

# Country Report 2003

(Based on the PCGIAP-Cadastral Template 2003)

## South Africa

Country/state for which the indications are valid:	South Africa
Name of contact person	A J van den Berg
Affiliation, Organization:	Department of Land Affairs
Function, Position:	Chief Surveyor-General
Address:	Private Bag X954 Pretoria, 0001
Email address:	AVDBERG@DLA.GOV.ZA

### I. Country Report

#### A. Country Context

##### *Geographical Context*

Based on statistics, emanating from Census 2001, dated October 2001, the 2nd Census in a democratic South Africa, the estimated population of South Africa is 44.8 million people. The 1<sup>st</sup> Census dated October 1996, indicated an estimated population of 40.6 million people. 55.4% live in urban areas and 44.6% in rural areas. South Africa is located at the southern tip of the continent of Africa. The geographic co-ordinates are 22 00-34 00 South and 16 00-32 00 East. It has an area of 1,219,912 sq.km, which includes Marion and Prince Edward Islands. This is slightly less than twice the size of Texas. It's land boundaries total 4,862 km and its coastline extends for 2,798 kms. Its border countries are Botswana, Lesotho, Mozambique, Namibia, Swaziland and Zimbabwe. The climate is mostly semiarid, subtropical along the east coast with sunny days and cool nights. The terrain consists of a vast interior plateau rimmed by rugged hills and a narrow, coastal plain. The country encompasses a range of vegetation types, from arid shrubland and semi desert through savanna and woodland to coastal forest and alpine forest. Two internationally recognised biodiversity "hot spots" are located in South Africa, the Cape Floristic Kingdom (an entire floral kingdom found nowhere else) and the Succulent Karoo, the only arid land hot spot in the world. The largest land use is agriculture (86%, mostly natural veld with about 12% cultivated). Urban and industrial land use comprises 1.4%, forestry comprises 1.5% and conserved areas 6%. As at 1996, there were 422 protected areas, made up of national parks and provincial reserves with a total area of 6.7 million hectares.

##### *Historical Context*

In 1652, the Dutch realised the strategic and economic importance of the Cape of Good Hope and sent a merchant, Jan van Riebeeck from The Dutch-East India Trading Company to establish a refreshment station for passing ships. South Africa was governed by Holland from 1672 to 1810. After the British seized the Cape of Good Hope in 1806 annexing the Colony to the United Kingdom, 10 000 of the Dutch settlers (the Boers) trekked north to found their own Republics. The discovery of diamonds (1867) and gold (1886) spurred wealth and immigration and intensified the subjugation of the native inhabitants. The Boers resisted British encroachments,

but were defeated in the Anglo-Boer War (1899-1902). In 1910, the British Colony and the Independent Boer Republics united to form the Union of South Africa. Through the Native Land Law of 1913, 13% of land was declared reservation for blacks, more recently referred to as Homelands. This laid the foundation for the Apartheid policy. In 1948 the right-wing National Party came to power, driving apartheid legislation even further – only whites were permitted to vote. In 1961, South Africa became an independent republic. During these years black resistance under the African National Congress became more militant, resulting in mass action campaigns being conducted against the Government. In 1990, President FW de Klerk ended Apartheid when he unbanned the ANC and released Nelson Mandela from Robben Island Prison after 27 years. In 1994, the first democratic elections were held and the ANC gained the majority. On 10<sup>th</sup> May 1994, Nelson Mandela was inaugurated as South Africa's first black President with Thabo Mbeki as vice-president and FW de Klerk second vice-president of the Interim Government. The former Homelands were incorporated into South Africa. In 1999 Thabo Mbeki was inaugurated as President.

