

A Profile of Higher Education in Southern Africa

VOLUME 2: NATIONAL PERSPECTIVES

Executive editor: Piyushi Kotecha

Editors: Merridy Wilson-Strydom and Samuel N Fongwa

Angola
Botswana
DRC
Lesotho
Madagascar
Malawi
Mauritius
Mozambique
Namibia
Seychelles
South Africa
Swaziland
Tanzania
Zambia
Zimbabwe



A PROFILE OF HIGHER EDUCATION IN SOUTHERN AFRICA

Volume 2: National Perspectives

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SARUA is a not-for-profit leadership association of the heads of the public universities in the 15 countries of the SADC region. Its mission is to promote, strengthen and increase higher education, research and innovation through expanded inter-institutional collaboration and capacity-building initiatives throughout the region. It promotes universities as major contributors towards building knowledge economies, national and regional socio-economic and cultural development, and for the eradication of poverty.

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Foreword

A wealth of quantitative and qualitative data has been assembled in these SADC country profiles and there is much to digest. However, four main observations arise from this compendium.

First, there has been a **tremendous demand for higher education provision** in all Southern African countries. Governments have responded positively to this need and this has resulted in the growth of the number of public and private institutions across the region. In SARUA's 2008 study, a total of 66 public universities, 114 technical universities or colleges and 170 private universities were identified. In the current study these numbers increased to 109 public universities, 526 technical universities or colleges and 456 private institutions. While this may partly be a function of improved reporting, we can nonetheless conclude that there has been considerable growth in higher education provision between 2008 and 2012.

Higher education is being recognised by governments in the SADC region as a key agent for national development after a period of neglect but, from the perspective of policy, investment, planning and innovation, these are still early days. Consequently, many challenges experienced by governments and universities flow from insufficient capacity, inadequate funding resources and a shortage of high-level management skills.

Second, growth in the regional higher education sector brings with it the **concomitant demand for qualified and experienced staff**. This poses one of the biggest challenges for institutional and national policy-makers. To deliver quality outputs, higher education institutions face a tremendous challenge in recruiting, developing, renewing and retaining capable human resources. Dedicated attention and innovative strategies are required to address this critical need in each country, taking cognizance of opportunities that can be harnessed through regional and international collaboration.

Responding to the demand for higher education without addressing the human, infrastructural and technological implications that flow from this response will compromise quality.

Third, it is encouraging to note that countries are increasingly establishing **structures to assist and support the governance and quality of higher education**. These include mechanisms such as tertiary education councils and entities responsible for quality assurance. However, continuing socio-political conflict in a number of countries, as well as cases of ongoing governance conflicts between higher education institutions and the state, undermine the growth of robust, flourishing institutions. The accountability-autonomy nexus is a contested area and differing practices pertain with regard to the powers of the state.

The continuum of institutional and academic autonomy varies a great deal in the legislative and operational domains across the region, a context that requires responsive institutions to contribute to national and regional development. The purpose of higher education governance arrangements, their respective boundaries and their effectiveness will require ongoing review. Interaction, dialogue and reflection amongst all key stakeholders will become necessary as part of the expansion agenda that is surfacing strongly in individual SADC countries.

Finally, this volume highlights the **low levels of internationalisation** of universities in the SADC region. Apart from small strides made in Mauritius, Botswana, Tanzania and South Africa, the data in this volume point to slow, uneven and low levels of regional and international collaboration. Clearly the priorities of most SADC countries remain at increasing country-level participation.

Many regions across the globe are using internationalisation or regional supra-national interventions as mechanisms to complement national efforts to expand and strengthen the contribution of higher education to the knowledge economy. How national, regional and international factors play out, either by design or by default, has important policy implications and could have severe consequences for postgraduate training in SADC countries.

With regard to the research conducted for this study, it is important to respect the integrity of the country profiles as just that. They are, in essence, country profiles, the value of which lies in their longitudinal nature. Over time, it is important that data collection and the gathering of policy perspectives are developed and refined by the individual countries within a systemic framework that can be used for analytic purposes. This function is not fully developed in all the SADC countries and is an important one to integrate in the near future. Each country and the SADC secretariat will need to address this function in a sustainable way. Only then will the region's higher education sector be able to drive evidence-based policy and institutional development for the benefit of all SADC citizens.

In a study of this magnitude there are many people to thank and acknowledge. Sincere thanks to Merridy Wilson-Strydom and Samuel N Fongwa for their excellent research leadership role in steering this study. Their expertise, commitment and stewardship in establishing a regional team of researchers was integral to conducting this study.

A dynamic and dedicated team of researchers participated in this study in various ways. Thanks go to:

- Prof. Leapetswe Malete and Mr Kagiso Kobedi at the University of Botswana, and Dr Godfrey Hampwaye and Dr Liberty Mweemba at the University of Zambia, who collected the data in Botswana and Zambia respectively and prepared the country chapters for these two countries (see Volume 2).
- The research team based at the University of the Free State: Beate Gadinger, Nteboheng Mahlaha, Israel Mawoyo and Lifutso Ts'ephe.
- The translators and research assistants who helped the team communicate with francophone and lusophone countries: Maud Macinkowsky, Evelyn Siyoko, Jorge Costa Mendes de Carvalho and Antonio Fariaf Fundiz.
- Dr Lis Lange (Senior Director: DIRAP, University of the Free State, South Africa) for her guidance and encouragement throughout the research process.

My thanks are also extended to the vice-chancellors and staff with whom the research team worked at the participating universities. Your efforts to gather the comprehensive set of data asked of you is most appreciated. Many thanks also go to the contact people with whom we worked in the ministries of education. Without the support of all these contact people at the universities and ministries this study would not have been possible.

Piyushi Kotecha
CEO: SARUA
November 2012



Researchers and authors

Samuel N Fongwa, originally from Cameroon, is currently employed as a part-time researcher at DIRAP, and is also a research associate with the Centre for Development Support (CDS). After obtaining his MEd with distinction in higher education studies at the University of the Western Cape, he registered for a doctoral degree at the CDS, University of the Free State. He has been involved in higher education research since 2008 and was part of phase one of the Higher Education Research and Advocacy Network in Africa (HERANA) project with the Centre for Higher Education Transformation (CHET). Mr Fongwa's research interests include higher education institutional research, higher education and development policy, and knowledge production and transfer in developing economies.

Beate Gadinger is a dual South African and German citizen and is currently a senior officer at DIRAP. Ms Gadinger's work includes assisting with research projects involving institutional research and academic planning. She obtained a BA in media studies in 2008, an honours in communication science in 2009, and an honours in German in 2011 from the University of the Free State (UFS). She is currently enrolled for a masters degree in higher education studies at the same institution, focusing on attendance and success rates in low-performing modules at the UFS.

Kagiso Kobedi is assistant director (data analysis) of the Institutional Planning Department at the University of Botswana. Mr Kobedi holds an MSc and postgraduate diploma in medical demography from the London School of Hygiene and Tropical Medicine. Having previously worked as researcher at the Tertiary Education Council, as statistician at the Central Statistics Office, and as a lecturer in biostatistics, demography and research at Health Manpower (attached to the Institute of Health Sciences), he obtained a bachelors degree in statistics from the University of Botswana (UB) before joining UB in 2008 as a data analyst. Mr Kobedi has presented locally and internationally at conferences on quantitative demographic models and various issues in higher education, and has co-authored and presented papers on the internationalisation of higher education. His research interests include development and implementation of statistical methods for higher education students' studies, fertility models, census undertaking and participation in research studies.

Nteboheng Mahlaha is from Lesotho and is currently a research assistant at DIRAP. In 2011 she became part of the University of Free State (UFS) SARUA project team, while completing her BA honours in criminology. She holds an undergraduate degree in human and societal dynamics obtained at the UFS in 2010. Ms Mahlaha has been involved as a tutor with the New Academic Tutorial Programme and has held a leadership position at the UFS.

Leapetswe Malete is the director of the Office of International Education and Partnerships at the University of Botswana. Prof. Malete holds a masters and PhD in sport psychology with a cognate in developmental psychology from Michigan State University in the United States. He obtained a

bachelor's degree in humanities and a postgraduate diploma in education from the University of Botswana before joining the University of Botswana in 1994 as a staff development fellow teaching sport psychology and research methods. He has previously served as a visiting research fellow at the University of the West Indies, Mona Campus in Jamaica. Prof. Malete is an author or co-author of numerous peer-reviewed publications, and has presented at many international conferences on sport psychology and international higher education. His research interests are in psycho-social correlates of the involvement of youth in sport and physical activity, with a specific emphasis on achievement goal orientations, socio-environmental influences, and self-confidence or efficacy beliefs. He has received a number of international research grants and served as either co-investigator or project leader in multi-disciplinary research teams.

Israel G Mawoyo is a Zimbabwean who obtained his bachelor of social science in human and social dynamics and an honours in sociology at the University of the Free State (UFS), where he is currently enrolled for a masters in gender studies. His research interests include gender studies and higher education. Mr Mawoyo has worked as a student facilitator for the psychology and sociology departments. His honours degree research focused on the visibility of the Health and Wellness Centre at the UFS.

Liberty Mweemba is an environmental scientist/engineer and a geographer with more than 17 years of experience at both national and international levels. He has been teaching at the University of Zambia since 2003, where he has also taught quantitative and qualitative research techniques. Mr Mweemba has published articles in many high-level international scientific journals and books, and has also spoken at numerous international conferences. His main areas of expertise include climate change and variability, environmental management and planning, environmental education and awareness, assessment of land use and land cover changes, environmental auditing and management, environmental risk assessment, education and ecological design.

Lifutso Ts'ephe is from Lesotho and is currently reading for a masters degree in public management at the University of the Free State. She holds a bachelors degree from the National University of Lesotho, majoring in development studies and sociology, and an honours degree in sociology from the UFS. She worked as a research assistant in DIRAP and is currently engaged in a research project on black women's narratives at UFS.

Merridy Wilson-Strydom is the assistant director of Monitoring and Institutional Research DIRAP. She completed her bachelors and honours degrees in social science at the University of KwaZulu-Natal (Pietermaritzburg), and was awarded a Rhodes scholarship to read for an MPhil in development studies at Oxford University, which she completed in 2001. Ms Wilson-Strydom has been working in the areas of education and higher education for nearly fifteen years, initially at the University of the Witwatersrand, then as an education research consultant, and now in the field of institutional research at the University of the Free State. She has published in several national and international journals and presented her work at conferences. Ms Wilson-Strydom was the lead researcher and project manager of SARUA's first regional higher education profiling study, published in 2008, and has played this role again in the current study. Her research interests include higher education transformation, theories of social justice and their application to higher education, access, and institutional research more broadly.



Acronyms

ACTET	Advisory Council on Teachers Education and Training
ADEA	Association for the Development of Education in Africa
AGRI	agriculture
BAC	Botswana Accountancy College
BCA	Botswana College of Agriculture
BIUST	Botswana International University of Science and Technology
BOTA	Botswana Training Authority
BUS	business, management and law
CBU	Copperbelt University
CEO	chief executive officer
CESSAF	Centre of Excellence for Science Applied to Sustainability
CHE	Council on Higher Education
CHET	Centre for Higher Education Transformation
CNTEMAD	National Centre of Distance Education in Madagascar
COL	Commonwealth of Learning
COLAZ	College Lecturers Association of Zimbabwe
COMESUN	Commission for the Establishment of the University in the North
CTI	Science and Technology Innovation
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
DHI	Danish Hydraulic Institution
DIRAP	Directorate for Institutional Research and Academic Planning
DoE	Department of Education
DRC	Democratic Republic of the Congo
ECR	Euromoney Country Risk
EDSEC	education sector
EDU	education
EMIS	education management information system
ERP	enterprise resource planning
ESDP	Education Sector Development Programme
FDI	foreign direct investment

FET	further education and training
FRELIMO	Liberation Front of Mozambique
FTE	full-time equivalent
GDP	gross domestic product
GEAR	Growth Employment and Redistribution
GER	gross enrolment ratio
GNU	Government of National Unity
HDI	human development index
HDU	historically disadvantaged university
HEA	Higher Education Authority
HEDP	Higher Education Development Programme
HEQAC	Higher Education Quality Assurance Committee
HEQC	Higher Education Quality Committee
HESA	Higher Education South Africa
HRDAC	Human Resource Development Advisory Council
HRDS	human resource development strategy
HSC	health sciences
HUM	humanities and social sciences
ICT	information and communication technology
IEASA	International Education Association of South Africa
IIT	Indian Institute of Technology
IMF	International Monetary Fund
ISAS	Institute of Southern African Studies
ISRI	Instituto Superior de Relacoes Internacionais
LED	local economic development
MCA	Mauritius College of the Air
MDGs	Millennium Development Goals
MESU	<i>Ministère de l'Enseignement Supérieur et Universitaire</i>
MGI	Mahatma Gandhi Institute
MHEST	Ministry for Higher Education, Science and Technology
MIE	Mauritius Institute of Education
MIPAM	Mauritius Institute of Public Administration and Management
MoET	Ministry of Education and Training
MoU	memorandum of understanding
MSCE	Malawi Secondary Certificate of Education
MTHE	Ministry for Tertiary and Higher Education
NAMACO	National Manpower Advisory Council
NAMCOL	Namibian College of Open Learning
NCHE	National Council for Higher Education
NCQF	National Credit and Qualifications Framework
NDP	National Development Plan
NEPRU	Namibian Economic Policy Research Unit
NM-AIST	Nelson Mandela African Institute of Science and Technology
NPHE	National Plan for Higher Education
NQA	Namibian Qualification Authority
NQF	National Qualifications Framework
NSFAS	National Student Financial Aid Scheme

NUL	National University of Lesotho
NVST	National University of Science and Technology
ODL	Open and Distance Learning
OPEC	Organization of the Petroleum Exporting Countries
PGDE	postgraduate diplomas in education
PPP	purhasing power parity
PRSPs	Poverty Reduction Strategic Papers
QAAD	Quality Assurance and Accreditation Division
Renamo	Mozambican National Resistance
SADC	Southern African Development Community
SAIDE	South African Institute for Distance Education
SAQA	South Africa Qualification Authority
SAQA	South African Quality Authority
SARUA	Southern African Regional Universities Association
SET	science, engineering and technology
SGS	School of Graduate Studies
SITRAC Ltd	State Information Training Centre
SKA	Square Kilometre Array
SQA	Seychelles Quality Assurance
SQAM	Standardisation, Quality Assurance, Accreditation and Metrology
SUA	Sokoine University of Agriculture
TCU	Tanzania Commission for Universities
TEC	Tertiary Education Commission, Seychelles
TEC	Tertiary Education Council, Botswana
TEMIS	tertiary education management information system
TEP	tertiary education policy
TEVET	Technical Education, Vocational and Entrepreneurship Training
TEVETA	Technical Education and Vocation Training Authority
TVET	technical and vocational education and training
UAN	University of Agostinho Neto, Angola
UB	University of Botswana
UBLS	University of Botswana, Lesotho and Swaziland
UBS	University of Botswana and Swaziland
UDSM	University of Dar es Salaam
UEM	Eduardo Mondlane University
UFS	University of the Free State
UIS	UNESCO Institute for Statistics
UNAM	University of Namibia
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNISA	University of South Africa
UniSey	University of Seychelles
UNISWA	University of Swaziland
UniZambeze	University of Zambezi
UoM	University of Mauritius
URT	United Republic of Tanzania

UTH	University Teaching Hospital
UTM	University of Technology, Mauritius
WEF	World Economic Forum
WTO	World Trade Organisation
ZAOGA	Zimbabwe Assemblies of God Africa
ZIMCHE	Zimbabwe Council for Higher Education
ZIMDEF	Zimbabwe Manpower Development Fund
ZOSS	Zimbabwe Occupational Standards Service



1 Introduction

SADC's vision is that of a common future, a future within a regional community that will ensure economic well-being, improvement of the standards of living and quality of life, freedom and social justice and peace and security for the people of Southern Africa. This shared vision is anchored on the common values and principles and the historical and cultural affinities that exist between the people of Southern Africa (www.sadc.int).

Building a common future within a regional context demands a shared understanding of the region, but also of the nation states making up that region. The same can be said of regionalisation in the context of higher education specifically.

Volume 1 of this study presents a detailed account of public higher education at the regional level. While such an understanding is of critical importance for enhancing regional collaboration and co-operation in the higher education sector, important national contextual details and specificities are lost in the process of presenting a regional picture.

This second volume of SARUA's ground-breaking work on regional higher education profiling sets out to present the national higher education context and perspectives of each of the 15 countries making up the SADC region. This is particularly important given the diversity of the region. A few key ranking indicators are shown in Table 1 below to highlight this regional diversity.

We see that, with respect to per capita gross domestic product (GDP) world rankings, the region includes the Seychelles with a ranking of 38 at one end and the DRC ranked 183rd at the other end. Similarly, with the human development index (HDI) and the world HDI ranking, the region shows a wide distribution of human development performance. As for GDP world rankings, Seychelles leads the way with an HDI ranking of 52, closely followed by Mauritius (ranked 77th), while Zimbabwe is placed at 173, Mozambique at 184, and the DRC at 187. While South Africa performs relatively well on the GDP world rankings (78th), the country's performance on the HDI ranking is much lower (123rd) due to the persistently high levels of poverty and inequality within the country. These contextual differences have an impact on public higher education, the form it takes, its development and the role accorded to the sector in national development. Building a common understanding of the interaction of such factors at national level is the focus of this volume.

Much has been written about the SADC region, its history, development trajectory and current positioning within the continental and global socio-economic and political contexts (for some examples see Hahn 2005, Sawyerr 2004, SADC 2009, UNESCO 2010, Ngwenya 2011 and Butcher et al. 2008). This volume does not seek to present another version of such work. Instead, the focus here is on analysing and showcasing the data collected from the ministry of education and public universities in each country in order to deepen the understanding of regional higher education situated within local realities.

Table 1: Gross domestic product per capita and human development index in SADC countries

SADC countries	GDP per capita (PPP terms in US\$)*	GDP per capita world ranking*	HDI**	HDI world ranking**
Angola	5 895	108	0.486	148
Botswana	16 030	55	0.633	118
DRC	348	183	0.286	187
Lesotho	1 960	150	0.450	160
Madagascar	934	173	0.480	151
Malawi	860	175	0.400	171
Mauritius	14 954	62	0.728	77
Mozambique	1 085	170	0.322	184
Namibia	7 363	99	0.625	120
Seychelles	24 726	38	0.773	52
South Africa	10 973	78	0.619	123
Swaziland	5 305	115	0.522	140
Tanzania	1 515	158	0.466	152
Zambia	1 611	156	0.430	164
Zimbabwe	487	181	0.376	173

Sources: *IMF (2011), **UNDP (2011)

Research procedure

This study surveyed public universities in all 15 SADC countries and also attempted to map the prevalence of private higher education in the region. The ministries of education in each country were approached to provide policy information as well as to respond to a series of questions about higher education set out in the study questionnaire. The public universities were approached individually to provide a comprehensive set of institutional data. This was not possible for private institutions, given the lack of information currently available on the scope of the sector.

The primary purpose of the study was to update the profiling data on public universities in the region that was published by SARUA in 2008. The secondary purpose was to obtain information about the numbers of private higher education institutions currently operating in the region, and to lay the basis for future research in this area. Where information about private higher education was provided by participating ministries, this has been included in the country chapters presented in Volume 2. However, the data collected through the mapping of private higher education was not sufficient for a meaningful regional analysis at this stage.

The following steps were followed in the collection of data:

1. The university and ministry of education questionnaires used in SARUA's first study were reviewed and updated as needed. Care was taken to ensure that the revised versions would still allow for the collection of longitudinal data. Questionnaires were translated into French and Portuguese and all communication was in English, French or Portuguese depending on the countries in question.
2. A letter from the SARUA CEO informing the ministry responsible for higher education in each of the 15 countries was prepared and sent to each ministry, together with a statement of support for the study that the ministry was asked to consider signing. Signed statements of support were received from eight of the countries.
3. SARUA provided a list of 72 public universities in the region to the research team and letters from the SARUA CEO were sent to all vice-chancellors informing them of the study and requesting their support. Where statements of support had been provided by ministries, these were attached to the letter.
4. Approximately two weeks later the questionnaires, with accompanying explanatory letter, were sent out to all 72 universities and the ministries of education. No questionnaire was sent to the ministry in South Africa because all the information asked in the ministry questionnaire could be sourced from national policy documents.

5. An extensive follow-up effort via email and telephone was carried out over a period of about nine months. As was documented in the previous SARUA study, many challenges were encountered with respect to finding accurate contact details for the appropriate people within ministries and universities, and often several emails and telephone calls were needed to establish the correct contact person. Where the research team experienced difficulties in receiving responses, additional follow-up letters were sent out by SARUA to encourage response.
6. During the course of data collection, it emerged that Angola has six public universities and not one as originally indicated on the initial list, and that the DRC in fact has 36 public universities and not five as was originally thought. At a fairly late stage in the study, these additional universities were included in the research and the relevant letters and questionnaires sent out. The same follow-up procedure was followed, although the amount of time available was limited due to the need to conclude the study. See Table 2 below for a summary of the responses received per country.
7. Whilst data collection and follow-up was in process, the research team conducted a comprehensive literature review (Fongwa and Wilson-Strydom 2012) as well as a review of the websites of the ministries of education and the universities. This website review included the collection of data on the vision and mission statement of the public universities as well as relevant policy documents and other information. This broader source of secondary data informed the writing of the country chapters in this volume as well as this regional review in Volume 1.
8. Data obtained from the ministries and the universities were captured in a spreadsheet which included automated verification calculations that alerted the research team to data points that were inaccurate or needed further explanation or verification. Verification requests were sent back to the universities, mostly via email and sometimes telephonically. In some cases universities responded with corrected data, but often no further data were provided. Where data appear inconsistent and could not be verified, specific explanatory notes are included in the analysis presented.

Limitations

As noted above, despite the contributions that this profiling work makes towards a regional understanding of higher education, there are some important limitations that need to be considered when interpreting the profile data.

The fact that this profiling work includes all the public universities in the region is a key strength of the study, since data at this breadth are not readily available. However, this extensive university coverage is also a limitation since the wide scope of working with 108 universities limits the quality of follow-up and verification of the data collected that would be ideal, and which would be possible when working with a sample of universities or with a much larger research budget. As already discussed, it was not possible to appoint in-country research teams in all the SADC countries. Ideally, in-country research teams would be in a position to visit the universities in the country and verify the data provided by each institution. This level of detail is not possible in the context of a study conducted by a small organisation such as SARUA. This should be borne in mind by the SADC Technical Committee on Higher Education when planning for ongoing regional data-gathering exercises. Furthermore, given the many challenges related to data availability, accuracy and timeliness, it would have been ideal if the study could have included a greater element of capacity-building in the areas of institutional research and national higher education statistics.

As shown in the profile (and also discussed briefly in the literature review section below), the private higher education sector is growing tremendously in the region. This is due to the high levels of demand for university places that cannot be met by the public sector. However, little is known about where private universities are functioning, the programmes on offer and the quality thereof. Thus SARUA used this opportunity to conduct exploratory research into private higher education. Ministries of education in this study were asked to provide the number of private institutions operating in their countries, a list of the names of private institutions, as well as an estimation of the proportion of students enrolled in private institutions. Some countries were able to provide relatively comprehensive data in this regard, but others still have sketchy understandings of private provision.

Table 2: Summary of responses received per country

Country	Number of public universities	Number of university responses received	MoE response received?	Notes
Angola	6	1	No	At the outset of the study only one public university was included. An additional five were identified during the research and questionnaires were sent to them towards the end of the study. No additional responses were received.
Botswana	2	2	Yes	
DRC	36	6	Yes	There were originally only five universities included in the study, as per the list provided by SARUA. However, based on the response of the Ministry of Education, it was discovered that there are 36 public universities in the DRC. Questionnaires were then sent to all of the additional universities. Three responses came in from the original five universities targeted and three responses came in from the additional 31 universities included.
Lesotho	1	1	Yes	
Madagascar	6	4	No	
Malawi	2	1	Yes	The university that did not submit a response did provide data in the SARUA 2008 study. This data have been incorporated into this analysis.
Mauritius	2	2	Yes	
Mozambique	5	3	No	
Namibia	2	2	Yes	
Seychelles	1	0	Yes	The University of Seychelles is a very new university. As such, it was not appropriate for the university to provide data for this study. However, the ministry response was comprehensive and provided a useful overview of higher education in the country.
South Africa	23	12	Yes (policy)	Although only 12 universities submitted responses, HEMIS data for students and staff were available and thus, in most instances, data for all 23 universities are presented in this review.
Swaziland	1	1	Yes	None
Tanzania	9	8	Yes	Only one university did not respond, the Open University of Tanzania. This university did provide a response in the previous study and the data have been incorporated in the analysis presented in this review.
Zambia	3	3	Yes	
Zimbabwe	9	8	Yes	Only one university did not provide a response. Unfortunately this university also did not respond in the previous study and thus no data are available.
Total	108	54 (excluding SA HEMIS data) or 65 (including SA HEMIS data)	12 ministry responses	Ministry response rate is 80%. University response rate is 50% (60% including HEMIS data). If one considers only the 72 universities included in the original list provided by SARUA, the response rate is 75%. These response rates exclude the university data from the previous study that were integrated with the current data.

In the current study universities were asked to provide data for the 2010 academic year. In most instances data submitted referred to 2010, but there were some examples where universities did not have up-to-date information available and hence sent through data from previous years. In addition, as noted above, where universities did not submit a response for this study, but did submit data for the 2008 study, the data from the earlier study have been incorporated to ensure as

comprehensive a profile as possible. As a result, the higher education profile presented in Chapter 4 of Volume 1 should be seen as the closest possible estimate of data for the 2010 academic year.

A final limitation concerns the data on private higher education provision in the SADC region. As shown in the profile (and also discussed briefly in the literature review section), the role of private universities is becoming increasingly important and needs to be better understood. SARUA has conducted some exploratory work in this regard (Pillay 2011), but there are still many gaps in our understanding of private higher education. It was beyond the scope of this study to include private higher education institutions. Thus, when the review refers to higher education in the SADC region, this is limited to public higher education.

2 Angola

Compiled by Samuel N Fongwa

COUNTRY CONTEXT STATISTICS	
	Population: 19.6 million (2011)
	GDP per capita: US\$6 000 (2011)
	Human development index: 0.486
	Unemployment: >50% (2011 est.)
	Key economic sectors: oil and gas, trade and commerce, services, agriculture, forestry, fishing
	Principal exports: crude oil, diamonds, refined petroleum products, coffee, sisal, fish and fish products, timber, cotton
	HIV and AIDS prevalence: 2% (2009)
	Gross primary enrolment ratio: 124% (2010)
Gross secondary enrolment ratio: 31% (2010)	
Gross tertiary enrolment ratio: 14% (2010)	
Country context data were obtained from a variety of sources: CIA (2012), UNAIDS (2011), UNDP (2011), UNESCO Institute for Statistics (2011)	

This profile summarises the higher education landscape in Angola in recent years as the country tries to consolidate the gains of a peaceful settlement of the protracted civil war and embarks on a process of national reconstruction and socio-economic development. The role of higher education in these processes was reiterated recently by the Angolan President, José Eduardo dos Santos, who defended the changes currently taking place in the higher education system, arguing that ‘the revision of the educational system that we implement aims to reorientate the courses according to the needs of development of the country and its provinces and regions’ (AngolaPress 2012c).

As economies across the globe join forces in forming regional blocs to address economic and financial challenges and opportunities, higher education institutions are also coming together to form more comprehensive regional bodies to jointly address challenges within and beyond the sector and to contribute to national and regional development imperatives (Oyewole 2009). This chapter provides an overview of the level of regional and international collaboration within the SADC higher education system with an emphasis on Angola.

As was discussed in the introduction to this collection of country profiles, the overall study made use of two questionnaires. The first was sent to the Ministry of Higher Education in Angola, and the other to the participating universities. Despite a comprehensive follow-up process, including an attempt to appoint an in-country researcher, no completed questionnaire was received from the Ministry of Higher Education and only one of the six universities included in the study submitted a response. The university response received was only partially completed and the data provided contained a number of inconsistencies. Secondary data and other relevant resources were therefore used to provide an overview of the general higher education environment in Angola. The fact that all but one of the universities are still very new, is likely to mean that they did not have adequate data to contribute to the study. As a result, the data were insufficient and could not provide a general overview of the different aspects of interest within the Angolan higher education landscape. A decision was therefore made to exclude the data in this chapter. The data were replaced by a

literature search conducted to track what has been happening within the higher education environment since the previous SARUA study (Kotecha 2008). General media and available governmental documents were used to gather information, on the basis of which an emerging picture of higher education in Angola could be presented.

National socio-economic and political context

The socio-economic and political landscape of Angola continues to recover from the 27-year civil war that plagued the country immediately after independence from the Portuguese in 1975. Caught in the Cold War struggles, anti-government factions fought against government troops. Each side was supported by local and international individuals, organisations and nations with different interests in the country and its natural resource deposits. Following the end of the civil war in 2002 and the signing of the memorandum of understanding, the country embarked on construction and resettlement programmes for the millions of people who were displaced during the war. One major socio-economic impact of the war is the poor conditions under which the majority of the population continues to live. Another is the huge number of academics and educated Angolans who were forced to flee the country during the war.

In the years following the war, Angola discovered huge oil deposits and in 2006 became a member of the Organization of the Petroleum Exporting Countries (OPEC). Due to high production, the country quickly became the largest oil producer in sub-Saharan Africa, the second-largest economy in the SADC region, and among the three fastest growing economies in the world (ADB 2011a). With close to 60 per cent of national GDP coming from oil and gas, exploration has supported the rapid growth of the non-oil sector, which has now out-performed the oil sector during the last couple of years (ADB 2011b). Angola currently has a population of more than 19 million people, about 4.5 million of whom live in the capital city Luanda. The country has a GDP per capita (in purchasing power parity terms) of above US\$6 000, making it one of the strongest economies in the region and the continent. Although Angola can boast one of the fastest-growing economies, more than two-thirds of the population live below the poverty line, with about 28 per cent living in extreme poverty and only 30 per cent having adequate access to healthcare services (CIA 2012). This is evident with malaria accounting for over 77 per cent of all deaths and a doctor-to-patient ration of about 1:10 000. The government has embarked on a programme to construct health and other social facilities for citizens (UNDP 2009).

Due to the high number of skilled Angolans who left the country during the war and the dire poverty levels that persist in the country, another key feature of the Angolan economy is the high rate of remittance received by Angolans. These remittances come from a range of countries, with South Africa and Portugal being two of the main sources, as they were the destinations of many Angolans during the migration. In a 2008 study of remittance flow into Africa, it was realised that Angola was the highest Central African country and the second-highest of four SADC countries in terms of remittances, receiving US\$969 million (2.2 per cent of GDP). South Africa received US\$1 489 million dollars (0.6 per cent of GDP), Lesotho received US\$355 million (24.1 per cent of GDP) and Swaziland received US\$89 million (3.4 per cent of GDP) (Tinajero 2009). Many families in Angola, and other SADC countries, depend significantly on remittances from abroad.

Research on human development indexes argues that Angola is plagued with a high corruption level, poor human rights and limited freedom of speech. Transparency index ratings ranked Angola 160th out of 180 countries surveyed. This has been confirmed by a survey by the Heritage Foundation, which ranks Angola as 153rd out of 179 countries. The government has been quick to enact policies to clamp down on corruption, leading to a number of high-profile cases and indictments (Tinajero 2009), but Human Rights Watch recently denounced high levels of government restrictions on the freedom of expression around the Head of States Summit in Angola in 2011, during which journalists and other media representatives were deprived of rights of expression and other basic rights. The African Director at Human Rights Watch called on the country and the region to address the situation, stating that 'the obstructive behaviour highlights the restrictive and repressive environment in Angola, which itself should be on the SADC's agenda' (Human Rights Watch 2011).

From a policy perspective, Angola has initiated a number of policies and strategic papers to address national socio-economic development. One of these policies is the Plan for Sustainable

Development 2009–2013, a national development plan whose overall objective is to ‘achieve growth with diversification, to fight hunger and poverty and the reduction of poverty’ (Plan for Sustainable Development 2009–2013). The plan outlines eight priority sectors as the focus for national development, but does not include education (or higher education), focusing instead on the macro-economic aspects of society. A World Bank study (Bloom et al. 2006) observes that no reference is made to higher education in the country’s Poverty Reduction Strategic Papers (PRSPs). From a higher education perspective, there is therefore a disconnect between national development planning and the higher education sector, despite some recognition of the role of higher education in national development.

