BOE/012/0038/4

20/11/95

RDP

DEVELOPMENT PLANNING FRAMEWORK

ATLAS

Compiled for the
Forum for Effective Planning and Development
(FEPD)

20 November 1995

PREAMBLE

Accurate information is an essential prerequisite for effective planning. Before we can make good decisions about where and how to invest our scarce resources in support of economic growth and development, there is a great deal we need to know. Where are our people located? What access to they have to basic services? What is their level of literacy, their life expectancy? What work do they do? What potential exists in the land they live on? What natural resources do they have? This data can be for the country as a whole, but it becomes particularly powerful when it is spatially-referenced by province, magisterial district, local authority or ward. Then the particular needs and opportunities can be pinpointed.

A vast number of public and private institutions in South Africa hold spatially-referenced data in computerised Geographic Information Systems (GIS). The information in these systems varies in its type, its accuracy, its level of detail, and its structure. Unless we have a common approach to collecting, quantifying, organising and presenting this information, our plans will never build synergy. For example, to plan education, health and housing, we must first all agree how many people are in an area, how many houses, schools and clinics exist and so on.

To date, the October Household Survey has greatly enhanced our access to spatially-referenced data. When we complete the October 96 Census, our base of data will be dramatically improved. Furthermore, the National Information Project (NIP) will help us to come up with consistent ways of classifying and organising the data throughout government so that our databases can all use and access the same information. Ultimately our aim is to have a national GIS, or a network of linked GIS systems throughout all tiers of government such that any stakeholder can see what is going on in any community in the country. For example, one should easily be able to access information on population, economic activity, government expenditure, special RDP projects, future plans of different departments, and so on.

As a first step in this direction we have produced this Atlas. It was commissioned by the Forum for Effective Planning and Development (FEPD), which is made up of MECs from all nine provinces and national ministers. We asked the CSIR to collected data from a wide range of sources and map the data in a consistent GIS format. The data is also available on computer disk. The maps in this ATLAS were presented at the FEPD Development Planning Workshop that took place in Cape Town from 26-28 November 1995.

The primary intention of this ATLAS is to stimulate discussion and to demonstrate the opportunities afforded by Geographical Information Systems as a tool to support development planners. While every effort has been made ensure the quality and accuracy of the information, no guarantees can be given on the use of the maps or the associated data to produce the maps. The maps have been categorised under 6 main headings, namely:

- Population and Development Needs;
- Land, Natural Resources, Environment and Tourism;
- Existing Infrastructure;
- Industry and Agriculture;
- Economic Activity;
- Government Administration, Expenditure and Investment; and
- Emerging Strategies.

This ATLAS is a first step. A task team has now been established under the FEPD to take the process further, and to link up with the Census and the NIP. We welcome your comments, and your participation in the process.

Jay Naidoo, Minister in the Office of the President, November 1995

Acknowledgement of Sources

Central Statistical Services (CSS)
Computing Centre for Water Research (CCWR)
Council for Geological Sciences
CSIR: Division of Building Technology
CSIR: Division of Forest Science and Technology
CSIR: Division of Microelectronics and Communications Technology (Satellite Application Centre)
Department of Constitutional and Provincial Affairs
Department of Environmental Affairs and Tourism
Department of Fisheries
Department of Health
Department of Land Affairs: Chief Directorate: Surveys and Land Information
Department of Mineral and Energy Affairs
Development Bank of Southern Africa (DBSA)
EasyData
ESKOM
Human Sciences Research Council (HSRC)
Institute for Soil, Climate and Water (ISCW)
Institute of Water Quality Studies (IWQS)
National Electrification Forum (NELF)
RDP Office
South African Reserve Bank
Water Research Commission

Since much of this data has been acquired from a range of organisations, there is a need to respect ownership and distribution rights of those organisations. Attention has been given to compiling a comprehensive data dictionary for each and every dataset that is in the system. This provides details relating to the sources, quality statements, notes on the level of detail and the extent of coverage.

Development Planning Information Committee

Organisations presently represented on the Committee (in alphabetical order):

CSIR
Department of Land Affairs: Chief Directorate: Surveys and Land Information
Development Bank of Southern Africa (DBSA)
Gauteng Province
North West Province
National Information Project
RDP Office

List of Maps

Population and Development Needs

1. **Change in Urban Population (Average/Annum 1990-1995)** - Estimated percentage growth or decline within each magisterial district between 1990 and 1995 for the urban population .
2. **Change in Rural Population (Average/Annum 1990-1995)** - Estimated percentage growth or decline within each magisterial district between 1990 and 1995 for the rural population .
3. **Level of Urbanisation** Represents the percentage of the population within each magisterial district that reside within urban areas (the definition of urban is still largely based on the 1991 census).
4. **Population Density /Km²** - Average number of people per square kilometre per magisterial district.
5. **Households: Informal Housing (%)** - Percentage of housing units which are considered informal in both urban and rural areas (built with unconventional building materials) per magisterial district.
6. **Households with Inadequate Sanitation** - Percentage of housing units with inadequate sanitation (i.e. pit latrine, bucket system, other sanitation) per magisterial district.
7. **Households with Inadequate Water Supply** - Percentage of housing units with inadequate water supply (i.e. communal supply, other supply, no water) per magisterial district.
8. **Households with Inadequate Electricity Supply** - Percentage of the population without access to electricity within each magisterial district.
9. **Pupils per Teacher** - Ratio of pupils per teacher (across all population groups) per magisterial district (e.g. 35 pupils to each teacher)
10. **Schools per Population (000s)** - The number of schools for every 1000 persons (across all population groups) per magisterial district
11. **Nurses per Population (000s)** - Number of nurses for every 1000 persons per magisterial district
12. **Doctors per Population (000s)** - Number of doctors for every 1000 persons per magisterial district.
13. **Beds per Population (000s)** - Number of beds (available for patients) for every 1000 persons per magisterial district.
14. **Hospitals per Population (000s)** - Number of hospitals for every 1000 of the population in each magisterial district.
15. **Post Offices /Km²** - Average number of Post Offices per square kilometre per magisterial district.
16. **Poverty Gap** - The poverty gap represents the total sum of money that would be required to supplement the income of poor households to the level of the accepted poverty line (R740/month for rural households and R840/month for urban households).
17. **Human Development Index (HDI): Black** - Human Development Index for the Black population group per magisterial district. Human Development Index is a composite, relative index which attempts to quantify the level of development based on measures of life expectancy, literacy and income. A maximum value of 1 denotes a high level of human development with 0 as the lowest level.
18. **Per Capita Income** - Total income per magisterial district divided by the total population of the district.

Land, Natural resources, Environment and Tourism

19. **Rivers and Lakes** - Graphic representation of the main river systems in South Africa.
20. **Mean Annual Rainfall** - Average annual rainfall (mm) per magisterial district.
21. **Forestry per Catchment** - Percentage of the Area that is used for Forestry per rainfall catchment area.
22. **Mines (selected)** - Spatial distribution of selected mines.
23. **Main Tourism Areas** - Identification of the main tourism regions in South Africa.
24. **Hotel Room Occupancy Rates** - Percentage occupancy rate of available tourist accommodation according to SATOUR tourism regions - June 1995.

Existing Infrastructure

25. **Transportation Network** - Graphic representation of the distribution of the main road and rail infrastructure.
26. **Transportation Volumes** - Graphic representation of the transportation patterns and the volumes of goods transported by road and rail.
27. **Electricity Grid** - Graphic representation of the ESKOM electricity grid, location of power stations and sub-stations.

Industry and Agriculture

28. **Manufacturing (1988): Total** - Total number of formal manufacturing companies per statistical region.
29. **Manufacturing (1988): Iron and Steel** - Number of formal companies within the Iron and Steel sector per statistical region.
30. **Manufacturing (1988): Wood Products** - Number of formal companies within the Wood Products sector per statistical region.
31. **Manufacturing (1988): Transportation** - Number of formal companies within the Transportation sector per statistical region.
32. **Agricultural Contribution to GGP (1991)** - Percentage contribution of the Agricultural sector to the Gross Geographic Product (GGP) per magisterial district. GGP represents the spatial distribution of the Gross National Product of South Africa for all sectors of the economy.
33. **Agricultural Contribution to GGP (1993)** - Percentage contribution of the Agricultural sector to the Gross Geographic Product (GGP) per magisterial district. (Refer to No. 32. for definition of GGP).

Economic Activity

34. **GGP 1993 /Km²** - Average Gross Geographical Product (GGP) for all economic sectors per square kilometre within each magisterial district (Refer to No. 32. for definition of GGP).
35. **Change in GGP (1991-1993)** - Percentage increase or decrease in the Gross Geographical Product per magisterial district between 1991 and 1993 (Refer to No. 32. for definition of GGP).
36. **Unemployment Level (1991)** - Percentage formal unemployment (all population groups) per magisterial district. Based on revised census figures.
37. **Personal Disposable Income Per Capita** - Average annual dispoable income in thousands of Rands (income spent on consumerables) per magisterial district divided by the number of per person per district.

Government Administration, Expenditure and Investment

38. **RDP Programmes** - Examples of spatial distribution of RDP Programmes, namely the location of the Presidential Lead Projects, the spatial distribution and number of people benefiting from the Water Supply Programme; and the budget allocations per province with respect to the Clinic Programme.

Emerging Strategies

39. **Major Urban Nodes and Dense Rural Settlements** - Spatial distribution of the urban economic nodes (major urban centres and secondary towns) and rural dense settlements. (Conceptual map only).
40. **Development Corridors** - The identification of possible primary and secondary corridors (Conceptual map only).

MAPS

Reference Maps

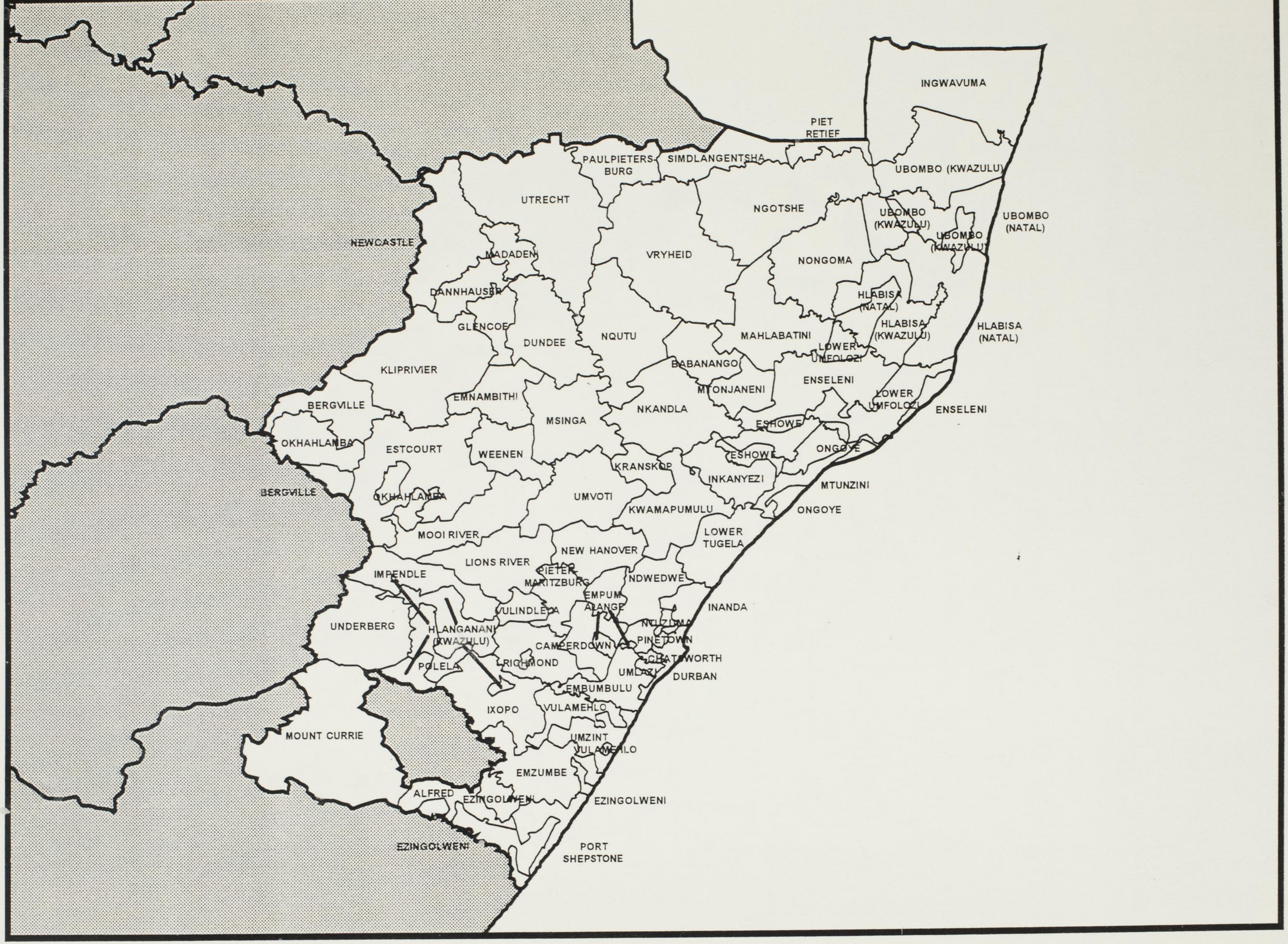
PROVINCES OF SOUTH AFRICA




MALUTI
UMZIMKULU
HERSCHEL
MT. FLETCHER
KWABHACA
MAXESIBENI
LADY GREY
VENTERSTAD
ALBERT
ALIWAL NORTH
BARKLY EAST
SIPHAQUENI
MACLEAR
QUMBA
TABANKULU
BIZANA
STEYNSBURG
WODEHOUSE
ELLIOT
TSOLO
LIBODE
LUSIKISIKI
MOLTENO
NDWE
XALANGA/ CALA
MIDDELBURG (CAPE)
HOFMEYR
STERKSTROOM
CACADU/ GLENGREY
ENGCOBO
UMTATA
NGQELENI
UMZIMVUBU/ PORT ST. J
COFIMVABA/ ST. MARKS
MQANDULI
DUTYWA/ IDUUYWA
TARKA
QUEENSTOWN
TSOMO
XHORA/ ELLIOTDALE
CRADOCK
NQAMAKWE
HEWU
CATHCART
GCUWA/ BUTTERWORTH
GRAAFF-REINET
GATAYANA/ WILLOWVALE
BEDFORD
MPOFU/ SEYMOUR
STUTTERHEIM
ADELAIDE
KEISKAMMAHOEK
KOMGA
CENTANI
ABERDEEN
PEARSTON
FORT BEAUFORT
KING WILLIAM'S TOWN
MIDDLEDRIFT
VICTORIA EAST
EAST LONDON
JANSENVILLE
SOMERSET EAST
ALBANY
PEDDIE
MADANTSANE
WILLOWMORE
STEYTLERVILLE
KIRKWOOD
BATHURST
UITENHAGE
ALEXANDRIA
JOUBERTINA
HANKEY
PORT ELIZABETH
HUMANSDORP

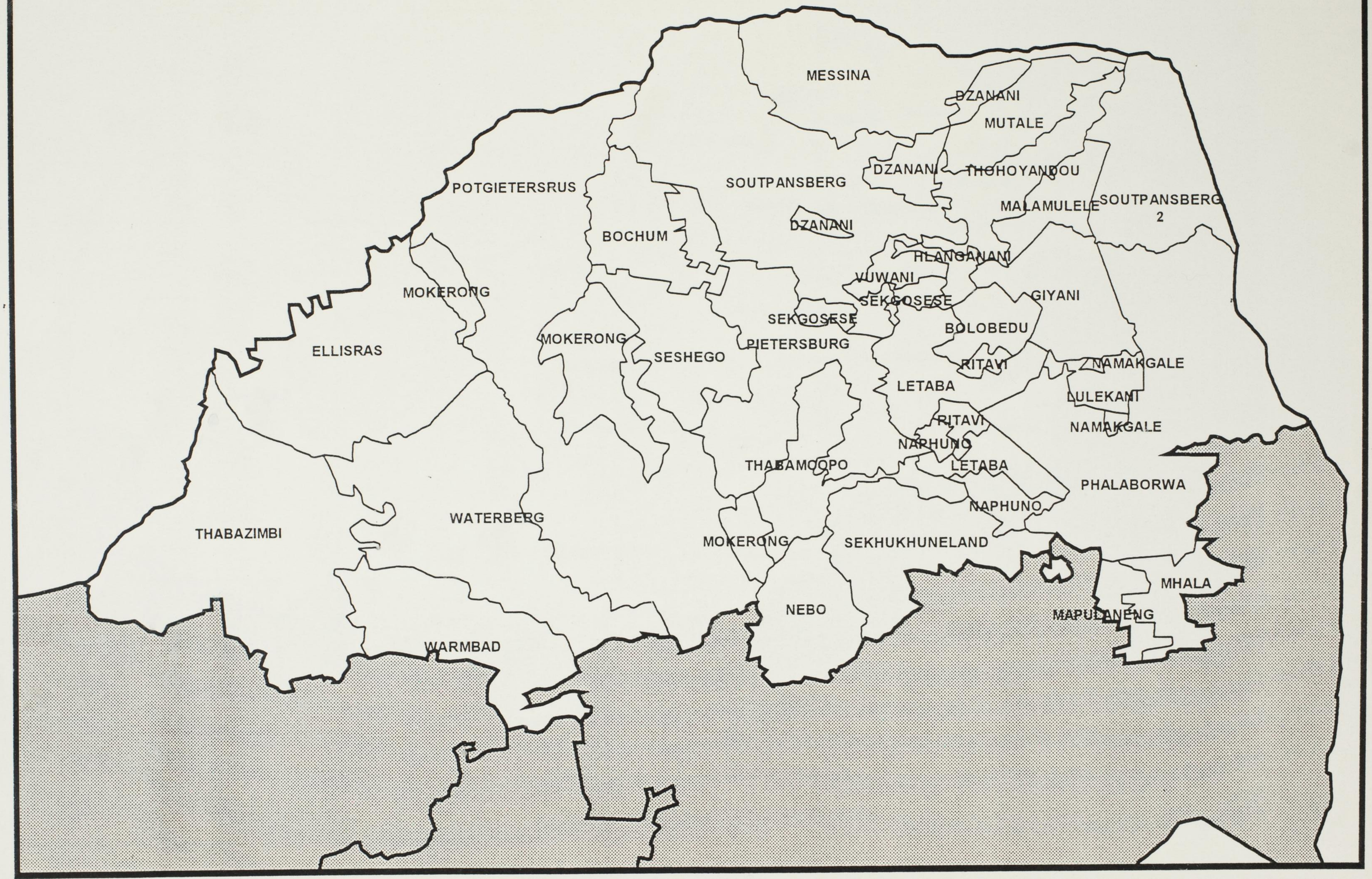

PARYS
SASOLBURG
VREDEFORT
VILJOENSKROON
KOPPIES
HEILBRON
FRANKFORT
VREDE
BOTHAVILLE
KROONSTAD
WESSELSBRON
ODENDAALSRUS
HOOPSTAD
LINDLEY
REITZ
HENNENMAN
WELKOM
VENTERSBURG
VIRGINIA
HARRISMITH
BULTFONTEIN
THEUNISSEN
SENEKAL
BETHLEHEM
BOSHOF
WINBURG
FOURIESBURG
WITSIESHOEK
MARQUARD
FICKSBURG
BRANDFORT
CLOCOLAN
EXCELSIOR
JACOBSDAL
PETRUSBURG
BLOEMFONTEIN
BOTSHABELO
LADYBRAND
THABA'NCHU
KOFFIEFONTEIN
DEWETSDORP
REDDERSBURG
EDENBURG
FAURESMITH
WEPENER
JAGERSFONTEIN
TROMPSBURG
SMITHFIELD
ZASTRON
PHILIPPOLIS
BETHULIE
ROUXVILLE


WONDERBOOM
SOSHANGUVE
SOSHANGUVE
WONDERBOOM
CULLINAN
PRETORIA
BRONKHORSTSPRUIT
KRUGERSDORP
RANDBURG
KEMPTON PARK
BENONI
ROODEPOORT
RANDFONTEIN
GERMISTON
JOHANNESBURG
BOKSBURG
SPRINGS
ALBERTON
BRAKPAN
OBERHOLZER
WESTONARIA
NIGEL
HEIDELBERG (TVL)
VEREENIGING
VANDERBIJLPARK


INGWAVUMA
PIET RETIEF
PAULPIETERS-BURG
SIMDLANGENTSHA
UBOMBO (KWAZULU)
UTRECHT
NGOTSHE
UBOMBO (KWAZULU)
UBOMBO (NATAL)
UBOMBO (KWAZULU)
NEWCASTLE
MADADENI
VRYHEID
NONGOMA
DANNHAUSER
HLABISA (NATAL)
GLENCOE
DUNDEE
NQUTU
MAHLABATINI
HLABISA (KWAZULU)
HLABISA (NATAL)
LOWER UMFOLOZI
KLIPRIVIER
BABANANGO
ENSELENI
MTONJANENI
EMNAMBITHI
LOWER UMFOLOZI
BERGVILLE
NKANDLA
ENSELENI
MSINGA
ESHOWE
OKHAHLAMBA
ESTCOURT
WEENEN
ESHOWE
ONGOYE
KRANSKOP
INKANYEZI
MTUNZINI
BERGVILLE
OKHAHLAMBA
UMVOTI
KWAMAPUMULU
ONGOYE
LOWER TUGELA
MOOI RIVER
NEW HANOVER
LIONS RIVER
PIETER MARITZBURG
NDWEDWE
IMPENDLE
EMPUM ALANGE
INANDA
VULINDLELA
UNDERBERG
H LANGANANI (KWAZULU)
CAMPERDOWN
PINETOWN
NKANDLA
RICHMOND
CHATSWORTH
POLELA
UMLAZI
DURBAN
EMBUMBULU
IXOPO
VULAMEHLO
MOUNT CURRIE
UMZINT VULAMEHLO
EMZUMBE
ALFRED
EZINGOLWENI
EZINGOLWENI
EZINGOLWENI
PORT SHEPSTONE


PELGRIMSRUS (O)
MDUTJANA
MOUTSE
MORETELE
MDUTJANA
MBIBANA
MOUTSE
GROBLERSDAL
LYDENBURG
PELGRIMSRUS
WITRIVIER
NSIKAZI
MKOBOLA
BELFAST
NELSPRUIT
BARBERTON
MIDDELBURG
(TVL)
WATERVAL BOVEN
NKOMAZI
WITBANK
CAROLINA
EERSTEHOEK
DELMAS
KRIEL
HIGHVELD
RIDGE
BETHAL
ERMELO
BALFOUR
STANDERTON
AMERSFOORT
PIET
RETIEF
WAKKERSTROOM
VOLKSRUST


KURUMAN
GORDONIA
HARTSWATER
POSTMASBURG
BARKLY WEST
WARRENTON
KIMBERLEY
HAY
HERBERT
KENHARDT
NAMAKWALAND
PRIESKA
HOPETOWN
PHILIPS-TOWN
BRITSTOWN
DE AAR
CARNARVON
COLESBERG
WILLISTON
HANOVER
CALVINIA
VICTORIA -WEST
RICHMOND
NOUPOORT
FRASERBURG
SUTHERLAND


MESSINA
DZANANI
MUTALE
DZANANI
THOHOYANDOU
SOUTPANSBERG
POTGIETERSRUS
MALAMULELE
SOUTPANSBERG
2
DZANANI
BOCHUM
RLANGANANI
VUWANI
MOKERONG
SEKGOSESE
GIYANI
SEKGOSESE
BOLOBEDU
MOKERONG
PIETERSBURG
ELLISRAS
SESHEGO
RITAVI
NAMAKGALE
LETABA
LULEKANI
RITAVI
NAMAKGALE
NAPHUNO
LETABA
THABAMOOPO
PHALABORWA
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WATERBERG
THABAZIMBI
MOKERONG
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MHALA
NEBO
MAPULANENG
WARMBAD