### ***Current Political and Administrative Structures***

The Republic of South Africa comprises 9 Provinces, namely Eastern Cape, Free State, Gauteng, Kwa-Zulu-Natal, Limpopo, Mpumalanga, North-West, Northern Cape and Western Cape. The Capital is Pretoria with Cape Town as the legislative center and Bloemfontein the judicial center. The new Constitution which was certified by the Constitutional Court on 4<sup>th</sup> December 1996 was signed by President Mandela on 10<sup>th</sup> December 1996. Parliament, the legislative authority of South Africa has the power to make laws for the country in accordance with the Constitution. It consists of the National Assembly and the National Council of Provinces (NCOP). The National Assembly consists of 350-400 elected members for a period of 5 years. It is presided over by a Speaker. In the 1999 elections, the ANC gained 266 seats. The NCOP consists of 54 permanent members and 36 special delegates and represents Provincial interests in the National Government. Any Bill which has been introduced to the National Assembly and passed, must be referred to the NCOP for consideration. The legal system is based on Roman-Dutch law and English common law. The President, Thabo Mbeki is the Head of State and leads the Cabinet. He is elected by the National Assembly from amongst its members. The President appoints the Deputy-President (currently Jacob Zuma) and the Ministers from among members of the National Assembly. The Cabinet consists of the President, the Deputy-President and the Ministers. The president assigns the Deputy-President's and Ministers powers and functions.

Due to the diversity of cultures amongst the people of South Africa, there are 11 official languages of which Xhosa is the most widely spoken as a home language. The most commonly accepted business language is English.

### ***Historical Outline of Cadastre***

The first land surveyors came to the Cape in approximately 1658, five years after Jan van Riebeeck had established the first European settlement at the Cape. The first cadastral survey was for a piece of land along the banks of the Liesbeek River in order to transfer land to a released servant of the Dutch East India Company.

Until 1857, surveys were represented in a graphical manner using natural features as boundaries. After 1857, theodolites were used and the recording of numerical data on diagrams was compulsory.

The British occupation introduced legislation (Cradock Proclamation) in 1813 that no sale of land would be recognized unless the land had been properly surveyed and registered.

In 1971 the Sectional Title Act made it possible for the first time in South Africa for flats (apartments) and other portions of buildings to be individually owned.

Cadastral surveying in South Africa is undertaken exclusively by or under the control of Registered Professional Land Surveyors. The Professional Land Surveyor and Conveyancer work closely together to record land ownership and/or rights in a public register kept by the Registrar of Deeds.

South Africa is fully covered by the National Control Survey System (NCSS) which is of high accuracy and which is marked by a network of Trigonometrical stations and Town Survey Marks. It is a legal requirement that all cadastral surveys be connected to this system. As from 01-01-1999 the NCSS has been based on the World Geographic System 1984 ellipsoid with the position of the Hartebeesthoek Radio Astronomy Telescope as the origin of the system.

## **B. Institutional Framework**

### *Government Organizations*

The agencies responsible for land registration and cadastral surveying fall under the National Department of Land Affairs. These agencies include four Surveyors-General and 9 Deeds Registry Offices, each with their own jurisdiction of administration.

### *Private Sector Involvement*

These include qualified and registered private practising professional land surveyors on the surveying side and registered attorneys qualified to carry out conveyancing (registration) activities. All cadastral surveys and conveyancing is done by the private sector. The land surveyors submit their documents to the Surveyors-General for examination and approval, after which the conveyancers lodge the approved survey documents to the respective Registrars of Deeds for registration.

### *Professional Organization or Association*

Professional land surveyors have to register with the South African Council for Professional and Technical Surveyors, established in terms of Act 40 of 1984, in order to carry out cadastral surveys. There are also Institutes of Land Surveyors in the various Provinces.

### *Licensing*

There is no licensing system. Registration with the South African Council for Professional and Technical Surveyors, as stated above, is required for performing cadastral surveys. To qualify for registration, candidates must have a four-year University degree in Land Surveying, followed by a practical articulated period and the passing of further survey law exams.

### *Education*

There are presently only two Universities offering the Land Surveying Degree, namely Cape Town University and the University of Natal. The average number of students graduating from Cape Town is 10 annually, and from Natal 15 annually.

