rural development & land reform
Department:
Rural Development and Land Reform
REPUBLIC OF SOUTH AFRICA

48TH TECHNICAL COMMITTEE AND GOVERNING COUNCIL MEETING OF THE REGIONAL CENTRE FOR MAPPING OF RESOURCES FOR DEVELOPMENT (RCMRD)

10 – 11 NOVEMBER 2014

COUNTRY REPORT FOR THE REPUBLIC OF SOUTH AFRICA

1. General overview

2013 marked the centenary of the 1913 Natives Land Act, which was the first of a number of discriminatory laws that reinforced the massive dispossession of land from Black South Africans. The root of the land question today arises out of the pervasive process of land alienation that dispossessed the majority of South Africans of their land over the past few centuries.

To mark this occasion, the department hosted a number of world class exhibitions at centres throughout the country to remind South Africans of how far they have come as a nation. These events also showcased Government's progress with the rural transformation agenda, and the great strides made over the past 20 years. The aim of the exhibitions was to take the visitors through colonial history, land dispossession, repression, resistance, and the restitution of land rights to victims of forced removals under the democratic government. These exhibitions were also aimed at creating awareness especially among the youth, about the journey travelled thus far and the progress made by the government of the day towards reversing the negative legacy of the 1913 Natives' Land Act and related racially motivated laws.

South Africa passed a key milestone during 2014 as the nation celebrated 20 years of freedom and democracy. Another round of General Elections was held in May 2014, and the Department of Rural Development and Land Reform ("the

department") was, and is still, at the center of things; working towards the transformation of our rural communities in general and land reform in particular.

2. Major policy and legislative issues

In improving the administration of land reform and rural development, and transformation as a whole, the department has initiated policy shifts. These will assist in realizing the department's commitment to taking the land reform and rural development priority mandate of government onto a new trajectory in line with the expectations of the citizens.

The following are a few of the legislation pieces that the department has been working on.

2.1 Geomatics Profession Act, Act 19 of 2013

The Geomatics Profession Bill was passed by the National Assembly on 20 June 2013, and was assented to by the President on 9 December 2013 as Act 19 of 2013.

The Act replaces the Professional and Technical Surveyors Act, 40 of 1984, which catered for surveyors but excluded geographical science professionals and mine surveyors. The Act makes provision for all Geomatics professionals, technologists and technicians.

Furthermore, it will ensure that the professional council is more representative, while it places more emphasis on education and training, as well as the marketing of the profession to attract more people into it.

2.2 Spatial Data Infrastructure Act, Act 54 of 2003

The Spatial Data Infrastructure Act provides for the establishment of the South African Spatial Data Infrastructure and the Committee for Spatial Information. The primary purpose is to ensure the open sharing of spatial information among

organs of State. The Act is currently under review and a draft Spatial Data Infrastructure Amendment Bill has been prepared and approved by the Minister of Rural Development and Land Reform for submission to the Cabinet. There has however, been further delays in this process. The amendments relate mainly to clarifying some definitions, making the process of appointing members of the Committee for Spatial Information easier, authorizing the Committee for Spatial Information to make policies and guidelines, and to provide for penalties for non-compliance with the Act, Regulations and official standards. Draft Regulations have also been prepared that will come into operation once the Spatial Data Infrastructure Amendment Bill is enacted. These Regulations are aligned to the Act and the envisaged Amendment Act.

2.3 Deeds Registries Amendment Act, Act 34 of 2013

The Deeds Registries Amendment Act was assented to by President on 14 December 2013. The Act amends the Deeds Registries Act, 1937. Among other things but not limited to, the Act provides discretion in respect of the rectification of errors in the name of a person or the description of property mentioned in deeds and other documents, the issuing of certificates of registered title taking the place of deeds that have become incomplete or unserviceable. The Act also provides for the substitution of an obsolete reference and an outdated heading. The Act further regulates the updating of deeds in respect of the change of names of companies, close corporations and the surnames of women.

