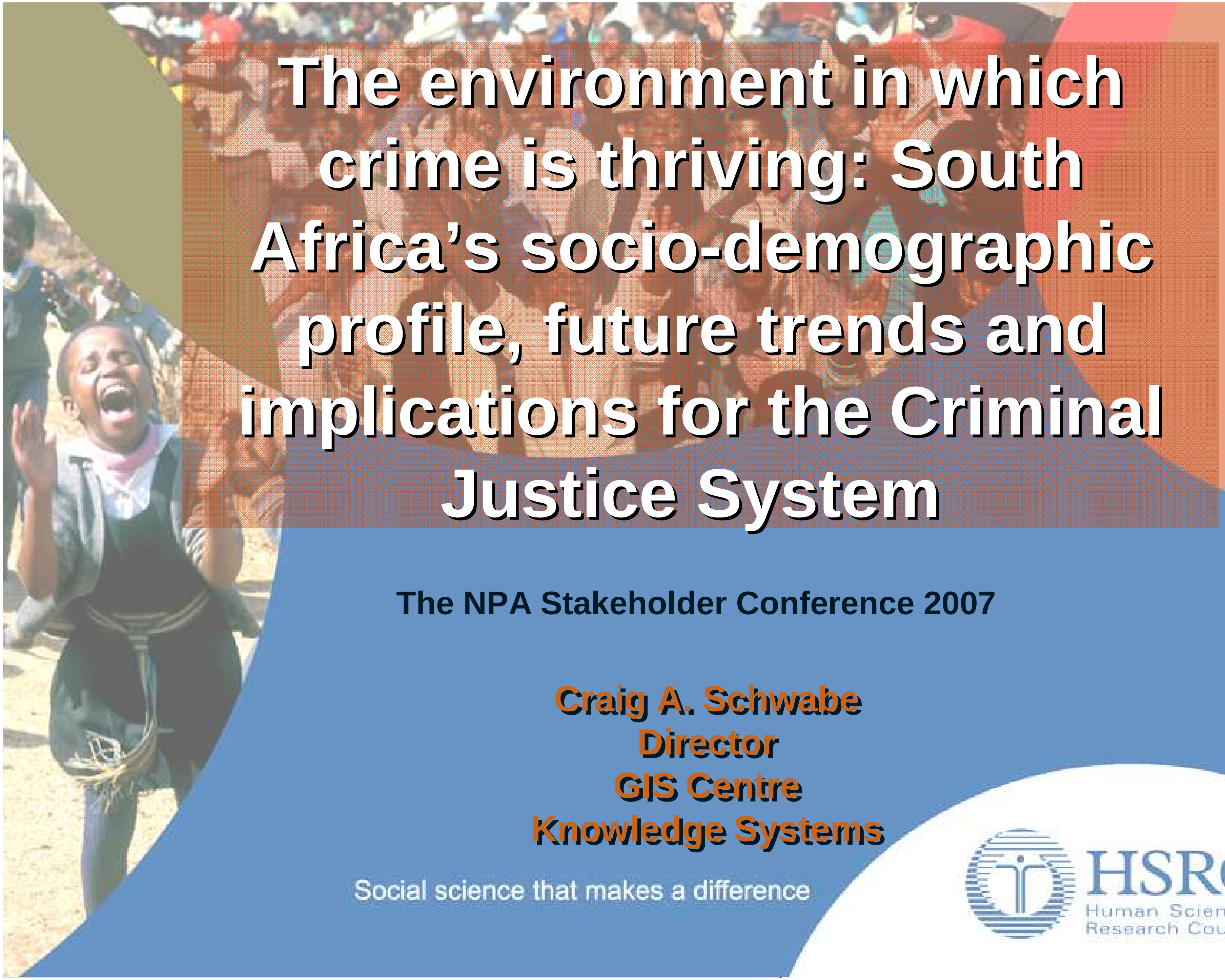

The environment in which crime is thriving: South Africa’s socio-demographic profile, future trends and implications for the Criminal Justice System

The NPA Stakeholder Conference 2007

Craig A. Schwabe
Director
GIS Centre
Knowledge Systems

Social science that makes a difference

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Purpose of presentation

- Overview of the socio-economic situation in South Africa
- Present some future trends
- Examine crime within a theoretical context
- Examine crime within a futures scenario
- Profiling of priority police stations in South Africa

A SOCIO-ECONOMIC PROFILE OF SOUTH AFRICA

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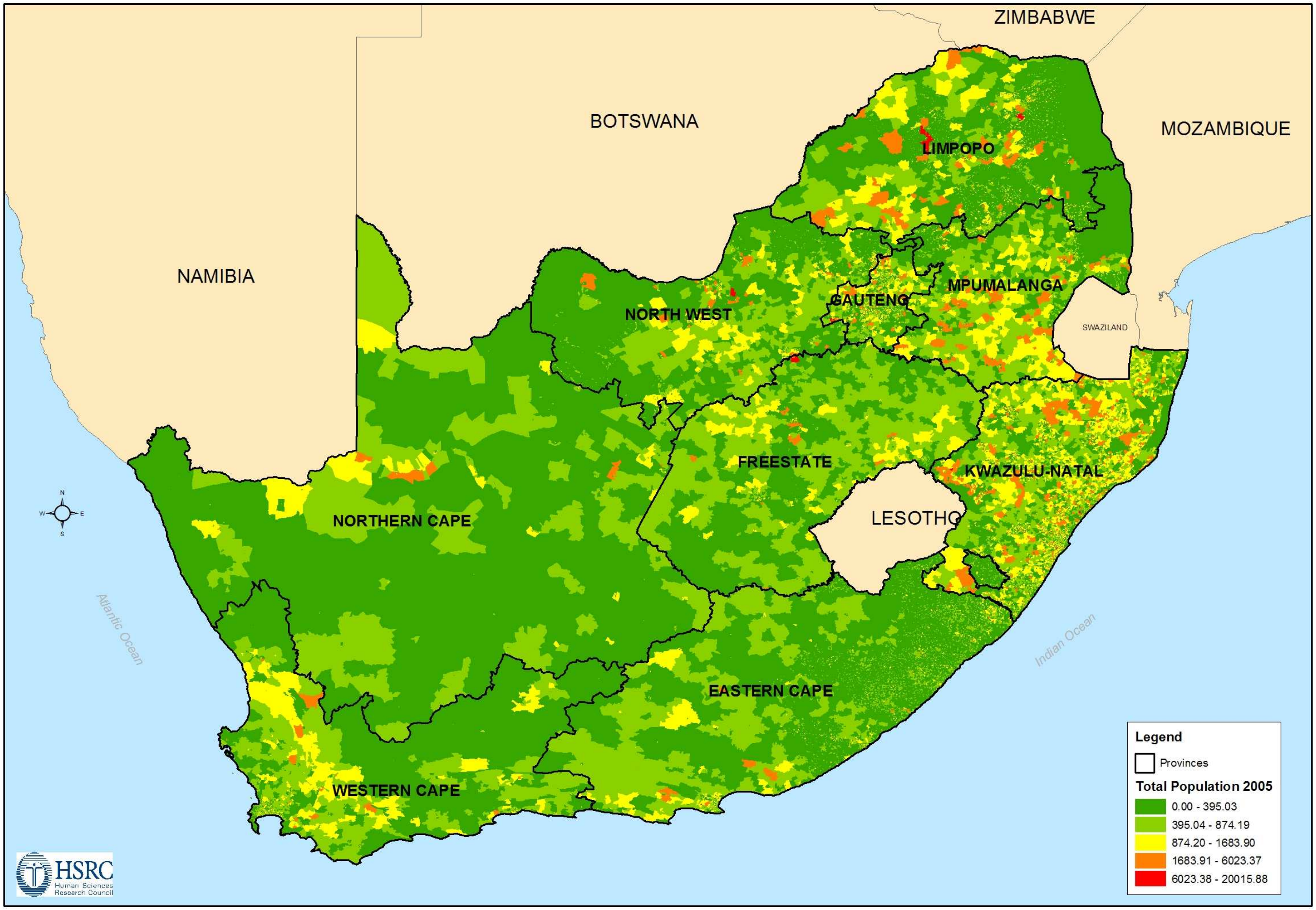
Total population 2005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Provinces
Total Population 2005
0.00 - 395.03
395.04 - 874.19
874.20 - 1683.90
1683.91 - 6023.37
6023.38 - 20015.88
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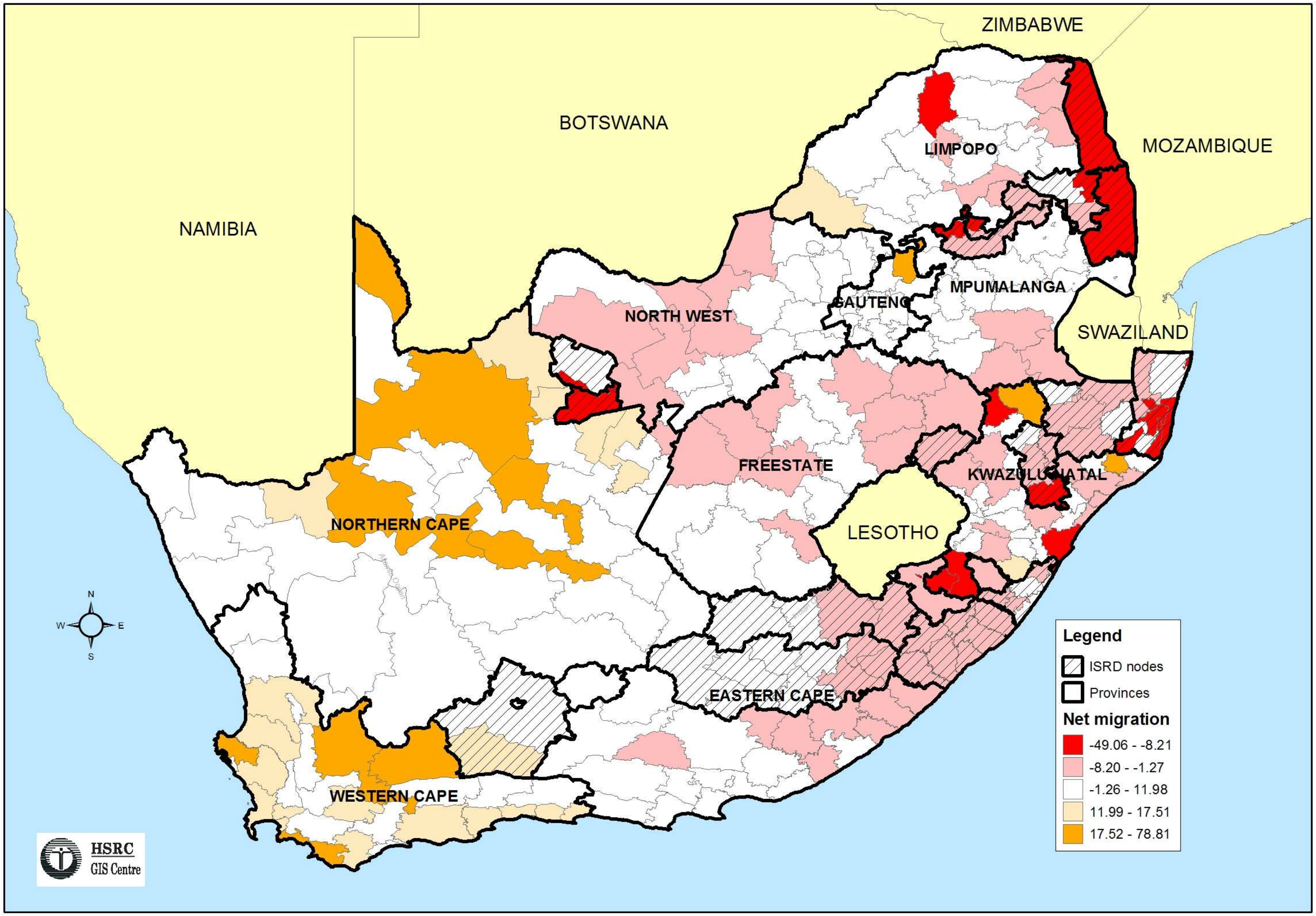
Population