One of the main higher education policies in Angola is the ‘Lei Nº 7/03 de 17 de Junho, 2003, Diário da República, I Série nº4717.06.2003’ which establishes three main structures for post-secondary education: the Council of Higher Education, the National Directorate for Technical and Professional Education and the Directorate for Higher Education. A close study of the objectives of the council and the directorates reveals that only the Directorate for Technical and Professional Education states an expectation to make an active contribution to national socio-economic development. The Council and the Directorate of Higher Education are expected to ensure quality in the higher education system (SARUA 2009). With the increasingly important role that higher education has to play in national transformation and development (as acknowledged in Angola), there is a need for policy reconciliation between national development policy and higher education policy to strategically situate higher education, recognising the national and regional contribution it can make in a country which is fast becoming a major role-player in the region and the continent.

There are a number of government efforts aimed at improving the access, quality and relevance of higher education in national development in Angola. There is, however, lack of evidence of a clear policy-steering and co-ordination between sectors and within the region.

Higher education landscape

Recent developments and debates in higher education

Due to the protracted civil war that not only limited the development of higher education, but also forced many academics to leave the country, higher education in Angola can be considered to be in its defining phase. A significant milestone is the importance that the current government is placing on higher education and the level of growth the sector has experienced (and continues to experience) in less than a decade.

At the practical level, Angola has witnessed a significant rise in the number of secondary and post-secondary or vocational colleges. Starting with only two universities in 1998 – the University of Agostinho Neto (UAN) and the Catholic University – the Angolan President recently highlighted the fact that there are over 17 universities and 44 higher education institutions across the country. This has been supported with government spending over US\$480 million in the establishment and running of 53 new schools and technical professional training (SARUA 2009).

In 2012, more spending is expected by the Angolan government through the provision of student scholarships and bursaries to support the growth of higher education. This was announced by the Minister of Higher Education, Science and Technology, who stated that ‘the Angolan government is to create 6 000 new bursaries in 2012 as part of its policy to promote education’. This new figure will add to the 2 405 students who are already studying abroad (1 965 studying towards bachelor’s degrees, 146 for masters and 294 for doctoral degrees in different countries).

On 12 September 2012 a media report indicated that the government had identified an urgent need for all Angolan citizens to participate in higher education, as this plays a pivotal role in ‘harmonious’ sustainable development in the country (AngolaPress 2012a). According to the report, a top official at José Eduardo dos Santos University stated that:

the quality of wealth and poverty depends on the quality of education ... The economic and social development of a country requires firstly to develop university education, based on a strong scientific and academic performance of students (AngolaPress 2012a).

He argued that the development of higher education is the responsibility of every Angolan citizen, and not just some executives.

With gender being a significant factor in higher education access and throughput, the Angolan government has taken significant policy initiatives not only to increase access for women in higher education, but also to facilitate access to scientific research and innovation. On the occasion of the 28th National Science and Technology Innovation (CTI) policy, the Minister of Higher Education, Science and Technology emphasised that the specific objective of the policy was to address 'issues related to promoting and ensuring women's participation in the activities of the CTI,' reiterating that this policy and new path will 'open the road to increasing the number of Angolan women in scientific careers, producing scientific knowledge and enriching national scientific community at regional and international levels' (AfricaSTI 2012).

Still in a bid to situate higher education in its development efforts, Angola is hosting the newly established Centre of Excellence for Science Applied to Sustainability (CESSAF). The University of Agostinho Neto, based in Luanda, will be hosting this first African centre for sustainable development. The centre is expected to provide research and training opportunities for scientists throughout sub-Saharan Africa through expert training and sharing of cutting-edge knowledge between different countries (Makoni and Sawahel 2011). The Minister of Higher Education, Science and Technology also recently inaugurated a new polytechnic in the Southern Huíla Province.

Over and above the huge oil, gas and natural minerals with which the country is endowed, the Angolan government and the higher education system have made significant efforts to align their development and reconstruction process to knowledge, higher education and innovation. However, most of these efforts are initiated by different ministries and sectors and there is little co-ordination by the government through a central body or framework.

Regionalisation

Angola, with Portuguese as its official national language, is making significant strides in forging partnerships of academic and scientific collaboration with institutions and countries within and beyond the African continent. CESSAF was created to bring together experts, students and academics from different parts of Africa and Europe (in particular the UK) to share cutting-edge knowledge on environmental management. The centre will serve as a base for regional collaboration through international conferences and workshops. Furthermore, a central database of information on issues relevant to African earth sciences research will be initiated, aimed at promoting networking and collaboration between various research centres in Africa.

A number of collaboration activities exist with other universities, including the memorandum of understanding which was recently signed between the Danish Hydraulic Institution (DHI) and the UAN. According to the document, 'the agreement will enable the Angolan institution to have access to the technologies produced by DHI used in the training and academic research' (AngolaPress 2011). Elsewhere, there has been an agreement between higher education in Angola and the Paraguay higher education system to admit and attract more Angolan postgraduate students. This was announced by the President of Angolan students in Paraguay, who noted that 'over 50 Angolan citizens are attending masters and doctoral studies in Paraguay as there are better study conditions'. Hence it appears that there is a sense of the value of collaboration within the higher education system in Angola.

In the SADC region, besides being a signatory to the SADC Protocol on Higher Education and Training, Angola forms part of the SADC Open and Distance Learning (ODL) project which was initiated in 2007. The project aims, among other things, to emphasise the need for a multi-faceted approach to capacity-building in ODL, such as in the areas of developing policy frameworks, training and the establishment of institutional structures to enhance collaboration.

Angola also has close collaboration with universities and higher education systems in the SADC region. Major collaborators are South Africa and Mozambique with whom there have been agreements of co-operation. While this co-operation falls within the SADC Protocol on Higher Education and Training, no clear policy statement has been made to align Angolan higher education policy and planning to the SADC Protocol.

In an extraordinary meeting of SADC ministers of education and training, which top representatives from the Angola education sector attended, the 'urgency to expand the enrolment and access to higher education' was underscored. This included expanding the use of information and communication technologies (ICTs) and enhancing their quality and relevance for higher education as well as the socio-economic and human development demands of the SADC region (Press Release 2012a). The Angolan government has also stressed the role and importance of higher education in national development, albeit with less emphasis on collaboration with regional institutions and systems.

At the start of the 2012 academic year the vice-president of Angola used the slogan 'Higher education: towards quality teaching and research for national development' to stress the importance of higher education in achieving national development (AngolaPress 2012b). While Angola in its reconstruction and development process has significantly increased the number of higher education institutions reflecting SADC's policies and objectives for increased access to quality higher education, there is little evidence of clear national or institutional policies aimed at aligning higher education planning with SADC protocols and targets. This can also be attributed to the weak higher education regulatory system in Angola which is still under development.

Enabling and hindering influences on regionalisation

Looking at the hindrances to regionalisation, a major actual and potential hindrance to the level of collaboration and partnership between Angolan higher education, academics and other universities in the region is the language barrier. With Portuguese as the main language of communication in a region that is dominated by English-speaking academics, policies written in English and the majority of the universities speaking English, it becomes challenging (if not intimidating) to engage in any significant collaboration. Coming from a context of recent socio-political unrest, the country also faces significant development challenges which could be the reason for an initial focus on structuring and consolidation of the national higher education sector before opening up to regional collaboration and harmonisation. This concern has been echoed in a recent study which concludes that for Angola 'the main focus and priority is – and has to be – domestic reconstruction and development. There is still a long way before Angola can fully benefit from and contribute to regional co-operation and integration' (Tjønneland 2011:21). While the focus of the study was on infrastructure, it can also be observed in other areas of the economy and society, including higher education.

Conclusions

The growth of higher education in Angola, from only two universities (one public and one private) in 1998 to more than 60 institutions (including 17 universities) at present is a clear indication of the importance that has been placed on higher education. The increase in the number of institutions has been closely followed by an increase in government spending through bursaries and scholarships, providing academic support facilities aimed at situating higher education in the development role it needs to play in the country's recovery and development pathway. But in spite of the rapid development in structures, higher education in Angola continues to lack the human capacity to carry the national structures needed to govern higher education. There is therefore a need to establish policies of quality, control and co-ordination of the higher education sector.

It can be argued, based on the information available, that there appears to be a fair level of collaboration between Angolan institutions and other universities, institutions and higher education systems across the globe. This shows a conscious effort to break the language barrier and seek to communicate, share knowledge and scientific resources with other academics across different socio-cultural barriers. However, there appears to be less effort to collaborate with African universities, and particularly those in the Southern African region. This lack of regional commitment might also be evident in the poor level of response from the universities which were contacted as part of this study.

3 Botswana

Compiled by Leapetswe Malete and Kagiso Kobedi

COUNTRY CONTEXT STATISTICS	
	Population: 2.0 million (2011)
	GDP per capita: US\$16 200 (2011)
	Human development index: 0.633
	Unemployment: 17.8% (2010 est.)
	Key economic sectors: mining, manufacturing, agriculture, tourism
	Principal exports: diamonds, copper, nickel, soda ash, meat, textiles
	HIV and AIDS prevalence: 24.8% (2009)
Gross primary enrolment ratio: 110% (2009)	
Gross secondary enrolment ratio: 82% (2009)	
Gross tertiary enrolment ratio: 7% (2006)	
Country context data were obtained from a variety of sources: CIA (2012), UNAIDS (2011), UNDP (2011), UNESCO (2011).	

Since its independence in 1966, the economy of Botswana has maintained one of the highest growth rates in the world. Despite a drop in growth below 5 per cent in the 2007–2008 financial year and subsequently a sharp negative shift in 2009, the country has one of the most stable growth rates in the region, although the 2009 economic downturn witnessed a near 30 per cent fall in overall industry output.

Through fiscal discipline and proficient management, Botswana has transformed itself from one of the poorest countries in the world to a middle-income country with an estimated per capita GDP of \$16 200 in 2011 (CIA 2012). Two major investment services rank Botswana as the best credit risk in Africa. Diamond mining has fuelled much of the expansion and currently accounts for more than one third of GDP (accounting for between 70 and 80 per cent of export earnings, and half of the government's revenues). Botswana's heavy reliance on a single luxury export was a critical factor in the sharp economic contraction of 2009. Tourism, financial services, subsistence farming and animal husbandry are emerging as key sectors.

In spite of the significant economic growth, a more holistic picture of Botswana reveals a country faced with numerous social challenges. Botswana was ranked 118 out of 187 countries in the 2011 human development index (HDI). According to the African Development Bank (ADB 2009), Botswana experienced a drop in HDI ranking in recent years, and this is closely linked to the high HIV prevalence in the country (the second highest in the world). Besides the high HIV/AIDS prevalence, Botswana faces other major social challenges, including high poverty rates, inequality and unemployment. The high unemployment rate largely reflects the narrow base of an economy dominated by the mining sector which has only limited linkages with other activities.

Improved healthcare has impacted positively on the welfare of the Botswana population. Both infant mortality rates and the number of underweight children below the age of five dropped steadily between 1996 and 2008. The maternal mortality rate also declined substantially, from 326 deaths per 100 000 live births in 1991 to 198 in 2008. Botswana has consistently improved its health

service infrastructure and facilities, and has increased the employment of qualified physicians and other medical personnel. The health infrastructure network consists of 31 hospitals, 243 clinics and 340 health centres. By 2009, more than 95 per cent of the population had access to a health facility within a radius of eight kilometres. The proportion of the population with access to potable water and sanitation was 95.8 per cent (compared to 79.8 per cent in 2007), with the prospect of further improvement following continued investment in social services (BFHS 2007).

Botswana enjoys a stable political environment, based on a representative parliamentary system. The president is head of both state and government. Botswana is a multi-party constitutional democracy where elections since independence in 1966 have been freely and fairly contested and held on schedule. The country has an Independent Electoral Commission whose mission is to facilitate the formation of democratically elected governments by providing transparent, free and fair elections in accordance with the established legal framework in Botswana and with internationally accepted standards and principles.

Higher education landscape

This section highlights the key initiatives and policies that have shaped the higher education landscape in Botswana since independence.

Brief historical overview of higher education

Higher education in Botswana began in 1964 with the establishment of the regional University of Basutoland, Bechuanaland and Swaziland, subsequently renamed University of Botswana, Lesotho and Swaziland (UBLS), with its campus in Roma, Lesotho. Following the breakup of UBLS in 1975, Botswana and Swaziland established the University of Botswana and Swaziland (UBS), comprising the University College in Gaborone (specialising in economics, social studies and natural science) and the University College in Kwaluseni (which offered law).

Co-operation between the two countries and their colleges remained high with a free interchange of students and a common vision for tertiary education which, at the time, was seen as playing an increasingly important role in national development, not only by providing the necessary skilled human resources, but also by using the university as a focus for academic and cultural activities. At the same time, both colleges concentrated on developing their infrastructural and academic resources. In 1982, UBS was dissolved and separate universities were established in each country: the University of Botswana, and the University of Swaziland. After the split, co-operation remained high with student exchanges and special consultative mechanisms established between the two institutions.

In 1990, a major review was undertaken of the organisation, management and structure of the University of Botswana (UB). This led to considerable changes in governance, starting with the creation of new faculties of business, engineering and technology, and subsequently a school of graduate studies, bringing the total number of faculties to eight. The Botswana College of Agriculture (BCA), which awards degrees through UB, functions as an autonomous ninth faculty. The Okavango Research Institute (formerly the Harry Oppenheimer Okavango Research Centre, established in 1994) attracts post-doctoral researchers from different parts of the world. The institute offers excellent research facilities.

National higher education policy context

Botswana's higher education system is highly centralised and faces significant co-ordination challenges. There is no ministry of higher or tertiary education, nor does the Ministry of Education and Skills and Development have a higher education desk (although there is talk of plans to set up a higher education desk within the ministry in the near future). Currently, public higher education institutions are the responsibility of different ministries and departments of government, while private institutions run independently of government control, except for the oversight role relating to ensuring academic quality and curriculum development under the Tertiary Education Council (TEC). Concerns about programme quality and poor regulatory framework were raised in the Report of the National Commission on Education of 1993, which recommended the setting up of the TEC to formulate policy and co-ordinate tertiary education provision. The fragmented tertiary education provisions in Botswana have resulted in major inequalities and uneven development of institutions.

Some institutions are well governed, well resourced and have good quality facilities and programmes, while others are underdeveloped, poorly governed and managed. They lack well-trained staff, facilities are inadequate and poorly maintained and the staff lack opportunities for further development. Only degree-awarding public institutions and a few diploma-awarding institutions (such as institutes of health sciences and some colleges of education) seem to enjoy a resource environment suitable for teaching, learning and research at tertiary level. A significant number of public and private institutions do not have resources to match their level and description.

Besides the TEC, there are a number of bodies within the education and training sector that have a separate responsibility for quality assurance and academic standards. These include the Botswana Training Authority, the Botswana Examination Council, the Quality Assurance and Assessment Unit within the Ministry of Education, the Nursing Council, the Chartered Institute of Management Accountants and the Association of Chartered Accountants. In 2002 the TEC developed a draft policy for tertiary education in Botswana, which proposed a set of regulations for the registration of public and private tertiary education institutions operating in Botswana. By the end of 2006 the TEC had registered 18 of the estimated 30 public and private tertiary institutions operating in the country at the time. Other activities of the council have included the formulation of a funding strategy and allocation formula, both of which are expected to change the current management and funding regimes for tertiary education in Botswana.

In 2006 the Ministry of Education set up a consultancy to formulate the development of the National Qualifications Framework (NQF). The report of the consultancy came up with the proposal to establish a National Credit and Qualifications Framework (NCQF) with ten levels, beginning from pre-school to a doctoral qualification. The ministry is currently designing the structure and location of the NCQF. It is clear even at this early stage of their operations that both the TEC and the NCQF will have transformative effects on the tertiary education landscape in Botswana, but it is too early to tell the real impact of these changes. To this point, the TEC's registration of institutions, especially private tertiary institutions, seems to have already opened the door for the highly desired but long denied government sponsorship of students to these institutions. It has also created a greater awareness of the need to pay attention to quality assurance and academic standards in curriculum development and resource allocation before new programmes can be approved.

Size and shape of higher education

Number of public higher education providers

Botswana's tertiary education system has two major public universities: the University of Botswana (UB) and the newly established Botswana International University of Science and Technology (BIUST) which opened its doors to students in March 2011. There are 23 publicly-funded technical colleges. Colleges offering four-year degrees, masters degrees and professional qualifications include the Botswana Accountancy College (BAC) and the Botswana College of Agriculture (BCA); colleges of education offer a three-year diploma; vocational schools (known as brigades) offer certificate or diploma courses; technical colleges offer advanced certificates and diplomas in technical fields; and institutes for health sciences offer health-related non-degree qualifications. There is also training provided by department-based colleges including the Police College, the Military School, the Roads Training Centre, and the Department of Environmental, Wildlife and Tourism Institute. Most public institutions are generally focused on meeting the human resource needs of the public sector, a focus that has naturally tended to limit the institutions' external outlook. The University of Botswana, in contrast, strives to be a regional and global university of international repute.

Private higher education providers

Botswana has seven private higher education providers that enrol about 41 per cent of the country's registered higher education students. A 2008 White Paper on Higher Education envisages increasing the gross enrolment ratio (GER) to 17 per cent by 2016, and then to 25 per cent by 2026. Botswana sees private universities as playing a key role in this expansion. Private colleges such as Limkokwing University of Creative Technologies (a branch campus of a Malaysian university), the National Institute for Information Technology (a franchise of the Asian IT training giants), ABM University College and Ba Isago University College provide niche programmes in emerging skill

needs such as ICT and business administration. These institutions are for-profit and tend to be either branch campuses or partners of foreign universities.

An interesting aspect of private higher education provision in Botswana is the joint public-private collaboration in which the government subsidises private tertiary education. In addition, the government pays for students' tuition costs at private tertiary institutions. Providing post-secondary education in Botswana has been the exclusive responsibility of government for many years. These recently-established private institutions have been more responsive to market demand and when particular employers have needed certain types of skills, they have been able to respond faster than public institutions, including the University of Botswana.

Demand for higher education

The growth in the number of tertiary education institutions has had a positive impact on access to education opportunities and also benefits the economy. In the last two academic years (2008/2009 and 2009/2010) the number of people aged between 18 and 24 accessing higher education within Botswana almost doubled. However, the economic recession, which saw some cuts in the government student sponsorship budget, had an immediate negative impact on enrolment. Mass schooling has led to a 100 per cent transition from primary to junior secondary education, and a 67 per cent transition from junior to senior secondary level, with a projected increase to 83 per cent by 2009 and 100 per cent by 2015 (Government of Botswana 2008). Access to basic ten-year education (i.e. up to junior secondary school) is universal. Such a massive expansion has implications for higher education demand.

Figure 1 below gives a summary of gross enrolments, highlighting growth in the level of participation in higher education in Botswana over a seven-year period. Between 2003 and 2009, the participation rate increased by 7.4 per cent. Presently, the higher education participation rate is 15.1 per cent. About 48 per cent of these students are registered with universities, as more than half are in colleges and other tertiary institutions (Bailey, Cloete and Pillay 2011). When this is viewed in relation to the size of the school age population, it can be seen that only a small proportion of school students make the transition to higher education. The situation has been exacerbated by the decline in funding for students and increasing demand for higher education (Siphambe 2010).

At the University of Botswana, a total of 7 184 applications were received for undergraduate study in 2009/2010, a decrease from 2008/2009 by 1 195. Of the applicants, only 5 006 were admitted. This decrease is partly due to the Ministry of Education Skills and Development application cut-off points for sponsorship, and a quota system for public institutions. Regarding graduate programmes, the university research strategy commits UB to significantly increase MPhil and PhD enrolments in the next two strategic planning periods to 2021. From its very modest beginnings in 1996, the School of Graduate Studies (SGS) has co-ordinated graduate programmes at UB to ensure that the first PhD research student graduated in 1998/1999. This has been followed by about 20 MPhil and 28 PhD qualifications awarded so far.

Figure1: Tertiary education gross enrolment rates (%)* 2003/2004 to 2009/2010



Source: TEC Annual report (2009/10)

*The gross enrolment ratio is the total enrolment at a given educational level, regardless of age, divided by the population aged 18-24, multiplied by 100

Student profile

For this study, only students from the University of Botswana are represented due to the unavailability of data from BIUST (2009/2010 enrolment data were not available owing to its recent establishment). UB had 14 180 contact students and 505 distance students enrolled in 2009/2010. Full-time students numbered 11 566 and part-time students 2 614. Looking at the nationality of the student body, 13 837 were Botswana citizens and 309 from other SADC countries, while 539 students were enrolled from non-SADC countries. The largest proportion of students are enrolled in the humanities and social sciences (30 per cent), followed by science, engineering and technology, and business management and law (both 17 per cent). The number of female and male students per major field of study is shown in the figure below. In total, male students account for 52 per cent of the student population.

Enrolment patterns at national level

The 2009/2010 academic year showed a general decline in tertiary enrolments compared to the previous year. The total enrolment dropped from 47 889 in 2008/2009 to 42 366 in 2009/2010. In percentage terms, this was a decrease in GER from 17.3 per cent in 2008/2009 to 15.1 per cent in 2009/2010. The main reason for this significant drop in enrolments was a substantial cut in government scholarships for tertiary students. The number of students sponsored in both public and private tertiary institutions declined due to the budget cut, but the cut in numbers was more pronounced in the private institutions. Private enrolment declined from 45 per cent of the total enrolment in 2008/2009 to 41 per cent in 2009/2010. In 2009/2010 there were 24 996 students enrolled in public tertiary institutions, constituting 59 per cent of the student population, while 17 370 students (41 per cent) were enrolled in private institutions (Figure 3). The combined private tertiary education enrolment was followed by UB with 34 per cent, while other publicly funded tertiary education providers accounted for only 25 per cent (with the Botswana Wildlife Institute enrolling the smallest number of students).

During the 2009/2010 academic year, 1 499 students were enrolled in graduate programmes: 145 for a postgraduate diploma, 1 227 for masters and 127 for MPhil or PhD qualifications. The School of Graduate Studies at UB projected its growth rates as follows: the MPhil programme enrolment will grow on average by 7 per cent and PhD enrolments by 18 per cent annually over the next seven years.

Figure 2: Number of students per major field of study and gender

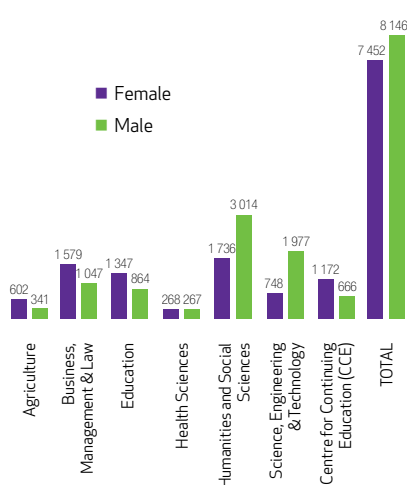
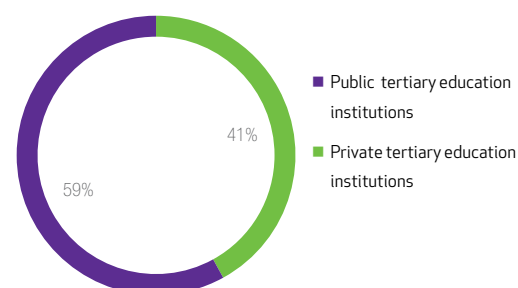


Figure 3: Public and private tertiary education institution national enrolment share 2009/10



Source: TEC Annual Report (2009/2010)

Staff profile

In the 2009/2010 academic year, 514 of the academic and research staff employed at UB were Botswana citizens, 102 were citizens of other SADC countries, and 190 were from non-SADC countries. For the same year, the universities employed 1 465 management and administrative staff of whom 1 400 were Botswana citizens, 25 from other SADC countries, and 40 were citizens from non-SADC countries. The distribution of staff according to faculty and gender is shown in the full data profile available on the SARUA website at www.sarua.org. There were no statistics to show the breakdown of academic and research staff according to other variables such as highest qualifications and gender. This was also lacking for management or administrative staff members by major field of study. These data are yet to be compiled by the institutions. The University of Botswana in particular has an ongoing human resource data cleaning exercise as part of the enterprise resource planning (ERP) software implementation programme.

Identified areas for expansion

Attrition in higher education in Botswana is growing, due to increasingly attractive packages in the region. Domestic, regional and global demands for personnel in areas such as law, management, engineering and health have ensured major recruitment and retention challenges. At the national level there is also major competition with the private and public sector for skills in these and related disciplines.

National higher education outputs and alignment with policy imperatives

Graduate patterns

Graduate statistics show a decrease in the number of graduates in 2010 compared to 2009. In 2009 about 3 172 students were awarded degrees, including ten PhDs and 191 masters (the rest being bachelors degrees, diplomas and certificates). In 2010 a total of 2 898 graduated from the University of Botswana while 216 graduated from the Botswana College of Agriculture. Of the 2 071 degrees awarded, eight were PhDs, 190 were masters, and the remaining 1 846 were bachelors degrees. About 120 students were awarded postgraduate diplomas in education (PGDE), while 645 and 64 students graduated with diplomas and certificates respectively from diverse fields. In the same year, the Botswana College of Agriculture produced 169 bachelors degrees and 47 higher diplomas. Graduation data at UB is processed manually outside the system, so it is very difficult to analyse the data with regard to aspects such as age or gender. This is expected to change with the implementation of the ERP in 2012. The gender distribution of graduates is expected to mirror the 55 per cent female enrolment proportions.

Research output

Alongside the steady growth of its primary teaching mission which has produced much of the needed human capital skills, UB has developed a strategy to become a leading academic centre of excellence in Africa and the world. The aim of the university research strategy is to elaborate the meaning of increased research-intensiveness in order to enhance academic output. There are national and international drivers behind the need for the University of Botswana to transform its research performance. At national level, the draft Policy on Tertiary Education (Government of Botswana 2008) clearly sets the expectation that the university must contribute more significantly to the new national research and innovation system, which is critical for the next stage of Botswana's development. The vigorous implementation of the university research strategy during 2009/2010 has manifested itself in the form of increased research activity across a number of fronts. Overall, the dominant research output type is the peer-reviewed journal article, followed by refereed conference papers and peer-reviewed book chapters (as seen in Table 1). Peer-reviewed books and non-peer-reviewed journals make up the next group of sizeable contributions. The majority of the researchers publish in peer-reviewed journals.

Table 1: Higher education knowledge outputs in Botswana

Category of research output	2008	2009	2010
Peer-reviewed journal articles	306	338	347
Peer-reviewed books	22	23	28
Peer-reviewed book chapters	83	97	102
Patents	0	0	0
Other: refereed conference papers	131	98	178
Other: non-peer-reviewed journals	8	16	28

Sources: SARUA university questionnaires (2011)

Currently the University of Botswana and the Botswana College of Agriculture are the two main institutions that account for significant research output and graduate training. For UB, much of the research takes place within faculties. However, the university has set up a number of thematic multi-disciplinary research centres and institutes that are aimed at increasing research output. These include the Okavango Research Institute, which specialises in natural resource management, and the UB Centre for the Study of HIV and AIDS (established in November 2006). Other significant research centres are the UB International Tourism Research Centre, the Centre for Strategic Studies (housed in the UB Department of Political and Administrative Studies), and the Centre for Scientific Research, Indigenous Knowledge and Innovation, tasked with developing indigenous knowledge systems and producing scientists who recognise the important role of the resource-rich but economically disadvantaged communities and their indigenous knowledge.

Quality assurance

Internal quality assurance processes are in place at UB and a specific budget is set aside to facilitate these processes. The quality assurance framework includes teaching, research and community service activities, as well as student performance, administrative processes, entrepreneurial activities and external relations. The national quality assurance framework prescribes quality assurance procedures to be adhered to. UB is required to report to the national authorities on quality assurance issues.

UB takes part in mandatory peer review quality assessments. There are mechanisms in place to provide ongoing staff development, training and orientation to newly-appointed staff members. There are also mandatory processes in place for evaluating the performance of individual teaching staff. UB regularly conducts internal evaluations of its academic programmes. Some student learning services (libraries, advice centres, student orientation etc.) and all research activities are evaluated. The intense internal moderation of examination and marking for each course has quality dividends that outweigh the high cost of the process. Student feedback is actively sought on academic issues, governance and student services. Formal student satisfaction surveys are conducted across these three areas in order to improve quality.

Student support services include accommodation, sports facilities, information on study opportunities in other institutions, social and cultural activities, support for international student health and wellness, disability and catering services. Though they cannot accommodate the increasing student numbers, the services have been rated as reasonable in quality and capacity, except sports facilities, which are rated as of good quality. Academic orientation, academic support, career guidance, psychological counselling, protection and domestic services, health facilities, and residence programmes (living, learning community programmes) are available and sufficient to accommodate student numbers. These services are either rated at a reasonable or good level. The university is currently constructing a recreational centre to be used by students and staff.

The university has 1 600 computers available for students to use, making a student-to-computer ratio of 10:1. The computers available to students are complemented by student personal laptops which connect to a campus-wide wireless network at no charge. Academic and administrative staff are provided with Internet access. The total bandwidth (uplink and downlink) available to UB is >100 MBps. It was reported that digital library materials and sporting facilities are available and

sufficient to accommodate the numbers of students that need to use them. Science and computer laboratories, a library, lecturing, tutorials and small group learning venues, office space, student recreational areas and student accommodation are available, but cannot accommodate the numbers of students.

Recent developments and debates in higher education

During 2009/2010 one of the TEC's foci was on the implementation of the tertiary education policy (TEP) and support towards establishing the Human Resource Development Advisory Council. The approved first phase of the implementation (known as the founding development phase) consists of four main activities:

1. Developing new legislation to govern tertiary education: The TEC decided that the first step in implementing the policy was to design a new legal instrument. Hence, the need for generic legislation to synchronise all existing laws governing the establishing of universities and other public tertiary institutions, including private institutions. These included regulatory bodies such as TEC and BOTA (Botswana Training Authority), as well as other laws that may hinder the comprehensive integrated implementation of the TEP.
2. Developing a change management strategy: The changes envisaged under the TEP were far-reaching. With the need to change the modus operandi of institutions and government, TEC perceived the need to develop a change management strategy which will assist in making the change process less disruptive, uniformly understood and positively received.
3. Formulating a communication strategy: For the proposed changes to take place smoothly, the TEC identified a critical need for adequate communication between stakeholders and institutions. This will ensure that everyone is properly informed about the contents of the policy and the expected role of each stakeholder in its implementation.
4. Establishing stakeholders' task working teams on different aspects of the policy: The TEC, working with the Ministry of Education and Skills Development, established working teams to develop detailed implementation programmes for each aspect of the policy. There is an over-arching policy implementing and co-ordinating task team or committee, which receives reports from four sub-teams:
 - task team on rationalisation and merger of BOTA and TEC;
 - task team on establishing autonomy of colleges and institutes of health sciences;
 - task team to define the role of private tertiary education institutions;
 - task team on rationalisation of programmes at university-level institutions.

Besides these four areas, the first phase involves the establishment of a tertiary education management information system (TEMIS). This database and information management system is critical for the successful implementation of several projects, including the funding model, design of institutional plans, monitoring and evaluation frameworks, accreditation and registration of institutions and projections of their enrolments. During 2009/2010 a consultant was appointed to implement phase one of TEMIS, which mainly involves a situational analysis and definition of the requirements of the database.

Another recent development is the approval of the human resource development strategy (HRDS). The HRDS was approved during the 2008/2009 financial year. During 2009/2010 the TEC set up the transitional Human Resource Development Advisory Council (HRDAC). The HRDAC and HRDS were officially launched in November 2009. A joint secretariat, comprising staff endorsed by BOTA and TEC, was set up and operates relatively autonomously from both organisations. The HRDAC also started the process of the merger of BOTA and TEC and the Manpower Unit of the Ministry of Finance and Development Planning into a new Human Resource Development Council.

Regionalisation

Higher education in Botswana at both national and institutional level has significantly embraced the regionalisation agenda championed by the SADC Protocol on Higher Education and Training. A strong emphasis on regional collaboration and integration exists within Botswana institutions. The SADC protocol has been considered in national educational planning, as reflected in fees, shared resources and partnerships. The development of an education hub seeks to address domestic and regional higher education imperatives. This is also reflected in the educational plan, which includes the development of a national qualification framework, informed by existing regional frameworks, and is the basis of Botswana's input into the development of SADC's long-awaited regional qualification framework. This regional framework is intended to facilitate student mobility among SADC countries and the implementation of the SADC Protocol on Education and Training. At a more practical level, Botswana students are encouraged to study at universities located in other SADC member states if a course is not available locally. This is designed to widen the skills capacity within the country and to use the opportunities created by regional associations.

The university has set a target that 10 per cent of the student body should be made up of international students by the end of the National Development Plan (NDP10). Progress is being made towards attaining that goal as 848 (6 per cent) of the student population in 2009/2010 were international students, of which more than a third were from other SADC countries. Interestingly, the number of students from the rest of the world outnumbers those from within SADC. This supports arguments by Molutsi and Kobedi (2008) as they observe that 'foreign students do not seem to be a significant factor in the internationalisation of tertiary education in Botswana'.