2.4 Sectional Titles Amendment Act, Act 33 of 2013

President Zuma signed the Amendment Act on 18 December 2013. The Act seeks to amend the Sectional Titles Act, Act 95 of 1986. The amendments include among other things but not limited to; the provision for further regulation of notification of the intended establishment of schemes and the sale of units to lessees, allowing for the cancellation of registered sectional plans in a prescribed manner, the cancellation of part of a section pursuant to an expropriation, the

registration of a transfer of a part of the common property with the consent of the owners of the sections and the holders of registered real rights, regulation of the issuing of a certificate of registered sectional title in respect of a fraction of an undivided share in a section and the issuing of more than one certificate of real right of extension and more than one certificate of real right of exclusive use area.

2.5 Restitution of Land Rights Amendment Act, Act 15 of 2014

The Restitution of Land Rights Amendment Act, was signed into law by President on 29 June 2014. This historic event builds on other legislative achievements of the department in respect of land reform. The Act amends the Restitution of Land Rights Act, Act no. 22 of 1994 to provide for the re-opening of the land claims process which effectively propels the country forward in the quest to reverse the legacy of the 1913 Land Act.

The State has re-opened the lodgment of claims to enable the excluded claimants to lodge claims.

The re-opening of land claims will provide an opportunity to persons and communities that did not lodge claims by the cut-off date of 31 December 1998 to also benefit from the restitution programme.

3. Major technical issues in the land and mapping sector

3.1 Surveying of unsurveyed State Domestic Facilities (SDFs)

The Chief Surveyor-General has a responsibility to ensure certainty regarding the allocation and ‘ownership’ of state immovable assets as provided for in Section 239 of the Constitution. In this regard, the Constitution also provides for the Chief Registrar of Deeds to make entries or endorsements on any relevant register, title deed or other document register immovable property in the name of the State in accordance with an item 28(1) certificate produced by the Minister, for

confirmation of ownership of State immovable assets. The Chief Surveyor-General's role in contributing to the achievement of this exercise is to facilitate Cadastral Surveying of State Land and approval of Diagrams and Records thereof, in terms of the provisions of the Land Survey Act 8 of 1997.

In this regard, the DRDLR has embarked on a programme to complete the surveying of all Unsurveyed State Domestic Facilities (e.g. Hospitals, Clinics, Schools, Post Offices, Police Stations, etc). The purpose of this exercise is to assist custodian departments to develop and complete their asset registers to comply with the Government Immovable Asset Management Act 19 of 2007. Compliance with this Act will not be possible if a State Domestic Facility is not Surveyed and defined by an approved Cadastral Diagram.

Over the next three years, 4 500 State Domestic Facilities will be surveyed. For the current financial year ending 31 March 2015, an amount of R15 million will be spent for the survey of 1 500 State Domestic Facilities.

3.2 National Aerial and Satellite Imagery

An area of 406 478,000 square kilometres of digital aerial imagery in full colour at 0.5m ground resolution will be acquired in the current year. All of this imagery is converted into ortho-rectified imagery. This is in pursuit of refreshing the imagery coverage every three years. The ortho-rectified imagery is a very popular product serving many users' needs. In selected areas the imagery is also being processed to provide ortho-rectified colour-infrared (CIR) imagery. This CIR is particularly popular with environmentalists and agriculturalists.

The South African National Space Agency (SANSA) is responsible for the acquisition of satellite imagery. The satellite receiving station of SANSA, based at Hartebeesthoek, has the capability of direct reception of imagery from the SPOT, LANDSAT and MODIS satellite systems. The reception footprint covers Africa south of latitude 5ºS. A mosaic of SPOT imagery is being produced covering the

whole country. South Africa is preparing to build and launch a new earth observing satellite as part of ARM.

3.3 National Mapping

The Integrated Topographic Information Database provides the most comprehensive database of geo-spatial information in the country. This database provides topographic information at a detail level nominally at 1:50 000 in a fully topologically-structured manner. The requirement is now to keep that information up to date. During this year 199 375 km² will be updated. The manner of updating the Topographic Information database is being changed to focus on the currency of the database rather than just having systematic revisions. This new method will require the detection of changes that have occurred and then to capture those changes. With this method the strategic objective will be to ensure that the recording of a change to any main feature is prioritized.

The maps of the national map series, which consists of the 1:10 000 Orthophoto Maps, 1:50 000 Topographic Maps, 1:250 000 Topo-Admin Maps and the 1:500 000 Topo-Admin Maps, were updated in the past year by updating in total 1790 maps. These maps are available both as hard-copy (printed) and digital maps. The printed map remains an important product because many users are still only able to use printed maps.

