



rural development & land reform

Department:
Rural Development & Land Reform
REPUBLIC OF SOUTH AFRICA

CHIEF SURVEYOR-GENERAL

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REPORT ON THE SCARCE SKILLS TRAINING PROGRAMME UNDER NGMS

REF NO: CSI/7/1

1. PURPOSE

- 1.1 The primary purpose of this report is to comply with a request by the Chairperson of the Portfolio Committee on Rural Development and Land Reform for presentation of a report on the Scarce Skills Programme under the Sub-programme National Geomatics Management Service (NGMS).

2. SUMMARY AND ANALYSIS OF THE SCARCE SKILLS PROBLEM FACING THE NGMS

- 2.1 The Geomatics Profession is still not representative of the South African demographics and requires transformation. One of the current major interventions is the introduction of the Geomatics Bill, which, when enacted, will replace and radically transform the current regulatory statute, namely the Professional and Technical Surveyors Act 40 of 1984, which Act established the present South African Council for Professional and Technical Surveyors, for the control of education, training and discipline of surveyors and geospatial information science practitioners. The Department's Office of the Chief Surveyor-General is the main driver of the Bill.
- 2.2 It is expected that the above mentioned intervention in relation to the governance of the Geomatics Profession would assist in addressing the

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limited and unrepresentative nature of the skills base in the profession and further address the problem of progression and mobility within the ranks.

2.3 In South Africa, there are currently six institutions of higher learning that offer qualifications in Surveying / Geomatics, namely University of KwaZulu-Natal (UKZN), University of Cape Town (UCT), Tshwane University of Technology (TUT), Mangosuthu University of Technology (MUT), Durban University of Technology (DUT) and Cape Peninsula University of Technology (CPUT). Out of the six institutions only two are offering the four-year Bachelor of Science degree in Land Surveying / Geomatics. Those are UKZN and UCT. The rest offer National Diploma (N.Dip) and Bachelor of Technology (B.Tech) qualifications. The N. Dip is a three- year programme which is currently structured in such a way that a student has to complete two academic years in class and one year in a practical environment at the work place. Upon successful completion of the entire course a student may then graduate to pursue a career as a technician. The B.Tech is a one - year full-time or two-year part-time course post N.Dip qualification, which would empower a technician to graduate to the level of Technologist. The four year B.Sc programme leads to professional registration with Council, whose requirements are successful completion of articles (approx. two years) and passing of board exams set by the Council.

2.4 The department's bursary scheme seeks to contribute towards addressing the skills shortage in the area of Geomatics/Surveying by the sponsoring students in their studies at tertiary institutions. This would create a bigger pool of qualified persons to participate in this sector within the department and the country at large, thus increasing capacity required in the land development and management fraternity. The Survey Officer course addresses the skill levels required at the elementary levels of the profession

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and provides both taught and work-based training within the department. For those aspiring to further their studies it provides a good foundation for progress to tertiary qualifications.

3. DEPARTMENT OF RURAL DEVELOPMENT BURSARY SCHEME

- 3.1 The Departmental bursary scheme was established in 2006 under the Directorate Human Resource Development. At the time of its establishment, the Chief Directorate Surveys and Mapping was offering bursaries at a very low scale. The output from Chief Directorate Surveys and Mapping could not meet the required capacity needed by the Department, hence the establishment of the National Bursary Scheme. At the time of its establishment the vacancy rate was high within the Department and staff turn-over was on the rise due to remuneration imbalances between different Government Departments, State Owned Enterprises, private sector and various municipalities. There was therefore a need for aggressive strategy.
- 3.2 During that period student intake at Universities of Higher Learning and Universities of Technology was low to an extent that the University of Cape Town was on the brink of being shut down. The establishment of the scheme boosted the sustainability of the school of surveying in Cape Town. In 2006/07 a Memorandum of Understanding was signed by both the Department of Rural Development and Land Reform (then Land Affairs) and the two Universities to sponsor 20 first year students each year for the next three years, commencing 2007.
- 3.3 The Department awarded a total of 387 bursaries to prospective employees since 2006 to study either a four year B.Sc degree or three year National Diploma in the field of Geomatics/Surveying. Recently we awarded over 5 scholarships to Masters students. Since 2006, 190 students have completed

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their studies in both streams and are all supported by the department to further undertake their articles and permanently appointed in the Department. 22 students were excluded due to poor performance, especially at four year degree level. We currently have 175 prospective employees studying in both streams. The tables below indicate number of graduates since 2007, for both genders.

