MASIPHUMELELE

COMMUNITY RISK ASSESSMENT

April 2005

DMISA CONFERENCE

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WATEFRONT
TABLE BAY
PAROW
CAPE TOWN
GOODWOOD
WYNBERG
LLANDUDNO
MITCHELLS PLAIN
HOUT BAY
R310
MUIZENBERG
FISH HOEK
KOMMETJIE
SIMON'S TOWN
SCARBOROUGH
CAPE PENINSULA
NATIONAL PARK
CAPE OF GOOD HOPE
CAPE POINT


Masiphumelele

Objectives of the risk assessment

- Identify hazards in Masiphumelele
- Identify the factors increasing vulnerability to priority hazards
- Present recommendations to reduce risk in Masiphumelele
- Develop a proposal for a ‘useful output’

Institutional arrangements

- Disaster Mitigation for Sustainable Livelihoods Programme (DiMP) coordinated the assessment as part of CRA course
- Disaster Risk Science honours students and Disaster managers from various municipalities in South Africa
- Local facilitators from Masiphumelele
- Local institutions from within the Cape Town Metropole

Community Risk Assessment Methods

1. Secondary data (qualitative and quantitative) which included: fire statistics from 1994 – 2004 and census data for 2001

2. Spatial data (aerial photographs, GPS)

3. Literature review (internet and library)

Participatory risk assessment methods

- Hazard Mapping
- Transect walk
- Concept Mapping
- Informal questionnaire
- Interviews : Community members & Institutions