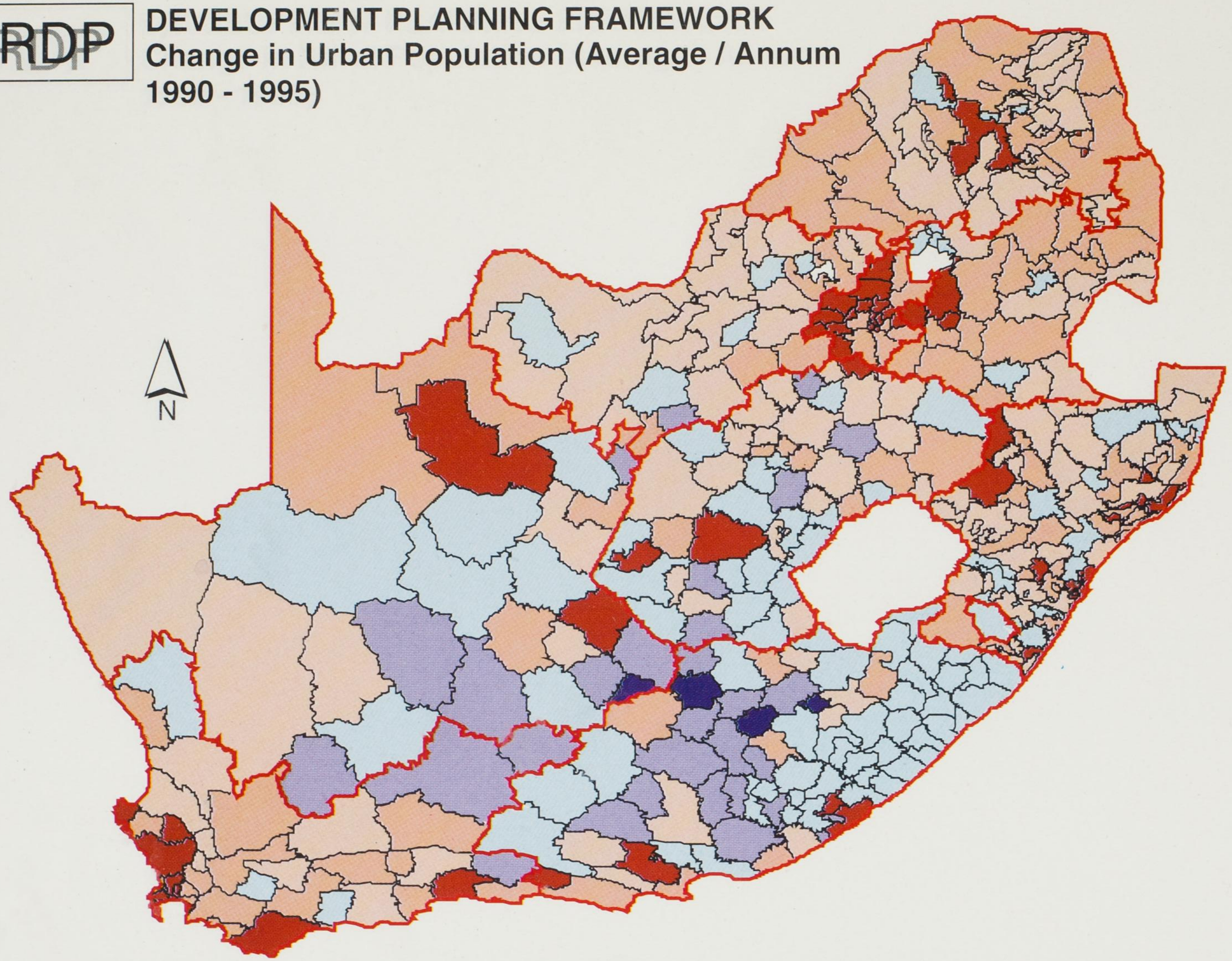
LEHURUTSHE
MADIKWE
LEHURUTSHE
MANKWE
MORETELE
ODI 1
RUSTENBURG
BAFOKENG
ODI 2
MARICO
SWARTRUGGENS
RUSTENBURG
BRITS
KOSTER
MOLOPO
VRYBURG
LICHTENBURG
VRYBURG
MOLOPO
DITSOBOTLA
COLIGNY
VENTERSDORP
GANYESA
DELAREYVILLE
POTCHEFSTROOM
KLERKSDORP
KUDUMANE
SCHWEIZER-RENEKE
WOLMARANSSTAD
BLOEMHOF
TAUNG
CHRISTIANA


VANRHYNSDORP
VREDENDAL
CLANWILLIAM
PIKETBERG
VREDENBURG
HOPEFIELD
MOORREESBURG
TULBAGH
MALMESBURY
WELLINGTON
CAPE
BELLVILLE
GOODWOOD
KUILS RIVER
STELLENBOSCH
PAARL
WORCESTER
SIMONS TOWN
CALEDON
WYNBERG
MITCHELLS PLAIN
SOMERSET WEST
STRAND
HERMANUS
CERES
ROBERTSON
MONTAGU
SWELLENDAM
BREDASDORP
LAINGSBURG
HEIDELBERG (CAPE)
BEAUFORT WEST
PRINCE ALBERT
LADISMITH
RIVERSDALE
CALITZ-DORP
MOSSEL BAY
OUDTSHOORN
GEORGE
MURRAYSBURG
UNIONDALE
KNYSNA

Population and Development Needs

RDP

DEVELOPMENT PLANNING FRAMEWORK
Change in Urban Population (Average / Annum 1990 - 1995)



Provincial Boundaries
Urban Population
- Decline : > 1.5 %
- Decline : 0.5 - 1.5 %
- Decline : < 0.5 %
- No change
- Increase: < 0.5 %
- Increase : 0.5 - 1.5 %
- Increase : 1.5 - 10 %

Source:
National Electrification Forum (NELF) Database (1993)

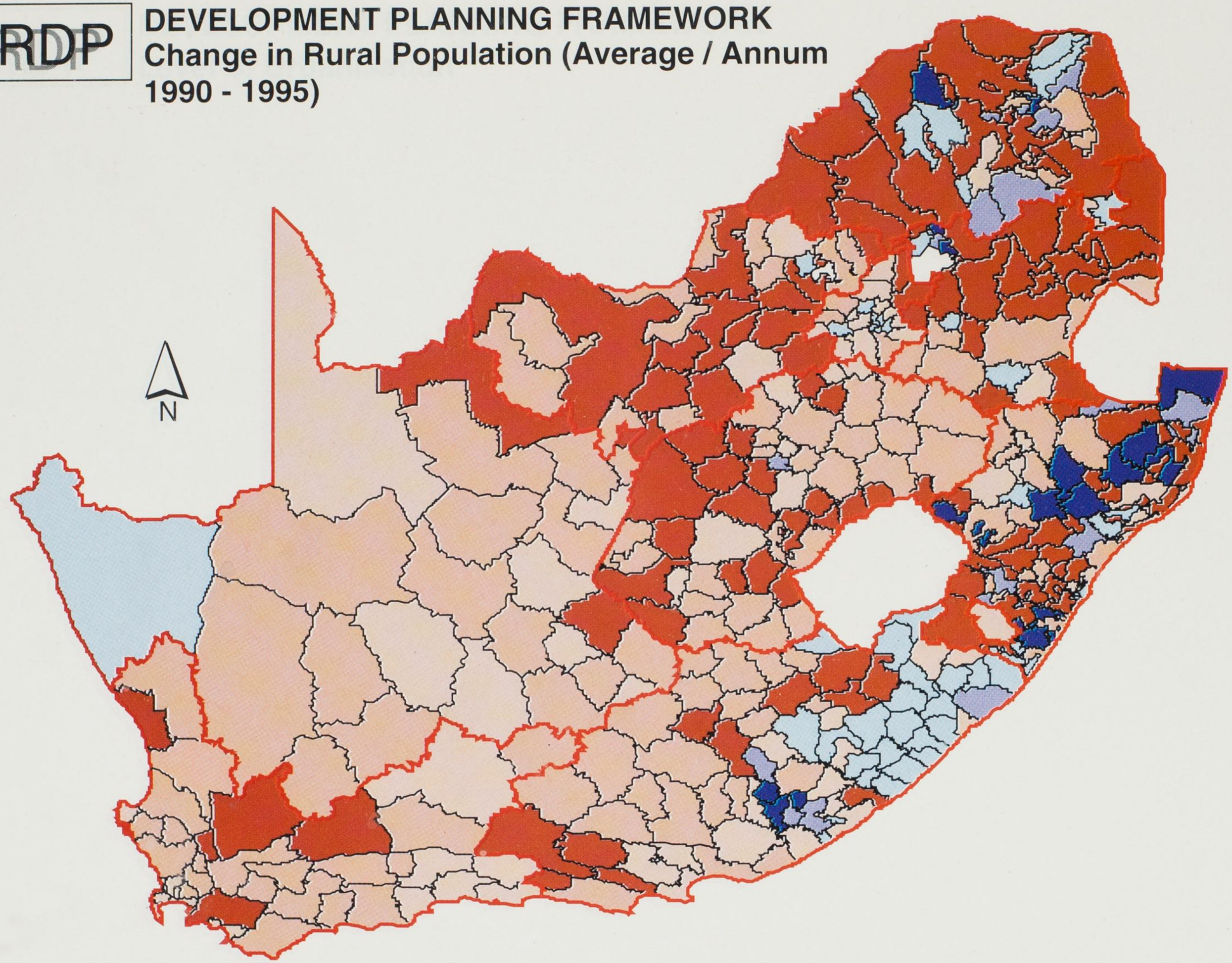
100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK

Change in Rural Population (Average / Annum 1990 - 1995)



Provincial Boundaries

Rural Population

- Decline : > 1.5 %
- Decline : 0.5 - 1.5 %
- Decline : < 0.5 %
- No change
- Increase: < 0.5 %
- Increase : 0.5 - 1.5 %
- Increase : 1.5 - 10 %

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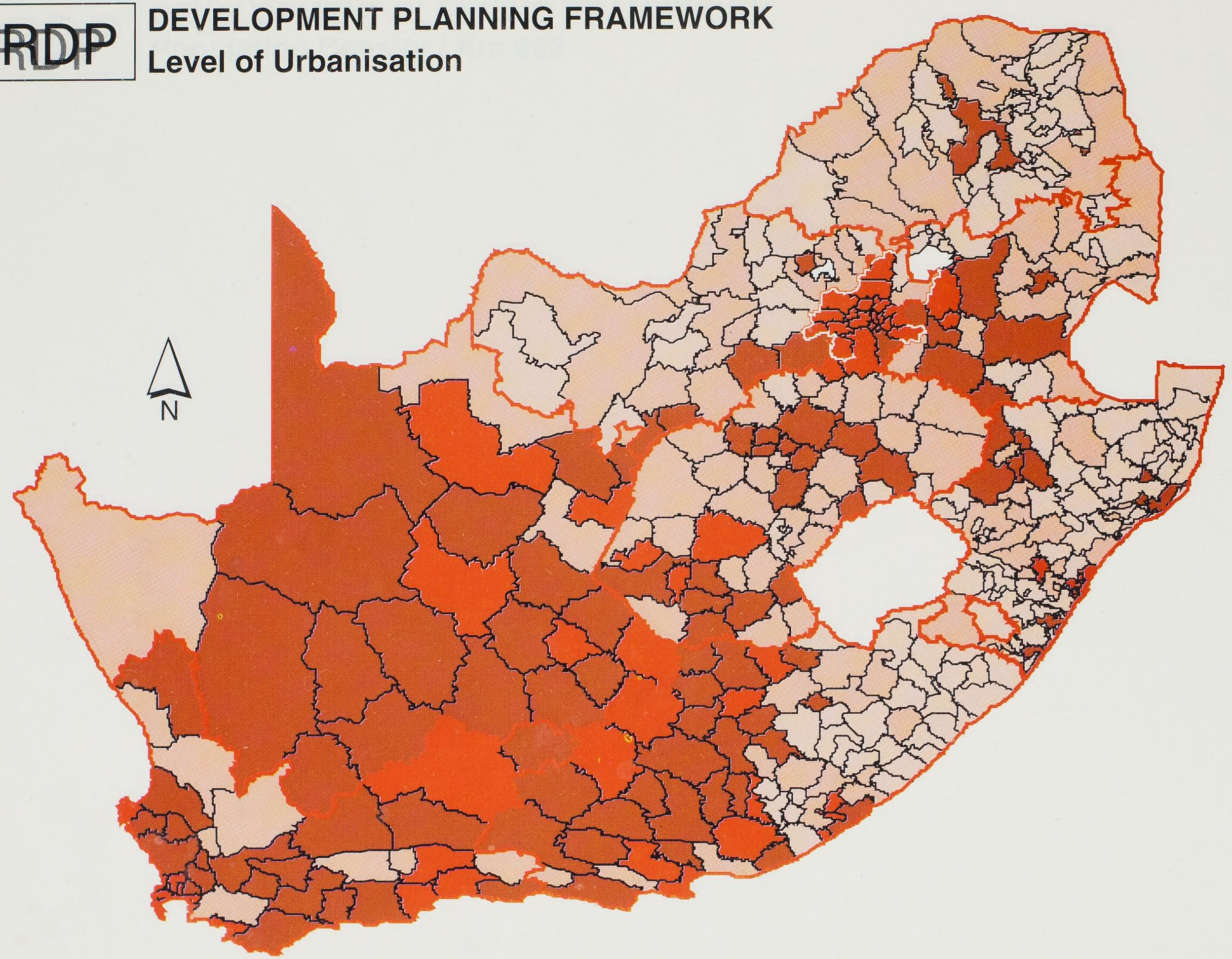
Source:
National Electrification Forum (NELF) Database (1993)

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DEVELOPMENT PLANNING FRAMEWORK

Level of Urbanisation



Provincial Boundaries

Urbanisation

- No data
- 0 - 25 %
- 25 - 50 %
- 50 - 75 %
- 75 - 100 %

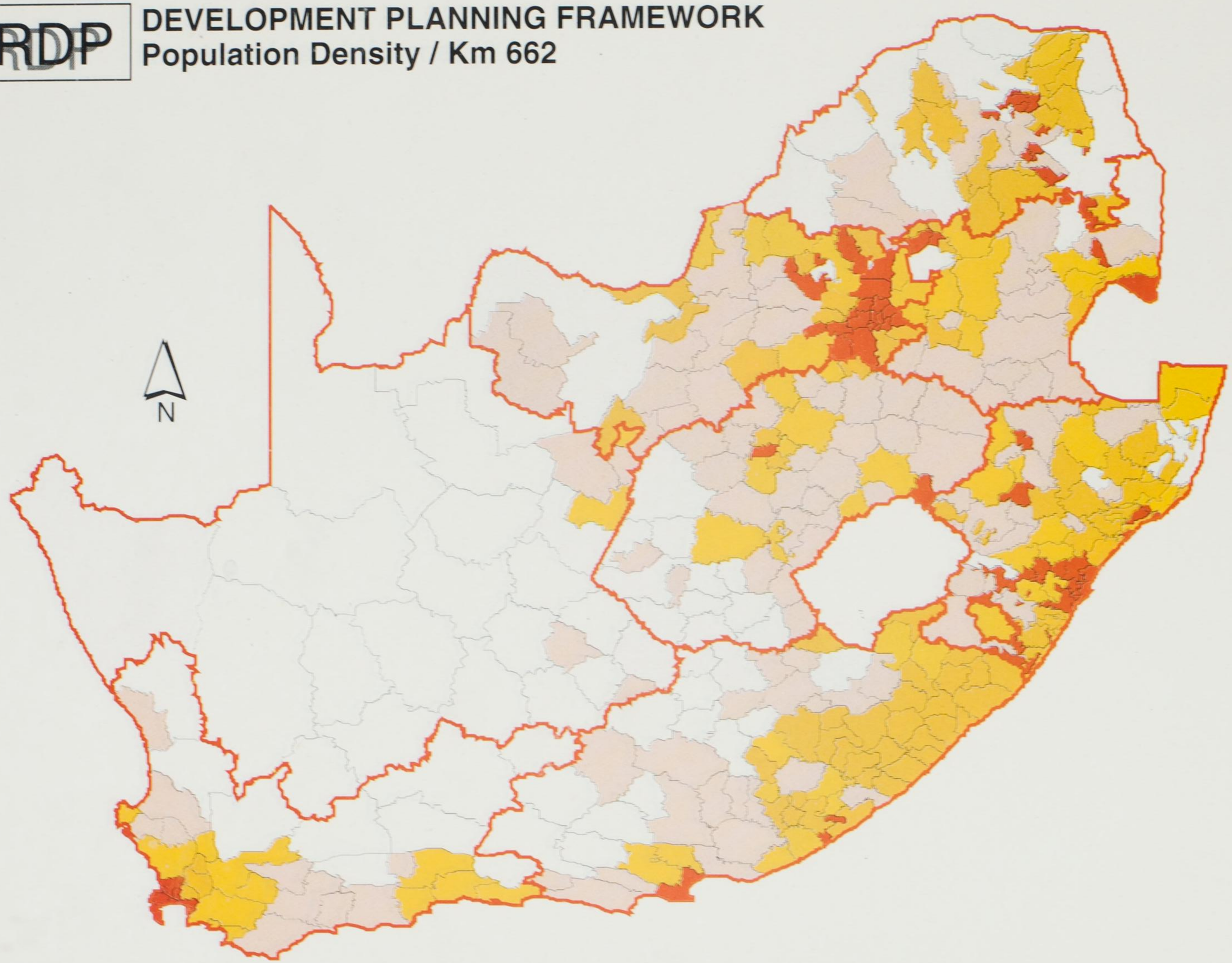
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Source:
National Electrification Forum
(NELF) Database (1993)

Compiled for :
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DEVELOPMENT PLANNING FRAMEWORK
Population Density / Km 662



Provincial Boundaries
Population Density
< 5
5 - 20
20 - 65
65 - 200
200 - 10,000

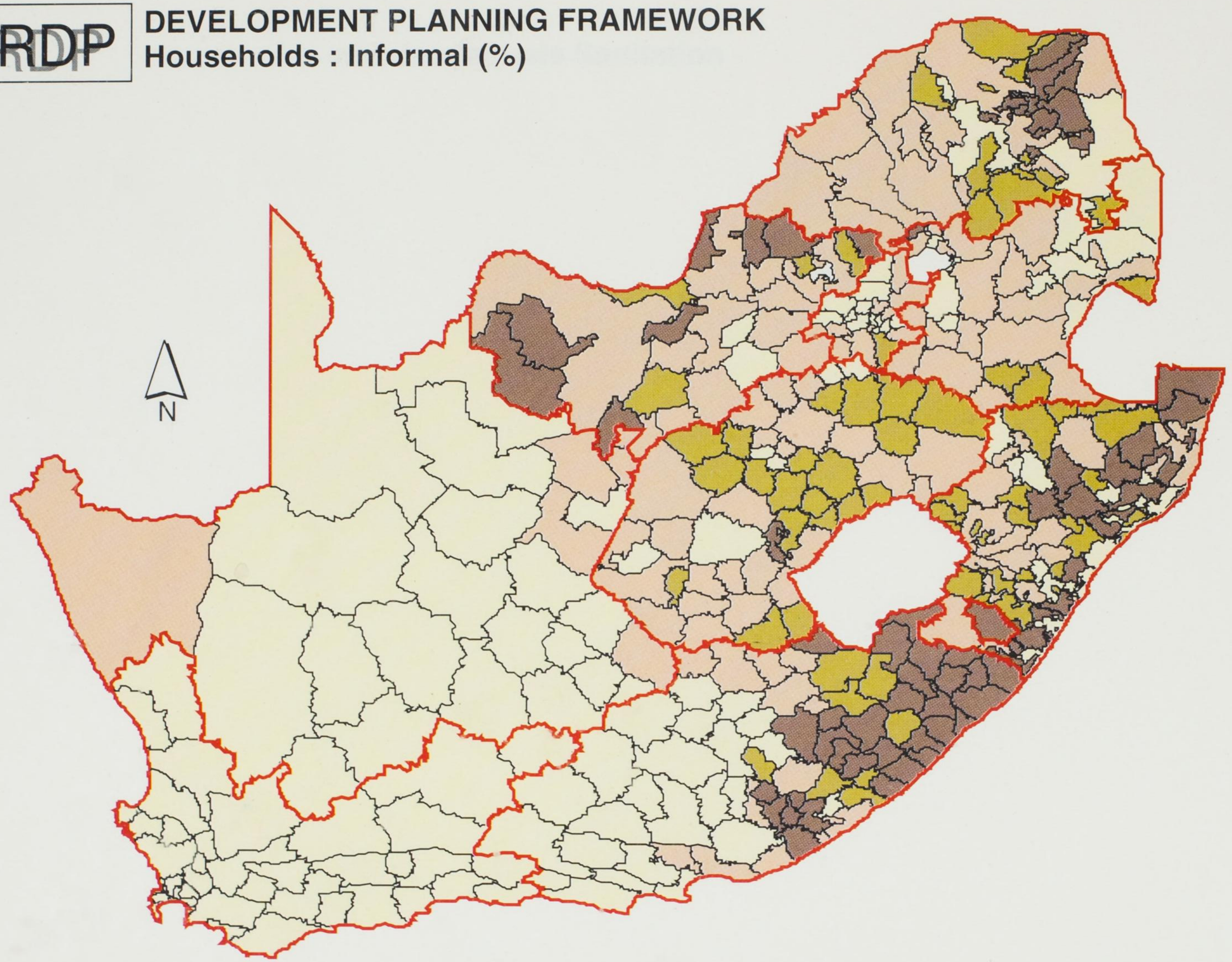
Source:
National Electrification Forum
(NELF) Database (1993)

Compiled for :
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100 0 100 200 300 400 500 600 700 800 Kilometers

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DEVELOPMENT PLANNING FRAMEWORK
Households : Informal (%)



Provincial Boundaries
Informal Households (%)
- No data
- < 25 %
- 25 - 50 %
- 50 - 75%
- 75 - 100 %

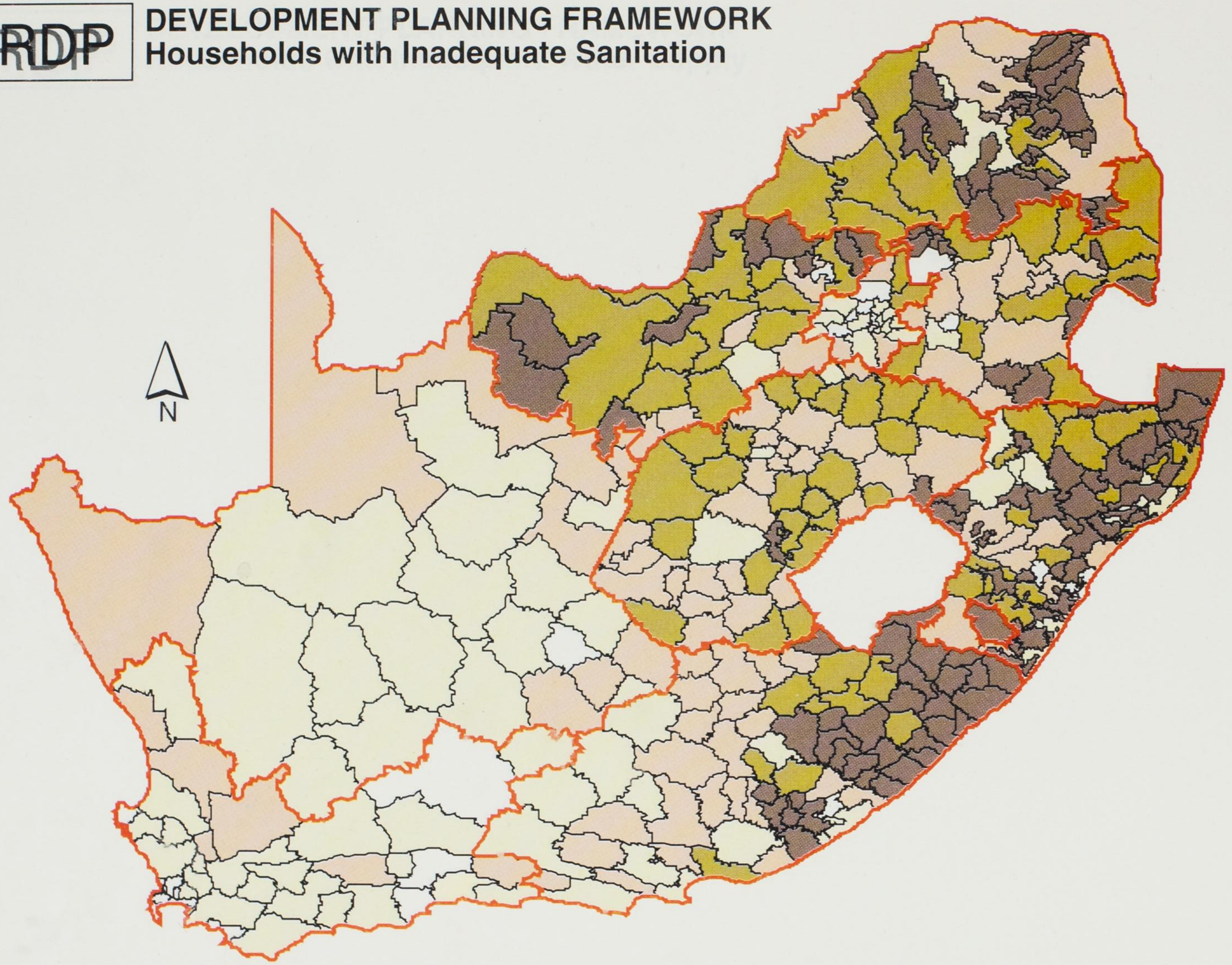
Source:
National Electrification Forum
(NELF) Database (1993)