Row Labels	Female					Female Total
	2008	2009	2010	2011	2012	
African	6	11	19	10	18	64
ND: Carto	2	1				3
ND: Surv	2	9	16	7	14	48
BSc:Geo	2	1	3	3	4	13
Coloured	1				1	2
ND: Carto	1					1
ND: Surv						
BSc:Geo					1	1
White	1	1		1	2	5
BSc:Geo	1	1		1	2	5
Indian	2	1			2	5
ND: Surv		1			1	2
BSc:Geo	2				1	3
Grand Total	10	13	19	11	23	76

Table 1

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Row Labels	Male						Male Total
	2007	2008	2009	2010	2011	2012	
African	5	12	12	34	24	18	105
ND: Carto							
ND: Surv	5	5	8	22	14	10	64
BSc:Geo		7	4	12	10	8	41
Coloured				2	1	1	4
ND: Carto							
ND: Surv				2	1		3
BSc:Geo						1	1
White						2	2
BSc:Geo						2	2
Indian		2	1				3
ND: Surv			1				1
BSc:Geo		2					2
Grand Total	5	14	13	36	25	21	114

Table 2

4. SURVEY OFFICER'S COURSE

The Survey Officer course is a structured in-house course spread over 18 months. During this period, the learners are taught in a class environment and evaluated through tests, assignments and examinations. Learners are expected to do practical work at the office and evaluated on that as well.

The first group was recruited in 2008, only one learner did not complete and 30 continued to tertiary institutions in pursuit of diploma or degree qualifications sponsored By DRDLR.

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The second intake of 65 was in 2010. Of this group 7 resigned before completing the course. The remaining 58 passed the Survey Officers course. Of that group 28 continued to tertiary institutions in pursuit of diploma or degree qualifications sponsored By DRDLR.

The training programme has proved to be beneficial to both the Department as well as other government agencies in terms of capacity building, the individuals themselves being exposed to a new career in Surveying / Geomatics which ultimately increases the number of surveyors in the country.

In order to give value to the course, DRDLR saw it fit to have the course accredited with the South African Qualification Authority and register with Sector Education Training Authority as a training provider. This would ensure that the course is formal, structured and aligned with the National Qualifications Framework at level 4. This qualification will lead to an occupation called Geomatics Technician Officer (currently known as Survey Officer).

The process of accreditation commenced in February 2011 and since then, the following milestones have been achieved.

- Lodgement of application for Qualification Registration with Quality Council for Trade and Occupation: 12 September 2011.
- Registration of lecturers as assessors with Education and Training Authority: 30 September 2011.
- Scoping meeting: 11 October 2011.
- Qualification Development meeting: 24-25 October 2011.
- Consolidation of curriculum development information: 25 November 2011.
- Submission of revised Qualification documentation to Quality Council for Trade and Occupation (QCTO): 5 December 2011.
- Submission of Accreditation Application to Construction Education Training Authority (CETA): 5 December 2011.

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- Acknowledgement of application receipt by QCTO: 10 July 2012.
- CETA site visit: provisional accreditation: 19 October 2012.
- Appointment of trainees for piloting the Geomatics Technician officer course: September 2012.

Role players in the process:

- Quality Council for Trade and Occupation (QCTO) will take responsibility for ensuring appropriate standards and qualifications are generated and submitted to SAQA. QCTO is responsible for recommending Occupational Qualifications to SAQA. (in a manner approved by SAQA for registration on NQF)
- SAQA will only accept qualification from Umalusi, High Education Quality Council (HEQC) and Quality Council for Trade and Occupation, for the purposes of placing the course on the appropriate level of the NQF.
- At this stage the DRDLR is running a pilot programme monitored by CETA and QCTO. The full course cycle is 18months, commencing November 2012. Full accreditation will be issued after all requirements have been met (lecture content, competency tests, practical tests, practical work etc)



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FOR CHIEF SURVEYOR-GENERAL

DATE: 25-02-2013