SADC has established regional training and research centres, such as the Centre for specialisation in Public Administration and Management at the University of Botswana (SADC 2008). Public universities in Botswana also form part of the Southern Africa Regional Universities Association (SARUA), which is a tool for universities in the SADC region to enhance collaboration, partnership and integration. The University of Botswana reports that collaboration with other higher education institutions in the SADC region is valued and given high priority by management and senior academic staff.

The University of Botswana's vision and its value of internationalisation make it imperative that students and staff internationalise in all their intellectual endeavours. Enrolment of students from the SADC region is valued and given high priority by management. Consequently UB has begun student recruitment in the region to significantly increase the number of students from SADC. This strategy accounts for the increase in foreign student enrolment over the past five years. In line with this strategy, UB has established an Office of International Education and Partnerships to offer various kinds of support services to international students and staff including:

- academic advice for students, assistance with visas, orientation and other welfare issues;
- enhancing the internationalisation of all curricula by augmenting international and comparative subject matter in both general education and disciplinary courses; and
- the provision of internships for UB students outside Botswana.

Enabling and hindering influences on regionalisation

Most of Botswana's potential to draw regional and global students comes from its reputation as a politically stable and economically growing country in Africa. Standardisation of entrance requirements, harmonisation of academic years, ease of credit transfer, provision of in-state tuition fee rates to students from other SADC countries, the establishment of joint academic programmes, and the easing of immigration formalities, are some of the mechanisms that the organisation recommended to facilitate the mobility of students (and of academic staff). UB is one of the better-resourced and staffed institutions on the African continent.

Most of the challenges faced by education and training in the sub-region are common to all countries. Challenges related to regionalisation include inadequate education and training facilities and equipment, a shortage of teaching and learning materials, lack of comparable standards and qualifications across all training institutions and countries, limited comparability of the educational and training systems of member states, and the existence of barriers to access these systems. These

factors hinder the mobility of students and staff and the mutual recognition of qualifications. Financial and human resource limitations that hinder the financing of structures to drive regionalisation seem to be central to the under-development of linkages. Universities are also not yet accustomed to direct engagement without a third party (usually from the developed world).

Conclusions

This chapter has presented and reflected on key aspects of the Botswana higher education landscape. The information highlights policy directions, areas of achievement, challenges faced and opportunities for growth in the higher education sector. While data management has improved significantly, much still needs to be done in this area to be able to accurately assess progress in the various sectors. Accurate data remain important in this endeavour.

From a policy standpoint, a number of key policy frameworks are in progress, aimed at reforming the sector to enhance efficiency and quality and to ensure relevance of skills to national development. Examples of these policies are the National Credit and Qualification Framework (which has to be aligned to the regional framework), the Tertiary Education Policy and the Human Resource Development Strategy. Amid cuts in government funding, enrolments at local institutions and transition rates into higher education have increased significantly. This is mainly due to deliberate policy and planning that has resulted in an increase in the number of public institutions, while growing the capacity of existing ones, as well as increasing the number of private institutions.

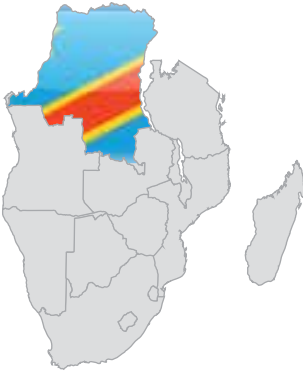
The major constraints identified are in the areas of quality assurance and limited growth at the postgraduate level, especially in disciplines that are key drivers of modern economies, such as engineering and technology, applied sciences, health and business. Higher education institutions also face staffing challenges in professions such as medicine and health sciences, law, business, psychology and natural sciences. These challenges range from inability to attract highly qualified and experienced staff to mobility of senior academics. There seems to be increased movement of senior academics to regional universities and the private sector, which suggests a need for better staff recruitment and retention strategies at major public institutions, including UB. Overall, research output remains low, albeit with some improvements. This is against the backdrop of challenges emanating from a lack of a national research funding strategy as well as intra-institutional constraints and postgraduate enrolments. The ongoing discussion on a national funding strategy is expected to bring about the much-needed change.

While regional and international co-operation remains low or negligible across small public and private institutions, the University of Botswana has experienced significant growth in this area, mostly because of a deliberate policy and plan. This has generated significant value, as evidenced by the number and quality of bilateral and multilateral projects around student and staff exchanges and research collaboration.

4

Democratic Republic of the Congo

Compiled by Beate Gadinger

COUNTRY CONTEXT STATISTICS	
	Population: 67.8million (2011 est.)
	GDP per capita: US\$451 (2010 est.)
	Human development index: 0.286
	Unemployment: not available
	Key economic sectors: agriculture and forestry, services, mining, manufacturing
	Principal exports: diamonds, gold, copper, cobalt, wood products, crude oil, coffee
	HIV and AIDS prevalence: 1.6% (2009 est.)
	Gross primary enrolment ratio: 94% (2010)
Gross secondary enrolment ratio: 38% (2010)	
Gross tertiary enrolment ratio: 6% (2009)	
Country context data were obtained from a variety of sources: CIA (2012), UNDP (2011), UNESCO (2011).	

The Democratic Republic of the Congo (DRC) is a former Belgian colony that gained independence in 1960. Since independence, the country has experienced recurring political unrest and socio-economic turmoil. The quest for access to and control over the huge mineral-rich areas of the country has been the focus of protracted war, which has been fuelled by internal and international interests. War has directly resulted in over 5.4 million deaths, while diarrhoea, malaria, pneumonia and malnutrition continue to take their toll on the population. Although the war has reduced significantly, more than 1.5 million people remain internal refugees among whom many thousands of deaths are recorded each month (Shah 2010). There are also more than 153 000 refugees from the conflict in surrounding countries.

Following a coup d'état in 1965, the country was ruled by Mobutu Sese Seko until his expulsion in 1995 (during which time the country became known as Zaire). Laurent Kabila became president in 1997, and the country was subsequently renamed the DRC. Laurent Kabila's reign as leader was not without attempts to oust him, which were often supported by other African countries. After his assassination in 2001 his son, Joseph Kabila, succeeded him as president. Joseph Kabila remains in power and has had many successes during his reign as president, including the withdrawal of occupying Rwandan and Ugandan armed forces, the establishment of a unity government, and the country's first multi-party elections in 2006 (Anon 2012).

The DRC held its second democratic election in 2011, with about 19 million voters taking part. Local elections are scheduled to take place in late 2012, but will most likely take place in 2013 (Anon 2012). The election of 2011 was accompanied by sporadic violence across the country. The internal situation in the DRC remains critical and is being closely watched by the UN. The provinces of North and South Kivu are stricken by internal conflict which has a 'negative effect on security and human rights' (Anon 2012, Dagne 2011).

While French is the main national language (inherited from the Belgian era), four indigenous languages also have status of national languages: Kikongo, Lingala, Swahili and Tshiluba. When Joseph Kabila came to power, he identified five areas, known as the '*cinq chantiers*' (five pillars), where extensive action is needed to enhance national unity and development. These areas were identified as education, health, infrastructure, basic services and job creation (Bureau of African Affairs 2012). Details of the education pillar in relation to higher education will be discussed in subsequent sections.

Higher education landscape

The DRC has a relatively large higher education sector, which closely follows the Belgian system from which it was designed. As a signatory of the SADC Protocol on Higher Education and Training, the DRC has acknowledged the role of higher education in national and regional development and the importance of a regional higher education system.

The education system functions on a four-level principle. The first level is called the *Ecole Maternelle*, commonly known as kindergarten, which lasts two to three years and is closely followed by primary school, known as *Ecole Primaire*. Primary school, which can last up to six years, prepares students for *Ecole Secondaire* (secondary school), which is divided into lower and upper, ending with an entrance examination to university or a vocational school. This concludes basic education. Further education and training is carried out by public and private higher education institutes (*Universités* and *Instituts Supérieurs*) (Valinande 2000). The DRC national government states that primary education is mandatory for all citizens and it is free (Valinande 2000, Kotecha 2008).

Brief historical overview of higher education

The higher education system in the DRC is run by the Ministry of Higher and University Education, known by its French appellation *Ministère de l'Enseignement Supérieur et Universitaire* (MESU). Higher education is divided into four cycles. The first cycle consists of three years to graduate, equivalent to a bachelors degree, followed by another two years to be granted *Maitrise*, which is similar to a masters (except for the medical professions, for which this cycle lasts three years). This is followed by the *Doctoral de Troisième Cycle*, which is equivalent to a doctoral degree (but not equivalent to a PhD) (Kotecha 2008).

Private higher education in the DRC was first established in the early 1990s, when the government authorised private institutions to operate. The first private university was Marien Ngouabi University. The number of private institutions has risen significantly over the years.

A note on methodology: In the case of the DRC, several new universities were identified during the course of this study. Access to contact details presented a major challenge, as many of the universities do not have websites, or if they have websites they do not have contact details or the information is outdated. Possible contact persons were finally identified through a helpful person in the Ministry of Higher and University Education, but some of the numbers did not correspond to the right universities, some were not functioning and some of the email addresses were not active. However, the majority of the universities were informed about the study and questionnaires were sent for completion. A total of 36 universities¹ were sent questionnaires, and six responses were received. Just before the finalisation of this report, one university submitted updated enrolment numbers for the 2011/2012 academic year. These figures have been included in this report, but not added to the totals due to the different time period represented and the fact that the national calculations had already been completed for the study.

¹ There were only six universities in the initial list at the outset of the study.

National higher education policy context

The policy currently governing higher education is the 'Academic Instruction Act No. 013/minesu/cabmin/mml/kob/2011 of 26/08/2011' (as noted in the Ministry Questionnaire). This new policy replaced the older policies 'Higher education and universities' (Decree no. 81-028 of 3 October 1981) and 'Academic degrees in technical higher education institutions' (Law no 82-004 of 6th February 1982) (Bloom et al. 2006). No information regarding statutory bodies was provided.

Another document that has influenced higher education in the DRC is the Vision 2020, which aims to develop a higher education curriculum able to respond to national development priorities through three key strategies:

- promoting entrepreneurship;
- developing technical and vocation skills; and
- providing the relevant human capital through improved teacher training.

The Poverty Reduction Strategic Paper (PRSP) of 2004 and 2005 also articulated the need for teacher training and the need to increase vocational and technical skills (Bloom et al. 2006). In the recent PRSP, in which the five pillars for national development are outlined, higher education is identified as a major role-player in meeting national development needs. The strategy seeks to align the higher education sector through the following objectives:

- improving quality education;
- promoting research and development;
- matching scientific and technological training with the socio-economic requirements of the private sector;
- identifying priority areas to be professionalised; and
- supporting non-formal education.

Although the Ministry of Higher and University Education is still developing policies for the sector, the national development documents show a close synergy between higher education development and national development, which is critical if higher education is to be sustained as an agent for national development (Cloete et al. 2011).

Size and shape of higher education

According to the data obtained from the Ministry of Higher and University Education there are 36 public universities and 140 accredited private institutions in the DRC with more than 61 500 students enrolled. In addition, the documentation provided by the Ministry indicated that the number of publicly-funded higher education institutions amounted to a total of 416 (although not all of them are accredited or operational).

As noted above, data were received from only six public universities. Due to the incomplete nature of the data collected, the percentage of students enrolled in private and public institutions could not be determined. Despite the missing data, it is hoped that this profile provides a more complete understanding of higher education in the DRC than is currently available.

Student profile, enrolment patterns and demand for higher education

This section presents an overview of public higher education in the DRC on the basis of the data provided by the six universities that submitted responses. Fewer than 40 000² enrolments have been recorded across all the major fields of study, and most of the current enrolments recorded are DRC citizens. Of the 17 261 new applications for undergraduate study recorded, 3 642 could not be accepted despite meeting the admissions criteria. The current process to establish more universities in the provinces could assist in reducing this number. The distinction between male

2 Note that according to the Ministry of Higher and University Education, there are more than 140 000 students in the public higher education sector. Since data are not available from all of the universities, this section reports the trends for the six universities that submitted data.

and female shows an increase in favour of females, particularly in science, engineering and technology (SET) and business, management and law. According to the available data, the number of women students in the SET fields has increased from 127 to 450. However, this data cannot be accurately verified as the previous set of data could not provide the distinction in all cases reported on.

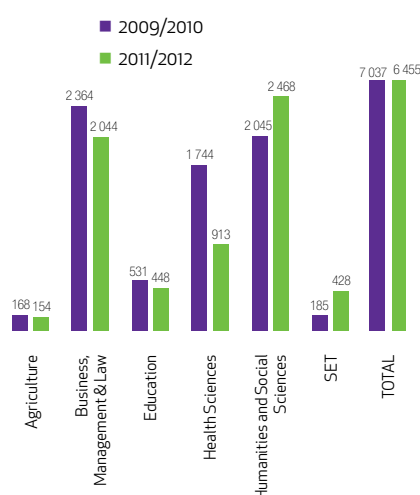
Enrolment data from the University of Kisangani between the 2009 and 2011 academic years show that there has been an overall decline in the number of enrolments. Business management and law, as well as the health sciences, showed significant drops, while there was a slight increase in the SET and humanities fields. While sufficient data from the other main universities were not available to validate this trend, the decrease could be attributed to the newly created universities which now provide access to higher education for students from regions which previously did not have universities and had to travel to Kisangani for higher education.

There was a decline in undergraduate enrolments, but a significant increase in the number of enrolments for postgraduate studies³. This could however be attributed to the difference in data labelling between the current study and the previous one. In the previous study, large enrolment numbers were recorded under the label 'other', but in the current data set no enrolments have been reported on in the label 'other', so it could be argued that the students previously under 'other' have been allocated to different fields, thus increasing the enrolment figures.

Figure 2 compares the number of postgraduate enrolments between 2006 and 2012, including the masters, doctoral and 'other' label, to indicate that a substantial increase has been observed between the two set of data for postgraduate enrolments.

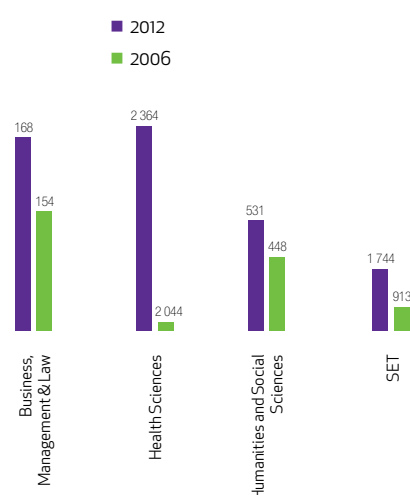
At this stage and with the available data it is difficult to report on the demand for higher education. Given the fact that 32 of the 36 universities have been established within the past three years, and keeping in mind that the current Ministry of Higher and University Education is trying to revitalise the education sector by publicly reporting on their progress (Ministère de l'Enseignement Primaire Secondaire et Professionnel 2010–2012), it could be argued that the need for higher education exists and that it is being attended to. The decline in student enrolments does not indicate that the demand for higher education has grown since the previous study, but again it is necessary to stress that if more data were available, more complete information may show these assumptions to be incorrect.

Figure 1: Comparative analysis of university enrolment in one university



Sources: SARUA university questionnaires (2011) and additional data provided in 2012

Figure 2: Trends in postgraduate enrolment



Sources: SARUA university questionnaires (2011), SARUA (2009)

Staff profile

Several of the universities that provided data did not include staffing data, or major inconsistencies were found in the data. As a result, this chapter (and the accompanying data profile) does not include an analysis of the staff profile at public universities in the DRC.

National higher education outputs and alignment with policy imperatives

Continuing with the focus on the six universities for which data are available, at first glance more qualifications seem to have been awarded since the previous study (although this might also be as a result of more universities participating in the current study). Noteworthy is the fact that there has been an increase in the number of qualifications awarded at masters and doctoral levels, except in the field of health sciences (which only showed an increase in undergraduate qualifications). Figure 3 provides an overview of the graduation patterns at the six universities for the 2009/2010 academic year. Note that the postgraduate graduation figures include all postgraduate qualifications.

Universities have to report on quality assurance at national level. The participating universities indicated that the DRC has a quality assurance framework as well as a document outlining national specifications of quality assurance processes. Four of the six participating universities indicated that peer-review quality assessments are in place. Five of the universities do internal quality assurance as well, but only one university indicated having a quality assurance budget. To further enhance quality, five universities reported that they provide training opportunities for newly appointed staff members and four of them offer ongoing training and development opportunities to staff.

All six participating universities have research offices or units. Four universities are earmarked as research-intensive universities and have a research plan or strategy in place. Three universities have units specifically dedicated to higher education research.

Regarding research output in terms of publications, the available data point to a possible increase in the number of peer-reviewed journal articles, while peer-reviewed books and book chapters remained stable. The research output numbers are very low for a higher education sector as large as that of the DRC, but are explained by the fact that data are only available for six of the 36 public universities. Figure 4 shows the number of publication between 2008 and 2010 according to type of publications.

Figure 3: Graduations per field of study (academic year 2009/2010)

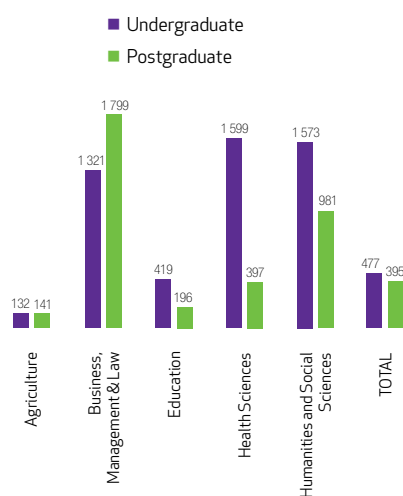
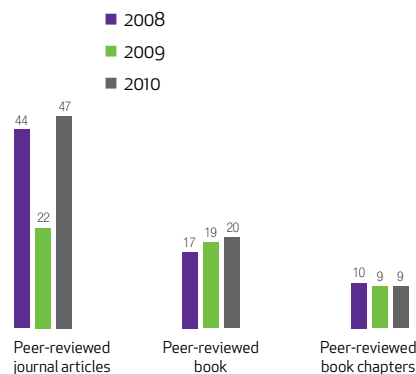


Figure 4: Research output 2008–2010



Recent developments in higher education

Government documentation included some enrolment data, which showed that the public sector appears to have more than 140 000 students enrolled. Further investigation indicated that the large number of newly opened universities were part of a national initiative to create more universities in the provinces and that this was being published and tracked online by the ministry (Ministère de l'Enseignement Primaire Secondaire et Professionnel 2010–2012). A report entitled 'Effective Delivery of Public Services in the Education Sector' recommends that the ministry regularly publish reports on interventions and progress (Mokonzi and Kadongo 2010).

The establishment of the University of Kisangani is partly linked to the huge mineral deposits and the rainforest in that part of the country. A recent development in the higher education landscape has been the establishment of a masters programme in sustainable environmental management. The programme, which is supported by the European Union, offers an example of the kind of education that could lead to change in the region (Mann 2010).

Regionalisation

The limited data obtained, and the difficulty of sourcing accurate data about higher education in the DRC, reveals a relatively low level of collaboration and engagement with other universities and higher education bodies in the SADC region. This could be attributed to two main issues. The first is the political instability that has characterised the country and continues to limit possibilities for regionalisation, and the second is the language barrier between the DRC and other higher education systems in the region. With no students from the SADC region (and only five international students) reported in this study, regional collaboration remains a major challenge. However, the DRC's participation in the study, despite all the challenges, is indicative of a desire to break down the barriers to regional collaboration as the country develops its higher education sector.

Conclusions

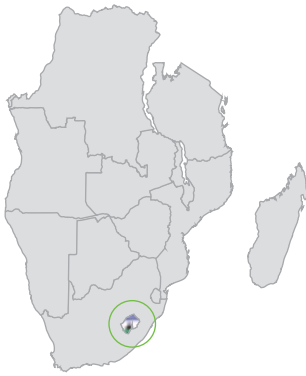
Higher education in the DRC (as in most parts of the world) has closely followed the socio-political climate of the country. The socio-political context of the DRC remains crucial in understanding the higher education landscape and has been provided to sketch a picture that is broader than the one the statistics have to offer. The fact that the ministry is publicly reporting on its endeavours to better the education and higher education sectors indicates that the country is moving towards a more structured higher education system in the future. The active efforts made by participating universities are an indication that higher education in the DRC is trying to situate itself in the broader regional and African context.

With a response rate of about 17 per cent it is not possible to argue that the current data provide a good statistical reflection of the current higher education landscape in the DRC. Nonetheless, given the dearth of information about higher education in the DRC, these numbers go some way towards improving regional understanding of higher education in this country. It can be argued that the higher education system in the DRC appears to be making significant strides, not only to increase access, but also to ensure a fair distribution of higher education opportunities across the country through the new universities that are operating in many different parts of the DRC. If adequate funding and quality structures are put in place, higher education in the DRC could meet the desired development expectations as stated in the PRSPs.

It is strongly recommended that for future research endeavours of this nature, the data collection process should involve local in-country researchers who would be better able to negotiate and make sense of the higher education sector in its national context. It proved difficult to obtain the needed information, to identify relevant persons who could assist in the data collection, and even to find contact details for the new universities.

5 Lesotho

Compiled by Lifutso Ts'ephe

COUNTRY CONTEXT STATISTICS	
	Population: 2.2 million (2011)
	GDP per capita: US\$981 (2010)
	Human development index: 0.450 0.450
	Unemployment: 25.3% (2008)
	Key economic sectors: agriculture and forestry, services, mining, manufacturing
	Principal exports: diamonds, gold, copper, cobalt, wood products, crude oil, coffee
	HIV and AIDS prevalence: 1.6% (2009 est.)
Country context data were obtained from a variety of sources: CIA (2012), UNAIDS (2011), UNDP (2011), UNESCO (2011), Lesotho Bureau of Statistics (2012).	

Lesotho is a democratic, sovereign and independent country, totally surrounded by its neighbour, the Republic of South Africa. The former Basutoland was renamed the Kingdom of Lesotho upon independence from the UK in 1966. In 1993, after 23 years of military rule, a new constitution was implemented, leaving the King without executive authority and prohibiting him from engaging in national political affairs⁴. In 1998, violent protests and a military mutiny following a contentious election prompted military intervention by Botswana and South Africa. Constitutional reforms have since restored political stability and peaceful parliamentary elections were held in 2002. Lesotho is one of three remaining monarchies in Africa (the other two being Morocco and Swaziland).

Following peaceful, but controversial, parliamentary elections in May 2012, the long-serving Prime Minister, Pakalitha Mosisili, resigned from office. Although the new Prime Minister, Thomas Thabane, did not win the election outright, he was able to form a coalition government with the support of opposition parties. This new government is considered historic for three reasons:

- the shift from a majority-party government under the Lesotho Congress Party to a new coalition government
- the formation of alliances between smaller parties to oust the bigger party
- the parliament now consists of a stronger and better represented opposition, as opposed to the former weak opposition under a stronger majority party.

Lesotho's natural resources include water, agricultural and grazing land, and minerals. Lesotho is an exporter of labour to South Africa. Agricultural products include corn, wheat, pulses, sorghum,

4 <http://education.stateuniversity.com/pages/841/Lesotho-HIGHER-EDUCATION>

barley and livestock. Lesotho's key industries include food, beverages, textiles, clothing, handicrafts, construction and tourism. In 1980, Lesotho introduced its own currency, the Loti (plural Maloti), which is equivalent to the South African Rand. The South African economy has been a major export destination for the textile industry in Lesotho, and with the challenges facing the South African economy in recent years the future of the Lesotho textile industry has been insecure. The government of Lesotho has recently confirmed plans for significant investment in the textile industry (African Development Bank 2009).

Higher education landscape

Brief historical overview of higher education

In the early twentieth century Fort Hare College (which later became the University of Fort Hare) in South Africa provided access to Basotho students. The colonial Lesotho government was required to pay the college an amount of 300 pounds per year for this privilege. Lesotho was also represented on the Fort Hare College Board of Governors at this time. In 1958 this agreement with Lesotho was terminated by the South African government⁵.

Meanwhile, in 1945, the Roman Catholic Church founded Pius XII College, a Catholic university college, at a temporary site in Roma, approximately 34 kilometres from the capital city of Maseru. The objective of the college was to provide African Catholic students with post-matriculation and religious education. In 1946 the college moved to its permanent site. The number of students increased rapidly and it was found necessary to increase the facilities. From 1954 to 1964 Pius XII College was an 'associate college' of the University of South Africa (UNISA) in Pretoria, a distance education institution that examined the students and offered degrees in arts, science, commerce and education.

In the early 1960s, apartheid legislation in South Africa became more restrictive, and problems arose regarding student residence requirements. As a result, an independent, non-denominational university was established by Royal Charter through the High Commission for Basutoland, Bechuanaland and Swaziland. After independence in 1966, additional campuses were established in Gaborone (Botswana) and Kwaluseni (Swaziland) and the name of the university changed to University of Botswana, Lesotho and Swaziland. The newly independent university offered its first degrees in 1967. These degrees took the form of four-year programmes in science and education, and a law degree which included two years of study at the University of Edinburgh. In October 1975, the Roma campus in Lesotho withdrew to become the National University of Lesotho⁶.

National higher education policy context

The current higher education system of Lesotho was formalised through the enactment of the Higher Education Act in 2004. This was followed by the establishment of the Council on Higher Education (CHE) four years later (SAIDE 2011). The council, also established through a parliamentary act, seeks to achieve the following:

- monitor the implementation of the policy on higher education in the country;
- regularly publish information on developments in higher education;
- make higher education accessible to students and perform any functions assigned by the Minister of Education and Training; and
- advise the Minister of Education and Training on relevant aspects of higher education.

The Government of Lesotho focuses on improving and maintaining the higher education system in order to improve the quality of graduates produced, with the aim of providing the high skills and expertise needed for the national economy as well as for the region. As a result, the Higher Education Quality Assurance Committee (HEQAC) and the CHE were created and mandated to:

⁵ <http://education.stateuniversity.com/pages/844/Lesotho-SUMMARY>

⁶ <http://education.stateuniversity.com/pages/841/Lesotho-HIGHER-EDUCATION>

- ensure that higher education quality assurance is promoted
- accredit programmes and issue certificates of accreditation of higher education
- audit the mechanisms and processes of quality assurance in higher education institutions in Lesotho
- monitor the performance of both academic programmes and higher education institutions on an ongoing basis (SAIDE 2011).

A coherent national higher education policy has been initiated by the council in order to ensure and regulate the system systematically, with the support of the South African Institute for Distance Education (SAIDE).

The Lesotho Constitution states that education is directed to the wholesome development of citizens, their sense of dignity, and respect for human rights and fundamental freedoms. Various policies have been formulated within the Ministry of Education and Training (MoET) aimed at regulating the higher education landscape in Lesotho. These include:

- The Higher Education Act 2004, which regulates the provision of higher education by public and private providers. The act further provides for the regulation of higher education (HE), for the establishment, composition and functions of a Council for Higher Education, for the governance and funding of public HE institutions, for the registration of HE private institutions, and for quality assurance.
- The establishment of a Council on Higher Education (CHE), a statutory corporate body established by Section 4 of the Higher Education Act⁷. Its mandate is to regulate the higher education sector and promote quality assurance in Lesotho. It consists of a chairperson, eight members appointed by the Minister of Education and Training, and two principal secretaries. In November 2010 the council published its five-year strategic plan which runs from the 2010/2011 academic year to 2014/2015.

Size and shape of higher education⁸

In addition to the public National University of Lesotho (NUL), the MoET indicates that there are five private higher education institutions in Lesotho: Limkokwing University of Creative Technology, Maluti School of Nursing, Paray School of Nursing, Roma School of Nursing and Scott School of Nursing. The largest private provider is Limkokwing University with an enrolment of 3 703 students in the 2010/2011 academic year. Limkokwing University is an international university headquartered in Malaysia with campuses in Bali, Borneo, Botswana, Cambodia, Indonesian, Jakarta, Lesotho, Swaziland and the United Kingdom.

This was a significant development for the country as Limkokwing Lesotho offers a range of associate courses, degree courses and language courses.

Enrolment in the four nursing schools is as follows:

- Maluti School of Nursing: 105 students
- Paray School of Nursing: 96 students
- Roma School of Nursing: 89 students
- Scott School of Nursing: 85 students

Demand for higher education

Information about the size and shape of public higher education in Lesotho was taken from the questionnaire received from NUL, since it is the only public university in the country. In the university's questionnaire response, NUL reported that a total of 4 336 applications were received for undergraduate study, while only 1 735 new students were admitted. At the postgraduate level, 247 applicants applied for postgraduate studies at the university, but only 141 applicants were

⁷ www.che.ac.ls/home/

⁸ The data presented in this section are drawn largely from the questionnaires completed by the Ministry of Education and Training and the National University of Lesotho in 2011/12. Note that the completed questionnaires did not contain any information about staffing.

admitted for the academic year 2010. Demand for university access is greater than the capacity available. Students who are not able to gain a place at NUL are likely to apply to one of the private higher education institutions and relatively large numbers of students travel to South Africa for higher education opportunities.

In an effort to reach larger numbers of students, NUL began to offer provision by distance education from 1994/1995. Distance education provision is co-ordinated by the Institute of Extra-Mural Studies located in Maseru, with various regional centres used as resource centres⁹. NUL has offered part-time courses since 1960 when it instituted in-service courses for teachers, a Postgraduate Certificate in Education and a Bachelor of Education (also a postgraduate degree).

Enrolment patterns

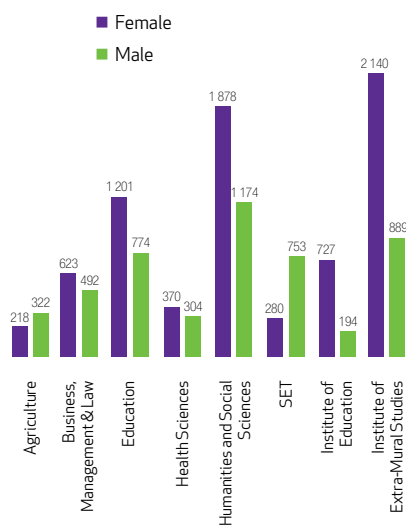
For the academic year 2009/2010, the university had a total of 12 339 students, 108 of whom were from other SADC countries and 19 were international students coming from countries outside of the SADC region. The vast majority of students enrolled at NUL (98.2 per cent) are undergraduate students. A total of 116 students are reported to be enrolled in masters degree programmes and 116 in postgraduate programmes below masters level. In 2009/2010 only four students were enrolled for doctoral study, all four of them in the humanities and social sciences. Female students make up 60 per cent of the NUL student population, outnumbering male students in all fields of study except agriculture and science, engineering and technology (see Figure 1).

Identified areas for expansion

The questionnaire response submitted by NUL identified several areas in which expansion is required. At present, there are insufficient facilities to support student numbers. For example, the academic orientation services are relatively poor. Although such services are available, there is insufficient human resource capacity to accommodate all first-year students as well as returning students. There are no academic support services (such as writing centres) to enhance academic writing and study skills. Accommodation facilities for students are limited and reported to be of poor quality. There is no Internet connection in the students' rooms and this limits their ability to do research during non-campus hours.

With respect to student support services, there is currently no office for career guidance within the institution. There are also no psychological counselling services, and sports facilities are reported to be of poor quality as they cannot accommodate all students. Language training is not offered and there is no specific support for international students (possibly because a very small number of international students are enrolled at NUL).

Figure 1: Number of students by gender and major field of study (2009/2010)



National higher education outputs and alignment with policy imperatives

Graduate patterns

Table 1 shows the number of qualifications awarded by the NUL for 2009/2010 by level of study and major field of study. In total, 186 qualifications were reported to have been awarded. Given that the total enrolment for the academic year was 12 339, the number of qualifications indicates a low throughput rate at the NUL. In particular, graduation from undergraduate programmes (where 98 per cent of the students are enrolled) appears to be a major challenge for NUL. There are relatively low numbers of students graduating in agriculture, health sciences and business, management and law.

