	21.3	22.0	-1.5	0.7	11.8	10.8	11.0	1.2
LEHURUTSHE	114264	2356.5	0.0	0.1	3.8	0.1	98.1	0.0	1.8	0.0	13.0	3.8	48.5	45.5	50.6	36.0	0.0
LETABA	69178	2330.4	34.0	14.6	8.0	26.3	53.6	0.2	17.1	10.8	20.6	-1.5	29.7	27.9	23.3	2.0	0.2
LIBODE	122274	1369.5	0.0	0.4	5.2	0.1	96.6	0.1	4.5	0.0	13.4	1.6	89.3	59.4	34.9	37.0	0.0
LICHTENBURG	98870	5300.3	30.0	21.2	10.9	21.2	48.1	1.0	8.6	4.4	18.2	0.1	18.7	24.5	22.2	39.0	0.4
LINDLEY	57078	2847.1	34.0	25.6	11.2	20.6	41.5	3.2	4.0	2.4	17.8	0.1	20.0	16.5	26.0	22.0	1.4
LIONS RIVER	50443	1588.3	47.0	24.6	9.3	26.3	41.8	0.5	8.6	4.5	20.3	0.4	31.8	21.0	18.8	8.0	0.4
LOWER TUGELA	112633	1130.0	45.0	25.6	7.8	29.1	39.3	1.1	8.3	9.0	20.6	-1.1	99.7	20.7	16.8	12.0	0.6

## Appendix 2 Continued

District Name	Population	Area km <sup>2</sup>	%FL	AFS	AOW	APW	APL	ABL	ASL	CS	PSI	PGR	PD	NAP	HOF	UR	URS
LOWER UMFOLOZI	14793	2222.7	54.0	35.9	2.6	38.2	22.5	2.0	3.8	25.5	23.0	1.9	30.4	9.7	13.6	4.0	2.3
LULEKANI	48045	334.6	23.0	4.3	3.1	4.4	89.3	0.8	1.3	0.0	15.8	39.4	143.6	29.6	58.6	47.0	0.1
LUSIKISIKI	203715	2476.2	0.0	0.4	5.0	0.3	96.7	0.1	0.4	0.0	12.9	-0.1	82.3	59.4	34.9	11.0	0.0
LYDENBURG	47596	4992.0	44.0	22.5	9.2	24.5	45.8	0.8	8.4	8.1	20.4	-1.6	9.5	22.7	21.1	10.0	0.6
MACLEAR	23502	2384.3	31.0	23.1	9.1	21.4	47.4	2.5	15.5	7.6	19.7	-1.3	9.9	21.8	24.7	13.0	0.9
MADADENI	491016	519.1	44.0	15.3	3.2	14.0	65.4	3.1	0.8	1.3	18.4	3.8	945.9	30.8	36.6	35.0	1.2
MADIKWE	69508	2759.2	0.0	4.1	3.3	4.2	90.1	0.2	1.5	0.0	12.9	-0.3	25.2	40.4	48.0	12.0	0.0
MAHLABATINI	173460	1796.4	28.0	4.7	2.6	4.6	88.5	0.7	1.5	0.0	16.3	3.0	96.6	29.2	58.9	57.0	0.1
MALAMULELE	210567	1301.9	27.0	0.9	3.1	1.0	96.7	0.2	1.4	0.0	16.3	4.3	161.7	31.6	63.4	38.0	0.0
MALMESBURY	127232	2802.0	56.0	40.4	5.6	40.5	13.9	0.7	4.6	5.6	20.9	5.1	45.4	6.6	6.9	14.0	2.8
MANKWE	145914	3416.8	0.0	3.4	3.5	3.2	91.2	0.4	1.6	0.0	12.9	3.0	42.7	44.1	45.8	36.0	0.0
MAPULANENG	226561	1017.0	38.0	2.1	9.9	2.3	91.3	0.3	4.1	1.6	18.7	3.9	252.3	51.6	33.9	37.0	0.0
MARICO	48530	6530.5	31.0	16.1	10.3	17.1	58.6	0.7	8.5	3.7	18.3	-0.8	7.4	29.8	26.7	30.0	0.4
MARQUARD	22565	1336.6	31.0	17.6	9.9	15.9	58.7	0.9	5.2	1.3	17.6	-1.3	16.9	25.8	30.7	9.0	0.4
MATATIELE	180200	2401.2	0.0	1.2	4.8	1.2	95.2	0.0	0.7	0.0	12.9	2.5	75.0	58.0	34.8	19.0	0.0
MAXESIBENI	84591	1263.1	0.0	2.3	3.8	0.8	94.1	0.5	0.9	0.0	12.8	2.6	67.0	28.4	64.6	30.0	0.0
MBIBANA	30033	853.1	40.0	7.2	9.3	4.6	81.8	1.4	2.4	0.0	18.3	10.6	98.7	39.8	39.0	36.0	0.2
MDANTSANE	325667	441.1	0.0	38.2	4.9	34.4	21.3	2.0	0.6	0.0	12.7	1.0	1583.2	8.7	13.7	26.0	3.1
MDUTJANA	165910	441.1	37.0	11.3	6.4	10.6	75.0	0.8	1.6	2.0	18.1	4.1	376.1	36.4	35.4	45.0	0.3
MESSINA	32053	5380.5	36.0	24.9	9.5	23.0	44.1	0.7	5.5	6.3	18.8	-1.0	6.0	19.3	23.2	11.0	0.9
MHALA	304223	1531.2	27.0	5.3	4.7	4.9	87.2	0.5	1.5	0.0	16.4	7.0	198.7	33.2	52.0	38.0	0.1
MIDDELBURG (CA)	26582	5721.8	40.0	36.1	7.0	35.6	20.4	2.2	1.8	7.3	18.8	0.8	4.6	8.4	13.0	17.0	3.1
MIDDELBURG (G)	189219	5690.7	48.0	30.1	7.0	28.4	35.2	1.6	3.1	12.3	20.7	0.9	33.3	17.1	17.4	12.0	1.0
MIDDLEDRIFT	75564	716.0	0.0	0.8	2.7	0.8	97.6	0.0	1.6	0.0	12.9	0.0	105.5	34.1	61.6	46.0	0.0
MKOBOLA	263540	530.2	37.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	12.7	497.1	0.0	0.0	37.0	0.1
MOKERONG	99308	3621.7	36.0	3.4	7.8	3.1	90.0	0.3	2.9	0.0	17.9	4.7	148.4	43.2	42.5	32.0	0.1
MOLOPO	231949	2925.5	0.0	16.0	4.8	14.1	65.6	1.2	1.3	0.0	12.9	4.2	79.3	34.3	30.8	9.0	0.3
MOLTENO	18325	1934.6	27.0	29.3	7.6	27.8	32.6	4.0	0.7	5.8	16.9	-1.0	9.5	12.0	23.3	30.0	2.4
MONTAGU	25930	2472.0	48.0	38.4	8.3	38.5	15.1	0.6	7.5	4.6	20.1	1.4	10.5	7.2	7.7	8.0	2.3
MOOIRIVIER	32799	1575.4	37.0	24.6	12.2	24.0	41.1	0.3	9.4	0.9	18.7	0.6	20.8	20.3	18.9	12.0	0.5
MOORREESBURG	12161	1638.4	45.0	37.3	7.7	39.3	16.2	0.4	8.8	1.9	19.6	-0.4	7.4	8.3	7.4	6.0	1.4
MORETELE	128213	2004.9	0.0	6.0	3.9	6.1	85.8	0.3	1.9	2.1	13.3	1.5	200.7	47.7	36.2	38.0	0.1
MOSSELBAY	71933	1901.0	62.0	44.9	6.2	42.4	6.8	1.0	2.3	3.0	21.1	4.7	37.8	3.4	3.0	8.0	5.4
MOUNT CURRIE	55356	4070.9	38.0	28.2	9.1	27.1	37.5	1.1	4.9	8.2	19.3	-0.4	13.6	18.7	16.8	12.0	0.7

Appendix 2 Continued

District Name	Population	Area km <sup>2</sup>	%FL	AFS	AOW	APW	APL	ABL	ASL	CS	PSI	PGR	PD	NAP	HOF	UR	URS
MOUTSE	120315	405.3	33.0	4.8	8.0	4.3	88.1	0.0	2.2	0.0	17.6	-0.4	296.9	46.6	36.3	0.0	0.1
MPOFU	16858	511.9	0.0	3.5	2.1	3.6	92.5	0.1	7.5	0.0	13.7	0.0	32.9	27.8	63.0	45.0	0.2
MQANDULI	168009	1209.4	0.0	0.3	2.6	0.1	98.4	0.1	1.2	0.0	12.8	4.0	138.9	29.9	67.0	35.0	0.0
MSINGA	180450	1763.6	17.0	0.1	3.1	0.2	98.5	0.0	1.4	0.0	15.0	2.2	102.3	31.5	65.2	84.0	0.0
MT. FLETCHER	137253	2294.2	0.0	0.6	2.9	0.1	97.8	0.1	2.1	0.0	12.9	1.9	59.8	29.8	66.6	22.0	0.0
MTONJANENI	13114	775.3	31.0	19.2	3.9	29.6	49.6	0.8	11.3	14.4	20.0	-1.7	16.9	25.0	22.4	7.0	0.3
MTUNZINI	21867	429.8	42.0	17.5	5.7	22.9	54.5	1.8	8.7	9.1	20.3	-0.8	50.9	26.5	27.4	3.0	0.5
MURRAYSBURG	6952	5404.3	30.0	37.5	11.0	36.3	15.6	0.3	9.2	8.1	18.5	1.9	1.3	7.3	8.0	22.0	1.9
MUTALE	71477	2054.4	0.0	0.2	3.6	0.8	98.2	0.0	2.1	0.0	13.1	3.9	34.8	32.9	62.4	25.0	0.0
NAMAKGALE	83924	146.8	42.0	21.1	3.2	19.9	53.3	4.0	0.6	0.0	18.0	3.8	571.7	17.6	38.2	18.0	1.0
NAMAKWALAND	72047	47714.5	56.0	28.6	18.4	19.3	34.4	4.1	4.4	6.1	21.4	-0.6	1.5	12.4	21.4	16.0	9.8
NAPHUNO	23033	1892.2	35.0	2.3	5.6	2.3	92.7	0.4	2.4	0.0	17.6	6.1	106.3	38.7	51.2	31.0	0.1
NDWEDWE	371672	870.7	43.0	0.0	3.3	0.1	98.6	0.0	1.4	0.0	18.3	7.3	426.9	32.1	64.5	36.0	0.0
NEBO	387196	2745.9	36.0	2.1	5.9	1.8	93.3	0.4	2.2	0.0	17.7	4.5	141.0	39.8	50.4	51.0	0.1
NELSPRUIT	71851	2211.2	48.0	28.0	9.6	28.1	36.0	0.3	7.7	21.5	22.4	0.5	32.5	18.9	15.3	55.0	0.5
NEW HANOVER	47008	1076.6	32.0	15.6	8.5	24.1	53.3	0.9	14.5	2.0	18.9	-1.6	43.7	25.3	26.5	10.0	0.3
NEWCASTLE	62012	2000.6	60.0	43.2	2.3	44.3	10.7	1.8	1.0	16.1	22.4	-0.3	31.0	5.6	4.4	8.0	2.7
NGOTSHE	31518	3394.9	17.0	4.6	7.0	18.0	72.9	0.6	17.3	2.9	17.5	-3.1	9.3	32.3	38.1	10.0	0.1
NGQELENI	144158	1406.8	0.0	0.7	5.3	0.2	96.3	0.0	0.8	0.0	12.9	1.1	102.5	58.4	35.5	19.0	0.0
NIGEL	146451	900.7	52.0	38.4	10.5	29.5	19.5	3.0	0.6	4.3	19.7	2.0	162.6	6.5	15.1	26.0	6.1
NKANDLA	155366	2079.0	26.0	1.2	4.2	0.8	95.4	0.3	2.0	0.0	16.2	2.7	74.7	30.1	63.8	63.0	0.0
NKOMAZI	334050	1381.2	24.0	2.2	6.7	2.1	92.1	0.3	3.2	0.0	16.3	9.9	252.1	38.9	50.1	4.0	0.1
NONGOMA	197283	2182.1	25.0	0.6	3.9	0.8	96.6	0.1	2.0	0.0	16.1	2.2	90.4	32.5	62.1	58.0	0.0
NOUPOORT	12115	1477.8	32.0	38.6	4.2	37.7	18.6	2.0	2.0	3.4	17.3	-0.3	8.2	6.3	13.3	28.0	7.5
NQAMAKWE	114559	1240.8	0.0	0.5	2.8	0.1	98.0	0.0	4.2	0.0	13.2	2.3	92.3	29.6	66.9	31.0	0.0
NQUTU	271056	1773.8	33.0	4.4	3.7	3.3	89.0	0.7	1.5	4.2	17.5	4.0	152.8	29.9	58.7	64.0	0.2
NSIKAZI	402545	675.1	37.0	5.5	6.8	4.9	85.5	1.0	2.5	0.4	18.0	7.0	596.3	43.1	39.7	35.0	0.2
NTUZUMA	797052	76.6	57.0	25.5	13.8	11.9	45.5	3.2	0.3	0.0	19.6	5.3	10405.4	17.9	30.9	0.0	5.1
OBERHOLZER	303898	553.6	51.0	42.2	11.3	31.6	12.6	2.8	0.2	8.9	20.1	2.9	548.9	3.4	11.4	3.0	53.9
ODENDAALSRUS	151989	877.3	45.0	33.2	16.3	20.6	28.2	2.3	3.1	3.4	19.0	5.3	173.2	7.1	22.8	11.0	2.4
ODI I	834891	1651.8	0.0	11.8	3.2	11.8	73.8	1.0	1.6	0.0	12.9	2.0	505.4	38.7	34.4	63.0	0.3
ODI II	39486	414.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	95.4	0.0	0.0	34.0	0.0
OKHAHLAMBA	165098	1468.3	32.0	2.9	6.6	1.9	91.0	0.6	2.5	0.0	17.2	4.3	164.0	38.6	50.0	61.0	0.1
ONGOYE	160994	594.7	41.0	6.9	5.5	8.7	78.9	1.1	6.3	0.0	18.5	4.2	382.2	30.0	48.8	37.0	0.2

Appendix 2 Continued

District Name	Population	Area km2	%FL	AFS	AOW	APW	APL	ABL	ASL	CS	PSI	PGR	PD	NAP	HOF	UR	URS
OUDTSHOORN	78911	3369.3	60.0	38.2	5.2	34.9	21.6	1.1	0.2	51.2	26.5	2.8	23.4	11.4	10.4	24.0	8.9
PAARL	162864	1095.3	55.0	44.4	10.0	38.1	7.6	0.6	3.0	3.4	20.3	1.0	148.7	3.8	3.7	19.0	4.2
PARYS	78502	933.0	58.0	38.7	8.2	36.7	16.8	0.8	5.0	16.8	22.6	1.6	84.1	7.8	8.7	14.0	2.3
PAULPIETERSBURG	27050	1459.3	56.0	36.9	6.5	32.0	23.5	1.7	1.0	11.4	21.1	3.8	18.5	5.0	19.6	17.0	5.7
PEARSTON	6385	2545.6	27.0	16.4	6.7	19.9	58.4	2.0	6.8	138.0	34.4	0.2	2.5	25.9	31.2	10.0	0.3
PEDDIE	91655	1710.9	32.0	34.0	7.7	37.0	20.4	2.9	8.7	0.3	17.9	-1.5	53.6	8.5	12.8	21.0	2.6
PELGRIMSREST	34530	2492.9	0.0	4.8	2.5	4.9	89.4	0.2	1.1	0.0	12.9	1.6	13.9	31.2	56.7	46.0	0.1
PELGRIMSREST (KZN)	1817	6201.2	43.0	15.1	5.2	28.9	51.9	0.9	17.0	72.3	29.3	-1.6	0.3	25.0	25.8	0.0	0.3
PETRUSBURG	14755	2962.6	30.0	19.2	10.7	20.7	50.4	1.7	9.5	0.3	17.8	-0.8	5.0	23.8	25.5	32.0	0.6
PHALABORWA	35444	11515.4	50.0	28.8	5.9	30.9	36.7	0.9	4.9	17.6	22.0	-0.6	3.1	19.0	15.4	7.0	0.9
PHILIPPOLIS	9383	3441.5	37.0	20.5	8.6	21.6	50.3	2.0	6.8	1.9	18.6	0.2	2.7	24.3	25.0	1.0	0.9
PHILIPSTOWN	11063	5558.4	30.0	34.6	8.3	35.4	21.5	1.8	7.5	1.0	17.5	1.2	2.0	9.4	12.3	16.0	2.2
PIET RETIEF	74669	3756.0	32.0	19.6	5.4	27.8	49.2	1.3	10.3	5.9	18.9	-0.9	21.9	23.0	24.2	20.0	0.4
PIETERMARITZBURG	308563	738.6	68.0	47.5	3.9	45.5	3.1	1.4	0.4	21.4	23.9	1.7	417.8	1.6	1.5	2.0	12.4
PIETERSBURG	75475	6333.9	59.0	38.4	4.5	41.3	16.6	2.4	4.1	49.5	27.0	-0.7	11.9	8.8	6.9	18.0	1.6
PIKETBERG	37592	4565.2	51.0	35.1	9.7	35.9	19.9	0.4	9.6	8.9	21.3	0.9	8.2	9.9	9.4	5.0	1.2
PINETOWN	244235	330.4	69.0	48.0	5.9	43.2	2.9	0.9	0.1	19.0	23.6	2.3	739.2	1.0	1.9	8.0	16.4
POLELA	5175	224.6	48.0	11.5	7.3	19.2	65.4	0.0	11.9	6.8	21.3	-0.7	23.0	31.7	30.2	15.0	0.1
PORT ELIZABETH	1018425	1358.5	65.0	41.8	6.9	35.6	13.8	2.5	0.1	11.4	22.1	1.9	749.7	3.4	12.3	5.0	29.2
PORT SHEPSTONE	79649	1710.9	59.0	41.8	3.2	42.6	12.6	1.0	2.7	16.3	22.4	3.0	46.6	5.8	6.6	26.0	2.3
POSTMASBURG	74097	18985.3	47.0	37.5	8.7	35.3	18.7	2.3	3.9	10.8	20.5	0.0	3.9	7.3	11.3	7.0	6.1
POTCHEFSTROOM	267434	3583.2	52.0	33.8	7.3	30.0	27.8	1.8	2.8	8.1	20.5	2.6	74.6	13.9	15.0	14.0	2.2
POTGIETERSRUS	83375	16103.3	36.0	21.8	7.7	25.7	46.8	0.6	9.0	9.1	19.6	-3.1	5.2	23.0	21.8	31.0	0.4
PRETORIA	874243	1359.3	73.0	48.3	2.8	46.1	2.7	0.6	0.1	71.2	30.6	1.6	643.2	0.7	2.1	5.0	34.6
PRIESKA	22650	14034.4	39.0	37.9	16.5	27.8	18.2	0.5	5.5	2.6	18.5	-2.8	1.6	8.8	9.0	9.0	2.1
PRINCE ALBERT	9329	8140.6	36.0	35.5	9.8	35.6	19.9	0.3	8.8	12.2	19.8	-0.4	1.1	10.3	8.8	22.0	1.6
QUEENSTOWN	60028	1924.8	54.0	37.2	3.6	36.2	22.1	2.0	1.4	7.4	20.5	-0.9	32.9	8.8	14.1	18.0	2.9
QUMBU	125027	1584.9	0.0	0.7	2.9	0.1	97.6	0.1	1.0	0.0	12.8	1.8	78.9	29.8	66.4	24.0	0.0
RANDBURG	519365	389.0	68.0	44.9	4.7	41.0	7.9	2.1	0.0	47.4	27.0	4.5	1335.1	2.1	7.3	26.0	53.7
RANDFONTEIN	175652	798.5	55.0	38.8	6.3	36.6	17.4	3.0	1.9	17.1	22.0	1.9	220.0	8.9	9.3	15.0	6.1
REDDERSBURG	8163	1526.8	35.0	23.6	8.7	25.0	42.7	2.3	7.7	2.9	18.5	-1.3	5.3	18.9	23.9	21.0	0.8
REITZ	41148	2706.0	31.0	20.7	11.2	18.3	50.2	2.4	6.1	4.1	18.0	-0.3	15.2	23.3	26.5	17.0	0.6
RICHMOND (CA)	6330	7349.1	30.0	31.6	8.5	31.2	27.9	2.3	6.6	7.5	18.2	-1.4	0.9	11.8	16.9	14.0	1.5
RICHMOND (KZN)	28584	1139.8	34.0	12.8	8.6	21.6	59.7	0.1	14.6	0.0	18.9	-0.5	25.1	28.7	28.4	24.0	0.1