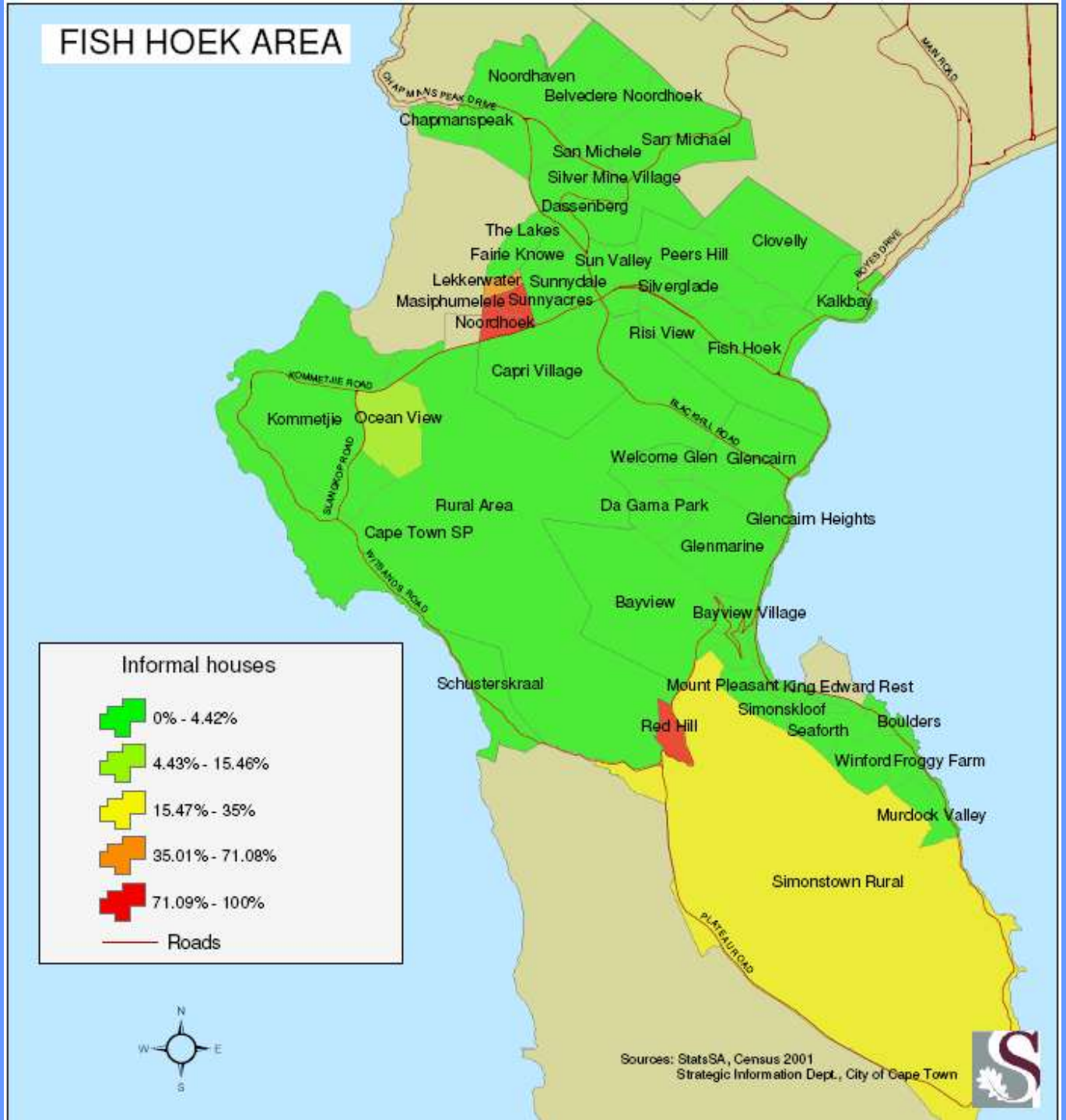
Background to Masiphumelele

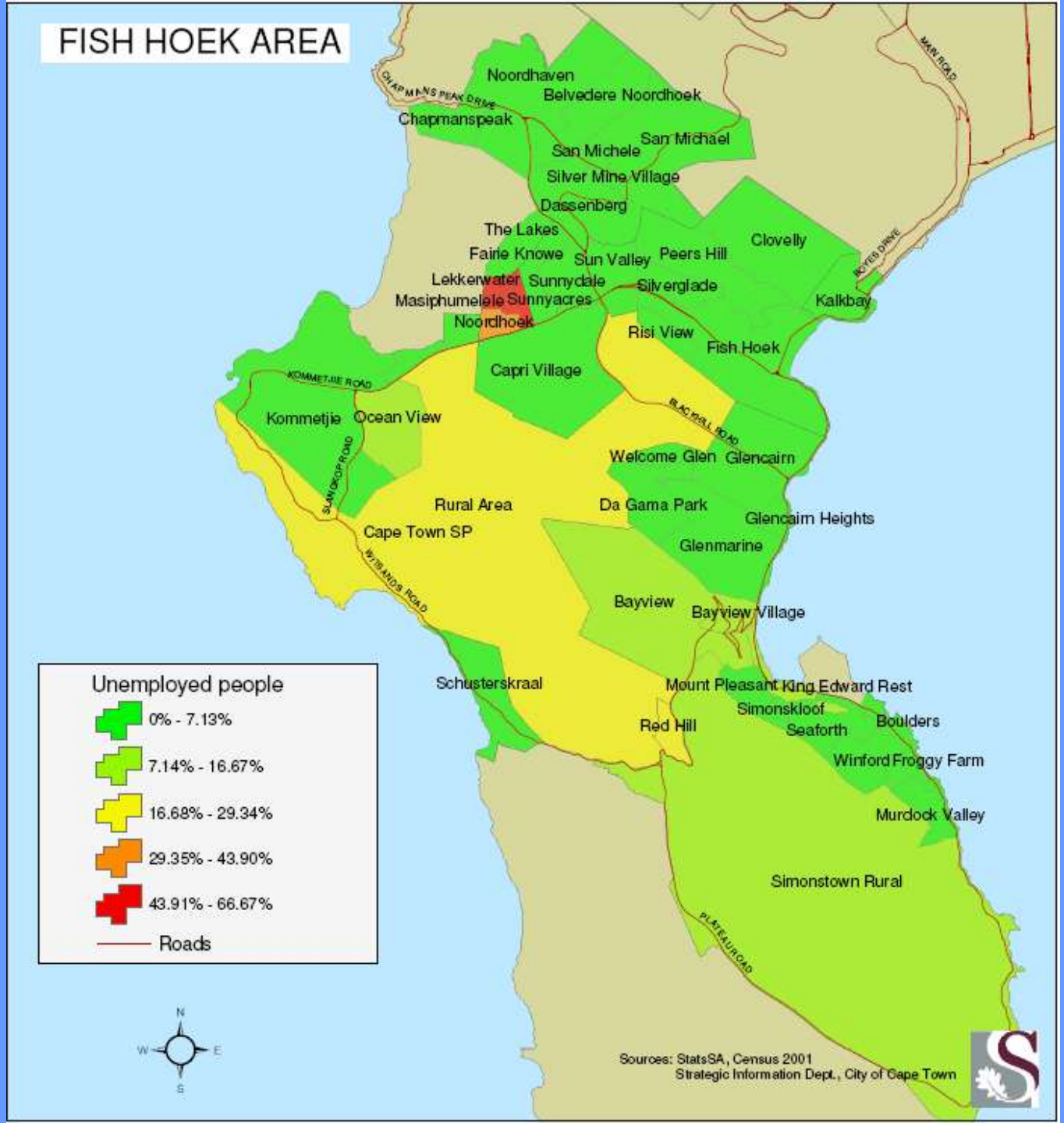
- 1950's apartheid government declares the South Peninsula a white group area
- The government abolished influx control in 1986
- Families were forcibly removed in 1987
- Supreme court division granted squatters right to return in 1988
- Land Expropriated for the establishment of a township in 1990
- Masiphumelele established in 1992