## **C. Cadastral System**

### *Purpose of Cadastral System*

The primary function of the Cadastral System in South Africa is to define (delineate and document) ownership rights. Any land that has not been transferred from the state to a juristic person remains the property of the state. Any juristic person that has been granted freehold rights is free to trade (transfer at market value) that immovable property. Accurate delineation of the ownership rights has enabled the development of a Cadastral Information System, which forms the basis for land valuation; land taxation, development planning, local authority demarcation and land administration

### *Types of Cadastral Systems*

1. **Freehold Ownership:** gives the owner the greatest rights over land – including the rights to:
  - 1.1. Use it to its full potential, within the limits of the law or conditions of title.
  - 1.2. Dispose of it or sell it.

- 1.3. Use it as security for a loan.
- 1.4. Exclude its use by others.
2. **Leasehold Ownership:** A lease is contract whereby land is let to or hired by a person other than the owner for a specified period of time. A lease for ten years or more is a “long lease” and must be registered with the Registrar of Deeds.
3. **Servitude:** A registered right vested in a person, who thereby derives some advantage from another’s property. There are two types:
  - 3.1. **Praedial:** A servitude which operates in favour of the owner of a piece of land and which is cannot be separated from that land, and
  - 3.2. **Personal:** A servitude in favour of a person or body who need not own any land.
4. **Sub-surface Rights:** The rights to any minerals on a property may be completely separated from the ownership of the land through the registration process.
5. **Sectional Title Unit:** Sectional title schemes were created to enable ownership of a portion of a building, for example an apartment block. The external walls, the floor and the ceiling define a unit within a scheme of two or more units. A unit owner has exclusive rights to his or her unit, but is jointly responsible for the remainder of the property not exclusively owned.
6. **Permission to Occupy:** During the apartheid era, it was unlawful for a black person to own property. Large tracts of land were held in trust by the state, but occupied by Traditional Communities of black people. The state could issue a letter, sometimes with a plan attached, authorizing a juristic person to utilize that land under strict conditions. These were never submitted to the Deeds Registry, but rather kept by the authority that had control over the traditional community. The state is currently working on legislation to transfer this land to the Traditional Communities and/or individuals within those communities.
7. **Deeds of Grant:** Some towns were laid out on state or municipally owned land for black people who worked in the city. These were often some distance from the cities. Blacks were given some rights of occupation, in a form of lease, but were little more than a permission to occupy recorded in the Deeds Registry. The state is in the process of eliminating this discrimination by upgrading these Deeds of Grant to Freehold Title.

### *Cadastral Concept*

There is a Surveyor-General in Pretoria, Cape Town, Bloemfontein and Pietermaritzburg. The 9 Provinces have been divided between the 4 Surveyors-General. Each Surveyor-General is more or less autonomous within his or her area of jurisdiction. The principal functions of each Surveyor-General is (with the help of his staff complement) to:

- Examine and approve diagrams, general plans and sectional title plans that are lodged for approval by an accredited Land Surveyor prior to them being registered in a Deeds Registry. (Note that the accredited Land Surveyors are either in private practice, or in other state departments. No employee in the Office of the Surveyor-General may perform cadastral surveys, thereby ensuring that the accredited Land Surveyors employed in the office of the Surveyor-General provide independent assessment of every cadastral survey performed by their peers.)
- Preserve and keep up to date all approved documents and records pertaining to cadastral surveys.
- Prepare and keep up to date composite plans showing all land parcels in both paper and digital form.
- Supply copies of documents kept in the office in hard copy or digital form.
- Provide advice and information pertaining to the cadastre.

The **diagram** is the fundamental document prepared by the Land Surveyor to be used for registration purposes. The essential information shown on a diagram is:

- a) The unique designation of the property.
- b) An illustration depicting the property.
- c) Details of any curvilinear boundary.
- d) Descriptions of the corner beacons.

- e) A table listing the numerical data of the boundaries.
- f) The area of the property.
- g) Details of any registered real right over or under the property (e.g. Servitudes or mineral rights).
- h) A unique reference number supplied by the Surveyor-General.