Appendix 2 Continued

District Name	Population	Area km2	%FL	AFS	AOW	APW	APL	ABL	ASL	CS	PSI	PGR	PD	NAP	HOF	UR	URS
RITAVI	67535	526.4	37.0	4.1	3.6	4.4	89.4	0.8	1.7	0.0	17.6	5.6	338.2	31.3	56.6	4.0	0.1
RIVERSDALE	27436	3938.4	55.0	37.0	9.5	37.0	17.1	0.3	8.6	10.7	21.9	1.9	7.0	8.9	7.6	28.0	1.3
ROBERTSON	36449	1591.0	44.0	32.0	14.1	30.8	23.4	0.4	12.1	6.7	20.4	1.2	22.9	11.3	11.9	7.0	1.0
ROODEPOORT	313916	229.8	70.0	46.3	2.8	44.6	5.5	1.9	0.1	30.2	25.2	2.1	1366.0	1.5	4.9	9.0	61.2
ROUXVILLE	16020	2797.5	30.0	17.7	9.4	17.4	57.3	0.9	6.4	3.2	17.8	-1.4	5.7	24.1	31.4	11.0	0.5
RUSTENBURG	3721	2058.0	48.0	31.6	3.8	33.1	33.2	0.3	3.4	16.8	21.3	2.6	71.8	16.0	15.6	12.0	0.6
SASOLBURG	127669	1039.6	61.0	35.1	3.3	33.8	26.1	2.3	1.3	7.0	21.2	1.6	122.8	13.2	14.6	11.0	3.3
SCHWEIZER-RENEKE	61759	4268.1	23.0	16.0	12.4	14.1	58.5	1.1	8.4	2.1	17.0	1.0	14.5	29.4	28.1	9.0	0.5
SEKGOSESE	73991	615.3	33.0	0.5	4.5	0.6	97.1	0.1	1.7	0.0	17.2	4.4	237.7	36.6	57.7	3.0	0.0
SEKHUKHUNELAND	473106	4139.1	37.0	1.0	6.1	1.1	95.5	0.2	2.3	0.0	17.9	2.7	114.3	41.7	50.1	41.0	0.0
SENEKAL	56376	3587.5	34.0	22.5	7.5	21.0	48.8	2.8	3.3	3.6	17.9	-1.5	15.7	21.4	27.5	43.0	0.7
SESHEGO	329687	3406.5	42.0	7.8	5.1	7.8	81.3	1.5	1.7	0.0	18.4	3.0	112.8	35.2	44.1	16.0	0.2
SIMDLANGENTSHA	147251	686.4	29.0	3.2	5.1	3.2	90.1	0.5	3.1	3.4	17.2	5.0	214.5	33.6	54.9	33.0	0.1
SIMONSTAD	67631	256.8	71.0	47.6	2.7	45.9	4.0	0.4	0.3	0.0	21.5	2.4	263.4	2.0	1.8	58.0	38.6
SIPHAQUENI	87910	1179.2	0.0	0.9	5.3	0.4	95.7	0.2	2.4	0.0	13.1	-1.6	74.6	58.4	35.0	15.0	0.0
SMITHFIELD	10957	2856.0	32.0	23.3	7.6	25.2	43.1	2.9	7.3	4.2	18.2	-0.7	3.8	18.9	24.9	20.0	0.8
SOMERSET-EAST	41770	5538.6	38.0	31.7	11.7	28.4	27.3	1.9	7.4	3.8	18.8	1.1	7.5	10.6	17.6	11.0	2.2
SOMERSET-WEST	67814	231.5	65.0	46.2	3.0	45.7	5.4	0.7	1.5	17.6	23.1	2.5	292.9	2.8	2.3	27.0	6.1
SOSHANGUVE	274810	9.7	57.0	32.0	9.3	23.4	29.9	6.1	0.0	0.8	19.8	7.7	28330.9	7.5	27.9	12.0	0.0
SOUTPANSBERG	42102	10154.7	37.0	20.0	6.7	28.8	47.0	0.4	12.7	11.3	20.5	-1.3	4.1	23.8	20.7	28.0	0.4
SOUTPANSBERG (KZN)	860	4188.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
SPRINGS	246444	333.6	65.0	40.1	3.1	37.8	17.4	2.3	0.1	15.8	22.7	-0.6	738.7	8.7	10.3	2.0	68.5
STANDERTON	117342	4639.2	39.0	29.2	6.6	28.5	36.7	1.2	3.8	3.8	18.6	-0.5	25.3	15.4	20.4	19.0	1.0
STELLENBOSCH	86885	425.3	65.0	40.9	7.1	39.1	13.1	1.0	4.2	11.2	22.7	1.4	204.3	6.3	6.7	11.0	2.7
STERKSTROOM	11775	1668.3	33.0	26.3	7.9	27.2	36.3	3.9	7.1	3.0	18.1	-1.8	7.1	14.2	24.3	24.0	1.7
STEYNSBURG	16603	2747.2	36.0	29.5	5.0	31.1	32.1	3.7	5.4	0.5	17.9	0.5	6.0	12.0	22.4	38.0	2.8
STEYTLERVILLE	6583	3566.0	36.0	30.3	11.1	32.1	26.6	2.4	10.7	2.5	19.0	-0.6	1.8	13.2	13.3	44.0	1.6
STRAND	46574	129.0	71.0	48.6	2.6	46.8	2.0	0.7	0.1	11.3	22.9	2.3	361.0	0.8	1.2	18.0	33.3
STUTTERHEIM	61600	1570.1	39.0	28.1	20.6	11.3	40.7	1.1	2.1	3.1	18.2	0.1	39.2	19.5	20.4	16.0	1.6
SUTHERLAND	3944	8941.7	36.0	32.1	10.5	37.0	21.2	0.3	14.5	7.0	19.8	-1.4	0.4	10.6	9.7	33.0	1.2
SWARTRUGGENS	15525	1772.8	29.0	11.7	9.5	15.2	66.7	0.8	9.2	2.5	18.1	0.6	8.8	31.5	32.1	9.0	0.3
SWELLENDAM	35579	4075.1	46.0	33.3	11.8	33.0	22.6	0.6	10.2	4.9	20.3	1.4	8.7	10.9	11.1	16.0	1.3
TABANKULU	106370	1323.8	0.0	0.8	5.3	0.4	95.9	0.2	2.4	0.0	13.1	0.0	80.4	58.5	35.0	6.0	0.0
TARKA	13443	3175.0	33.0	23.8	9.0	26.6	40.1	2.9	9.3	7.9	19.1	-0.4	4.2	17.8	22.8	57.0	1.0

Appendix 2 Continued

District Name	Population	Area km <sup>2</sup>	%FL	AFS	AOW	APW	APL	ABL	ASL	CS	PSI	PGR	PD	NAP	HOF	UR	URS
TAUNG	233646	2650.3	0.0	6.2	2.4	6.2	85.9	0.8	1.0	0.0	12.8	3.3	88.2	29.9	55.3	20.0	0.3
THABA 'NCHU	93807	1134.2	0.0	10.6	3.2	10.7	76.9	0.5	1.5	0.0	12.9	0.7	82.7	39.1	36.4	16.0	0.5
THABAMOPO	431597	2716.6	43.0	6.3	4.7	6.4	84.8	0.8	1.7	0.0	18.5	4.4	158.9	33.9	48.6	39.0	0.1
THABAZIMBI	59829	10520.8	42.0	16.8	8.8	24.5	52.8	1.0	12.6	9.1	21.0	0.1	5.7	26.4	23.4	0.0	0.4
THEUNISSEN	54871	1865.7	46.0	25.0	14.0	18.4	40.6	3.8	5.6	4.5	19.7	2.8	29.4	16.2	26.4	0.0	0.8
THOHOYANDOU	296896	1975.9	0.0	5.3	4.7	4.5	87.8	0.5	1.4	1.5	13.2	3.4	150.3	31.8	53.7	10.0	0.1
TROMPSBURG	6948	1960.1	39.0	27.7	7.0	30.0	36.2	1.8	6.7	3.8	19.0	-1.4	3.5	14.9	20.2	31.0	1.2
TSOLO	102578	1655.6	0.0	2.6	5.4	1.9	92.3	0.2	2.3	0.0	13.1	0.0	62.0	55.3	34.8	22.0	0.0
TSOMO	108815	955.9	0.0	0.9	3.1	0.1	97.2	0.1	1.0	0.0	12.8	4.7	113.8	29.7	66.2	90.0	0.0
TULBAGH	28024	945.0	47.0	25.5	13.7	26.3	35.7	1.1	12.2	2.6	20.5	0.7	29.7	16.4	18.1	43.0	1.0
UBOMBO	69939	4275.0	111.0	27.2	13.3	16.1	39.2	5.1	1.4	1.6	26.9	2.8	31.5	11.1	32.3	48.0	0.0
UITENHAGE	273946	3067.9	60.0	41.0	6.8	35.3	14.6	3.0	0.4	7.9	21.1	2.9	89.3	4.1	12.8	31.0	33.9
UMLAZI	559081	24.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22913.2	0.0	0.0	26.0	0.0
UMTATA	436827	1793.4	0.0	17.2	5.3	13.1	63.8	1.3	0.5	3.2	13.1	6.5	243.6	16.4	47.9	0.0	0.3
UMVOTI	52719	1766.7	32.0	23.1	9.5	24.2	43.6	2.4	7.7	5.4	18.5	-0.4	29.8	19.6	23.6	17.0	0.5
UMZIMKULU	161077	2433.7	0.0	1.0	2.7	0.5	97.0	0.2	1.0	0.0	12.8	1.1	66.2	29.7	66.0	7.0	0.0
UMZIMVUBU	57070	634.9	0.0	2.4	3.8	0.7	93.9	0.5	0.9	0.0	12.8	0.2	89.9	29.3	63.8	65.0	0.0
UMZINTO	54765	940.5	53.0	39.4	4.4	39.4	17.5	1.0	2.5	9.4	20.8	-1.8	58.2	8.7	8.0	9.0	1.6
UNDERBERG	11406	1882.9	35.0	11.9	8.9	20.2	62.5	0.1	13.4	3.7	19.5	-0.8	6.1	31.5	27.5	10.0	0.2
UNIONDALE	10256	3063.9	42.0	22.4	18.6	22.4	37.8	1.2	16.0	9.5	21.2	-0.8	3.3	17.5	19.0	5.0	0.9
UTRECHT	32660	3924.0	27.0	12.0	8.0	16.7	66.8	0.2	8.9	1.1	17.6	-3.0	8.3	31.4	32.0	8.0	0.1
VANDERBIJLPARK	744420	933.5	57.0	35.3	9.8	26.4	25.2	3.8	0.3	2.4	20.0	2.6	797.5	9.4	19.1	7.0	23.0
VANRHYNSDORP	14130	9512.6	50.0	37.6	8.7	37.6	16.8	0.8	7.2	9.5	21.0	1.1	1.5	7.7	8.4	25.0	2.7
VENTERSBURG	21640	1239.4	36.0	25.6	17.8	13.9	41.2	3.4	4.2	0.1	17.8	-0.1	17.5	16.7	26.0	21.0	1.3
VENTERSDORP	45544	3537.1	28.0	12.6	13.3	13.5	62.2	1.0	11.5	2.2	18.0	-1.9	12.9	31.4	29.1	17.0	0.3
VENTERSTAD	8053	2123.0	25.0	32.9	8.1	32.3	26.1	3.1	5.0	0.3	16.6	0.0	3.8	10.9	15.8	36.0	2.5
VEREENIGING	372595	1569.6	59.0	38.3	16.0	24.4	19.9	2.7	0.7	14.3	21.9	3.3	237.4	8.6	12.6	26.0	12.5
VICTORIA EAST	97671	1020.3	0.0	9.1	2.9	8.5	80.4	0.8	1.0	0.0	12.8	0.2	95.7	30.4	49.2	20.0	0.3
VICTORIA-WEST	13741	11270.3	36.0	38.1	10.9	35.2	16.1	0.8	6.8	0.6	18.1	0.8	1.2	7.8	8.0	43.0	1.9
VILJOENSKROON	76933	2088.3	41.0	15.3	13.2	17.0	55.0	1.9	12.4	1.6	19.7	0.6	36.8	26.3	28.2	20.0	0.3
VIRGINIA	112497	557.6	55.0	32.9	7.2	30.9	29.2	1.3	3.6	9.6	21.2	0.5	201.8	11.8	17.1	2.0	0.9
VOLKSRUST	43395	1887.2	42.0	31.4	7.1	30.2	30.4	2.7	4.0	2.7	18.8	-0.5	23.0	12.2	19.1	0.0	1.5
VREDE	49955	5399.6	31.0	19.2	9.3	18.7	54.1	2.1	5.4	3.1	17.9	-2.2	9.3	25.6	27.3	12.0	0.5
VREDEFORT	18717	1371.2	38.0	21.6	10.6	20.4	47.6	2.9	6.4	0.1	18.4	-1.9	13.7	21.5	25.9	15.0	0.8

Appendix 2 Continued

District Name	Population	Area km <sup>2</sup>	%FL	AFS	AOW	APW	APL	ABL	ASL	CS	PSI	PGR	PD	NAP	HOF	UR	URS
VREDENBURG	48158	743.7	58.0	49.5	5.4	44.8	0.4	0.5	0.2	5.7	20.5	1.8	64.8	0.2	0.2	23.0	100.5
VREDENDAL	31701	3766.5	50.0	26.5	13.3	28.0	33.3	0.4	13.3	9.3	21.8	2.2	8.4	16.9	15.3	11.0	0.9
VRYBURG	125254	30736.6	25.0	18.7	10.7	20.8	51.7	1.0	9.9	4.7	17.8	0.5	4.1	25.7	24.1	5.0	0.5
VRYHEID	107873	3841.4	36.0	23.7	5.2	26.0	46.4	1.3	4.9	5.8	18.7	-0.2	28.1	21.4	23.7	14.0	0.4
VULAMEHLO	145297	655.1	28.0	0.0	3.9	0.3	98.0	0.0	2.0	0.0	16.5	1.1	221.8	33.0	62.8	12.0	0.0
VULINDLELA	320086	276.0	50.0	12.5	8.2	6.0	72.0	2.0	1.0	0.0	19.0	1.2	1159.7	32.3	41.0	59.0	0.6
VUWANI	169932	522.9	0.0	1.3	4.2	1.2	96.5	0.3	1.2	0.0	13.1	3.5	325.0	35.8	57.5	41.0	0.0
WAKKERSTROOM	53594	2321.7	24.0	8.8	9.1	9.1	75.8	1.9	4.8	1.0	16.8	0.4	23.1	39.0	34.1	48.0	1.9
WARMBAD	56802	4428.6	42.0	21.0	10.7	19.4	49.8	1.4	6.9	9.1	20.0	0.2	12.8	25.5	23.5	19.0	0.8
WARRENTON	32369	1603.2	66.0	29.2	13.4	21.5	34.3	3.2	4.1	5.6	22.2	-0.1	20.2	14.0	21.9	12.0	1.8
WATERBERG	61427	8190.6	35.0	21.1	9.4	24.5	46.9	0.7	10.1	5.1	19.1	-0.4	7.5	24.3	20.7	27.0	0.4
WATERVAL-BOVEN	13295	965.2	43.0	27.5	3.9	31.8	37.4	1.8	6.0	2.2	19.2	-1.3	13.8	14.1	22.8	4.0	1.4
WEENEN	16368	948.9	16.0	20.9	10.0	18.0	52.4	1.3	4.5	6.1	16.1	-1.0	17.2	21.6	29.5	26.0	0.4
WELKOM	360973	571.1	58.0	37.4	3.6	36.1	22.8	1.2	1.2	7.5	21.0	2.7	632.1	8.5	14.3	11.0	1.7
WELLINGTON	41742	466.9	57.0	40.8	8.7	38.4	12.3	0.4	5.6	4.9	21.0	2.1	89.4	6.0	6.0	6.0	2.5
WEPENER	18730	1729.4	40.0	26.7	8.9	24.5	40.3	1.5	4.9	1.5	18.5	-0.8	10.8	15.0	25.0	14.0	1.3
WESSELSBRON	40629	1733.6	38.0	24.7	18.7	13.1	41.8	3.7	5.1	1.4	18.3	0.1	23.4	17.1	26.4	20.0	1.5
WESTONARIA	254135	577.7	50.0	47.6	18.0	31.8	2.5	1.9	0.4	2.9	19.4	4.2	439.9	1.1	1.4	29.0	9.2
WILLISTON	4561	13254.9	37.0	35.1	10.4	37.8	17.1	0.3	12.4	6.4	19.6	-1.2	0.3	8.3	8.4	10.0	1.5
WILLOWMORE	12001	7675.2	42.0	34.3	10.4	34.3	22.0	0.8	8.7	11.9	20.5	0.2	1.6	11.4	9.5	9.0	1.2
WINBURG	25326	2424.8	37.0	24.3	12.6	18.2	44.2	3.0	4.2	2.8	18.3	-1.6	10.4	19.2	25.8	14.0	1.0
WITBANK	264582	2836.6	55.0	35.8	5.7	33.0	24.0	3.0	1.4	13.2	21.4	1.2	93.3	9.6	15.9	0.0	3.2
WITRIVIER	35080	4352.2	42.0	20.4	6.3	27.0	49.1	0.6	9.5	8.7	20.4	-0.4	8.1	26.1	20.3	17.0	0.3
WITSIESHOEK	415231	495.1	44.0	4.3	5.7	4.1	89.3	0.3	1.9	0.2	18.7	6.9	838.7	38.8	47.1	15.0	0.1
WODEHOUSE	21525	2945.0	28.0	17.7	11.5	17.8	52.6	1.4	10.6	5.7	18.2	-1.8	7.3	26.2	26.8	14.0	0.7
WOLMARANSSTAD	85182	4966.2	25.0	21.7	13.2	17.5	48.1	1.4	6.9	2.6	17.1	0.3	17.2	20.6	26.9	36.0	0.7
WONDERBOOM	408629	1389.5	62.0	34.6	3.1	32.0	28.3	1.8	0.6	2.2	20.6	1.6	294.1	14.3	15.9	20.0	6.5
WORCESTER	137250	4075.4	52.0	36.5	9.3	36.0	18.3	0.7	7.9	8.7	21.2	1.4	33.7	8.7	9.4	10.0	1.7
WYNBERG	1561580	375.2	64.0	46.6	4.6	44.1	2.1	4.6	0.0	7.6	21.7	3.6	4162.0	1.3	3.4	19.0	0.0
XALANGA	57889	592.5	0.0	4.2	6.3	1.6	89.0	0.6	2.1	0.0	13.0	-0.3	97.7	53.8	34.0	10.0	0.2
XHORA	72443	748.3	0.0	0.4	2.7	0.1	98.2	0.1	1.0	0.0	12.8	0.5	96.8	29.9	66.9	22.0	0.0
ZASTRON	19095	1920.9	36.0	21.4	9.4	19.9	49.6	2.3	5.3	4.2	18.5	-0.7	0.0	22.0	27.2	35.0	0.6
ZWELITSHA	291248	1406.5	0.0	13.8	7.4	8.3	69.9	1.8	0.9	0.0	12.8	3.6	0.0	31.4	39.1	14.0	0.4

Appendix 2 Continued

District Name	NSI	ISI	ALP	SD	PA	PEI	UAP	UF	ICP	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI
ABERDEEN	7.6	11.3	6864.6	0.7	0.0	2288.4	6.7	0.7	0.5	0.0	117.9	16.3	19.2	177.3	220.2	11.4	0.9	0.0
ADELAIDE	12.8	6.4	720.2	0.4	0.3	240.3	37.6	13.6	125.0	0.0	3.3	21.2	0.8	45.0	72.0	9.1	3.6	0.0
ALBANY	10.0	10.8	363.2	0.6	0.3	121.3	31.9	50.8	28.0	0.0	2.8	13.8	1.6	32.6	39.2	5.3	11.9	1.0
ALBERT	10.2	8.2	1559.7	0.7	2.5	521.0	19.8	5.4	9.5	0.0	6.4	4.6	2.0	102.8	113.4	3.2	0.9	0.0
ALBERTON	1025.0	-1004.0	0.0	3.4	0.0	1.1	0.0	0.0	1122.7	136.2	0.0	4.0	0.0	0.1	0.0	0.0	0.0	0.0
ALEXANDRIA	13.0	4.7	507.9	0.6	11.9	173.5	100.1	158.9	139.8	0.0	9.2	0.4	1.5	258.5	111.5	72.4	1.9	0.0
ALFRED	19.9	-0.1	474.1	2.8	0.0	159.0	158.3	1607.4	6031.8	0.0	20.3	4.8	0.0	72.6	370.8	94.8	24.9	0.0
ALI WAL-NOORD/NORTH	14.0	7.3	484.2	1.0	0.0	161.7	33.5	25.5	74.0	0.0	3.0	4.2	1.8	30.2	44.9	4.5	0.3	0.0
AMERSFOORT	21.4	-3.5	287.3	1.1	0.0	96.2	44.6	255.5	172.6	98.8	6.6	30.3	0.0	19.5	20.0	52.2	0.0	1.0
BABANANGO	15.1	2.6	1936.5	0.8	1.9	646.4	19.1	5.3	263.4	0.0	18.9	0.0	0.0	40.1	287.7	22.4	20.4	0.0
BAFOKENG	39.3	-26.6	0.0	0.6	0.0	0.2	0.0	0.0	108.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
BALFOUR	14.4	3.8	317.9	1.1	0.0	106.4	45.5	432.3	158.2	217.0	13.2	414.9	0.2	243.6	3.6	123.5	2.8	7.0
BARBERTON	13.6	5.6	230.1	0.6	9.0	79.9	19.8	419.7	26.5	0.7	12.0	5.9	0.6	13.9	268.8	134.2	124.4	9.0
BARKLY-OOS/EAST	10.8	6.8	1936.2	0.6	0.0	645.6	25.7	11.1	28.6	41.0	11.7	4.9	1.3	84.6	149.6	5.2	0.9	0.0
BARKLY-WES/WEST	12.6	5.3	1157.3	0.7	2.6	386.8	7.9	24.4	11.2	0.0	5.6	1.3	0.0	15.2	48.3	49.4	13.8	11.0
BATHURST	14.9	3.5	241.5	0.8	0.8	81.0	46.8	191.2	137.4	0.0	5.0	7.4	0.7	26.9	45.8	10.1	40.3	0.0
BEAUFORT-WES/WEST	6.5	13.0	4241.3	0.5	1.9	1414.6	3.4	0.7	0.0	0.0	5.6	7.4	0.8	51.2	69.0	1.1	0.0	0.0
BEDFORD	13.0	7.6	955.0	0.6	0.0	318.5	21.2	11.6	32.0	0.0	5.0	7.2	1.8	64.3	107.4	10.1	0.8	0.0
BELFAST	10.9	7.7	592.9	0.4	2.2	198.5	39.0	199.4	41.1	0.0	11.3	3.4	0.1	39.6	178.9	89.0	11.4	13.0
BELLVILLE	117.9	-91.3	5.6	1.1	0.0	2.2	308.5	1151.4	689.7	0.0	0.7	26.8	0.5	32.3	26.4	0.3	9.5	0.0
BENONI	297.6	-275.8	0.6	0.4	0.0	0.3	135.9	38.2	490.2	1593.7	0.1	9.9	1.5	2.6	1.0	1.5	0.1	45.0
BERGVILLE	20.0	-1.8	353.8	0.8	6.4	120.3	36.2	322.7	334.9	176.8	8.2	698.2	0.1	140.5	77.9	68.2	2.4	0.0
BETHAL	17.1	2.7	188.3	0.3	0.0	62.9	44.3	605.8	160.8	333.3	9.3	1340.9	0.0	117.7	57.9	101.7	16.9	13.0
BETHLEHEM	13.4	6.4	274.2	0.5	5.6	93.5	58.5	562.4	64.6	70.1	13.0	22.3	1.2	51.9	95.4	121.1	25.0	3.0
BETHULIE	11.6	6.7	1754.2	1.2	12.3	589.2	12.4	2.5	8.5	0.2	5.1	11.9	1.1	83.5	91.9	2.2	0.0	1.0
BIZANA	35.3	-22.2	0.0	1.2	0.0	0.4	0.0	0.0	247.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BLOEMFONTEIN	20.4	2.8	93.0	0.7	0.2	31.3	26.1	103.4	17.2	6.3	2.0	24.8	5.2	22.6	17.5	14.5	0.8	0.0
BLOEMHOF	13.2	5.4	543.9	0.9	7.1	184.0	14.4	83.5	103.4	157.4	6.2	60.5	0.8	33.6	43.1	137.3	1.4	6.0
BOCHUM	36.8	-19.6	0.0	0.5	2.1	0.9	0.0	0.0	69.7	0.0	0.0	0.0	0.0	52.3	0.0	31.1	8.6	1.0
BOKSBURG	258.4	-236.4	0.6	4.3	0.5	1.8	229.5	7.7	611.2	968.8	0.1	21.0	0.6	0.7	2.1	0.4	1.6	34.0
BOLOBEDU	55.6	-38.8	0.0	0.6	0.5	0.4	0.0	0.0	252.0	0.0	0.0	0.0	0.0	9.0	0.0	2.2	22.5	0.0
BOSHOF	10.8	6.7	2078.0	0.5	0.0	692.8	24.8	111.2	10.1	6.8	24.1	1.1	3.8	82.5	212.1	41.2	32.4	2.0
BOTHAVILLE	16.2	2.3	342.7	0.9	0.3	114.6	81.5	834.0	66.8	385.2	19.1	11.6	3.1	28.7	48.4	223.5	6.9	15.0
BOTSHABELO	506.1	-488.3	0.0	3.2	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 2 Continued