- Total population of 47.4 million in 2006
- Largest concentration of the population is in major metropolitan areas and continuing to grow on the periphery
- KwaZulu-Natal has largest population (9.9 mill) followed by Eastern Cape (6.8 mill) and Limpopo (5.4 mill)
- Rural provinces generally have high male absenteeism – migrant workers
- Limpopo has lowest male : female ratio (0.89)
- Only North West has higher male : female ratio (1.05) – mining industry
- Population growth rate has declined to 1%
- HIV prevalence is 11%

Net migration 2001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ISRD nodes
Provinces
Net migration
-49.06 - -8.21
-8.20 - -1.27
-1.26 - 11.98
11.99 - 17.51
17.52 - 78.81
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Migration

- Net out migration from most rural areas, especially the more remote and former homelands (e.g. Ga-Segonyana, Greater Marble Hall, Matatiele, Hlabisa)
- Net in migration into areas where better economic activity (most Western Cape, northern parts of Northern Cape, parts of North West)
- Strong migration into metropolitan areas and into informal settlements found urban periphery

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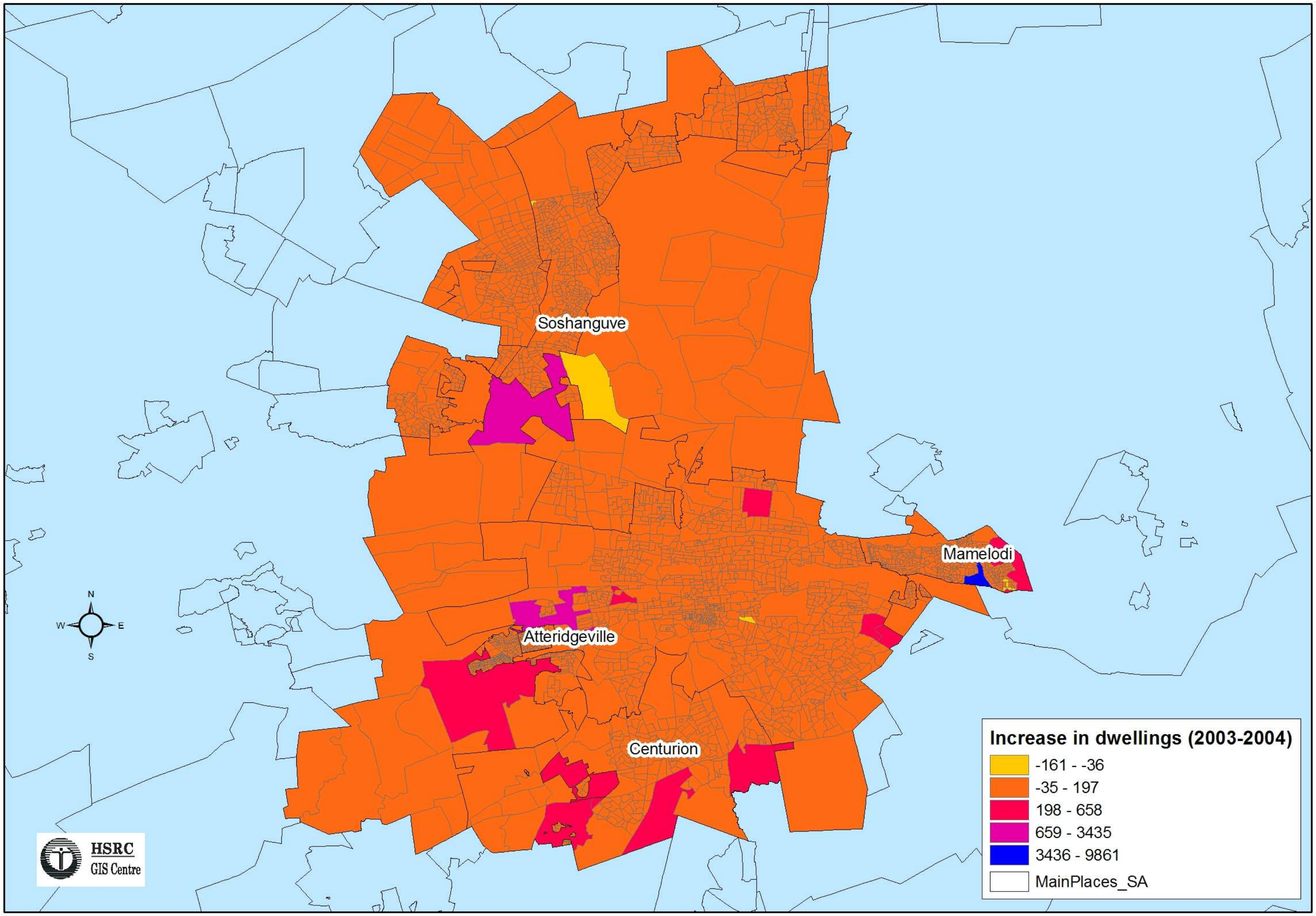
Tshwane Inmigration 2003-2004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Centurion
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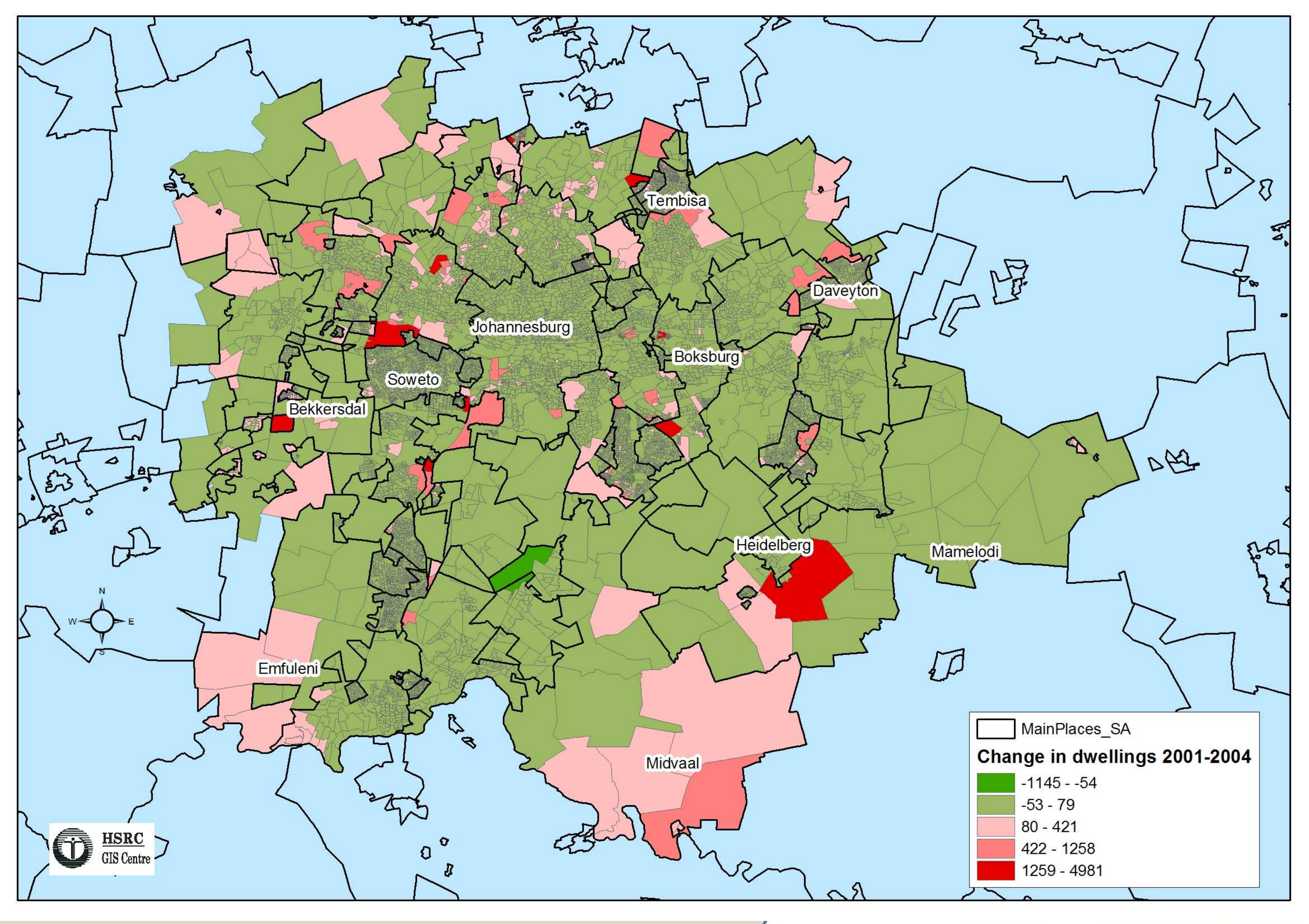
GIS Centre
Increase in dwellings (2003-2004)
🟨 -161 - -36
🟧 -35 - 197
🟥 198 - 658
🟪 659 - 3435
🟦 3436 - 9861
⬜ MainPlaces_SA