A **general plan** is a document consisting of one or more sheets showing the relative position of two or more pieces of land. The general plan contains the same essential information in respect of each piece as is shown on a diagram. It is compulsory to prepare a general plan for any subdivision of land into ten or more pieces or when required in terms of any law, such as township establishment or the amendment of an existing general plan. General plans may comprise many sheets and depict a very large number of Erven.

A **Sectional Plan** is a document consisting of several sheets showing the relative position of two or more units within a sectional title scheme. A scheme comprises one or more buildings that may be multi-storeyed. A sheet of the Sectional Plan shows the position (footprint) of the building or buildings in relation to the outer limits of the land parcel. Other sheets show the relation of the units within the building to each other, floor by floor and, where necessary, in cross-section.

### *Content of Cadastral System*

South Africa is fully covered by the National Control Survey System which is of high accuracy (records are kept to centimetre accuracy and the system is generally of that order) and which is marked by a network of trigonometric stations and town survey marks. A second network of active GPS Base Stations is gradually supplementing the older network. It is a legal requirement that all cadastral surveys are connected to these control networks, ensuring that:

1. The position of every beacon and boundary is accurately known,
2. Property boundaries do not overlap, and
3. Beacons that are lost or destroyed can be replaced with the minimum delay and expense.

Permanent corner beacons joined, usually, by imaginary straight lines mark the boundaries of properties or land parcels. The types of beacon that may be used are prescribed by regulation and new beacons are usually iron pegs of specified dimensions. Well-constructed corner fence posts and corners of permanent buildings may also be adopted as beacons. Should rock or buildings prevent placing a beacon a hole may be drilled in the obstruction to indicate the position.

Although the boundaries between beacons are usually imaginary straight lines, certain natural or artificial features that are permanent and are clearly defined may be adopted as curvilinear boundaries. The most common examples are the middle of a river and the top edge of a cliff. Artificial features that are liable to move, such as fences, roads and railway lines, may not be adopted as new cadastral boundaries.

Although statutory restraints severely restrict an owner's right to deal with his or her land, the State has imposed these restrictions in the interests of orderly planning and development and for the benefit of the community as a whole. With few exceptions permission must be obtained before land can be subdivided. The list of laws and ordinances that control the subdivision of land is a long one and is subject to change, and no attempt will be made here to list them. In many cases permission to subdivide must be obtained from more than one authority.

## **D. Cadastral Mapping**

### *Cadastral Map*

It is a plan showing the relative position / positions and boundaries of surveyed land parcel / parcels. Main types of cadastral maps are:

**Diagram:** It is geometrical figure containing numerical and verbal representations of a piece of land, line, feature or area forming the basis for registration of a real right. A legal document must contain the signature of a professional land surveyor and being approved by a Surveyor-General. The most common types are subdivision and consolidation diagrams which are basic property maps showing:

- The unique designation of the property
- An illustration depicting the property
- The boundary description
- Description of beacons
- Co-ordinates and numerical data of the beacons and boundaries
- The area of the property

**General Plan:** It is a plan representing the relative positions and dimensions of two or more pieces of land together with the same essential information in respect of each land parcel, as required on a diagram. A general plan may comprise of one or many sheets and depict a large number of land parcels, normally called erven or lots. To become a legal document, it must be signed by a professional land surveyor (who did the survey), and then approved or certified as general plan by the Surveyor-General.

**Sectional Title Plan:** It is a plan showing portions of buildings (sections) that can be separately owned together with the positioning of these buildings in relation to the land. The floor area of each section is tabulated and the proportion of the total area included in each section, listed. This is used to determine the proportional levy each owner has to pay.

**Working Plan:** It is a plan drawn and signed by professional land surveyor, and it accompany and form part of survey records that are submitted to the Surveyor-General for approval. After acceptance and approval, they are filed for safekeeping and future reference, together with the rest of the survey records. A working plan indicates found and placed beacons, the property designation, boundaries, servitudes, roads, surrounding properties and rivers. The description of the beacons is given and the survey working points and measured lines are indicated in red.