District Name	NSI	ISI	ALP	SD	PA	PEI	UAP	UF	ICP	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI
BRAKPAN	159.6	-138.4	1.7	1.5	0.0	1.1	98.4	43.5	858.5	32.2	0.1	11.3	0.2	33.7	9.5	0.3	0.0	48.0
BRANDFORT	11.5	6.8	1006.6	1.1	0.0	335.9	36.8	61.3	32.1	14.3	15.0	2.4	5.4	43.7	125.6	47.2	3.2	1.0
BREDASDORP	5.6	16.0	1266.6	0.6	7.8	425.0	37.8	288.9	17.0	0.0	26.8	11.1	2.2	184.1	219.7	303.3	240.6	0.0
BRITS	21.8	-1.8	94.7	0.8	6.3	33.9	35.0	453.0	22.9	4.1	5.9	6.6	24.1	51.9	62.9	34.3	45.7	14.0
BRITSTOWN	7.9	11.1	8966.4	0.6	0.0	2989.0	4.7	2.3	0.3	0.0	10.2	3.3	0.0	120.8	127.1	2.0	1.4	0.0
BRONKHORSTSPRUIT	14.0	5.6	232.9	0.6	0.5	78.0	420.4	71.6	87.6	201.5	16.2	44.8	11.4	247.3	268.6	86.7	22.4	1.0
BULTFONTEIN	13.6	4.8	703.5	1.2	0.0	234.9	25.8	345.8	38.0	103.7	20.2	2.7	3.8	30.7	152.9	278.0	21.1	2.0
CACADU	36.2	-23.3	0.0	0.4	0.0	0.1	0.0	0.0	34.7	0.0	0.0	0.1	0.0	2.3	4.7	0.1	0.0	0.0
CALEDON	9.1	11.8	318.2	0.3	18.9	112.5	67.4	617.0	14.9	0.0	18.7	92.5	6.2	95.5	306.2	84.7	424.5	0.0
CALITZDORP	5.7	14.2	1037.2	0.4	9.3	349.0	22.5	35.9	49.9	0.0	12.5	4.6	2.1	268.7	220.2	14.1	143.2	0.0
CALVINIA	4.3	15.8	18365.7	0.3	0.9	6122.3	2.7	0.7	0.0	0.0	20.4	5.9	0.0	228.2	245.7	36.8	18.3	1.0
CAMPERDOWN	18.9	1.0	129.2	0.7	0.0	43.3	301.1	1153.5	239.0	0.0	25.6	0.2	0.1	1384.1	909.2	89.9	35.7	0.0
CAPE	251.9	-212.7	1.4	2.3	0.0	1.2	3.9	27.1	370.7	0.0	0.0	264.3	0.0	37.9	32.2	0.0	0.1	0.0
CARNARVON	6.8	12.5	13335.6	0.3	0.0	4445.3	1.7	0.3	0.1	0.0	11.2	6.6	0.0	263.1	185.2	3.0	0.1	0.0
CAROLINA	12.0	6.9	1511.8	0.7	0.9	504.5	80.3	239.1	30.1	62.6	18.9	3.2	0.1	60.7	184.5	169.6	11.7	4.0
CATHCART	12.7	4.7	1116.8	0.3	0.2	372.4	32.2	29.5	46.0	0.0	6.9	4.6	1.3	56.9	129.3	6.1	6.4	0.0
CENTANI	35.2	-22.1	0.0	0.4	0.0	0.1	0.0	0.0	419.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CERES	6.7	12.6	1247.0	0.3	5.4	417.6	7.1	164.5	0.7	0.0	23.3	7.5	7.1	27.2	358.5	15.9	493.0	0.0
CHATSWORTH	469.6	-448.8	0.0	7.4	0.0	2.5	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
CHRISTIANA	9.9	8.2	811.0	0.9	0.0	270.6	90.1	121.7	10.7	42.2	24.4	7.1	3.6	623.2	69.4	96.9	11.7	1.0
CLANWILLIAM	6.7	16.7	1887.4	0.5	10.1	632.7	13.7	178.4	2.2	0.0	23.1	4.7	5.3	52.2	245.6	52.2	564.7	1.0
CLOCOLAN	15.0	3.3	390.4	0.8	0.0	130.4	72.3	475.3	491.4	251.7	14.4	3.6	0.5	81.2	125.3	112.6	14.6	4.0
COFIMVABA	40.7	-27.9	0.0	0.5	0.0	0.2	0.0	0.0	105.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
COLESBERG	9.7	8.2	2293.9	0.6	2.3	765.6	10.0	2.6	2.6	0.0	4.0	270.3	0.0	145.7	82.4	2.8	3.4	0.0
COLIGNY	13.4	5.0	461.8	0.4	0.0	154.1	40.1	525.2	150.7	643.2	23.3	1.3	1.5	38.5	60.8	256.0	0.2	0.0
CRADOCK	11.1	7.7	1074.9	0.5	1.8	359.1	18.5	27.7	5.3	0.0	5.1	6.4	7.4	72.8	71.4	10.7	1.5	0.0
CULLINAN	14.6	5.8	97.7	0.7	5.7	34.7	39.1	13.0	51.1	27.2	3.0	0.0	3.4	35.6	23.4	10.4	7.6	24.0
DANNHAUSER	11.7	8.2	286.0	0.9	4.5	97.1	41.7	140.4	489.3	181.9	3.6	25.9	0.0	78.2	52.0	42.3	0.9	9.0
DE AAR	9.2	10.8	1081.7	0.7	0.0	360.8	6.6	12.0	2.2	0.0	1.8	3.3	0.0	92.8	18.8	0.1	0.2	0.0
DELAREYVILLE	13.5	4.7	662.0	0.7	1.0	221.2	30.6	407.5	50.1	236.2	30.7	2.3	4.8	48.6	146.5	341.3	2.7	0.0
DELMAS	17.1	1.9	144.1	0.3	0.0	48.1	104.6	1035.3	292.9	1298.4	13.4	120.9	0.0	290.9	102.2	128.8	40.2	29.0
DEWETSDORP	12.3	5.7	1189.8	1.2	0.5	397.2	35.6	48.1	39.7	12.8	15.5	8.1	1.2	84.0	128.5	46.9	0.4	0.0
DITSOBOTLA	31.1	-18.2	0.0	1.1	0.0	0.4	0.0	0.0	85.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DUNDEE	10.5	9.3	356.1	0.7	0.0	118.9	74.7	151.1	235.4	138.0	4.8	6.8	0.0	126.3	122.5	30.8	1.3	3.0

## Appendix 2 Continued

District Name	NSI	ISI	ALP	SD	PA	PEI	UAP	UF	ICP	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI
DURBAN	374.6	-342.1	0.3	2.1	0.0	0.8	0.0	142.5	0.0	0.0	0.0	67.5	0.0	0.1	1.4	0.9	0.0	0.0
DZANANI	42.4	-29.6	0.0	1.6	0.0	0.5	0.0	0.0	127.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EAST LONDON	54.8	-41.5	0.0	1.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EDENBURG	10.6	7.4	1997.8	0.8	0.1	666.2	20.5	4.5	20.5	0.6	7.7	2.4	2.3	89.2	96.2	4.8	4.7	1.0
EERSTEHOEK	56.1	-38.0	0.0	0.9	0.0	0.3	0.0	0.0	309.6	0.0	0.0	0.0	0.0	76.2	0.0	26.3	59.2	1.0
ELLIOT	14.0	5.2	842.6	0.9	0.0	281.1	23.5	62.1	73.7	0.0	6.0	5.2	0.3	41.4	80.4	21.2	1.9	0.0
ELLISRAS	5.9	15.8	0.0	0.6	1.5	0.7	9.5	13.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0
EMBUMBULU	87.2	-68.4	153.2	1.7	0.0	51.6	0.0	0.0	521.0	0.0	0.0	249.2	2.2	3.6	19.6	0.1	1.3	0.0
EMNAMBITHI	66.4	-48.7	0.0	1.0	0.0	0.3	0.0	0.0	429.7	0.0	0.0	0.0	0.0	2.6	0.0	2.6	0.5	0.0
EMPUMALANGA	154.4	-135.7	0.0	1.7	0.0	0.6	0.0	0.0	489.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EMZUMBE	59.5	-42.6	0.0	1.1	0.0	0.4	0.0	0.0	302.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENGCOBO	37.5	-24.7	0.0	0.8	0.0	0.3	0.0	0.0	121.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENSELENI	50.3	-33.0	0.0	1.4	0.2	0.5	0.0	0.0	336.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
ERMELO	10.1	8.9	368.7	0.7	0.3	123.2	46.6	300.9	22.9	0.0	10.9	225.3	0.1	39.8	98.1	83.4	6.8	3.0
ESHOWE	9.4	10.4	194.3	4.1	5.8	68.1	3.5	1249.0	73.7	5891.1	20.9	10.2	0.2	484.1	288.7	256.6	118.0	0.0
ESTCOURT	12.2	6.7	351.2	1.2	26.1	126.2	57.1	266.0	84.5	42.5	7.5	67.6	0.2	141.5	96.0	50.7	0.4	0.0
EXCELSIOR	14.6	3.8	700.3	0.7	0.0	233.7	31.5	168.7	96.9	13.0	15.6	18.3	1.2	65.0	218.9	105.5	3.5	0.0
EZINGOLWENI	90.8	-74.0	0.0	2.3	0.0	0.8	0.0	0.0	1250.2	170.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FAURESMITH	9.0	9.3	4014.6	1.0	1.3	1338.9	13.3	70.7	4.0	0.0	19.5	2.9	7.6	83.9	234.0	97.7	31.6	0.0
FICKSBURG	16.7	2.0	223.9	1.4	0.9	75.4	51.4	405.6	220.8	99.1	8.4	6.3	1.0	40.2	93.4	58.5	13.1	0.0
FORT BEAUFORT	15.8	4.2	210.6	1.5	1.5	71.2	18.9	56.3	94.0	117.8	1.8	3.9	0.6	17.0	38.9	1.1	17.6	0.0
FOURIESBURG	15.8	1.5	419.6	1.2	0.0	140.2	47.7	315.8	247.6	0.0	11.8	0.6	1.2	54.1	108.5	130.7	22.7	0.0
FRANKFORT	13.9	4.2	465.5	1.0	0.0	155.5	41.6	347.8	91.5	14.4	14.8	3.6	1.0	71.7	118.6	114.4	0.4	0.0
FRASERBURG	5.2	15.1	24835.5	0.5	0.0	8278.7	2.5	0.8	0.1	10.1	24.5	13.8	0.0	182.4	347.0	10.9	0.1	0.0
GANYESA	25.3	-12.4	0.0	0.5	0.0	0.2	0.0	0.0	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GATYANA	45.6	-32.8	0.0	0.3	0.0	0.1	0.0	0.0	295.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GCUWA	43.1	-30.3	0.0	0.8	0.0	0.3	0.0	0.0	467.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GEORGE	13.9	6.6	140.6	0.5	8.4	49.8	47.3	223.8	28.3	0.0	4.4	52.2	3.5	58.8	84.3	5.5	33.9	1.0
GERMISTON	231.8	-205.4	0.5	0.8	0.0	0.4	362.7	4.4	413.1	0.0	0.4	108.3	1.2	13.7	0.0	0.0	2.1	70.0
GIYANI	36.8	-20.5	0.0	0.4	0.8	0.4	0.0	0.0	88.5	0.3	0.0	1.0	0.0	9.8	27.3	1.3	5.6	0.0
GLENCOE	11.2	8.5	173.4	0.7	0.0	58.0	77.8	174.8	775.8	0.0	2.9	9.0	0.0	82.9	38.0	14.8	2.1	10.0
GOODWOOD	878.0	-855.7	0.0	5.3	0.0	1.8	0.0	0.0	0.0	25161.6	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
GORDONIA	9.1	11.0	2950.6	0.3	17.8	989.5	3.4	15.3	0.1	0.0	10.8	15.9	0.2	55.5	99.2	17.3	113.4	1.0
GRAAFF-REINET	7.9	11.9	1492.3	0.2	2.2	498.2	10.1	0.7	2.6	0.0	42.2	7.1	4.4	42.7	45.9	3.3	0.1	0.0

Appendix 2 Continued

District Name	NSI	ISI	ALP	SD	PA	PEI	UAP	UF	ICP	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI
GROBLERSDAL	15.6	4.1	210.6	0.4	6.2	72.4	19.7	461.3	54.4	0.0	15.2	21.5	0.6	9.7	148.1	138.4	42.4	15.0
HANKEY	12.2	6.5	303.3	0.4	29.5	111.1	15.5	309.5	23.2	17.7	149.8	1.7	4.0	11.3	149.7	18.7	183.9	0.0
HANOVER	8.8	8.1	6217.7	0.3	0.0	2072.7	7.3	2.1	1.5	0.0	10.5	2.5	0.0	79.7	128.5	0.9	0.0	0.0
HARRISMITH	11.7	6.6	725.5	0.5	4.9	243.7	33.5	217.5	36.4	0.0	14.4	6.5	2.5	62.9	203.9	163.9	23.8	0.0
HARTSWATER	16.3	2.4	175.3	1.9	0.0	59.1	43.4	217.1	423.3	2442.3	15.8	6.2	0.1	40.6	95.1	226.9	5.8	9.0
HAY	8.4	10.1	8620.7	0.4	0.2	2873.8	7.5	2.2	1.9	0.0	18.2	4.2	0.0	71.6	190.9	13.7	26.9	3.0
HEIDELBERG (CA)	7.2	11.8	1129.7	1.1	4.5	378.4	58.7	239.7	38.7	0.0	26.1	53.1	1.1	938.9	533.6	238.4	24.6	1.0
HEIDELBERG (G)	29.5	-10.0	80.8	0.7	6.9	29.5	397.5	250.4	263.4	0.0	4.8	0.3	9.2	19.2	31.3	37.1	7.0	1.0
HEILBRON	12.5	5.8	567.5	0.5	0.3	189.4	31.9	229.1	53.7	51.3	16.4	2.1	0.5	49.4	101.7	116.1	2.7	2.0
HENNENMAN	18.3	1.5	149.0	0.4	0.0	49.8	56.3	344.8	140.8	2291.5	6.4	3.0	0.8	22.5	28.9	110.4	2.7	3.0
HERBERT	10.0	7.6	2162.1	0.5	0.0	720.8	11.1	22.3	3.5	6.7	11.6	12.2	0.1	76.5	132.9	138.9	64.8	6.0
HERMANUS	10.1	12.9	102.3	2.2	7.3	37.3	8.5	57.4	70.3	0.0	1.6	16.9	0.9	17.6	41.2	1.2	11.5	3.0
HERSCHEL	31.9	-19.0	22.4	0.8	0.0	7.7	0.0	0.0	117.0	0.0	3.5	6.4	2.8	20.8	58.9	1.8	93.0	0.0
HEWU	32.3	-16.8	0.0	1.2	4.6	1.9	0.0	0.0	132.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.0
HIGHVELD RIDGE	44.4	-27.9	34.2	0.7	0.0	11.7	12.4	243.8	57.5	0.0	1.7	0.0	0.0	13.7	31.4	19.8	1.2	0.0
HLABISA (KZN)	41.2	-22.4	50.8	0.5	0.1	17.1	0.0	0.0	48.8	316.3	2.1	8.4	0.1	10.2	29.9	17.8	9.6	0.0
HLABISA (KZN)	23.7	-6.9	0.0	0.6	156.0	52.2	0.0	0.0	1207.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HLANGANANI (GAZA)	77.1	-59.8	0.0	1.8	0.0	0.6	0.0	0.0	225.7	0.0	0.0	0.0	0.0	38.2	0.0	4.6	4.5	0.0
HLANGANANI (KZN)	33.1	-13.9	92.2	1.7	0.8	31.6	29.6	221.4	162.1	0.0	0.2	0.0	0.8	1.7	4.4	0.3	0.0	1.0
HOFMEYR	9.9	12.7	4278.1	0.7	0.0	1426.3	7.3	2.7	3.9	0.0	172.0	6.5	3.1	260.9	905.8	2313.6	123.8	0.0
HOOPSTAD	12.5	4.9	250.1	0.7	9.7	86.8	49.8	1091.6	155.1	0.0	3.9	1.0	0.3	35.6	40.4	114.6	3.0	2.0
HOPEFIELD	7.5	11.1	8282.6	1.2	2.2	2762.0	7.7	31.8	10.2	147.4	18.2	3.8	0.0	99.3	276.1	499.2	48.3	0.0
HOPETOWN	6.2	12.3	2029.4	0.7	0.0	676.7	16.6	7.7	1.9	0.0	488.3	15.0	5.7	601.3	459.3	54.3	42.3	1.0
HUMANSDORP	10.1	10.6	0.0	0.5	24.3	8.3	193.0	695.5	74.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
IDUTYWA	15.0	-15.0	0.0	1.5	0.0	0.5	0.0	0.0	221.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IMPENDLE	12.0	8.2	1435.5	0.6	37.0	491.0	26.2	176.7	184.5	0.0	33.2	0.0	0.0	1243.7	495.1	42.9	66.7	0.0
INANDA	157.8	-136.5	5.5	1.7	1.9	3.0	35.1	1607.6	57.5	0.0	0.6	2.6	0.1	1.6	7.7	9.2	0.4	0.0
INDWE	16.5	1.8	434.9	1.0	0.0	145.3	29.4	63.8	336.4	0.0	3.8	1.0	0.6	22.9	39.8	7.2	0.0	0.0
INGWAVUMA	30.8	-15.4	0.0	0.4	16.2	5.5	0.0	0.0	65.0	0.0	0.0	0.0	0.0	47.5	0.0	9.3	14.3	1.0
INKANYEZI	45.6	-28.5	0.0	0.9	0.2	0.4	0.0	0.0	360.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IXOPO	15.4	3.8	462.3	0.5	0.5	154.4	125.9	414.0	200.3	0.0	19.5	0.9	0.2	236.5	280.4	29.8	40.5	0.0
JACOBSDAL	12.2	6.1	1968.2	1.0	0.0	656.4	17.6	84.7	12.4	0.0	15.4	0.3	4.6	194.8	84.5	20.8	14.6	2.0
JAGERSFONTEIN	11.5	7.1	1089.2	1.5	0.0	363.6	13.9	3.3	14.7	7.2	2.7	3.4	0.3	31.4	54.0	1.3	1.5	1.0
JANSENVILLE	9.6	11.0	3369.4	0.9	0.0	1123.5	6.5	0.8	0.6	0.1	65.4	6.7	0.4	88.4	109.2	0.3	0.1	0.0