- The settlement expanded rapidly from 191 dwellings in 1993 to 794 dwellings in 1996.
- 1268 sites were constructed between 1996 and 1998 at a high growth rate (gross) of 35% (per annum)
- Today there are considerably more dwellings and the population is an estimated 25 000.

Profile of Masiphumelele

- Most residents are originally from the Eastern Cape, seeking employment
- Status: +/-50% unemployed, 88.7% informal housing,
- Developmental priorities: Land and housing, schooling, health
- Services: electricity, toilets and standpipes


FISH HOEK AREA
Noordhaven
Belvedere Noordhoek
Chapmanspeak
San Michele
San Michael
Silver Mine Village
Dassenberg
The Lakes
Fairie Knowe
Sun Valley
Peers Hill
Clovelly
Lekkerwater
Sunnydale
Silverglade
Masiphumelele
Sunnyacres
Noordhoek
Kalkbay
Risi View
Fish Hoek
Capri Village
Kommetjie
Ocean View
Welcome Glen
Glencairn
Rural Area
Da Gama Park
Glencairn Heights
Cape Town SP
Glenmarine
Bayview
Bayview Village
Schusterskraal
Mount Pleasant
King Edward Rest
Simonskloof
Red Hill
Seaforth
Boulders
Winford
Froggy Farm
Murdock Valley
Simonstown Rural
CHAPMANS PEAK DRIVE
MAIN ROAD
BOYES DRIVE
KOMMETJIE ROAD
SUNNYCROFT ROAD
BLACKBERG ROAD
WYNBERG ROAD
PLATEAU ROAD
Informal houses
0% - 4.42%
4.43% - 15.46%
15.47% - 35%
35.01% - 71.08%
71.09% - 100%
Roads
N
W
E
S
Sources: StatsSA, Census 2001
Strategic Information Dept., City of Cape Town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Murdock Valley
Simonstown Rural
MAIN ROAD
CHAPMANS PEAK DRIVE
KOMMETJIE ROAD
SUNDOWN ROAD
BLACKSMILL ROAD
WITSANDS ROAD
BOYES DRIVE
PLATEAUROAD
Unemployed people
0% - 7.13%
7.14% - 16.67%
16.68% - 29.34%
29.35% - 43.90%
43.91% - 66.67%
Roads
N
W
E
S
Sources: StatsSA, Census 2001
Strategic Information Dept., City of Cape Town

Disaster Risk Profile

- The assessment highlighted three priority disaster risks:
  - Informal settlement fires
  - Winter flooding/ponding
  - Flood related illness such as cold and flu
- These disaster risks are inextricably linked
- Two areas in Masiphumelele were identified as at risk: The 'Wetlands' and 'Schoolside'
- For this reason the assessment focused primarily in these areas and did not explore the risk in backyards and formal houses