**Compilation / Noting Sheet:** It is purely cadastral map at various scales showing all land parcels and administrative. It shows the relationship of every piece of land to those adjoining it. In addition other surveyed real rights such as servitudes and leases are also included in this map.

**Digital Cadastral Index Map:** It is seamless computerized map of all land parcels and administrative boundaries in South Africa. Its other characteristics are the same as above.

# Example of a Cadastral Map

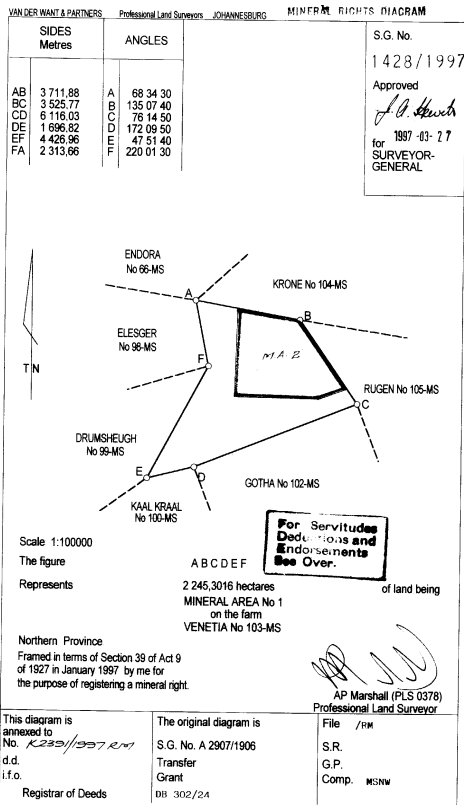


Figure 1: A Diagram.

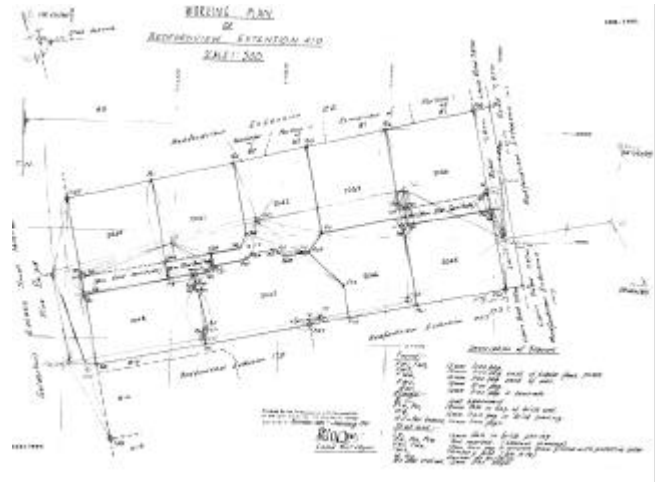


Figure 2: Working Plan.

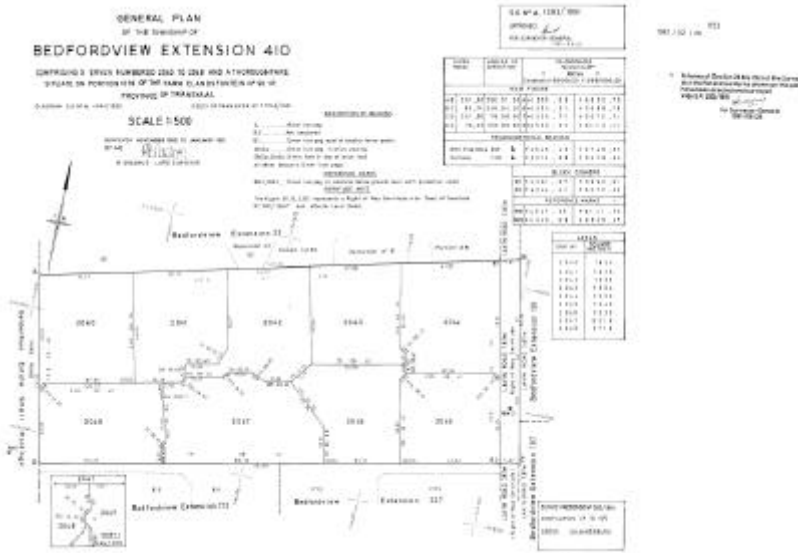


Figure 3: General Plan.