100 0 100 200 300 400 500 600 700 800 Kilometers

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DEVELOPMENT PLANNING FRAMEWORK
Households with Inadequate Sanitation



Provincial Boundaries
In-Adequate Sanitation (%)
- 0 - 20 %
- 20 - 40 %
- 40 - 60 %
- 60 - 80 %
- 80 - 100 %

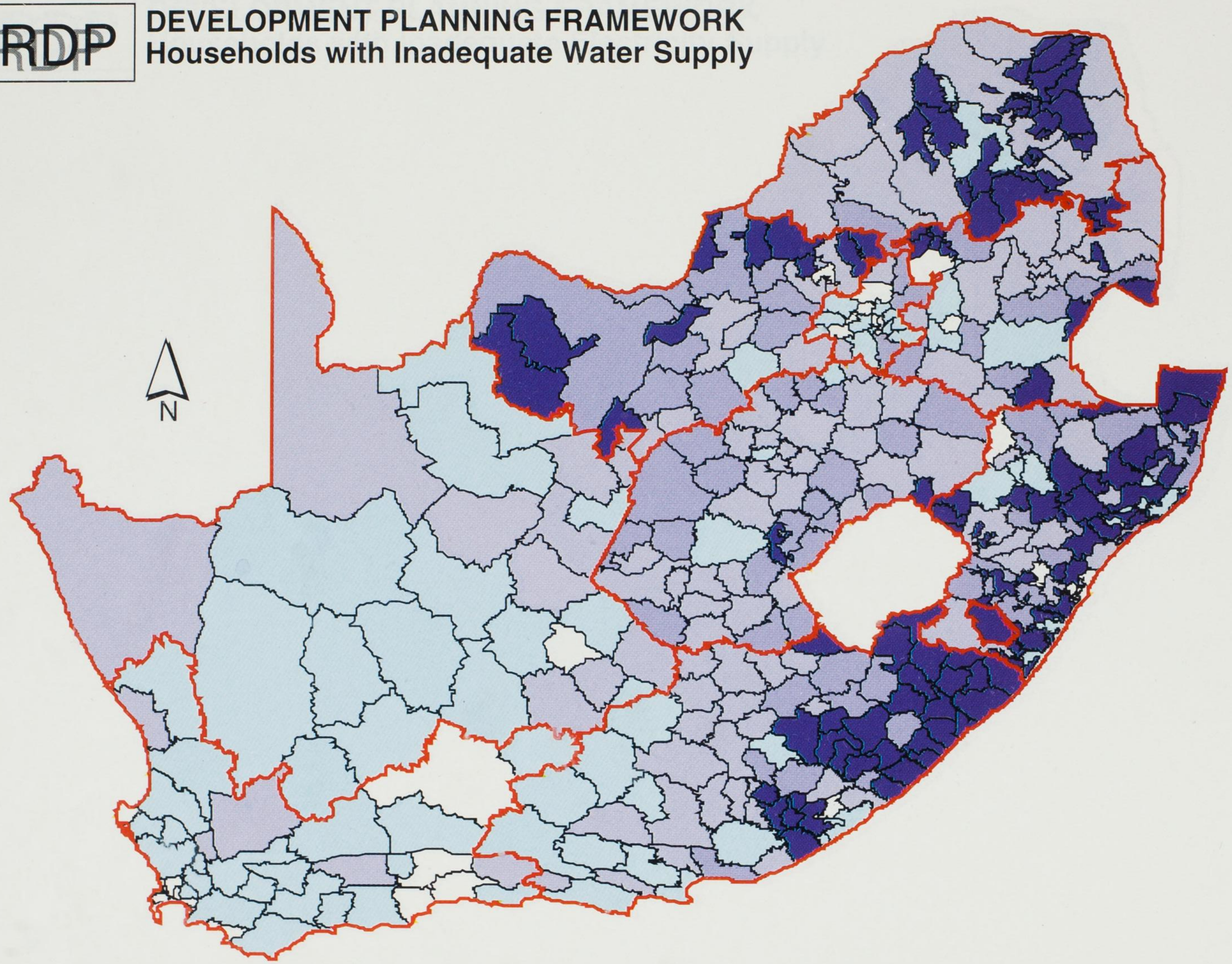
Source:
National Electrification Forum
(NELF) Database (1993)

100 0 100 200 300 400 500 600 700 800 Kilometers

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DEVELOPMENT PLANNING FRAMEWORK
Households with Inadequate Water Supply



Provincial Boundaries
In-Adequate Water Supply (%)
0 - 20 %
20 - 40 %
40 - 60 %
60 - 80 %
80 - 100 %

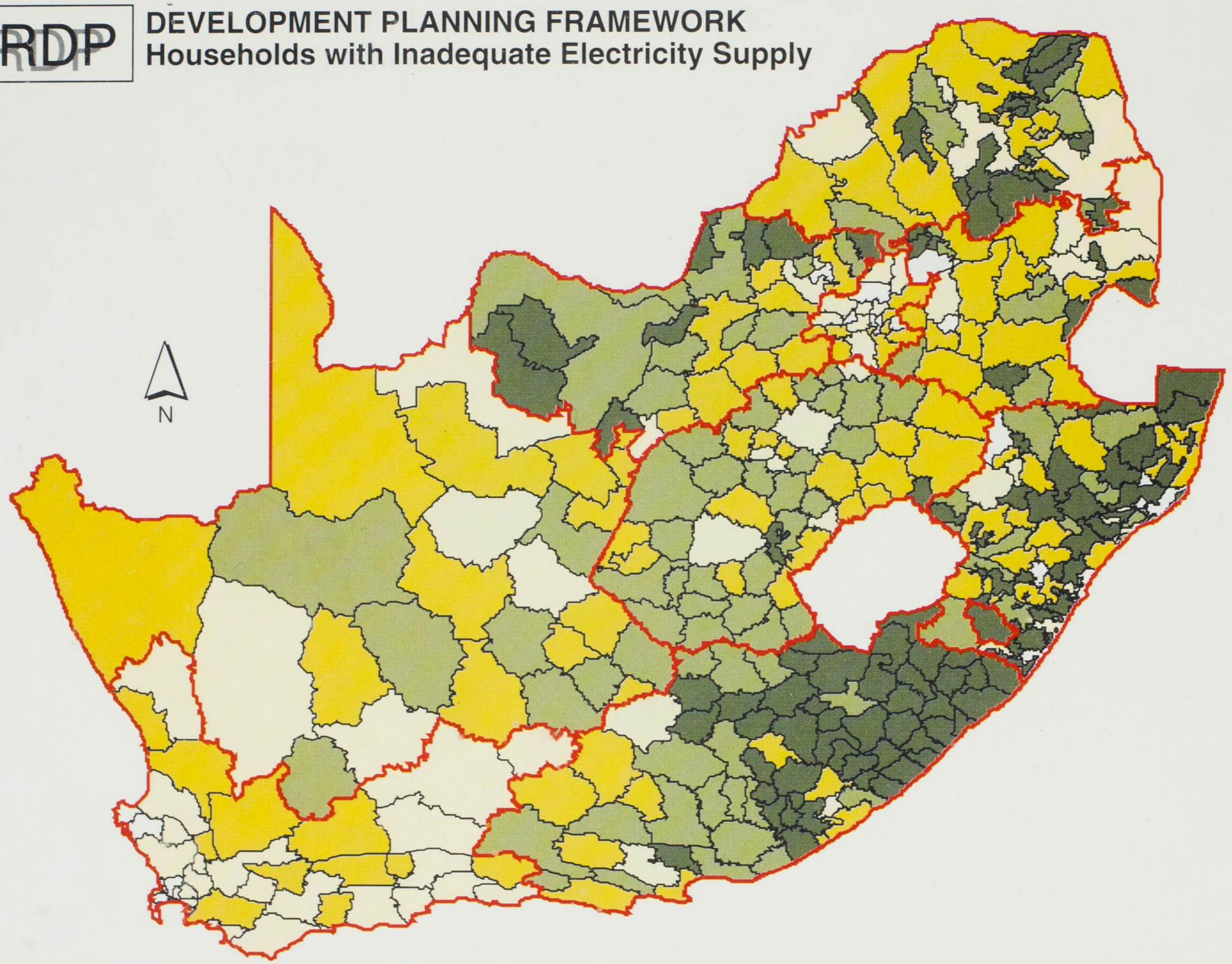
Source:
National Electrification Forum
(NELF) Database (1993)

100 0 100 200 300 400 500 600 700 800 Kilometers

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GIS and Mapping by the CSIR

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DEVELOPMENT PLANNING FRAMEWORK
Households with Inadequate Electricity Supply



Provincial Boundaries
In-Adequate Electricity Supply (%)
- 0 - 20 %
- 20 - 40 %
- 40 - 60 %
- 60 - 80 %
- 80 - 100 %

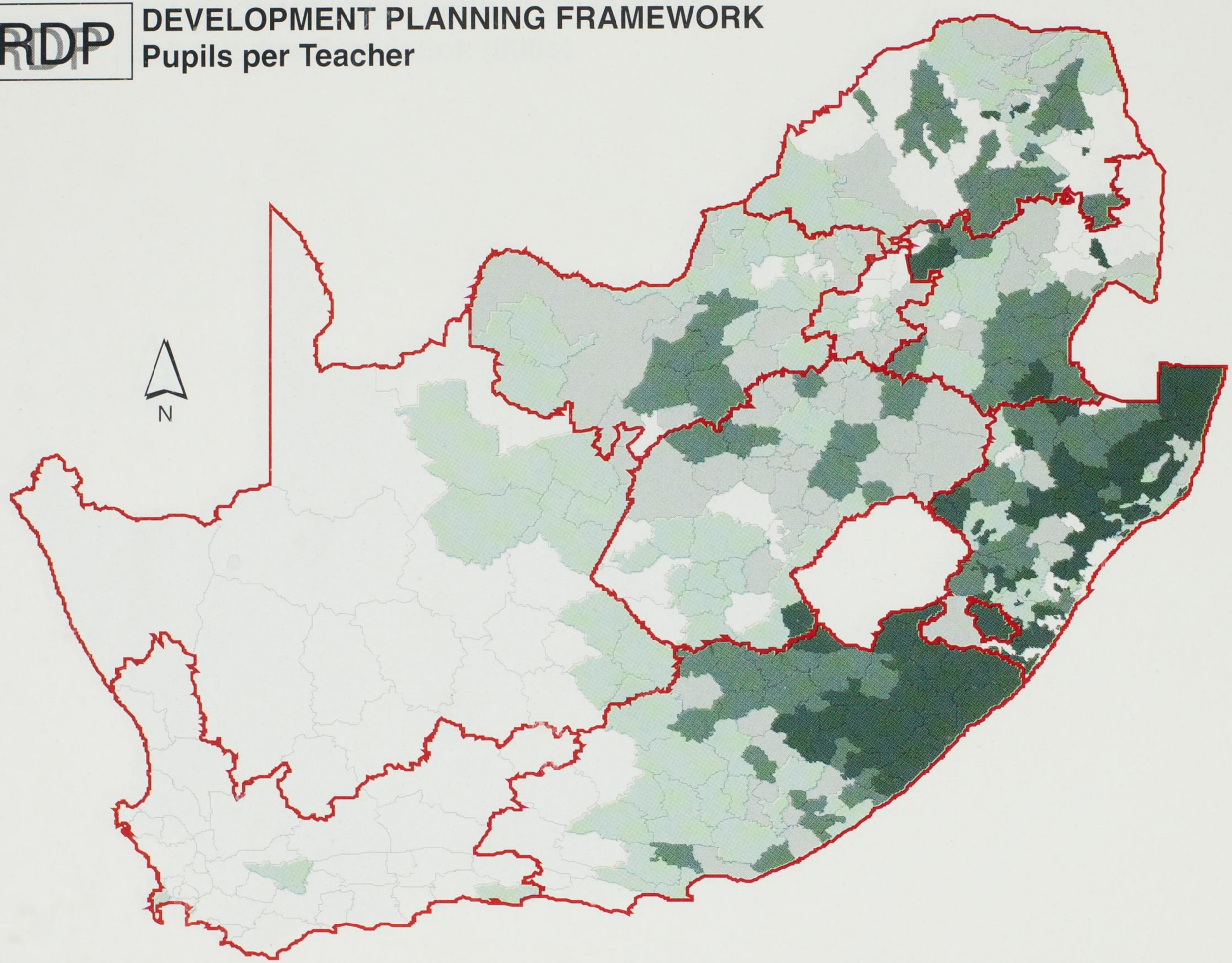
100 0 100 200 300 400 500 600 700 800 Kilometers

Source:
National Electrification Forum
(NELF) Database (1993)

Compiled for :
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RDP

DEVELOPMENT PLANNING FRAMEWORK
Pupils per Teacher



Provincial Boundaries

No. of Pupils

- < 27
- 28 - 31
- 32 - 34
- 35 - 41
- > 42

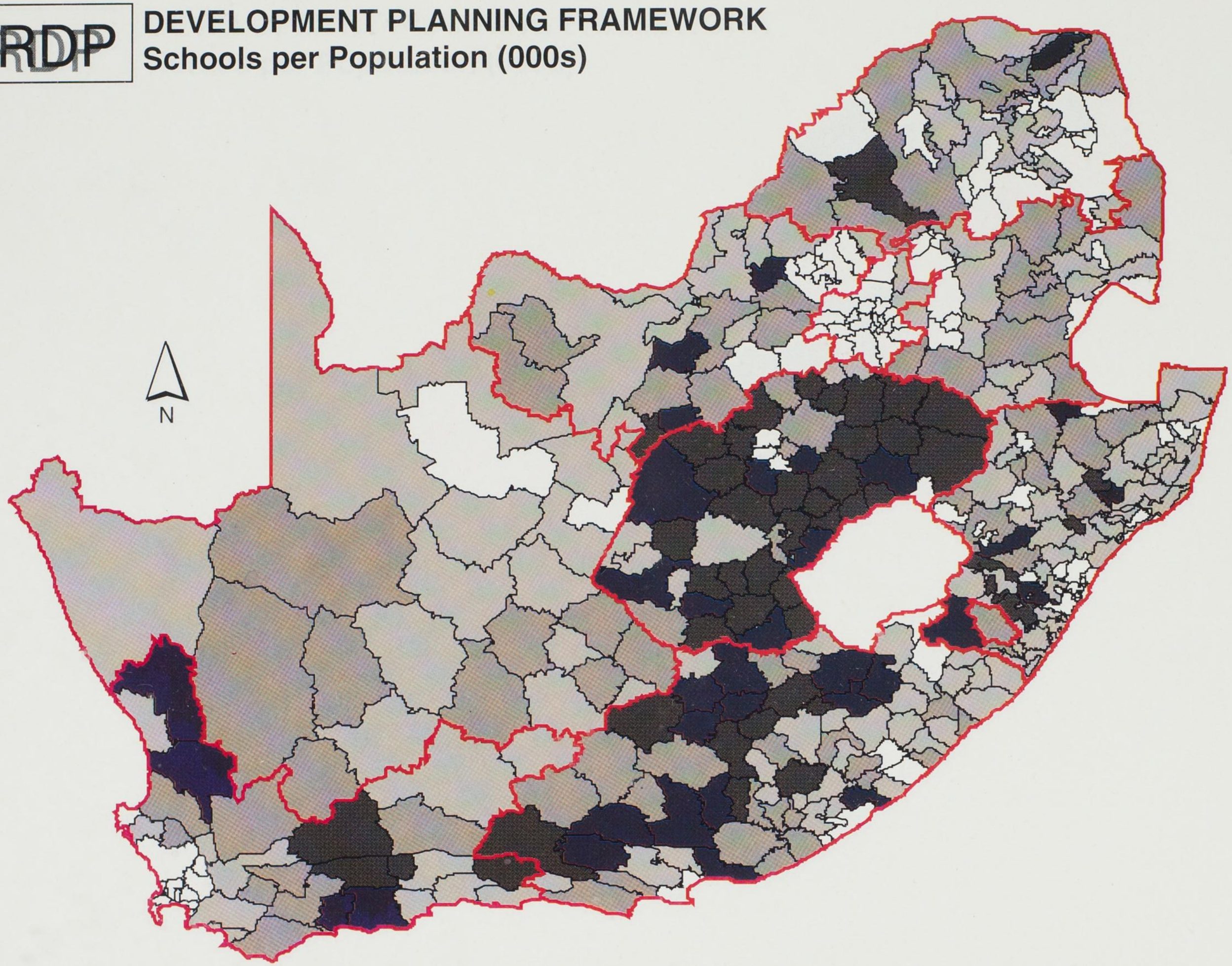
Source:
Former Departments of Education
Compiled: HSRC

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Schools per Population (000s)



Provincial Boundaries
No. of Schools
< 0.5
0.5 - 1
1 - 1.5
1.5 - 2
> 2

Source:
Former Departments of Education
Compiled: HSRC

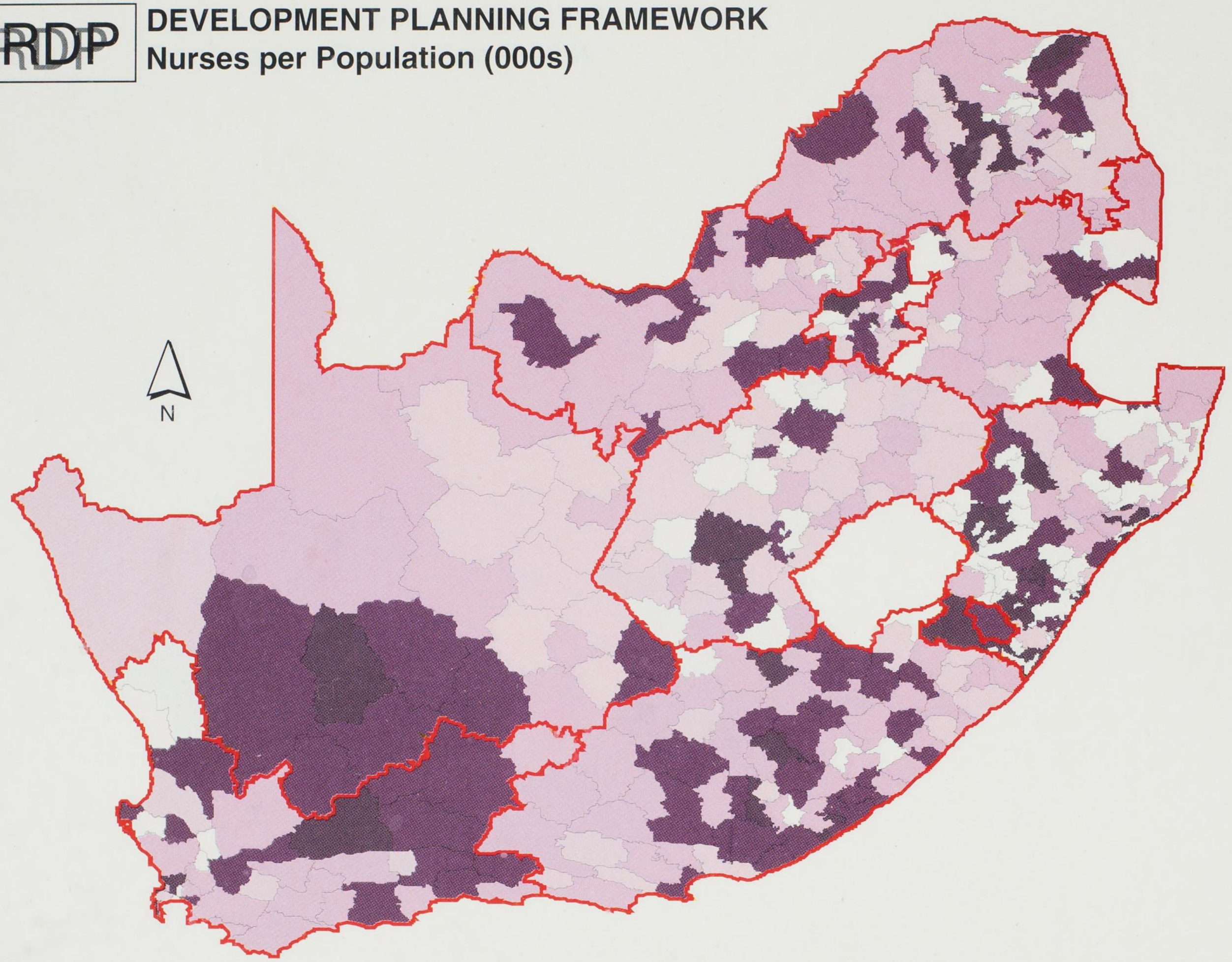
100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK

Nurses per Population (000s)



Provincial Boundaries

No. of Nurses

- < 0.5
- 0.5 - 1.5
- 1.5 - 3
- 3 - 6
- > 6 (max 32)

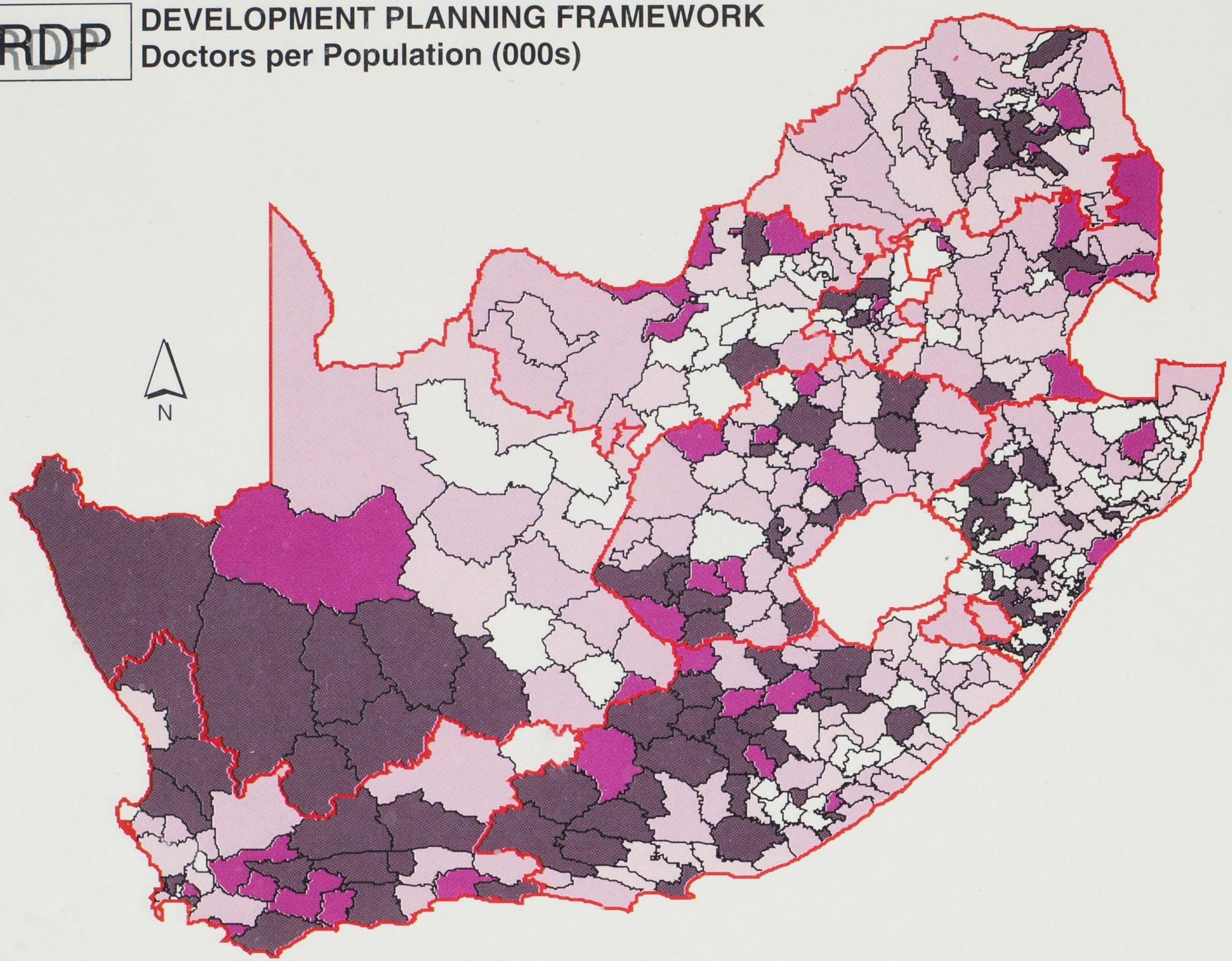
100 0 100 200 300 400 500 600 700 800 Kilometers

