spatial data
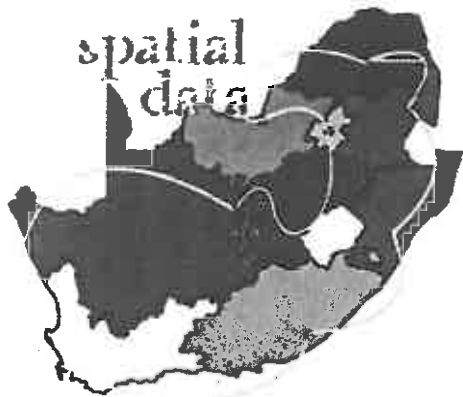
Intelligent crime fighting
- Using knowledge to combat crime -

Imagine a map depicting the crime hot spots in every district in the country, the types of crime occurring in each, the crime rate and the crime density. Imagine what a powerful weapon this information could be in the fight against crime!

Thanks to the efforts of the HSRC's GIS Centre, maps of crime statistics for every police station in South Africa is now available. The statistics include the 37 types of crime (see list below) recorded by the South African Police Services (SAPS) and several indicators that have been developed by the GIS Centre. These indicators include:
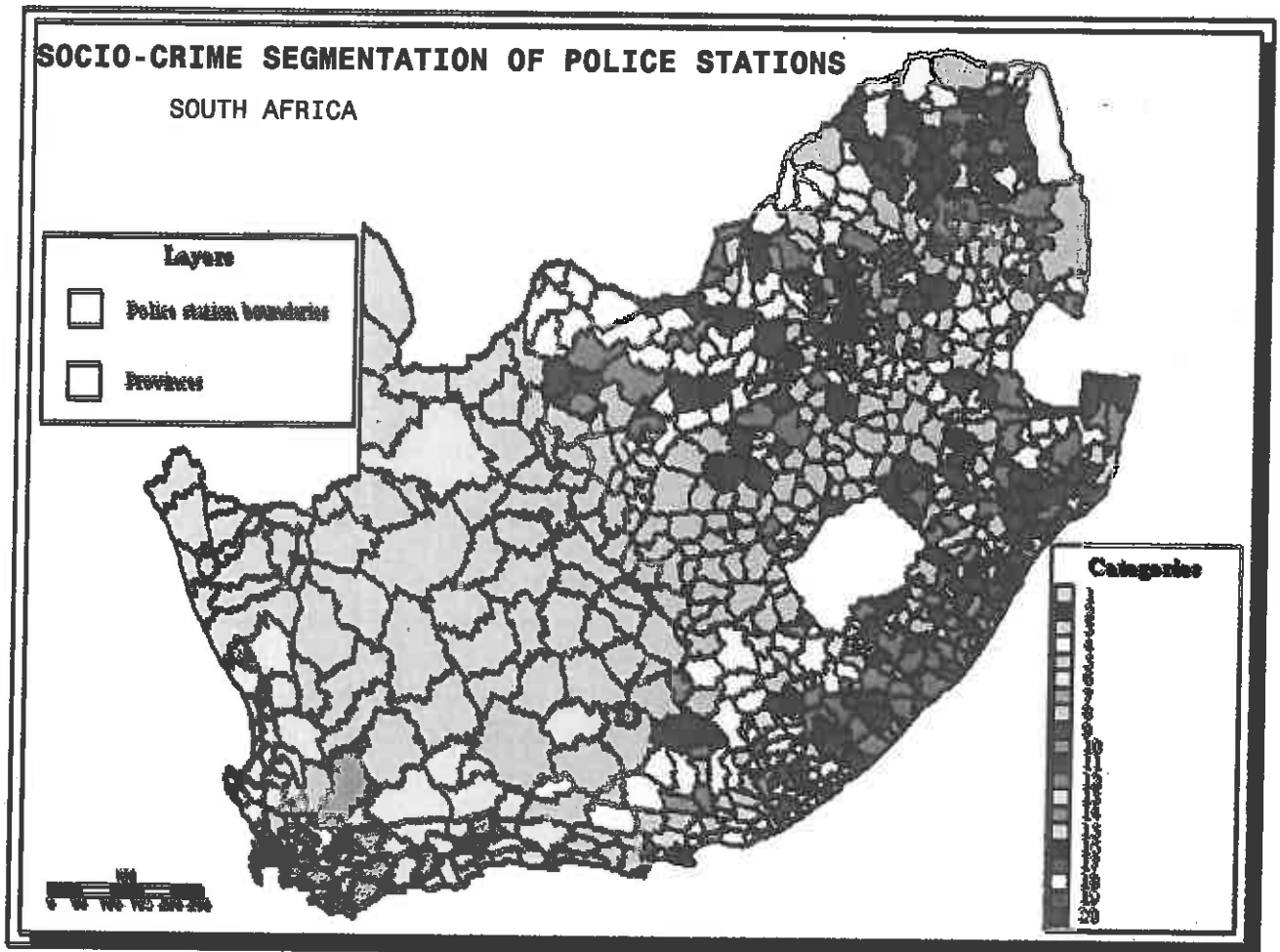
- Total number of crimes by type
- Crime rates by type (crimes per 100 000 population)
- Crime density (crimes per square kilometer)
- Socio-crime categorisation (clustering of police stations)
- Crime risk (Risk of certain crime types occurring)