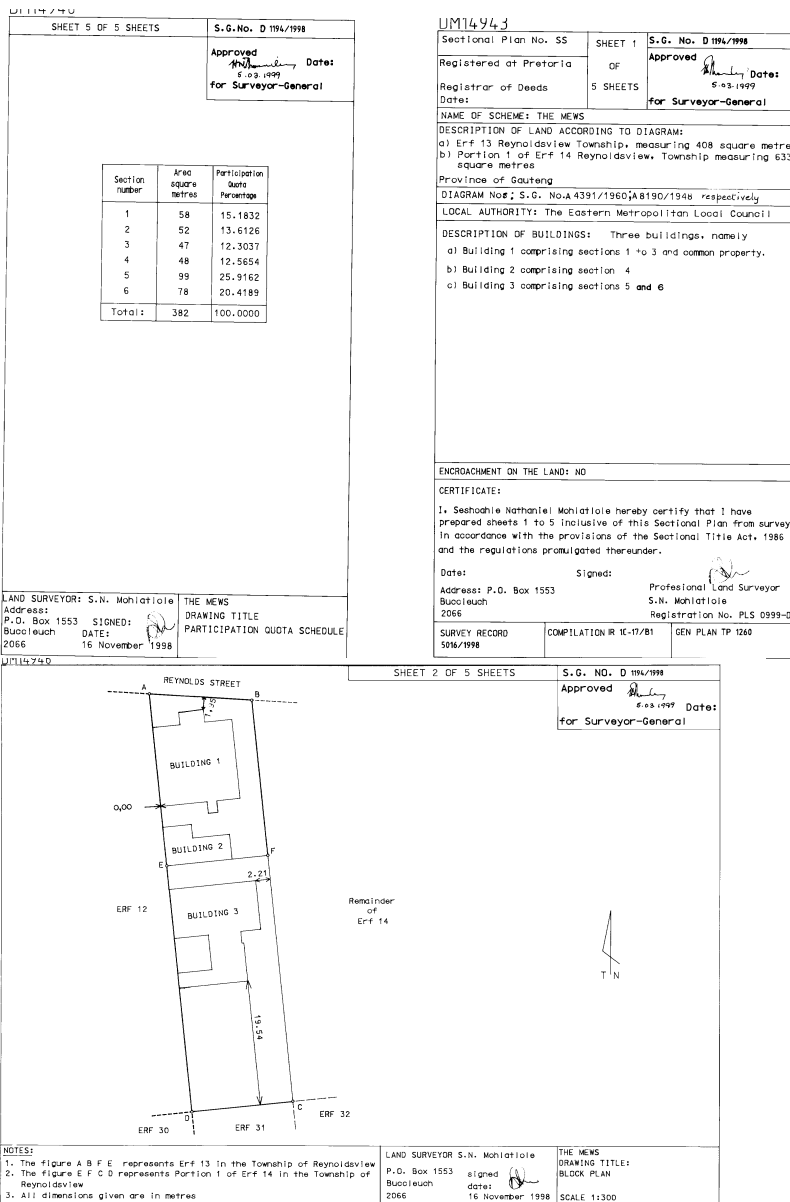


Figure 7: Sectional Title Plan.