Johannesburg
Inmigration 2001-2004


Tembisa
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Soweto
Bekkersdal
Heidelberg
Mamelodi
Emfuleni
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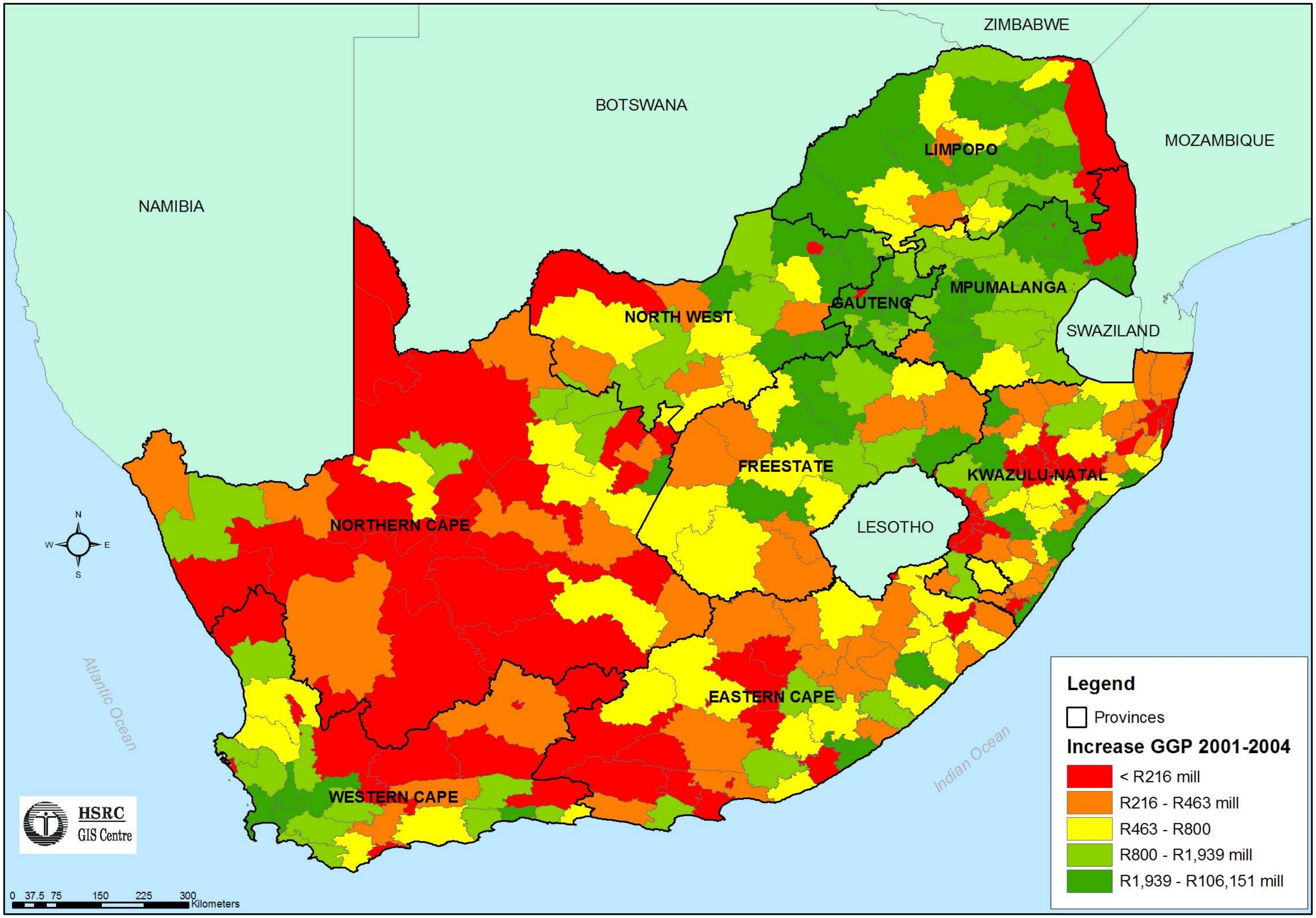
GIS Centre
MainPlaces_SA
Change in dwellings 2001-2004
-1145 - -54
-53 - 79
80 - 421
422 - 1258
1259 - 4981

Gross Domestic Product (GDP)

- The GDP is a measures of the size of the economy.
- The GDP is the market value of all final goods and services produced and includes:
  - Consumption (i.e. use of goods and services)
  - Investment (i.e. savings, purchase of capital goods)
  - Government spending (i.e. government purchases, transfer, taxes, government borrowing)
  - Exports minus imports
- GDP by sector defines what is driving the economy in a municipality

Increase in GDP 2001-2004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0 37.5 75 150 225 300
Kilometers
Legend
☐ Provinces
Increase GGP 2001-2004
🟥 < R216 mill
🟧 R216 - R463 mill
🟨 R463 - R800
🟩 R800 - R1,939 mill
🟩 R1,939 - R106,151 mill