Wetlands
Schoolside

Flooding risk in Masiphumelele

Flood Prone Informal Areas : April 2004


Coca-Cola

Informal dwelling fire risk in Masiphumelele

Figure 4: Number of fire incidents in Masiphumelele: 1994-2004

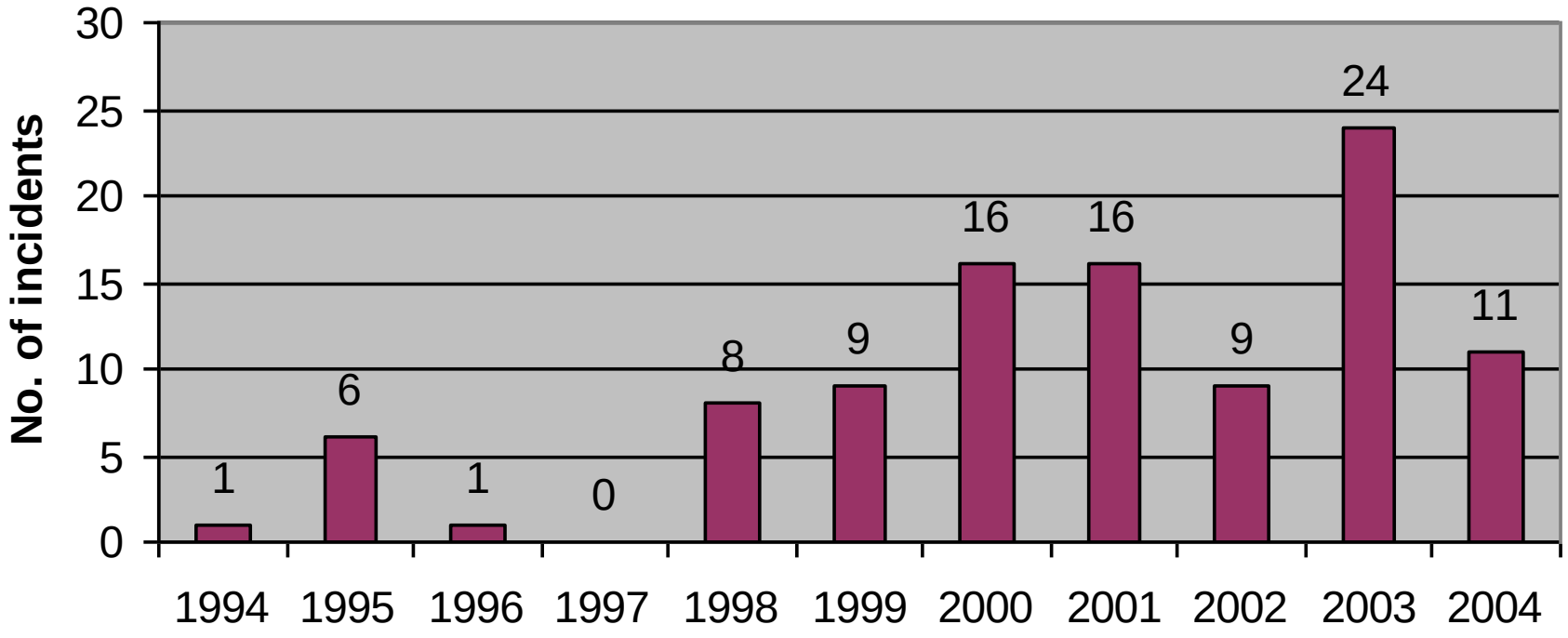
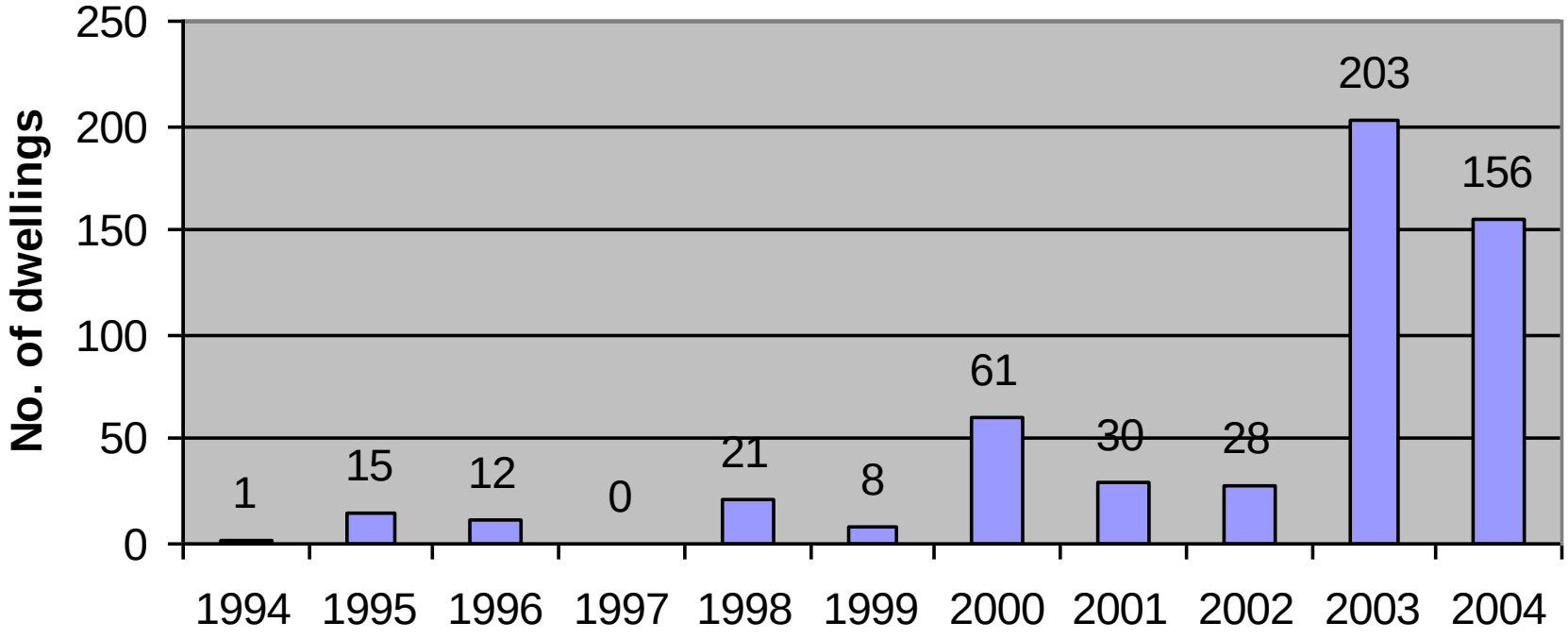