Source:
Department of Health

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Doctors per Population (000s)



Provincial Boundaries
No. of Doctors
< 0.02
0.02 > 0.06
0.06 - 0.12
0.12 - 0.18
> 0.18 (max 4)

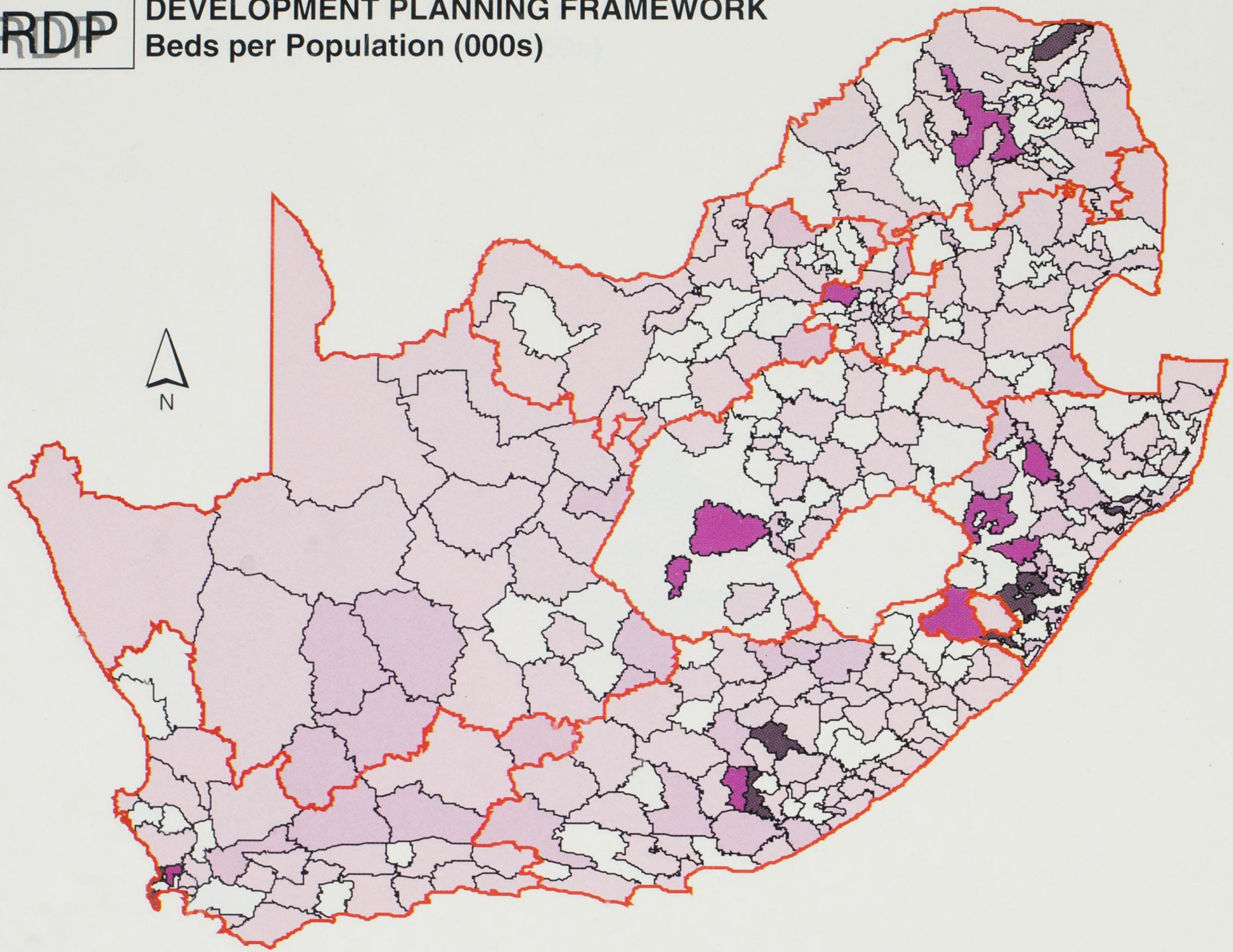
Source:
Department of Health

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Beds per Population (000s)



Provincial Boundaries

No. of Beds

- < 1.5
- 1.5 - 5
- 5 - 10
- 10 - 15
- > 15 (max 54)

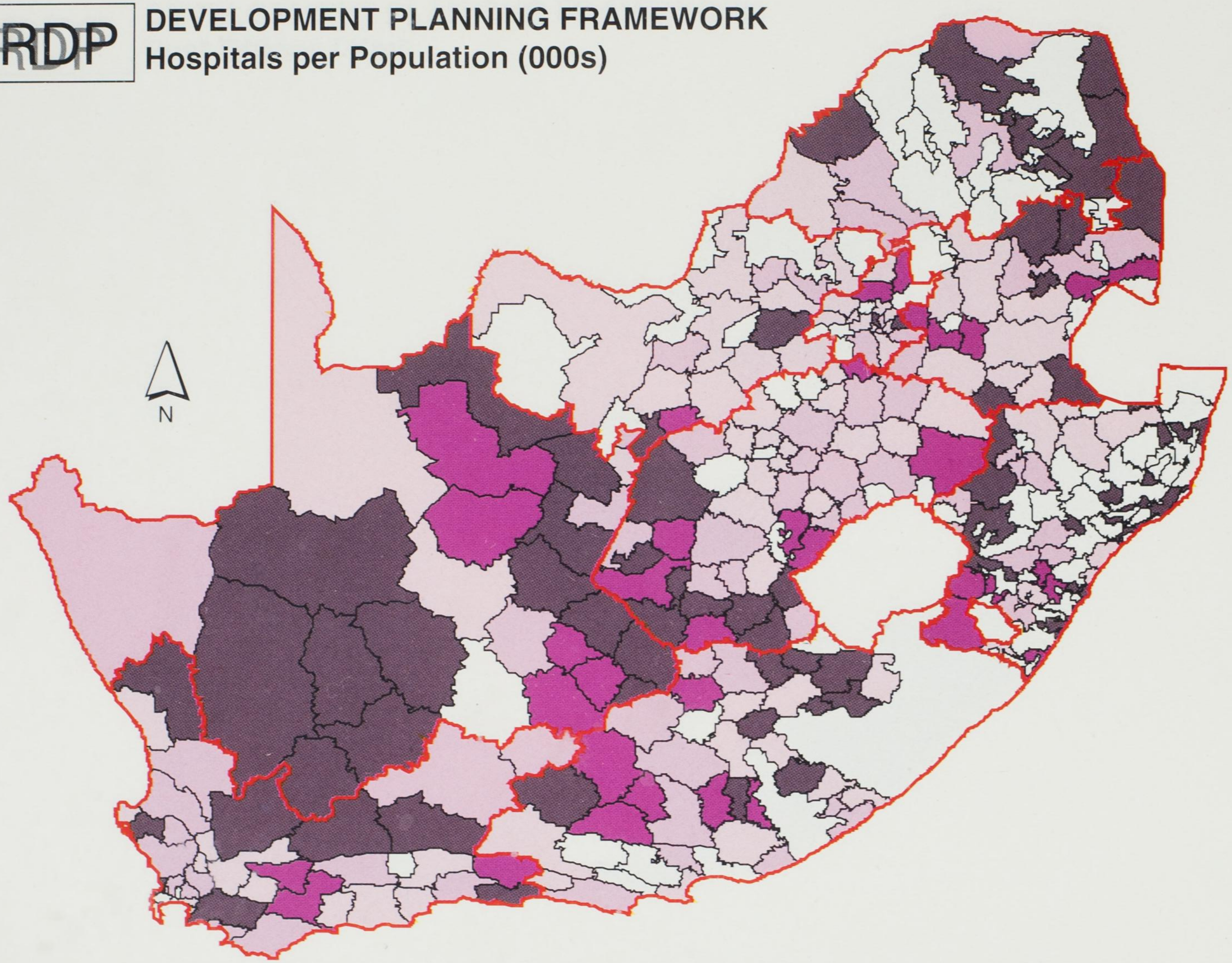
100 0 100 200 300 400 500 600 700 800 Kilometers

Source:
Department of Health

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Hospitals per Population (000s)



Provincial Boundaries

No. of Hospitals

- < 0.06
- 0.06 - 0.12
- 0.12 - 0.18
- 0.18 - 0.24
- > 0.24

Source:
Central Statistical Service (CSS)
Compiled: CSIR

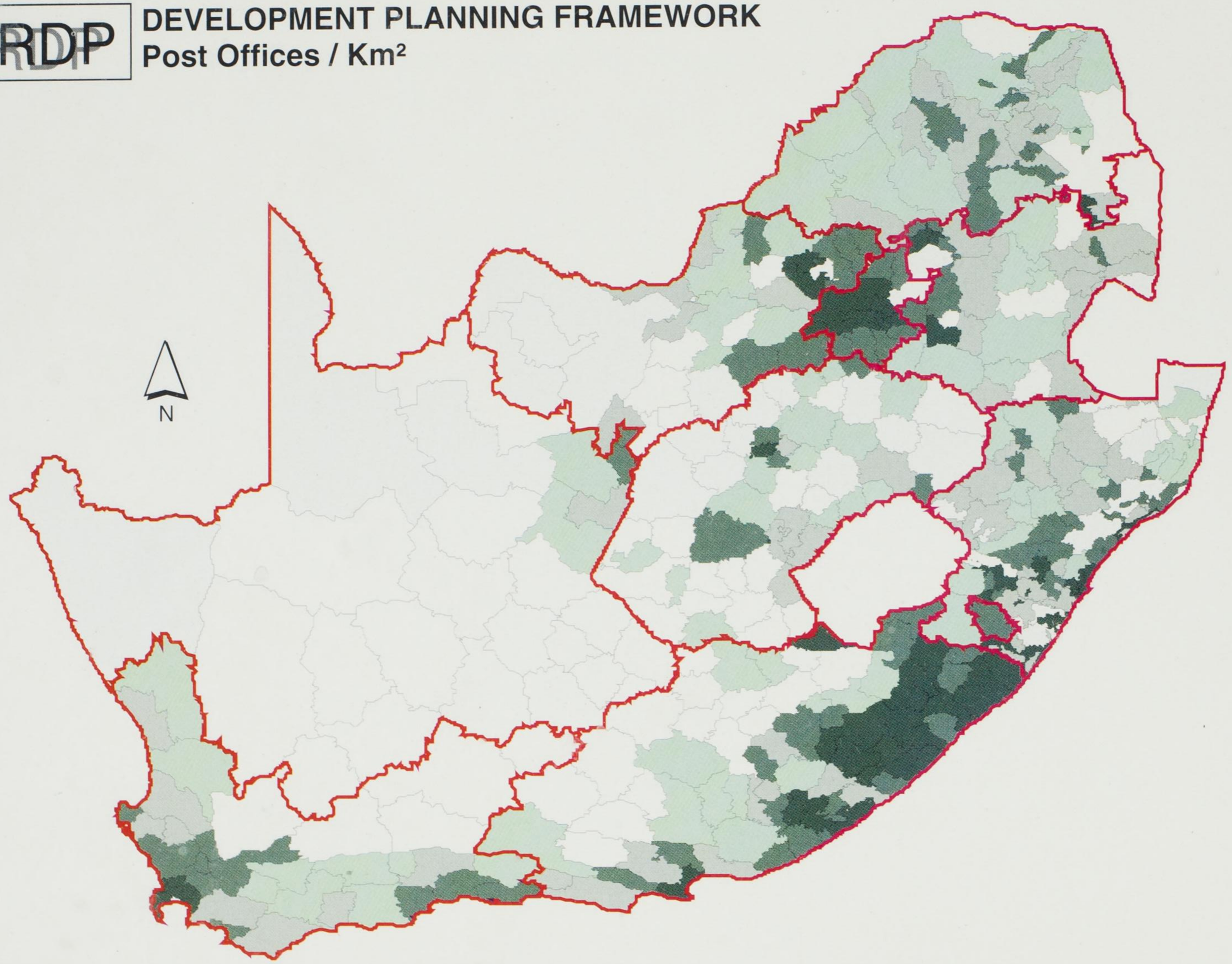
Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

100 0 100 200 300 400 500 600 700 800 Kilometers

RDP

DEVELOPMENT PLANNING FRAMEWORK

Post Offices / Km²



Provincial Boundaries

No. of Post Offices

- < 0.001
- 0.001 - 0.002
- 0.002 - 0.003
- 0.003 - 0.011
- > 0.11 (max 0.4)

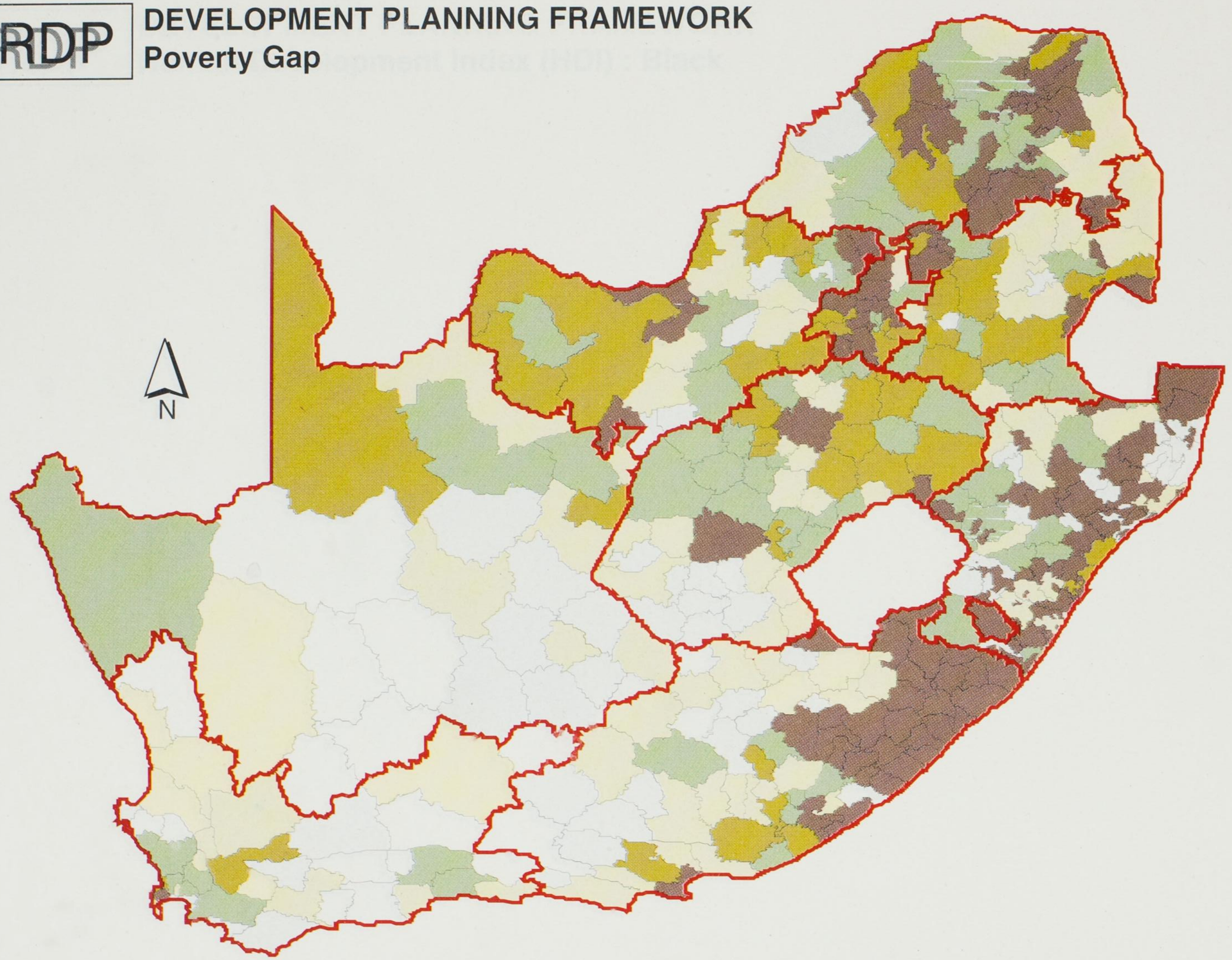
Source:
Post Office
Compiled: HSRC

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Poverty Gap



Provincial Boundaries
Poverty Gap (R000's)
< 6,000
6,000 - 12,000
12,000 - 24,000
24,000 - 48,000
48,000 - 400,000

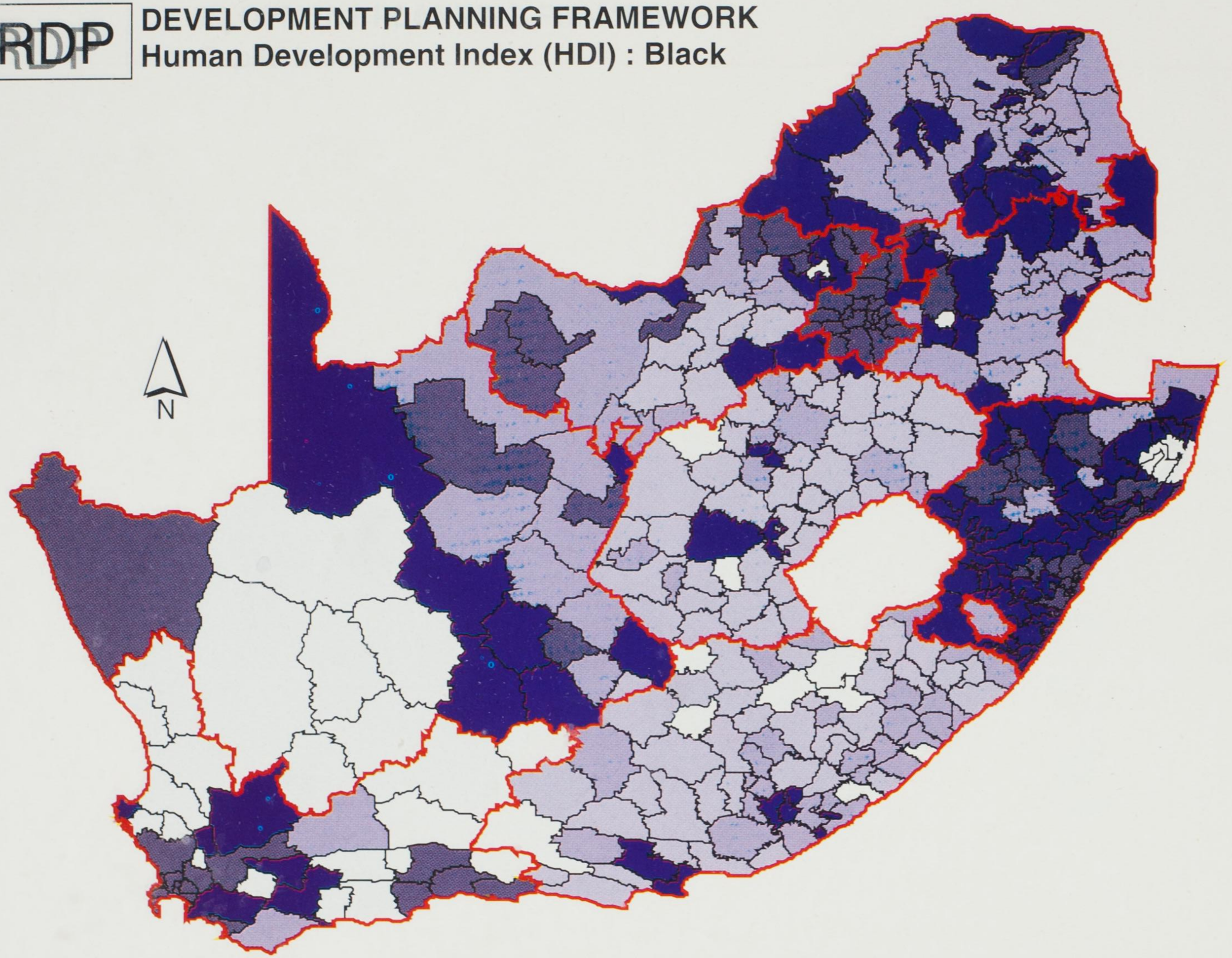
Source:
SALDRU
CSS
HSRC

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Human Development Index (HDI) : Black



Provincial Boundaries

HDI

- 0 - 0.1
- 0.1 - 0.2
- 0.2 - 0.3
- 0.3 - 0.4
- > 0.4

Source:
SALDRU
CSS
HSRC

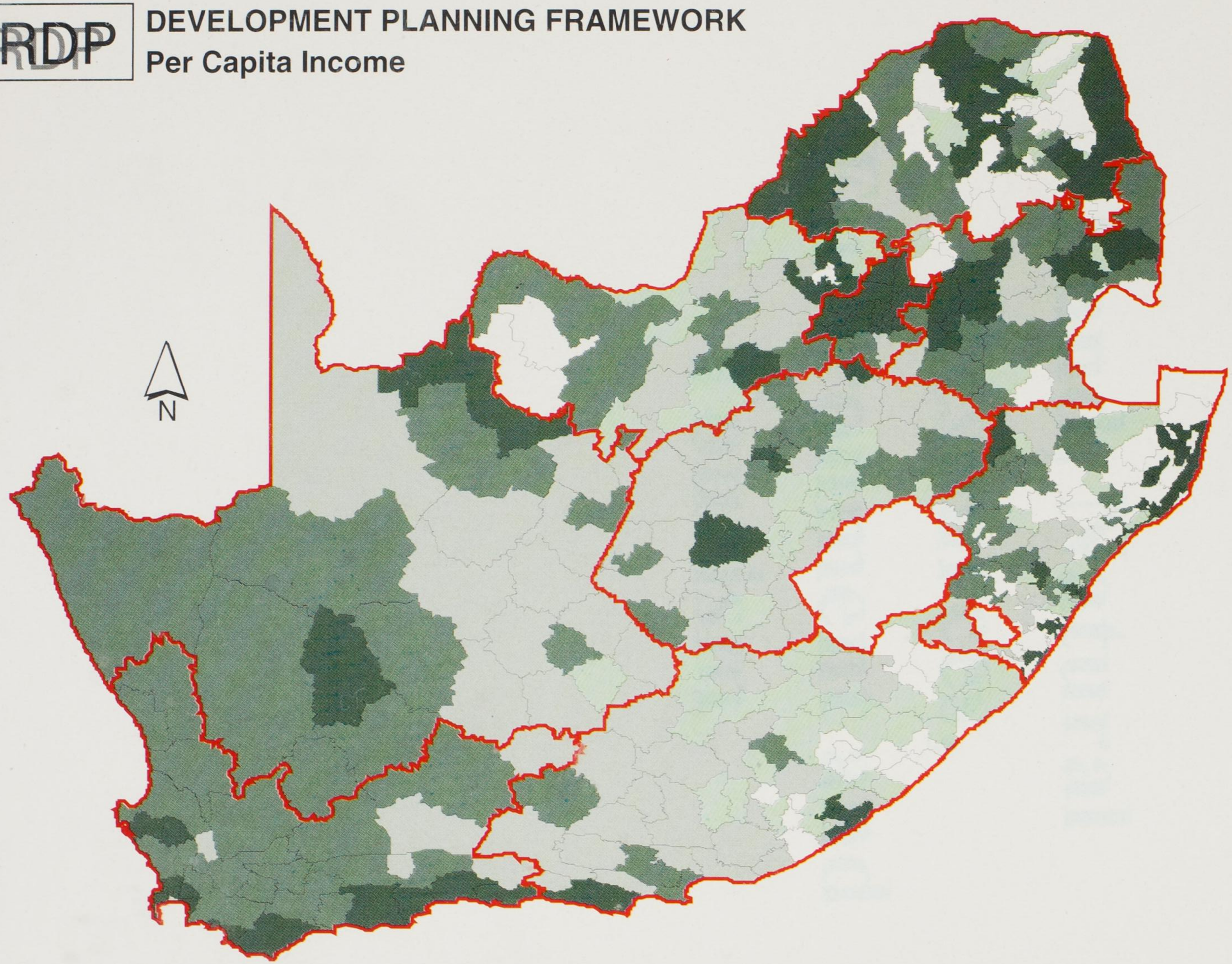
100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK