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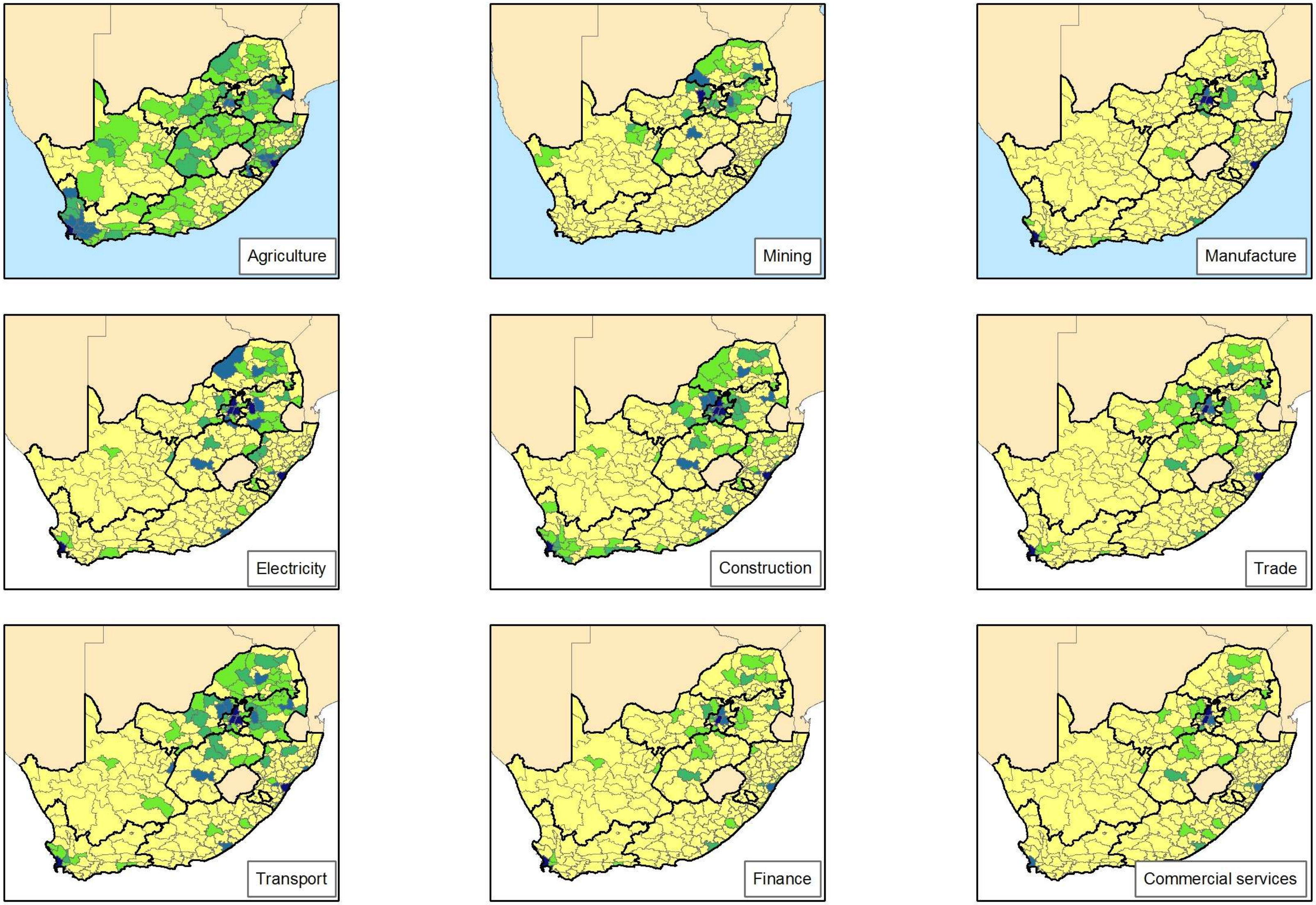
GDP By Sector 2004


Agriculture
Mining
Manufacture
Electricity
Construction
Trade
Transport
Finance
Commercial services

Human Development Index (HDI)

- Summarizes an areas human development potential - health, education and wealth
- Systematic way of comparing levels of development within countries
- Health - life expectancy at birth
- Education - adult literacy rates and age specific enrolment rate in education institutions
- Wealth - average Purchasing Power Parity income

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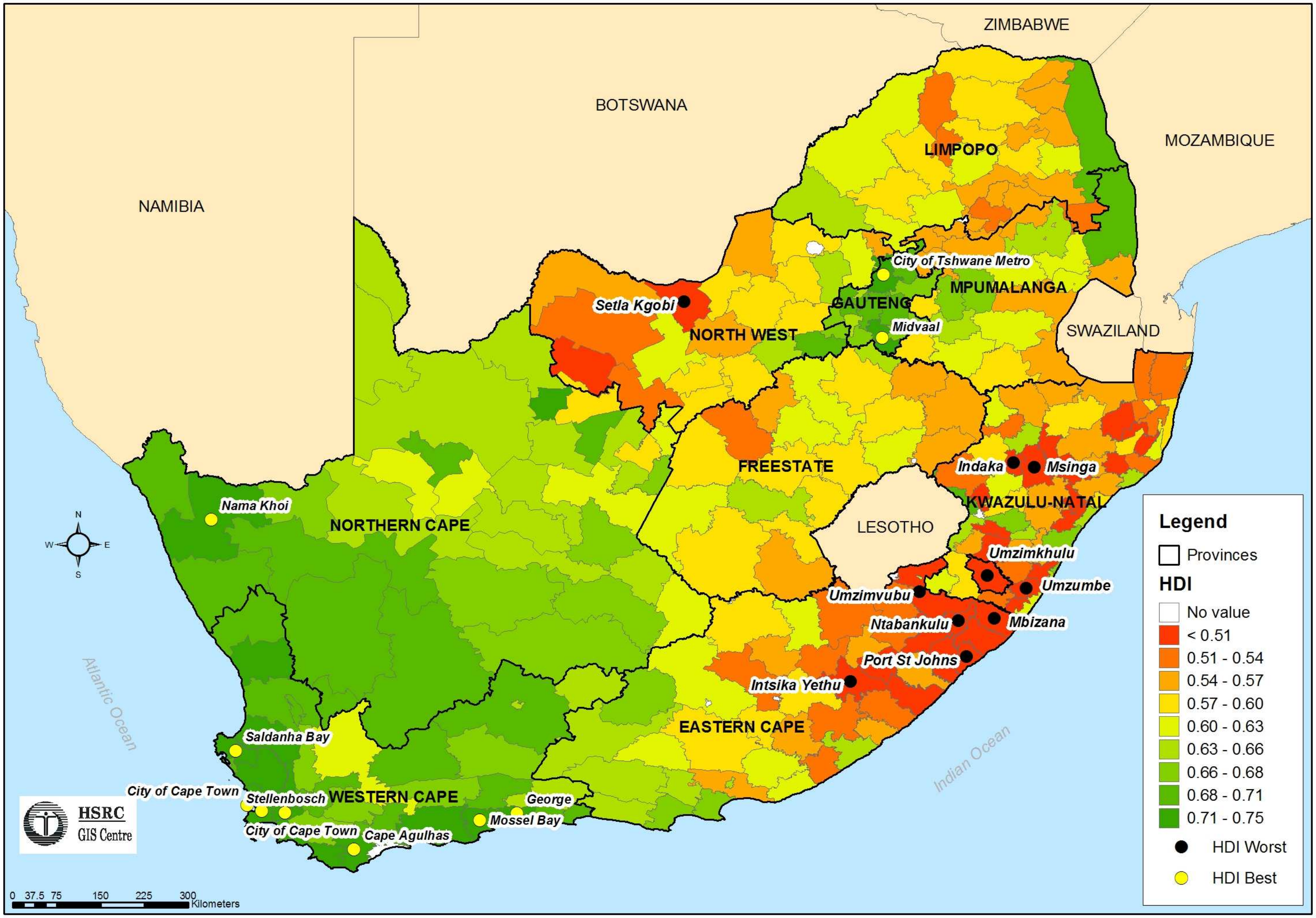
HDI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Setla Kgobi
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Midvaal
SWAZILAND
FREESTATE
Indaka
Msinga
KWAZULU-NATAL
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Nama Khoi
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Umzumbe
Umzimvubu
Ntabankulu
Mbizana
Port St Johns
Intsika Yethu
EASTERN CAPE
Atlantic Ocean
Indian Ocean
Saldanha Bay
City of Cape Town
Stellenbosch
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George
Mossel Bay
City of Cape Town
Cape Agulhas
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0 37.5 75 150 225 300 Kilometers
Legend
Provinces
HDI
No value
< 0.51
0.51 - 0.54
0.54 - 0.57
0.57 - 0.60
0.60 - 0.63
0.63 - 0.66
0.66 - 0.68
0.68 - 0.71
0.71 - 0.75
HDI Worst
HDI Best

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Poverty Gap

- Poverty gap measures the difference between each poor household’s income and the poverty line - depth of poverty
- Equates to total amount needed in income to raise all households out of poverty in a year
- Poverty rate is the percentage households living below the poverty line
- Although poverty levels are declining – poverty remains a problem in historically disadvantaged areas
- Some areas are not being effectively targeted (e.g. Msinga)
- New poverty areas are emerging that need to be monitored (e.g. Free State)