Figure 5: Number of dwellings affeced by fire: 1994-2004




HUNGRY LION
SPRING WAD NESS
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PLUS EXTRAFREE Coke


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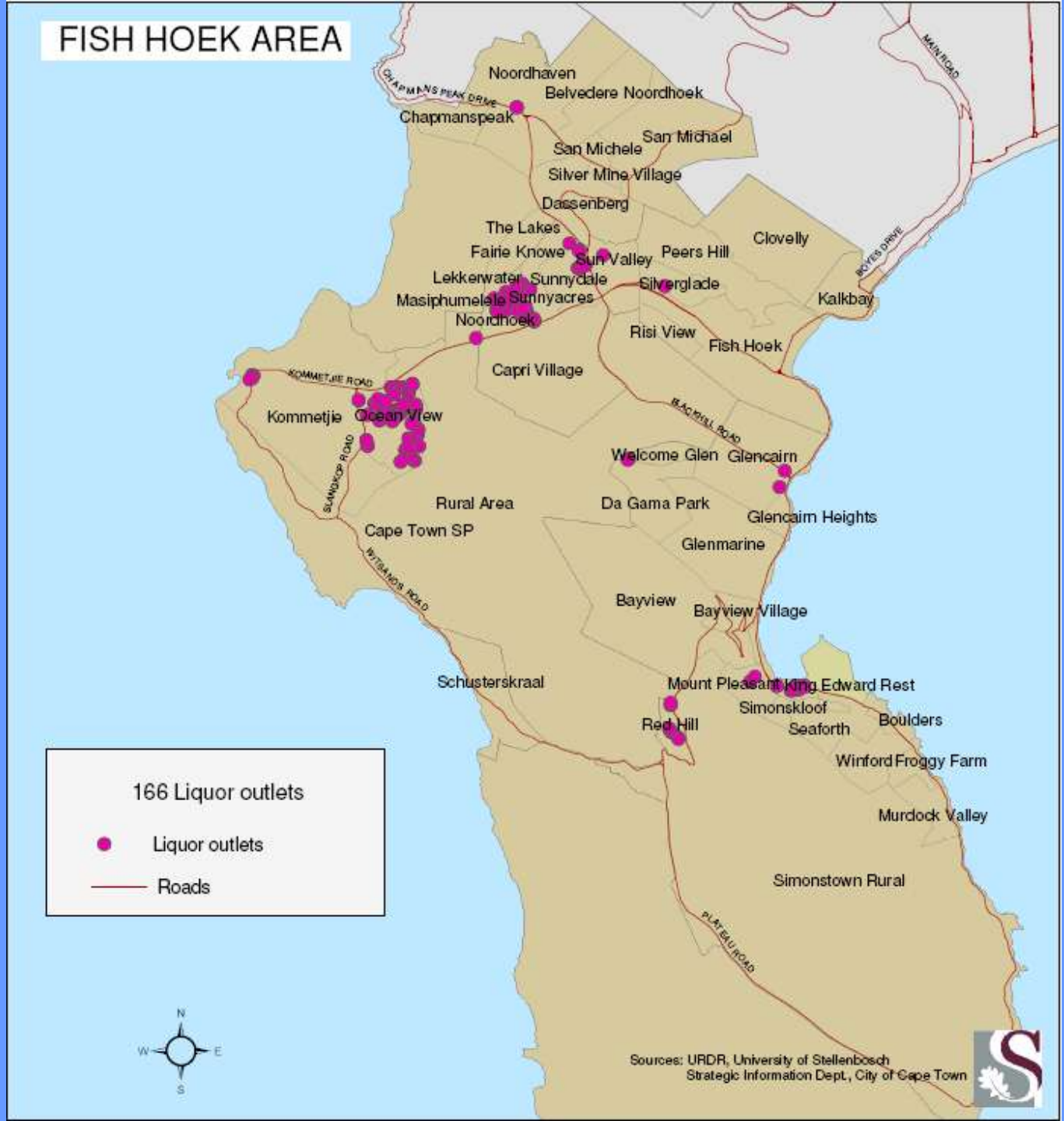
3
4
6.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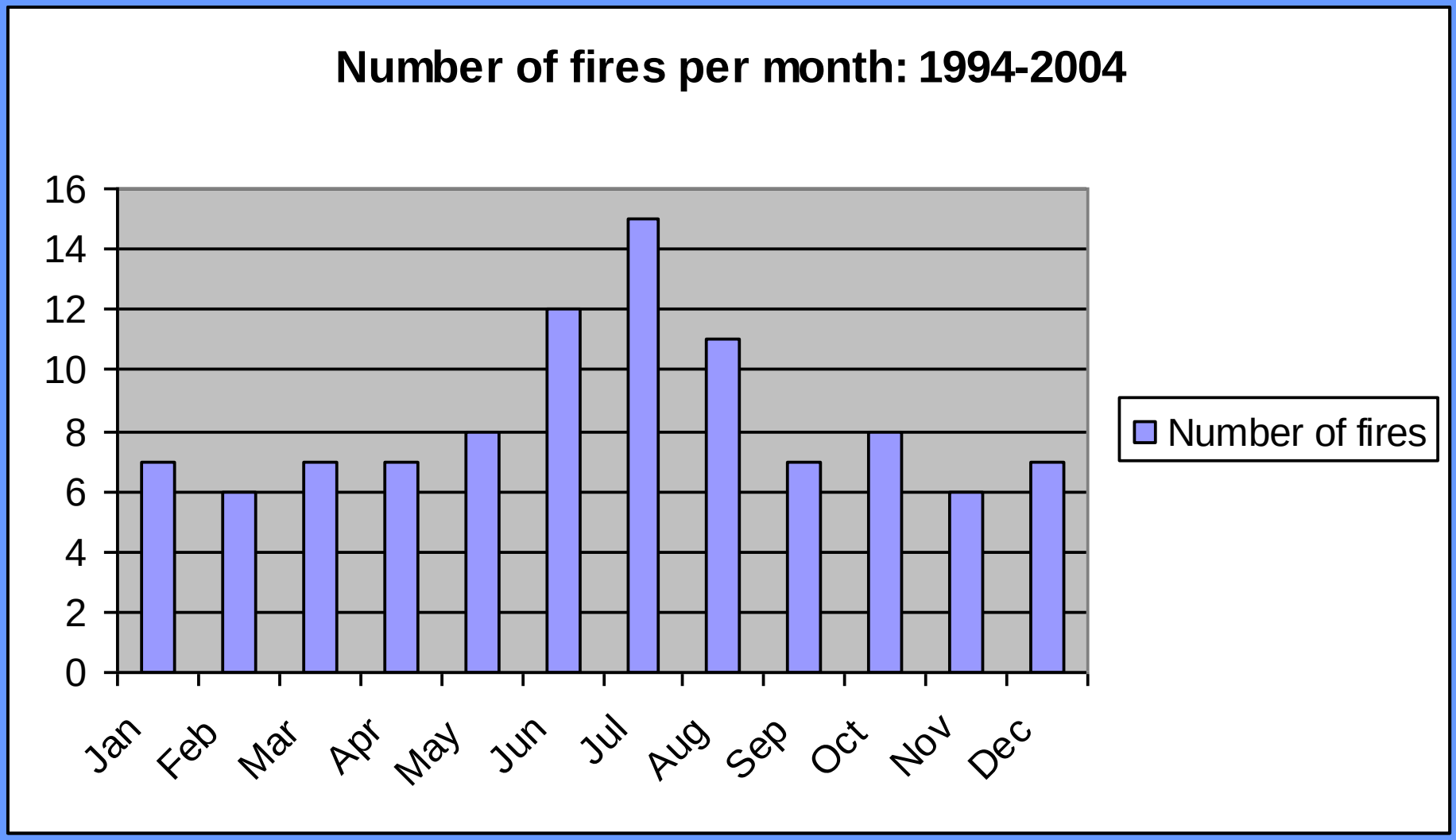