Table 1: Number of qualifications awarded per field of study and level of study

Major field of study	Number of qualifications awarded per level of study				
	Undergraduate	Postgraduate (up to but excluding masters)	Masters	Doctoral	Post-doctoral
Agriculture	9	0	3	0	0
Business, management and law	5	4	0	0	0
Education	44	1	2	0	0
Health sciences	5	0	0	0	0
Humanities and social sciences	65	3	7	2	0
Science, engineering and technology	19	6	1	0	0
Institute of Education	1	1	0	0	0
Institute of Extra-Mural Studies	4	4	0	0	0
Total	152	19	13	2	0

Source: SARUA university questionnaire (2011)

Quality assurance

As described above, Lesotho has a Higher Education Quality Assurance Committee (HEQAC) that operates at a national level. At an institutional level, NUL reported that the university has no internal quality assurance processes, does not track student performance, and does not have a teaching and learning strategy. However, the university makes use of peer review quality assessments, external moderators for examinations and sometimes conducts internal evaluations of its academic programmes. In addition, the university reports that there is training for newly appointed staff members as well as mechanisms for ongoing staff development. The performance of individual teaching staff is evaluated, but on a voluntary basis, so it depends on the willingness of the academic concerned. Student feedback regarding academic matters is collected. At present there is no evaluation of student support services or research activities at the university.

Research output

The total number of articles published in Lesotho between 2001 and 2007, as indexed in the international database ISI, was 75, which means an average output of 7.5 papers per year. The only institution that produces scientific publications is the National University of Lesotho. The university questionnaire focused on the 2009/2010 academic year, and NUL reported the following publications.

Table 2: Research output at National University of Lesotho (2009/2010)

Source title	Record count
African Affairs	6
Theatre Research International	5
Journal of Southern African Studies	4
Bulletin of the World Health Organization	3
General Relativity and Gravitation	2
Pramana - Journal of Physics	2
South African Journal of Wildlife Research	2
Total	24

Source: SARUA university questionnaire (2011)

The National University of Lesotho hosts the Institute of Southern African Studies (ISAS). The main purposes of ISAS are research and the development of information systems and services, focusing on Angola, Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. Although its main focus is on the Southern African region, it also collaborates with Africa as a whole and with other developing countries. ISAS has also been engaged in regional and sub-regional research projects since the 1980s¹⁰.

Recent developments and debates in higher education

Public higher education in Lesotho has for the past few years been embroiled in controversy, with several strikes at NUL affecting the academic calendar, students and institutional performance. A strong change agenda is unfolding at NUL. This is not without contestation and it appears that various stakeholders are in the process of consultation and engagement with ministerial involvement. Lecturers within the institution were on strike for most of the 2011 academic year due to low salaries, occasionally forcing the university to close. The university's top management proposed a new institutional strategy to restructure the university, which is perceived by many to have affected most of the lecturers in a negative manner, as many lost their jobs (Public Eye 2011).

The university shut down three of its campuses (the Institute of Extra-mural Studies in Mphahle's Hoek, Mahobong and Qacha's Nek) at the end of 2011 due to lack of funds. In January 2012, the Dean of the Law Faculty at NUL resigned in protest against the university's restructuring exercise and apparent lack of policy to guide the restructuring process (Tlali 2012a).

In its questionnaire response, the Ministry of Education and Training reported that the country has plans to establish more public universities, but no concrete details or plans are available.

Regionalisation

Commitment to regionalisation at a national level in Lesotho is unclear. In the initial SARUA profiling study (Kotecha 2008), the Lesotho Ministry of Education reported that the SADC Protocol on Education and Training had influenced national higher education policy. However, in the current study, it was reported that the SADC Protocol had not influenced national policy. This seems to suggest a break in discourse between the previous and the current respondents, and the lack of an institutionalised regional agenda.

Student and staff mobility has tended to be inconsistent and ad hoc. In the 2008 SARUA study, very limited collaboration and partnerships were mentioned. No data about enrolment of students from other SADC countries or other international students were provided in the initial SARUA study. In the current study, NUL reported that 108 students from other SADC countries were enrolled and 19 from other (non-SADC) countries. Thus, students from other SADC countries make up only 0.9 per cent of the total NUL student enrolment and NUL appears to have little regional presence. These challenges in the area of regionalisation are likely to have been compounded by the recent instability at NUL.

¹⁰ See www.nul.ls/institutes/isas.htm

Conclusions

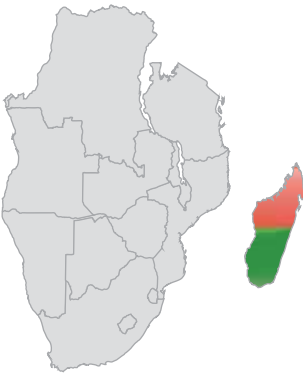
Higher education in Lesotho can be considered to be at a crossroads. The higher education sector in the recent past has been plagued by a number of institutional, structural and political challenges. While the Council on Higher Education has been trying to develop policies and establish statutory bodies to govern and accredit higher education institutions, there is a need to harness, nurture and protect the current achievements of the higher education system. The need for a quality assurance framework remains paramount for any higher education system at national and institutional level. The current strikes have affected higher education in general, undermining higher education quality and output.

Being the only public university, the National University of Lesotho has the main responsibility of not only increasing access for students, but also being a knowledge-producing institution. There is an urgent need to identify ways in which to encourage masters and doctoral student enrolment and graduation, and stimulate the production of knowledge in the form of academic publications.

The higher education landscape in Lesotho remains one of many possibilities. However, there is a need to actively build and revitalise the sector in order to realise all the social and economic promises of higher education at both private and public levels.

6 Madagascar

Compiled by Beate Gadinger

COUNTRY CONTEXT STATISTICS	
	Population: 21.3 million (2011)
	GDP per capita: US\$422 (2010)
	Human development index: 0.480
	Unemployment: 50% (2004 est.)
	Key economic sectors: mining, agriculture, industry, tourism
	Principal exports: coffee, vanilla, shellfish, sugar, cotton cloth, clothing, chromite, petroleum products
	HIV and AIDS prevalence: 0.2% (2009 est.)
Gross primary enrolment ratio: 149% (2010)	
Gross secondary enrolment ratio: 31% (2009)	
Gross tertiary enrolment ratio: 4% (2010)	
Country context data were obtained from a variety of sources: CIA (2012), UNAIDS (2011), UNDP (2011), UNESCO (2011).	

Madagascar is a former French colony which, like most other French African colonies, gained independence in 1960. The population of the island is predominantly of mixed Asian and African origin with around 18 ethnic or cultural groups. The major language is Malagasy, while French is widely used as the language of education. English is increasingly being spoken in some pockets of society and has now been introduced in primary schools.

A democratic government was established in 1960, modelled on the French political system. Since 1972, when the first democratically elected president's rule ended, political transitions in Madagascar have tended to be associated with disputes and popular unrest. This included a coup d'état in 2009, which was strongly condemned by the international community and led to isolation of the country. The US and Norway formally imposed sanctions on Madagascar, while the EU and other bilateral donors suspended aid (Maunganidze 2009). Under the auspices of SADC and the African Union a new constitution was approved in December 2010 and an interim prime minister was elected (Ploch and Cook 2012). A formal election date has been set for May 2013 (SAPA 2012).

Political instability, high population growth and mismanagement of resources have impeded economic activity in Madagascar in recent years. Due to imposed austerity measures, GDP growth stood at a meagre 0.6 per cent in 2011 (African Economic Outlook 2012). It has been argued that Madagascar will only be able to meet one of the eight Millennium Development Goals (MDGs) – reducing the HIV prevalence rate of the country. Infant and child mortality rates remain high at 61 and 92.8 per 1 000 respectively.

Higher education landscape

Brief historical overview of higher education

As reported in SARUA's previous profiling study (Kotecha 2008), the Malagasy education system is divided into cycles. The first two cycles refer to primary and secondary education, and the third cycle is tertiary education.

Most aspects of the schooling and higher education system were adopted from the French system. At independence, Madagascar had only one university, the University of Madagascar, which in 1961 was renamed the University of Antananarivo. In the period of socialism (from 1976 to 1990) five university centres were established, one in each of the other provinces, to increase access to higher education. These university centres (Antsiranana, Fianarantsoa, Toamasina, Toliara and Mahajanga) gained full university status in 1988 (US Department of the Army n.d.), making a total of six public universities - one in each of the six provinces¹¹.

In 1995 a policy of accreditation was established by the Ministry of Education. This policy provided for the establishment of private higher education institutions in Madagascar. The policy required that private education institutions comply with certain criteria in the areas of infrastructure and human resources before their curricula could be approved by the Ministry of Education. The accreditation process was suspended in 2003, but private higher education institutions still had to be approved by the ministry. Based on 2009 data from the Ministry of Education, 21 private higher education institutions had been provided with accredited status, while 47 private institutions had permission to operate without accreditation (Rasoanampoizina 2011). Private higher education provides access for most of the students who do not get admission into public higher education institutions. Private higher education also specialises in specific professional courses for those interested in more professional training. There are two types of private institutions operating in Madagascar: approved institutions of higher education and institutions of higher vocational training (Ministère des Affaires Etrangères et Européennes 2009).

In 1992, the Malagasy government established a distance learning centre, the National Centre of Distance Education in Madagascar (CNTEMAD). The centre focused on subjects and training fields in high demand at the University of Antananarivo. Major programmes offered were in the fields of management, business and computer sciences. The expansion of education (including higher education) in Madagascar has had a positive effect on the country. The general literacy level in the country also rose significantly to about 80 per cent in the 1990s according to a UNICEF report available online¹².

Besides the public and private higher education institutions, there are eleven research centres covering different fields of study. These include centres focusing on environmental and rural development, health and medicinal centres and information technology research centres (Ministère des Affaires Etrangères et Européennes 2009). The degree system in Madagascar closely follows that of the French with the *Licence*, *Maitrise*, *Diplôme d'Etude Approfondie* (DEA) and *Doctoral*.

National higher education policy context

Since independence a number of policies have shaped access to higher education in Madagascar, and have guided its quality and relevance. One of the key documents has been the Master Plan of 1997. The main aim of this plan was to improve the quality of higher education and to meet international standards of expanding and diversifying the higher education system so as to foster the sustainable development of the nation (Master Plan 1997). The principles upon which the plan was established include:

- diversification of the system;
- improvement of quality in higher education training at all levels;
- advancement of academic output through research;

¹¹ The French system of six provinces has since been superseded by 22 administrative regions.

¹² See also US Department of the Army (n.d.)

- national, regional and local integration of the higher education system; and
- establishment and enhancement of a system of evaluation and control.

Since then a number of other relevant policy documents have informed the growth of higher education in Madagascar:

- Madagascar Naturally 2004
- Madagascar Action Plan 2007
- Strategic Plan for Education 2007–2009.

While these documents focus on the transformation of the economy towards sustainable development, the role of higher education has been clearly established. A key strategy for achieving national development is a focus on the improvement of the higher education system with a view to increasing knowledge production and strengthening its application to development. Further information outlining the higher education sector and its composition can be found in the document provided by the Ministry of Foreign and European Affairs at the French Embassy in Madagascar.

The Malagasy government supports the idea of public higher education institutions gaining financial autonomy by seeking private funding, as well as the creation of more private institutions as the state has reached its capacity with respect to financial assistance for public higher education (World Bank 2010).

Universities that participated in the SARUA study indicated that the national quality assurance initiative is a fairly recent development and that quality assurance guidelines are either not yet in use, or are still in the design and ratification stages.

Size and shape of higher education

In this section an overview of the current state of higher education in Madagascar is presented, drawing on the data collected from the five universities that participated in SARUA's research (2008 and 2011).

Student profile and enrolment patterns

Four of the six public higher education institutions responded to the higher education institutional questionnaire in the current study. Data were also available for one additional university from SARUA's previous work. The document released by the Ministry of Education in 2009 states that Madagascar has 55 private institutions with more or less 14 500 students enrolled (Ministère des Affaires Etrangères et Européennes 2009). This accounts for about 27 per cent of the current total enrolments. The previous SARUA study, which was concluded in 2005/2006, indicated that there were 21 private institutions in Madagascar, indicating that private higher education provision (in terms of number of institutions) has more or less doubled in four years. In the 2008 SARUA study, private institution enrolments accounted for 7 per cent of the total student enrolment compared with the recorded enrolment of 78 per cent in the six public universities' (Kotecha 2008). Over the last four years there has thus also been a significant increase (20 per cent) in the proportion of enrolments in private institutions.

Based on the available data, the public higher education system in Madagascar currently enrolls more than 45 000 students, with the vast majority being Malagasy citizens. Almost all the students are reported to be enrolled for full-time contact-based study. The demand for higher education in Madagascar outstrips supply. For the 2010 academic year approximately 50 819 applications were received for undergraduate study and a total of 31 328 prospective students could not be accommodated at the public universities. The four universities that submitted data for the 2009/2010 academic year reported that a total of 16 474 new first-year undergraduate students were admitted.

With respect to the gender of students in Malagasy public higher education, the data available show that 58.1 per cent of the student body are women. However, there are important gender differences within each major field of study (See Figure 1). The data show that much larger numbers

of male students are enrolled in science, engineering and technology as well as business, management and law, with relatively larger proportions of female students being enrolled in the humanities and social sciences. Across both genders, the largest number of enrolments is found in the business, management and law fields, followed by the humanities and social sciences.

The vast majority of students (69.2 per cent) are enrolled in undergraduate programmes, with 22.5 per cent enrolled at postgraduate level below masters, 7.6 per cent for masters degrees, and only 0.3 per cent for doctoral studies. The largest number of doctoral enrolments (64) is seen in science, engineering and technology.

Staff profile

Available data indicate that there are approximately 2 414 academic and research staff employed at public universities and 2 010 management and administrative staff. For both academic and research staff and management and administrative staff, the proportion of male appointments is much higher than female. A total of 62.9 per cent of academic and research staff members are male and 62.3 per cent of management and administrative staff members are male. These gender disparities are further compounded by the fact that 62.9 per cent of the female academic and research members are employed on temporary contracts compared to 53.1 per cent of male academic and research staff. There are more male staff members employed within each field of study, with the greatest disparity being evident for science, engineering and technology.

On a more positive note, relatively large proportions of academic and research staff are reported to hold doctoral qualifications. This is particularly the case for science, engineering and technology where it was reported that there are a total of 302 academic and research staff members with doctorates. No information was available about research output, so it was not possible to assess whether the staff members with doctoral qualifications are active in research.

Areas for expansion and shortages identified

A key issue in the higher education sector in Madagascar is the age of academics. It has been reported that by 2015 more than 50 per cent of the staff in the higher education sector will be reaching retirement age. With the limited number of students able to access postgraduate study and the low throughput rate at doctoral level, the country faces a huge challenge in replacing the staff who are retiring (Ministère des Affaires Etrangères et Européennes 2009).

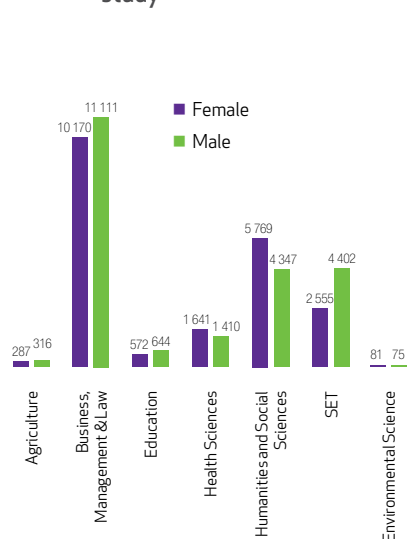
One option may be to increase access to more diversified higher education institutions and to provide students with better learning environments through the expansion of university facilities and improved access to electronic equipment and resources. The Madagascar Action Plan and Poverty Reduction Strategic Paper makes reference to the contribution that higher education could make. However, for higher education to play a meaningful role in development there is a need to expand access substantially, and to ensure that the academic workforce grows.

National higher education outputs

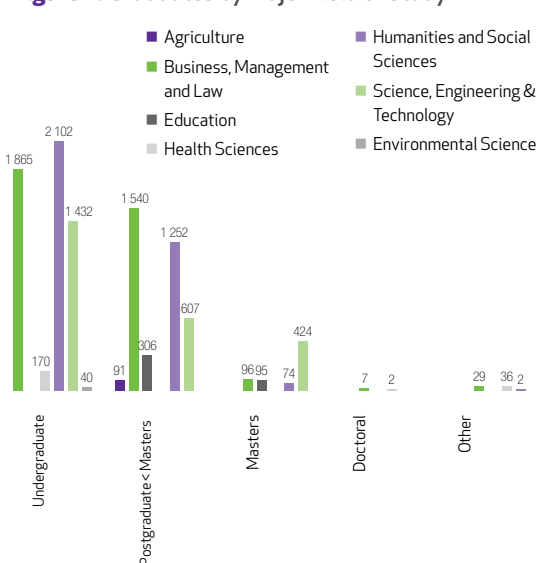
Graduate patterns

Figure 2 presents the number of graduates per field of study. As expected, given the enrolment trends presented above, the majority of qualifications were awarded in the fields of business, management and law, followed by humanities and social sciences, and then science, engineering and technology. Just over half of the qualifications awarded (55.2 per cent) were at undergraduate level, 37.3 per cent at postgraduate level lower than masters, 6.8 per cent at the masters degree level, and only 0.1 per cent – a total of nine qualifications – at doctoral level.

In total, female graduates accounted for 46.4 per cent of the number of graduates at all levels of study. When considered at each level of study, the data show that the proportion of graduates is roughly equal across genders at the undergraduate and postgraduate up to masters degree levels. However, for masters degrees, only 35 per cent of the qualifications were awarded to female students. Interestingly, doctoral qualifications were evenly shared across genders.

Figure 1: Enrolment by gender and major field of study

Sources: SARUA university questionnaires (2008 and 2011)

Figure 2: Graduates by major field of study

Sources: SARUA university questionnaires (2008 and 2011)

Quality assurance, student support and infrastructure

Attention to quality assurance is a relatively new development in the higher education landscape in Madagascar. There is thus no statutory body tasked with the responsibility of ensuring quality and standards in the provision of higher education. While different institutions have expressed differing views in the establishment of a quality assuring body (as reflected in the questionnaires), limited financial support from government and other stakeholders presents the foremost challenge to assuring quality in higher education. A comment by one of the participating universities is that external evaluation by students of the educational system in Madagascar is not yet seen as normal practice amongst the Madagascan universities (Higher Education Institutional Questionnaire 2012).

Some universities have demonstrated significant efforts to improve and modernise their teaching, learning and research practices, as well as putting in place the necessary support structures to promote academic research. However, the available financial resources are reported to be insufficient. Logistics infrastructure such as classrooms, science laboratories, language laboratories, computer rooms, libraries and computers are in short supply.

Government subsidy grants have increased since the previous study was concluded. Public universities in Madagascar are now receiving approximately 88 per cent of their funds from the government. The ministry document indicated that universities mainly rely on the government to provide them with the bulk of their funds (Ministère des Affaires Etrangères et Européennes 2009). Student fees only account for 10 per cent of the available funds.

Research output

In the data provided by participating universities, three indicated that they perceive themselves to be research-intensive universities, with a research strategy in place. All of the participating universities indicated that they have a unit with at least one person responsible for research. Three of the universities also reported that they had a research plan or strategy in place.

It was not possible to verify this further by considering actual research output as no data were provided. Information on the current state of the research output was being compiled by the Malagasy Conference Publication Promotion Service at the time of the survey, and was thus not available for this study.

Regionalisation

The questionnaire received from the ministry was incomplete, making it difficult to report on Madagascar's current commitment to higher education regionalisation. However, this section will draw on the document released by the French Embassy in Madagascar to provide some indication of regional linkages (although these are not specifically focused on the SADC region) (Ministère des Affaires Etrangères et Européennes 2009).

The embassy document on higher education indicates that most of Madagascar's efforts at collaboration take place with France and other francophone countries. Collaborative projects focus most commonly on the needs of Madagascar for financial, research and technical assistance. Approximately 500 students received visas to study in France during the course of 2009. Collaboration between France and Madagascar has three goals:

- to restructure doctoral studies in Madagascar;
- to strengthen research efforts; and
- to provide administrative capacity within the institutions as well as within the ministry (Ministère des Affaires Etrangères et Européennes 2009).

A regional integration project is currently in place, which includes 92 non-European partners from across the world, all with links to the University of Antananarivo. These include three African partners (Comoros, Mozambique and Senegal) and three Indian Ocean partners (including the islands of Reunion and Mauritius) (Ministère des Affaires Etrangères et Européennes 2009).

Collaboration within SADC still faces considerable challenges, including the obvious challenge of communication. The language barrier between Madagascar and the majority English-speaking SADC member countries remains a major challenge, while geographic distance and political differences could account for the limited interaction with other French-speaking countries in SADC (such as the DRC) (Hahn 2004). The 2008 SARUA profiling study also identifies issues around educational frameworks and policies in the higher education sector, which could account for the poor regional collaboration between Madagascar and other countries and higher education systems (Kotecha 2008). The current political situation in Madagascar has also impacted on practices promoting regionalisation, as many collaborative efforts are hanging in the balance pending the outcome of the planned elections in 2013 (Maunganidze 2009).

Conclusions

As is the case across the SADC region, public higher education in Madagascar remains significantly dependent on state funding and there are thus tensions with respect to institutional autonomy from the state. Political instability also significantly impacts on higher education provision and quality due to this dependence on the state.

Infrastructural development remains a major challenge to higher education access, provisioning and quality. Human and physical resources will be required to position higher education more strongly in its role of human capital formation and to support national development through knowledge production. The data revealed an ageing academic staff complement, many of whom will soon retire. Urgent efforts will thus be needed to replace these established academics, but it is unclear where the next generation of academics will come from given the very low throughput at doctoral level. The gender disparities at all levels also give cause for concern.

Despite the internal political and economic challenges facing Madagascar and its higher education system, this island state's geographic isolation and the inherent challenges to regional collaboration (different language and educational structures), higher education in Madagascar has been identified as a major agent in national development. This positions the sector positively, and suggests that potentially the development of higher education in Madagascar will, in one way or the other, impact on regional development. SARUA's work seeks to support this by forging avenues that enhance and sustain regional collaboration between higher education institutions in Madagascar and other parts of the region.

7 Malawi

Compiled by Nteboheng Mahlaha

COUNTRY CONTEXT STATISTICS	
	Population: 15.4 million (2011)
	GDP per capita: US\$357 (2010)
	Human development index: 0.400
	Unemployment: not available
	Key economic sectors: agriculture
	Principal exports: tobacco, tea, sugar, cotton, coffee, peanuts, wood products, apparel
	HIV and AIDS prevalence: 11% (2010 est.)
	Gross primary enrolment ratio: 119% (2006)
Country context data were obtained from a variety of sources: CIA (2012), UNAIDS (2011), UNDP (2011), UNESCO (2011).	

The Republic of Malawi is situated in southeast Africa. In 1963 Malawi gained independence, changed its name from Nyasaland and adopted a single-party state. Malawi now has a democratic, multi-cultural government with a small military force to protect the country (including an army, a navy and an air force). In 2012, Joyce Banda became the country's first female president.

Malawi is among the world's least developed countries. The economy is heavily dependent on agriculture, on which the large rural population depends. Malawian agriculture is mainly subsistence-based, depending on primary products, and with little processing to finished products. The country's wealth is largely in the hands of a small elite. Agriculture accounts for about 37 per cent of GDP and 85 per cent of all exports. To meet its development targets, Malawi depends significantly on outside aid. With the GDP real growth rate estimated to have been 6.5 per cent in 2010 and 4.6 per cent in 2011, the government faces challenges in building and expanding the economy, improving education and health care.

Malawi has a low life expectancy, a high infant mortality rate and a high prevalence of HIV which has affected the labour force. Malawi is among the top producers of tobacco in the world and ranked tenth in global rankings in 2010. It also produces tea, sugar cane and coffee which, alongside tobacco, account for about 90 per cent of all revenue (Nkhutako District Assembly 2009).

Higher education landscape

Higher education is provided by two public institutions and seven private institutions.

Brief historical overview of higher education

Shortly after independence the University of Malawi opened its doors to students, starting with only 90 students in 1965. Two years later, the Institution of Public Administration, Hill College of Education and Bunda College were established as colleges affiliated to the university, increasing

access to higher education for those who could not get access to the traditional university or who wanted a more professional training route. The establishment of Mzuzu University followed an Act of Parliament, establishing a second public university in Malawi. In order to facilitate the rapid establishment of this new university, the Commission for the Establishment of the University in the North (COMESUN), established by the Malawian President, recommended that the existing Mzuzu Teachers' Training College be upgraded to house the new university. The first intake of 300 students enrolled in 1999. Mzuzu University has five faculties that offer both undergraduate and postgraduate programmes (Mzuzu University n.d.). This university did not complete a questionnaire in the current study, so data relating to the Mzuzu University have been sourced from SARUA's 2008 profiling study.

Since the late 1980s, much of the debate regarding higher education in Malawi has centred on managing the demand for higher education. In 1988 the criteria for admission were changed to a quota system, ensuring representation of students from all the provinces. The introduction of a quota system of selection meant that the University of Malawi would accept an equal number of students from each political district in Malawi. Within the quota selection system, each of the 28 districts was allocated space for 10 students per year. This quota system was overturned by a high court ruling in 1993, soon after a multiparty democratic government took office. The quota system was perceived to constitute a violation of fundamental human rights (Divala 2009). However, according to news reports the Minister of Finance insists that the quota system was abolished solely because of financial implications for the national coffers and the need to increase student tuition fees (Malawi News 2012).

The quota system was replaced by a merit system, meaning that students would gain access to university according to their academic excellence. In 2009 the government of Malawi and the funder of the University of Malawi decided to re-introduce the quota system in the selection of students to the university, but in 2012 the President of Malawi again abolished the quota system, stating that students should be accepted on the basis of merit rather than their place of origin. A committee has been appointed to design a new access system with the ultimate aim of increasing student intake into public universities (University World News 2011b). The University of Malawi remains the largest university in the country and now consists of five colleges: Bunda, Chancellor, Kunuzu Nursing, a polytechnic and a medical school (Kotecha 2008). Malawi plans to construct five new higher education institutions within the coming decade and a Public Universities Working Committee has been set up to oversee the planning (University World News 2011b).

National higher education policy context

The government's National Educational Sector Plan 2009–2012 sets out three priority areas for higher education improvement (Ministry of Education, Science and Technology 2009):

Priority 1: Governance and management. This focuses on national education sector plans to improve the quality and relevance of higher education, to create legal provision and change in managerial approaches.

Priority 2: Access and equality. Here the aim is to increase the number of higher education institutions in Malawi. There is insufficient space for all eligible students to be accommodated within the two public universities and thus students do not have a fair chance of accessing higher education in Malawi. This supports World Bank findings (World Bank 2008), which indicate that access to higher education in Malawi remains one of the lowest in sub-Saharan Africa. Another report by the United Nations, based on research from selected African countries, reveals that less than one per cent of Malawi's qualified cohort are actually enrolled in some form of tertiary education (UN 2010).

Priority 3: Quality and relevance. The Malawi Growth and Development Strategy seeks to transform the nation from poverty to prosperity. This requires a sound human capital resource base with skills that are technologically up-to-date and adequate knowledge in scientific research. The quality of higher education will need to meet the human resource requirements and development needs of the country.

These priorities resonate closely with the main objectives stated in the 2012 Output Budget issued by the Ministry of Education, Science and Technology, namely to:

- mainstream gender issues in higher education activities;
- fight HIV/AIDS and minimise its impact in schooling and society;
- strengthen educational management and governance at all levels;
- improve quality and relevance of education at all levels; and
- widen equitable access at all levels to all Malawians.

There is evidence of an effort to link higher education to national development needs. This is observed in the 2001 Policy and Investment Framework of the Ministry of Education, Sports and Culture: ‘the Government acknowledges the significance of a solid higher education system in enhancing the development of Malawi’ (Minister of Education, Sports and Culture 2000:32).

The overall regulation of higher education is done through an accreditation committee whose membership comprises the Ministry of Education (Education Methods and Advisory), the Office of the President and Cabinet (Department of Human Resources Development and Training) and the University of Malawi. For public universities, governance issues are regulated by Acts of Parliament (Chevvara 2009).

According to the Ministry of Education questionnaire response, the ministry does not monitor governance and management of higher education at the institutional level: institutions are independent. With the exception of funding, which comes from the Ministry of Finance as well as irregular interventions from the Ministry of Education, all internal institutional planning and processes are conceived and implemented at institutional level. Interventions are based on institutional needs, and institutions have responsibility for both governance and management. The University of Malawi and Mzuzu University are each governed by a council, consisting mainly of members appointed by the government, and supported mostly by government grants and miscellaneous income sources. Private higher education institutions usually have independent councils and senates which are appointed by their proprietors, mostly religious bodies. The Ministry of Education also indicated that parliament has just approved the establishment of the National Council for Higher Education, and council members have been appointed.

Size and shape of higher education

There are two publicly funded universities and seven privately funded universities. The student percentages indicate that although there are more private institutions, most students are enrolled in public universities. Most of the privately funded universities are owned by religious groups.

Table 1: Number and type of higher education institutions

Type of higher education institutions	Number of institutions	Percentage of students enrolled
Publicly-funded universities	3	80
Publicly-funded technical universities	N/A	N/A
Privately-funded accredited universities or colleges	7	20
Total	10	100

Sources: SARUA MoE questionnaires (2011)

Access to higher education remains a major challenge as the two public universities cannot accommodate demand. For example, approximately 38.1 per cent of the 2007 Malawi Secondary Certificate of Education (MSCE) graduates were admitted into public universities in 2008. This means that slightly over 60 per cent of the students eligible for higher education could not be admitted due to limited space (Ministry of Education, Science and Technology 2009). The increasing number of private institutions is enabling access for professional and vocational training.

In a 2007 study of the students who had applied for undergraduate admission, 60 per cent were not accepted due to limited infrastructure and facilities. Even though students met the minimum

admission requirements, limited infrastructure prevented the admission of more students. Of the 2 000 students who applied for postgraduate studies, only 20 per cent were admitted.

Student profile

From available data, 99 per cent of students in Malawi (8 556) are national citizens. Seventy-five students were said to be from the SADC region and five students from other countries outside the SADC region. The universities consist mostly of contact students, although the number of distance students is growing. Most of the students are enrolled for undergraduate studies. The highest enrolments are in science, engineering and technology (about 25 per cent of all registered students). More males (59.6 per cent) than females are enrolled for undergraduate studies.

Enrolment patterns

Enrolment rates have been increasing, with about 8 000 students enrolled for undergraduate studies in 2008 (World Bank 2008). The majority of students (more than 85 per cent of all enrolments) are registered for undergraduate studies at public universities, with the highest rate of enrolment being reported for engineering and technology. Although engineering and technology has the highest student enrolment overall, the humanities and social sciences have 52.2 per cent of students enrolled for doctoral studies (the highest percentage at this level of study). Most students enrolled at the universities are male, with the exception of the health sciences in which 55.6 per cent of the students are female. The greatest gender disparity is seen in science, engineering and technology, where 67.3 per cent of the students are male.

Staff profile

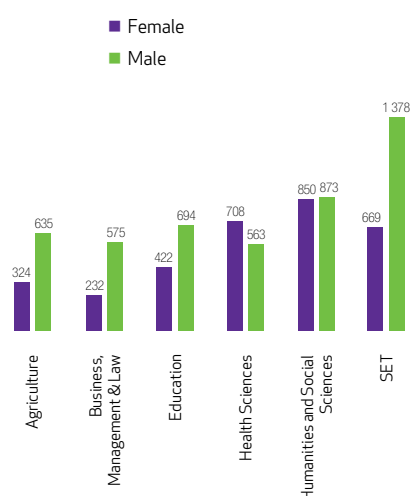
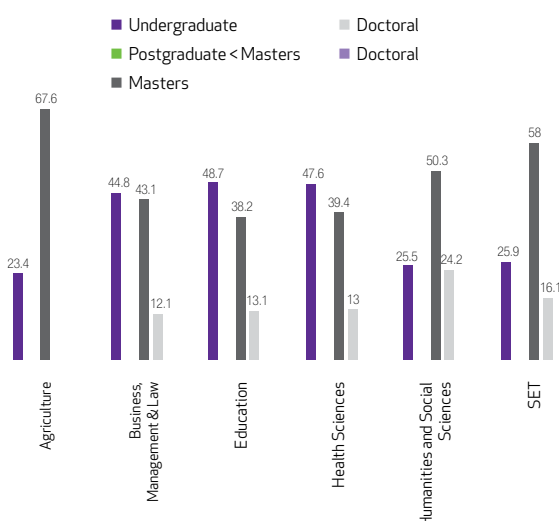
Data from the study indicated that there are about 890 academic and research staff at public higher education institutions in Malawi. Of these, 91.8 per cent are employed at the University of Malawi, while 8 per cent of the staff are from Mzuzu (note that the Mzuzu figures are from the SARUA 2008 study). Of the 770 academic and research staff members at the University of Malawi, 94.3 per cent are Malawian citizens, 0.8 per cent are from SADC countries, and about 5 per cent are from countries outside the SADC region.

As with student enrolment patterns, a large gender disparity is evident among staff with 71 per cent of academic and research staff being male. Most staff are located in the Science, Engineering, and Technology Faculty, where most of the students are enrolled. The majority of academic and research staff at the University of Malawi have masters degrees as their highest qualification. There are no staff members with doctoral degrees in the agriculture department.