Appendix 2 Continued

District Name	NSI	ISI	ALP	SD	PA	PEI	UAP	UF	ICP	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI
JOHANNESBURG	1151.0	-1125.7	0.1	2.2	0.0	0.8	17.7	16.7	203.3	0.0	0.0	20.6	2.3	0.4	0.3	0.0	0.1	18.0
JOUBERTINA	7.7	11.0	450.3	1.8	15.8	156.0	10.7	291.0	23.1	1.7	23.3	0.2	5.0	12.2	232.4	0.3	755.2	0.0
KEISKAMMAHOEK	35.6	-22.7	0.0	1.3	0.0	0.4	0.0	0.0	397.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
KEMPTON PARK	271.3	-249.5	2.1	1.3	0.0	1.2	256.4	27.7	411.6	0.0	0.2	8.1	9.6	11.8	3.5	2.1	0.5	10.0
KENHARDT	6.2	15.2	28232.9	0.3	0.0	9411.1	2.1	5.7	0.0	0.2	37.2	4.3	0.0	260.1	199.4	4.4	51.5	1.0
KIMBERLEY	21.1	0.4	151.4	0.3	1.2	51.0	12.2	41.9	32.2	0.0	1.0	34.3	0.0	34.5	9.5	6.6	3.9	3.0
KING WILLIAM'S TOWN	14.3	12.9	132.5	0.4	0.0	44.3	57.8	29.1	637.9	0.0	1.1	7.9	0.3	15.1	39.7	0.7	1.9	0.0
KIRKWOOD	13.9	5.1	264.5	0.3	20.6	95.1	17.2	135.2	35.8	0.0	6.1	1.8	4.2	23.6	92.7	2.6	81.0	0.0
KLERKSDORP	32.2	-11.2	57.2	0.2	0.0	19.2	38.5	209.8	55.0	0.0	1.5	12.8	3.7	25.0	5.2	10.9	0.4	6.0
KLIPRIVIER	11.2	9.4	322.6	0.2	0.0	107.6	33.0	159.6	104.9	95.2	2.4	11.7	0.1	53.9	34.0	3.9	0.2	1.0
KNYSNA	10.8	10.2	194.6	0.4	19.3	71.5	18.7	70.2	25.3	15.0	3.0	11.5	0.8	18.8	68.7	0.5	3.2	2.0
KOFFIEFONTEIN	10.6	8.5	909.6	1.0	0.0	303.5	11.4	21.3	10.5	0.0	4.4	5.3	0.9	16.8	41.0	51.4	4.3	2.0
KOMGA	10.4	6.8	654.5	1.4	0.1	218.6	66.3	55.6	210.5	17.2	6.0	10.0	0.3	46.0	113.6	6.0	36.5	0.0
KOPPIES	14.5	3.8	500.7	1.1	2.4	168.1	30.9	351.7	145.7	0.0	23.1	2.2	2.7	79.2	70.2	249.5	13.5	4.0
KOSTER	14.3	4.4	611.9	1.0	0.0	204.3	31.3	348.7	103.0	88.1	19.8	1.9	5.0	136.6	149.9	221.2	2.8	1.0
KRANSKOP	16.1	1.9	326.7	3.0	0.0	109.9	21.8	203.8	216.7	6631.8	10.8	0.9	0.0	18.3	209.5	138.6	8.6	0.0
KROONSTAD	15.4	4.9	223.7	0.5	0.0	74.7	31.9	336.6	44.9	1.2	7.5	14.1	1.9	36.2	27.0	79.9	13.5	3.0
KRUGERSDORP	42.9	-21.4	18.5	0.7	2.2	7.2	325.7	325.2	70.7	927.1	2.9	8.6	12.0	137.0	41.3	1.5	12.3	25.0
KUDUMANE	21.0	-7.8	0.0	0.7	0.0	0.2	0.0	0.0	11.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
KUILSRIVIER	196.6	-176.1	2.4	4.6	0.0	2.3	111.1	722.9	2543.4	0.0	1.0	8.6	0.2	109.8	31.0	0.2	7.6	0.0
KURUMAN	5.8	13.5	5812.3	0.4	0.0	1937.6	6.3	0.6	4.1	0.0	11.7	28.5	0.0	92.0	130.0	0.5	0.3	2.0
KWA MAPUMULU	53.0	-36.0	0.0	0.6	0.0	0.2	0.0	0.0	213.9	0.0	0.0	0.0	0.0	5.2	0.0	3.5	0.7	0.0
KWABHACA	37.9	-25.1	0.0	0.4	0.0	0.1	0.0	0.0	207.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LADISMITH	8.0	12.6	1986.8	0.4	7.2	664.8	5.5	20.4	3.9	0.0	10.5	2.9	2.0	58.2	126.8	9.3	112.7	0.0
LADY GREY	11.0	8.3	1185.2	0.3	0.0	395.2	28.0	17.3	121.4	0.0	7.1	0.0	0.6	0.0	0.0	0.0	0.0	0.0
LADYBRAND	13.0	5.8	461.8	0.3	0.0	154.1	33.0	225.2	133.3	0.0	11.9	2.7	2.2	53.9	123.4	93.8	12.0	0.0
LAINGSBURG	5.7	16.4	12326.7	0.5	5.7	4110.9	2.0	2.7	0.1	3.9	15.7	8.6	0.5	117.2	175.0	4.9	45.4	0.0
LEHURUTSHE	30.7	-17.8	0.0	0.6	2.4	1.0	0.0	0.0	81.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LETABA	13.6	7.0	0.0	0.9	6.6	2.5	145.0	0.0	105.5	0.0	0.0	25.1	0.0	35.6	389.5	5.4	444.5	1.0
LIBODE	37.0	-23.6	0.0	0.6	0.0	0.2	0.0	0.0	234.3	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LICHTENBURG	17.5	0.7	513.3	0.5	0.0	171.2	61.8	475.5	38.1	0.0	23.5	14.8	6.8	53.1	116.1	260.1	3.6	1.0
LINDLEY	14.3	3.5	527.7	0.7	0.0	176.1	36.8	330.4	70.2	559.7	15.5	0.8	4.0	36.6	100.1	191.3	3.2	1.0
LIONS RIVER	13.4	6.9	265.4	2.2	2.0	89.9	124.7	522.1	232.1	156.8	10.3	2.9	0.2	177.2	140.1	21.5	11.0	0.0
LOWER TUGELA	24.8	-4.1	76.6	0.6	0.1	25.7	10.8	2193.6	15.5	0.0	8.9	11.6	0.1	10.8	128.8	182.8	1.7	0.0

Appendix 2 Continued

District Name	NSI	ISI	ALP	SD	PA	PEI	UAP	UF	ICP	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI
LOWER UMFOLOZI	10.3	12.7	120.8	1.5	36.8	53.1	8.4	342.4	13.9	0.0	7.7	37.6	0.1	19.3	254.0	126.4	6.6	0.0
LULEKANI	53.0	-37.3	0.0	2.4	63.7	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0
LUSIKISIKI	31.3	-18.4	0.0	0.8	0.0	0.3	0.0	0.0	162.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LYDENBURG	10.4	10.0	627.0	1.0	6.2	211.4	19.2	110.0	27.8	0.0	11.0	14.7	0.2	60.3	133.5	48.3	31.9	3.0
MACLEAR	11.5	8.2	948.0	0.9	0.0	316.3	22.6	143.3	75.7	64.7	8.1	7.5	0.4	38.3	125.8	48.7	20.5	0.0
MADADENI	175.6	-157.2	0.0	2.6	0.0	0.9	0.0	0.0	1147.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0
MADIKWE	20.9	-7.9	0.0	1.2	0.0	0.4	0.0	0.0	45.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
MAHLABATINI	40.8	-24.5	0.0	1.4	8.0	3.1	0.0	0.0	249.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MALAMULELE	49.8	-33.6	0.0	2.0	0.8	0.9	0.0	0.0	92.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
MALMESBURY	13.5	7.5	223.7	0.4	4.7	76.3	122.8	926.3	82.5	0.0	13.0	308.7	0.0	277.1	152.8	171.7	44.6	0.0
MANKWE	28.6	-15.7	0.0	0.8	13.7	4.8	0.0	0.0	43.3	0.0	0.0	0.0	0.0	10.7	0.0	15.5	1.4	0.0
MAPULANENG	63.1	-44.4	0.0	1.3	3.7	1.7	0.0	0.0	317.2	0.0	0.0	0.0	0.0	25.5	0.0	9.8	0.4	0.0
MARICO	15.6	2.7	854.7	0.9	0.9	285.5	17.4	62.4	36.3	0.0	9.0	0.0	7.5	96.1	60.3	24.6	21.3	1.0
MARQUARD	13.6	4.0	531.7	1.1	0.0	177.6	42.9	292.2	202.6	422.2	17.0	4.7	0.6	0.0	174.0	0.0	0.0	0.0
MATATIELE	31.5	-18.6	0.0	1.1	0.0	0.4	0.0	0.0	0.0	45.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAXESIBENI	32.1	-19.3	0.0	2.2	0.1	0.8	0.0	0.0	193.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MBIBANA	37.4	-19.0	0.0	2.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MDANTSANE	272.6	-259.9	0.0	3.6	0.9	1.5	0.0	0.0	617.1	0.0	0.0	2.8	0.0	0.0	12.0	0.0	0.0	0.0
MDUTJANA	82.9	-64.8	0.0	2.1	0.0	0.7	0.0	0.0	260.0	0.0	0.0	1.4	0.0	0.0	11.1	0.0	0.0	0.0
MESSINA	9.9	8.9	1261.1	0.4	3.8	421.8	19.6	60.0	6.7	0.0	0.0	1.6	3.1	0.0	151.1	0.0	0.0	7.0
MHALA	54.8	-38.4	0.0	0.6	15.0	5.2	0.0	0.0	274.4	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MIDDELBURG (CA)	7.8	11.0	1990.7	0.7	0.0	663.8	11.6	3.7	2.4	0.0	4.4	3.3	1.5	64.7	72.6	5.6	2.1	0.0
MIDDELBURG (G)	13.6	7.1	218.3	0.7	1.0	73.3	84.3	590.8	51.4	0.0	11.6	611.3	0.1	58.3	159.6	130.1	16.5	11.0
MIDDLEDRIFT	41.2	-28.3	0.0	2.5	0.0	0.8	0.0	0.0	326.8	8457.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MKOBOLA	91.2	-86.5	0.0	1.7	0.0	0.6	0.0	0.0	192.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOKERONG	45.1	-27.2	0.0	0.6	1.8	0.8	0.0	0.0	52.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
MOLOPO	26.3	-13.4	0.0	1.1	0.0	0.4	0.0	0.0	61.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MOLTENO	12.7	4.2	1075.3	0.8	0.0	358.7	18.8	5.5	45.2	0.0	4.2	2.7	0.9	40.7	67.0	1.9	0.1	1.0
MONTAGU	6.2	13.9	720.4	0.9	15.0	245.4	5.9	75.3	7.0	0.0	6.1	7.4	1.8	28.4	110.9	4.3	155.7	0.0
MOOIRVIER	12.2	6.5	426.0	0.9	14.5	147.1	138.9	503.9	194.7	0.0	12.6	2.4	0.2	247.4	148.9	24.5	18.1	0.0
MOORREESBURG	5.0	14.5	812.3	0.7	0.0	271.0	25.8	855.8	43.3	0.0	39.5	16.5	0.3	0.0	360.9	0.0	0.0	1.0
MORETELE	54.0	-40.8	0.0	0.9	0.4	0.4	0.0	0.0	111.4	0.0	0.0	12.8	0.0	0.0	41.7	0.0	0.0	0.0
MOSELBAY	10.4	10.7	199.5	0.4	2.7	67.6	42.3	117.0	46.8	0.0	3.5	9.0	2.6	24.1	35.6	18.5	4.7	0.0
MOUNT CURRIE	10.2	9.0	672.5	0.5	0.5	224.5	51.4	290.4	78.9	0.0	9.5	4.7	0.2	144.8	102.3	21.8	5.3	0.0

Appendix 2 Continued

District Name	NSI	ISI	ALP	SD	PA	PEI	UAP	UF	ICP	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI
MOUTSE	63.2	-45.7	0.0	1.8	3.5	1.7	0.0	0.0	1506.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MPOFU	28.2	-14.5	0.0	2.6	0.0	0.9	0.0	0.0	182.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MQANDULI	45.8	-33.0	0.0	1.3	0.0	0.4	0.0	0.0	339.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MSINGA	47.5	-32.5	0.0	1.4	0.0	0.5	0.0	0.0	186.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MT. FLETCHER	30.0	-17.1	0.0	1.0	0.0	0.3	0.0	0.0	140.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MTONJANENI	11.6	8.3	503.2	1.1	11.2	171.9	39.3	229.7	99.7	0.0	13.3	2.0	0.1	200.9	326.1	126.1	17.4	0.0
MTUNZINI	17.9	2.4	146.2	2.1	1.9	50.1	56.1	1853.2	128.9	0.0	13.1	0.0	0.0	432.8	353.6	380.9	4.3	5.0
MURRAYSBURG	7.1	11.4	6978.9	0.7	0.0	2326.5	5.7	0.3	1.2	0.0	11.0	4.5	0.3	78.3	176.3	5.6	0.5	0.0
MUTALE	26.5	-13.4	0.0	0.7	0.2	0.3	0.0	0.0	75.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
NAMAKGALE	108.4	-90.4	0.0	6.5	0.0	2.2	0.0	0.0	2013.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NAMAKWALAND	10.1	11.3	3430.2	0.2	3.5	1144.6	1.3	1.0	0.0	0.0	3.6	1.3	0.0	38.5	30.5	0.9	4.4	6.0
NAPHUNO	38.9	-21.3	0.0	0.2	11.9	4.0	0.0	0.0	82.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NDWEDWE	94.5	-76.2	0.0	0.6	0.0	0.2	0.0	0.0	411.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEBO	47.8	-30.1	0.0	0.2	1.9	0.7	0.0	0.0	101.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
NELSPRUIT	20.5	2.0	339.6	0.3	1.1	113.7	14.5	280.7	47.7	0.0	11.6	95.0	0.2	49.5	232.4	54.4	76.5	6.0
NEW HANOVER	17.4	1.5	179.1	0.6	1.5	60.4	36.0	1478.7	73.1	19.5	18.3	0.2	0.1	208.0	273.3	189.2	6.2	0.0
NEWCASTLE	8.6	13.9	206.6	0.9	0.4	69.3	43.1	130.1	143.2	0.0	30.6	252.2	0.1	44.0	28.4	7.4	1.0	6.0
NGOTSHE	14.4	3.1	583.8	0.9	13.0	199.2	21.5	115.9	73.2	18.3	12.4	2.0	0.1	13.2	160.9	77.7	40.1	0.0
NGQELENI	36.1	-23.2	0.0	1.5	0.0	0.5	0.0	0.0	309.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NIGEL	36.4	-16.6	39.5	0.9	0.4	13.6	509.5	47.1	353.4	0.0	2.3	14.4	4.4	21.5	15.6	26.9	0.9	7.0
NKANDLA	39.1	-22.8	0.0	1.2	2.4	1.2	0.0	0.0	203.0	141.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NKOMAZI	59.2	-42.9	0.0	1.4	0.9	0.8	0.0	0.0	309.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NONGOMA	40.9	-24.7	0.0	1.1	0.7	0.6	0.0	0.0	319.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NOUPOORT	10.5	6.8	1052.0	0.9	0.0	351.0	6.8	2.6	6.0	0.0	2.2	4.3	0.0	21.3	33.0	0.4	0.1	0.0
NQAMAKWE	37.0	-23.8	0.0	1.8	0.0	0.6	0.0	0.0	244.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NQUTU	51.6	-34.1	0.0	1.2	0.0	0.4	0.0	0.0	397.5	0.0	0.0	15.4	0.0	0.0	150.7	0.0	0.0	0.0
NSIKAZI	120.2	-102.3	0.0	1.1	0.4	0.5	0.0	0.0	474.4	0.0	0.0	0.5	0.0	0.0	10.4	0.0	0.0	0.0
NTUZUMA	1744.1	-1724.4	0.0	12.4	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OBERHOLZER	103.9	-83.8	8.3	2.3	7.4	6.0	226.2	52.9	195.6	0.0	0.3	6.6	3.5	1.8	2.5	5.1	0.8	28.0
ODENDAALSRUS	37.0	-17.9	52.9	1.2	0.0	18.0	18.2	492.4	234.5	116.3	1.8	2.4	0.6	2.0	11.8	25.7	2.3	20.0
ODI I	107.3	-94.4	0.0	1.0	5.7	2.2	0.0	0.0	96.3	174.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
ODI II	21.9	-21.9	0.0	1.4	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0
OKHAHLAMBA	53.0	-35.8	0.0	1.1	2.3	1.1	0.0	0.0	384.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ONGOYE	83.7	-65.2	0.0	2.5	17.3	6.6	0.0	0.0	1001.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0

Appendix 2 Continued

District Name	NSI	ISI	ALP	SD	PA	PEI	UAP	UF	ICP	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI
OUDTSHOORN	13.5	13.1	96.4	1.1	13.9	37.1	37.9	81.8	15.6	0.0	3.6	206.0	2.7	96.5	39.4	0.3	38.4	1.0
PAARL	30.1	-9.8	132.9	1.7	31.3	55.3	173.0	71.2	135.3	0.0	2.0	5.7	4.9	76.9	53.4	4.7	4.7	0.0
PARYS	19.7	2.9	84.5	3.2	0.0	29.3	261.6	878.6	338.0	0.0	10.1	30.7	5.1	343.8	239.2	1.7	257.8	4.0
PAULPIETERSBURG	11.6	9.5	323.8	1.1	0.8	108.5	28.4	212.0	168.2	79.4	13.1	14.6	1.0	113.2	52.1	105.0	0.2	9.0
PEARSTON	11.7	22.7	1152.7	0.8	0.0	384.5	23.1	100.1	3.2	59.1	26.6	5.0	0.1	176.8	632.2	356.9	24.0	1.0
PEDDIE	16.2	1.7	266.3	0.6	0.2	89.0	12.3	1.9	77.9	0.0	5.9	0.8	2.7	6.1	9.7	0.3	0.1	0.0
PELGRIMSREST	24.9	-12.1	0.0	0.3	11.8	4.0	0.0	0.0	28.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PELGRIMSREST (KZN)	8.3	21.0	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
PETRUSBURG	14.4	3.5	1473.5	0.5	0.0	491.3	20.4	80.4	12.6	0.0	34.1	8.1	0.0	10.2	1079.6	21.5	137.6	0.0
PHALABORWA	7.5	14.5	662.5	0.6	48.6	237.3	2.5	15.1	0.0	0.5	10.5	0.7	2.4	48.6	78.7	74.3	5.0	3.0
PHILIPPOLIS	9.0	9.6	2032.4	0.8	0.4	677.9	11.0	2.5	3.2	0.0	0.0	99.8	3.7	26.9	145.6	19.7	160.9	0.0
PHILIPSTOWN	7.2	10.3	2588.4	0.9	1.6	863.6	6.6	5.3	0.8	0.1	6.0	1.6	4.2	47.6	99.7	4.2	1.5	0.0
PIET RETIEF	14.8	4.2	664.7	1.5	2.8	223.0	34.5	239.0	49.4	0.0	1.6	52.4	0.1	8.6	18.8	4.2	2.3	7.0
PIETERMARITZBURG	72.8	-48.9	92.7	1.9	2.2	32.3	137.3	438.1	206.5	93.1	2.8	1.6	0.2	9.4	51.1	26.8	5.6	0.0
PIETERSBURG	7.8	19.2	0.0	0.5	9.7	3.4	34.3	192.1	18.7	0.0	0.0	145.3	0.0	85.0	91.0	15.6	70.2	2.0
PIKETBERG	5.8	15.5	997.2	0.6	4.2	334.0	29.9	517.9	10.9	7.5	0.0	91.0	8.9	276.1	354.7	20.1	253.3	1.0
PINETOWN	128.1	-104.5	146.2	2.0	2.4	50.2	32.4	1224.0	329.6	0.0	4.1	0.5	5.6	14.2	41.8	22.8	46.1	0.0
POLELA	16.6	4.7	848.4	4.5	5.8	286.2	37.8	257.3	2113.1	0.0	63.5	779.6	0.1	80.4	511.1	78.4	344.6	0.0
PORT ELIZABETH	133.6	-111.4	0.3	1.7	0.3	0.8	24.6	29.7	84.3	0.0	0.1	0.0	0.0	0.4	1.7	0.1	0.0	4.0
PORT SHEPSTONE	15.1	7.4	54.7	1.2	2.9	19.6	28.2	564.8	25.2	0.0	20.8	127.1	0.1	39.5	26.1	80.1	28.9	1.0
POSTMASBURG	5.9	14.6	47.6	0.5	0.0	16.0	7.8	0.1	2.5	0.0	0.7	20.3	0.0	65.6	96.5	0.1	7.9	1.0
POTCHEFSTROOM	20.4	0.1	513.9	0.5	1.8	172.0	103.1	172.4	45.1	0.0	1.0	2.2	0.0	7.8	13.6	0.0	0.1	3.0
POTGIETERSRUS	13.0	6.5	316.3	0.2	4.9	107.1	14.7	50.8	6.9	2.5	9.8	31.4	8.8	243.5	140.3	52.9	2.8	5.0
PRETORIA	114.5	-83.9	126.3	0.8	2.3	43.1	314.5	115.0	87.6	100.4	0.0	1.3	40.9	4.6	13.7	7.9	4.2	1.0
PRIESKA	4.6	13.9	248.7	0.7	0.0	83.1	2.8	2.6	0.2	0.3	26.2	1867.0	5.6	1140.0	391.6	20.2	217.0	1.0
PRINCE ALBERT	7.2	12.5	12796.4	0.7	7.7	4268.3	4.1	1.7	0.1	0.0	24.3	14.7	0.0	192.8	223.3	251.0	11.3	0.0
QUEENSTOWN	12.6	7.9	1143.6	0.5	0.7	381.6	21.0	21.8	84.1	0.0	1.9	0.7	3.6	22.8	19.7	1.2	1.1	0.0
QUMBU	33.5	-20.7	117.1	0.6	0.0	39.2	0.0	0.0	249.0	0.0	0.8	13.0	3.8	24.3	13.2	1.7	0.1	0.0
RANDBURG	238.1	-211.1	0.0	1.0	0.0	0.3	36.5	11.3	32.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0
RANDFONTEIN	43.5	-21.5	2.1	0.9	0.0	1.0	609.0	98.9	149.2	4.3	0.1	348.5	0.1	2.7	0.5	0.0	0.4	25.0
REDDERSBURG	11.4	7.0	683.2	0.3	0.0	227.9	19.6	10.9	29.1	282.5	43.9	260.1	6.2	879.4	511.1	508.7	374.8	5.0
REITZ	13.7	4.3	324.0	0.4	0.0	108.2	40.9	496.5	86.3	0.8	2.1	0.5	0.8	13.0	29.3	1.4	0.0	0.0
RICHMOND (CA)	7.3	10.9	3443.4	0.5	0.0	1148.0	4.7	1.5	0.9	17.2	139.5	23.2	1.6	293.1	1223.3	1358.5	303.8	0.0
RICHMOND (KZN)	17.6	1.3	2411.8	2.4	0.5	804.9	68.0	537.5	191.8	0.0	3.1	32.1	0.0	35.2	257.3	1.0	0.3	0.0