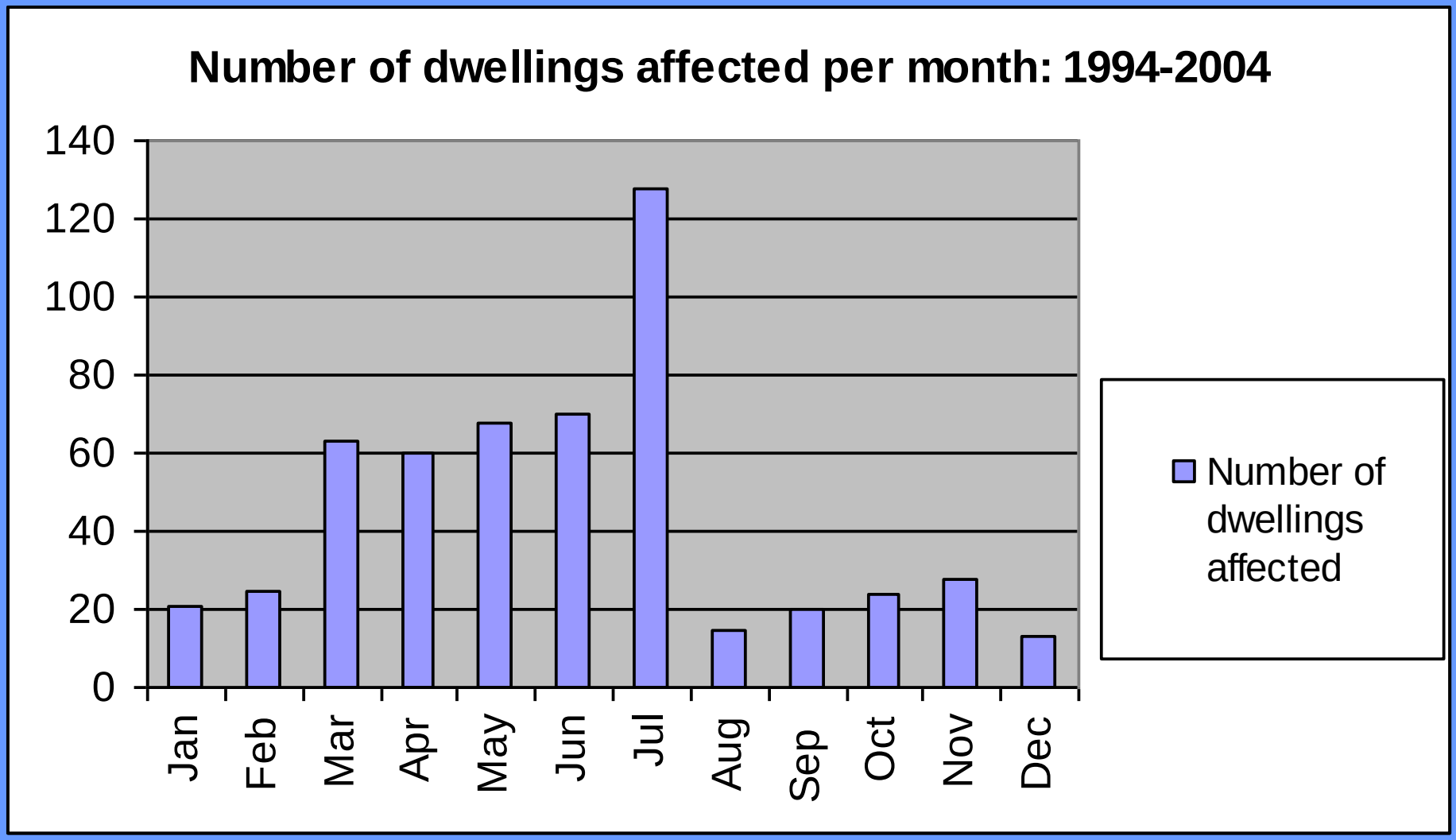
CHAPMANS PEAK DRIVE
MAIN ROAD
BOYES DRIVE
KOMMETJIE ROAD
BLACKHILL ROAD
SLANGKOP ROAD
WITSANDS ROAD
PLATEAU ROAD
166 Liquor outlets
Liquor outlets
Roads
N
W
E
S
Sources: URDR, University of Stellenbosch
Strategic Information Dept., City of Cape Town