National higher education outputs and alignment with policy imperatives

Graduate patterns

As with enrolment data, the majority of qualifications are awarded at the undergraduate level, with most of the qualifications awarded in science, engineering and technology. This distinguishes Malawi significantly from most other countries in the region where the majority of graduates are in the humanities, business management or education. Overall, there was no major difference between male and female graduate output. There is a significantly lower throughput rate at masters level, where only a quarter of enrolled students graduate in regular time. Based on the data provided by the University of Malawi, the humanities and social sciences are the only field of study that produced a doctoral graduate in the 2009/2010 academic year.

Figure 1: Enrolment by gender and major field of studySource: SARUA university questionnaire (2011)¹**Figure 2: Highest level of qualification for academic and research staff**

Source: SARUA university questionnaire (2011)

Quality assurance

The University of Malawi quality assurance policies have recently been approved. Quality assurance processes, however, vary across the different institutions and campuses. There is no generic quality assurance process or tool used by all higher education institutions within the system. Reports from the University of Malawi point to the need for further development of institutional quality assurance procedures. Arrangements for the engagement of external examiners and consultants, and moderation of the quality of the academic activities (including attainment of standards of performance and outcomes as well as staff training) are already in place. The university is currently engaged in the formation of a Quality Assurance Unit to monitor the quality assurance arrangements intended to maintain and elevate quality, and monitor, review, analyse and make available to the public reports on the quality of outcomes at the University of Malawi. The availability and quality of student support services seem to be high, even though most of the services are insufficient for the many students that need them.

Research output

The University of Malawi defines itself as a research-intensive university. However, no data were provided on research output to support this statement.

Recent developments and debates in higher education

As briefly mentioned above, Malawi plans to develop five new universities in the next decade. A committee of 17 people are in charge of this plan. Somewhat concerning is the fact that all the committee members are male. Sceptics doubt whether the construction of the five new universities will happen and argue that a better plan would be to change the teaching colleges into universities as there is currently not enough funding to build new universities (University World News 2011c). The new University of Science and Technology is currently being built. This new university will include an academy of medical science and a school of climate change and earth sciences. This university is expected to start operating in 2014 (Mkoka 2011).

Malawi is preparing to pass higher education legislation that will regulate accreditation of private universities, stipulating how private institutions operate and specifying standards. The bill gives the Ministry of Education the right to shut down private institutions if they fail to meet the new standards (University World News 2011d).

¹³ Some of the data used come from the 2008 study, as no data were received from Mzuzu University in this study.

Regionalisation

Malawi places considerable importance on regional collaboration and integration in the higher education sector in the areas of governance, financial management and capacity-building. The Ministry of Education reports that elements of the SADC Protocol on Education and Training have influenced Malawi's national higher education policy and practice.

Collaboration with the SADC region is valued and given high priority by management and senior academic staff at the University of Malawi. However, underfunding prevents management from committing fully to the practical aspects involved in ensuring adequate collaboration (Kotecha 2008). Even though the absolute numbers of students from outside Malawi remains low, there has been a significant increase in students from foreign countries studying at the national higher education institution in the past five years. However, no form of language and/or cultural support is provided for them.

Conclusions

Malawian higher education has come a long way, from one university with a quota selection system to the current two public universities and improved academic freedom. Even though there is no higher education policy currently in operation, a few policies are in the pipeline. These policies are expected to shape and improve the quality of higher education provision, management and output at different institutions of higher learning and training in Malawi.

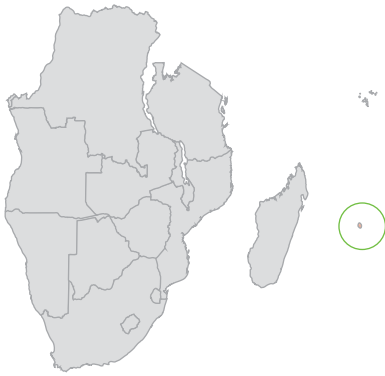
The demand for higher education remains very high, with limited opportunities for access in the present public and private institutions. This is evident in the low intake of students who qualify and apply for university admission. With recent government plans to increase the number and quality of universities, it is hoped that access will improve for both national and foreign students from SADC and beyond. This will not only improve the level of internationalisation of the higher education system, but will also expose the higher education system to other academic development frontiers.

There continues to be more male than female students enrolled for both undergraduate and postgraduate studies. The student and staff gender disparities require attention, as does the regional footprint in terms of partnerships and collaboration with other universities and higher education institutions in the region. The dominance of the SET fields provides some hope for an economy aiming to break the cycle of dependence on foreign donors and to widen its focus beyond agriculture to technology and innovation, required in the knowledge economy.

With increasing emphasis on the rise of the knowledge economy at global and regional levels, higher education institutions in Malawi will have to establish a structured and incentivised framework to encourage knowledge production through scientific publications and develop a system to monitor and reward academics for their research output. Higher education policies should focus on increasing access, ensuring quality human capital training and improving knowledge creation and accumulation, since this will ensure that higher education gains its relevance in the country and the region.

8 Mauritius

Compiled by Nteboheng Mahlaha

COUNTRY CONTEXT STATISTICS	
	Population: 1.3 million (2011)
	GDP per capita: US\$7 488 (2010)
	Human development index: 0.726
	Unemployment: 7.8% (2011)
	Key economic sectors: agriculture, tourism, manufacturing, financial services
	Principal exports: clothing and textiles, sugar, molasses, fish, cut flowers
	HIV and AIDS prevalence: 1% (2010)
Gross primary enrolment ratio: 111% (2010)	
Gross secondary enrolment ratio: 89% (2010)	
Gross tertiary enrolment ratio: 25% (2010)	
Country context data were obtained from a variety of sources: CIA (2012), UNAIDS (2011), UNDP (2011), UNESCO (2011).	

The Republic of Mauritius is an island country off the southeast coast of Africa, with a population of approximately 1.3 million people. Since its independence in 1968, Mauritius has developed tremendously from a low-income, agriculture-based economy to a middle-income diversified economy. The economy is principally based on tourism, textile manufacturing, sugar and financial services (FAO 2012). In recent years, information and communication technology, seafood, hospitality, property development, healthcare, renewable energy and education and training have emerged as important sectors, attracting substantial investment from both local and foreign investors.

The government has steered a programme aimed at shifting from previous development patterns which depended largely on low-cost, low-technology, low-skill products and an unlimited supply of adaptable labour, towards an economy focusing on high technology, finished goods, high skill levels and services. The economy of Mauritius has made significant steps in adapting to the new global knowledge economy by promoting the development of a more diversified production system using high-technology inputs and building a knowledge-based workforce (Zafar 2011, Bailey et al. 2011).

Mauritius had an estimated total GDP of \$19.28 billion in 2011 (CIA 2012), with a GDP per capita of over \$7,488. It is one of the world's top luxury tourism destinations and has a wide range of natural attractions. Mauritius received the world leading island destination award in 2012 (Acanchi 2012). According to the UNDP 2009 report, social development indicators in the Mauritius economy display a relatively high level of equality, balance and equitable growth impact across the different social strata. With the highest human development index in sub-Saharan Africa, the economy shows a relatively good distribution of wealth, especially when compared to other African countries such as South Africa and Botswana (which both have high GDPs but lower HDIs).

Mauritius is a multi-party democratic republic. The president is the head of state, and the prime minister is the head of government. The prime minister is assisted by a council of ministers (US Department of State 2012).

Higher education landscape

Higher education is provided by eleven public institutions (of which two are universities) and 55 private universities. The public institutions that will be analysed in this study are the University of Mauritius and the University of Technology.

Brief historical overview of higher education

Tertiary education started in 1924 with the College of Agriculture, and has since developed into a diversified system composed of public, private, regional and international institutions catering for a wide range of courses, programmes, diplomas and degrees (Mohamedbhai 2006). As in most African countries, it was not until after independence that the higher education system really became a national priority.

Tertiary education in Mauritius encompasses a wide range of institutions with diverse characteristics. Some institutions provide all levels of tertiary education in a range of disciplines, while others focus their activities on only one or two areas at certain levels. A number of the institutions providing tertiary education are international institutions that offer education via distance methods (Mohamedbhai 2006). Within the public sector, five key institutions are evident: the University of Mauritius (UoM), the University of Technology (UTM), the Mauritius Institute of Education (MIE), the Mahatma Gandhi Institute (MGI) and the Mauritius College of the Air (MCA). There are other higher education providers which are not under the umbrella of the Tertiary Education Commission. These include the Swami Dayanand Institute of Management, the Institut Supérieur de Technologie, the Industrial and Vocational Training Board, the Mauritius Institute of Health, the School of Nursing and the Council of Legal Education. There is also an Industrial and Vocational Training Board that provides mainly vocational courses.

The University of Mauritius was established in 1965 and initially consisted of three schools: agriculture, administration and industrial technology. However, in recent years the UoM has expanded: it now comprises five faculties and is the largest provider of higher education in Mauritius, with a strong research focus.

Two state institutions, the Mauritius Institute of Public Administration and Management (MIPAM) and the State Information Training Centre (SITRAC Ltd), were merged to form the Mauritius University of Technology (UTM), which opened its doors to students in September 2001. This university's vision is 'to become a University of national, regional and international renown, providing multi-level quality tertiary education and training including continuing professional education geared towards sustained capacity-building for increasingly technology-driven and enterprise-based developments' (University of Technology, Mauritius 2012).

National higher education policy context

In spite of the impressive socio-economic developments experienced by most sectors in Mauritius, education in general seems to have lagged behind. In a recent World Economic Forum report (WEF 2012), it was observed that 'educational enrolment rates remain somewhat low, especially at the university level; education spending is low; and the educational system gets mediocre marks for quality'. This supports recent calls on government and other stakeholders for education (and higher education in particular) to receive new impetus (African Development Bank 2009). The ADB further indicates in its report that, while there is a need to improve access to higher education and its skills base, the sector will have to forge closer ties with the world of business and industry in order for the country to make the transition to a knowledge hub for the region.

Higher education in Mauritius is governed by the Tertiary Education Commission (TEC), which was created in 1988 as an independent body under the Ministry of Education. The commission's main responsibilities at that time were to develop and co-ordinate post-secondary education in Mauritius and to allocate government funds to the institutions under its jurisdiction. There were no private tertiary institutions at that time and no provision was made for private higher education institutions (The Ministry of Education and Scientific Research 2004). The TEC has since evolved and the accreditation of both public and private tertiary institutions in Mauritius now falls within its mandate (Mohamedbhai 2006). The TEC has been enshrined in a five-year strategic plan with the

main vision to 'make Mauritius the intelligent Island of the region in the Global Village', and a clear mission to 'position Mauritius in the region as a world class knowledge hub and the gateway for post-secondary education' (TEC 2007:5).

The main responsibilities of the TEC are to:

- register and accredit private universities and other post-secondary institutions;
- recognise and determine the equivalence of academic qualifications in post-secondary institutions inside and outside Mauritius; and
- promote and maintain high-quality standards in post-secondary education institutions through quality assurance and accreditation mechanisms.

These responsibilities are linked to specific goals, including to:

- provide the environment necessary to create a regional knowledge hub and a centre for higher learning and excellence in Mauritius;
- increase access to post-secondary education through the establishment of open and distance learning;
- align post-secondary education with international standards and quality;
- promote regional and international collaboration and co-operation through student diversity and relationships with institutions abroad; and
- advocate, nurture and promote principles of good governance, transparency and accountability in the post-secondary education system.

In 2001 the Mauritius Qualifications Authority was established. Its function is to evaluate and recognise qualifications awarded by training institutions running technical schools and vocational courses.

Size and shape of higher education

Although Mauritius has more private than publicly funded universities, the percentage of students enrolled at private universities is lower than that of students enrolled at public institutions. This finding is echoed by previous studies (Mohadeb 2010), which revealed that the 'five higher education institutions taken together (UoM, Mauritius Institute of Education, Mahatma Gandhi Institute, Mauritius College of the Air and UTM), accounted for 42 per cent of the higher education student population with 14 036 students and accounted for 91 per cent of the enrolment in the public institutions.' According to data provided by the Ministry of Education and Human Resources, 33.6 per cent of the students in Mauritius are currently studying at international universities.

Table 1: Number and type of higher education institutions

Type of higher education institution	Number of institutions	Percentage of students enrolled
Publicly-funded tertiary education institutions (including the two universities)	11	49.1
Publicly-funded technical universities	N/A	N/A
Privately-funded accredited universities or colleges	55	17.3
Distance education	N/A	9
Overseas	N/A	33.6
Total	61	100

Sources: SARUA MoE questionnaires (2011)

Other studies on the size, shape and participation of higher education in Mauritius identified similar trends: for example, that nearly half of all students in tertiary education (46.5 per cent) were in public higher education institutions, while 53.5 per cent were in private and foreign institutions. The UoM is reported to be the largest supplier of tertiary education locally, accounting for 22.2 per cent of total higher education enrolment, as opposed to about 5 per cent for the UTM,

12 per cent for the Mauritius Institute of Education, 2 per cent for the Mahatma Gandhi Institute and 1.2 per cent for the Mauritius College of the Air (Mohadeb 2010).

Demand for higher education

Tertiary education is becoming increasingly important for the growing economy of Mauritius. In 2010, 78 per cent of the students who wrote their high school exams passed and were ready to go to university (Mauritius examination syndicate n.d.). There were 11 200 students who applied for undergraduate studies: 71.4 per cent applied to the University of Mauritius and 28.6 per cent applied to the University of Technology. Just under 50 per cent of the students who applied to UoM met the criteria of admission, but could not be accepted due to infrastructural constraints. 31 per cent of the students who applied to UTM were admitted as first-year students. A larger proportion (69 per cent) of students who applied for postgraduate studies at UoM and UTM were admitted. The University of Mauritius admitted 57.4 per cent of the students who had applied. Increasing access is one of the goals stated in the UoM Strategic Plan 2006-2015¹⁴.

Student profile

The data provided by the two universities indicated 91.6 per cent of the students are contact students. The University of Technology does not offer distance education, therefore the 8.4 per cent of the students who study via distance are all enrolled at UoM. The UoM did not present data on the number of students per nationality, but at UTM it was reported that 99.7 per cent of the students were national citizens, while 0.08 per cent came from the SADC region and 0.19 per cent came from countries outside the SADC region. In the 2008 SARUA study, UTM only had part-time students, but there are now 2 274 full-time students (who account for 48.2 per cent of the total number of students enrolled) at UTM. A slightly higher percentage of female students (54 per cent) than male students are enrolled at the public universities in Mauritius.

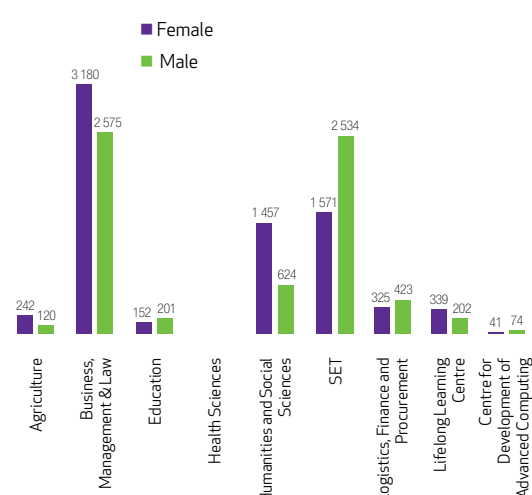
Enrolment patterns

In the initial SARUA profiling study there were 9 574 students enrolled at both universities. Three years later, the present study has shown that the student numbers have increased to about 14 883 students (a 54.3 per cent student increase rate). The largest proportions of students (40.5 per cent) are enrolled for degrees, diplomas and certificates in business, management and law, followed by science, engineering and technology (with 29 per cent of the student enrolment). There are more female than male students in most faculties, except in the field of science, engineering and technology (where only 33.3 per cent of the students enrolled are women). It was reported that there are 159 students enrolled for doctoral studies, with 58.5 per cent of them studying science, engineering and technology, and only 8.2 per cent studying business, management and law. Enrolment trends by gender are shown in Figure 1 below.

Staff profile

In the academic year 2009/2010, a total of 312 academic and research staff were employed at the two public universities. Of these, 208 were national citizens of Mauritius and 8 were from countries outside the SADC region. None of the staff at either of the two public universities in Mauritius were reported to have come from elsewhere in the SADC region. The University of Mauritius could not provide information on the gender distribution of its staff. The University of Technology reported having more female than male administrative staff members, although male academics continue to outnumber female academics. The ratio of academic and research staff (312) to students (14 883) was about 1:48. According to the data provided, most of the academic and research staff in Mauritius hold a doctoral degree.

14 www.uom.ac.mu/aboutus/StrategicPlan/index.htm

Figure 1: Enrolment by major field of study and gender

Sources: SARUA university questionnaires (2011)

Table 2: Number of staff members by nationality and type of post

Staffing categories	Nationality	Number of staff
Academic and research staff	National citizens	304
	SADC citizens	0
	Other international staff	8
Management and administrative staff	National citizens	813
	SADC citizens	0
	Other international staff	7

Sources: SARUA university questionnaires (2011)

The questionnaire responses point to a large shortage of academic staff. The University of Mauritius has twice as many part-timers as permanent staff, a practice that is reported to be less costly for the university. This is especially true for the faculty of Law and Management. There is also a need for more staff from the SADC region, as this could enhance the regional position of the country and facilitate collaboration between institutions. The increasing number of students enrolling each year exerts mounting pressure on the already limited resources.

National higher education outputs and alignment with policy imperatives

Graduate patterns

In all faculties and major fields of study, the majority of qualifications are awarded at the undergraduate level. The fields of agriculture and science, engineering and technology were the only fields that had doctoral graduates. 54 per cent of the students who obtained their undergraduate degrees are women and there is no great gender discrepancy. However, at the doctoral level gender disparities were more apparent with male students being awarded 9 of the 11 doctoral degrees (88.8 per cent).

Quality assurance

The Tertiary Education Commission has a Quality Assurance and Accreditation Division (QAAD). Established in 1997, its main objective at the time was to ensure the quality of public universities. In 2005 the TEC Act stated that the QAAD is now responsible for ensuring quality of post-secondary education and determining the recognition and equivalence of post-secondary qualifications. The objective is to bring post-secondary education provision in line with international standards and quality (Tertiary Education Commission 2011).

The University of Mauritius has a quality assurance office which was created in 2002 to align with the university's 1999–2004 strategic plan (Bailey et al. 2011). This office is committed to continuous improvement and quality management to ensure relevance, quality of teaching and learning, quality of research and good practice at institutional level. UoM regularly conducts internal evaluation of academic programmes. Institutional data collected from the UoM indicates that there are no infrastructure problems. There are enough science laboratories, which are in good condition, and student accommodation is not a problem at UoM. This response from the UoM could indicate significant progress in increasing access when compared to previous research (ADB 2009, Government of Mauritius 2008, Kotecha 2008), which indicated access as a major issue in Mauritius higher education. This was also articulated in policy documents such as the 2008/2009 government budget speech, which allocates resources to scale up infrastructure to increase access and enrolments.

At the University of Technology internal quality assurance is conducted where needed. Where and when a need is identified, an in-depth quality audit is carried out to identify and correct any shortcomings. Quality assurance is conducted across all areas of the university, including teaching activities, research activities and student performance.

Research output

The TEC provided a list of research conducted by tertiary education institutes in 2010. The research output covers many themes, including access to tertiary education, distance education, planning and development of tertiary education, and tertiary education and the labour market (Mohadeb 2010). Most of the research was in the form of peer-reviewed journals. Both the UoM and UTM report being committed to expanding research.

Table 3: Research output

Category of research output	2008	2009	2010
Peer-reviewed journal articles	126	95	188
Peer-reviewed books	0	1	1
Peer-reviewed book chapters	3	2	7
Patents	0	0	0
University-funded research projects	6	6	12
Externally-funded research projects	5	7	10
Conference papers	14	32	23

Sources: SARUA university questionnaires (2011)

Recent developments and debates in higher education

The government of Mauritius plans to transform the country into a regional knowledge hub and this is an important driver for developments in the higher education sector. It has been reported that Mauritius aims to attract as many as 100 000 foreign students by 2020 and recruitment efforts have already begun in Tanzania and India. Plans include the expansion of the two existing public universities and setting up additional campuses in various parts of the country. A medical university has also been established (Gouges 2011). Mauritius has been actively seeking international partnerships to build the tertiary education sector. The Indian Institute of Technology (IIT) plans to open a branch campus in Mauritius in 2013. The focus of the branch campus will be on high-level engineering courses (Gouges 2011).

Regionalisation

Regional collaboration among universities is increasingly recognised as a vital tool to enhance higher education development, quality assurance and knowledge output. Regionalisation as a concept is manifested in several ways. These include academic mobility of staff and students at regional level, the mutual recognition of academic qualifications in post-secondary education, and establishing a common higher education area in the region.

Mauritius places a great deal of value on regional collaboration as well as the internationalisation of its higher education sector. In its questionnaire response, the Ministry of Education and Human Resources noted that it has taken the SADC Protocol into consideration when drafting its strategic plan for 2008–2012.

As shown in Table 1, just over 33 per cent of students in Mauritius are enrolled for study at universities in other countries. In contrast, only 0.08% of students in Mauritius are from other SADC countries. The two public universities do not currently have any staff from other SADC countries, and only 2.6 per cent of the current staff complement come from countries outside of SADC. Thus, while Mauritius is actively pursuing internationalisation in various forms, there is the potential to attract more staff and students from the region.

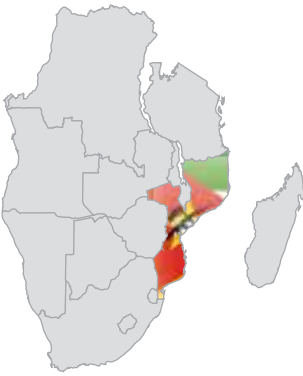
Conclusions

Building on the previous SARUA study, this study has provided empirical evidence highlighting the extent of higher education demand in Mauritius, as well as the national focus on building the tertiary education sector as a key strategy for ensuring the competitiveness of Mauritius in the global knowledge economy. Although enrolments at the two public universities have increased substantially in the past three years, the data indicate that although more than half of the students who leave secondary education meet the admission requirements, they fail to gain access to higher education due to the limited number of spaces currently available. For the country to continue to move towards a knowledge economy, there is a need to increase access to education and also to ensure that postgraduates are sustained in the system. It is promising to note that the government of Mauritius has prioritised tertiary education in its development plans and is explicitly seeking to broaden access.

The process of internationalisation of higher education is somewhat unbalanced, with a significant number of Mauritian students studying abroad, and very few students from other countries studying in Mauritius. Less than two per cent of all the students enrolled in the two public universities are from outside the country (including from the SADC region, where the discourse on regional collaboration continues to gain currency). With a relatively high percentage of academic staff holding doctoral degrees, there is a need for incentives to increase and improve the quality of research output and the number of masters and doctoral graduates produced annually. The number of research publications has been increasing, although there is room for improvement. With its plans to build more universities and improve the quality of higher education, Mauritius continues to strive towards the provision of world class education.

9 Mozambique

Compiled by Nteboheng Mahlaha

COUNTRY CONTEXT STATISTICS	
	Population: 23.9 million (2011)
	GDP per capita: US\$1 100 (2011)
	Human development index: 0.322
	Unemployment: 21% (1997 est.)
	Key economic sectors: mining, agriculture, industry, tourism
	Principal exports: aluminium, prawns, electricity, cashew nuts, sugar, citrus, cotton, timber
	HIV and AIDS prevalence: 11.5% (2010 est.)
	Gross primary enrolment ratio: 111% (2011)
Gross secondary enrolment ratio: 26% (2011)	
Gross tertiary enrolment ratio: 1% (2005)	
Country context data were obtained from a variety of sources: CIA (2012), UNAIDS (2011), UNDP (2011), UNESCO (2011).	

Located in southeast Africa, Mozambique covers an area of 799 330km. Having been a Portuguese colony until 1975, Portuguese is the official language and it is used both academically and socially. Mozambique is one of two countries in the Southern Africa region that uses Portuguese as the main national language of communication. The most commonly-used local languages are Emakhuwa (26.1 per cent) and Xichangana (11.3 per cent). The 1980s in Mozambique were characterised by civil unrest and war, economic decline and sustained political instability. In 1992 the peace agreement between the government and the Mozambican National Resistance (Renamo) was signed, and in 1994 Mozambique held its first multi-party elections.

Following the peace agreement, the country started witnessing a positive turn in political and economic fortunes. In 2009 Mozambique held its fourth peaceful and democratic elections (Knight and Teferra 2008). However, a 2012 report by the Bertelsmann Stiftung's Transformation Index – a global body which assesses democratic and market economy transition in 128 developing countries – criticised the dominance of the Liberation Front of Mozambique (FRELIMO). The report suggested that FRELIMO presents a challenge to the democratic gains the country has achieved thus far. This is compounded by the 'close overlap between the state, party and economic elites' ensuring personal enrichment (Bertelsmann Stiftung 2012).

In the aftermath of civil war and political unrest in Mozambique, the economy depended mostly on donor aid, with the USA as the main donor. Other significant donors included the IMF, World Bank, United Nations, the European Union, the UK and other countries in Western Europe, and South Africa. Mozambique's economy is currently dominated by trade and agriculture, with agriculture still providing the highest export earnings from commodities such as prawns, fish, cotton, timber and sugar. Only 38 per cent of the population live in urban areas, with the majority of Mozambicans surviving on agricultural activities. The recent discovery of large coal deposits has increased the country's foreign direct investment (FDI) which improves the prospects of reducing

reliance on foreign aid (Kolver 2012). In 2010 it was estimated that 56.1 per cent of the population was literate and of these 70.8 per cent were males (CIA 2012). The GDP by purchasing power parity (PPP) in 2011 improved by 7.2 per cent to \$1 100 per capita; an improvement from the 6.8 per cent growth of 2010 (CIA 2012). Like most countries in Southern Africa, Mozambique has a high HIV prevalence rate, which has had a negative impact on the economic growth potential of the country.

Higher education landscape

This section provides a review of the higher education landscape of Mozambique. Areas of interest include the policies governing higher education and quality and recent developments as far as the broader higher education sector is concerned. Based on primary data collected during the current study and enriched or supported by data from the previous SARUA profiling study published in 2008, as well as a review of other research done on higher education in Mozambique, this section also provides a broad description of important higher education indicators including, inter alia, the size and shape, funding, research output and staff distribution among public higher education institutions in Mozambique. It is important to note upfront that the response rate of Mozambican universities was poor in this study and as such, both primary and secondary data sources have been used in preparing this chapter.

Brief historical overview of higher education

Estudos Gerais Universitarios was the first higher education institution established in Mozambique (in 1962). In 1968 this university became known as the University of Lourenço Marques. By 1974 the university offered 17 degree programmes across diverse academic and professional disciplines (Chilundo 2010). At that time the university was mainly reserved for students of Portuguese colonials, and only a small number of Mozambicans gained access to the university (Higher Education in Mozambique Patrol n.d.). This elitist idea of higher education was observed in most sub-Saharan Africa countries in the early sixties and seventies. After independence the University of Lourenço Marques became Eduardo Mondlane University, taking the name of the first president of FRELIMO, who was assassinated in 1969. Eduardo Mondlane is considered the first real Mozambican university and had the aim of expanding access to higher education for large numbers of Mozambicans.

In 1985 the Pedagogic University was established, making it the second public university in Mozambique. The main purpose of this university was to train teachers for the national education system. A few years later a third public university was established, the Instituto Superior de Relacoes Internacionais (ISRI), whose mission is to train people in diplomacy studies. The Universidade Lúrio was established in Nampula in 2006 and now also has campuses in Pemba and Lichinga. In 2007 the University of Zambezi (UniZambeze) was established by Decree of the Council of Ministers No.77/2007. Located in Beira, this new university began admitting students from 2009.

Private higher education was only officially permitted in 1993 through a new higher education policy which provided for the approval of private higher education. In the first three years after the policy came into being, three private institutions were established (Knight and Teferra 2008) and there has been a tremendous growth in the number of higher education institutions since then. Today there are a total of 13 private higher education institutions and 13 public higher education institutions (including universities). Eduardo Mondlane remains the largest university in Mozambique (Bailey et al. 2011).

National higher education policy context

In 1995 the first National Education Policy and Strategies for Implementation was approved. This document aimed to improve the economy by increasing the literacy rate in the country (Kotecha 2008).

The Education Sector Strategic Plan 1999–2003 was launched in 1998 and its main focus was to:

- improve access of education for all, especially for women;
- improve the quality of education; and

- strengthen the financial and administrative infrastructure of institutions to ensure effective and sustainable delivery of education.

At the end of this 1999–2003 strategic plan cycle, a number of gaps and possible improvements were identified in the higher education sector and a new higher education law was passed in 2003. LEI No. 05/2003 of the Ministry for Higher Education, Science and Technology (MHEST) sought to achieve the following objectives:

- enhance research at cultural and technical levels via training to address relevant problems facing society and business towards national development and human heritage;
- develop a highly skilled core of technical and research staff through training;
- encourage the third mission of the university through extension services, mainly through knowledge dissemination and exchange; and
- enhance human capital production to the training of graduates of high quality.

The second Education Sector Strategic Plan covered the period 2005–2009. It included many of the same initiatives as the first, but in addition focused on the development of vocational education and higher education (Government of Mozambique 2005). This policy document advocates for an increase in higher education access through vocational and other tertiary forms of education and the production of human capital with the skills relevant for the recovering economy.

The mandate of higher education in Mozambique is captured through Article 114 of Mozambique's legislation for higher education, which states that:

1. Access to public institutions of higher education shall guarantee equal and equitable opportunities and the democratisation of education, taking into account the requirements in terms of qualified staff and the raising of educational and scientific standards of the country.
2. Public institutions of higher education shall be corporate persons governed by public law, and they shall have legal personality and enjoy scientific, teaching, financial and administrative autonomy, without prejudice to the appropriate evaluation of teaching standards, in accordance with the law.
3. The state shall recognise and supervise private and co-operative education in accordance with the legislation.

Originally, the higher education sector in Mozambique was governed as an integral part of the Ministry of Education, and no particular emphasis was placed on higher education as a separate section. However, between 2000 and 2004 the need to improve the capacity for human capital formation as well as research and innovation lead to the creation of the Ministry of Higher Education, Science and Technology. Together with MHEST, two councils were established: the Higher Education Council, and the National Council on Higher Education, Science and Technology, composed of rectors from both public and private higher education institutions (Bailey et al. 2011). These two councils were set up to advise MHEST as part of its decision-making process.

Size and shape of higher education

Higher education in Mozambique is comprised of 26 higher education institutions (13 private institutions and 13 public institutions). Most of these institutions are located in the capital city, Maputo. Eduardo Mondlane University (UEM) is the oldest and largest of them with an estimated student population of 12 000 (Bailey et al. 2011). According to SARUA baseline data published in 2006, the UEM accounted for 61 per cent of all student enrolments at public universities. In spite of the rapid growth in the number of private institutions since 1995, higher education in Mozambique is largely provided by public universities, with the UEM and the Universidade Pedagógica (the country's second largest university) accounting for an estimated one-third of all higher education enrolment (both public and private).

Demand for higher education

The number of students in higher education increased from about 3 500 in 1986 to almost 40 000 by 2006 (Bailey et al. 2011). Bailey and her colleagues observed that two-thirds of the students are enrolled in public institutions. The three universities for which data were available in this study reported having about 17 062 applications for the 2009/2010 academic year and 71 per cent of these students were registered as first-year students. In the 2008 SARUA study Universidade Eduardo Mondlane had 4 336 students who had applied to study and a total of 2 730 qualified applicants were not accepted due to space constraints. No data were available for the other universities.

Student profile

An estimate of the profile of students, in terms of nationality and mode of study, enrolled in public higher education in Mozambique is summarised in Table 1.

Table 1: Estimated student enrolment by mode of study and nationality

Student category	Number of students
Contact students	16 714
Distance students	2 070
Full-time students	42 782
Part-time students	16 314
National citizens	66 538
SADC citizens	0
Other international students	168

Sources: SARUA university questionnaires (2008 and 2011)

The data above were obtained from the universities that participated in SARUA's research published in 2008 and in the current study. Universidade Pedagógica only enrolls distance education students and of these students 99.8 per cent are national citizens and only 0.2 per cent are from other African countries. The newly-opened University of Zambeze, on the other hand, only has contact students who are all national citizens. The data from the 2008 study show that the biggest university in Mozambique, UEM, had no students from the SADC region and only 0.5 per cent of the students were from other countries.