Appendix 2 Continued

District Name	NSI	ISI	ALP	SD	PA	PEI	UAP	UF	ICP	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI
RITAVI	72.6	-55.0	31.6	2.6	0.0	11.4	0.0	0.0	994.1	0.0	2.7	0.1	0.1	10.8	7.1	14.5	6.5	0.0
RIVERSDALE	9.1	12.8	0.0	0.4	0.4	0.3	30.9	94.5	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ROBERTSON	9.2	11.2	827.1	0.7	3.3	277.0	21.7	242.9	25.7	0.0	11.2	7.0	3.1	108.1	111.1	57.4	21.3	1.0
ROODEPOORT	240.8	-215.6	38.5	1.6	0.0	13.4	277.2	25.2	421.7	0.0	1.1	1.8	4.8	6.7	21.7	2.7	43.0	29.0
ROUXVILLE	11.9	5.9	15.7	0.4	0.4	5.5	25.9	12.7	36.4	2.7	12.0	258.3	1.0	47.5	115.9	8.8	61.6	0.0
RUSTENBURG	19.8	1.5	176.0	2.4	8.6	62.3	142.9	108.6	68.6	1.3	0.8	1.6	2.0	4.6	14.6	2.2	0.0	13.0
SASOLBURG	27.8	-6.5	104.0	1.7	0.0	35.2	27.1	385.5	146.2	1.4	4.2	39.1	6.9	168.2	65.8	15.3	10.5	17.0
SCHWEIZER-RENEKE	13.7	3.2	109.5	0.4	0.0	36.6	25.7	296.5	16.3	25.9	5.8	1425.1	0.7	74.6	112.9	65.4	1.2	1.0
SEKGOSESE	56.6	-39.4	286.6	2.7	2.3	97.2	0.0	0.0	1526.1	5931.3	10.0	0.9	2.2	17.6	47.7	69.4	0.0	0.0
SEKHUKHUNELAND	41.6	-23.7	0.0	0.8	1.9	0.9	0.0	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
SENEKAL	17.8	0.1	0.0	1.0	0.9	0.6	43.4	220.7	61.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SESEGO	35.2	-16.8	85.1	0.9	0.8	29.0	0.0	0.0	73.0	36.3	2.2	0.5	0.8	6.6	17.6	16.9	2.3	4.0
SIMDLANGENTSHA	56.9	-39.7	0.0	1.0	3.4	1.5	0.0	0.0	1163.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SIMONSTAD	61.0	-39.5	144.0	3.2	31.5	59.6	7.8	8.6	70.9	0.0	7.2	0.0	0.1	0.0	0.0	0.0	0.0	17.0
SIPHAQUENI	30.2	-17.1	0.2	1.2	0.0	0.5	0.0	0.0	298.5	0.0	0.0	0.9	0.0	1.6	6.4	0.0	0.0	0.0
SMITHFIELD	11.3	6.9	0.0	0.7	0.5	0.4	20.6	6.3	15.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SOMERSET-EAST	8.3	10.4	614.7	0.6	0.3	205.2	20.0	18.0	7.8	0.1	2.4	2.5	1.4	18.6	36.8	0.9	0.0	1.0
SOMERSET-WEST	55.6	-32.5	793.2	3.4	9.1	268.6	33.7	291.1	282.9	0.0	3.4	2.8	4.7	41.7	56.2	5.8	1.5	0.0
SOSHANGUVE	4731.0	-4711.2	3.0	21.9	0.0	8.3	0.0	0.0	0.0	0.0	0.3	3.2	0.5	1.7	16.1	0.4	10.4	0.0
SOUTPANSBERG	12.6	7.8	0.0	0.4	1.1	0.5	18.0	50.5	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
SOUTPANSBERG (KZN)	0.0	0.0	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPRINGS	137.9	-115.2	281.3	0.5	0.0	93.9	544.7	4.2	364.5	0.0	0.0	2.9	6.5	22.3	41.6	1.4	30.3	100.0
STANDERTON	13.4	5.2	11.4	0.8	0.0	4.1	88.4	376.2	68.4	6.0	0.8	33.7	1.9	10.4	7.7	6.9	5.4	12.0
STELLENBOSCH	38.7	-16.0	420.3	3.5	19.5	147.8	35.5	1246.4	348.9	6852.6	17.6	908.9	0.1	225.6	165.5	166.9	4.2	5.0
STERKSTROOM	11.6	6.5	0.0	1.3	0.0	0.4	14.3	6.0	62.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STEYNSBURG	13.6	4.3	887.1	1.3	0.0	296.1	12.8	9.4	7.4	0.0	2.9	8.1	0.6	29.9	63.3	2.5	0.1	0.0
STEYTLERVILLE	12.2	6.8	4049.7	1.2	2.8	1351.3	7.1	0.5	1.0	0.0	11.6	28.8	1.3	111.8	228.5	17.3	0.6	0.0
STRAND	69.4	-46.6	723.0	2.5	0.8	242.1	81.4	0.8	487.6	0.0	11.1	1.0	0.9	15.2	28.1	0.5	0.1	0.0
STUTTERHEIM	16.1	2.1	0.2	0.8	1.4	0.8	41.3	27.7	118.3	0.0	0.2	18.9	0.0	4.4	1.0	0.2	1.7	0.0
SUTHERLAND	8.9	10.9	3449.9	0.3	0.0	1150.1	4.5	1.1	0.1	0.0	32.0	25.9	1.6	268.7	562.1	36.5	55.9	1.0
SWARTRUGGENS	13.7	4.4	5495.2	0.7	0.0	1832.0	14.8	34.1	64.4	0.0	6.2	0.8	0.0	68.2	77.3	2.6	2.9	1.0
SWELLENDAAM	8.2	12.1	312.5	0.4	7.6	106.8	36.7	264.1	11.7	10.8	2.6	1.7	1.4	13.8	16.8	6.8	0.9	0.0
TABANKULU	30.0	-16.9	295.5	0.5	0.0	98.7	0.0	0.0	270.0	0.0	6.4	10.7	6.7	44.2	81.1	40.6	55.7	0.0
TARKA	17.1	2.0	0.0	0.4	0.9	0.4	14.6	4.9	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 2 Continued

District Name	NSI	ISI	ALP	SD	PA	PEI	UAP	UF	ICP	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI
TAUNG	32.8	-20.0	123.7	0.8	0.0	41.5	0.0	0.0	69.1	0.0	0.4	0.6	1.1	4.1	7.8	1.2	0.0	5.0
THABA NCHU	29.2	-16.3	0.0	1.4	0.0	0.5	0.0	0.0	136.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
THABAMOPO	47.5	-29.0	0.0	0.8	0.7	0.5	0.0	0.0	79.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
THABAZIMBI	9.3	11.6	0.0	0.3	3.4	1.3	15.2	24.4	8.8	0.0	0.0	11.7	0.0	0.0	39.3	0.0	0.0	4.0
THEUNISSEN	12.6	7.1	1563.8	0.9	0.4	521.7	20.9	270.2	69.0	81.0	0.0	25.7	6.3	38.2	196.7	25.9	19.7	20.0
THOHOYANDOU	41.5	-28.3	56.6	1.1	18.0	25.3	0.0	0.0	117.7	136.4	1.7	0.4	4.8	2.9	70.8	16.9	6.7	1.0
TROMPSBURG	11.6	7.5	0.0	0.8	0.0	0.3	17.5	2.8	13.3	0.0	0.0	561.4	0.0	0.0	889.2	0.0	0.0	0.0
TSOLO	29.0	-15.9	185.4	1.2	0.0	62.2	0.0	0.0	184.0	0.3	0.5	0.3	1.3	8.1	9.0	0.2	0.1	0.0
TSOMO	50.7	-37.9	0.0	2.2	0.0	0.7	0.0	0.0	300.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TULBAGH	18.1	2.4	0.0	1.3	33.3	11.6	27.1	494.1	39.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
UBOMBO	21.0	5.9	49.9	1.0	22.2	24.4	0.8	1.5	54.7	0.0	2.6	1.3	2.4	5.7	46.3	0.1	55.4	0.0
UITENHAGE	29.0	-7.9	0.0	0.5	11.7	4.1	22.5	18.3	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
UMLAZI	3823.2	-3823.2	38.1	10.5	0.0	16.2	0.0	0.0	0.0	0.0	5.7	4.3	5.7	4.1	2.5	0.2	0.7	0.0
UMTATA	52.4	-39.4	0.0	0.5	0.0	0.2	0.0	0.0	172.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UMVOTI	15.0	3.5	0.0	0.9	0.6	0.5	47.4	359.5	106.4	0.0	0.0	110.8	0.0	0.0	748.2	0.0	0.0	0.0
UMZIMKULU	28.3	-15.5	90.6	1.1	0.0	30.5	0.0	0.0	152.0	38.1	3.2	3.2	0.1	12.0	63.6	12.2	2.9	0.0
UMZIMVUBU	41.4	-28.6	0.0	3.3	0.0	1.1	0.0	0.0	525.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UMZINTO	13.9	6.9	0.0	1.7	2.4	1.4	6.6	910.2	112.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
UNDERBERG	12.4	7.1	706.1	0.5	39.8	248.8	41.6	243.3	139.6	0.0	47.4	15.6	0.0	163.9	705.7	890.0	28.4	0.0
UNIONDALE	7.5	13.8	966.5	0.7	9.9	325.7	11.5	23.2	5.6	0.0	0.0	15.4	1791.0	237.7	220.9	43.4	19.4	0.0
UTRECHT	12.8	4.8	698.8	1.0	0.0	233.3	38.4	143.6	76.2	0.0	5.5	2.5	2.2	32.4	59.1	1.2	54.7	3.0
VANDERBIJLPARK	143.1	-123.0	45.3	1.7	0.0	15.7	230.1	19.7	177.4	279.5	0.6	1.3	0.1	1.9	4.8	1.2	0.2	4.0
VANRHYNSDORP	7.7	13.3	272.1	0.7	0.0	90.9	4.1	17.5	0.1	2.1	12.0	184.6	2.2	24.0	55.3	109.9	2.6	1.0
VENTERSBURG	13.7	4.0	4087.1	1.0	0.5	1362.9	61.0	235.0	123.9	0.0	11.6	3.8	2.5	45.2	100.3	51.5	136.0	1.0
VENTERSDORP	14.8	3.2	270.0	0.8	0.0	90.3	33.2	478.0	41.5	13.1	5.5	2.3	0.8	24.7	55.2	29.8	6.4	1.0
VENTERSTAD	11.5	5.1	3556.0	0.9	8.3	1188.4	13.2	6.7	8.3	379.8	127.2	18.2	6.7	744.3	1226.8	1093.2	21.3	0.0
VEREENIGING	50.1	-28.1	47.9	0.3	2.4	16.8	333.4	57.0	166.4	0.0	0.1	0.5	0.6	0.8	2.2	0.0	0.3	0.0
VICTORIA EAST	32.6	-19.8	530.7	0.6	0.0	177.1	0.0	0.0	123.8	394.6	32.0	3071.1	15.9	1146.4	397.3	171.7	97.1	0.0
VICTORIA-WEST	10.4	7.6	0.0	0.5	0.0	0.2	4.7	2.1	0.2	0.0	0.0	0.6	0.0	22.0	19.4	0.3	0.1	0.0
VILJOENSKROON	18.7	1.0	1476.8	0.8	0.0	492.5	56.4	784.1	65.7	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	2.0
VIRGINIA	39.0	-17.8	174.4	2.3	0.0	58.9	8.6	219.5	142.2	7337.7	10.9	1.1	1.0	8.2	32.6	140.0	4.9	35.0
VOLKSRUST	9.2	9.6	53.6	0.5	4.7	19.6	38.5	194.4	133.2	54.1	2.2	15.3	1.1	4.9	22.7	32.0	1.4	1.0
VREDE	12.1	5.8	335.4	0.3	3.0	112.9	45.8	183.3	61.5	10.3	6.9	45.1	0.0	43.2	72.6	34.7	0.3	0.0
VREDEFORT	12.5	5.9	2771.3	0.4	0.0	923.9	28.2	322.8	173.0	331.0	41.8	5.2	1.5	207.5	540.8	321.5	7.4	6.0

Appendix 2 Continued

District Name	NSI	ISI	ALP	SD	PA	PEI	UAP	UF	ICP	IMP	EUA	EW	IPA	IL	AFF	IFC	IH	MI
VREDENBURG	31.8	-11.2	229.5	1.2	0.1	76.9	23.8	341.4	169.0	777.3	6.8	0.9	0.3	15.0	37.5	59.9	0.9	17.0
VREDENDAL	9.1	12.6	183.3	0.9	0.0	61.4	16.4	86.4	0.8	0.0	5.4	42.0	0.2	50.9	169.6	54.2	0.0	5.0
VRYBURG	10.0	7.8	208.0	0.4	0.8	69.7	12.2	64.3	4.3	0.0	2.9	7.0	3.0	7.2	46.6	6.9	67.1	1.0
VRYHEID	14.6	4.1	2132.6	0.2	0.3	711.0	36.6	153.1	96.1	0.0	22.3	10.8	14.4	117.6	189.7	145.9	1.5	9.0
VULAMEHLO	55.1	-38.6	255.4	1.1	0.0	85.5	0.0	0.0	653.8	1209.6	3.1	0.5	0.1	30.3	50.2	15.4	1.6	0.0
VULINDLELA	215.6	-196.7	0.0	1.1	0.0	0.4	0.0	0.0	2866.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
VUWANI	77.1	-64.1	0.0	1.3	0.0	0.4	0.0	0.0	1442.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WAKKERSTROOM	24.4	-7.6	0.0	0.5	0.0	0.2	27.0	209.9	90.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0
WARMBAD	13.6	6.4	298.6	0.5	1.6	100.2	43.8	102.3	19.9	6.1	3.7	1.5	0.0	12.0	54.5	11.7	0.2	4.0
WARRENTON	11.6	10.5	1016.3	0.9	0.0	339.1	11.2	66.4	82.9	109.0	0.0	53.6	2.8	78.1	23.2	107.5	29.0	22.0
WATERBERG	13.2	5.9	139.0	0.9	2.3	47.4	27.6	87.2	10.8	0.0	2.5	17.7	0.0	6.1	21.1	6.2	1.4	1.0
WATERVAL-BOVEN	9.1	10.1	4788.0	1.2	0.0	1596.4	17.9	66.9	52.4	671.7	0.1	31.9	8.5	204.2	355.3	452.8	47.3	11.0
WEENEN	15.6	0.5	400.5	3.3	5.2	136.3	24.3	268.5	200.1	2.0	3.6	1.2	0.0	15.5	174.6	0.5	0.2	0.0
WELKOM	111.7	-90.7	20.7	2.2	0.0	7.6	117.8	492.9	152.0	79.7	0.5	0.3	0.1	0.6	4.2	0.4	4.6	11.0
WELLINGTON	18.7	2.3	93.1	1.7	10.9	35.2	641.0	789.0	181.0	1365.4	4.6	118.7	0.4	191.3	33.9	39.6	0.9	0.0
WEPENER	10.9	7.6	182.9	0.9	0.9	61.6	28.1	17.3	66.0	0.0	18.0	26.1	5.9	61.3	226.5	2.0	220.9	0.0
WESSELSBRON	14.8	3.6	339.1	1.7	0.3	113.7	22.2	663.3	57.0	1.3	3.4	8.3	2.5	14.0	49.8	2.1	0.8	1.0
WESTONARIA	80.8	-61.4	60.2	1.7	0.0	20.6	33.9	6.9	227.3	4878.8	3.2	5.9	2.5	4.2	18.1	56.3	4.2	34.0
WILLISTON	4.5	15.0	263.6	0.5	0.0	88.0	1.7	0.4	0.1	0.1	9.6	178.6	3.4	40.3	150.7	16.7	23.7	0.0
WILLOWMORE	5.5	15.0	9969.7	0.5	10.2	3326.8	5.1	0.8	0.2	0.0	10.9	16.8	0.0	51.9	105.4	1.5	0.0	0.0
WINBURG	11.5	6.8	2657.6	0.4	3.1	887.0	20.2	136.9	77.1	0.0	40.9	3.8	3.3	60.4	69.3	3.5	0.3	0.0
WITBANK	20.5	0.9	0.0	0.3	2.7	1.0	29.6	441.9	78.1	20.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.0
WITRIVIER	11.9	8.6	629.8	0.4	80.6	236.9	8.8	140.6	2.3	102.2	8.1	13.2	3.7	19.2	88.9	91.7	0.9	0.0
WITSIESHOEK	157.8	-139.0	34.4	0.8	51.5	28.9	0.0	0.0	566.8	31.3	1.4	347.0	0.1	18.4	11.3	32.3	0.4	0.0
WODEHOUSE	12.2	6.0	228.2	0.4	0.0	76.2	31.1	15.2	45.0	0.0	23.6	18.9	0.2	29.7	526.5	149.9	207.2	0.0
WOLMARANSSTAD	16.9	0.1	0.0	0.7	3.0	1.2	30.9	319.4	39.4	0.0	0.0	0.6	0.0	0.0	52.9	0.0	0.0	1.0
WONDERBOOM	58.7	-38.2	64.2	1.1	1.7	22.4	49.4	38.1	13.6	1148.6	0.4	0.4	1.3	4.8	5.9	0.3	0.0	12.0
WORCESTER	10.8	10.4	300.0	0.9	25.2	108.7	24.5	303.0	8.0	0.3	11.4	1.8	1.8	24.1	51.6	62.9	0.2	1.0
WYNBERG	698.2	-676.5	0.9	2.0	0.8	1.3	63.2	750.0	225.2	0.0	0.1	0.0	4.3	0.2	0.8	0.1	0.3	0.0
XALANGA	32.6	-19.6	430.2	1.0	0.0	143.8	0.0	0.0	785.7	0.0	15.8	39.0	8.8	839.0	671.1	5.2	734.0	0.0
XHORA	36.0	-23.2	3.4	1.5	0.0	1.6	0.0	0.0	718.3	0.0	2.1	0.0	0.4	28.1	49.9	0.0	33.3	0.0
ZASTRON	14.0	4.5	0.0	1.2	0.0	0.4	33.6	51.1	80.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ZWELITSHA	14.7	-2.0	60.3	2.3	0.0	20.9	0.0	0.0	178.4	5.3	0.6	0.5	1.0	4.0	8.1	1.9	0.0	0.0