Number of fires per month: 1994-2004
16
14
12
10
8
6
4
2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Number of fires


Number of dwellings affected per month: 1994-2004
140
120
100
80
60
40
20
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Number of dwellings affected

Health risks in Masiphumelele

High rate of TB and HIV/Aids

In Masiphumelele 24% of people tested are HIV positive

50% of TB patients are HIV positive

Living in wet damp conditions increases the risk of respiratory and other infections, such as flu/colds

Skin rashes were also identified – directly related to pollution

Lack of or Insufficient Services

Community based risk reduction strategies

- Flood risk
  - Building rubble
  - Informal drains
  - Cement floors
  - Electricity supply is disconnected
- Fire risk
  - Precautionary measures by parents
- Health risk
  - Managing communal toilets by self-employed janitors

Multidimensional nature of disaster risk in Masiphumelele

- Disaster risks are multidimensional and interlinked
- In Masiphumelele disaster risk is not driven primarily by an external hazard, but by inherent conditions of vulnerability – which are a product of limited development – hence "development risk"
- Recommendations are therefore orientated towards not simply managing disaster emergencies, but to addressing the underlying factors/processes generating risk

Recommendations for Flooding Risk

- Clear indication of flood plain
- Clean storm water drains and channels
- Homes to be built up off the ground
- Control of new arrivals / construction
- Prioritise households with women and children with provision of plastic sheeting

Recommendations for Fire Risk

- Training of local fire fighting teams
- Improved access for fire services
- Fire hydrants / additional taps
- Provide fire-resistant recycled material for construction of houses
- Local policing of shebeens
- Education and awareness on fire prevention – especially for men

Recommendations for Health Risk

- Clear water bodies
- Regular waste removals
- Provide households with rubbish bins
- Better Health Services
- Sanitation
- Drainage
- Education Programmes

Specific Risk Reduction Recommendations

- Fast housing delivery on new land
- Secure more land for housing and ensure that the wetland is not encroached on
- Tackle underlying factors that increase vulnerability
- Provide sustainable employment

Proposed useful output

- Photo exhibition
  - Mirror our experiences to residents and politicians
- Hazard exercise book
  - Interactive way to teach children about risk
- Play
  - Increase awareness about risk and empower people with skills