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Poverty Rate 2006

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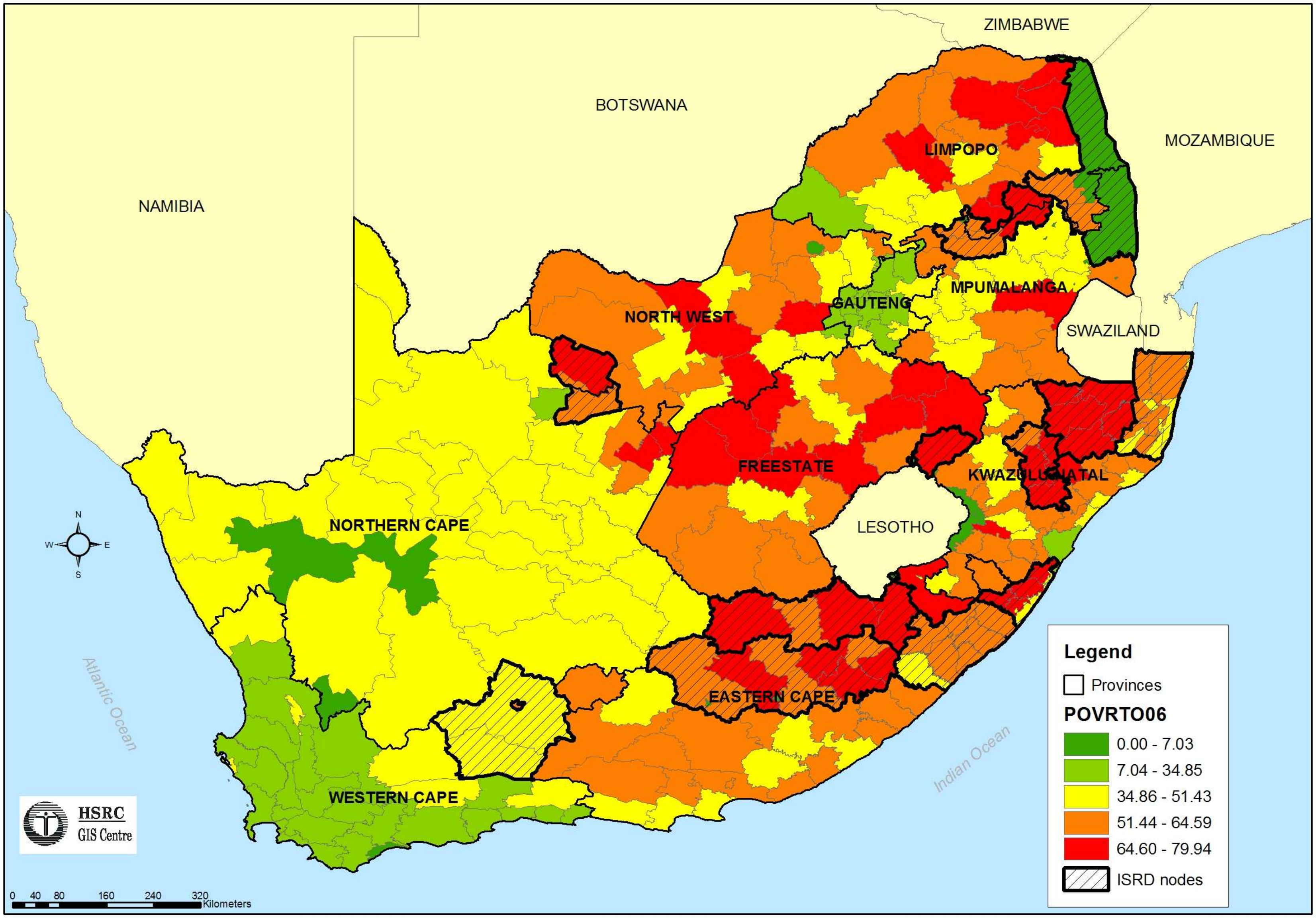
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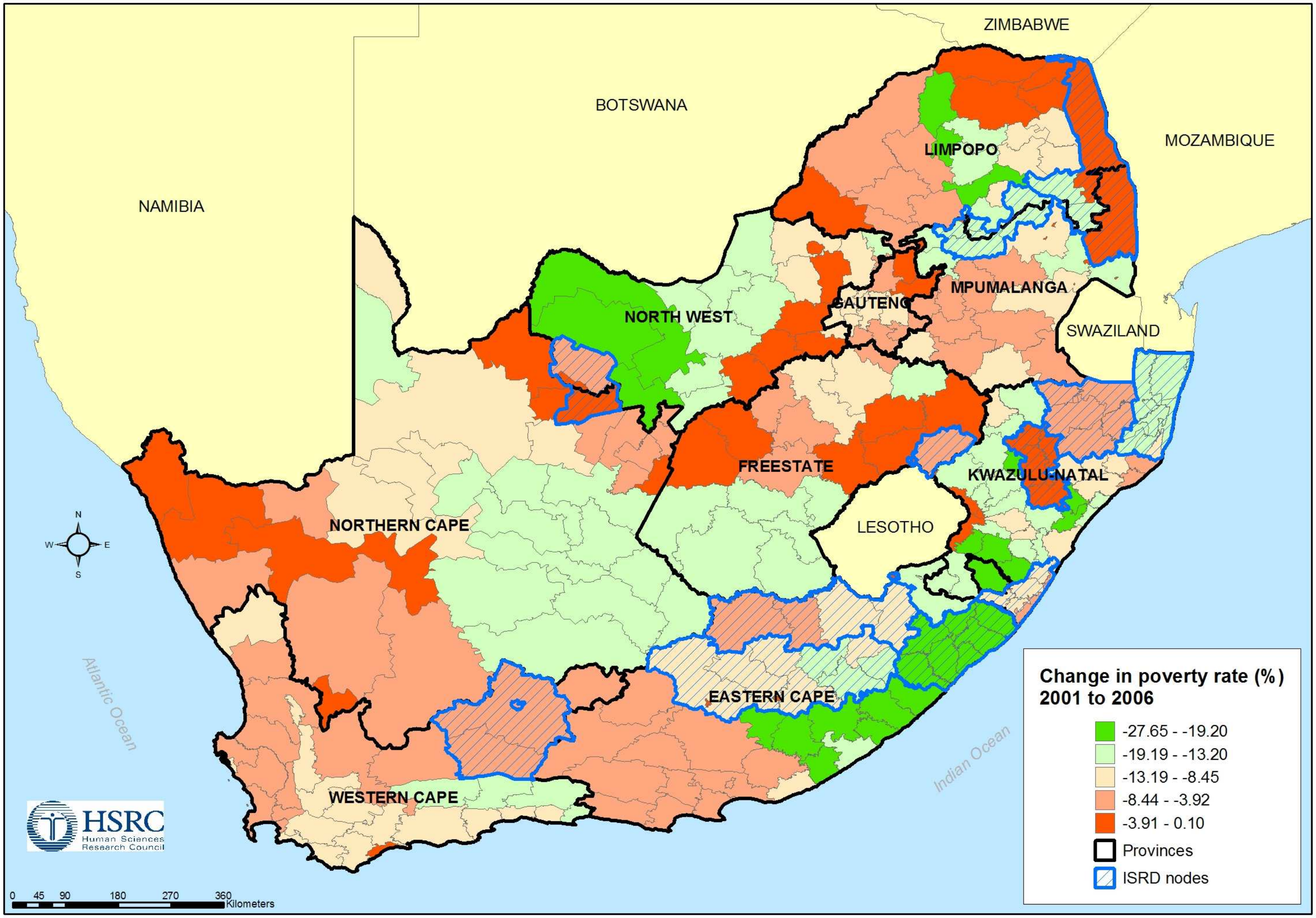
0 40 80 160 240 320
Kilometers
Legend
☐ Provinces
POVRTO06
🟩 0.00 - 7.03
🟩 7.04 - 34.85
🟨 34.86 - 51.43
🟧 51.44 - 64.59
🟥 64.60 - 79.94
▨ ISRD nodes