Appendix 2 Continued

District Name	MQ	NEI	IEI	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PEI	PG	NEI	IEC
ABERDEEN	0.0	33.6	2254.8	36.7	47.0	446.3	69.9	71.2	13.9	16.8	0.0	0.0	82.2	40602.3	40602.3	-40520.2
ADELAIDE	0.0	19.5	220.8	29.7	37.5	261.4	48.9	41.0	20.2	9.9	0.0	0.0	53.4	32084.2	32084.2	-32030.9
ALBANY	0.5	12.9	108.4	35.4	45.6	530.6	120.0	106.1	26.0	80.0	9.0	11.2	118.0	30245.2	30245.2	-30127.2
ALBERT	0.0	15.8	505.2	29.2	38.3	428.2	85.2	58.6	57.9	12.8	2.9	6.0	90.7	26809.2	26809.2	-26718.5
ALBERTON	0.0	74.3	-73.2	31.8	41.4	391.2	65.2	42.9	13.3	5.6	180.7	26.8	84.9	18150.9	18150.9	-18066.0
ALEXANDRIA	1.5	50.3	123.1	33.3	43.6	268.5	54.0	24.5	24.9	8.6	9.5	8.8	62.5	28959.0	28959.0	-28896.5
ALFRED	0.1	493.3	-334.3	43.6	55.6	809.2	185.5	22.7	38.7	19.2	94.0	10.2	180.5	19746.7	19746.7	-19566.2
ALIWAL-NOORD/NORTH	0.8	13.1	148.6	29.0	36.3	462.1	93.9	52.2	19.5	8.5	69.7	2.6	96.6	24519.3	24519.3	-24422.6
AMERSFOORT	16.5	42.2	53.9	26.2	32.8	136.4	22.7	12.9	6.3	2.5	0.0	0.0	30.2	25275.9	25275.9	-25245.8
BABANANGO	0.0	39.8	606.6	37.0	49.2	442.9	645.9	702.6	19.6	128.3	331.1	128.5	244.4	28136.4	28136.4	-27892.0
BAFOKENG	0.0	6.5	-6.3	42.0	53.1	0.0	53.4	22.8	0.0	4.3	76.8	10.3	24.0	0.0	0.0	24.0
BALFOUR	131.7	105.5	0.9	31.7	41.9	725.2	18.1	17.6	17.1	3.6	0.0	0.0	89.2	25332.2	25332.2	-25243.0
BARBERTON	107.6	67.2	12.7	45.3	56.1	858.2	16.7	11.2	80.5	3.1	95.5	1.5	154.8	31124.7	31124.7	-30969.9
BARKLY-OOS/EAST	0.0	21.4	624.2	30.2	39.4	354.5	126.0	100.5	16.1	21.4	3.2	46.6	96.0	43792.5	43792.5	-43696.5
BARKLY-WES/WEST	50.2	14.0	372.8	34.2	44.5	395.7	103.5	73.9	23.0	11.0	3.6	14.6	95.5	33218.3	33218.3	-33122.8
BATHURST	0.6	30.1	50.9	32.0	40.2	219.1	12.2	14.1	7.8	3.4	0.0	0.0	44.2	25514.7	25514.7	-25470.6
BEAUFORT-WES/WEST	0.0	8.2	1406.4	38.6	49.1	901.0	74.8	34.3	190.7	8.1	58.5	12.5	167.5	21360.7	21360.7	-21193.3
BEDFORD	0.0	15.4	303.1	29.7	36.1	239.6	4507.6	4126.7	5.4	684.5	7913.9	1005.4	1732.4	31625.8	31625.8	-29893.4
BELFAST	107.7	43.2	155.3	33.6	43.7	607.2	1359.1	1541.6	67.2	103.9	3460.5	272.6	649.9	26584.2	26584.2	-25934.3
BELLVILLE	4.7	132.4	-130.2	46.7	59.8	1974.8	7.0	1.2	92.9	0.7	0.0	0.0	291.0	7277.1	7277.1	-6986.2
BENONI	0.7	136.5	-136.2	32.8	42.4	652.2	24.9	23.5	14.3	3.2	7.8	1.2	94.8	13724.3	13724.3	-13629.5
BERGVILLE	0.0	109.8	10.6	36.1	45.5	936.5	511.2	511.7	14.4	53.7	330.0	105.6	325.4	46589.9	46589.9	-46264.5
BETHAL	324.9	183.9	-121.0	39.7	50.5	2085.1	6.2	5.8	28.0	1.5	0.0	0.0	237.4	16886.1	16886.1	-16648.7
BETHLEHEM	0.9	64.1	29.4	31.6	40.7	618.3	638.1	866.2	80.5	220.7	220.5	161.7	347.6	0.4	0.4	347.2
BETHULIE	0.0	13.0	576.3	29.9	38.1	347.9	97.5	69.8	67.2	12.6	0.0	0.0	85.5	4.5	4.5	81.0
BIZANA	0.0	14.6	-14.2	39.6	40.4	0.0	370.5	195.2	0.0	23.1	1039.7	162.1	142.7	71427.0	71427.0	-71284.3
BLOEMFONTEIN	0.0	14.1	17.2	35.6	47.4	1049.2	3.0	1.7	189.4	1.0	0.1	0.2	170.7	0.1	0.1	170.6
BLOEMHOF	0.7	38.1	145.8	29.6	38.8	394.8	210.6	112.1	29.6	21.1	58.5	89.4	106.6	149681.0	149681.0	-149574.4
BOCHUM	0.0	9.6	-8.7	34.8	35.8	0.0	0.6	0.3	0.0	0.2	14.5	0.2	8.0	60946.3	60946.3	-60938.4
BOKSBURG	46.4	113.2	-111.4	36.4	46.9	1291.4	44.0	50.9	85.2	7.0	107.2	8.6	201.9	7386.6	7386.6	-7184.7
BOLOBEDU	0.0	16.8	-16.4	35.6	37.4	0.0	2.9	4.0	0.0	1.5	0.0	0.0	6.0	58563.5	58563.5	-58557.5
BOSHOF	5.5	32.8	660.0	32.0	42.3	316.4	129.3	62.2	12.9	9.5	3.7	16.5	78.9	1.4	1.4	77.5
BOTHAVILLE	52.2	104.5	10.1	30.1	38.8	273.0	142.9	204.5	5.4	15.4	389.7	25.7	116.4	0.8	0.8	115.6
BOTSHABELO	0.0	0.0	1.1	24.7	31.8	21.7	1.6	1.5	0.2	0.4	0.0	0.0	7.9	0.1	0.1	7.8

Appendix 2 Continued

District Name	MQ	NEI	IEI	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PEI	PG	NEI	IEC
BRAKPAN	65.9	70.7	-69.6	32.0	42.0	480.6	18.1	11.0	18.8	2.1	56.2	5.6	77.3	15906.6	15906.6	-15829.3
BRANDFORT	1.4	22.9	313.0	29.9	39.1	225.1	55.8	22.7	18.1	9.0	0.0	0.0	50.6	2.1	2.1	48.5
BREDASDORP	3.4	78.5	346.5	42.1	56.0	630.9	538.9	236.6	22.3	43.3	194.4	79.7	220.1	16470.7	16470.7	-16250.6
BRITS	99.4	50.6	-16.6	39.2	50.9	623.8	2.1	8.0	15.8	1.1	0.6	0.4	102.2	2427.9	2427.9	-2325.7
BRITSTOWN	2.6	16.2	2972.9	35.0	46.2	334.5	397.8	238.5	26.6	56.9	18.6	50.7	150.7	37015.7	37015.7	-36864.9
BRONKHORSTSPRUIT	74.1	91.4	-13.4	40.2	52.5	898.0	83.8	47.8	15.8	13.9	629.0	28.9	205.9	31179.9	31179.9	-30974.0
BULTFONTEIN	0.0	60.3	174.6	30.3	38.5	273.7	11720.9	14836.9	6.7	1247.3	8301.3	980.4	3277.3	1.4	1.4	3275.9
CACADU	0.0	2.5	-2.3	32.7	32.3	10.1	8.3	5.1	0.3	1.1	2.0	0.5	7.2	49692.9	49692.9	-49685.7
CALEDON	4.7	101.9	10.6	47.9	60.5	786.4	54.6	30.7	24.6	5.6	48.0	9.2	155.6	13643.6	13643.6	-13488.0
CALITZDORP	0.0	45.5	303.5	42.4	54.2	476.0	2164.1	1388.1	6.7	234.1	278.1	15.7	420.6	25059.9	25059.9	-24639.3
CALVINIA	29.5	34.7	6087.6	44.9	58.8	863.9	84.9	37.3	46.6	11.0	24.2	0.9	155.1	43155.1	43155.1	-43000.0
CAMPERDOWN	10.9	244.1	-200.8	44.6	57.8	1942.7	53.6	71.5	80.5	11.4	49.3	12.1	345.8	24170.9	24170.9	-23825.1
CAPE	7.5	43.7	-42.5	47.3	60.6	9726.6	64.0	39.7	1336.0	5.0	101.0	4.7	1375.9	13818.3	13818.3	-12442.4
CARNARVON	0.1	27.7	4417.6	42.1	52.5	510.5	135.5	71.3	30.3	19.2	0.0	0.0	110.8	44324.8	44324.8	-44214.0
CAROLINA	151.6	59.8	444.7	36.1	47.4	541.8	38.4	24.6	16.4	4.8	2.1	1.7	98.7	26772.8	26772.8	-26674.1
CATHCART	0.0	18.8	353.6	30.8	38.2	321.7	45.6	24.6	19.6	12.5	0.0	0.0	63.6	36016.9	36016.9	-35953.3
CENTANI	0.0	24.7	-24.5	38.3	34.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	86096.0	86096.0	-86090.8
CERES	0.0	65.0	352.6	45.7	59.5	660.8	73.7	73.8	20.8	10.1	7.0	21.2	159.8	11842.6	11842.6	-11682.8
CHATSWORTH	0.0	0.1	2.4	47.2	60.9	161.4	7.7	2.2	0.1	2.1	5.5	1.4	30.7	11952.6	11952.6	-11921.9
CHRISTIANA	1.1	64.9	205.7	32.6	43.0	310.2	70.7	39.8	19.3	9.5	0.0	0.0	119.2	86208.6	86208.6	-86089.4
CLANWILLIAM	0.0	67.2	565.4	42.9	56.9	575.3	119.1	139.9	26.8	11.7	24.9	41.1	145.1	21316.2	21316.2	-21171.0
CLOCOLAN	0.0	96.9	33.5	31.4	39.2	290.5	126.9	54.2	10.3	18.4	9.7	5.7	75.6	2.7	2.7	73.0
COFIMVABA	0.0	6.2	-6.1	36.5	33.1	0.0	20.2	20.5	0.0	3.9	19.0	10.3	12.2	74879.2	74879.2	-74867.0
COLESBERG	0.0	30.8	734.8	29.1	37.8	567.7	26.6	7.7	30.9	9.3	0.0	0.0	74.5	34201.0	34201.0	-34126.5
COLIGNY	0.0	102.4	51.7	32.0	42.3	255.8	243.8	184.3	82.7	15.9	242.1	23.2	124.0	9485.2	9485.2	-9361.2
CRADOCK	0.0	13.3	345.7	32.1	42.8	457.7	8888.5	8120.6	95.5	1166.0	13132.1	1342.8	2712.3	25589.2	25589.2	-22876.9
CULLINAN	390.0	36.9	-2.3	49.7	60.6	612.7	1936.4	1641.7	22.9	162.0	3360.3	298.0	728.6	27343.1	27343.1	-26614.5
DANNHAUSER	800.9	109.8	-12.6	45.0	55.7	1120.0	16.8	34.3	32.2	8.2	0.0	0.0	172.8	17985.0	17985.0	-17812.2
DE AAR	4.1	8.4	352.4	35.8	46.5	858.9	40.5	26.5	445.0	6.0	0.0	0.0	168.6	28572.0	28572.0	-28403.4
DELAREYVILLE	0.0	76.5	144.7	32.8	43.6	339.0	27.9	24.5	22.5	5.0	3.1	26.2	69.8	12181.5	12181.5	-12111.7
DELMAS	61.3	206.9	-158.8	33.1	43.2	495.1	208.0	198.4	28.1	16.4	103.9	27.4	139.4	16699.5	16699.5	-16560.1
DEWETSDORP	0.0	24.7	372.4	29.4	39.0	243.0	202.2	165.6	12.5	23.2	68.0	33.4	96.0	3.5	3.5	92.5
DITSOBOTLA	0.0	5.0	-4.7	34.9	39.2	0.0	34.8	20.4	0.0	6.3	150.3	3.8	22.9	4005.5	4005.5	-3982.6
DUNDEE	62.1	56.3	62.7	33.4	44.0	903.9	42.3	12.9	92.4	6.5	0.0	0.0	141.5	20035.3	20035.3	-19893.8

Appendix 2 Continued

District Name	MQ	NEI	IEI	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PEI	PG	NEI	IEC
DURBAN	4.0	12.7	-11.9	42.6	56.2	3899.8	0.6	0.4	593.0	0.3	0.0	0.0	579.6	13394.0	13394.0	-12814.4
DZANANI	0.0	7.5	-7.0	38.4	37.5	0.0	36.4	49.2	0.0	2.7	5.1	1.2	13.8	37597.3	37597.3	-37583.5
EAST LONDON	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17788.7	17788.7	-17788.7
EDENBURG	0.0	15.0	651.3	28.9	38.3	306.9	33.4	21.9	16.3	11.1	15.7	0.0	63.9	7.4	7.4	56.5
EERSTEHOEK	0.0	27.8	-27.5	34.3	40.0	0.0	14.9	10.8	0.0	2.4	4.9	0.6	8.2	45410.9	45410.9	-45402.8
ELLIOT	0.0	18.6	262.6	28.5	34.9	266.4	17.8	23.7	12.0	6.5	0.0	0.0	51.2	32143.9	32143.9	-32092.8
ELLISRAS	0.0	2.2	-1.5	0.0	0.0	0.0	500.4	721.3	0.0	53.8	372.9	254.3	241.5	18368.9	18368.9	-18127.4
EMBUMBULU	9.7	47.5	4.2	4.1	5.2	298.5	491.1	317.5	0.4	23.2	1275.3	155.9	194.3	35043.9	35043.9	-34849.7
EMNAMBITHI	0.0	25.6	-25.3	46.6	53.7	0.0	8.2	3.3	0.0	0.9	6.3	1.2	24.8	34330.4	34330.4	-34305.7
EMPUMALANGA	0.0	28.8	-28.2	20.2	23.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	31932.6	31932.6	-31923.3
EMZUMBE	0.0	17.8	-17.4	36.5	38.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.6	57121.6	57121.6	-57105.0
ENGCOBO	0.0	7.1	-6.9	36.4	33.0	0.0	267.9	97.9	0.0	30.1	573.0	28.3	80.7	90773.2	90773.2	-90692.5
ENSELENI	0.0	19.9	-19.3	35.3	42.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.2	39195.0	39195.0	-39161.8
ERMELO	71.7	53.5	69.7	31.4	41.4	749.1	90.7	118.2	39.9	10.5	27.8	24.3	138.3	21811.0	21811.0	-21672.6
ESHOWE	9.3	494.4	-426.3	45.1	58.7	1184.9	370.6	279.3	70.4	32.4	20.3	27.8	303.9	17943.1	17943.1	-17639.2
ESTCOURT	2.2	48.0	78.1	36.9	47.9	1102.1	132.2	65.1	56.5	7.8	44.2	6.3	181.5	31063.0	31063.0	-30881.5
EXCELSIOR	0.0	43.4	190.2	30.8	38.9	383.4	74.2	6.9	12.2	11.3	12.1	1.8	166.6	3.1	3.1	163.6
EZINGOLWENI	0.0	83.6	-82.8	36.4	40.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4	48010.6	48010.6	-48004.2
FAURESMITH	2.3	33.4	1305.6	34.2	45.4	385.0	17.6	36.2	16.7	6.4	0.0	1.7	453.6	5.8	5.8	447.8
FICKSBURG	0.8	58.7	16.7	32.5	39.1	402.3	127.1	95.8	22.7	15.7	103.3	45.1	83.2	1.1	1.1	82.1
FORT BEAUFORT	0.0	21.6	49.5	28.1	37.2	275.1	23.8	9.2	8.0	7.2	0.0	0.0	47.8	17946.8	17946.8	-17899.0
FOURIESBURG	-0.2	55.3	84.9	33.5	39.3	203.8	156.9	185.2	13.1	20.1	565.5	68.2	134.2	3.0	3.0	131.2
FRANKFORT	1.1	48.3	107.2	28.5	37.3	272.2	25.7	16.6	12.0	3.5	3.2	1.7	48.2	0.9	0.9	47.3
FRASERBURG	0.0	34.8	8243.8	44.4	58.6	649.5	546.8	386.1	35.0	102.9	688.3	98.9	280.4	49511.2	49511.2	-49230.8
GANYESA	0.0	1.0	-0.8	34.2	35.0	0.0	17.5	19.7	0.0	3.4	70.2	6.6	14.3	85535.1	85535.1	-85520.8
GATYANA	0.0	17.4	-17.3	39.1	36.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	67931.1	67931.1	-67925.7
GCUWA	0.0	27.5	-27.2	29.0	30.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	58857.4	58857.4	-58853.2
GEORGE	2.4	32.1	17.8	39.9	52.8	741.0	6.3	9.1	37.3	2.5	0.0	0.0	126.8	10609.8	10609.8	-10483.0
GERMISTON	21.7	58.7	-58.2	44.3	58.8	3976.0	19.6	16.4	344.7	2.0	11.3	4.1	573.6	8815.9	8815.9	-8242.3
GIYANI	2.2	8.0	-7.6	33.1	35.7	408.4	25.3	33.5	8.2	7.6	1580.3	15.4	181.2	53103.9	53103.9	-52922.7
GLENCOE	67.7	73.9	-15.8	37.4	47.9	728.2	266.4	84.5	206.0	14.3	171.0	17.7	163.5	19368.1	19368.1	-19204.6
GOODWOOD	0.0	1480.1	-1478.4	43.2	55.2	728.8	0.5	1.2	14.1	0.2	0.0	0.1	116.1	8361.2	8361.2	-8245.1
GORDONIA	1.9	19.6	969.9	40.1	53.0	702.4	10.4	3.0	37.1	1.5	1.0	0.9	119.1	29280.4	29280.4	-29161.3
GRAAFF-REINET	0.0	9.4	488.9	35.5	46.4	456.8	34.5	20.9	33.9	4.4	1.8	3.9	86.0	26514.4	26514.4	-26428.4

Appendix 2 Continued

District Name	MQ	NEI	IEI	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PEI	PG	NEI	IEC
GROBLERSDAL	0.4	54.5	17.9	44.3	57.8	544.7	10.9	14.3	50.4	2.9	0.2	0.9	106.2	29094.5	29094.5	-28988.3
HANKEY	3.4	52.3	58.8	35.8	47.4	294.1	217.7	111.8	8.9	20.7	99.8	49.5	99.4	25298.9	25298.9	-25199.6
HANOVER	0.0	13.7	2059.0	32.0	40.9	297.4	0.0	0.0	18.8	0.0	0.0	0.0	53.9	40848.1	40848.1	-40794.2
HARRISMITH	1.8	45.1	198.5	31.0	40.9	521.3	224.8	183.6	25.7	19.1	491.0	50.6	155.6	0.5	0.5	155.1
HARTSWATER	0.0	207.4	-148.3	36.4	48.3	452.7	11.7	4.8	27.1	3.1	0.0	0.0	87.6	37514.5	37514.5	-37427.0
HAY	4.9	20.3	2853.5	36.1	47.9	355.8	165.2	95.2	11.7	27.0	51.7	27.1	102.9	40048.8	40048.8	-39945.9
HEIDELBERG (CA)	-2.3	126.6	251.9	42.4	55.0	3133.0	30.0	206.5	224.7	11.6	0.0	0.2	323.7	23433.0	23433.0	-23109.3
HEIDELBERG (G)	0.5	60.1	-30.6	31.4	41.5	65.1	2.5	7.3	4.8	1.0	0.4	0.0	40.9	30814.4	30814.4	-30773.5
HEILBRON	0.0	38.6	150.8	30.4	39.1	313.1	15.1	22.4	10.1	3.7	0.0	0.0	59.3	1.1	1.1	58.2
HENNENMAN	31.2	179.0	-129.1	39.7	49.0	358.1	31716.8	41060.1	22.7	3693.6	20352.4	3852.3	8004.0	1.0	1.0	8003.1
HERBERT	5.8	29.0	691.9	36.4	48.2	260.1	53.3	9.7	10.5	7.6	10.0	0.9	62.0	34653.6	34653.6	-34591.6
HERMANUS	2.5	13.7	23.6	39.9	52.3	627.4	6166.0	2719.2	32.1	191.0	15123.5	622.2	2014.5	11027.1	11027.1	-9012.6
HERSCHEL	2.5	18.0	-10.3	28.2	37.2	728.7	0.0	0.0	24.8	0.0	0.0	0.0	123.1	65786.0	65786.0	-65662.9
HEWU	0.0	8.8	-6.9	36.4	37.5	0.0	9.2	9.8	0.0	2.5	0.5	3.3	7.6	38252.9	38252.9	-38245.4
HIGHVELD RIDGE	0.2	22.5	-10.8	38.6	47.9	94.8	5.5	4.9	2.5	1.7	6.2	0.3	101.2	40893.4	40893.4	-40792.2
HLABISA (KZN)	1081.6	89.7	-72.6	34.7	37.7	3342.9	198.0	156.9	42.2	16.9	51.3	27.8	311.0	2942.2	2942.2	-2631.1
HLABISA (KZN)	0.0	71.0	-18.8	243.2	255.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90.2	390090.6	390090.6	-390000.4
HLANGANANI (GAZA)	0.0	16.1	-15.5	52.3	54.8	0.0	89.8	109.1	0.0	5.6	43.3	8.3	29.7	79665.3	79665.3	-79635.6
HLANGANANI (KZN)	0.0	24.8	6.8	0.9	1.1	8.7	208.9	244.1	0.2	15.8	75.4	98.6	57.1	13199.9	13199.9	-13142.8
HOFMEYR	0.0	223.5	1202.8	158.9	211.6	1413.4	1861.5	1613.7	17.5	101.3	3556.5	630.4	955.5	32594.9	32594.9	-31639.4
HOOPSTAD	1.9	88.2	-1.4	12.3	16.1	253.5	270.2	167.3	5.7	19.7	149.5	121.9	101.7	1.4	1.4	100.3
HOPEFIELD	8.6	67.7	2694.3	48.0	63.9	588.0	37.7	44.4	65.2	13.0	8.3	0.0	120.0	13752.7	13752.7	-13632.7
HOPETOWN	10.3	100.2	576.5	156.5	206.9	1962.8	76.0	68.1	189.8	13.5	0.0	0.0	358.1	36198.9	36198.9	-35840.9
HUMANSDORP	0.0	56.7	-48.4	77.8	75.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	20166.5	20166.5	-20155.6
IDUTYWA	0.0	13.0	-12.5	0.0	0.0	0.0	11.2	7.8	0.0	2.0	1.9	3.9	2.6	0.0	0.0	2.6
IMPENDLE	0.0	133.5	357.6	48.8	62.0	742.7	392.1	185.6	13.2	107.5	54.4	14.7	228.9	28542.7	28542.7	-28313.9
INANDA	0.6	101.4	-98.3	44.4	58.1	303.7	51.7	59.2	17.1	4.7	17.0	7.4	67.7	13571.2	13571.2	-13503.6
INDWE	0.0	29.7	115.6	25.0	30.7	163.5	2434.7	2779.8	15.6	218.3	6692.7	508.6	1072.2	27998.3	27998.3	-26926.1
INGWAVUMA	0.0	8.1	-2.5	34.8	37.3	0.0	69.6	32.2	0.0	8.2	282.1	50.0	40.6	54276.8	54276.8	-54236.2
INKANYEZI	0.0	21.2	-20.9	36.0	40.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	41035.6	41035.6	-41025.5
IXOPO	1.2	79.4	75.1	38.1	50.5	548.6	300.5	186.5	23.0	23.6	40.9	21.0	155.3	36405.9	36405.9	-36250.7
JACOBSDAL	-0.2	26.6	629.8	37.0	48.5	322.2	137.8	114.2	17.0	18.1	73.0	3.2	105.4	5.3	5.3	100.1
JAGERSFONTEIN	0.0	7.9	355.6	30.8	37.4	233.0	61.4	41.2	14.1	16.8	0.0	0.3	48.7	6.3	6.3	42.4
JANSENVILLE	0.0	16.4	1107.1	33.2	42.3	487.8	197.9	133.0	168.1	36.6	75.0	15.9	136.3	35333.9	35333.9	-35197.7