Per Capita Income



Provincial Boundaries

Per Capita Income

- < R1,500
- R1,500 - R3,000
- R3,000 - R5,000
- R5,000 - R7,500
- R7,500 - R25,000

100 0 100 200 300 400 500 600 700 800 Kilometers

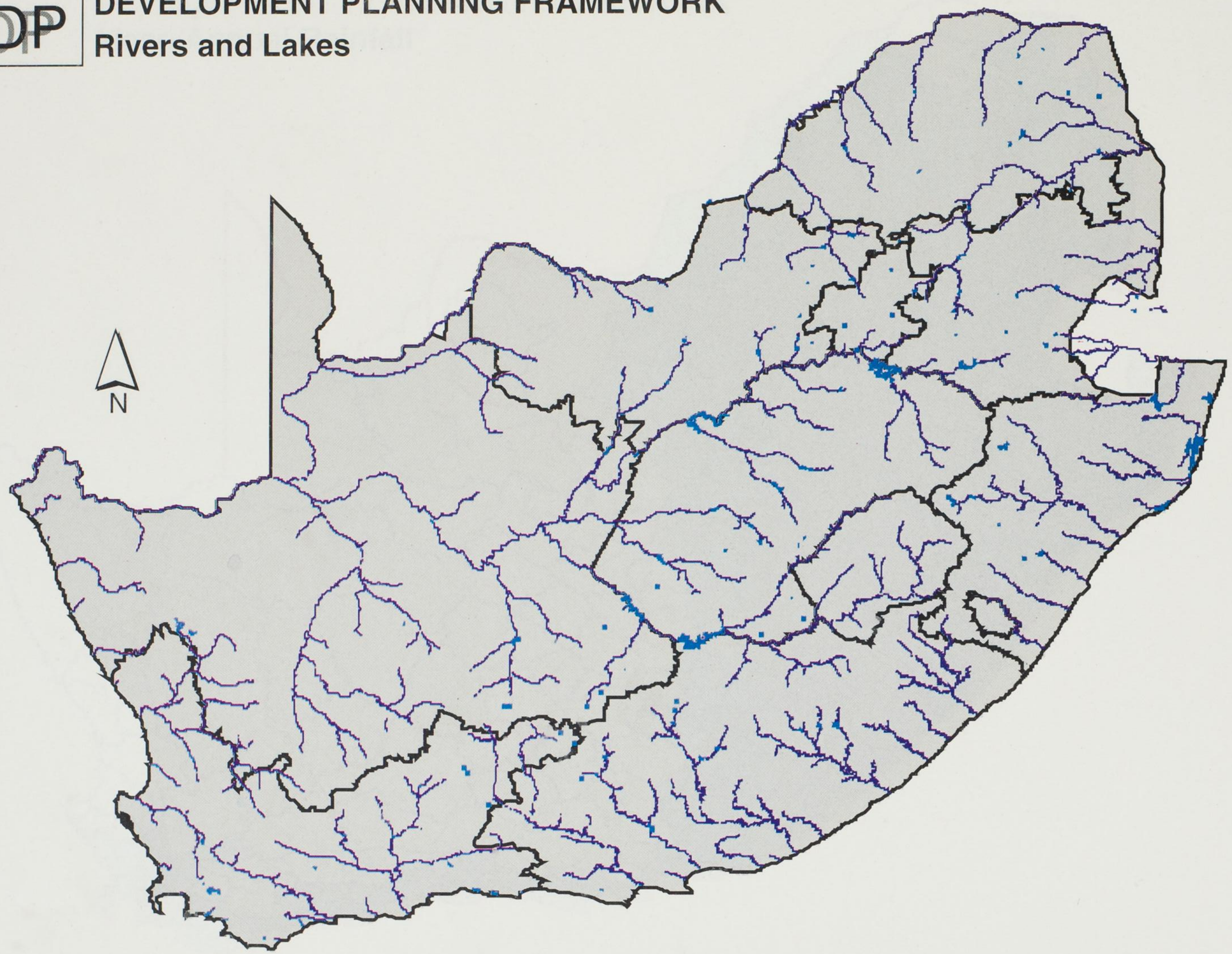
Source:
National Electrification Forum
(NELF) Database (1993)

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

Land, Natural Resources, Environment and Tourism

RDP

DEVELOPMENT PLANNING FRAMEWORK
Rivers and Lakes



Lakes
Rivers
Provincial Boundaries
South Africa

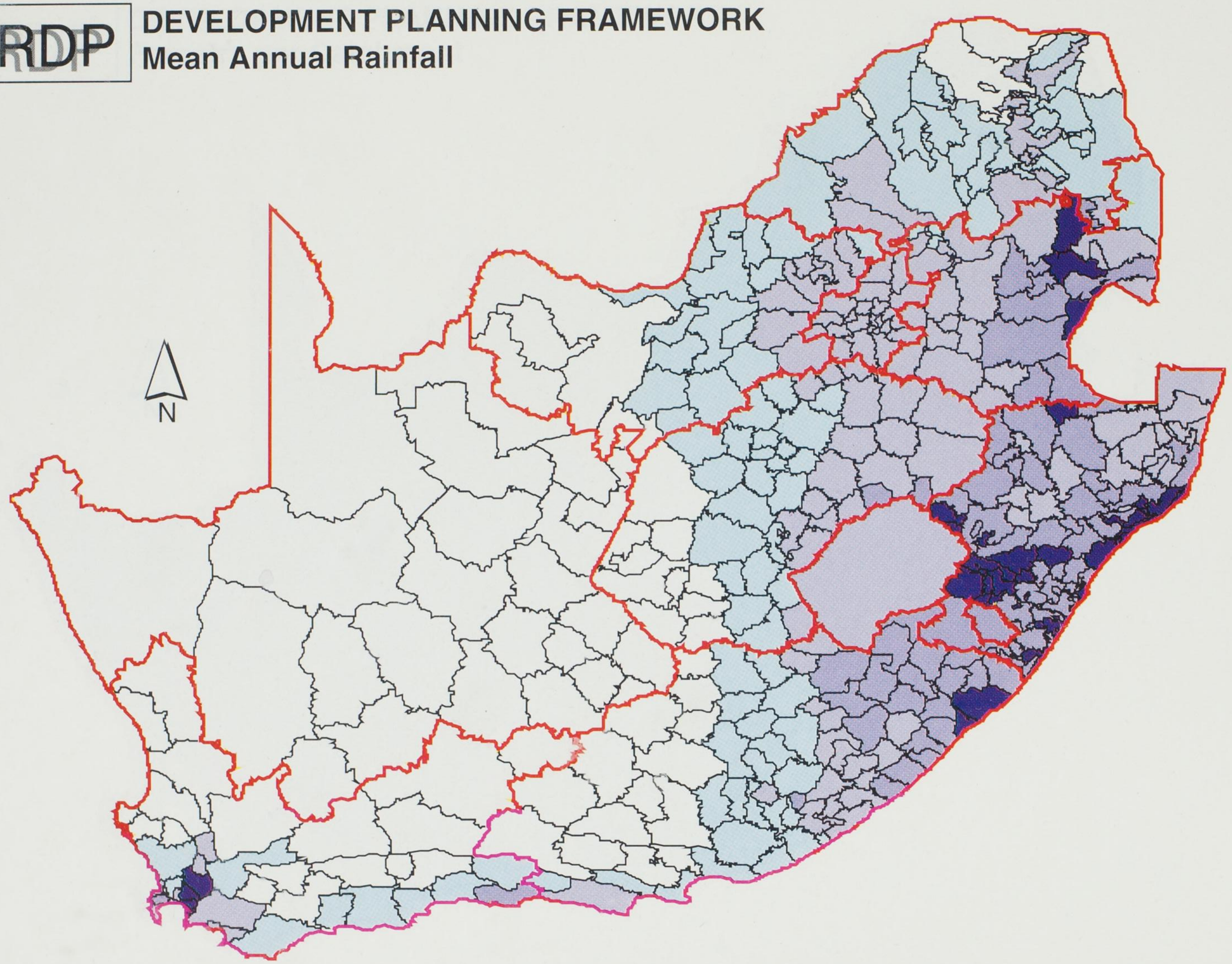
Source:
Institute of Water Quality Studies (IWQS)

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Mean Annual Rainfall



Provincial Boundaries

Rainfall

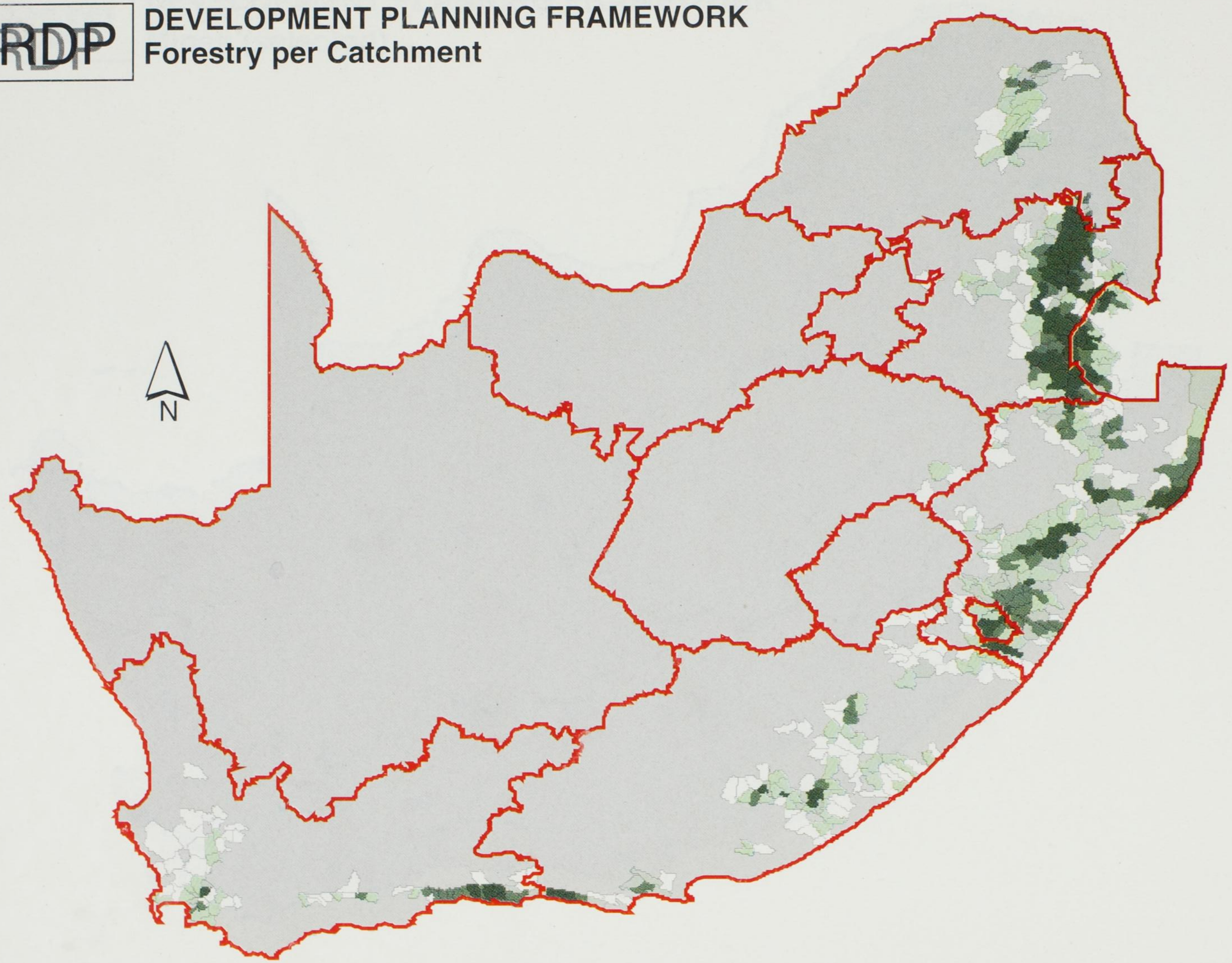
- < 350 mm
- 350 - 500 mm
- 500 - 650 mm
- 650 - 800 mm
- 800 - 1200 mm

Source:
CCWR, 1994
Compiled by Forestek, CSIR

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Forestry per Catchment



Provincial Boundaries
Area of Forestry (%)
< 1
1 - 5
5 - 10
10 - 20
> 20
South Africa

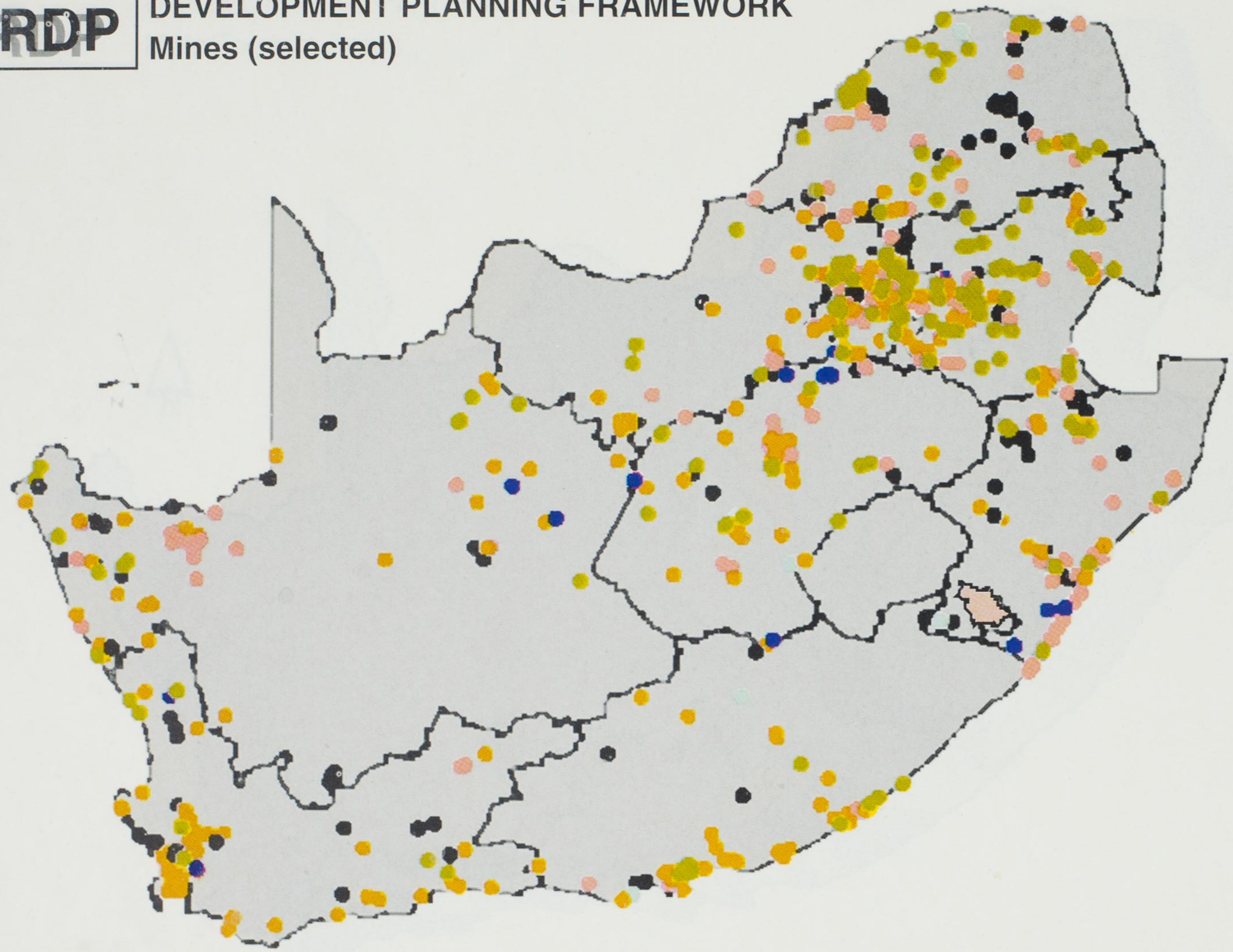
Source:
Forestek, CSIR (1995)
Compiled for the DWAF
Derived from1993 Landsat
TM Imagery

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Mines (selected)



Mines and Mining Permits
- Coal
- Diamonds
- Gold
- Iron Ore
- Precious Metals
- Tin
- Provincial Boundaries
- South Africa

Source:
Dept. of Environmental Affairs
and Tourism (DEA&T)

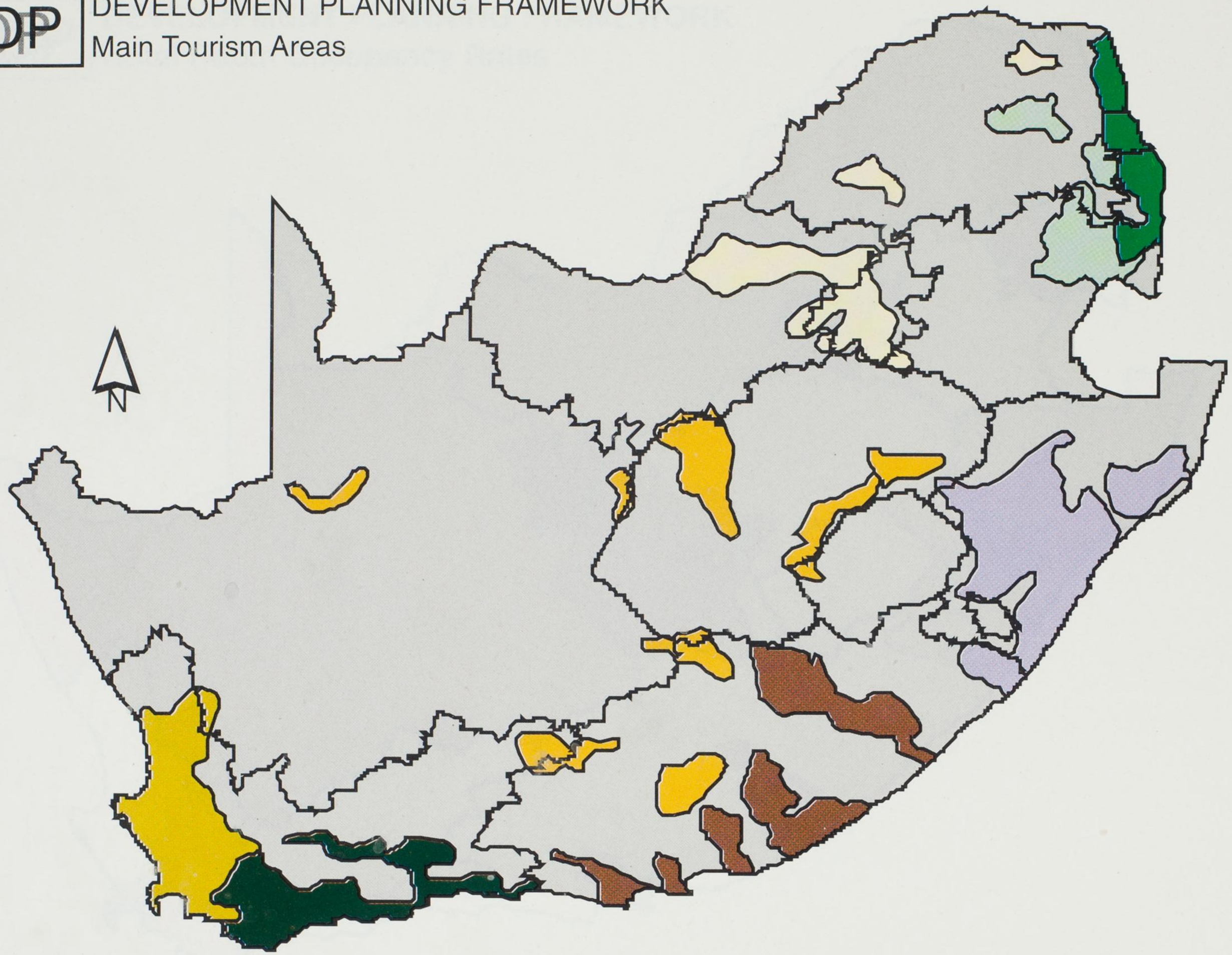
Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

100 0 100 200 300 400 500 600 700 800 Kilometers

RDP

DEVELOPMENT PLANNING FRAMEWORK

Main Tourism Areas



Provincial Boundaries
Tourism Areas
- Cape, OFS, Lesotho
- Eastern Cape
- Eastern Transvaal
- Kruger National Park
- KwaZulu-Natal
- Southern Cape
- Transvaal Highveld
- Western Cape
- South Africa

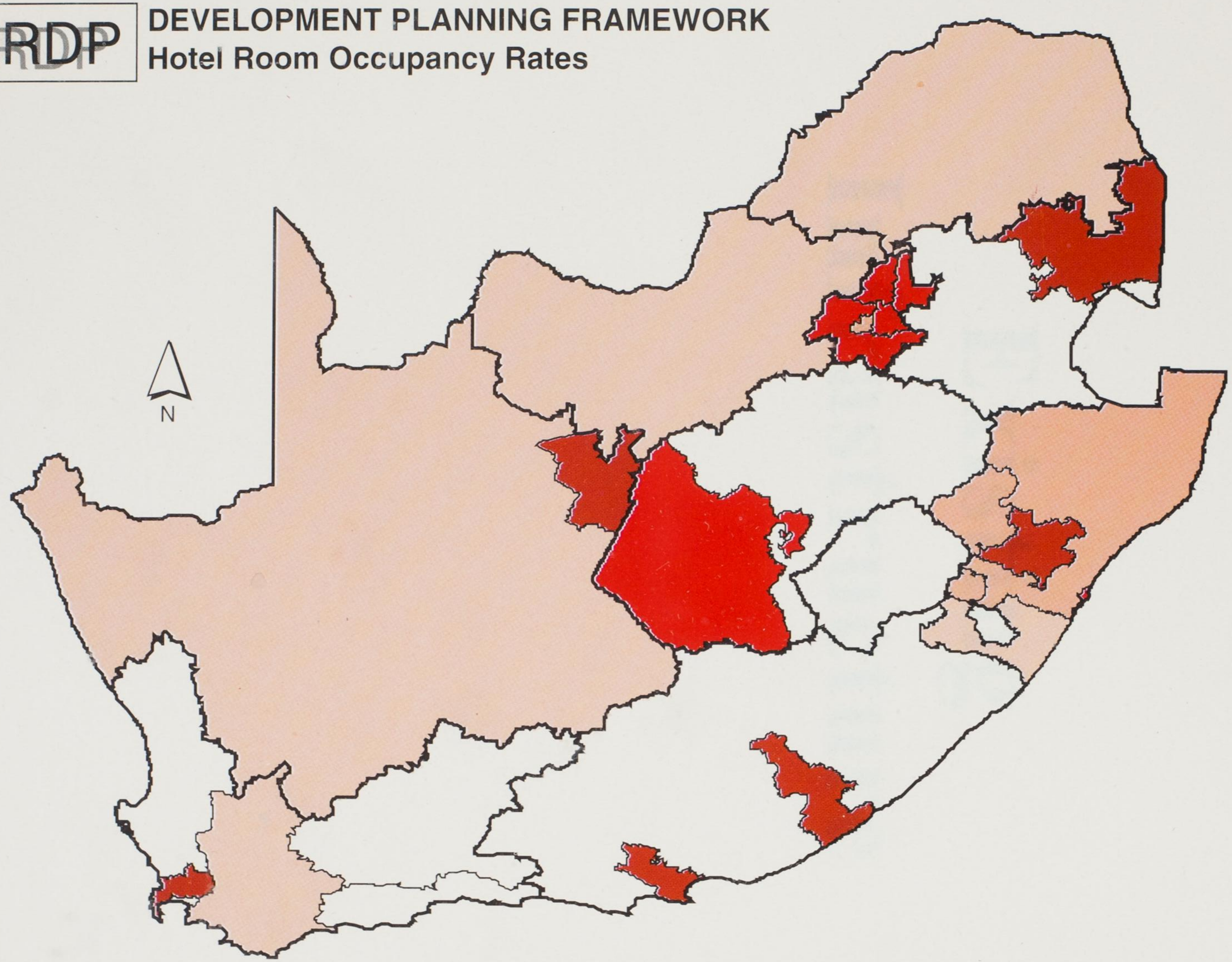
Source:

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

100 0 100 200 300 400 500 600 700 800 Kilometers

RDP

DEVELOPMENT PLANNING FRAMEWORK
Hotel Room Occupancy Rates



Provincial Boundaries
Room Occupancy (%)
- < 35
- 35 - 40
- 40 - 50
- 50 - 60
- > 60