It was observed from the data that there are about 60 412 students enrolled in the three universities. Of the total number of registered students, 48.2 per cent are female. As can be observed in the data tables, there is a fair spread of students according to gender, except for the education faculty where only 37.5 per cent of the students are female. Education has the most students enrolled (53 per cent), followed by business, management and law (18 per cent). Agriculture has the lowest enrolment figures, with 1.2 per cent of the students enrolled. The majority of the students were enrolled for undergraduate studies. The humanities and social sciences were the major fields of study in which students were enrolled for doctoral studies.

Staff profile

Very few staff employed in public higher education in Mozambique hail from countries other than Mozambique itself. During the 2009/2010 academic year, 97.8 per cent of academic and research staff at University Pedagógica were national citizens, 1.3 per cent were from SADC countries, and only 0.9 per cent were from other countries. The University of Zambeze has similar staff trends for the 2012 academic year. A gender disparity in staff members is evident, with 69 per cent of the staff being male. Male staff members also tend to occupy the higher management positions in the universities. Although education has the highest student enrolment, the humanities and social sciences have the most staff. This may be because University Pedagógica is a distance learning institution, which focuses more on the humanities and social sciences. The student:teacher ratio across all fields of study was 25:1. No information was provided about staff

qualifications in the 2011 study, but in the previous SARUA study the majority (62.6 per cent) of the staff members for whom data were available had only an undergraduate qualification, while 24.7 per cent had a masters degree and 12.6 per cent a doctoral degree. No research output data were provided.

National higher education outputs and alignment with policy imperatives

Graduate patterns

Similar to enrolment data, the majority of the qualifications in Mozambique are awarded to undergraduate students, with education having by far the highest number of graduates. Science, engineering and technology reported the largest number of masters graduates compared to the other fields of study. Overall, there appear to be very few doctoral qualifications awarded in Mozambique. It thus seems important to explore further why so few of the masters degree graduates appear to move on to doctoral level study in Mozambique. One possible explanation is that students go to study in other countries. For example, the South African HEMIS data show that 66 doctoral students from Mozambique were registered for the 2010 academic year. No data were available on graduates by gender, so it was not possible to assess whether the gendered enrolment patterns persist to graduation.

Quality assurance

From the questionnaire response provided by the Ministry of Education, Mozambique has a national quality framework for higher education, which is primarily involved in the establishment of higher education institutions. Evidence shows that Mozambique was part of the Southern African Development Community Standardisation, Quality Assurance, Accreditation and Metrology (SQAM) process in 2003 (SADC 2004). The Department of Higher Education in Mozambique is trying to improve the quality of its higher education provision by implementing quality assurance mechanisms and indicators. In 2011 calls were made for qualified and interested candidates to apply to head a project on implementing quality assurance mechanisms and indicators (Nuffic 2011).

The University of Zambeze reports having an internal quality assurance framework that includes a focus on employing good quality professional staff members, building research and ensuring efficient administration. The university also pays attention to the quality of learning materials and internet access, and tries to ensure that there is good interaction amongst students and lecturers. For the two universities for which quality assurance information is available, it was reported that student performance is tracked. Neither university, however, reported having a budget specifically allocated to quality assurance. Both universities sometimes conduct internal evaluations of their work and both have mandatory processes in place for evaluating the quality of individual teaching staff.

Recent developments and debates in higher education

A major development in the Mozambique higher education system is the decision by the council of UEM to make a U-turn on the proposed plan to adopt the Bologna process degree structure, reverting to a four-year degree in the 2012 academic year. This comes after concerns raised by academics about the feasibility of students gaining the relevant training in three years in view of the current state of secondary school education in the country, which does not always provide a sufficient foundation for the completion of a degree in three years. Other issues raised in the decision include the need for quality student training and human capital formation, consultation with all stakeholders within the broader education system and beyond, and co-operation with regional and continental universities (Makoni 2011).

In 2011 the Ministry of Education's annual budget was cut due to the financial crisis that was encountered that year. The budget cut affected the public universities' budgets and it was reported that UEM would lose about 38 per cent of its yearly budget affecting staff salaries and the quality of education overall (University World News 2011).

The World Bank has loaned Mozambique significant financial capital to improve its higher education sector. The funds are expected to be used to hire consultants who will help in the development of polytechnics in the country. All higher education institutions need to be licensed according to the procedure prescribed by cabinet in June 2012 (News for Mozambique 2012a). This rule intends to improve existing policies regarding the registration and operation of higher education institutions, especially those in the private sector. One of the requirements stipulates that after obtaining a licence, the institution must be fully operational within two years; failure to do so will lead to suspension of the licence (University World News 2012).

Mozambique was honoured to be amongst the few Southern African countries that will be hosting the world's biggest telescope, the Square Kilometre Array (SKA). Even though Mozambique is not directly involved in the project, UEM has close relations with the SKA South African project. This will enhance research and teaching in radio astronomy in Mozambican universities, especially UEM (News for Mozambique 2012b).

Regionalisation

From a national perspective, Mozambique places a great deal of emphasis on regional collaboration and integration in its higher education sector. The Universidade Eduardo Mondlane stipulated in the 2008 study that it values regional collaboration and gives preference to students from the SADC region over other African students. However the data presented earlier in this chapter showed the negligible numbers of students and staff from other SADC countries. Much of the regionalisation that does occur involves Mozambican nationals moving to other countries, notably South Africa. Further research is needed to understand the challenges to regionalisation in the Mozambican context. It is likely that language plays a role, since there are few students from SADC countries who would function easily in a Portuguese environment. We might also speculate that, as the national quality assurance work in Mozambique gains ground and there is more clearly defined approach to quality, there might be increasing mobility of students and staff into Mozambique. Further, the debates in Mozambique regarding adopting the Bologna process imply that in the context of Mozambique, SADC regional issues may be less influential than international partnerships and linkages in higher education.

Conclusions

Since the end of the civil war Mozambique's economy and higher education sector has shown signs of significant growth – from three higher education institutions in the 1980s to the 26 institutions at present. Higher education governance has improved over the years with the initiation and implementation of new policies and structures to address particular needs in the higher education sector. The demand for higher education is increasing and currently outstrips the available places. While opinions may differ on the UEM stance regarding the Bologna process, one important aspect is that higher education in Mozambique is recognising its role in contributing to the development not only of the country, but also the region and the continent.

The methodological limitations and low response rate from universities in Mozambique was noted at the outset of this chapter, and it is necessary to regard this chapter as a somewhat partial review of higher education in the country. However, given the dearth of higher education research focused specifically on Mozambique, it is held that this study makes a contribution to efforts towards better understanding higher education in the region.

10 Namibia

Compiled by Nteboheng Mahlaha

COUNTRY CONTEXT STATISTICS	
	Population: 2.3 million (2011)
	GDP per capita: US\$6 700
	Human development index: 0.625
	Unemployment: 51.2% (2008 est.)
	Key economic sectors: mining, agriculture, industry, tourism
	Principal exports: diamonds, copper, gold, zinc, lead, uranium, cattle, processed fish, karakul skins
	HIV and AIDS prevalence: 13.3% (2009 est.)
Gross primary enrolment ratio: 107% (2008)	
Gross secondary enrolment ratio: 104% (2007)	
Gross tertiary enrolment ratio: 9% (2008)	
Country context data were obtained from a variety of sources: CIA (2012), UNAIDS (2011), UNDP (2011), UNESCO (2011).	

Situated in the southwest of the Southern African region, the Republic of Namibia gained independence from apartheid South Africa in 1990 (SACMEQ 2012). The country has a population of over two million people, with 87.5 per cent of the population being Africans, and whites and mixed races comprising 6 and 6.5 per cent respectively (CIA 2012). The Namibian economy depends heavily on the mining and processing of minerals for export. Mining accounts for 8 per cent of GDP, but provides more than 50 per cent of foreign exchange earnings. Current GDP per capita stands at US\$6 700. Rich alluvial diamond deposits make Namibia a primary source for gem-quality diamonds and the country is the world's fourth-largest producer of uranium. Namibia also produces large quantities of zinc and is a small producer of gold and other minerals. The mining sector employs approximately 3 per cent of the population. Namibia normally imports about 50 per cent of its cereal requirements and in drought years food shortages are a major problem in rural areas. The Namibian economy is closely linked to South Africa with the Namibian dollar being on par with the South African rand (African Development Bank 2009).

Namibia is a politically stable and peaceful country with a progressive constitution. Since independence in 1990, a major political achievement has been the smooth transfer of power from one president to another. This bodes well for political stability and national development. However, high levels of poverty, unemployment and inequality in income and land ownership remain key challenges which could threaten economic growth and national stability (African Development Bank 2009). At the social level, Namibian society is plagued by high HIV prevalence (about 19.7 per cent). Although the rate of infection has significantly slowed down in recent years, the number of orphans infected and/or affected currently stands at more than 120 000 (National Planning Commission 2007). This is believed to be taking a significant toll on the country's economic output and overall growth.

Higher education landscape

Higher education is provided by two public and two private institutions. The public institutions are the University of Namibia and the Polytechnic of Namibia, and the private institutions are the International University of Management and the Headstart Mercy Montessori Teaching Training College. This section focuses on the landscape of public higher education in Namibia. Some of the factors that will be explored include the growth of higher education, regulatory policies, and recent developments, as well as institutional figures relating to institutional inputs and outputs.

Brief historical overview of higher education

Higher education was developed in Namibia in the early 1980s. Hitherto, students had to travel across the borders to attain tertiary education, with South Africa being the primary destination. In the mid-1980s, the academy was established, comprising university components, technical colleges and colleges for out-of-school training. After independence a special commission for higher education was created. It consisted of local and international representatives tasked with analysing and making recommendations concerning Namibia's higher education needs (SACMEQ 2012). The three components of the academy were transformed into two higher education institutions, a university and a polytechnic. The University of Namibia (UNAM) was established in 1993 and a year later the Polytechnic of Namibia was created from the technical school and the college for out-of-school training.

The polytechnic offers education and training for members of society who need more advanced technical skills. Although the polytechnic was established in 1994, it only became an independent institution in 1996 and subsequently established its Distance Education Centre to cater for students who could not afford to study full-time and who lived far from campus (Polytechnic of Namibia 2012). This institution collaborates with other major educational institutions and the Namibian College of Distance Education to offer distance programmes. It also works very closely with the University of Namibia.

After opening its doors to the first batch of students early in 1993, the University of Namibia set up a Centre for External Studies to provide off-campus students with the opportunity to obtain a higher education diploma or degree. The demand for tertiary education increased so rapidly that a second campus was established in the early 2000s. UNAM offers bachelors and masters degrees, as well as diplomas in the faculties of Agriculture and Natural Resources, Economics and Management Sciences, Education, Humanities and Social Sciences, Medical Health, and Natural Sciences (Kotecha 2008).

The Namibian College of Open Learning (NAMCOL) was sanctioned by the Namibian Public Service Commission in 1994. NAMCOL's main role is to enrol Namibians who do not gain entrance to the formal education system. It provides opportunities for students who could not complete their Grade 12 or who want to improve their marks to study and complete or improve their Grade 12 certificates. The majority of the students study via distance learning. The college also offers a certificate in education and development, designed to meet the staff development needs of district literacy organisations, agriculture and health workers, and community development workers in various ministries and NGOs.

National higher education policy context

Higher education in Namibia is primarily governed by the Namibian Higher Education Act of 2003 (Republic of Namibia 2003). The act aims to:

- regulate higher education;
- provide for the establishment, objectives, functions and composition of the National Council of Higher Education;
- provide funding for public higher education institutions; and
- provide for the establishment and functioning of a panel of enquiry into the affairs of higher education institutions.

Namibia has statutory bodies that help to regulate and ensure the quality of higher education in Namibia. The main one is the National Council for Higher Education (NCHE) which was established by the Education Act of 2003, but was only officially launched in 2005 (National Council for Higher Education 2009). The objectives of the council are to:

- promote the establishment of a co-ordinated higher education system;
- advise on the allocation of money to public higher education institutes;
- promote access of students to higher education institutes and encourage quality assurance in higher education; and
- advise the Minister of Education on quality promotion and quality assurance mechanisms of higher education institutions.

The Namibian Qualification Authority (NQA) is a statutory body established in 1996. The NQA is committed to promoting quality education and training in Namibian higher education institutions (Namibian Qualification Authority 2012). One of the objectives of the NQA is to ensure that every qualification meets the national standards.

The Advisory Council on Teachers Education and Training (ACTET) was established by the Teachers' Education Act of 2003 and is responsible for advising the Minister of Education (and others) about the training and education standards or qualifications in the teachers' education college.

Size and shape of higher education

Table 1 provides an overview of the types of higher education institutions and the proportional enrolment of students at each.

Table 1: Number and type of higher education institutions

Type of higher education institutions	Number of institutions	Percentage of students enrolled
Publicly-funded universities	1	53
Publicly-funded technical universities	1	40
Privately-funded accredited universities or colleges	2	7
Total	4	100

Sources: SARUA MoE questionnaires (2011)

Almost all students in Namibia (93 per cent) are enrolled in public higher education institutions. With only two private providers of higher education, Namibia appears to have a very small private higher education sector. As in other SADC (and African) countries, the private sector accounts for a significantly low percentage of enrolments.

Demand for higher education

On average, more than 41 000 pupils complete high school in Namibia each year. During the academic year beginning in 2010, a total of 26 612 students applied for undergraduate studies at the two public institutions: 54.7 per cent applied to UNAM and 45.3 per cent to the polytechnic. Of the students who applied, about a third of the students qualified but could not be admitted owing to space constraints. Just over half (53 per cent) of the students who had applied to do their postgraduate studies in the two higher education institutions were accepted. The demand for postgraduate studies at the University of Namibia is particularly high, with 1 727 students applying and only 668 (38.8 per cent) being accepted. There is therefore a high demand for access to higher education, but the current institutional facilities do not permit all qualified students to enrol. Many Namibian students continue to cross the borders into South Africa and elsewhere to gain access to higher education.

Student profile

The data available indicate that the majority of the students who study at the higher education level in Namibia (91 per cent) are Namibian citizens, with an estimated 8.4 per cent of students coming from other SADC countries and only 0.6 per cent being international students from non-SADC countries.

With respect to the gender of students, Namibia and South Africa show some commonalities, with female students accounting for an increasing proportion of the student body. For the 2009/2010 academic year, 58.5 per cent of students enrolled at the two public universities in Namibia were women. Female students outnumber male students in all fields of study, except natural resources and tourism and agriculture.

Enrolment patterns

According to the questionnaires submitted by the two public universities, the 2009/2010 academic year witnessed a total student enrolment of 22 698 students in public higher education. Both UNAM and the polytechnic have a distance learning option to cater for students who cannot attend full-time contact studies. A total of 5 365 (23.6 per cent) of the students studying at public institutions make use of distance learning options.

At the undergraduate level, business, management and law account for by far the largest enrolment (51.2 per cent of all undergraduate students). This is followed by science, engineering and technology, which accounts for 14.4 per cent of the undergraduate enrolment. Science, engineering and technology and the humanities and social sciences together account for the largest numbers of students enrolled for postgraduate study.

Table 2: Student enrolment in Namibian public higher education by major field and level of study

Major field of study	Number of students enrolled per level of study					
	Undergraduate	Postgraduate up to, but excluding masters	Masters	Doctoral	Post-doctoral	Other (e.g. short courses)
Agriculture	498	113	15	0	0	0
Business, management and law	10 992	134	132	6	5	0
Education	2 029	65	94	10	1	0
Health sciences	1 368	44	32	15	0	0
Humanities and social sciences	2 461	116	101	18	0	0
Science, engineering and technology	3 089	245	38	29	4	0
Natural resources and tourism	71	0	17	0	0	0
UNAM foundation	121	0	0	0	0	0
Non degree/diploma courses	57	0	0	0	0	0
External studies	778	0	0	0	0	0
Total	21 464	717	429	78	10	0

Sources: SARUA university questionnaires (2011)

Staff profile

The Namibian public universities reported having 858 academic and research staff, the majority of whom (93.4 per cent) are national citizens. Only 120 (6.6 per cent) of the academic and research staff were reported to be from outside Namibia (75 from other SADC countries, and 45 from countries outside the SADC region). In the previous SARUA study, 11 per cent (73 out of 660) of the staff members were from outside Namibia, so there appears to have been a decline in international staff members within the Namibian system. This is, however, commensurate with an overall

decrease in total staff numbers. Of the 600 administrative and management staff, only eight are not Namibian citizens.

Considering academic and research staff members specifically, the data show that 43.1 per cent of academic and research staff are female. In some fields of study the gender ratios are relatively even, but in others large disparities are evident. This is particularly the case for science, engineering and technology, which is dominated by men.

The majority of academic and research staff at UNAM have masters and doctorate degrees, but the majority of staff at the Polytechnic of Namibia have undergraduate degrees as their highest qualification.

National higher education outputs and alignment with policy imperatives

Graduate patterns

Consistent with the enrolment numbers, most qualifications awarded in the 2009/2010 academic year were in the field of business, management and law. At postgraduate level, 14 doctorate degrees were awarded in education. Although there is a massive difference in the enrolment of male and female students in the field of science, engineering and technology (SET), the gap seems to be decreasing and in fact 60 per cent of students who received their masters in SET-related fields were women. In the 2009/2010 academic year, a total of 3 526 undergraduate qualifications were awarded. At the postgraduate level, 480 students enrolled for masters degrees, but only 20 graduated. This reflects a possible bottle-neck, with limited throughput at postgraduate level. Only four doctoral degrees were awarded.

Quality assurance

In 2009 the final draft of the quality assurance framework for higher education in Namibia was released. The quality assurance system was developed to align with good practices from international case studies, taking into account the Namibian higher education context (National Council for Higher Education 2009). The National Council for Higher Education (NCHE) is responsible for quality assurance processes and works in collaboration with the Namibian Qualification Authority. The NCHE's main task regarding quality assurance is to:

- accredit, with the concurrence of the National Quality Authority, programmes of higher education provided at higher education institutions; and
- monitor the quality assurance mechanisms of higher education institutions.

Figure 1: Student enrolment in public higher education by gender and field of study

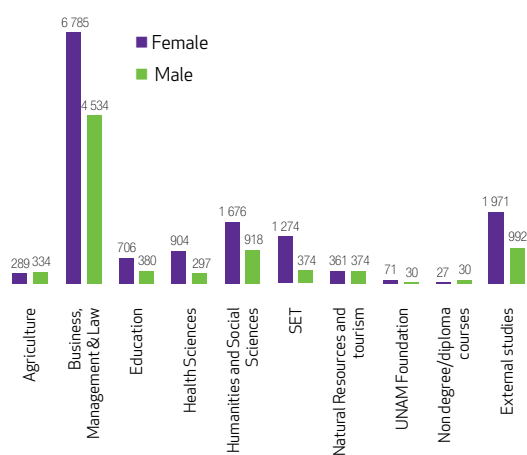
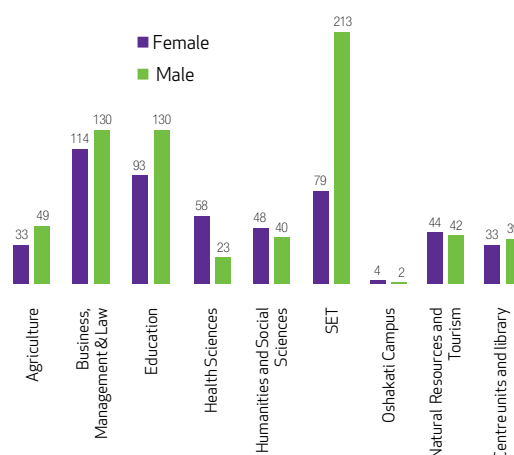


Figure 2: Academic/research staff by gender and major field of study



The Polytechnic of Namibia states that it conducts internal quality assurance procedures. The aim of quality assurance at the polytechnic is to enhance the effectiveness of the institution's core activities, which are teaching and learning, research and community engagement. It also co-ordinates and monitors the academic regulations, and regulates programmes, processes and the implementation of quality management systems both in academic departments and in support services. The quality assurance process further oversees the quality of academic programmes using the National Qualification Framework, and supervises departmental self-evaluation, programme accreditation and programme reviews.

Internal quality assurance at the University of Namibia is based on regular self-evaluation. An internal quality assurance management system is in place. The quality assurance office is responsible for liaising with stakeholders and develops internal quality management systems and procedures, which are internationally benchmarked to ensure constant and continuous improvement across all aspects of the university's operation in order to achieve the university mission, vision values and objectives.

Research output

The University of Namibia's research output continues to grow and the institution encourages research activity. In its approach to research funding, UNAM places emphasis on research proposals that cover areas that are of relevance to society. UNAM provides funding for academics to attend and present papers at national and international conferences and symposia (UNAM 2011). Young academics are urged to participate in research under the mentorship of senior researchers. As indicated in the table below, most of the research output is in the form of reports, theses, study guides, conferences papers and symposia. The university receives 66.4 per cent of its research funds from the government, 21 per cent from private individuals or trusts and only 2.4 per cent from international funders.

Table 3: Research output

Category of research output	2009	2010
Peer-reviewed journal articles	89	98
Peer-reviewed books	16	10
Peer-reviewed book chapters	28	29
Patents	5	7
Reports, theses, study guides, conferences, papers, translations, symposia	261	228

Sources: SARUA university questionnaires (2011), UNAM only. No data were available for 2008.

The polytechnic is not a research-focused institution at present and its records of research are sketchy.

Recent developments and debates in higher education

Recent debates in Namibian higher education concern the curricula and new academic programmes. The University of Namibia recently launched a new bachelor of accounting degree programme (New Era 2011), aimed at increasing the number of accountants in Namibia. Current data reveals that there are only 300 chartered accountants in the country. By opening this new programme, UNAM aims to increase the number of accountants being trained annually in Namibia, providing a strong foundation for those who desire to pursue careers in accounting and related fields. A new medical school campus of UNAM was opened in May 2011. There is a shortage of doctors and there is limited capacity to enrol students into medical school. The medical school is being developed in five phases and so far the first phase has been completed (Smith 2011). This phase consists mainly of an office building for academic and administrative staff, laboratories and the department of anatomy and physiology.

The Polytechnic of Namibia signed an agreement with the System Analysis Program Development University Alliance, aimed at enhancing academic training at the polytechnic (Smith 2011). This alliance will assist the polytechnic to integrate enterprise resources and planning technology into

its curricula, providing hands-on skills on the SAP system.

In the area of research development, the World Trade Organisation (WTO) has recently established a research chair at the University of Namibia. The Dean of the Faculty of Economics and Management Science holds the research chair, assisted by two co-chairs. The main duty of the chair is to serve as a bridging party between the WTO and stakeholders in member countries and to enhance their understanding of WTO policies and principles. The chair will also help the Namibian government, the business community and agricultural organisations to establish research-orientated policies. In 2012, the university is expected to introduce a postgraduate diploma and masters in international trade (University World News 2012).

Another recent development is the construction of student residence complexes at UNAM to accommodate 800 more students. The university can only accommodate 1 080 students and this is insufficient to meet the demand for student housing. UNAM entered into a partnership with Hanganeni Emona (Pty) Ltd to develop accommodation facilities for students at its main campus. This accommodation was due to be ready in 2011 (Sasman 2011).

Regionalisation

Through the SADC Protocol on Education and Training, Namibia has agreed to engage in collaboration and integration activities and processes with other higher education institutions in the region. However, according to the Ministry of Education's questionnaire response, the SADC protocol has not been specifically considered in national education planning, although the planning is in line with the aspirations of the protocol.

The University of Namibia is involved in a number of collaborative academic and research programmes with institutions based in other countries. The university reported that there are five teacher education projects focusing on capacity-building with the University of Oulu (Finland), University of Stellenbosch (South Africa), University of Zambia (Zambia) and the University of Dar es Salaam (Tanzania). Institutional collaboration also includes research and institutional transformation, HIV/AIDS peer education, staff exchange, teaching, student practical work, module development with the University of Cape Town, and a medical student exchange with the University of Pretoria (both in South Africa). This collaboration includes the exchange of information, collaboration in research on ICT and fishery-related projects, supervision of postgraduate students, development of teaching resource materials relevant to the SADC region, training of medical students, skills transfer, practical training, and co-supervision of postgraduate students (UNAM).

At the Polytechnic of Namibia, in line with the SADC protocol, there is no difference in the tuition fees between the students from Namibia and other SADC countries and there is an allocated enrolment percentage reserved for students from SADC countries. The polytechnic is collaborating with SAP University Alliance to enhance academic training at the polytechnic (Smith 2010).

Conclusions

Although Namibia currently has four higher education institutions (two public and two private), the demand for places in higher education institutions outstrips available places, as evidenced by the increasing percentage of students who complete high school, but cannot study further. Expansion of the higher education sector is needed to accommodate this growing demand. Given that the private higher education sector currently appears to play a small role in Namibia, this might become the focus of greater attention in order to meet demand.

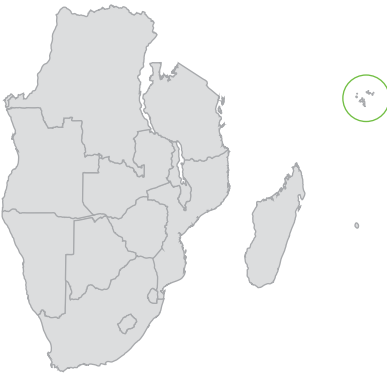
While the majority of students in the higher education system are Namibian citizens, there are relatively more students from the SADC region when compared to some other countries in the region. The number of staff members from other SADC countries is also relatively large compared to other countries in the region (excluding South Africa and the bigger higher education systems). At the regional level, the data findings reveal that Namibian universities report having good collaboration with other universities in the region. This collaboration provides a good base for further student and staff exchange.

The public higher education sector in Namibia, particularly at the undergraduate level, enrolls more women than men. Given the relatively large proportional difference, it is important for

Namibia to track these trends in order to understand why fewer young men are attending university. Despite the larger absolute numbers of female students, the stark gender disparity in science, engineering and technology requires attention. At the postgraduate level, UNAM enrolls the majority of students. The data seems to point towards a possible output problem at the postgraduate level as only a very small percentage of students complete their postgraduate degrees in the stipulated time. Most of the academic and research staff at UNAM have a masters or doctorate, so the university appears to have the human resources potential required to increase its knowledge output. This is potentially a very useful asset for higher education in Namibia.

11 Seychelles

Compiled by Lifutso Ts'ephe

COUNTRY CONTEXT STATISTICS	
	Population: 0.9 million (2006)
	GDP per capita: US\$11 451 (2006)
	Human development index: 0.773
	Unemployment: 2% (2006 est.)
	Key economic sectors: fishing, tourism, agriculture, beverages
	Principal exports: canned tuna, frozen fish, cinnamon bark, copra, petroleum products
	HIV and AIDS prevalence: not available
Gross primary enrolment ratio: 117% (2006)	
Gross secondary enrolment ratio: 119% (2010)	
Gross tertiary enrolment ratio: not available	
Country context data were obtained from a variety of sources: CIA (2012), UNDP (2011), UNESCO (2011), UNAIDS (2011).	

Seychelles is an island country located in the Indian Ocean, approximately 1 600 kilometres east of Kenya. The previously uninhabited island was discovered by Arab traders, by the Portuguese, and then by the French who ruled the country for 40 years. Between 1794 and 1811 the island changed hands seven times between the French and British, before finally being ruled by the British after a protracted war. The location of the island made it a suitable transit port for slaves from mainland Africa, Madagascar, India and elsewhere.

In 1976 Seychelles gained independence as a republic. This was followed three years later by the establishment of a one-party system, a period that has been referred to as the second republic. In 1992 democracy gained ground with the introduction of a multi-party system, and since 1993 Seychelles has entered the period known as the third republic¹⁵.

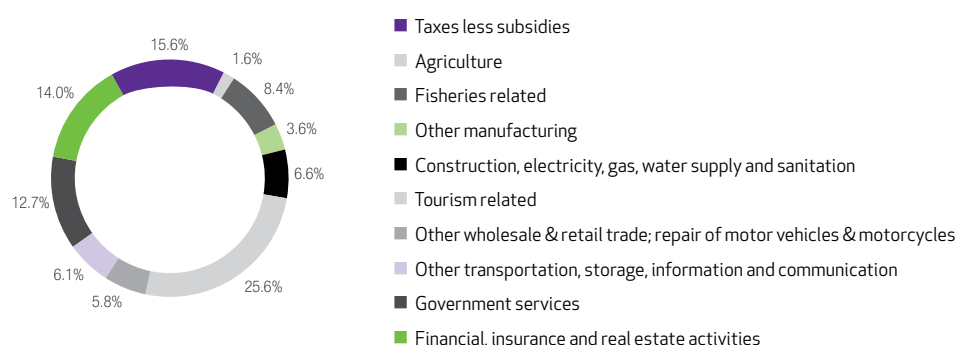
The majority of the people in Seychelles (75 per cent) live on Mahe Island, while 15 per cent live on the Praslin and La Digue islands. Most Seychellois are descendants of early French settlers and African slaves who were freed from slave ships on the East African coast by the British in the 19th century. As a result, Seychelles culture is a mixture of French and African influence. The native language is Kreol, but English and French are commonly used. English is the official language¹⁶.

The Seychelles economy relies mainly on tourism, tuna fish production and foreign direct investment. The service sector in Seychelles, which is heavily dependent on tourism, accounts for 70 per cent of GDP. In the last few years the government has emphasised the need to diversify the economy, and there has been a growing focus on farming and small-scale manufacturing¹⁷. As per the 2011–2015 strategic paper, tourism remains the major source of GDP in Seychelles, followed by services, with manufacturing and agriculture contributing just above 5 per cent.

¹⁵ www.nation.sc

¹⁶ www.cia.gov/library/publications/the-world-factbook/geos/se.html

¹⁷ www.economywatch.com/world_economy/seychelles/

Figure 1: GDP at market prices by sector

Sources: Seychelles National Bureau of Statistics (2009), African Development Bank (2011)

Higher education landscape

In the years following independence, education discourse evolved in the context of a broad political vision of the social, economic and educational transformation considered necessary for the creation of a post-colonial society which would, among other things, redress discrimination and inherited inequalities (Education Act 1982). This was aimed at building national unity and promoting cultural identity. In the process, higher education did not get the necessary emphasis.

It was not until the late 1990s that higher education in Seychelles began to receive greater attention. Public higher education in Seychelles is still therefore in its infancy, defining and positioning itself in the national and regional socio-economic and political development discourse (Ministry of Education and Youth 2004).

Seychelles witnessed the establishment of its first public university in 2009. Being the first university in a country with a population of less than 90 000, the university brings with it aspirations and expectations from all sectors of society. The University of Seychelles (UniSey) has its main campus at Anse Royale, and the School of Education is located at Mont Fleuri (Seychelles Nation Online, 3 August 2012). Formally inaugurated in late 2010, and with a 2012 intake of about 300 students in twelve degree programmes, UniSey is hoping to turn the island tourist destination into a knowledge centre for the region (Fine 2011). As a new university, UniSey offers degree programmes through the University of London International Programme. Students who enrol with UniSey receive course materials from the University of London International Programme Colleges and, on completion of their study programmes, graduating students are awarded a degree from the University of London as well as the University of Seychelles. The vice-chancellor of the University of London is a member of the UniSey Board. UniSey has formalised partnerships with other international universities, including Université Paris-1 Panthéon-Sorbonne in France, University of Edith Cowan in Australia, TERI University in India and China Ocean University (Fine 2011). The government of Seychelles offers scholarships for students studying at UniSey, and the university itself has a scholarship scheme that is funded by donations from individuals and the private sector¹⁸.

National higher education policy context

Higher education in Seychelles has been undergoing significant policy transformation in the last couple of years. With major impact starting in 1999, recent reforms have provided the impetus needed for the establishment of a promising higher education system.

¹⁸ www.unisey.ac.sc/university

UNESCO and the Commonwealth of Learning (COL) have helped UniSey prioritise quality assurance. With training and support from the South African Quality Authority (SAQA), the Seychelles Quality Assurance (SQA) established its NQF regulations through a consultative process¹⁹. SQA is responsible for assuring the quality and standards of education and training in Seychelles and protecting the interests of learners enrolled in education and training programmes (Republic of Seychelles 2005). The main purpose of the quality assurance system is to assure stakeholders that the registered institution is providing good quality education. Stakeholders of tertiary education in Seychelles include learners and their families, local and international communities, teachers and researchers, employers and professional bodies, partner institutions, and funders of tertiary education.

As mentioned earlier, a number of key policy documents have been enacted to provide a environment conducive to higher education management and effectiveness.

The Draft Higher Education Act of Seychelles²⁰ sets out to provide a higher education system able to cover the three-fold mission of higher education as argued worldwide: teaching, research, and community engagement. The act states that ‘the objective of higher education is to develop in life-long learners the critical skills, knowledge, values and attitudes that will enable them to move confidently within academic or vocational traditions, engage in research, and serve the community as responsible citizens’.