### Role of Cadastral Layer in SDI

---

## E. Reform Issues

### Cadastral Issues

The South African system of land surveying is equal to the best in the world. The country's cadastre, or parcel-based land information system, is highly accurate. Boundaries in surveyed areas are secure and property co-ordinates are recorded in a national reference system. The goal of this paper is to list a few important problems that the South African cadastre is confronted with. Firstly, there is problem with receiving consents for survey, secondly the incorporation of permission to occupy (PTO's) in the South African cadastre and lastly the different ordinances for consent approval between the different provinces.

The South African cadastre has become used by buyers, with time and money available for the myriad bureaucratic and legal procedures that back up a state-of-the-art system, and has been

criticised for being inappropriate to a rapidly urbanising society. A cadastre serves a country's resource management; the raising of rates and taxes; and the underpinning of an economy in regards to bonds, loans and whatever form investments take. A range of national institutions form part of the relationship between an individual and his or her land. Some of these institutions are central and/or regional governments, the judiciary, the Receiver of Revenue and/or local government rates department, the various planning and environmental bodies and financial institutions – both public and private.

Land surveyors trigger, but don't create, time-consuming administrative procedures. Obtaining reliable co-ordinates and measuring a property can be done very quickly. However, before this can be done, what are known as 'subdivisional consents' have to be obtained. Permission to subdivide land, both in rural and urban areas, has to be obtained from a range of authorities for a variety of reasons. A land surveyor has to obtain the consent of dozens of bodies before the land can be subdivided.

The procedure is extremely time consuming, but no subdivision can take place legally until permission is obtained from all the relevant authorities. Complicating matters further is the fact that procedures vary from province to province and also from municipality to municipality.

The second problem is the accommodation or upgrading of PTO's into the South African cadastre. The upgrading of land tenure of PTO's is ideologically divided into two opposing factions – those supporting the upgrading of land tenure in the form of individual rights (freehold) and those strongly against it (communal). Between these two extremes, a number of positions may be taken – some leaning towards the freehold option and others leaning more towards retaining the existing 'communal' tenure system.

Those that support freehold as land tenure option have used economic reasons for their view. According to the International Labour Organisation they are of the opinion that radical land reform is the quickest way to reduce poverty. Other economic arguments used by the supporters of freehold, include the following:

- Freehold is considered to bring about agglomeration of the present small and uneconomic parcels of land into economically viable units.
- Freehold permits rational capitalisation, since sufficient land is accumulated to make it feasible, and since freehold land can be mortgaged to secure capital.
- Freehold increases productivity and stability.

Another argument often advanced in support of the freehold option is an ecological one. This argument pays attention to the poor state of the ecology in areas of 'communal' land tenure systems. This argument is that private ownership would prevent the degeneration of valuable land and resources as it places more responsibility on the individual.

Those against freehold also use economic reasons for opposing it. According to these arguments, the danger inherent in the upgrading of land tenure is that it might precipitate a rapidly rising price spiral in local land markets. This might result in land which should have gone to the poor falling into the hands of people or institutions in the core economy, with people selling their land to obtain cash, leading to large-scale dispossession. The Department of Land Affairs argue that the advantage of 'communal' land is that such land provides the poor with free or very cheap access to land. Furthermore, the social structure which accompanies 'communal' ownership also functions as an important safeguard for the survival of the poor.

To use one example for a particular province in South Africa, the Surveyor-General: Bloemfontein is currently capturing all the PTO's documents, alpha-numerically of Phutaditjhaba and Thaba 'Nchu. The reason for capturing these PTO documents is to simplify enquiries at the public counter. This is also happening in other provinces like Western Cape, Limpopo and Mpumalanga. In the future the PTO's would be upgraded to some acceptable system for all concerned.

The third problem is the fact that there is vast differences in the ordinances between the various provinces, which results in different survey procedures that is been applied throughout the different Surveyor General's offices. This results in confusion for the land surveyors, conveyancers and general public. For example, the Free State ordinance give power to the townships

board, concerning the approval of consents of sub-division, etc., which results in no power to the municipalities and the people on the ground. This results in a lot of Sectional Title plans being created, which is much more costly than subdivisions, to overcome the problems of properties which had to be subdivided. The Northern Cape ordinances give power to the individual local authorities to approve subdivision.