Source:
Central Statistical Service (CSS)

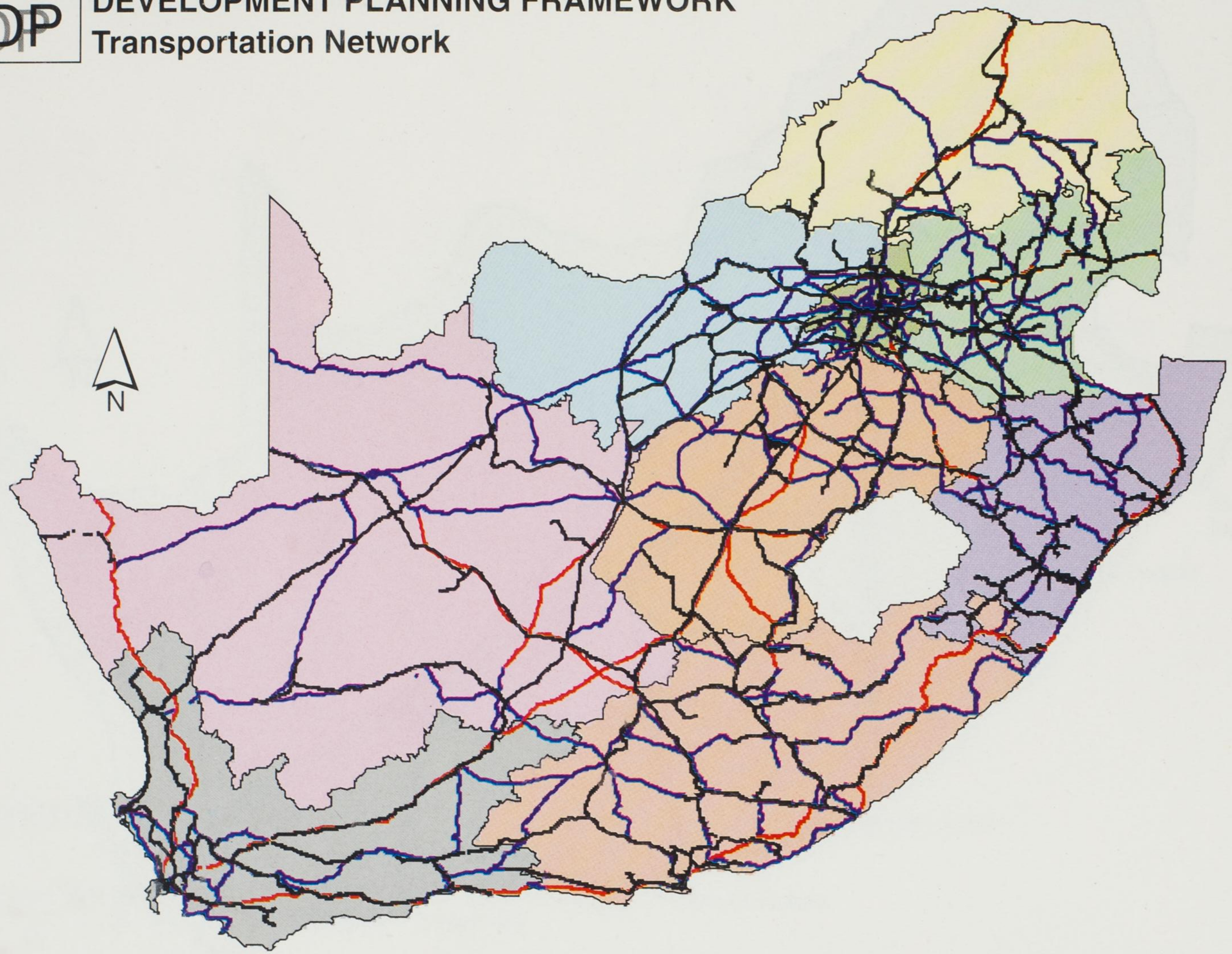
Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

100 0 100 200 300 400 500 600 700 800 Kilometers

Existing Infrastructure

RDP

DEVELOPMENT PLANNING FRAMEWORK
Transportation Network



Railways
Roads
Arterial
Freeway
Main
Nat_Route
Other
Secondary
Track_Footpath
Provinces
Eastern Cape
Free State
Gauteng
KwaZulu/Natal
Mpumalanga
North West
Northern Cape
Northern Province
Western Cape

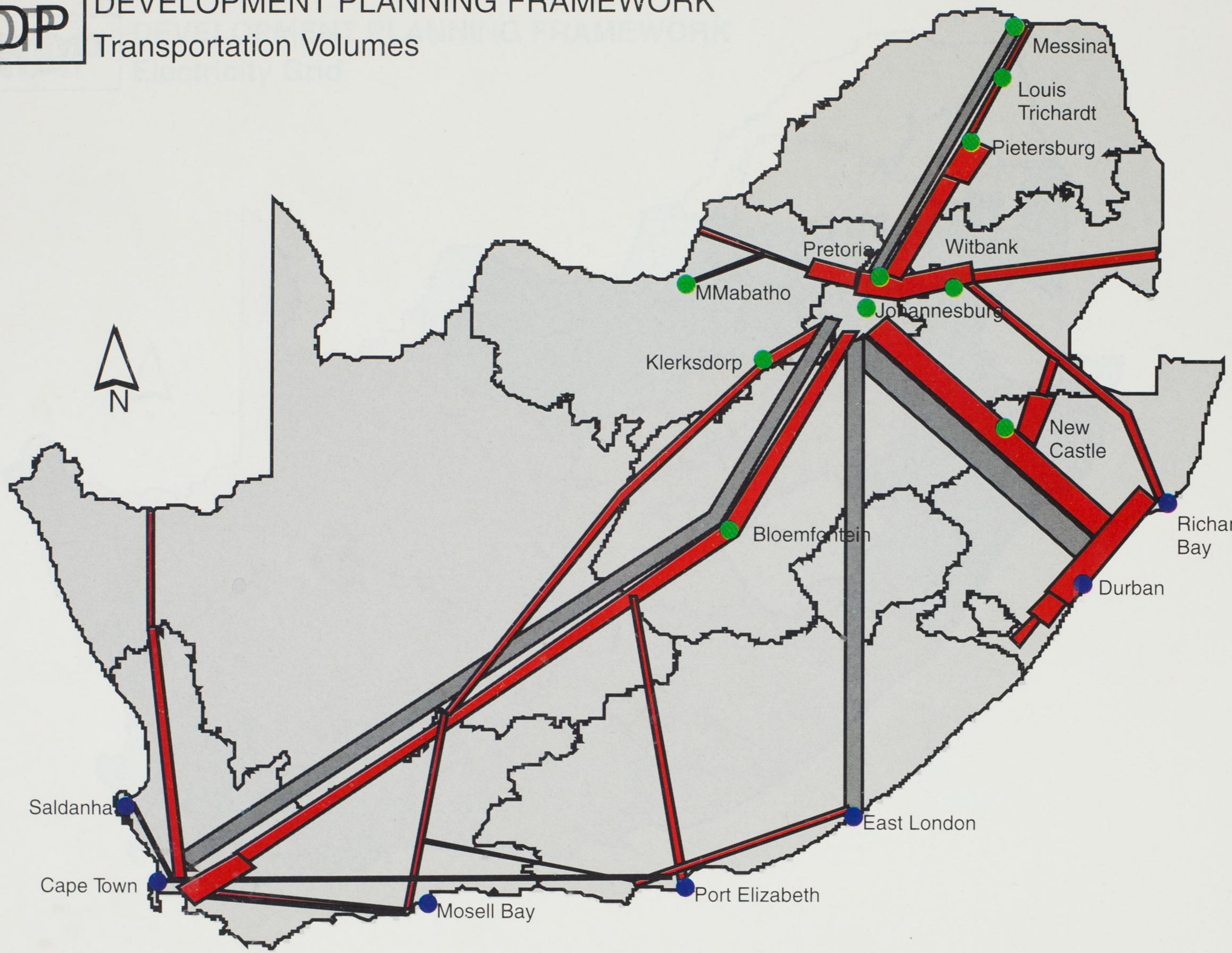
Source:
Dept. of Land Affairs
(1:500,000 database)
HSRC

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

100 0 100 200 300 400 500 600 700 800 Kilometers

RDP

DEVELOPMENT PLANNING FRAMEWORK
Transportation Volumes



Ports
Towns
Volumes
Rail
Road
Provincial Boundaries
South Africa

Road Transportation(Trucks/Day)

> 10000
500-1000
< 500
< 5000
5000-10000
> 10000

Rail Transportation(Tons/Day)

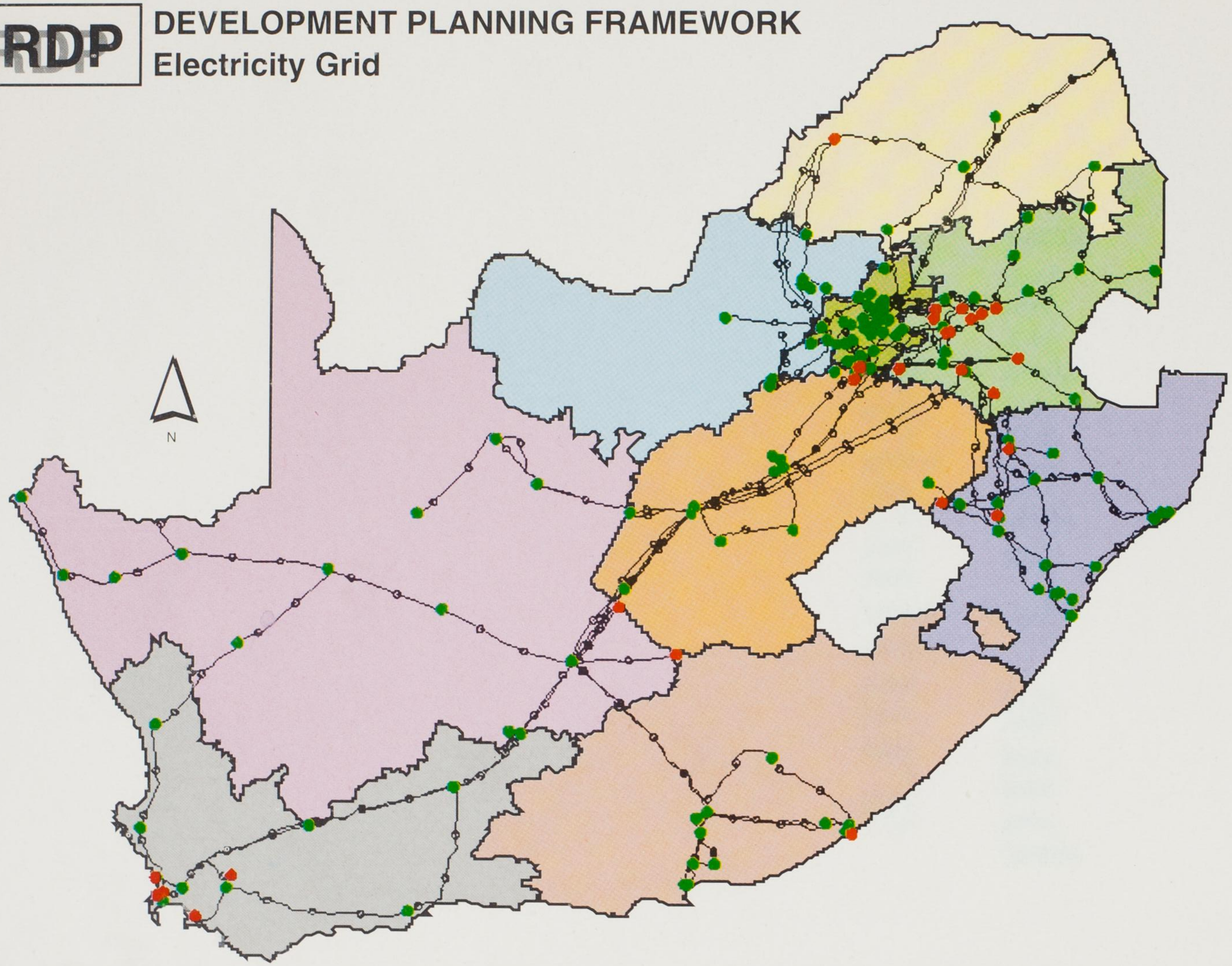
100 0 100 200 300 400 500 600 700 800 Kilometers

Source:
Department of Transport 1992

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Electricity Grid



Secondary Towns
Secondary Towns
Power Lines

Provinces
- Eastern Cape
- Free State
- Gauteng
- KwaZulu/Natal
- Mpumalanga
- North West
- Northern Cape
- Northern Province
- Western Cape

Source:
ESKOM: Electricity Grid

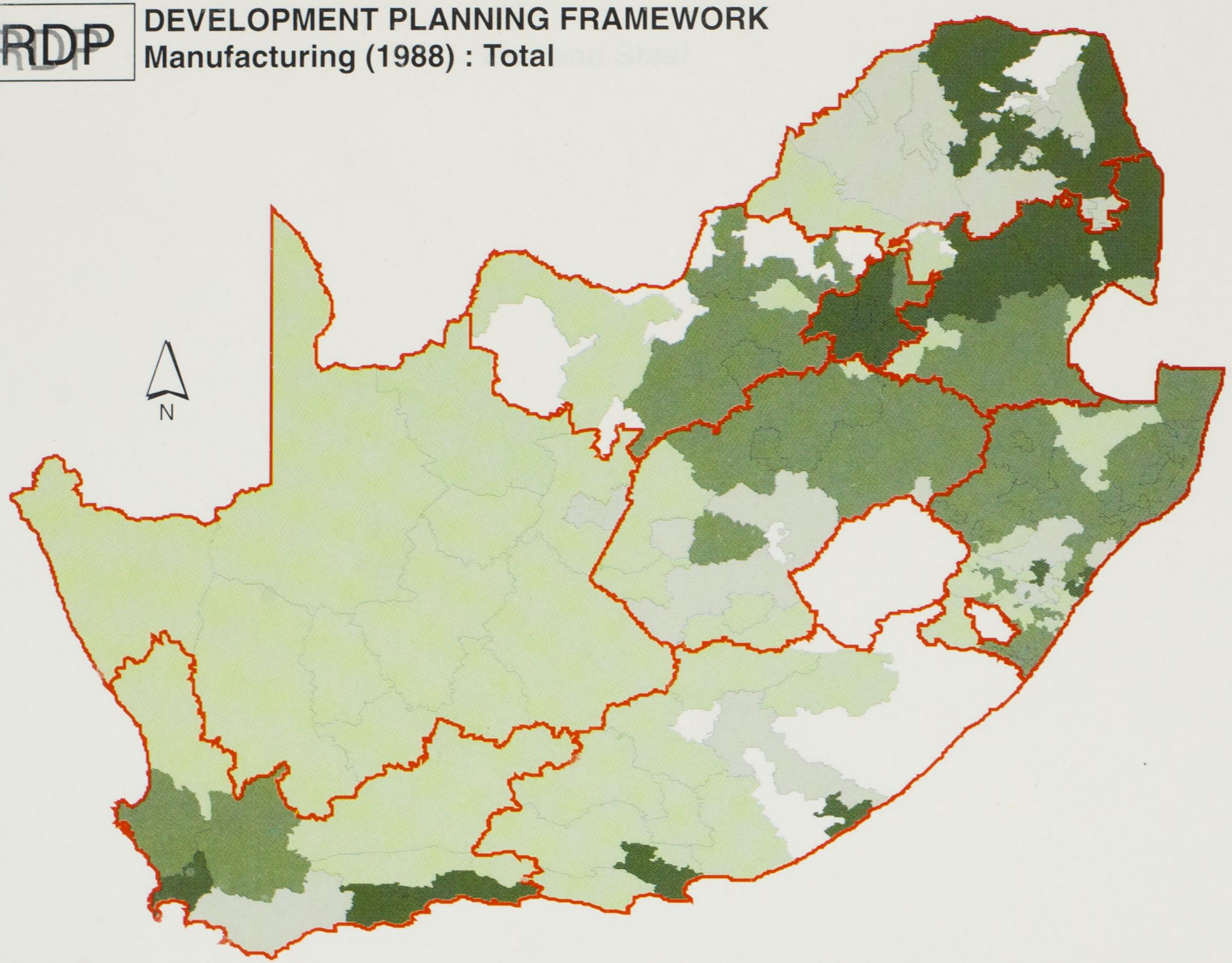
100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

Industry and Agriculture

RDP

DEVELOPMENT PLANNING FRAMEWORK
Manufacturing (1988) : Total



Provincial Boundaries
Companies
No companies
1 - 50
50 - 100
100 - 200
> 200 (max 4000)

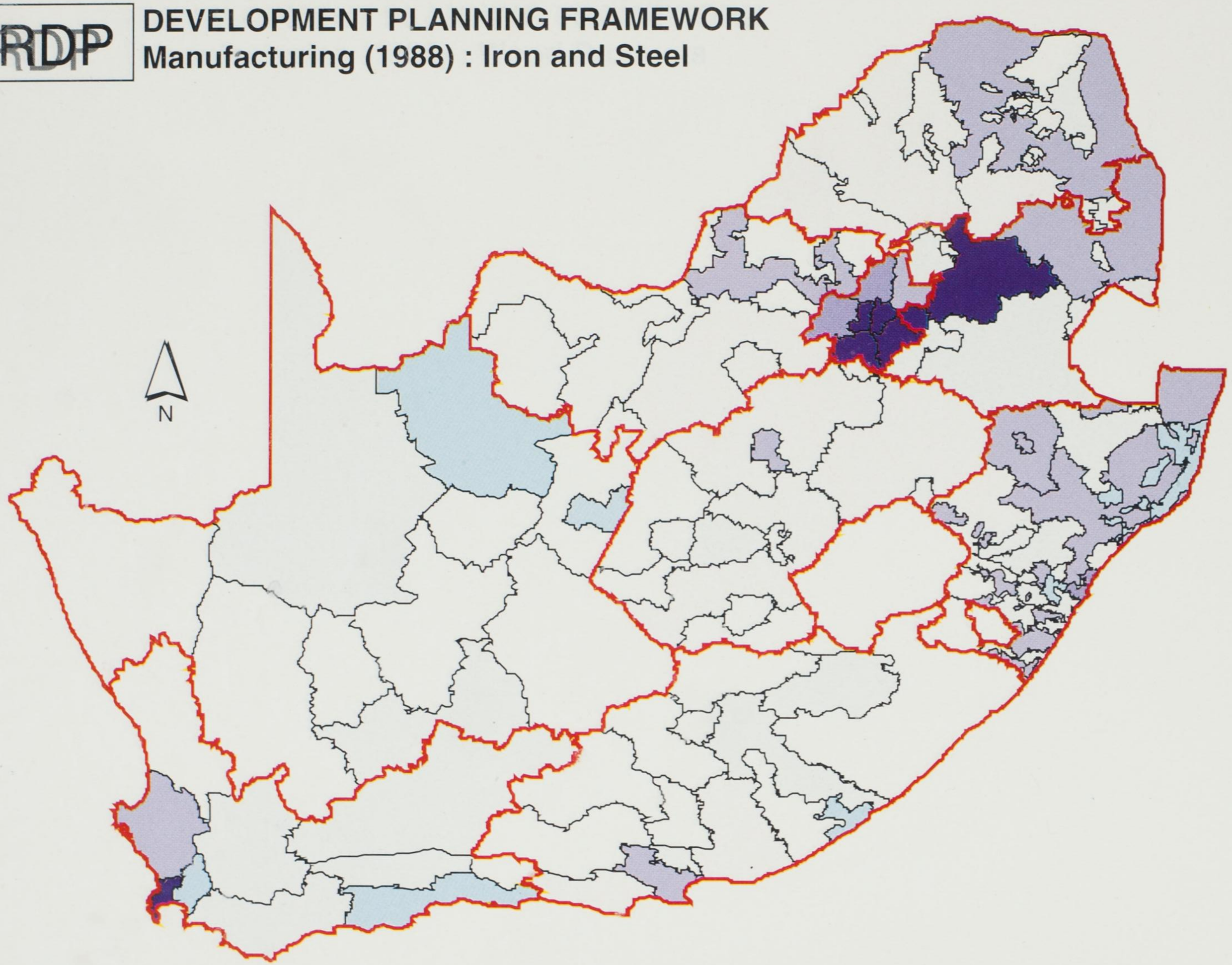
Source:
Central Statistical Service (CSS)

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

100 0 100 200 300 400 500 600 700 800 Kilometers

RDP

DEVELOPMENT PLANNING FRAMEWORK
Manufacturing (1988) : Iron and Steel



Provincial Boundaries

Companies

- No companies
- 1
- 2 - 4
- 4 - 10
- > 10 (max 74)

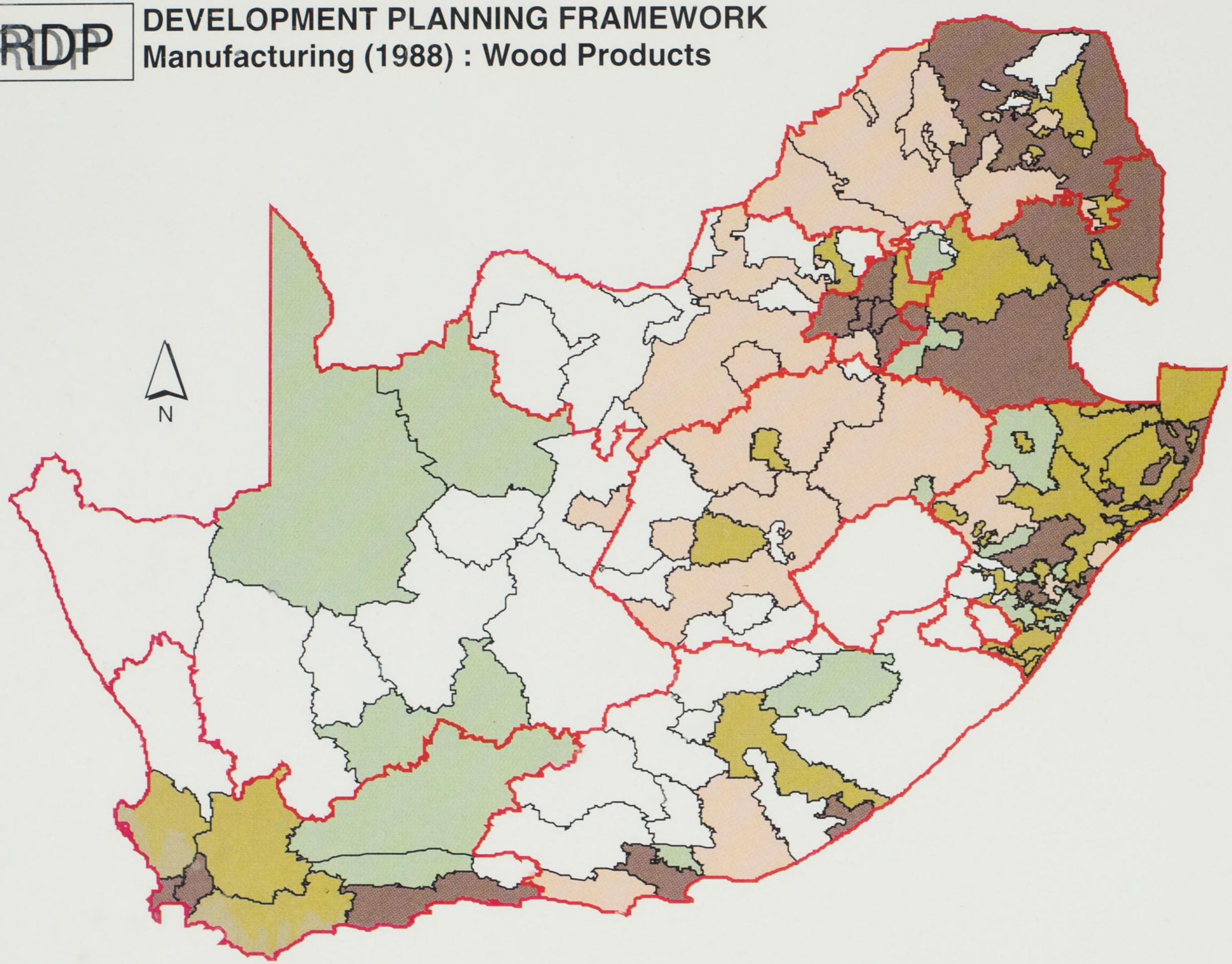
Source:
Central Statistical Service (CSS)

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
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RDP