The Seychelles Qualifications Authority Act of 2005 is mandated to develop and implement a National Qualifications Framework (NQF). This includes the establishment of a qualifications structure, setting standards for academic and professional training, ensuring quality in line with the SQA, providing recognition of foreign qualifications, recognising prior learning, ensuring an information management system and developing rules to govern access and quality in higher education.

The Education Reform Action Plan 2009–2010 emerged from the National Education and Training Strategic Committee set up by the president in August 2008. Based on recommendations from the committee, five priority areas were identified for action. While the detailed themes that emerged from the priority areas are not discussed here, the key areas were:

- providing for the diversity of educational needs and national development priorities;
- guaranteeing quality education;
- improving the quality of teachers in the context of UniSey;
- improving the governance of educational institutions; and
- creating responsible and empowered students.

The implementation of these action areas were to be monitored and reported upon periodically by a secretariat at the Ministry of Education.

The Tertiary Education Act of 2011 provides for the harmonious and rationalised development of quality education and training. It covers six key areas relating to tertiary education management at national and institutional level:

1. Provision for a Tertiary Education Commission (TEC): The TEC is conceived as the main legal instrument to advise the minister and co-ordinate sustainable development of tertiary education at the national level.
2. Institutional governance and charter: Under this component, the act provides for two kinds of tertiary education institutions – universities and professional centres.
3. University governance: Using guidance from international experiences, the act provides a legal framework for university governance.
4. Governance of professional centres: Besides consolidating and enhancing the current status of governance in professional centres, the act seeks to reinforce the link between professional centres and industry.

¹⁹ www.sqa.org.za/docs/reports/annual08/eor5.pdf

²⁰ http://www.sufoundation.sc/Resources/Seychelles_Higher_Education_Act_Draft_1.pdf

- Rights and duties of learners: The act enforces government's commitment to increase access to tertiary education, while also reinforcing the need for learners to adhere to their duties and responsibilities within their academic programmes and institutional codes of conduct.
- Autonomy and accountability: The act takes into account other important values of institutional management, such as the need for autonomy and responsible accountability.

Regionalisation

Seychelles is a relatively new member of SADC, and even though the UniSey is a very new university, it has already fixed its sights on international and regional co-operation and collaboration. In the questionnaire response submitted by the Ministry of Education, it was noted that collaboration within SADC was considered to be of importance to the Seychelles, and UniSey has aligned its work with the SADC Protocol on Education and Training.

UniSey is a university built on strategic partnerships with other universities. At present, there do not seem to be formal partnerships in place between UniSey and other SADC universities, although there have been initial reports of possible partnerships with South African universities. The earlier collaboration between the SAQA and SQA has been a good indication of UniSey's willingness to partner with other SADC countries in order to learn from each other.

In the longer term, the vice-chancellor of UniSey has noted the intention of this new university to contribute to tertiary education development in Africa (Fine 2011). A strong, healthy collaboration and partnership network with higher education systems and institutions in the region will go a long way to supporting the development and growth of the higher education sector in Seychelles.

Conclusions

Despite the newness of the emerging public higher education sector, the government of the Seychelles has made significant progress in developing a higher education policy environment. The newly established University of Seychelles has been breaking new ground in the formation of partnerships with international universities, and student enrolment (although still small) has shown growth in the three years of operation. The international partnership model of UniSey is likely to provide an important case study for understanding the possibilities and pitfalls that this approach to higher education might hold for other countries in the SADC region. A rich horizon of future research lies ahead, focused on exploring the role UniSey plays in the social, economic and political development of the Seychelles.

12 South Africa

Compiled by Samuel N Fongwa

COUNTRY CONTEXT STATISTICS	
	Population: 50.6 million (2011)
	GDP per capita: US\$10 973
	Human development index: 0.619
	Unemployment: 24.9% (2011)
	Key economic sectors: services, tourism, mining, manufacturing, agriculture, forestry and fishing, utilities
	Principal exports: metals, gold, diamonds, machinery, transport equipment
	HIV and AIDS prevalence: 17.5% (2009)
	Gross primary enrolment ratio: 107% (2002)
Gross secondary enrolment ratio: 90% (2002)	
Gross tertiary enrolment ratio: 15% (2006)	
Country context data were obtained from a variety of sources: CIA (2012), SADC (2007), UNAIDS (2011), UNDP (2011), UNESCO (2011).	

South Africa is widely considered the economic powerhouse of the SADC region and the African continent at large. With a total population of over 50 million inhabitants and a gross domestic product (GDP) per capita in terms of purchasing power parity (PPP) exceeding US\$10 000, South Africa has been a major economic destination for other African and international job seekers. Although Seychelles, Botswana and Mauritius boast a better per capita GDP in the region (CIA 2012) when compared to the large population of South Africa, South Africa contributes (in nominal terms) 30 per cent to the continent's GDP²¹. Notwithstanding such economic strength and recent promising trends, the levels of unemployment in South Africa remain very high – between 25 and 50 per cent, with an average of 25.3 per cent (Statistics South Africa 2010).

At the social level, South Africa continues to suffer from high levels of poverty and inequality in spite of its strong economic position in the region and the continent. The country has high crime levels, which have taken a toll on the economy by heightening a sense of investment insecurity and thus contributing to unemployment and under-employment (Stone 2008). The current socio-economic situation in South Africa is also a product of the inherited legacy of injustice, and radical and sustainable policies are required to redress socio-economic conditions.

This social and economic position is indicated in the country's low HDI ranking, more than 40 places lower than its GDP world rankings, and reflects a society plagued by low life expectancy, acute and chronic poverty and high levels of inequality (Bailey et al. 2011). The high HIV/AIDS and TB prevalence in South Africa – respectively the fourth and fifth highest in the world (CIA 2012) – is a product of some of the social and health challenges facing the country.

In political terms, South Africa is considered one of the most advanced democracies on the continent. The relatively smooth transition from the previous apartheid era to the current

²¹ See editorial 'Africa's Largest Economies – Top 20 Economies in Africa', available online at www.therichest.org/business/largest-economies-in-africa/.

democratic dispensation has provided evidence of a strong and growing democracy. In spite of the historic divides and remaining inequalities, South Africa has made significant strides in bridging the racial gap for the overall development of institutions and the country. Recent evidence has been the successful hosting of the FIFA World Cup™ in 2010. The ruling party, the African National Congress, celebrated its centenary anniversary in 2012, albeit with suggestions of serious rifts within the party.

In conclusion, besides a relatively stable political landscape and a growing economy, South Africa is faced with huge socio-economic challenges which urgently need to be addressed. These include a divided society, failing public service delivery systems, a high disease rate and poor education levels (National Planning Commission 2011).

Higher education landscape

South Africa has a much larger, more diverse and advanced higher education landscape than most of the systems in the region (and even on the continent). This section does not provide a detailed review of the system, but highlights key policies and aspects, recent developments, statutory bodies and offers a broad representation of its size and shape. Detailed studies are well covered in the literature, and the focus here is on the more recent developments and institutional issues relating to regionalisation in the country.

Brief historical overview of higher education

South Africa is one of the countries in Africa with the longest higher education history. This is partially due to the socio-political and historical path followed by the country, which is very different from most countries south of the Sahara. The first higher education institutions came into being in 1918 through the transformation of the South African College and Victoria College into the University of Cape Town and the University of Stellenbosch respectively. A key aspect of early higher education was the close link between higher education and the socio-political landscape of the country. Higher education was used by the former political regime as a tool to enforce its ideologies. Universities were separated on a racial basis, and access for students to funds, resources and infrastructure depended significantly on racial background. Since 1994, higher education in post-apartheid South Africa has primarily aimed at transforming the inherited legacy of racial division (CHE 2004, Sehoole 2006).

Significant emphasis has been placed on providing access to previously disadvantaged groups, including the black population²² and women. At the economic level, higher education seeks to redress the skills divide that has resulted from the fragmented higher education system. Articulated through the Growth Employment and Redistribution (GEAR) policy, historically disadvantaged universities (HDUs) were expected to make a more significant contribution in the production of skills in science, engineering and technology, as was being done by the previously white universities. Funding allocations also needed attention and redress. Transformation in the higher education system has been an ongoing process, aimed at achieving a more balanced, responsive and integrated system in support of national development (MoE 2001, Cloete and Muller 1998).

In the midst of increasing debates on the transformation of higher education in South Africa, it has been argued that the process has often been conceived as largely a 'managerial, bureaucratic or quantitative exercise with the primary concern of ensuring that adequate numbers of female and black students and staff find places in the universities' (Nongxa in Weinberg and Kistner 2007). This approach has had an impact on quality, and is reflected in the relatively poor throughput and success rates seen across the sector.

National higher education policy context

The South African higher education sector falls under the Department of Higher Education and Training (DHET). The DHET was formed when the then National Department of Education (DoE)

²² Black in this context refers to the African, Coloured and Indian population groups.

was split into the Department of Basic Education (DBE) and the DHET. The task of the DHET is to co-ordinate the training of all post-secondary education, including universities, further education and training (FET) colleges, adult education and sector education and training, with the aim of achieving Outcome 5 of government's 12 performance outcomes, namely to develop 'a skilled and capable workforce to support an inclusive growth path' (HESA 2011²³, DHET 2010).

South Africa has a plethora of policies and legislation governing higher education. In the period immediately following the 1994 elections there was an extensive, participatory drive to formulate new policies that explicitly broke with the apartheid past. This process culminated in the report of the National Planning Commission on higher education in 1996 (Cloete 2002). The next phases involved the development of the 1997 White Paper 3 (A Programme for Higher Education Transformation) which was legally formalised in the Higher Education Act No. 101 of 1997. The act provided the basis from which to work towards a unified and nationally planned higher education system, and underpinned the establishment of the statutory body, the Council on Higher Education (CHE), which advises the minister and promotes quality assurance within the higher education sector.

The 2001 National Plan for Higher Education (NPHE) took the legislative process one step further by outlining the framework and mechanisms through which the policy goals and transformation imperatives of the White Paper and the Higher Education Act could be implemented. The NPHE thus guides the higher education transformation process aimed at attaining a higher education reflecting institutional and programme equity measured in the following aspects:

- student equity targets in higher education institutions;
- staff equity targets at academic and support levels; and
- institutional and academic diversity in all institutions.

More recently, the DHET released a Green Paper on Post-School Education and Training which sets out to provide a vision for the post-schooling system in the country. Amongst other things, the green paper focuses on the lack of coherence of the sector and the importance of the country moving towards a single co-ordinated system for the provision of differentiated post-school education (DHET 2012). At the time of writing, a White Paper is in preparation.

Besides the DHET as the body responsible for higher education in South Africa, there are other statutory institutions with various responsibilities, all of which aim to improve the higher education system and report in one way or another to the DHET. These include:

- The Council on Higher Education (CHE): As already mentioned, the CHE advises the minister on the state of higher education policy formulation, and enhances the development of higher education through scholarly engagement at various levels. The Higher Education Quality Committee (HEQC) of the CHE conducts audits of universities against a range of institutional criteria and external peer review. The HEQC also governs the process of course accreditation with the help of the national qualifications framework (SAQA).
- Higher Education South Africa (HESA): HESA is the leadership body that represents the 23 public higher education institutions. Led by the vice-chancellors of the universities, HESA acts to support and advance the higher education sector in South Africa.
- The South Africa Qualification Authority (SAQA): SAQA was established via SAQA Act No. 58 of 1995. Under this act, SAQA seeks to uphold the underlying regulations ensuring access, quality and redress for all learners as stipulated in the National Qualifications Framework, through an integrated national framework responsible for credit accumulation and transfer. This framework seeks to break down the barriers to credit transfer that have hitherto existed between universities and technikons (now known as universities of technology).

Other bodies worth mentioning here are the further education and training (FET) colleges, responsible for post-school education in non-university institutions, and the National Student Financial Aid Scheme (NSFAS), responsible for student loans and grants.

²³ www.hesa.org.za/partnersandlinks/departments-higher-education-training-dhet

Size and shape of higher education

The current South African higher education and training system is composed of four types of institutions: traditional universities; universities of technology (formerly technikons); privately-funded universities, colleges of further education and training; and colleges for professional training (which include nursing, agriculture and the police force). These institutions are also classified by their funding system: except for the private universities and colleges, all the other higher education institutions are publicly funded.

Demand for higher education

In post-apartheid South Africa, higher education has witnessed different stages of transformation, differentiation and restructuring. One manifestation of the restructuring process was observed in the merger process in which the 36 universities were merged to form 23 public higher education institutions at the start of the new millennium. These 23 universities have been classified into three broad categories: eleven traditional universities inherited from the pre-1994 era, six comprehensive universities resulting from mergers of previous universities and technikons, and six universities of technology – upgrades of former technikons. The public universities provide access to more than 800 000 students across a wide range of fields. About a quarter of these students study via distance education, offered mainly by the University of South Africa (UNISA). Recent estimates indicate that there are over 89 private higher education institutions accredited by the DHET and another 29 private institutions operating with provisional accreditation (DoE 2012). According to Pillay (2010), about 35 000 students (approximately 5 per cent of all enrolments) are served by private institutions. International institutions are also present, with Monash University being the most prominent. Another key stakeholder in post-secondary education provision in South Africa are the FET institutions, which offer places for more than 124 000 students across various disciplines.

Demand for higher education in South Africa clearly outstrips supply. The stampede for places at the University of Johannesburg in early 2012, during which the mother of a prospective student lost her life, is perhaps the most dramatic example of the fierce competition for available places. Based on empirical data from eleven South African universities that provided data for this study, only about 20.7 per cent of all the students who applied to these universities (including UNISA) were placed in 2010. One of the responses of government to this challenge is the establishment of two new universities, one in the Northern Cape and one in Mpumalanga, which are due to begin enrolling students in 2014.

Student profile

In recent years there has been a high demand for higher education in South Africa. According to the International Education Association of South Africa (IEASA), student numbers have nearly doubled between 1993 and 2008, from 473 000 to about 799 658. According to the 2010 HEMIS data, enrolment figures have increased from the previous year to about 892 936. However, while the IEASA statistics do not provide a breakdown between national and international students, HEMIS (2010) data reveal that South African students make up about 73 per cent of all enrolments. Looking at students aged between 18 and 24 years, the gross enrolment ratio is slowly approaching the 20 per cent national target. However, like many other issues in the country, this enrolment ratio differs significantly along racial lines, with little more than 11 per cent of African students having access to higher education, while more than half of the eligible Indians and about 60 per cent of eligible whites enter university. The Coloured community constitutes the least enrolled, at about 7 per cent of those in the prescribed age group. While poverty and lack of opportunities can account for this, it is also believed that a low quality of primary and secondary education contribute to these trends (IEASA n.d.²⁴).

The majority of students (about 80 per cent) study via contact education. Most of the distance education provision in the country is done by South Africa's largest university, UNISA. However, in recent years the traditionally residential universities have increasingly offered selected

programmes using distance methodologies. Unlike many of the other countries in the SADC region, a large proportion of students in higher education are female (57.4 per cent) compared to male (42.6 per cent). Figure 1 shows the number of students enrolled in major fields of study by gender.

Figure 1 shows that, despite female students making up a larger proportion of the total student body, clear gender patterns are still evident with respect to where in the sector these female students find themselves. While female students account for 74 per cent of the education enrolments, 69 per cent of health sciences students and 65 per cent of humanities and social science enrolments, they account for only 38 per cent of enrolments in science, engineering and technology (SET). Given the strong government focus on building science and technology in the interests of national development, as well as the channelling of research funding towards SET fields, the implications of this gender imbalance are clear.

With respect to overall enrolment by field of study, in 2010 the largest enrolment (36.5 per cent) was seen in the fields of business, management and law, followed by SET (20.9 per cent), humanities and social sciences (19.1 per cent), education (16.3 per cent), health sciences (5.7 per cent) and agriculture (1.6 per cent).

Despite a national focus on increasing the number of doctoral students in the country, enrolment at the doctoral level still accounted for only 1.3 per cent of all enrolments in 2010. The vast majority of students in the South African public university sector are enrolled at the undergraduate level (63.2 per cent), while 23.8 per cent are enrolled for postgraduate programmes below masters level, and 11.7 per cent are enrolled for a masters degree. The pipeline from undergraduate to doctoral level study is thus problematic, since so many students are lost from the system following the completion of their undergraduate qualifications. This issue is addressed further in the section below that focuses on graduation patterns.

Staff profile

The table below presents the distribution of academic and administrative staff across public universities in South Africa.

Table 1: Staff profile in South African universities

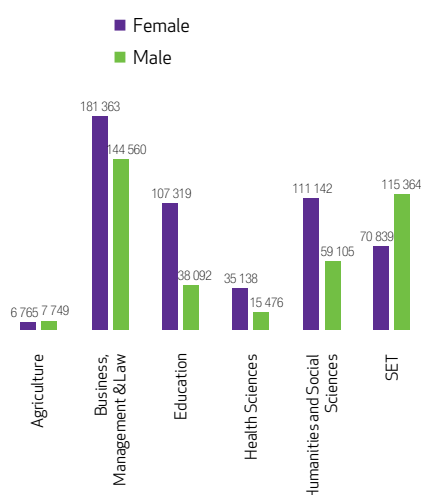
Staffing categories	Nationality	Number of staff
Academic and research staff	National citizens	41 410
	SADC citizens	1 391
	Other international staff	2 562
	No information	1 006
Management and administrative staff	National citizens	68 009
	SADC citizens	2 050
	Other international staff	4 377
	No information	1 385

Source: HEMIS data (2010)

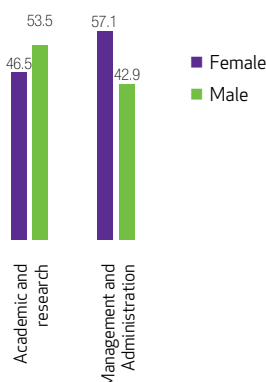
In total, female staff members account for 53 per cent of the staffing component at South African universities. However, they only account for 46.5 per cent of the academic workforce and make up 57.1 per cent of the administrative workforce. As such, gender divides are still evident (see Figure 2). In addition, female staff members in both the academic and administrative domains account for larger percentages of temporary contracts than their male colleagues.

The HEMIS data do not include headcount staffing data by major field of study. However, data on full-time equivalent (FTE) staff are available and provide an indication of the proportional staffing available for the different fields of study. Focusing on academic and research staff members specifically, Figure 3 shows that the largest numbers of staff are employed in the SET fields of study.

No HEMIS data were available on staff qualifications.

Figure 1: Enrolment in major field of study by gender

Source: HEMIS data (2010)

Figure 2: Type of employment by gender

Source: HEMIS data (2010)

National higher education outputs and alignment with policy

The sections above present the national policy context as well as the current size and shape of public higher education in South Africa. In this section, the focus is on the outputs of the higher education system, including the commonly-cited statistics about numbers of graduates and research output.

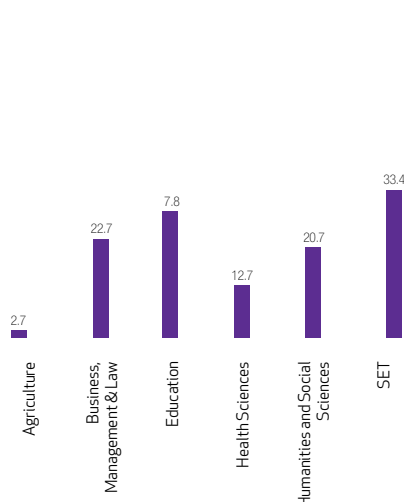
Graduate patterns

The graduation patterns follow the enrolment patterns, with the largest number of graduates seen in business, management and law, followed by science, engineering and technology. The relative smaller proportions of enrolments for postgraduate study were noted earlier. The effects of this are shown in Figure 4, with worryingly low numbers of graduates at postgraduate level – especially at masters and doctoral levels. While enrolment at masters and doctoral degree levels represented 11.7 per cent and 1.3 per cent of enrolment respectively, only 5.6 per cent of graduates are masters graduates, and 0.9 per cent are doctoral graduates. Given South Africa's focus on building the human capacity needed to compete in the global knowledge economy, these numbers are very low. Another area of concern is in the health sciences, where graduation figures remain low compared to enrolments. In the health sciences there are currently fewer than 12 000 graduates at all levels of study, with the majority of graduates being at the undergraduate level. Considering that health challenges facing the country (and the region as the whole) are one of the factors limiting socio-economic development, South Africa (and SADC) will have to increase the graduation rate in the health-related fields in order to address the needs of the country (and the region).

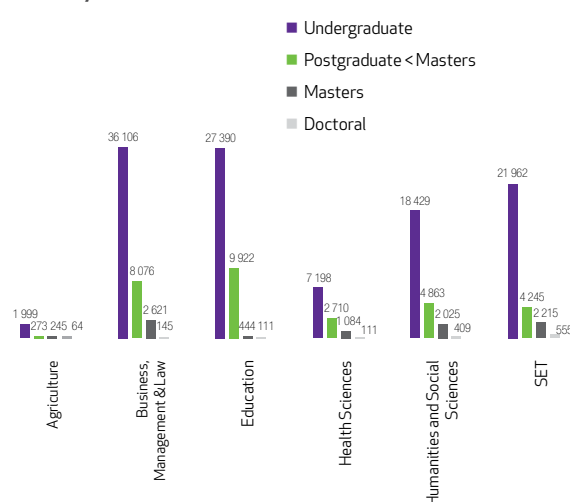
Quality assurance

In the broad context of higher education quality in South Africa, the Higher Education Act of 1997 and the White Paper on Higher Education of the same year provide the national policy on quality assurance. The Higher Education Quality Committee (HEQC) of the CHE is responsible for the implementation of quality assurance nationally. The HEQC's functions include:

- promoting quality in higher education;
- auditing the quality assurance mechanisms of higher education institutions; and
- accrediting programmes of higher education.

Figure 3: FTE staff per major field of study

Source: HEMIS data (2010)

Figure 4: Graduation patterns by major field of study

Source: HEMIS data (2010)

Between October 2004 and April 2011, all 23 public universities participated in quality audits done by the HEQC. The focus of these audits was on assessing the quality assurance processes that universities had in place. A new round of audits – now called reviews – is due to commence in 2013. At present, the HEQC has a draft framework for the second round of quality audits available for comment. Although the final framework is still to be released, the focus of the second round of audits (or reviews) will be on undergraduate teaching and learning²⁵.

At institutional level, all the universities that submitted responses to the SARUA survey confirmed that they have internal quality assurance systems in place. All responding universities have a quality assurance framework, and processes for allocating budget for quality-related activities. Key issues integrated in the institutional quality frameworks include teaching, research, community service, student performance monitoring, administrative processes, entrepreneurship, staff training and development, and external relations and partnerships. There is also evidence from the data of the presence of research offices and teaching and learning strategies, as well as offices dedicated to tracking students' performance to ensure maximum student throughput.

All responding universities indicated the presence of staff development and orientation activities for newly-appointed staff. In their bid to align with quality standards, institutions have put in place mechanisms for evaluating individual teaching, staff, student support and research activities, all aimed at increasing and ensuring quality at all institutional levels. All universities reported having an external examinations moderation process. Overall, the responses provide evidence of an active and rigorous effort at national and institutional levels to maintain a high quality of higher education management and output. Nonetheless, as noted above, South African higher education still shows high levels of dropout and generally low levels of throughput and success.

Student support and infrastructure

Analysis of the data indicates that there is a relatively high level of student support. Using generally accepted indicators – such as student orientation, academic mentoring and support, presence of university facilitated accommodation (such as on-campus residences), career guidance for first and second-year students, and the presence of infrastructure (such as libraries, sport facilities, laboratories, computers and internet for students) – universities in South Africa provide average to good academic support to students. When asked about the availability of support facilities, responses from the universities show that, on a scale of zero to three, the mean score is above 2.5, which can be interpreted as a good score. For the quality of these support services, on a scale of

²⁵ For more information see www.che.org.za.

zero to five, findings show a mean score of more than 3.8, indicating a fairly good quality of services available for students.

Table 2: Student support services and activities

Student support indicator	Description	Mean response from sampled universities
Academic orientation	Availability (rating scale from 1 to 3)	2.75
	Quality (rating scale from 1 to 5)	3.91
Academic support	Availability (rating scale from 1 to 3)	2.66
	Quality (rating scale from 1 to 5)	4.25
Career guidance	Availability (rating scale from 1 to 3)	2.50
	Quality (rating scale from 1 to 5)	4.25
Sport facilities	Availability (rating scale from 1 to 3)	2.41
	Quality (rating scale from 1 to 5)	3.81

Sources: SARUA university questionnaires (2011)

Looking into other aspects of infrastructure, the table below supports earlier arguments that there is a significantly high level of student academic support, as evidenced by the availability and quality of infrastructural facilities to support academic output and throughput in South African universities.

Table 3: Student infrastructure development

Infrastructure items	Description	Mean response from sampled universities
Science laboratories	Availability (rating scale from 1 to 3)	2.5
	Quality (rating scale from 1 to 5)	3.75
Libraries and services	Availability (rating scale from 1 to 3)	2.9
	Quality (rating scale from 1 to 5)	4.1
Digital library materials	Availability (rating scale from 1 to 3)	2.8
	Quality (rating scale from 1 to 5)	4.1
Computer laboratories	Availability (rating scale from 1 to 3)	2.5
	Quality (rating scale from 1 to 5)	4.0
Lecture venues	Availability (rating scale from 1 to 3)	2.4
	Quality (rating scale from 1 to 5)	3.8
Accommodation	Availability (rating scale from 1 to 3)	2.16
	Quality (rating scale from 1 to 5)	3.72

Sources: SARUA university questionnaires (2011)

From the data above it can be observed that accommodation for students remains a major challenge facing South African universities. The inadequate quality of student accommodation has been the source of much media attention in recent months, with reports of students at some universities living in squalid conditions.

Research output

Comparing research output between universities in the SADC region, South Africa ranks relatively highly. However, closer analysis of the national data shows that much of the research output is produced by a small number of top-performing universities. Except for a few exceptions, the majority of South African universities report that the bulk of their research funding comes from government subsidies and grants. There is a need to strengthen the third-stream income generation capacity of universities as this funding is critical to building strong research universities.

Table 4: Research output of South African universities

Category of research output	2008	2009
Peer-reviewed journal articles	7 638	8 257
Peer-reviewed books and book chapters	266	377
Patents	no data	no data
Other: proceedings	449	476

Source: HEMIS data (2010)

Responses from universities indicate that most universities have both a research office and an institutional research plan or strategy, which aims to monitor and improve research output from the institution. In addition, 75 per cent of the South African universities that submitted a questionnaire response indicated having a higher education research centre or unit that focuses its research on issues around higher education (policy, management, transformation and development). Such research centres play an important role in the ongoing project of building an effective, efficient and high-quality higher education system.

Recent developments and debates in higher education

With higher education facing new and changing challenges across the globe, the higher education landscape in South Africa has increasingly sought to keep pace, while also striving to improve both its size and quality. This necessitates being at the forefront of cutting-edge research and translating this research into relevant policy. With the emerging role of knowledge in development planning, higher education, research and government institutions seem to be coming together to forge a knowledge-integrated development pathway. There has been a steady increase in higher education funding as a percentage of national GDP in the past five years (Financial and Fiscal Commission 2012).

Following the 2012 State of the Nation Address and the subsequent budget speech, key developments and debates relevant to South Africa's higher education landscape have emerged. First was the President's announcement of the creation of two new universities in the Mpumalanga and Limpopo provinces, and second was the introduction of an additional R850 million allocated to improve university infrastructure. Furthermore, a donor funding allocation totalling R60 million will be made available for the 2012/2013 and 2013/2014 academic years through general budget support, to develop a national career guidance system that will provide access to information on occupations, economic indicators and directed learning opportunities for various careers.

Another key aspect in the South African higher education debate has been the production of adequate skills relevant for an economy seeking to transform into a knowledge economy. While a number of policies have been put in place to that end, there has been little output in the number of skills produced in the areas of engineering, natural sciences, human and animal health and in teacher education (which directly affects the readiness of school leavers entering the higher education system). The Minister of Higher Education and Training recently stated that 'we are engaging with higher education South Africa, and deans of relevant faculties to accelerate especially black and women graduate output in these areas' (The Sowetan 2012) to provide the relevant and needed skills for a knowledge economy.

Regionalisation

South Africa is a major role-player in higher education in the SADC region, as evidenced by the number of students from the region registered in South African universities (46 204 in 2010). While there are students hailing from all over SADC, the largest proportions come from Zimbabwe (41.8 per cent), Namibia (14.9 per cent), Botswana (9.3 per cent) and Lesotho (9.0 per cent). Mobility of staff and students has been perceived as a key aspect of enhancing the regionalisation process. There has been teaching and research collaboration between South African universities and universities in the region, and partnerships have formed. This has resulted in the exchange and mobility of students and staff across national boundaries within the region. Table 5 shows the number of students from SADC countries enrolled at South African universities in 2010.

Table 5: Students from SADC countries enrolled at South African universities

SADC country	Number of students enrolled at South African universities	Percentage of all SADC students at South African universities
Angola	1 179	2.6
Botswana	4 287	9.3
DRC	2 066	4.5
Lesotho	4 143	9.0
Madagascar	13	0.0
Malawi	850	1.8
Mauritius	893	1.9
Mozambique	756	1.6
Namibia	6 897	14.9
Seychelles	51	0.1
Swaziland	3 532	7.6
Tanzania	601	1.3
Zambia	1 642	3.6
Zimbabwe	19 294	41.8
Total	46 204	100

Source: HEMIS data (2010)

Although, compared to the other SADC countries, South Africa has many more staff members coming from the SADC region, SADC staff members still make up a small proportion of the total number of staff employed at South African universities. For academic and research staff, a total of 1 391 people (3.0 per cent) were reported to come from other SADC countries in 2010, while for administrative and management staff a total of 2 050 (2.7 per cent) came from SADC countries.

South Africa has taken regional imperatives and policy into account in the formulation of its higher education policy environment. A recent example is the 2010/2011–2014/2015 Strategic Plan of the Department of Higher Education and Training, which makes an explicit link between the objectives of the DHET and those of the SADC community (as expressed in the SADC protocol). Under the sub-programme on international relations, the DHET commits itself to ‘participate in SADC meetings and conferences, support and monitor the implementation of the SADC Protocol on Education, contribute to the harmonisation of policies and strategies in the SADC, and disseminate information to internal role-players participating in relevant workshops and meetings’ (DHET 2010). This objective and list of activities is backed by a significant budget to ensure its achievement. There thus appears to be evidence of a clear alignment of the SADC protocol and DHET objectives.

In June 2012 the South African Minister of Higher Education and Training convened an extraordinary summit of SADC ministers of education to discuss higher education matters in the region. At this summit it was noted that ‘South Africa is providing the platform for the gathering in order to reflect on some of the major challenges affecting higher education in the region’. Although concerns have been raised within South Africa, for example by the trade union movement, that the number of international students should be limited given that the national demand for higher education cannot be met, the Deputy Minister asserted that, while it is important to bring all perspectives to the discussion table, ‘our position is really to encourage students to freely move around between higher education institutes in the SADC region. We see this as a huge opportunity for all of us, as research capabilities, support networks and skills development and knowledge will be increased’ (Webb 2012). Thus, it appears that, at the level of management and policy, South African higher education emphasises the need for regional collaboration, partnership and the establishment of a regional network for academic and knowledge exchange.

Despite this commitment to regionalisation, challenges remain. While South Africa has been recognised as the main exporter of higher education to the region, there have also been a number of challenges at institutional, systemic and national level which have hampered regionalisation in South Africa in various ways. One of these has been the perception by many South Africans that students and staff originating from neighbouring countries and beyond come to the country and take admission and working opportunities which would otherwise have been allocated to South

Africans. These perceptions have also been seen in the xenophobic violence witnessed in South Africa in recent years.

Another challenge has been the lack of a harmonised education system, which undermines admission into universities across national borders, and recognition of credits. Policies will be needed to harmonise educational qualifications across the region so that they are recognised by a wide range of higher education institutions, facilitating the process of application and admission. This will require a harmonised quality assurance framework, and a governing body responsible for ensuring quality at educational institutions.

Conclusions

Higher education in South Africa has sought to follow a process of transformation similar to that of the country post-1994, with the aim of ensuring equality, equity and the redress of limitations of the past. However, with the changing global landscape of higher education, which includes both globalisation and regionalisation, higher education in South Africa is faced with a double transformation challenge. In trying to meet the challenge, numerous policies and initiatives continue to be designed and implemented. Notable have been the university mergers and the government's attempts to ensure fair distribution in access, academic and support staff, and output by universities – especially for disadvantaged groups.