Types of crime

1	Murder	20	Burglary - business premises (including attempts)
2	Attempted murder	21	Burglary - residential premises (including attempts)
3	Culpable homicide	22	Stock theft (including poultry)
4	Robbery with aggravated circumstances: firearm	23	Shoplifting
5	Robbery with aggravated circumstances. without firearm	24	Theft of motor vehicles and motorcycles
6	Other robbery	25	Theft out of or from motor vehicles
7	Public violence	26	Other thefts (not mentioned elsewhere)
8	Illegal strikes	27	Arson
9	Rape: 0-17 years	28	Malicious damage to property
10	Rape: adults	29	All fraud, forgery, malappropriations, embezzlements. etc.
11	Statutory rape	30	Drug - related crime
12	Indecent assault	31	Driving under the influence of alcohol or drugs
13	Crimen injuria	32	Illegal possession of firearms and ammunition
14	Cruelty towards and ill-treatment of children	33	Explosives act
15	Kidnapping: children 0-17 years	34	Carjacking
16	Kidnapping: adults	35	Hijacking of trucks
17	Abduction (for sexual or marriage purposes)	36	Robbery of cash in transit
18	Assault with the intent to inflict grievous bodily harm	37	Bank robberies
19	Common assault		

In order to provide these area specific crime maps, updated crime statistics are regularly obtained from the SAPS and linked to the spatial boundaries of the more than 1 100 police stations in South Africa. In addition, more than 150 socio-economic variables from the 1996 census are also provided for each police station in the country.

Through socio-crime categorisation maps are created that reflect the differences in the distribution of crime in communities located throughout the country. Crime in South Africa has a distinct urban versus rural nature, as well as differences in the extent of the problem and the type of crimes committed in these areas. Categories 1 to 20 (see overleaf for map) indicates a gradient from a "better" situation to the

SOCIO-CRIME SEGMENTATION OF POLICE STATIONS
SOUTH AFRICA

Layers
☐ Police station boundaries
☐ Provinces

Categories

"worst" situation in terms of the social status of communities, the extent of crime and the type of crime. The 22 police stations (see list below) that occur in category 20 are located predominantly in the urban townships where the extent of violent crime (eg murder, attempted murder, rape, aggravated assault) is the worst in the country.

These police stations are the government's priority.

ALEXANDRA	KHAYELITSHA	MOKOPANE	TEMBISA
BATHO	KWA MASHU	MOROKA	THOHOYANDOU
EVATON	MAAKE	PHUTHADITJABA	UMBUMBULU
GIYANI	MAMELODI	PLESSISLAER	UMLAZI
INANDA	MANKWENG	SESHEGO	
KATLEHONG	MITCHELLS PLAIN	TEMBA	

In terms of risk, there is also a distinct understanding of which categories have the highest risk profile in terms of crimes such as burglary, motor vehicle theft and car hijacking. For example, categories 16 and 17 have the highest risk of residential burglary while categories 15 and 19 are the police stations with the highest risk of car hijacking.

This information is an invaluable tool in the fight against crime in South Africa.

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