DEVELOPMENT PLANNING FRAMEWORK
Manufacturing (1988) : Wood Products



Provincial Boundaries

Companies

- No companies
- 1
- 2 - 5
- 5 - 15
- > 15 (max 78)

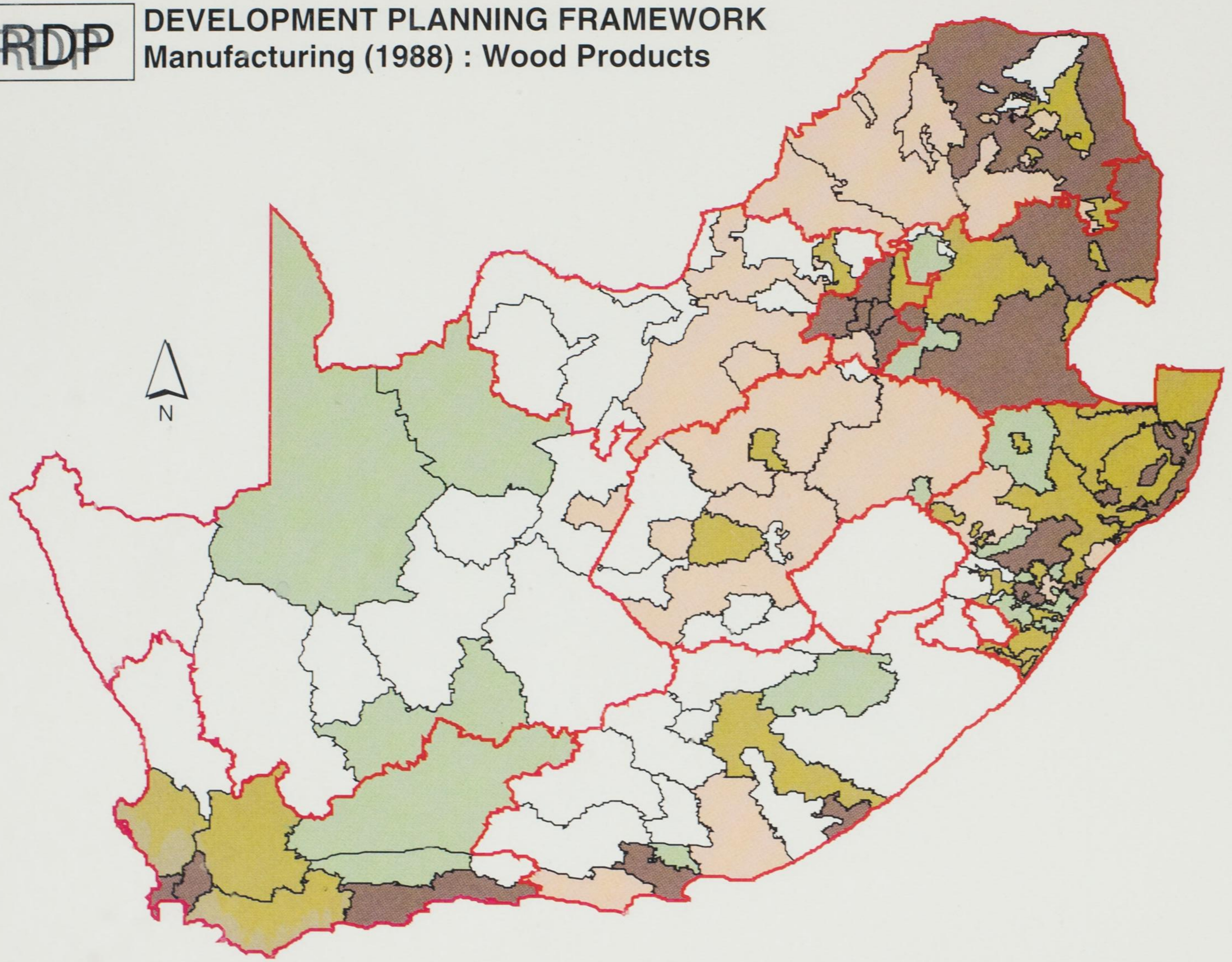
Source:
Central Statistical Service (CSS)

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Manufacturing (1988) : Wood Products



Provincial Boundaries
Companies
- No companies
- 1
- 2 - 5
- 5 - 15
- > 15 (max 78)

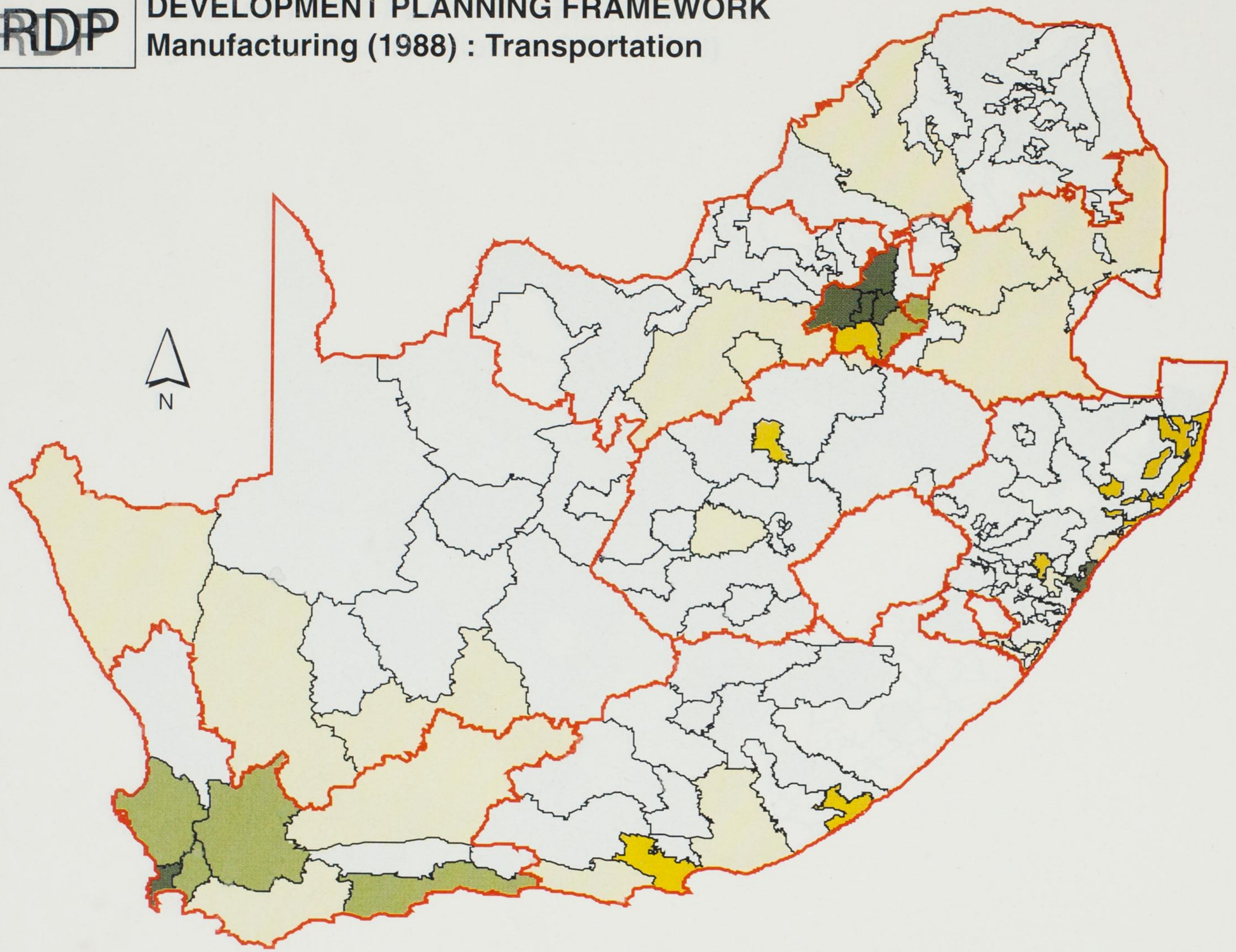
Source:
Central Statistical Service (CSS)

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Manufacturing (1988) : Transportation



Provincial Boundaries
Companies
- No companies
- 1
- 2 - 5
- 5 - 10
- > 10 (max 60)

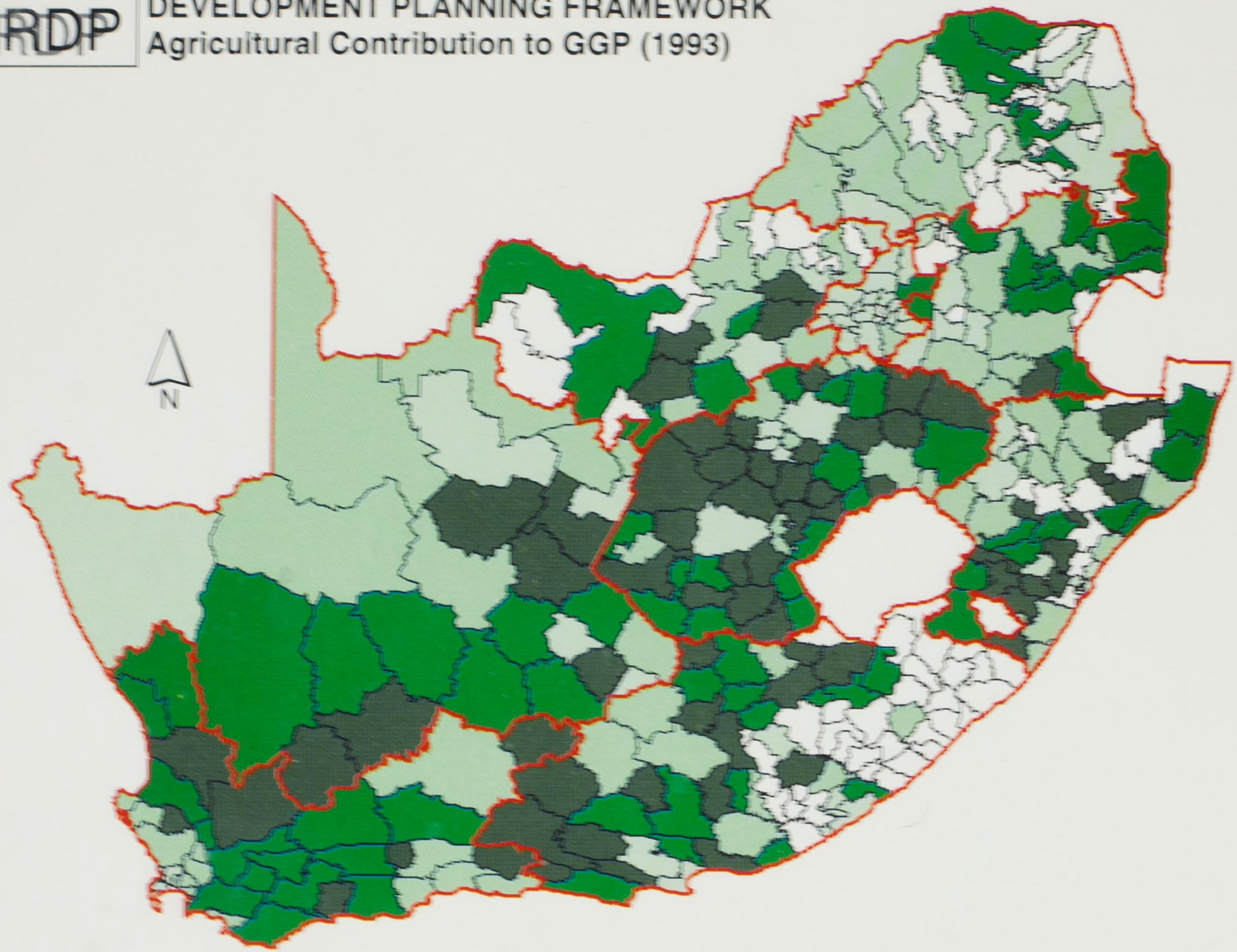
Source:
Central Statistical Service (CSS)

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Agricultural Contribution to GGP (1993)



Provincial Boundaries
% of Total GGP
No data
< 5 %
5 - 20 %
20 - 40 %
> 40 %

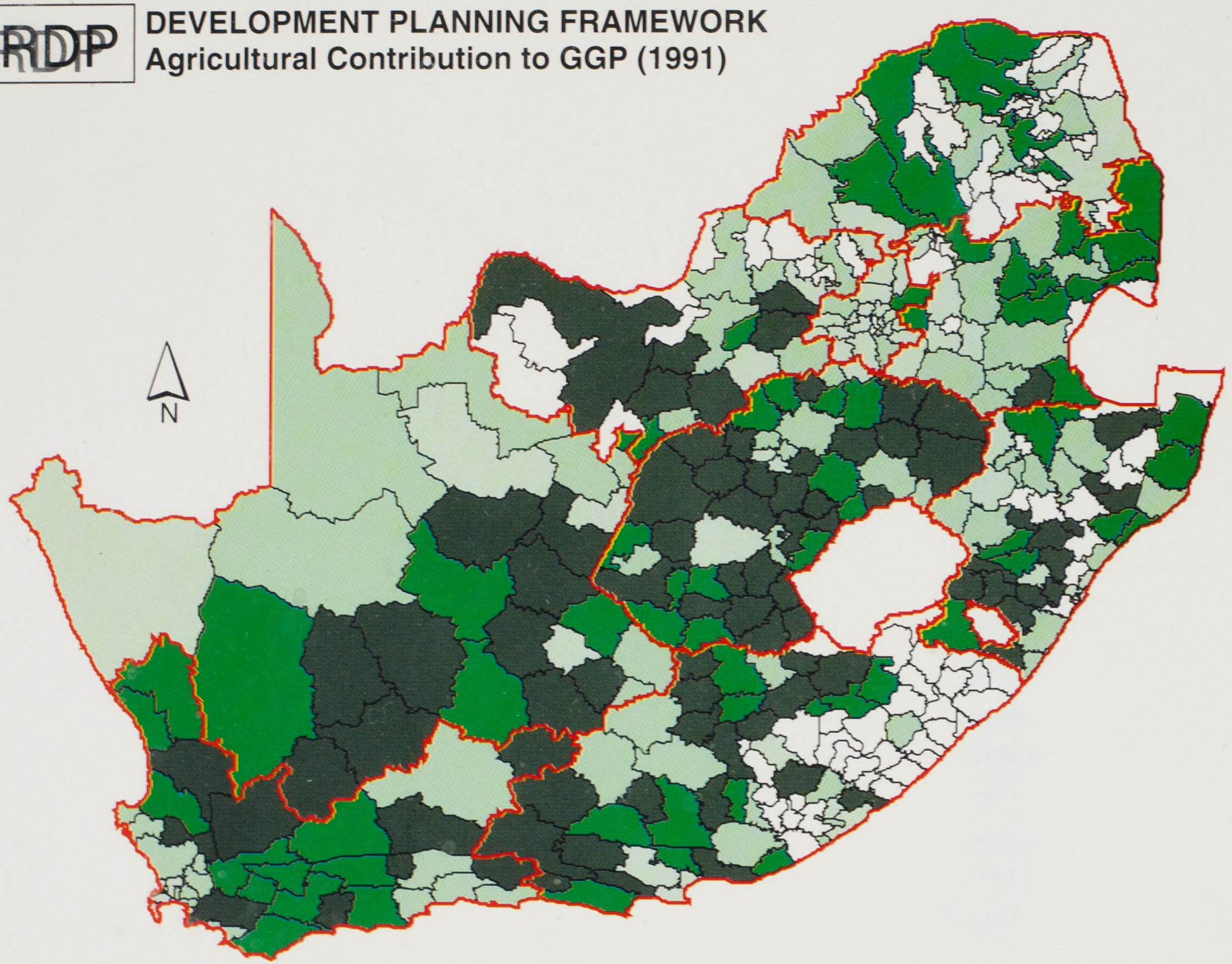
Source:
Central Statistical Service (CSS)

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

100 0 100 200 300 400 500 600 700 800 Kilometers

RDP

DEVELOPMENT PLANNING FRAMEWORK
Agricultural Contribution to GGP (1991)



Provincial Boundaries
% of Total GGP
No data
< 5 %
5 - 20 %
20 - 40 %
> 40 %

Source:
Central Statistical Service (CSS)

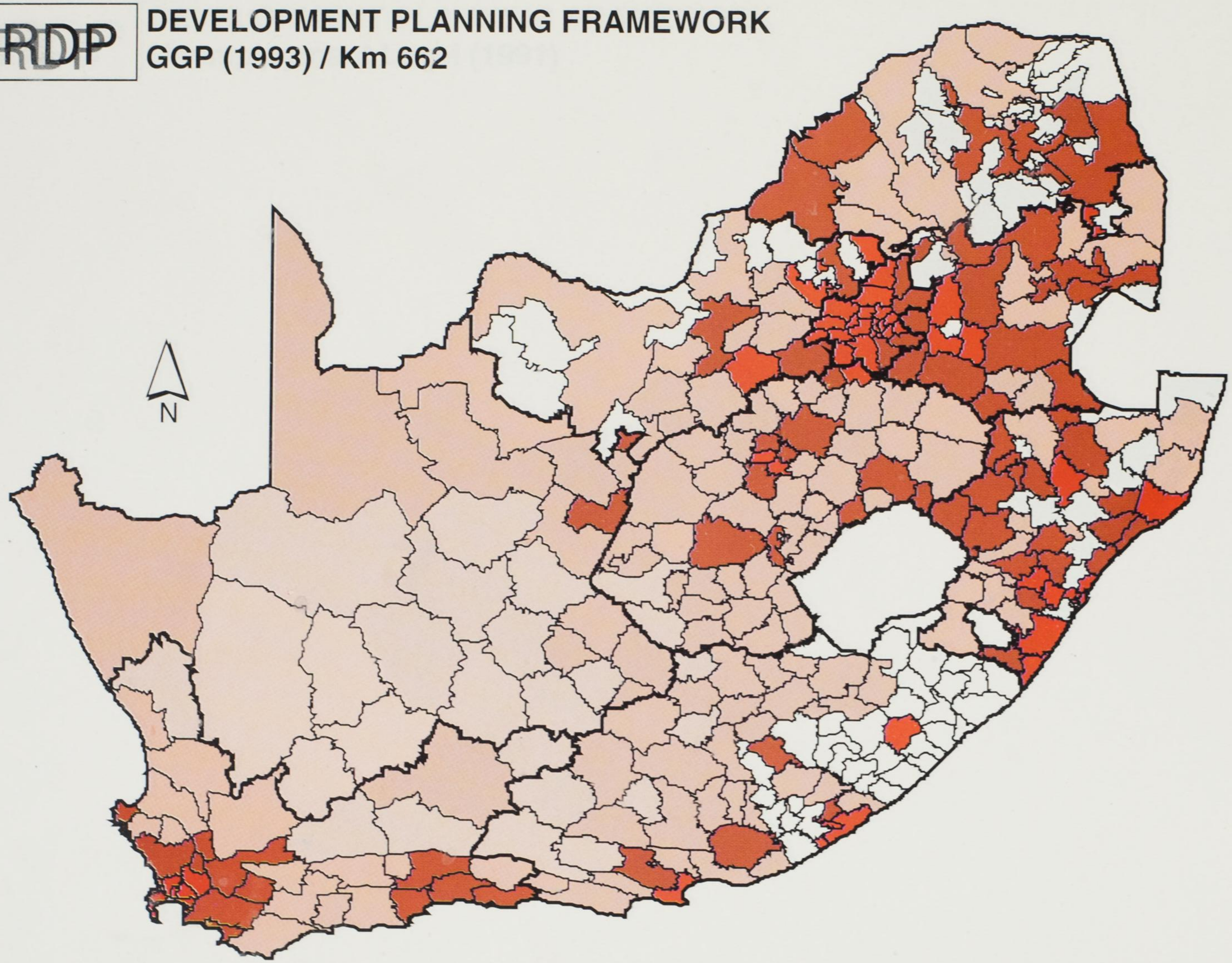
100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

Economic Activity

RDP

DEVELOPMENT PLANNING FRAMEWORK
GGP (1993) / Km 662



Provincial Boundaries
GGP
No data
< 10
10 - 100
100 - 1000
> 1000 (max 110,000)

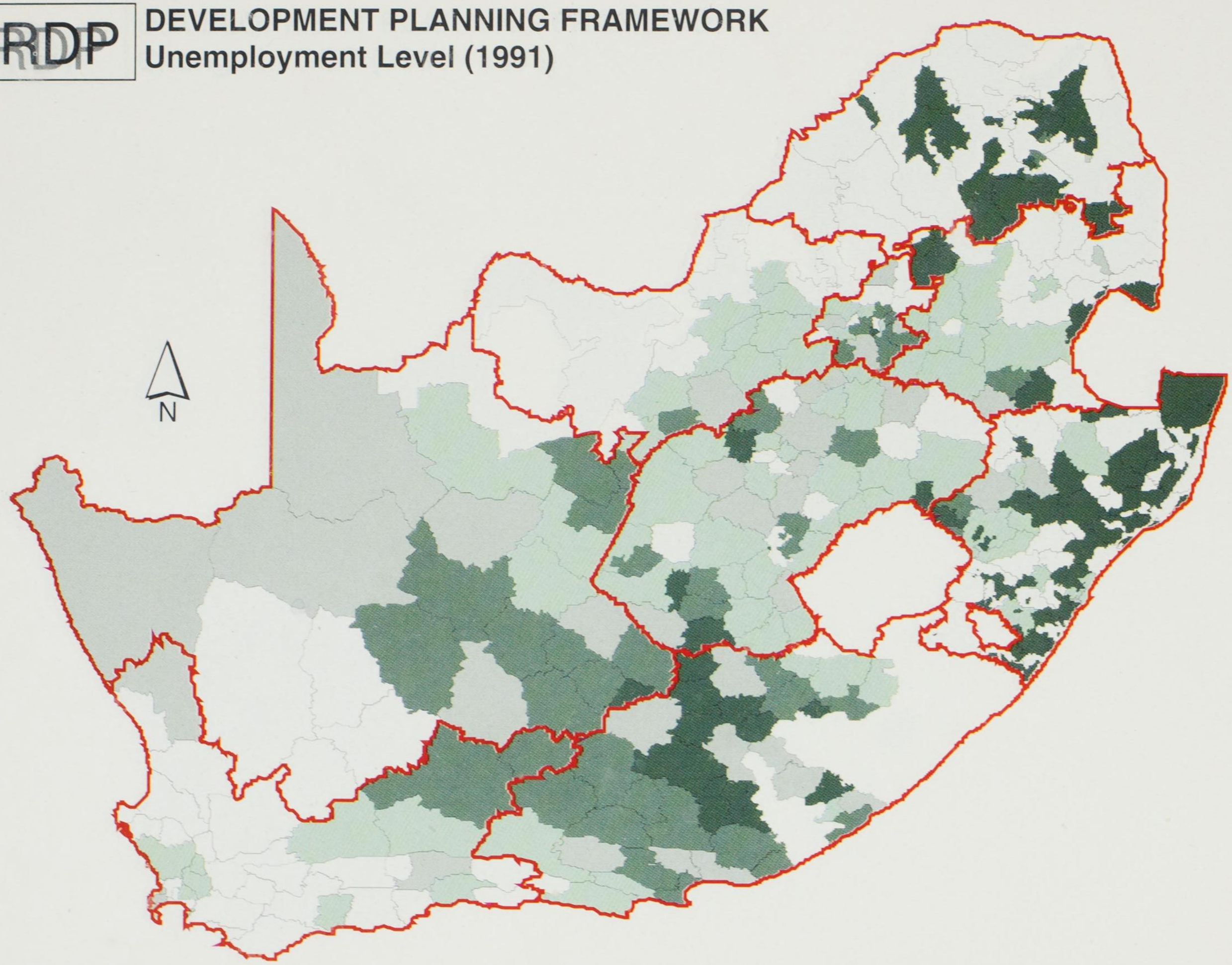
Source:
Central Statistical Service (CSS)

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Unemployment Level (1991)



Provincial Boundaries
Unemployment Level
< 10 %
10 - 15 %
15 - 20 %
20 - 25 %
> 25 % (max 81 %)