Appendix 2 Continued

District Name	MQ	NEI	IEI	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PEI	PG	NEI	IEC
JOHANNESBURG	3.7	16.6	-15.9	22.5	29.7	1115.7	0.3	0.2	86.4	0.0	0.0	0.0	166.5	10138.3	10138.3	-9971.8
JOUBERTINA	5.2	80.0	75.9	41.8	55.4	455.5	1193.3	784.8	11.3	60.6	1081.1	223.1	380.3	24574.9	24574.9	-24194.6
KEISKAMMAHOEK	0.0	23.4	-22.9	33.9	36.8	0.0	35.2	27.1	0.0	9.5	4.7	1.0	14.8	37692.0	37692.0	-37677.2
KEMPTON PARK	0.7	43.7	-42.5	34.7	43.9	1430.7	5.1	3.8	262.7	1.2	6.4	2.2	213.1	10476.8	10476.8	-10263.7
KENHARDT	1184.8	103.0	9308.1	45.6	60.2	1732.5	1071.9	538.1	45.6	95.6	2369.6	263.0	667.7	52402.9	52402.9	-51735.2
KIMBERLEY	52.2	13.6	37.4	34.1	45.2	854.1	44.3	11.7	151.1	3.3	80.4	7.9	151.6	18188.7	18188.7	-18037.2
KING WILLIAM'S TOWN	10.1	47.2	-2.9	36.7	47.3	1225.9	58.8	28.8	64.8	7.2	0.0	0.0	198.1	17238.5	17238.5	-17040.4
KIRKWOOD	0.0	23.5	71.6	34.7	45.5	261.3	310.2	160.8	9.1	22.6	2081.8	30.7	244.7	27635.9	27635.9	-27391.2
KLERKSDORP	647.5	59.8	-40.6	39.3	49.0	1020.0	0.0	0.0	14.1	0.0	0.0	0.0	143.6	4287.6	4287.6	-4144.0
KLIPRIVIER	1.9	29.5	78.1	35.3	46.9	1032.5	0.0	0.0	230.6	0.0	0.0	0.0	168.9	23308.5	23308.5	-23139.5
KNYSNA	6.4	14.4	57.1	39.8	53.0	586.1	107.7	41.2	18.8	9.8	123.5	3.7	113.3	13057.8	13057.8	-12944.5
KOFFIEFONTEIN	221.0	23.0	280.6	31.0	40.9	374.3	57.3	53.5	14.4	13.0	0.0	0.0	82.5	3.4	3.4	79.1
KOMGA	0.0	33.4	185.2	32.0	38.2	294.1	117.8	109.6	9.1	12.3	40.7	8.6	83.8	29045.3	29045.3	-28961.4
KOPPIES	75.6	61.7	106.4	31.8	41.8	316.6	113.6	121.8	15.4	11.9	30.4	41.2	87.6	2.3	2.3	85.3
KOSTER	3.1	65.4	138.9	33.4	44.6	272.9	586.8	412.7	20.9	49.9	1720.4	120.3	290.3	104913.6	104913.6	-104623.3
KRANSKOP	0.0	438.9	-329.0	40.9	53.0	461.7	63.2	45.0	34.7	17.9	57.6	0.4	93.7	35773.6	35773.6	-35679.9
KROONSTAD	29.1	36.9	37.9	30.8	41.0	573.1	9.0	6.7	107.1	1.4	28.8	4.7	99.2	0.3	0.3	99.0
KRUGERSDORP	26.4	112.7	-105.5	36.7	47.8	844.3	5.3	3.9	58.5	1.3	2.2	1.3	134.6	16676.2	16676.2	-16541.6
KUDUMANE	0.0	0.7	-0.4	36.0	38.5	0.0	41.6	38.5	0.0	4.1	38.6	24.8	18.7	5004.3	5004.3	-4985.6
KUILSRIVIER	1.3	208.1	-205.7	41.4	55.0	595.3	42.9	31.8	23.1	4.1	8.0	4.0	109.7	6062.0	6062.0	-5952.3
KURUMAN	1425.7	100.1	1837.5	41.6	54.1	2229.9	9.8	3.4	53.3	3.8	0.0	0.2	268.2	29406.6	29406.6	-29138.4
KWA MAPUMULU	0.0	13.1	-12.9	37.2	41.2	0.0	4.7	5.3	0.0	1.1	0.2	0.1	6.8	49846.4	49846.4	-49839.5
KWABHACA	0.0	12.2	-12.1	37.1	36.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.2	76779.0	76779.0	-76773.8
LADISMITH	0.5	20.7	644.1	41.2	54.1	550.0	20.8	12.3	35.1	11.2	0.0	0.0	94.6	25225.4	25225.4	-25130.8
LADY GREY	0.0	10.3	384.9	28.3	37.6	0.0	766.3	266.8	0.0	87.3	77.5	61.1	166.5	32069.1	32069.1	-31902.6
LADYBRAND	3.4	40.9	113.2	31.6	39.9	363.3	717.7	944.4	12.4	20.6	1631.6	110.5	323.9	1.5	1.5	322.5
LAINGSBURG	0.0	22.1	4088.8	45.4	56.7	596.0	541.8	120.5	84.2	63.6	889.3	16.8	237.9	29954.0	29954.0	-29716.1
LEHURUTSHE	0.0	4.8	-3.8	34.0	35.7	0.0	131.0	214.5	0.0	15.8	542.7	41.6	81.6	38916.7	38916.7	-38835.1
LETABA	7.7	68.2	-65.7	47.4	61.8	1310.4	4.7	2.7	78.5	2.2	0.0	0.0	181.2	33155.7	33155.7	-32974.5
LIBODE	0.0	14.0	-13.8	34.3	35.2	0.0	129.0	61.1	0.0	7.6	136.4	26.2	37.4	46727.5	46727.5	-46690.0
LICHTENBURG	5.4	62.3	108.9	34.3	45.7	662.1	13.5	8.8	24.3	1.2	0.0	0.0	100.0	26587.1	26587.1	-26487.1
LINDLEY	0.0	79.4	96.7	27.6	33.5	235.9	345.4	186.6	20.3	20.7	106.8	77.4	107.0	1.2	1.2	105.8
LIONS RIVER	0.0	82.3	7.6	40.9	53.9	467.9	130.1	69.7	34.2	17.6	31.0	13.3	120.9	25033.7	25033.7	-24912.8
LOWER TUGELA	0.6	150.9	-125.1	43.6	57.5	761.1	128.7	76.9	41.0	10.4	72.1	21.6	142.2	28444.6	28444.6	-28302.4

Appendix 2 Continued

District Name	MQ	NEI	IEI	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PEI	PG	NEI	IEC
LOWER UMFOLOZI	14.0	48.8	4.2	45.8	59.6	4465.1	592.4	805.2	807.3	29.8	762.2	75.5	826.2	13513.4	13513.4	-12687.2
LULEKANI	0.0	0.4	21.7	32.7	42.4	0.0	100.2	82.9	0.0	10.6	74.3	12.8	28.7	61639.7	61639.7	-61611.0
LUSIKISIKI	0.0	9.5	-9.3	38.4	38.8	0.0	7.1	1.4	0.0	0.7	1.9	0.1	6.7	83649.3	83649.3	-83642.7
LYDENBURG	427.8	52.2	159.2	38.7	50.6	1471.6	10.4	9.0	57.7	1.8	0.0	0.0	195.4	20911.4	20911.4	-20715.9
MACLEAR	0.0	32.7	283.6	29.1	36.8	357.2	240.3	96.7	11.1	20.2	519.9	3.1	135.2	29299.4	29299.4	-29164.2
MADADENI	0.0	69.0	-68.1	27.5	33.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.1	25005.5	25005.5	-24982.3
MADIKWE	0.0	2.7	-2.3	34.2	36.9	0.0	96.1	70.4	0.0	6.7	19.3	15.3	29.6	24932.5	24932.5	-24902.8
MAHLABATINI	0.0	14.7	-11.6	32.8	35.8	0.0	1.8	2.1	0.0	0.5	0.0	0.0	6.6	37249.6	37249.6	-37243.0
MALAMULELE	0.0	5.5	-4.6	33.6	34.0	0.0	1.4	3.3	0.0	0.6	0.0	0.0	5.4	60548.5	60548.5	-60543.1
MALMESBURY	5.6	123.8	-47.6	43.9	57.7	1388.0	61.2	44.0	19.7	4.4	113.7	5.4	207.0	9853.7	9853.7	-9646.7
MANKWE	0.0	4.2	0.7	36.9	42.3	0.0	270.9	248.3	0.0	17.2	189.3	56.7	299.2	18315.6	18315.6	-18016.4
MAPULANENG	0.0	20.8	-19.1	36.7	40.6	0.0	348.5	201.4	0.0	16.8	469.9	105.4	97.9	58140.0	58140.0	-58042.2
MARICO	53.9	22.9	262.6	37.3	49.1	601.2	3843.8	3586.0	64.2	431.5	6021.6	696.2	1355.9	83649.1	83649.1	-82293.1
MARQUARD	0.0	68.0	109.6	31.5	38.7	304.1	950.6	685.2	10.3	105.3	606.6	217.3	258.0	2.7	2.7	255.4
MATATIELE	0.0	2.7	-2.3	38.0	37.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.4	77664.5	77664.5	-77659.1
MAXESIBENI	0.0	11.4	-10.6	37.0	36.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	69568.2	69568.2	-69563.0
MBIBANA	0.0	0.0	0.7	33.5	40.9	0.0	55.0	71.7	0.0	13.2	8.8	10.7	25.8	31479.4	31479.4	-31453.7
MDANTSANE	0.0	37.2	-35.7	14.4	16.8	283.5	0.9	0.5	22.4	0.3	0.1	0.0	39.4	10589.8	10589.8	-10550.5
MDUTJANA	2.7	16.2	-15.5	33.6	39.8	349.7	122.2	120.4	10.7	94.9	159.5	31.4	107.0	33183.7	33183.7	-33076.7
MESSINA	51.1	17.7	404.1	35.6	46.2	499.9	602.7	228.8	39.4	36.7	195.2	37.3	181.0	30523.8	30523.8	-30342.8
MHALA	0.0	16.3	-11.1	33.9	36.4	0.0	1112.9	1597.0	0.0	333.5	1437.5	247.1	608.3	61001.3	61001.3	-60393.0
MIDDELBURG (CA)	0.0	10.1	653.7	36.6	47.6	521.3	108.5	52.7	40.6	15.2	1.8	9.9	98.2	30360.6	30360.6	-30262.5
MIDDELBURG (G)	615.8	137.7	-64.4	38.0	48.9	2085.1	2.3	3.2	42.7	1.1	0.0	0.0	248.4	15477.5	15477.5	-15229.2
MIDDLEDRIFT	0.0	516.7	-515.9	27.3	30.4	0.0	243.3	135.9	0.0	12.4	94.1	26.0	48.9	30999.0	30999.0	-30950.1
MKOBOLA	0.0	11.3	-10.8	35.4	43.6	0.0	52.9	44.3	0.0	6.6	125.7	10.8	27.2	32341.9	32341.9	-32314.7
MOKERONG	0.0	3.3	-2.4	33.7	36.6	0.0	0.4	0.2	0.0	0.3	0.0	0.0	5.1	53160.2	53160.2	-53155.1
MOLOPO	0.0	3.6	-3.2	31.7	38.4	0.0	13.6	7.5	0.0	1.7	0.5	0.3	7.3	4028.6	4028.6	-4021.3
MOLTENO	0.0	11.1	347.6	26.0	32.4	197.7	75.9	20.2	9.4	15.4	0.0	0.0	48.4	28799.6	28799.6	-28751.3
MONTAGU	0.0	23.7	221.7	39.5	51.3	467.3	14.7	21.0	19.2	6.1	0.5	0.5	89.1	15183.4	15183.4	-15094.2
MOOIRIVIER	0.0	76.0	71.2	33.1	43.3	470.7	140.5	94.8	24.0	18.9	12.7	30.8	111.8	24920.4	24920.4	-24808.6
MOORREESBURG	0.0	79.0	192.0	42.6	56.2	719.2	323.2	198.4	8.6	55.6	113.1	87.0	257.9	17040.4	17040.4	-16782.5
MORETELE	709.7	51.5	-51.1	35.4	42.3	1544.0	95.6	137.3	33.4	14.3	192.5	32.2	161.1	17325.5	17325.5	-17164.4
MOSELBAY	1.0	18.0	49.6	45.8	57.9	470.2	441.3	358.7	44.6	25.0	174.7	105.0	174.3	10541.7	10541.7	-10367.3
MOUNT CURRIE	0.2	41.7	182.8	32.8	43.5	490.5	74.4	25.5	47.9	6.9	11.3	2.4	69.8	38719.9	38719.9	-38650.2

Appendix 2 Continued

District Name	MQ	NEI	IEI	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PEI	PG	NEI	IEC
MOUTSE	0.0	88.6	-86.9	37.4	42.2	7.5	63.7	56.3	0.1	19.0	17.5	11.3	37.9	0.0	0.0	37.9
MPOFU	0.0	10.7	-9.9	23.9	26.6	0.0	26.1	38.3	0.0	7.4	0.0	0.0	10.6	58403.3	58403.3	-58392.7
MQANDULI	0.0	20.0	-19.5	34.8	33.9	0.0	14.3	9.9	0.0	2.5	3.0	1.4	8.1	65237.7	65237.7	-65229.6
MSINGA	0.0	11.0	-10.5	38.2	39.5	0.0	60.9	76.1	0.0	8.2	200.5	18.6	37.3	65159.3	65159.3	-65122.0
MT. FLETCHER	0.0	8.3	-7.9	39.0	37.6	0.0	20.2	0.5	0.0	5.1	0.0	1.4	18.4	76321.6	76321.6	-76303.2
MTONJANENI	1.4	62.1	109.7	48.3	59.0	690.7	975.5	384.5	24.2	52.9	325.8	172.5	289.7	19332.1	19332.1	-19042.4
MTUNZINI	17.8	190.9	-140.9	49.0	62.2	1760.0	1722.4	1694.5	88.8	170.1	8239.1	239.7	1157.6	16204.4	16204.4	-15046.8
MURRAYSBURG	0.0	16.7	2309.8	34.7	44.8	320.2	1268.9	871.5	11.4	121.1	1661.4	1263.9	501.2	38345.5	38345.5	-37844.3
MUTALE	0.0	4.5	-4.2	33.9	34.2	0.0	276.2	304.0	0.0	377.2	217.3	41.3	148.2	44503.6	44503.6	-44355.4
NAMAKGALE	0.0	118.4	-116.3	27.1	35.6	0.0	6.3	1.5	0.0	1.2	0.0	0.0	5.5	23326.6	23326.6	-23321.1
NAMAKWALAND	504.3	34.8	1109.8	42.0	54.8	856.9	6.8	9.4	34.0	2.1	0.0	0.0	88.4	27886.7	27886.7	-27798.3
NAPHUNO	0.0	4.8	-0.8	35.5	39.6	0.0	3.2	2.2	0.0	0.5	0.0	0.0	5.9	52220.6	52220.6	-52214.7
NDWEDWE	0.0	24.2	-24.0	45.6	50.2	0.0	28.6	24.9	0.0	3.4	21.5	7.1	13.8	43563.1	43563.1	-43549.3
NEBO	0.0	6.0	-5.3	37.2	39.3	0.0	6.3	3.4	0.0	0.8	7.1	1.5	7.3	60092.9	60092.9	-60085.6
NELSPRUIT	2.7	51.2	62.4	46.0	59.7	2521.3	8.9	6.4	191.8	1.6	0.0	0.9	360.0	85041.2	85041.2	-84681.2
NEW HANOVER	0.0	135.4	-75.0	38.1	50.6	549.8	24.3	19.9	20.9	4.3	0.9	1.1	101.8	25767.6	25767.6	-25665.8
NEWCASTLE	76.2	44.8	24.5	43.0	56.9	2443.1	102.5	53.1	185.0	10.1	101.2	5.6	414.5	15929.1	15929.1	-15514.6
NGOTSHE	16.5	32.5	166.7	35.7	45.8	229.5	16.7	23.1	9.7	6.0	0.0	0.0	51.5	31039.6	31039.6	-30988.1
NGQELENI	0.0	18.2	-17.7	34.3	34.6	0.0	15.2	8.9	0.0	4.4	1.4	2.3	8.5	36305.2	36305.2	-36296.7
NIGEL	46.5	61.7	-48.1	31.6	40.8	476.5	8.0	5.5	20.3	2.0	5.1	0.2	73.1	18464.5	18464.5	-18391.4
NKANDLA	0.0	20.2	-19.1	37.2	37.9	0.0	1.2	1.4	0.0	1.2	0.0	0.0	5.8	54311.2	54311.2	-54305.4
NKOMAZI	0.0	18.2	-17.4	31.9	35.4	0.0	6.2	3.7	0.0	1.1	11.4	0.7	6.6	5576.1	5576.1	-5569.5
NONGOMA	0.0	18.8	-18.2	34.4	36.3	0.0	97.1	103.6	0.0	15.0	494.8	10.4	64.1	48632.3	48632.3	-48568.2
NOUPOORT	0.0	4.5	346.5	28.4	34.8	679.6	340.5	233.7	386.7	32.5	138.6	40.1	200.3	26407.1	26407.1	-26206.7
NQAMAKWE	0.0	14.4	-13.8	33.8	32.5	0.0	84.7	47.2	0.0	8.8	319.1	18.6	45.8	56974.9	56974.9	-56929.2
NQUTU	106.6	39.4	-39.0	33.1	37.3	1770.7	6.8	1.0	109.4	0.4	0.0	0.0	231.2	48779.8	48779.8	-48548.5
NSIKAZI	8.5	29.0	-28.5	32.7	39.8	147.9	1.4	1.3	1.5	0.3	0.0	0.0	24.8	37419.1	37419.1	-37394.2
NTUZUMA	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20405.7	20405.7	-20405.7
OBERHOLZER	1389.1	112.5	-106.5	42.2	49.0	1585.2	84.8	120.5	13.1	20.4	818.4	31.4	273.8	9519.5	9519.5	-9245.7
ODENDAALSRUS	99.9	60.5	-42.4	38.1	46.5	247.5	12.6	4.6	15.3	1.6	2.8	0.9	45.5	0.2	0.2	45.2
ODI I	0.0	16.0	-13.7	27.0	34.0	0.0	0.8	0.5	0.0	0.3	0.0	0.0	5.8	15200.9	15200.9	-15195.1
ODI II	0.0	0.9	-0.5	40.2	46.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	415004.2	415004.2	-414998.0
OKHAHLAMBA	0.0	22.6	-21.5	34.7	37.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.6	47474.4	47474.4	-47457.8
ONGOYE	0.0	59.2	-52.6	33.5	40.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.4	31186.0	31186.0	-31168.6

Appendix 2 Continued

District Name	MQ	NEI	IEI	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PEI	PG	NEI	IEC
OUDTSHOORN	6.0	31.1	6.0	155.6	204.0	5224.7	31.3	17.8	697.0	2.8	6.3	3.8	807.8	78525.8	78525.8	-77718.0
PAARL	0.2	31.3	24.0	19.6	25.7	348.5	15.4	13.6	22.8	2.2	1.3	0.0	59.2	9493.4	9493.4	-9434.2
PARYS	10.2	140.0	-110.8	88.4	116.8	2365.6	2.1	2.2	38.9	1.0	0.0	0.0	379.2	25257.0	25257.0	-24877.8
PAULPIETERSBURG	56.1	50.1	58.4	83.6	110.0	735.6	1976.6	2187.9	38.0	172.1	7217.9	344.2	1063.5	1.7	1.7	1061.8
PEARSTON	372.5	104.7	279.8	132.9	175.1	1949.7	237.2	130.6	210.8	30.4	8.9	11.5	427.6	107306.7	107306.7	-106879.1
PEDDIE	0.0	6.9	82.1	2.2	2.8	23.8	25.9	16.7	0.5	4.9	23.4	0.4	9.8	2558.2	2558.2	-2548.5
PELGRIMSREST	0.0	1.7	2.4	87.5	91.3	0.0	233.5	151.4	0.0	23.7	95.2	71.2	67.3	104379.9	104379.9	-104312.6
PELGRIMSREST (KZN)	0.0	0.6	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PETRUSBURG	63.8	86.4	405.0	123.6	153.3	2961.8	221.7	138.6	134.1	24.7	11.2	82.1	481.2	3.9	3.9	477.3
PHALABORWA	0.2	14.2	223.0	13.0	16.9	135.6	63.0	43.3	11.1	14.1	1.3	11.6	36.6	20922.9	20922.9	-20886.3
PHILIPPOLIS	13864.6	843.4	-165.5	189.2	238.2	16780.4	73.8	33.0	134.3	16.4	31.6	0.5	1843.0	5.9	5.9	1837.0
PHILIPSTOWN	0.0	10.4	853.2	28.5	36.7	306.6	459.3	655.7	9.4	47.9	1705.9	135.4	292.2	42620.2	42620.2	-42328.0
PIET RETIEF	0.0	24.6	198.4	4.5	5.9	90.6	60.5	50.6	3.2	6.2	18.8	2.6	22.9	8692.3	8692.3	-8669.4
PIETERMARITZBURG	14.3	58.0	-25.8	9.8	12.8	180.1	34.2	22.3	4.5	3.4	12.1	2.0	33.8	15766.1	15766.1	-15732.2
PIETERSBURG	6.0	38.8	-35.4	157.2	209.2	5935.1	190.2	153.9	441.7	13.8	52.0	29.2	980.4	18170.9	18170.9	-17190.4
PIKETBERG	83.0	97.3	236.7	91.0	119.5	4239.3	6.5	4.6	481.1	2.8	0.0	0.0	692.8	19321.7	19321.7	-18628.8
PINETOWN	1.6	101.3	-51.1	6.7	8.9	130.9	23.6	16.9	6.4	2.0	2.8	1.7	27.1	14393.7	14393.7	-14366.6
POLELA	38.2	253.2	33.1	1898.7	2527.2	65296.1	305.4	180.8	3016.1	73.3	0.0	0.0	9607.5	31089.1	31089.1	-21481.6
PORT ELIZABETH	0.0	8.5	-7.8	0.2	0.3	3.5	5.3	4.0	0.3	0.5	0.3	0.7	1.8	14840.6	14840.6	-14838.8
PORT SHEPSTONE	16.9	56.4	-36.8	428.4	569.3	12257.2	17.4	8.7	1462.2	1.5	0.6	6.3	1904.8	16838.5	16838.5	-14933.7
POSTMASBURG	43.8	14.5	1.6	47.0	61.7	1161.2	9.2	3.4	92.6	1.0	0.0	0.0	188.0	20151.9	20151.9	-19963.9
POTCHEFSTROOM	311.1	38.8	133.3	10.3	13.3	413.9	19.9	11.5	23.0	2.4	38.1	1.6	57.6	0.0	0.0	57.6
POTGIETERSRUS	9.6	34.1	73.1	122.9	156.7	1691.7	10.2	9.8	74.7	2.5	0.0	0.0	290.7	34294.2	34294.2	-34003.5
PRETORIA	6.8	41.1	2.1	3.6	4.8	76.4	1.8	1.4	4.6	0.3	0.0	0.0	13.0	16777.3	16777.3	-16764.3
PRIESKA	181.3	226.8	-143.7	1655.3	2195.8	128795.4	282.9	389.1	12644.4	39.2	138.6	90.9	19836.4	38948.9	38948.9	-19112.5
PRINCE ALBERT	239.5	56.6	4211.6	95.8	126.4	1250.9	114.0	69.3	99.1	15.1	0.0	0.0	235.6	31492.0	31492.0	-31256.4
QUEENSTOWN	0.0	10.5	371.1	6.0	7.6	49.7	12.2	10.6	2.4	2.9	0.0	0.0	12.2	19574.9	19574.9	-19562.7
QUMBU	0.7	18.0	21.2	17.1	22.2	460.1	8.4	7.2	67.9	2.7	0.0	0.0	78.2	91075.0	91075.0	-90996.7
RANDBURG	0.0	5.4	-5.0	8.8	8.4	0.0	61.9	46.0	0.0	3.5	74.6	14.7	17.8	11803.3	11803.3	-11785.5
RANDFONTEIN	6.7	73.3	-72.2	109.1	145.0	3200.1	52.4	23.9	83.8	3.3	38.3	5.5	563.0	17738.4	17738.4	-17175.4
REDDERSBURG	8859.7	693.6	-465.7	773.4	1003.0	19495.1	81.6	96.5	434.5	33.9	0.0	0.0	2869.5	8.1	8.1	2861.4
REITZ	0.0	39.5	68.6	6.0	7.5	51.2	117.6	47.0	2.5	15.1	8.0	3.7	27.3	1.4	1.4	26.0
RICHMOND (CA)	0.0	198.1	949.9	189.2	248.1	2436.4	1550.3	338.3	103.6	483.1	17139.8	375.5	2068.2	49635.7	49635.7	-47567.5
RICHMOND (KZN)	0.0	66.3	738.6	9.3	12.4	425.9	646.8	630.8	12.2	141.6	572.9	170.7	238.8	25104.0	25104.0	-24865.2