Knowledge Management

Change in Poverty Rate 2001-2006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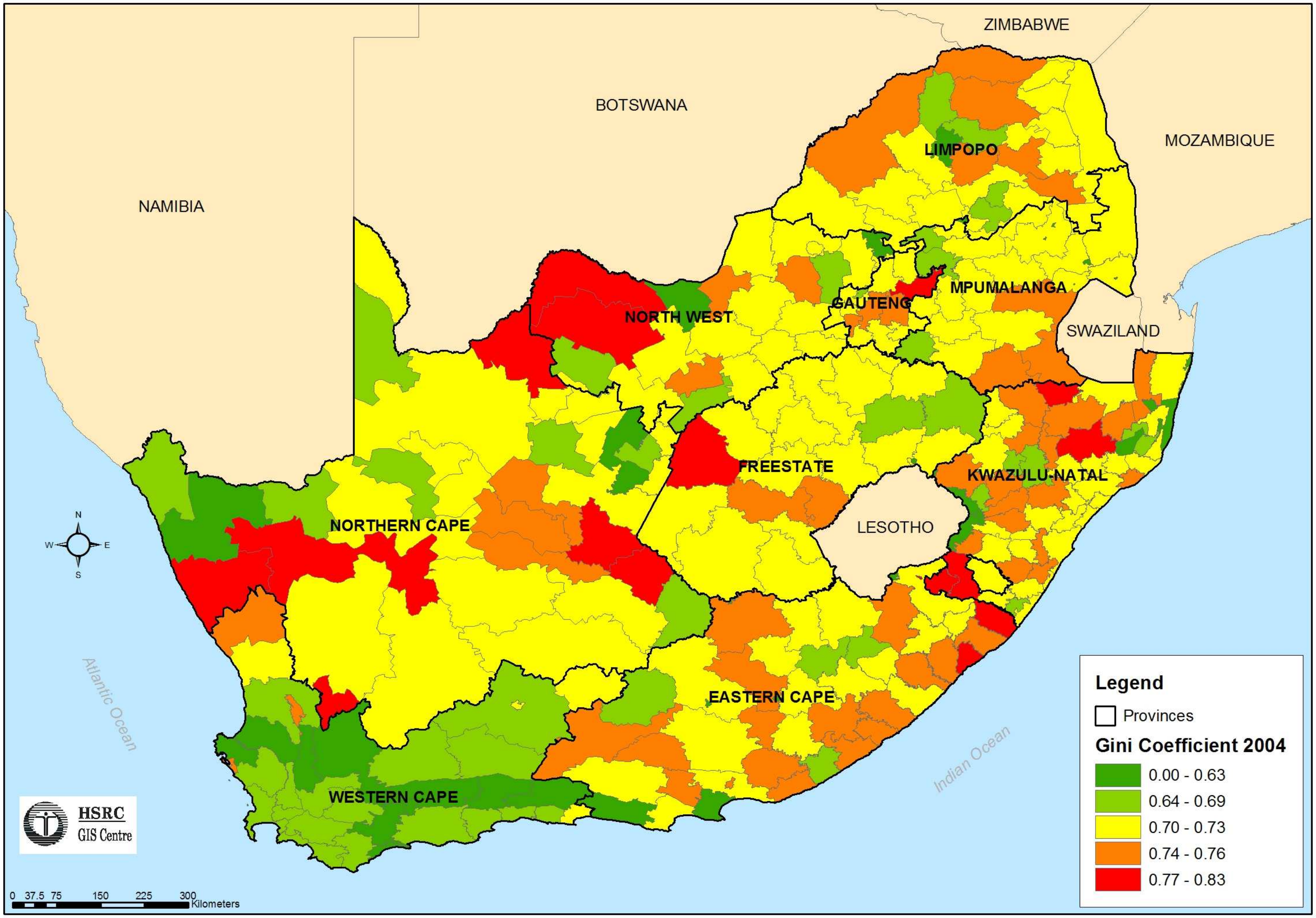
HSRC Human Sciences Research Council
0 45 90 180 270 360 Kilometers
Change in poverty rate (%) 2001 to 2006
-27.65 - -19.20
-19.19 - -13.20
-13.19 - -8.45
-8.44 - -3.92
-3.91 - 0.10
Provinces
ISRD nodes

Gini Coefficient

- The Gini coefficient is a measure of income inequality
- South Africa one of worst in the world
- Indicator of ‘relative depravation’ – key driver of crime – those that ‘have and don’t have’
  - 0 - perfect equality and all households earn same income
  - 1 - one household earns all the income and other households earn nothing
- Concentrated in rural areas but also in some metropolitan areas

Gini Coefficient 2004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0 37.5 75 150 225 300
Kilometers
Legend
☐ Provinces
Gini Coefficient 2004
🟩 0.00 - 0.63
🟩 0.64 - 0.69
🟨 0.70 - 0.73
🟧 0.74 - 0.76
🟥 0.77 - 0.83

Multiple Depravation

- Composite index and a indicator of service need:
  - Access to income
  - Access to household assets (e.g. refrigerator, television, radio)
  - Levels of employment
  - Levels of health
  - Levels of education
  - Living conditions (e.g. access to piped water, sanitation, electricity, telephone, type of dwelling and occupancy rates)
- Historically disadvantaged areas dominate but new areas are emerging (e.g. Tswelopele)
- Since 2001 seems to have been an improvement in service delivery

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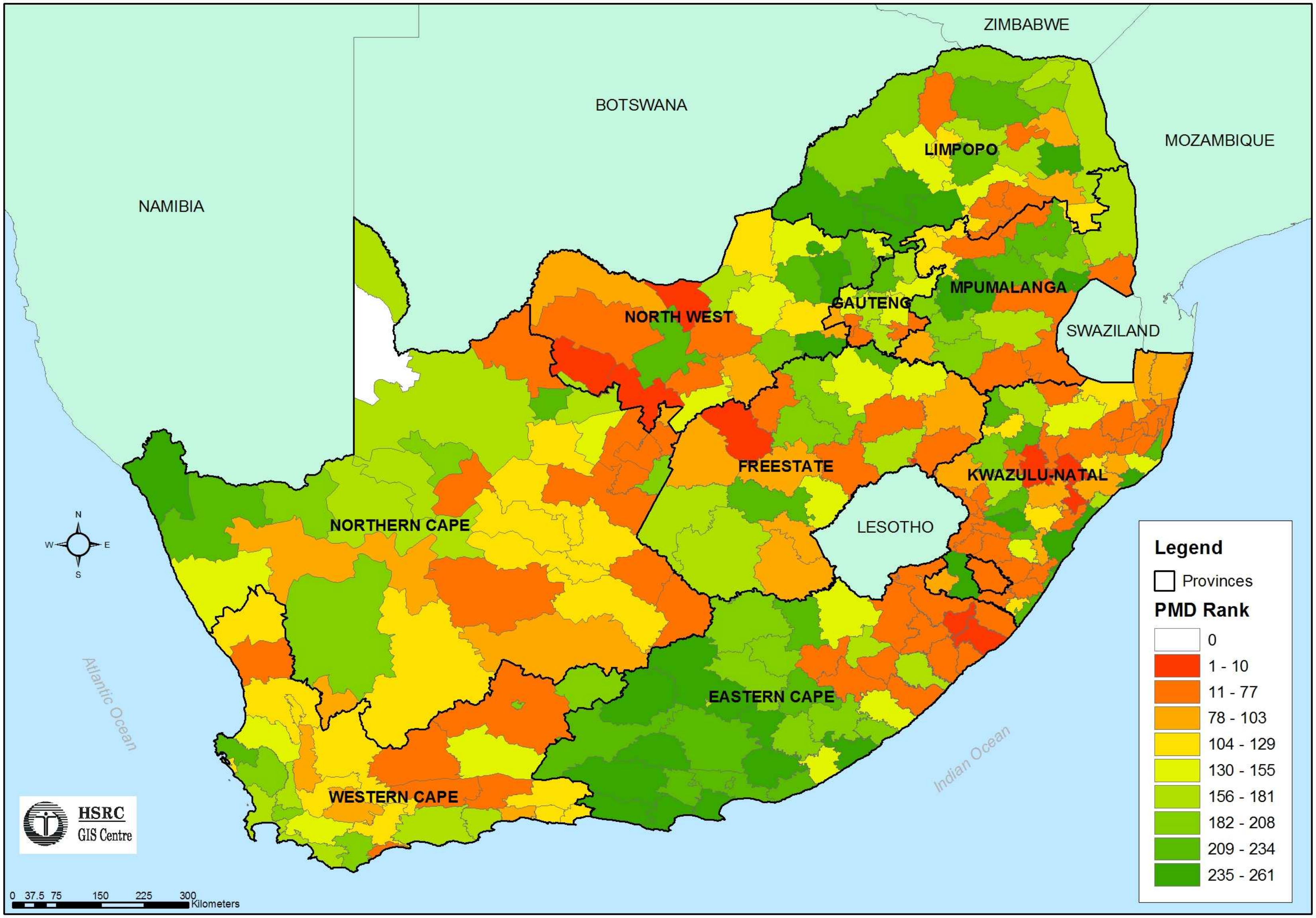
Multiple Depravation 2001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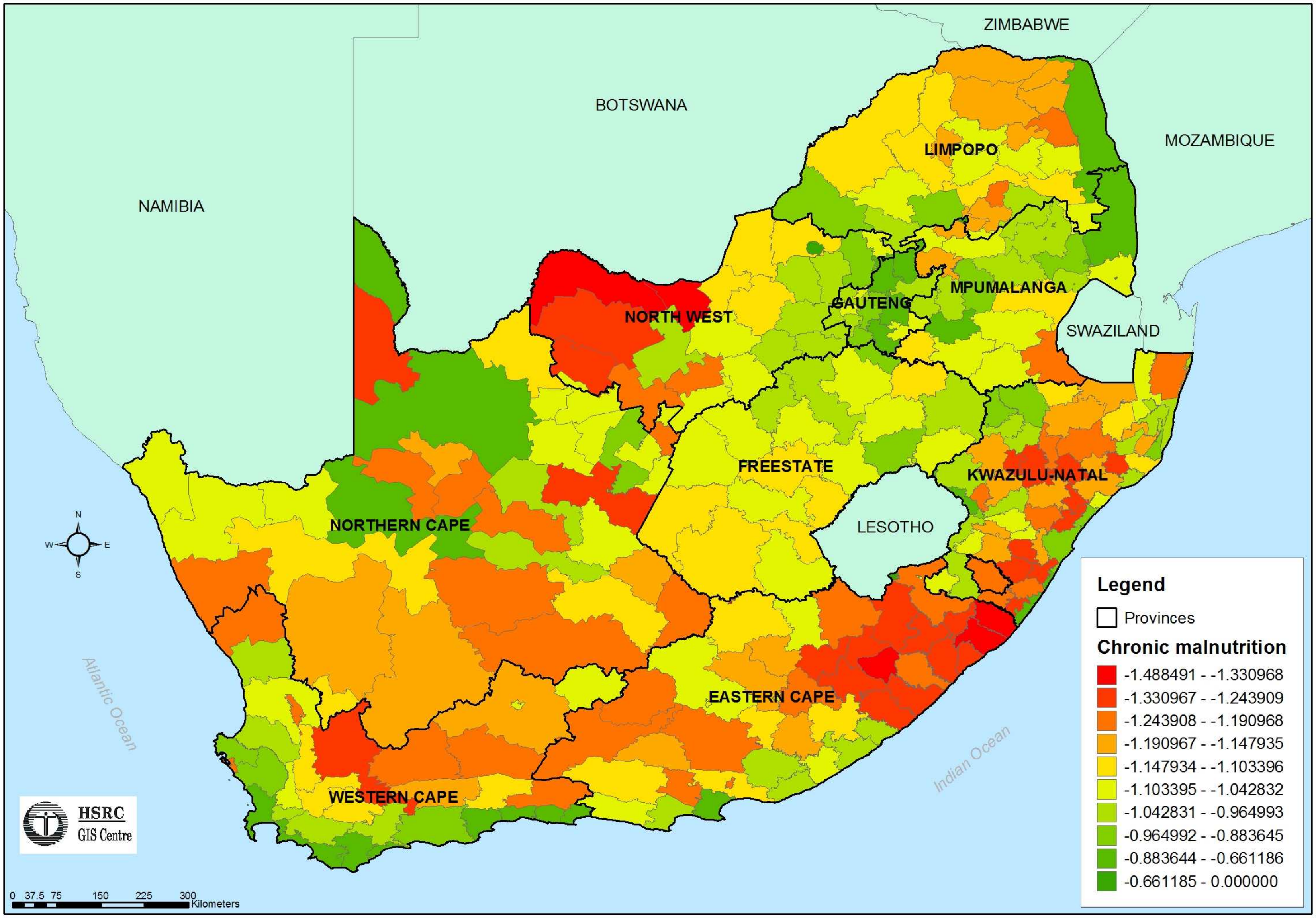
0 37.5 75 150 225 300
Kilometers
Legend
Provinces
PMD Rank
0
1 - 10
11 - 77
78 - 103
104 - 129
130 - 155
156 - 181
182 - 208
209 - 234
235 - 261