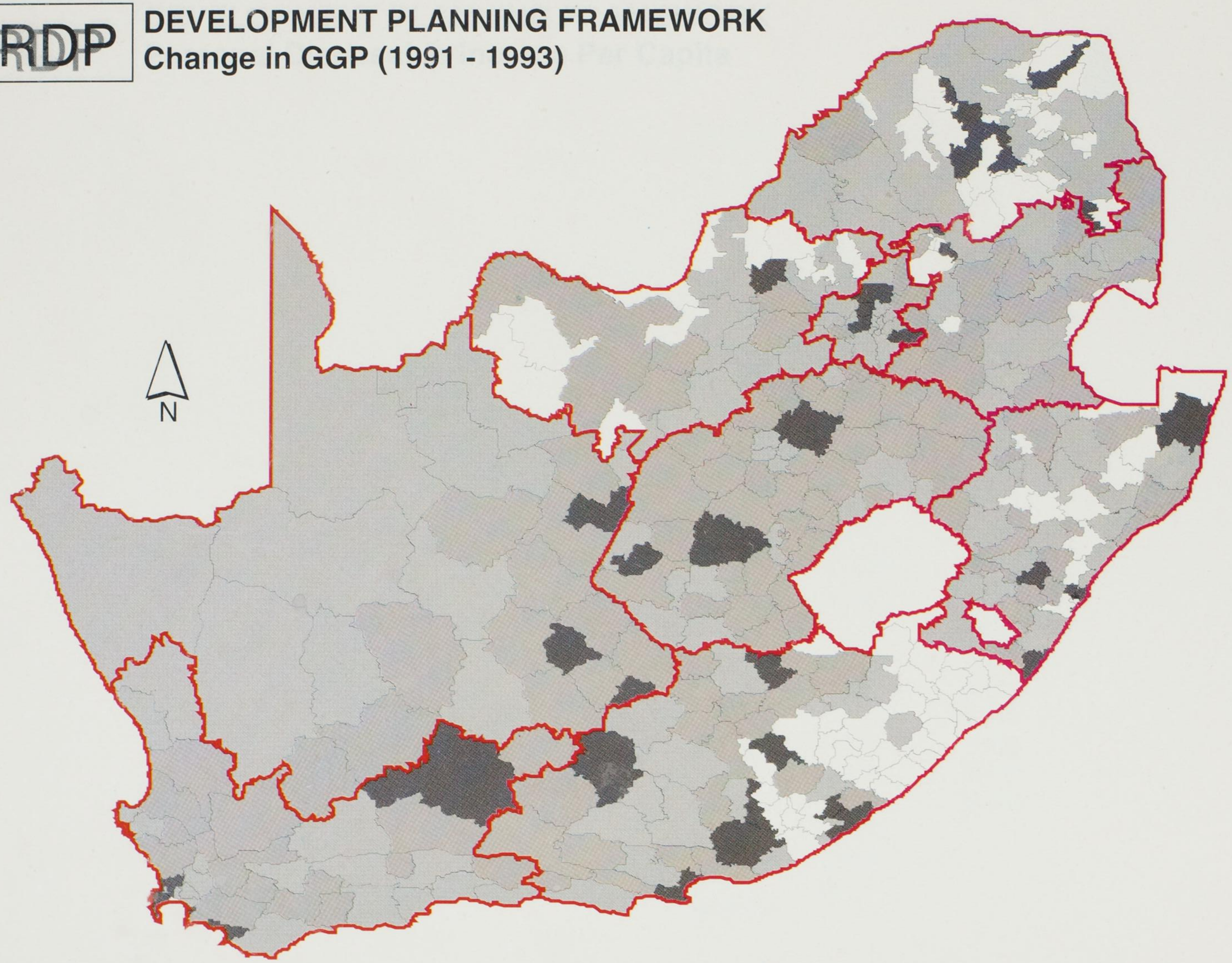
Source:
CSS
EasyData

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

100 0 100 200 300 400 500 600 700 800 Kilometers

RDP

DEVELOPMENT PLANNING FRAMEWORK
Change in GGP (1991 - 1993)



Provincial Boundaries
Change in GGP
- No change
- < 20 %
- 20 - 25 %
- 25 - 30 %
- > 30 %

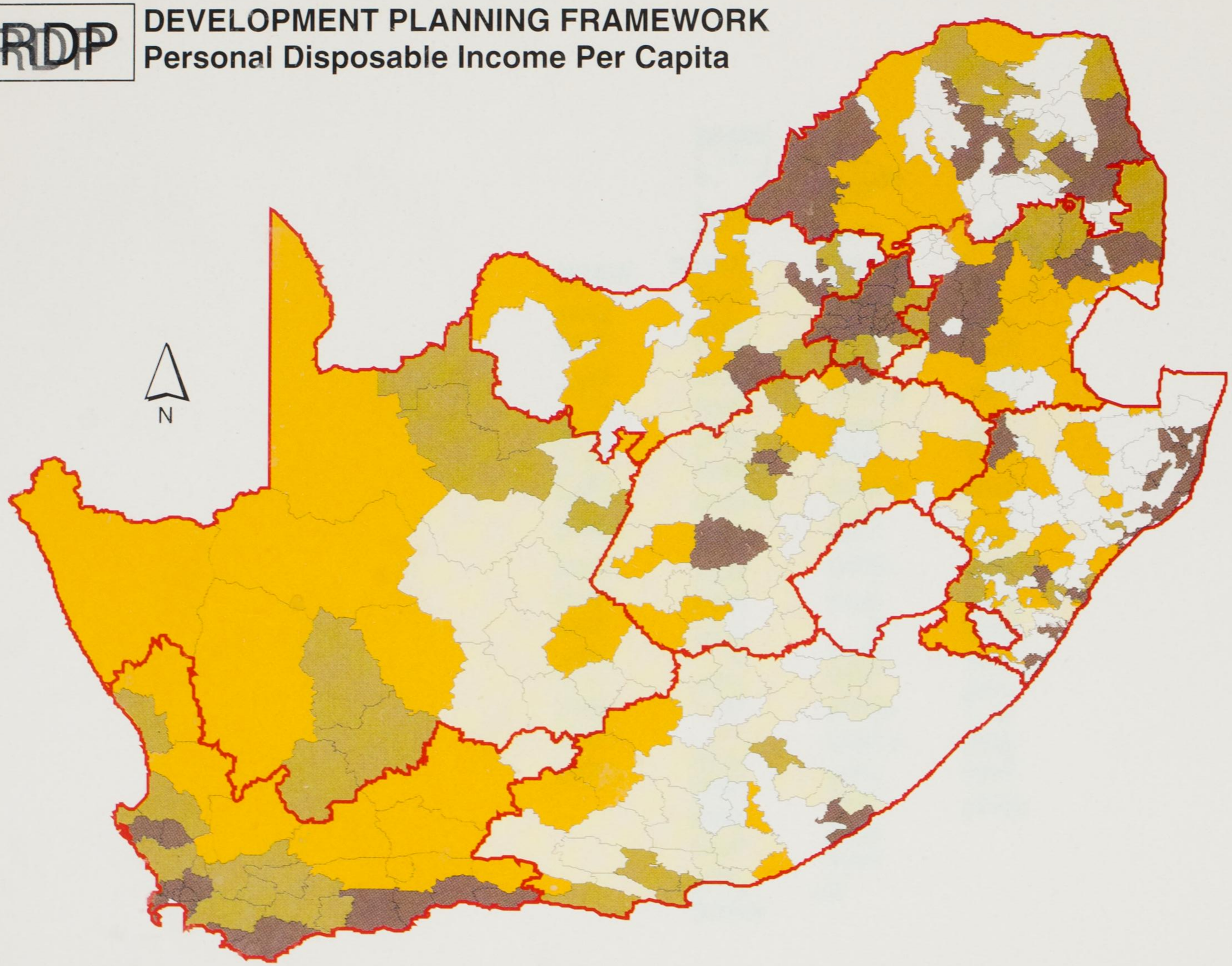
Source:
Central Statistical Service (CSS)

100 0 100 200 300 400 500 600 700 800 Kilometers

Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

RDP

DEVELOPMENT PLANNING FRAMEWORK
Personal Disposable Income Per Capita



Provincial Boundaries
PDI Per Capita
< 3
3 - 5
5 - 7
7 - 9
> 9 (max 22)

Source:
National Electrification Forum
(NELF) Database

100 0 100 200 300 400 500 600 700 800 Kilometers

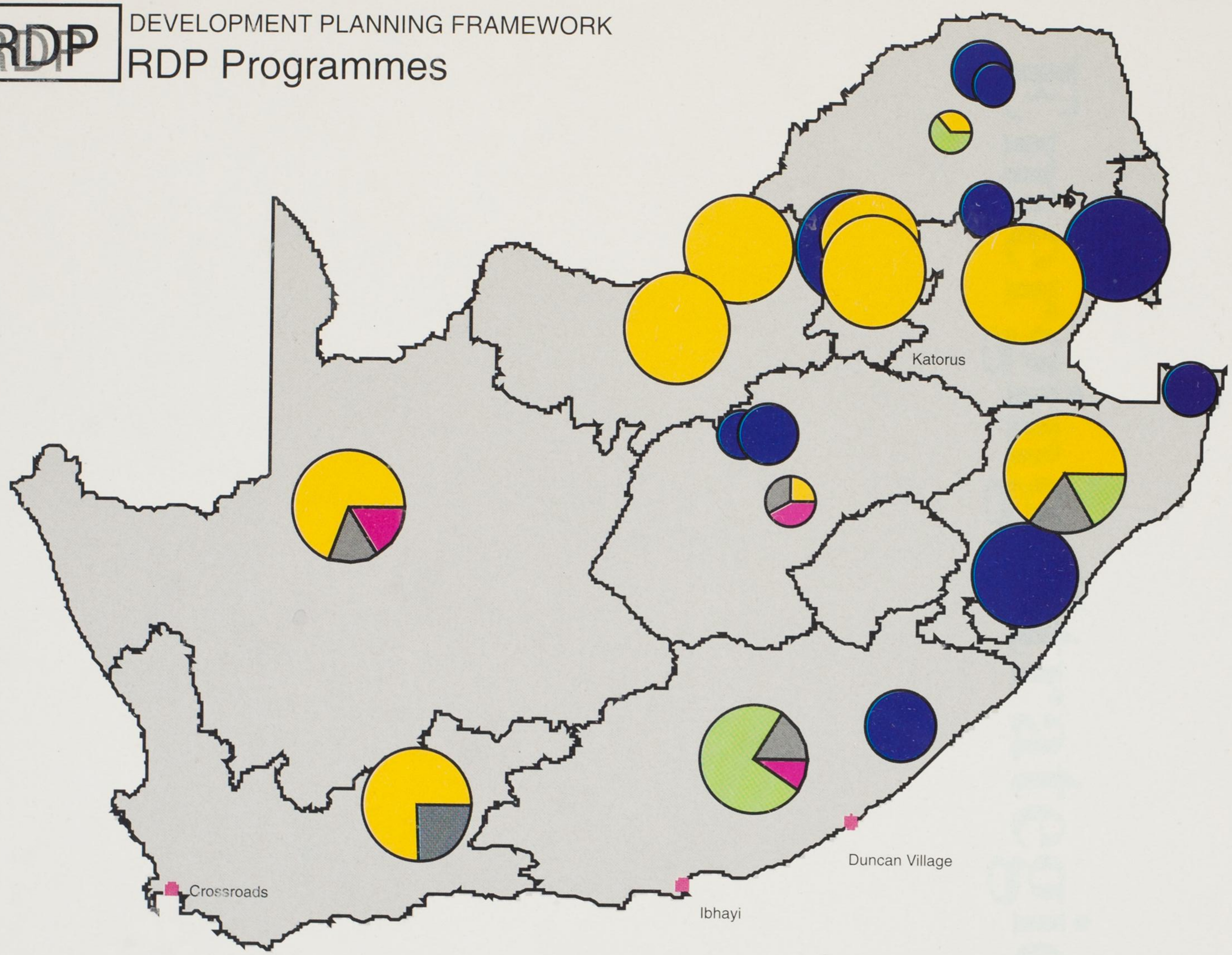
Compiled for :
The Forum for Effective Planning and Development
GIS and Mapping by the CSIR

Government Administration, Expenditure and Investment

RDP

DEVELOPMENT PLANNING FRAMEWORK

RDP Programmes



Water Supply Programme
Special Presidential
Clinics Programme
Provincial Boundaries
South Africa

Water Supply Programme
People Benefitting

300000
230000
160000
90000
20000

Clinics Programme

Vehicles
Equipment
Clinic upgrades
New clinics

2840000
2743125
2646250
2549375
2452500

Source:
RDP Office

Compiled for :
The Forum for Effective Planning and Development
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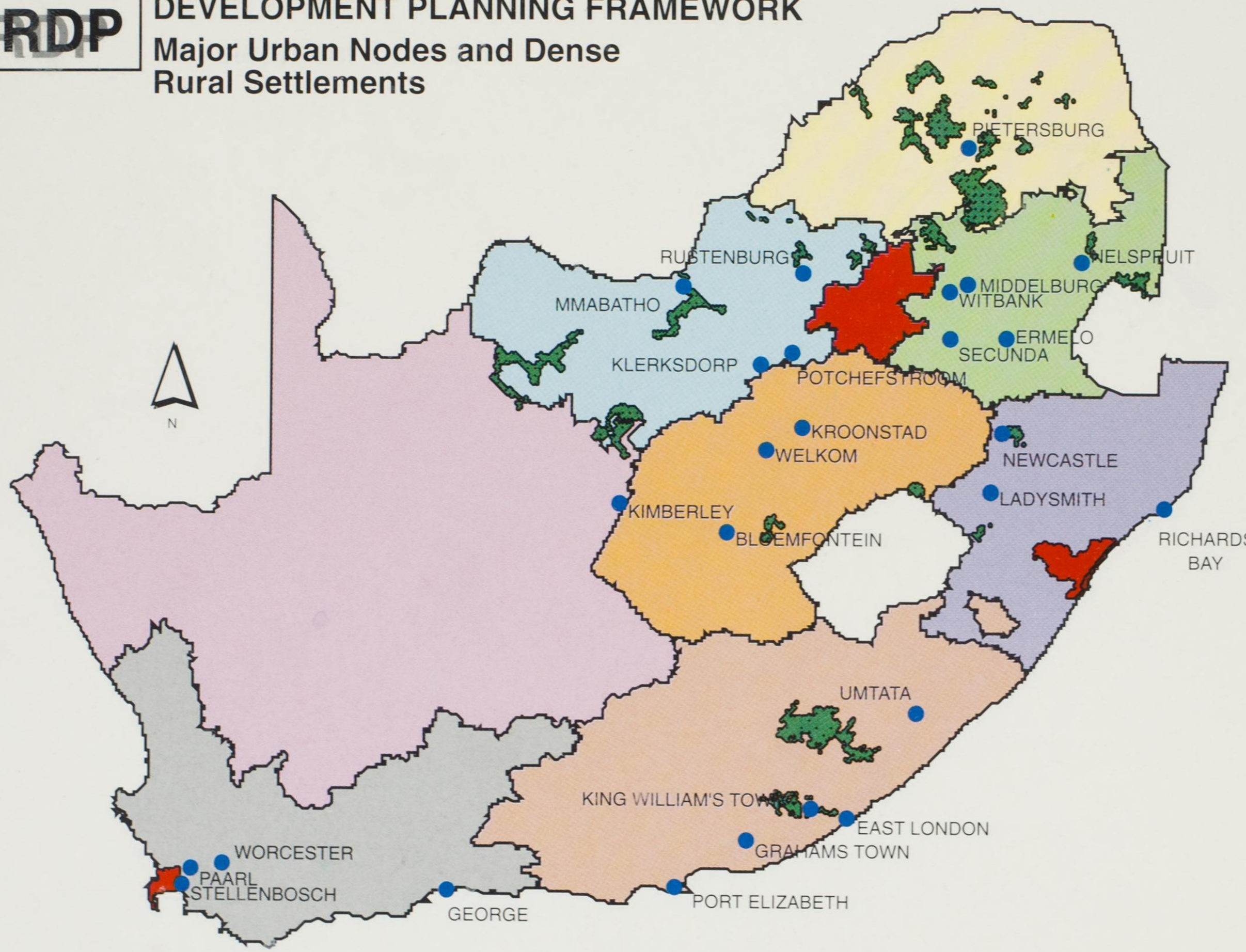
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Emerging Strategies

RDP

DEVELOPMENT PLANNING FRAMEWORK

Major Urban Nodes and Dense Rural Settlements



Secondary Towns
Provincial Boundaries

Corridors
- Dense Rural Clusters
- Major Urban Centres

Provinces
- Eastern Cape
- Free State
- Gauteng
- KwaZulu/Natal
- Mpumalanga
- North West
- Northern Cape
- Northern Province
- Western Cape

Source:
RDP Office
Conceptual map only

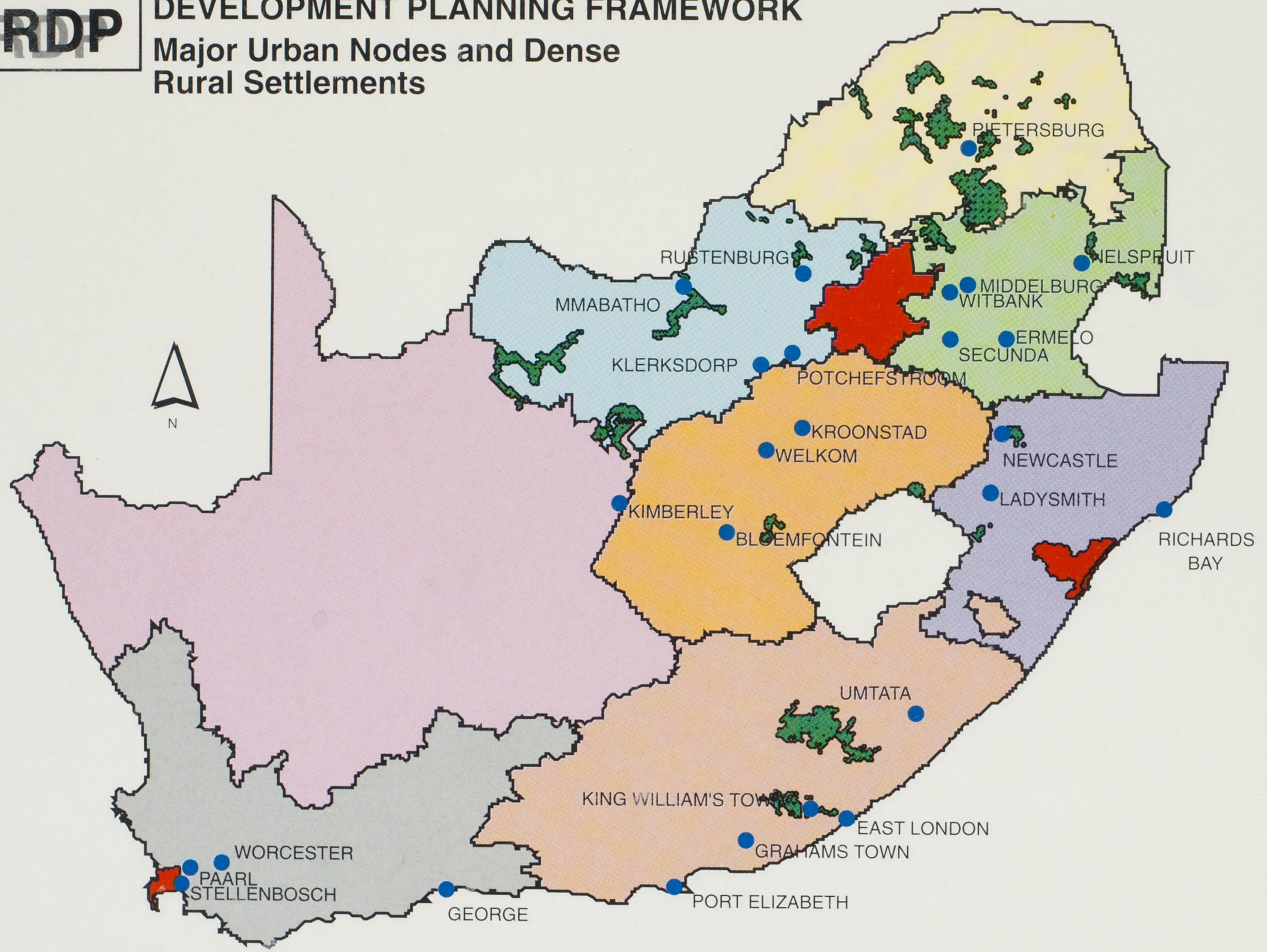
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RDP

DEVELOPMENT PLANNING FRAMEWORK

Major Urban Nodes and Dense Rural Settlements



Secondary Towns
Provincial Boundaries

Corridors
- Dense Rural Clusters
- Major Urban Centres

Provinces
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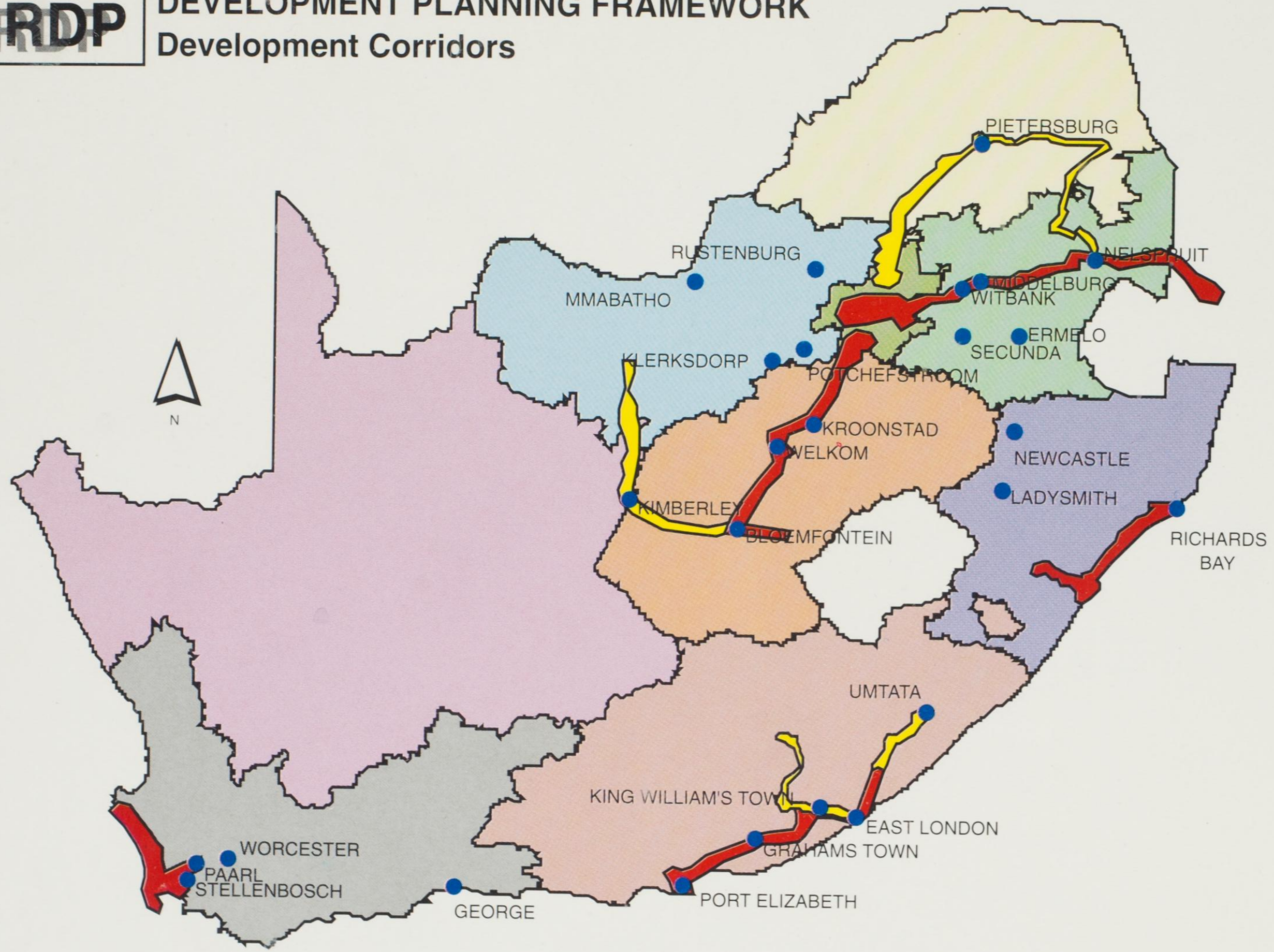
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DEVELOPMENT PLANNING FRAMEWORK
Development Corridors

RDP



Secondary Towns
Provincial Boundaries

Corridors
- Primary
- Secondary

Provinces
- Eastern Cape
- Free State
- Gauteng
- KwaZulu/Natal
- Mpumalanga
- North West
- Northern Cape
- Northern Province
- Western Cape

100 0 100 200 300 400 500 600 700 800 Kilometers

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