The South African National Land Cover Classification System that was approved in 2008 based on Land Cover Classification System No. 2 (LCCS 2) is being reviewed to be updated to LCCS 3 which conforms to Land Cover Meta Language (LCML) which is an international standard approved in 2012 (ISO 194477-2). South Africa is currently in the process of accepting ISO 194477-2 as South African standard for land cover meta language.

South Africa looking at establishing an Inter-governmental National Land Cover Team (ILCT) because it has been recognized through the South Africa Group Earth Observation Community of Practice (SAGEO) that Land Cover data requirements have legislation mandates of different national departments who are the users of data and have international and national reporting such Climate Change, Ecosystem Status and Food Security. Currently the country is producing the Land Cover data at 86 671 km² per year. It is clear that collaboration approach in producing the national land cover data is required because funding is not enough to cover the entire country.

The Guideline Procedure for National Land Cover Mapping and Change Detection is being revised in order to achieve consistent, reliable classification.

4. Infrastructure development

4.1 e-Cadastre

The department has embarked on a project of developing an electronic land registration system (technically known as the e-Cadastre); this will be the center piece of the country's land administration system. Direct beneficiaries will be the State, the mortgage systems as run by financial institutions, planning and engineering, investors doing property opportunity analysis (locally and internationally), real estate agents, all municipalities and provinces, environmentalists, mining and all property title holders. A 10 year road map, with well-defined milestones has been developed to guide the development of the electronic land registration system with an estimated cost of R1.8 billion.

Simultaneously, millions of old documents from as long back as 1657 (when the first land surveyor came to the Cape) will be scanned. When implemented, the e-Cadastre solution will improve Business processes and change management

programme will be implemented. This is a critical part of customer centric and self-sustaining modern land registration system for the country.

Currently, the paper based land registration system has an estimated annual value of R3 trillion of property transactions, including bonds that are processed through the system.

4.2 National Spatial Reference System

In this year about 1030 reference stations of the national spatial reference framework will be maintained. This includes both the permanent trigonometrical stations and the continuously operating GNSS base stations (Trignet). The maintenance work is conducted by three beacon teams that operate across the whole country.

Although the 'passive' network of reference stations consists of approximately 29,000 trig. Beacons, only about 11,000 of these are now being maintained on a continuous basis. The reason for this is that the cost of maintaining these stations is high and many of them are located in very inaccessible places, such as the tops of high mountains. Also the Trignet stations now provide an alternative to the trig beacons.

The Trignet GNSS network has 68 stations providing a continuous real-time service. The target is to have 70 stations operational by end of March 2015.

The South African Geoid, which has a vertical accuracy of better than 10cm, is aiding in the heighting work undertaken using GNSS methods.

4.3 South African Spatial Data Infrastructure

The Committee for Spatial Information (CSI), the statutory committee established in terms of the Spatial Data Infrastructure Act to oversee the establishment of the national spatial data infrastructure, namely the South African Spatial Data Infrastructure (SASDI), met on four occasions in the past year. The work of the

CSI is supported by 6 sub-committees, namely Policy and Legislation, Data, Systems, Standards, Marketing, and Education. The term of office of the CSI members ended on 30 June 2014 and the new members are still in the process of being appointed.

The electronic data discover facility, or geo-portal, is operational but requires additional functionality to meet all the needs of data custodians and users. To-date four data custodians are actively contributing metadata to the geo-portal.

5. Education and Training

5.1 Training and Development

Experiential training is also provided to students undertaking their diploma studies at the various Universities of Technology. In the current year 46 such students are receiving such structured training.

Geomatics graduates undertaking their professional article training are provided with training in photogrammetry and geo-spatial information science as well as in the surveying environment.

The department continues to train carefully selected Mathematics and Physical Science Matriculants, basics in surveying as Pupil Geomatics Officers. 60 Pupil Geomatics Officers completed their training and graduated on 19 September 2014.

5.2 Bursary students

The department continues to offer bursaries to qualifying students with the aim of increasing the skills pool of Geomatics practitioners in the country. This initiative will help in alleviating the skills shortage in our offices and the country as a whole, as well as creating job opportunities to the youth.

Over 250 students are currently studying surveying and related fields at Universities of Higher Education and Universities of Technology.