Malnutrition and hunger

- Malnutrition is caused by improper or insufficient diet – a lack of sufficient nutrients to maintain healthy bodily functions .
- Malnutrition may reduce the capacity of the body to function
- People that are poor are generally malnourished but are exceptions (e.g. Free State)
- High priority areas are again former homeland areas.

Chronic malnutrition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0 37.5 75 150 225 300 Kilometers
Legend
Provinces
Chronic malnutrition
-1.488491 - -1.330968
-1.330967 - -1.243909
-1.243908 - -1.190968
-1.190967 - -1.147935
-1.147934 - -1.103396
-1.103395 - -1.042832
-1.042831 - -0.964993
-0.964992 - -0.883645
-0.883644 - -0.661186
-0.661185 - 0.000000

Present and future trends

- Population growth is slowing – affected by HIV/AIDS
- Significant migration of people to economic centres and into informal settlements will continue
- Strong economic growth but food and petrol price increases making people vulnerable
- Food security has improved but food price increases in 2007 (25%) is a major problem
- Poverty levels declining and provision of services improving
- Inequality or “relative depravation” worsening – major driver of crime
- Need to target the ultra poor and look at holistic approach to job creation at the local level

What needs to be done

- Government expenditure is reducing poverty
- Historically disadvantaged areas are reaping the benefits but more needs to be done
- Available information confirms which are the priority areas
- A more holistic understanding of the problems at a localized level is needed
- The expenditure needs to be more targeted with appropriate interventions– 'check list' approach to local development
- The local economy needs to be diversified and bolstered considering the environment and people

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IMPLICATIONS FOR CRIME

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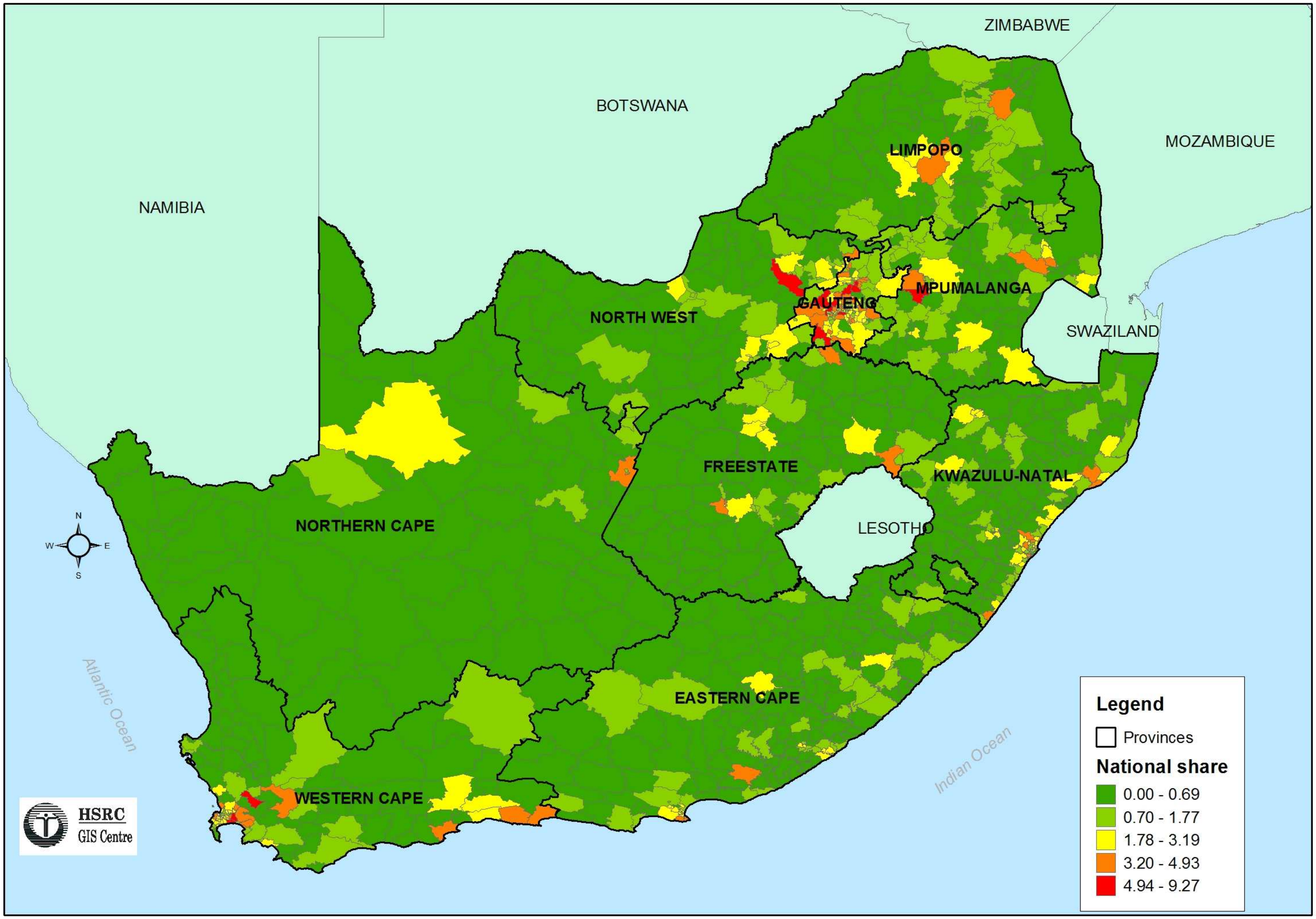
Residential burglaries 2004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Legend
☐ Provinces
National share
🟩 0.00 - 0.69
🟩 0.70 - 1.77
🟨 1.78 - 3.19
🟧 3.20 - 4.93
🟥 4.94 - 9.27