Appendix 2 Continued

District Name	MQ	NEI	IEI	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PEI	PG	NEI	IEC
RITAVI	0.0	60.9	-49.5	6.7	8.8	18.2	506.2	342.7	0.7	71.2	614.5	206.2	156.4	51477.2	51477.2	-51320.7
RIVERSDALE	0.0	8.6	-8.3	222.1	252.9	0.0	69.7	32.0	0.0	6.5	0.0	0.0	43.2	16613.0	16613.0	-16569.8
ROBERTSON	3.1	36.1	240.9	32.5	43.3	468.2	5.2	1.8	42.4	1.5	0.0	0.1	78.8	19627.3	19627.3	-19548.5
ROODEPOORT	0.5	49.1	-35.8	4.9	6.5	61.4	0.0	0.0	1.4	0.0	0.0	0.0	11.4	10264.2	10264.2	-10252.8
ROUXVILLE	1025.4	94.6	-89.1	779.5	1018.5	15958.7	0.0	0.0	709.8	0.0	0.0	0.0	2375.6	4.2	4.2	2371.4
RUSTENBURG	0.0	21.2	41.1	3.9	5.0	32.4	0.0	0.0	1.1	0.0	0.0	0.0	5.2	21546.5	21546.5	-21541.3
SASOLBURG	1418.0	135.6	-100.4	59.8	73.2	2314.1	0.0	0.0	74.0	0.0	0.0	0.0	335.9	0.2	0.2	335.7
SCHWEIZER-RENEKE	504.5	150.3	-113.7	80.8	101.8	5698.2	62.7	98.7	68.9	6.3	205.9	104.5	663.8	20220.6	20220.6	-19556.8
SEKGOSESE	0.1	447.4	-350.2	12.8	16.4	110.3	0.0	0.0	3.9	0.0	0.0	0.0	20.8	60009.5	60009.5	-59988.7
SEKHUKHUNELAND	0.0	0.8	0.1	10.8	11.4	0.0	0.8	0.1	0.0	0.1	0.0	0.0	1.7	63566.0	63566.0	-63564.3
SENEKAL	0.0	19.1	-18.5	318.2	350.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.8	1.1	1.1	46.7
SESHEGO	0.0	9.4	19.5	4.5	5.6	49.6	0.0	0.0	1.1	0.0	0.0	0.0	7.8	47811.7	47811.7	-47803.9
SIMDLANGENTSHA	0.0	68.4	-67.0	86.3	96.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	44431.7	44431.7	-44418.6
SIMONSTAD	0.0	6.6	53.0	72.4	80.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.4	10597.1	10597.1	-10573.7
SIPHAQUENI	1.5	18.2	-17.7	32.9	43.0	564.1	0.0	0.0	21.3	0.0	0.0	0.0	91.6	124556.2	124556.2	-124464.6
SMITHFIELD	0.0	2.5	-2.1	303.1	312.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.9	5.9	5.9	38.0
SOMERSET-EAST	0.0	6.4	198.8	7.8	10.0	80.0	314.4	225.4	3.3	232.5	560.0	248.5	409.9	28442.8	28442.8	-28032.9
SOMERSET-WEST	0.8	42.6	225.9	19.7	26.2	190.8	0.0	0.0	20.4	0.0	0.0	0.0	31.9	7157.1	7157.1	-7125.2
SOSHANGUVE	0.7	2.0	6.3	10.7	13.9	290.0	10.4	18.2	10.5	0.1	48.6	19.1	58.4	18145.3	18145.3	-18086.8
SOUTPANSBERG	0.0	4.6	-4.1	170.2	221.1	153.1	0.0	0.0	6.4	0.0	0.0	0.0	51.4	36001.6	36001.6	-35950.2
SOUTPANSBERG (KZN)	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SPRINGS	14.1	66.6	27.3	7.6	9.9	205.5	0.0	0.0	12.8	0.0	0.0	0.0	33.5	30857.4	30857.4	-30823.9
STANDERTON	10.1	36.9	-32.9	72.3	94.0	2808.0	0.0	0.0	240.7	0.0	0.0	0.0	366.2	14681.6	14681.6	-14315.4
STELLENBOSCH	136.0	594.9	-447.1	44.9	59.4	1778.4	0.0	0.0	51.8	0.0	0.0	0.0	214.2	19573.3	19573.3	-19359.1
STERKSTROOM	0.0	4.9	-4.4	421.4	409.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	59.4	36066.1	36066.1	-36006.7
STEYNSBURG	0.0	8.1	288.1	20.5	25.1	163.7	0.0	0.0	14.2	0.0	0.0	0.0	29.8	59478.7	59478.7	-59449.0
STEYTLERVILLE	0.0	24.0	1327.2	78.2	96.6	588.8	0.0	0.0	44.9	0.0	0.0	0.0	112.6	40443.7	40443.7	-40331.1
STRAND	0.4	36.9	205.2	4.7	6.2	61.4	0.0	0.0	2.4	0.0	0.0	0.0	8.9	10169.9	10169.9	-10161.0
STUTTERHEIM	0.0	12.6	-11.8	32.4	42.4	618.3	0.0	0.0	19.2	0.0	0.0	0.0	103.7	25791.3	25791.3	-25687.6
SUTHERLAND	2.6	58.4	1091.7	502.5	657.1	3558.9	3288.4	9486.5	114.7	2494.0	24274.5	7726.4	8083.9	57259.8	57259.8	-49175.9
SWARTRUGGENS	0.0	16.0	1815.9	10.6	14.1	178.5	70.5	261.2	7.4	0.0	303.7	326.7	261.2	71631.7	71631.7	-71370.5
SWELLENDAM	33.7	23.6	83.2	17.2	22.2	168.9	0.0	0.0	12.2	0.0	0.0	0.0	26.2	17885.5	17885.5	-17859.2
TABANKULU	0.0	30.3	68.4	14.2	18.7	280.4	0.0	0.0	10.3	0.0	0.0	0.0	45.1	78312.7	78312.7	-78267.7
TARKA	0.0	2.4	-1.9	323.4	322.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.2	29201.3	29201.3	-29155.2

Appendix 2 Continued

District Name	MQ	NEI	IEI	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PEI	PG	NEI	IEC
TAUNG	0.0	5.3	36.3	1.7	2.2	17.4	0.0	0.0	1.0	0.0	0.0	0.0	2.9	1412.6	1412.6	-1409.6
THABA 'NCHU	0.0	8.0	-7.6	81.0	86.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	0.4	0.4	12.0
THABAMOPO	0.0	4.7	-4.2	34.4	39.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	53397.1	53397.1	-53388.9
THABAZIMBI	0.0	6.1	-4.8	0.0	0.0	532.4	0.0	0.0	30.9	0.0	0.0	0.0	40.2	19368.5	19368.5	-19328.2
THEUNISSEN	1776.4	150.0	371.7	56.5	67.4	2166.4	20.7	112.5	21.4	3.5	227.7	154.0	337.0	0.8	0.8	336.2
THOHOYANDOU	76.3	25.6	-0.4	8.1	9.7	166.6	0.0	0.0	2.0	0.0	0.0	0.0	23.2	46144.9	46144.9	-46121.7
TROMPSBURG	459.0	114.3	-114.0	1596.1	1616.1	18509.5	0.0	0.0	331.5	0.0	0.0	0.0	2604.3	8.9	8.9	2595.4
TSOLO	0.0	12.0	50.2	2.2	2.8	21.2	0.0	0.0	1.5	0.0	0.0	0.0	3.5	75100.0	75100.0	-75096.4
TSOMO	0.0	17.7	-16.9	35.6	33.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	72258.7	72258.7	-72253.7
TULBAGH	0.0	33.1	-21.5	133.9	132.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	21997.8	21997.8	-21978.7
UBOMBO	0.1	10.1	14.3	45.0	51.5	131.6	0.0	0.0	7.0	0.0	0.0	0.0	28.6	103047.2	103047.2	-103018.7
UITENHAGE	0.0	2.8	1.3	56.4	72.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	15015.9	15015.9	-15006.2
UMLAZI	1.6	1.5	14.8	16.2	21.3	325.7	0.0	0.0	30.5	0.0	0.0	0.0	48.2	0.0	0.0	48.2
UMTATA	0.0	10.1	-9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32976.2	32976.2	-32976.2
UMVOTI	4.7	81.0	-80.5	255.3	260.6	7712.9	0.0	0.0	271.5	0.0	0.0	0.0	1021.9	23011.5	23011.5	-21989.6
UMZIMKULU	0.1	16.9	13.6	13.1	16.0	161.2	0.0	0.0	7.2	0.0	0.0	0.0	28.8	114774.9	114774.9	-114746.2
UMZIMVUBU	0.0	30.9	-29.8	114.6	112.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.2	155870.5	155870.5	-155854.3
UMZINTO	0.0	60.5	-59.1	35.4	36.7	0.0	956.0	656.2	0.0	40.3	472.1	317.7	210.9	20644.1	20644.1	-20433.2
UNDERBERG	2.3	134.0	114.8	210.5	273.8	6672.3	0.0	0.0	250.2	0.0	0.0	0.0	926.3	37838.4	37838.4	-36912.1
UNIONDALE	0.0	139.3	186.4	47.7	61.6	567.3	0.0	0.0	29.2	0.0	0.0	0.0	111.4	28058.9	28058.9	-27947.5
UTRECHT	0.0	24.6	208.7	12.4	16.5	118.4	0.0	0.0	9.9	0.0	0.0	0.0	26.6	26951.8	26951.8	-26925.2
VANDERBIJLPARK	13.6	43.2	-27.5	1.6	2.1	25.0	0.0	0.0	0.2	0.0	0.0	0.0	4.1	17100.7	17100.7	-17096.6
VANRHYNSDORP	16.4	25.4	65.5	1535.4	2007.7	24820.9	0.0	0.0	614.6	0.0	0.0	0.0	3340.2	25285.8	25285.8	-21945.6
VENTERSBURG	8.7	45.9	1316.9	26.8	35.3	387.9	0.0	0.0	70.0	0.0	0.0	0.0	70.2	2.5	2.5	67.6
VENTERSDORP	0.0	40.7	49.6	13.2	17.5	109.0	0.0	0.0	1.8	0.0	0.0	0.0	21.3	179036.9	179036.9	-179015.6
VENTERSTAD	15.0	215.3	973.1	191.1	252.8	2130.7	0.0	0.0	62.0	0.0	0.0	0.0	350.3	35810.8	35810.8	-35460.5
VEREENIGING	0.0	33.0	-16.2	0.6	0.8	4.5	19.8	29.4	0.1	3.5	124.7	22.3	33.8	19820.8	19820.8	-19787.1
VICTORIA EAST	117.6	327.5	-150.4	937.0	1232.3	30601.8	0.0	0.0	1274.2	0.0	0.0	0.0	4385.1	207011.6	207011.6	-202626.5
VICTORIA-WEST	0.0	2.9	-2.7	28.4	33.3	61.7	0.0	0.0	7.6	0.0	0.0	0.0	9.5	10977.8	10977.8	-10968.3
VILJOENSKROON	0.0	53.5	439.0	6.7	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.5	0.5	6.1
VIRGINIA	35.1	469.2	-410.3	31.9	37.7	141.8	0.0	0.0	3.2	0.0	0.0	0.0	34.9	0.1	0.1	34.7
VOLKSRUST	2803.4	194.4	-174.8	132.6	154.7	3489.3	0.0	0.0	36.4	0.0	0.0	0.0	466.8	57474.2	57474.2	-57007.4
VREDE	59.6	33.1	79.8	27.7	36.3	481.3	608.7	1046.5	115.8	33.2	1264.3	522.6	505.0	1.1	1.1	503.9
VREDEFORT	0.0	116.9	807.0	83.0	104.4	872.1	0.0	0.0	14.2	0.0	0.0	0.0	144.0	3.3	3.3	140.7

Appendix 2 Continued

District Name	MQ	NEI	IEI	PLF	PEA	PAY	TD	FRE	TC	OP	M	C	PEI	PG	NEI	IEC
VREDENBURG	0.0	85.3	-8.3	11.8	15.5	86.0	0.0	0.0	3.4	0.0	0.0	0.0	16.0	12078.8	12078.8	-12062.9
VREDENDAL	6.7	25.8	35.7	63.9	84.0	1435.0	0.0	0.0	65.5	0.0	0.0	0.0	224.4	22105.9	22105.9	-21881.5
VRYBURG	4.0	13.3	56.4	11.4	15.0	161.2	0.0	0.0	5.2	0.0	0.0	0.0	27.0	6894.9	6894.9	-6868.0
VRYHEID	18.5	48.0	663.1	39.4	52.2	491.1	0.0	0.0	40.1	0.0	0.0	0.0	88.4	21383.4	21383.4	-21295.1
VULAMEHLO	182.7	126.3	-40.8	28.8	37.0	597.1	0.0	0.0	98.6	0.0	0.0	0.0	98.7	53493.7	53493.7	-53395.0
VULINDLELA	0.0	168.6	-168.3	17.0	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	24237.0	24237.0	-24225.5
VUWANI	0.0	84.8	-84.4	63.1	76.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	156.9	45645.4	45645.4	-45488.5
WAKKERSTROOM	0.0	20.1	-20.0	116.7	114.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.5	18060.4	18060.4	-18043.8
WARMBAD	-0.1	15.3	85.0	23.1	28.5	77.3	0.0	0.0	1.7	0.0	0.0	0.0	16.3	26932.5	26932.5	-26916.2
WARRENTON	209.6	46.8	292.3	57.5	76.0	836.6	0.0	0.0	58.4	0.0	0.0	0.0	146.7	33099.0	33099.0	-32952.3
WATERBERG	0.9	10.7	36.7	16.3	21.5	163.5	0.0	0.0	52.6	0.0	0.0	0.0	28.9	26798.2	26798.2	-26769.3
WATERVAL-BOVEN	176.5	123.3	1473.1	166.5	217.5	1862.8	0.0	0.0	176.7	0.0	0.0	0.0	355.7	105722.6	105722.6	-105367.0
WEENEN	0.0	40.6	95.7	26.8	34.8	610.8	265.2	457.4	209.6	2.2	540.1	226.7	212.3	28778.7	28778.7	-28566.5
WELKOM	0.0	50.8	-43.2	1.4	1.7	9.1	0.0	0.0	0.2	0.0	0.0	0.0	1.9	0.0	0.0	1.9
WELLINGTON	5266.4	507.8	-472.6	400.0	477.3	9315.2	0.0	0.0	246.9	0.0	0.0	0.0	1345.4	14978.1	14978.1	-13632.7
WEPENER	9.6	40.1	21.5	102.5	134.0	1597.1	2185.5	1659.4	136.3	146.0	2151.3	1357.1	1578.1	3.9	3.9	1574.2
WESSELSBRON	1.4	48.6	65.1	13.5	18.0	134.2	0.0	0.0	10.5	0.0	0.0	0.0	21.8	1.5	1.5	20.3
WESTONARIA	0.0	310.3	-289.7	4.7	5.8	41.0	0.0	0.0	0.8	0.0	0.0	0.0	8.1	13156.6	13156.6	-13148.6
WILLISTON	19865.4	1193.6	-1105.5	2640.7	3152.0	26819.3	0.0	0.0	488.9	0.0	0.0	0.0	4798.5	63146.5	63146.5	-58347.9
WILLOWMORE	0.0	11.3	3315.5	15.7	20.2	293.0	0.0	0.0	18.4	0.0	0.0	0.0	46.3	33460.0	33460.0	-33413.7
WINBURG	0.0	24.5	862.6	18.8	23.3	170.2	0.0	0.0	18.5	0.0	0.0	0.0	28.3	2.4	2.4	25.9
WITBANK	0.0	35.1	-34.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1325.5	1325.5	-1324.4
WITRIVIER	0.0	28.2	208.7	21.5	27.2	214.1	0.0	0.0	6.7	0.0	0.0	0.0	389.8	88787.2	88787.2	-88397.5
WITSIESHOEK	272.5	75.4	-46.5	23.5	29.6	973.2	0.0	0.0	55.4	0.0	0.0	0.0	93.1	0.1	0.1	92.9
WODEHOUSE	0.0	61.6	14.6	86.7	109.6	1930.8	21.4	5.3	141.8	2.6	2.8	1.5	410.4	28550.8	28550.8	-28140.4
WOLMARANSSTAD	0.1	26.1	-24.9	192.1	214.7	803.5	0.0	0.0	16.8	0.0	0.0	0.0	94.6	29853.0	29853.0	-29758.4
WONDERBOOM	0.0	75.0	-52.6	1.5	1.8	12.5	0.0	0.0	0.6	0.0	0.0	0.0	3.8	14601.9	14601.9	-14598.1
WORCESTER	0.8	28.9	79.8	18.5	24.6	143.0	0.0	0.0	8.5	0.0	0.0	0.0	84.8	17914.5	17914.5	-17829.7
WYNBERG	0.4	61.4	-60.2	9.1	11.9	99.6	0.0	0.0	0.5	0.0	0.0	0.0	14.2	12144.5	12144.5	-12130.4
XALANGA	7.1	182.7	-38.9	99.5	131.4	2246.3	431.6	133.6	211.4	15.6	100.8	65.7	774.4	93872.1	93872.1	-93097.7
XHORA	13.3	49.7	-48.1	769.9	1023.1	5362.0	75.3	132.4	144.6	1.0	154.0	64.0	649.5	104382.6	104382.6	-103733.1
ZASTRON	0.0	9.7	-9.3	138.9	136.1	0.0	47.8	37.0	0.0	12.8	0.0	0.0	32.7	3.3	3.3	29.4
ZWELITSHA	0.0	11.8	9.1	2.0	2.6	23.1	0.0	0.0	2.5	0.0	0.0	0.0	3.6	34640.9	34640.9	-34637.2



### APPENDIX 3

Social Indicators		Economic Indicators		Environmental Indicators	
Positive	Negative	Positive	Negative	Positive	Negative
Community services	Households with access to off-site water facilities	Construction	Poverty gap	Arable land per capita	Agriculture, fishing and forestry
Households with access to bucket latrine facilities	Households with no access to piped water	Potential labor force		Protected areas	Electricity, gas and water
Households with access to full services	Population density	Finance and real estates		Species density	Energy use in agriculture
Households with access to on-site water facilities	Unemployment rate	Gross remuneration of employees			Intensity of cattle production
Households with access to piped water	Urban rural spread	Manufacturing			Intensity of maize production
Households with access to pit-latrine facilities		Other producers			Irrigation percentage of arable land
Households with access to septic tank latrine facilities		Paid employees in agricultural sector			Mining and quarrying
Percentage functional literacy		Trade and catering			Mining intensity index
		Transport and communication			Population growth rate
					Total income from field crops
					Total income from horticulture
					Total income from livestock
					Use of agricultural pesticides
					Use of fertilizers

APPENDIX 4