### *Current Initiatives*

---

### **References**

1. Setting the Boundaries. Dr Clarissa Fourie, Indicator SA Volume 11 No.2 Autumn 1994.
2. Towards freehold in peri-urban Thaba Nchu: A case study of Bultfontein 3 and 4, Lochner Marias, Acta Academica Supplementum 1 1998.

## II. Questionnaire

### 1. Cadastral Principles

#### *Deed or title registration*

- 1.1 Is your cadastral system based on deeds registration or on title registration ?
- deeds registration
  - title registration
  - other: .....

#### *Registration of land ownership*

- 1.2 By law, is registration of land ownership compulsory or optional ?
- compulsory
  - optional
  - other: .....

- 1.3 If felt necessary, please, comment on the actual practice and the legal consequences.

When a piece of land is subdivided, for instance, the new land parcel is shown on the cadastral map, but it may be a long time before it is registered, as the owner waits for the market to obtain the best price for the new land parcel. It is only registered once it is sold.

#### *Approach for the establishment of the cadastral records*

- 1.4 Are landowners required to register their properties systematically during the initial establishment of the cadastre or is registration sporadic, i.e. triggered only by specific actions (such as for example sale) ?
- systematic
  - sporadic
  - both
  - all properties are already registered
  - other: .....

## 2. Cadastral Statistics

### Population

2.1 What is the **population** of your country ?

44,8 million

2.2 Please, estimate the **population distribution** between urban and rural areas.

urban:	...55.4...	%
rural:	...44.6...	%
<hr/>		
total:	...100...	%

### Number and distribution of land parcels

2.3 Please, estimate the approximate **total number of the smallest uniquely identified land units**, often called "land parcels" in your country, including urban and rural areas ?

18 million

*The total number would include all freehold and state owned land, regardless of registered, non-registered or informal holding.*

2.4 What is the approximate **total number of registered strata or condominium units** ? This number would be in addition to the number of land parcels indicated in 2.3 ?

1 million

2.5 For **URBAN areas**, please, estimate the **distribution between the smallest uniquely identified land units, often called "land parcels"** (i) that are legally registered and surveyed, (ii) that are legally occupied but not registered or surveyed, and (iii) that are informally occupied without any legal title (this may include illegal occupation or squatting).

legally registered and surveyed:	...70...	%
legally occupied, but not registered or surveyed:	...10...	%
informally occupied without legal title:	...20...	%
<hr/>		
total:	...100...	%

*If the estimation is too difficult or complex using land parcels, you may base your estimation alternatively on the number of people occupying these forms of land parcels.*

2.6 For **RURAL areas**, please, estimate the **distribution between the smallest uniquely identified land units, often called "land parcels"** (i) that are legally registered and surveyed, (ii) that are legally occupied but not registered or surveyed, and (iii) that are informally occupied without any legal title (this may include illegal occupation or squatting).

legally registered and surveyed:	...80...	%
legally occupied, but not registered or surveyed:	...15...	%
informally occupied without legal title:	...5...	%
<hr/>		
total:	...100...	%

*If the estimation is too difficult or complex using land parcels, you may base your estimation alternatively on the number of people occupying these forms of land parcels.*

***Number of professionals***

Please estimate the total number of *academic professionals* that are active within the cadastral system and the proportion of the time that they actually commit for cadastral matters (as opposed to work outside of the cadastral system) ?

2.7	Total number of <b>professional land surveyors</b> , such as licensed surveyors active within the cadastral system:	860
2.8	Proportion of the time that these land surveyors commit for cadastral matters:	10%
2.9	Total number of <b>lawyers/solicitors</b> or equivalent active within the cadastral system or land market:	2,000
2.10	Proportion of time that these lawyers/solicitors commit for cadastral matters or land market:	70%

---

***Remarks and Comments***

Please, identify the best aspect of this questionnaire ?

Please, suggest the area in the questionnaire that could be improved ?