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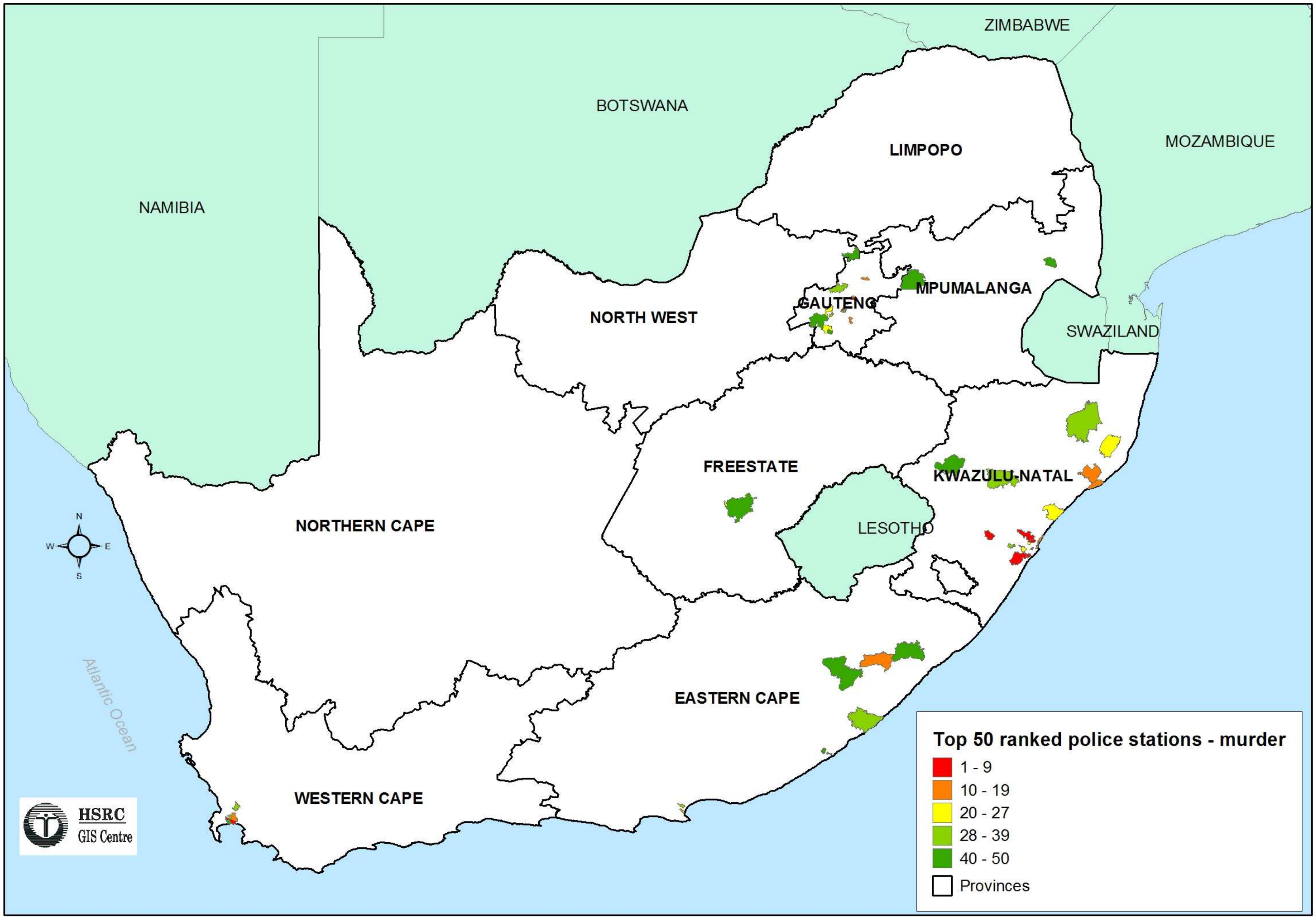
Top 50 ranked police stations - murder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EASTERN CAPE
WESTERN CAPE
HSRC
GIS Centre
Top 50 ranked police stations - murder
🟥 1 - 9
🟧 10 - 19
🟨 20 - 27
🟩 28 - 39
🟩 40 - 50
☐ Provinces

Tackling crime – long term

- Need to understand the society within which crime is occurring – their needs and perceptions
- Theory of crime needs to be considered in developing strategies and policies
- Need to look at international best practice (e.g. ‘broken glass’ theory)
- Continue to implement key intervention programme (e.g. public works, school feeding)
- Local economic development and job creation is key
- Continual engagement and communication on what is being done is key

Tackling crime – short term

- South Africa is well positioned from an information perspective to tackle crime
- Need to integrate information systems
- Need to develop the analytical skills and develop appropriate intervention strategies (e.g. visibility, patrol patterns, service indicators)
- Engaging with citizens and being accountable to them is key

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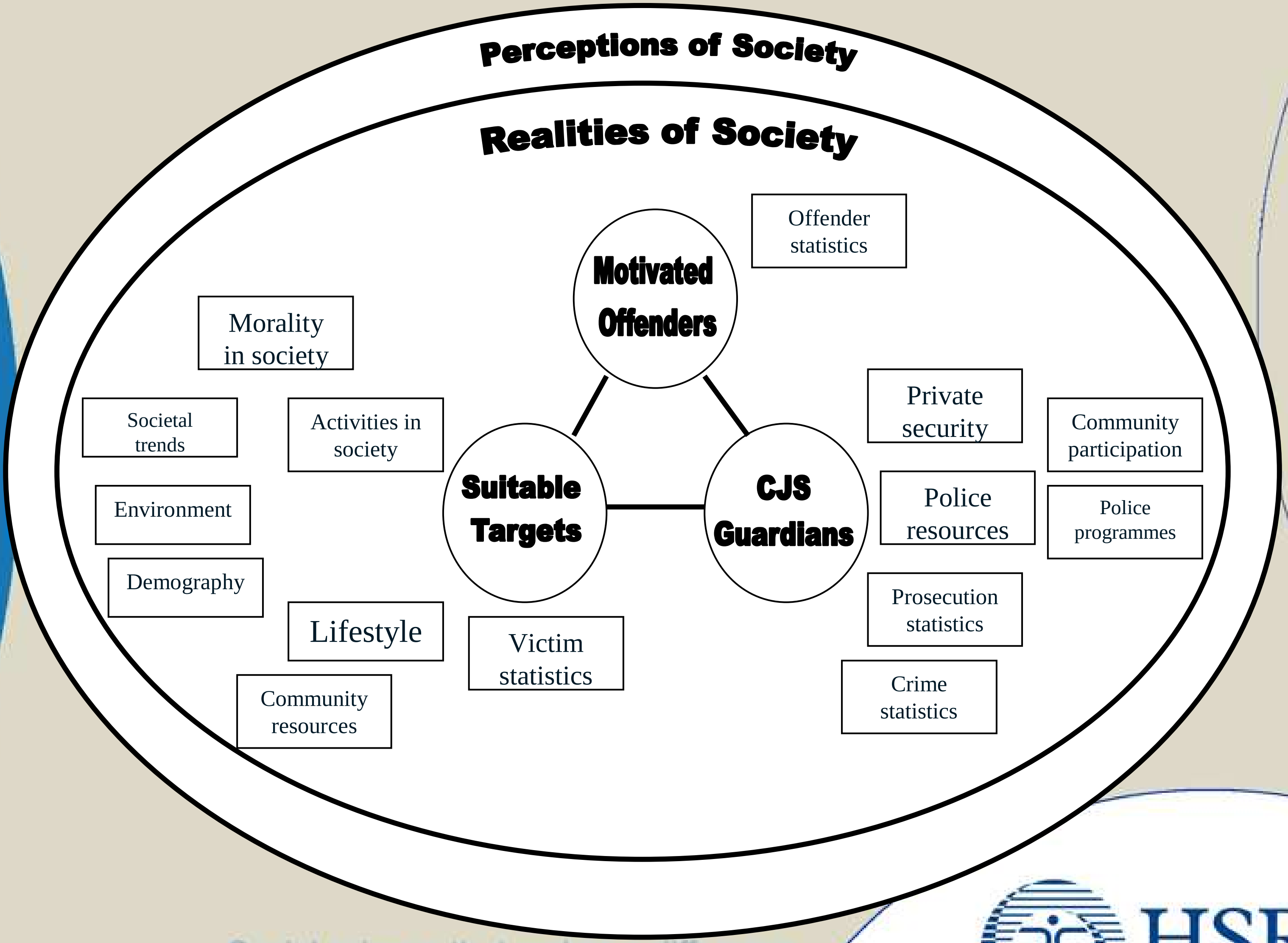
Information model for crime analysis



Perceptions of Society

Realities of Society

Motivated Offenders

Suitable Targets

CJS Guardians

Offender statistics

Morality in society

Societal trends

Activities in society

Environment

Demography

Lifestyle

Community resources

Victim statistics

Private security

Community participation

Police resources

Police programmes

Prosecution statistics

Crime statistics

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Future trends in crime

- With food insecurity destined to increase, relative depravation increasing and people becoming more vulnerable certain crimes will increase or remain high
- Need to deal with people’s needs and fears at a local level
- Continue to provide social grants, services and infrastructure programmes but feeding schemes remain a high priority
- Need to target the ultra poor and look at holistic approach to job creation at the local level
- Short term crime intervention strategies need to be implemented

PROFILING OF PRIORITY POLICE STATIONS

Future trends in crime

Knowledge Management

- Profiling at the police station level is required to develop appropriate intervention strategies
- Information is required on:
  - Geographic characteristics (e.g. terrain, land use)
  - Socio-economic (e.g. population density)
  - Access to services and infrastructure (e.g. access to telephones)
  - Resources available at the police station (e.g. operational vehicle)
  - Residential location of convicted criminals
- Target high priority areas from socio-economic and crime perspective
- Citizens must be effectively involved

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MAMELODI

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