During this year, 57 bursary students completed their studies at Universities of Higher Education and Universities of Technology. Of the 57 graduates, 9 are serving employees and have completed their National Diploma studies in surveying and cartography. The remaining 48 graduates are bursary students (prospective employees) and 15 have completed the B. Sc. Geomatics degree whilst 33 graduated on the National Diploma in Surveying.

6. Cooperation with RCMRD

South Africa is currently collaborating in field of remote sensing focusing in the Land Cover project. This collaboration is looking at applying three methods in South Africa, using Kwazulu Natal Province as a study area, while RCMRD are using Lake Victoria basin as a study area. There are four institutions involved in this collaboration research, the Department of Rural Development and Land Reform and Council for Scientific and Industrial Research (CSIR) from South Africa, RCMRD, and USGS. These three methods will contribute to the future mapping of Land Cover in Africa.

7. Other Cooperations and Affiliations

The AFREF Data Centre continues to be housed by the department, in Cape Town. There are 76 stations listed but only about 38 of these stations contribute data on a reliable and continuous basis. This is just a data store and no processing of data is performed.

During this year, the department participated in the meetings and activities of the United Nations Committee of Experts on Global Geospatial Information Management, the International Steering Committee for Global Map, as well as the professional international societies of the International Association of Geodesy and the International Cartographic Association.

The department continued working on the Mapping Africa for Africa initiative and AFREF Project, taking a lead role in these projects.

The department also attended the Twenty Fifth (25th) XXV FIG Congress 2014, held in Kuala Lumpur Malaysia, from 16 to 21 June 2014. The five delegates attended various plenary sessions, commissions, joint sessions and forums and parallel technical sessions together with more than 2500 delegates from 91 countries around the globe.

The 2nd AfricaGEO 2014 conference was hosted by South Africa in Cape Town from 1st – 3rd July 2014. AfricaGEO 2014 was organized by the various South African Geomatics Associations, and enjoyed the full support of; PLATO, SAGI, GISSA, Hydrographic Society of South Africa, Institute of Mining Surveyors of South Africa, the Association of Aircraft Survey Companies and the Department of Rural Development and Land Reform.

South Africa is also engaged in a border inspection exercise with the Botswana government. This exercise is as a result of the Molopo River, which forms part of the borderline, has degenerated into a valley making it difficult to identify the boundary line between Botswana and RSA. A Joint Border Inspection Working Group of the two countries was established to review the Boundary Treaty of 1973, which defines the whole boundary between the two countries. The inspection was intended to give an overview of the status of the international boundary and propose recommendations where necessary. The team has finished its ground work, observations made and noted and the compilation of the report with recommendations is underway.

South Africa is also engaged in discussions concerning the Inland Boundary Beacons Inspection exercise with Namibia. The exercise will be limited to the 20th meridian rectilinear boundary between Namibia and South Africa. A pre-inspection meeting between the two countries was held in South Africa on 19 September 2014. The meeting agreed that, due to difficult terrain and challenging weather conditions in summer, the exercise will be done in phases and will commence during mid-April 2015.

8. Challenges in the mapping and land sector

The biggest challenge faced is to have an adequate number of skilled, experienced technical and professional staff. This requires the filling of vacant posts with the right persons and to ensure that the knowledge base of the organization is not diminished. There are also financial constraints to undertake all the work required to meet the demands of the Country.

9. Future activities

The South African Spatial Data Infrastructure, which is currently data-centric, will, over time, grow into a service-oriented infrastructure, providing the user with the needed information and knowledge. This will include transparent access to information and the fusion of disparate datasets.

The current vertical datum for South Africa is being reviewed to determine whether there is not a more appropriate datum. This has arisen from the increased use of global navigation satellite systems (GNSS).

The national land cover mapping and national land use mapping programme will be extended to cover the whole country with comprehensive mapping every five years, with annual change detection being recorded, provided funding becomes available.

The territory of the Republic of South Africa includes the Prince Edward Islands, which consist of two small islands lying far to the south of the mainland. One of these two islands has never been mapped. It is planned that in 2015 a team of surveyors will undertake survey work on these islands so that they can be properly mapped. This survey operation however depends on permission to access the islands.

The Department of Rural Development and Land Reform has received a proposal to support and participate at Africa Geospatial Forum 2015 to be held during the 18th – 19th August 2015 in Johannesburg, South Africa.