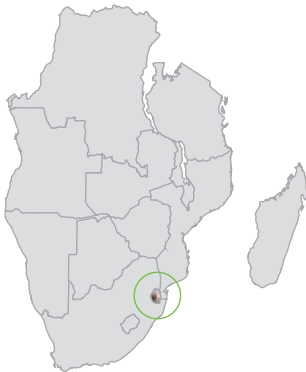
Like many other countries, South Africa's higher education system faces a number of challenges, including funding, access, the percentage of academic staff with doctoral degrees, and output (which includes student graduation rates and research publications). Some initiatives to address these include the establishment of two new universities (an initiative that is not without its critics), increased funding opportunities, and the availability of student support services on campuses.

At the regional level, South Africa has been one of the active members in the establishment and implementation of the SADC protocol, and continues to work towards its implementation at national and institutional levels. Numerous institutions have designed policies to implement the SADC protocol, and partnerships with regional institutions have been forged and sustained. However, the regionalisation process has not been without its challenges, ranging from systemic issues relating to student study permits to institutional issues such as preferential treatment.

South African higher education remains one of the biggest and most advanced systems in the region. It is home to many students and staff members from the SADC region, the continent and beyond. However, while a number of policies have been established to ensure that higher education in South Africa responds to its local (national) context whilst striving for global competitiveness, appropriate and high-quality national and institutional mechanisms for the implementation of such policies remain critical in order for higher education in South Africa to sustain its national and regional relevance.

13 Swaziland

Compiled by Nteboheng Mahlalat

COUNTRY CONTEXT STATISTICS	
	Population: 1.1 million (2011)
	GDP per capita: US\$3 311 (2010)
	Human development index: 0.522
	Unemployment: 40% (2006 est.)
	Key economic sectors: manufacturing, tourism
	Principal exports: soft drink concentrates, sugar, wood pulp, cotton yarn, refrigerators, citrus, canned fruit
	HIV and AIDS prevalence: 25.9% (2009 est.)
Gross primary enrolment ratio: 116% (2010)	
Gross secondary enrolment ratio: 58% (2010)	
Gross tertiary enrolment ratio: 4% (2006)	
Country context data were obtained from a variety of sources: CIA (2012), UNAIDS (2011), UNDP (2011), UNESCO (2011).	

Swaziland, also known as the Kingdom of Swaziland, is a landlocked country bordered by South Africa and Mozambique. It has a population of approximately 1.067 million people. The majority of the population speak siSwati as their first language. Swaziland's gross domestic product (GDP) in 2010 was estimated to be \$3 311 per capita, and the annual GDP growth rate was estimated at 2.0 per cent. Agriculture accounts for approximately 8.3 per cent of the GDP and manufacturing 28.29 per cent (US Department of State 2011). Surrounded almost entirely by South Africa, Swaziland's economy is heavily influenced by its dominant neighbour. The majority of the population depends on subsistence agriculture. Due to its small size, the country relies on export industries, composed of large firms with predominantly foreign ownership. Some of the main export commodities are sugar, wood pulp, citrus and canned fruit (US Department of State 2011). There is a very high prevalence of HIV, with Swaziland ranked highest in the world in terms of HIV infections (US Department of State 2011).

Swaziland gained independence in 1968 and has since been a monarchy. In 2005 King Mswati III endorsed Swaziland's first constitution in over 30 years. This constitution endorsed the king's absolute governing powers, reinforcing the ban on political parties and allowing human rights clauses to be suspended by the king if he finds them in conflict with public interest (although no definition of public interest is provided) (CIA 2012).

Higher education landscape

Higher education is provided by two public and two private institutions. The public institutions are the University of Swaziland (UNISWA) and the Swaziland College of Technology (Kotecha 2008). Since the focus of SARUA's work is on public universities, the data presented in this chapter and the accompanying data profile focuses only on UNISWA.

The University of Swaziland developed from the University of Lesotho, Botswana and Swaziland, which was previously known as the University of Basutholand. In 1982 the University of Swaziland was established, initially funded by the Catholic Church (University of Swaziland n.d.). The university consists of three campuses: the Layengo campus (home to the Agriculture faculty), the Kwaluseni campus (which houses the faculties of Humanities, Commerce, Education, Science and Social Sciences), and the Mbabane campus (which focuses on health sciences). The university is affiliated with the teaching college and the nursing school.

The University of Swaziland has not been able to keep up with the demand for higher education. One response has been the opening of an institute for distance learning that caters for the study needs of students who are unable to attend campus full-time (Swaziland Review 2011). Historically, the government has financed the majority of the students going to university (approximately 75 per cent), and the government provides adult education to improve the country's literacy rate.

Besides the University of Swaziland, there are several other tertiary institutions, including three teacher training colleges, two nursing colleges, and the Swaziland College of Technology. In 2011, two private universities were opened: the Limkokwing University of Creative Technology and the Southern African Nazarene University (Mbanza 2011). These new universities provide places for students who want to study architecture and other courses not offered by UNISWA. A third private university, the Swaziland Christian Medical University, is due to become operational in 2013. This new university, funded by the Republic of Korea, will be located near Mbabane and will include three colleges (medicine, nursing and ICT).

National higher education policy context

The Ministry of Education in Swaziland states that the aim of tertiary education is to provide trained personnel who will meet the socio-economic needs of the country, to build research skills and instil a culture of research at all tertiary institutions (Ministry of Education 2008).

There are currently no national policies in place specific to higher education, but there are policies waiting to be approved in parliament. These include the National Qualification Authority and the Higher Education Bill, intended to improve the quality of higher education and set guidelines for good practice (SARUA MoE questionnaires). In 2011, the Ministry of Education and Training published the Swaziland Education and Training Policy, which contains a section on tertiary and higher education (Ministry of Education and Training 2011). The guiding philosophy of the Education and Training Sector is defined as follows:

to produce an enlightened and participant citizenry that has skills and knowledge to contribute positively to economic and social development (Ministry of Education and Training 2011:7).

The following objectives are defined for tertiary and higher education:

- To introduce an inclusive, principled and comprehensive draft Higher Education (HE) policy, aligned to, and consistent with national EDSEC [Education Sector] Policy and the Higher Education Bill.
- To establish a revolving loan fund to ensure equitable access to HE for all suitably qualified high school graduates.
- To ensure student flows into prioritised course options realigned and increased to meet socio-economic development needs.
- To lower unit costs and improve cost-efficiency by an average one-year reduction in course duration.
- To audit and analyse infrastructural and human resource capacity in the Tertiary and HE sector and expand this to provide equitable access for all qualified senior secondary school graduates.
- To accommodate student diversity through flexible entry level assessment which recognises different ways of demonstrating understanding, knowledge and language differences, etc.
- To reserve between 4 per cent and 10 per cent of spaces for disabled and disadvantaged students in every institution to ensure their entry into tertiary or higher education.

- To optimise access to HE through expansion/strengthening of distance learning (Ministry of Education and Training 2011:39).

In the long term, the policy aims to expand the higher education sector to allow for a 40 per cent progression rate from secondary school to higher education (universities and colleges) (Ministry of Education and Training 2011).

Size and shape of higher education

As noted above, Swaziland's higher education system consists of four institutions of higher learning (two privately-funded accredited universities, one public university and one public technical college). The Ministry of Education and Training reported that 24 per cent of students are enrolled at the public university, while only 3 per cent attend the private university and another 5 per cent are enrolled in technical colleges (see Table 1).

Table 1: Number and type of higher education institutions*

Type of higher education institutions	Number of institutions	Estimated percentage of students enrolled in this type of institution*
Publicly-funded universities	1	24
Publicly-funded technical colleges	1	5
Privately-funded accredited universities or colleges	2	3

Sources: SARUA MoE questionnaires (2011 and 2012)

* 68 per cent of students who completed high school are unaccounted for. This may be because they are studying outside Swaziland or they are not furthering their studies.

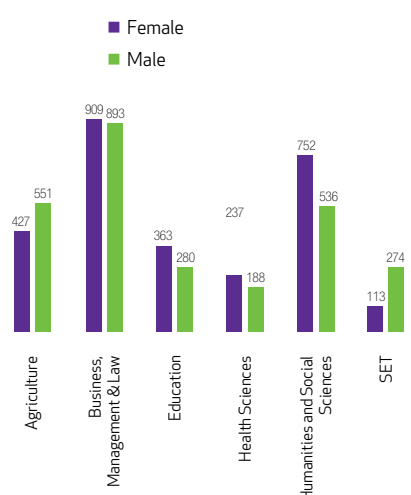
Demand for higher education

There is a relatively high demand for higher education in this small country, and the University of Swaziland cannot cater for this demand. The university reported that 4 454 students applied for enrolment for the 2009/2010 academic year. Although 2 955 applicants met the admission requirements, only 1 869 students were accepted. The Minister of Education has stated that more universities are needed in Swaziland to cater for the high demand of students leaving high school (University World News 2012). The problem does not only arise with undergraduate students: 20 per cent of students who applied for postgraduate studies were also not accepted. The data do not allow for an assessment of the extent to which these unsuccessful prospective postgraduate students met the requirements for entry to postgraduate study.

Swaziland has a national scholarship policy for pre-service training, based on a 50 per cent loan and 50 per cent grant formula. The awarding of scholarships under this policy is rationalised according to the country's needs, and mechanisms are being developed to ensure that beneficiaries pay back their loans (Kotecha 2008).

Student profile and enrolment patterns

Based on the data collected for this study, 86 per cent (5 451) of students at UNISWA are national citizens, with about 11 per cent (62) from other countries in the SADC region. Only ten students enrolled at the university are international students from countries outside SADC. The university consists mostly of contact students, although the number of distance students is growing every year. Most of the students are enrolled for undergraduate studies. The highest enrolment numbers are in business, management and law, with 1 802 students. The only faculty offering postgraduate degrees or diplomas (honours) is education, with 155 students enrolled in the 2009/2010 academic year. On the whole, there is a marginal difference in proportions of male and female students (49 and 51 per cent respectively), but more stark gender differences in enrolment are seen when considered by major field of study (see Figure 1). In particular, much larger numbers of male students enrol for science, engineering and technology and for agriculture compared to female students. Larger numbers of female students are enrolled in education, health sciences and the humanities and social sciences.

Figure 1: Student enrolment by gender and major field of study

Source: SARUA university questionnaire (2011)

Public higher education in Swaziland is dominated by undergraduate education, with 95 per cent of the 2009/2010 academic year enrolment at the undergraduate level. The largest numbers of students are studying business, management and law, closely followed by the humanities and social sciences. Science and technology enrolments account for the smallest proportion of students. The largest numbers of postgraduate students are found in education-related fields. There were no doctoral students enrolled at UNISWA at the time of data collection.

Table 2: Student enrolment by major field and level of study

Major field of study	Number of students enrolled per level of study					
	Undergraduate	Postgraduate < Masters	Masters	Doctoral	Post-doctoral	Other (e.g. short courses)
Agriculture	949	0	29	0	0	0
Business, management and law	1802	0	0	0	0	0
Education	436	155	52	0	0	0
Health sciences	425	0	0	0	0	0
Humanities and social sciences	1278	0	10	0	0	0
Science, engineering and technology	363	0	24	0	0	0

Source: SARUA university questionnaire (2011)

Staff profile

The table below presents the profile of academic and support staff at the University of Swaziland.

Table 3: Staff profile at the University of Swaziland

Staffing categories	Nationality	Number of staff
Academic and research staff	National citizens	183
	SADC citizens	25
	Other international staff	66
Management and administrative staff	National citizens	60
	SADC citizens	4
	Other international staff	4

Source: SARUA university questionnaire (2011)

Most of the academic and research staff are Swazi citizens, making up 66.2 per cent of the total staff. Staff from elsewhere in the SADC region represent 9 per cent, while other international staff represent about 24 per cent. This is a relatively large complement of international academics.

In all faculties except for the health sciences there are more male than female academic and research staff. Gender disparities are particularly marked for science, engineering and technology, in which only 14 per cent of academic and research staff members are women. The humanities and social sciences have the largest number of staff members, accounting for 22 per cent of all academic and research staff. The health sciences and business management and law fields have the smallest number of staff, each accounting for about 10 per cent. This disparity is also reflected in student enrolment figures, although the disparity between the staff is not as large as among the students. The student:staff ratio at the Faculty of Science, Engineering and Technology is 6:1, the lowest of all the faculties. The highest student:staff ratio is that of the Faculty of Business, Management and Law which stands at 60:1.

The university currently employs 82 management and administrative staff. More than 85 per cent of these staff come from Swaziland and are full-time employees. The departments of Humanities and Social Science, and Business, Management and Law have the largest number of management staff. The University of Swaziland indicated that there is a shortage of staff in the health sciences and education.

Of the 239 academic and research staff at UNISWA, 120 (50 per cent) have masters degrees, 113 (47 per cent) have doctoral degrees and 6 (0.02 per cent) have undergraduate degrees. The lack of enrolment at postgraduate level (particularly doctoral level) is therefore not due to a lack of qualified academics to provide supervision. Further research is needed to better understand the very low postgraduate enrolment at UNISWA.

National higher education outputs and alignment with policy imperatives

Graduate patterns

In line with enrolment numbers, most of the qualifications awarded were in agriculture, business, management and law and the humanities and social sciences. There was no major difference between the male and female graduate output, with female students accounting for a slightly larger proportion of the graduates (in line with enrolment trends). There is a significantly low throughput rate at masters level, as only 20 per cent of the students enrolled for a masters degree actually graduate.

Quality assurance

At present, Swaziland does not have a national higher education quality assurance system, although there is a quality assurance framework pending approval by the Swaziland Parliament (Ministry of Education 2008, Ministry of Education questionnaire 2011). Nonetheless, the Ministry of Education and Training reported that it provides technical support to UNISWA for quality assurance activities, and UNISWA noted that it is required to report on quality-related issues at the national level.

According to UNISWA's questionnaire response, the university has an internal quality assurance process and there is a specific budget allocated to this function. UNISWA also makes use of peer review processes and has mandatory processes in place for evaluating individual teaching staff. Training is provided for newly appointed staff members and ongoing staff development opportunities are reported to be available. External moderators are used as part of the examinations process. UNISWA indicated that it has procedures in place for gathering student feedback in the areas of academic issues, university governance and student services.

An additional factor that contributes to the quality of educational provision is that of infrastructure availability and quality, including, for example, science laboratories, lecture rooms and library material. In the UNISWA questionnaire response it is noted that staff and students have access to the Internet. A total of 415 computers are available for students, and the ratio of students to computers is approximately 13:1. While UNISWA has science laboratories, a library, computer laboratories, lecturing venues and venues for tutorials available, in each case it was noted that the

facilities are not sufficient to accommodate all the students. There is thus a need for more teaching space (lecture halls and smaller venues) and laboratories at the university (HE questionnaire 2012).

Research output

Research output is increasingly being used as a measure of the standing of a university, since this is the point at which universities contribute to the production of new knowledge. Table 4 shows the research output data provided by UNISWA for the period 2008 to 2010. In comparison with other universities and countries in the SADC region, the research output is average²⁶.

At present, UNISWA does not have a research office or a section dedicated to research. Much of the research funding (54 per cent) is provided for by donations from individuals and trusts, while donations from international funders account for about 25 per cent. The remaining 25 per cent is provided by the university (SARUA university questionnaire 2011).

Table 4: Research output

Category of research output	2008	2009	2010
Peer-reviewed journal articles	80	95	98
Peer-reviewed books	4	8	10
Peer-reviewed book chapters	1	14	16
Patents	No data	No data	No data

Source: SARUA university questionnaire (2011)

Recent developments in higher education

Swaziland as a country has experienced significant financial difficulty in recent years. At the start of the 2011 academic year, UNISWA was closed due to a financial crisis. This affected the number of students admitted, and limited the student numbers for 2011 to less than 500 (compared to 1 200 students in the previous year). The low enrolment rate was due to the lack of financial guarantees from government, as the majority of the students who applied were hoping to be funded by government (The Swaziland Observer 2011). This downsizing in the number of students caused UNISWA to delay operations this past academic year (University World News 2011).

As noted above, two new private universities (the Limkokwing University of Creative Technology and Southern African Nazarene University) have recently been opened in Swaziland, and a third (Swaziland Christian Medical University) is due to begin operations in 2013. The Limkokwing University of Creative Technology is a campus of the Malaysian-based Limkokwing University that currently operates in several countries globally²⁷. Located in Mbabane, Limkokwing offers associate degree courses in the following areas:

- architecture and the built environment;
- business management and globalisation;
- communication, media and broadcasting;
- tourism and hospitality;
- design innovation;
- film, television and broadcasting;
- multimedia creativity;
- lifestyle design; and
- sound and music design²⁸.

Given the country's financial difficulties, together with the demand for higher education, it is likely that private higher education in Swaziland will play an increasingly important role in the sector.

²⁶ Note that no data verification was done to ensure the accuracy of these figures.

²⁷ www.limkokwing.net/swaziland/about/

²⁸ www.limkokwing.net/swaziland/courses_associate_degree/

Regionalisation

Higher education in Swaziland at institutional and ministry level places emphasis on regional collaboration. The Ministry of Education aligned itself with the SADC Charter of Fundamental Social Rights and the SADC Protocol on Education and Training when developing its higher education policies (Ministry of Education 2008). Through the SADC protocol, Swaziland has agreed to engage in collaboration and integration with other higher education institutions in the region. Although several challenges are inherent in the process, some of these collaborative initiatives have been successful. At the policy level, UNISWA is required to make available 5 per cent of spaces to students from the SADC region (SARUA MoE questionnaires 2011). The students from SADC pay the same fees as local students. However, there are relatively few students from the SADC region currently studying at UNISWA. In the 2009/2010 academic year a total of 62 students (1.1 per cent of the student body) were from other SADC countries. With respect to staff, there are significantly more international staff members from outside the SADC region compared to those from SADC.

In the area of collaboration with other universities in the SADC region, the 2008 SARUA study reported collaboration between the Faculty of Science at UNISWA and the universities of Botswana and Witwatersrand in South Africa. The Faculty of Humanities has a collaborative programme with Eduardo Mondlane University in Mozambique, and the Faculty of Education has a collaborative programme with the University of Pretoria in South Africa (Kotecha 2008). More recently, UNISWA signed a collaboration treaty with the University of Namibia (SARUA MoE questionnaires 2012).

Conclusions

Swaziland, one of the few remaining monarchies in the SADC region, is faced with a range of challenges and opportunities in the higher education sector. The country's political system and recent financial crises have placed a great deal of stress on the public higher education system, and it remains to be seen how these difficulties will be resolved in coming years. To date there has not been a specific policy framework for higher education, although this is changing, with specific reference to tertiary and higher education being included in the recent Ministry of Education's Education and Training Policy (2011), and two higher education policies currently being before the Swaziland parliament.

In the past, the higher education sector was dominated by the University of Swaziland as the only university operating in the country. More recently, the private higher education sector is becoming more established, although the number of students participating in the private sector is still small. The Ministry of Education has plans for significant expansion in tertiary level participation, the long-term aim being for 40 per cent of school leavers to move on to higher education. It is unlikely that this will be possible without significant expansion of private higher education. The vast majority of higher education provision in Swaziland is at the undergraduate level, with no doctoral students being enrolled or graduating in the 2009/2010 academic year. This is cause for concern, particularly with respect to ensuring that a new generation of academics is available to drive the envisaged higher education expansion. Several infrastructural constraints were identified at the current levels of student enrolment. Significant investment in higher education infrastructure will thus be needed as the sector grows.

14 Tanzania

Compiled by Israel G Mawoyo and Merridy Wilson-Strydom

COUNTRY CONTEXT STATISTICS	
	Population: 46.2 million (2011)
	GDP per capita: US\$516 (2010)
	Human development index: 0.466
	Unemployment: 10.7% (2011)
	Key economic sectors: mining, agriculture, manufacturing, tourism
	Principal exports: gold, coffee, cashew nuts, manufactured goods, cotton
	HIV and AIDS prevalence: 5.6% (2009 est.)
	Gross primary enrolment ratio: 102% (2010)
Country context data were obtained from a variety of sources: CIA (2012), Tanzania National Bureau of Statistics (2012), UNAIDS (2011), UNDP (2011), UNESCO (2011).	

Tanzania is situated on the east coast of Africa with a population of just over 46 million people. The United Republic of Tanzania was established in 1964 when mainland Tanganyika merged with Zanzibar shortly after independence from the British. The first President, Julius Nyerere, and his post-independence Arusha Declaration in 1967, laid the foundations for Tanzania's national development, based on egalitarianism, socialism and self-reliance. However, the 1970s witnessed an economic crisis which forced the government to adopt policies imposed by foreign donors. After the structural adjustment programmes of the 1980s and 1990s, the economy has improved.

Agriculture continues to dominate the economy, making a contribution of more than 30 per cent to national gross domestic product (GDP) and contributing to more than 75 per cent of all employment; the rapidly growing service sector makes a 47 per cent contribution to GDP (URT 2011). Poverty remains a major challenge facing the country, with an unemployment rate of about 24 per cent among urban youth.

Higher education landscape

The higher education system in Tanzania has undergone a number of shifts and changes as it has sought to become relevant and responsive to its society.

Brief historical overview of higher education

Higher education in Tanzania dates back to the early 1960s. The first university started as a college of the University of London with a single faculty (Law). In 1963, two years after the college was established, the institution became a component of the University of East Africa, which at the time included Nairobi University College in Kenya and Makerere University College in Uganda. The East African Authority's decision for a split in 1970 resulted in the establishment of Dar es Salaam

University College, which later attained full university status to become the University of Dar es Salaam (UDSM). The majority of public institutions can be argued to have derived from the UDSM (Mwollo-Ntallima 2011). These include Sokoine University of Agriculture (SUA), established in 1984 out of the UDSM's Faculty of Agriculture, Forest and Veterinary Science, as well as Mkwawa University College and the Dar es Salaam University College of Education.

National higher education policy context

The Tanzanian education system has a 7–6–3 format: primary education lasts for a period of seven years, followed by six years of secondary education and three years of university education. The secondary level is further divided into two: a four-year period which leads to the ordinary level certificate, and entrance into the upper secondary level, which culminates in the advanced-level certificate and qualification for entry into university education. Upon completion of the advanced level, a student qualifies to enrol for a degree programme at a university or university college. An undergraduate qualification generally lasts for three years, but there are some programmes that take longer (Shaik n.d.).

The post-secondary education system is divided into two parts: tertiary and higher. Tertiary education specifically deals with semi-skilled qualifications, and tertiary institutions of learning generally offer certificate and diploma qualifications. Institutions of higher education (which include universities and university colleges), on the other hand, offer highly skilled qualifications.

Higher and tertiary education in Tanzania is governed by a number of policies, structures and frameworks aimed at enhancing the sector (SARUA 2009):

The Education and Training Policy (1995) covers a number of areas including:

- equity in access to education;
- quality control and assurance;
- partnerships between the state and the private sector in providing education;
- teacher management and reform; and
- broadening access.

The Higher Education Policy (1999) focuses primarily on ensuring that there is a council that caters for the needs and demands of the higher education sector. Some of the needs and demands that are to be addressed include:

- management and control of expansion within the higher education sector;
- funding: formulating and implementing cost sharing mechanisms;
- addressing gender imbalances in enrolment and participation rates in the natural sciences;
- linking higher and tertiary education to the demands of the market; and
- establishment of private institutions.

During SARUA's previous higher education profiling study (Kotecha 2008) it was noted that this policy was under review. In the present study, the research team sought information about recommendations or changes made to this policy, but no data or clarification was provided. It is likely that this policy has been superseded by the Higher Education Development Programme 2010–2015 (URT 2010) discussed below.

The mandate of the National Science and Technology Policy (1996) is to promote a culture of embracing science and technology in every sector of Tanzanian society. The policy has sixteen objectives which focus on achieving this goal.

The Higher Education Development Programme includes other policies such as the Technical Education and Training Policy (1996) and, more recently, the Higher Education Development Programme (HEDP) 2010–2015 (2010). The HEDP explicitly recognises the role of higher education in supporting sustainable social and economic development in Tanzania. Building on the Education Sector Development Programme (ESDP), the HEDP moves the national focus from the development of primary and secondary education to higher education. Acknowledging that participation rates in Tanzanian higher education have remained 'abysmally low' at only 3 per cent and that, although

there has been some development in the areas of science, engineering and technology (SET), this has had little impact on people's day-to-day lives (URT 2010:viii), the following developmental objectives are defined:

- establish a comprehensive and co-ordinated higher education system through institutional reforms;
- improve delivery of higher education through ensuring relevance and diversification of the curriculum, and increased access, equity and quality; and
- enhance the capacity of the higher education system so as to maintain and sustain all its functions effectively and efficiently.

Based on a review of the national context and important policy thrusts, it is noted that the HEDP is needed to respond to the increased social demand for higher education in Tanzania as well as the following needs (paraphrased from HEDP: 10):

- increased growth in agriculture, manufacturing and other economic sectors;
- capacity-building in new and emerging SET areas, including biotechnology, environmental science, molecular biology, nanoscience and informatics;
- improving capacity in both existing and emerging higher education institutions;
- ensuring that higher education institutions are more competitive in a globalised environment;
- increased demand for middle and high-level skills;
- improved knowledge and entrepreneurial skills amongst the youth;
- sustainability of higher education by efficient and effective resource mobilisation;
- addressing and solving problems related to poverty reduction; and
- addressing cross-cutting issues such as democracy, gender, environment, entrepreneurship, good governance and various infectious diseases.

The implementation of HEDP 2010–2015 is organised around nine areas of focus within three main thematic areas: institutional reforms, service delivery and sustainability mechanisms. The HEDP document provides a detailed account of the expected outputs and outcomes with specific targets set in many cases (URT 2010:x-xi, 11-33). Thus, higher education in Tanzania has been accorded an increasingly important place on the national agenda, and a supportive policy environment has been put in place as the basis from which the sector can grow.

Size and shape of higher education

Seven of the eight public higher education institutions in Tanzania provided questionnaire responses for the current study. The only outstanding response was that from the Open University of Tanzania. However, the Open University did submit a questionnaire response in SARUA's previous study that was published in 2008. In order to present a more complete picture of higher education in Tanzania, the Open University data from the previous study have been used together with updated data from the other seven universities.

Demand for higher education

The higher and tertiary education sector has witnessed considerable expansion in recent years. This is evident in the rapid increase in the number of private and public institutions. With only one university at independence, today the country has eight public higher education institutions, a large number of private institutions and publicly-funded colleges. In the Ministry of Education questionnaire response it was reported that the country has plans to establish new universities in the next five to ten years. The high number of private higher education institutions can be attributed to the government policy, implemented in the late 1980s and early 1990s, of opening up the sector to private investment. In the HEDP 2010–2015 document it is noted that private higher education accounts for about 26 per cent of the total national enrolment (URT 2010:17).

Evaluating the number of students who have access to higher education, Ishengoma (2007) argues that the provisioning of higher education in the country remains elitist, citing the huge disparity between the number of applicants who qualify to enrol for degree programmes and those who are actually enrolled. Ishengoma gives an example of the data that he collected in the 2006/2007 academic year at the University of Dar es Salaam. Of the 15 185 students who applied and who met the requirements for enrolling for an undergraduate qualification, only 7 049 were admitted. Many students who qualify for higher education do not even apply. This is reflected in the extremely low gross tertiary enrolment ratio.

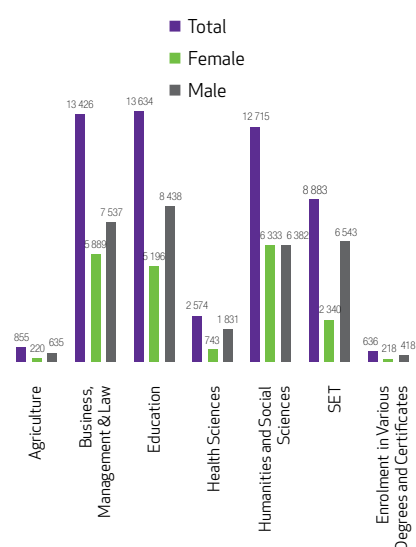
Student profile

The majority of registered public university students in Tanzania are contact students, although a relatively large proportion of students are reported to be studying part-time. Of the 52 723 students enrolled at public higher education institutions, only 49 students were reported as coming from other SADC countries (and 302 from other countries outside of SADC). While these figures are indicative of small numbers of international students, they should be treated with caution due to nationality data missing for several of the universities. There are reportedly 5 176 students enrolled in distance learning programmes, a trend facilitated by the Open University of Tanzania.

Figure 1 shows the number of students enrolled in various fields of study. Available data show that the largest total enrolment is found in education, followed by business, management and law, and then the humanities and social sciences. Despite the policy focus on SET, the total number of enrolments in this field of study remains fairly low. The greatest gender disparity in enrolments is also seen in the SET field, with male students making up 73.6 per cent of all students. Only in the humanities and social sciences is an even split evident between male and female students.

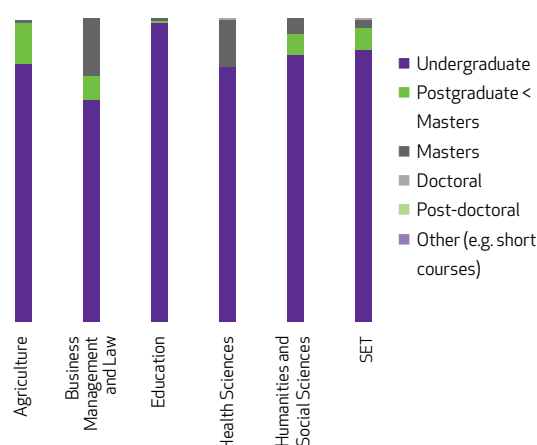
With respect to the level of qualification for which students in Tanzanian public universities are enrolled, the vast majority (87.7 per cent) are enrolled for undergraduate study. A total of 4.9 per cent are enrolled for postgraduate study below the masters level, 7.3 per cent for masters degree programmes, and only 0.2 per cent for doctoral study. Figure 2 shows the proportional enrolment per level of study for each of the major fields of study. Almost all the students (98.9 per cent) who are enrolled for studies in education are studying in undergraduate programmes.

Figure 1: Enrolment by major field of study and gender



Sources: SARUA university questionnaires (2008 and 2011)

Figure 2: Proportional enrolment by major fields and levels of study



Sources: SARUA university questionnaires (2008 and 2011)

Staff profile

Almost all the staff members (both academic and administrative) are Tanzanian citizens. Combined, the eight universities reported only five academic and research staff members coming from other SADC countries, and 69 from countries outside of SADC. All management and administrative staff members are Tanzanian.

As shown in Table 1, large gender disparities are evident with respect to staffing at all levels and across all fields of study. Less than one-third of academic and research staff are female. For management and administrative staff the proportion is slightly higher (39.8 per cent female).

Table 1: Staff by major field of study and gender

Staff category	Major field of study	Female staff members	Male staff members
Academic and research staff	Agriculture	42	135
	Business, management and law	85	300
	Education	46	109
	Health sciences	82	275
	Humanities and social sciences	124	298
	Science, engineering and technology	103	463
Management and administrative staff	Agriculture	228	903
	Business, management and law	140	193
	Education	33	37
	Health sciences	215	255
	Humanities and social sciences	150	124
	Science, engineering and technology	56	200
	Other	903	900

Sources: SARUA university questionnaires (2008 and 2011)

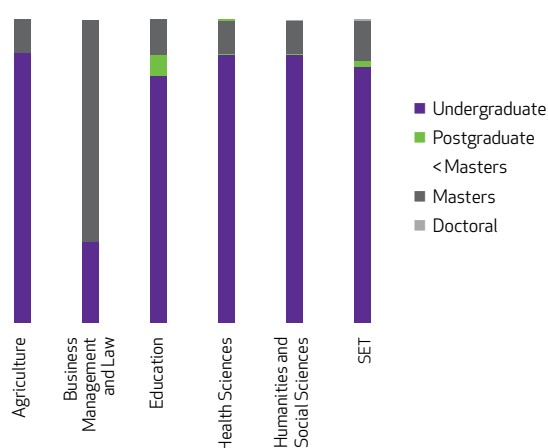
More positive findings are evident in the area of staff qualifications. A total of 17.6 per cent of academic and research staff have undergraduate qualifications, while 32.3 per cent have masters degrees, and nearly half (49.3 per cent) have doctoral degrees. The very low number of postgraduate enrolments was noted above, but the staffing data implies that the capacity – at least with respect to human resources – is available to expand the provision of postgraduate study.

National higher education outputs and alignment with policy imperatives

This section presents an overview of graduate trends, quality assurance and research output.

Graduate patterns

As is to be expected given the large proportional enrolment in undergraduate qualifications, most of the graduates produced by public universities in Tanzania (68.4 per cent) are at the undergraduate level. Excluding qualifications in business, management and law, more than 80 per cent of the qualifications awarded are at undergraduate level. Interestingly, there are more graduates at masters degree level in business, management and law than there are at undergraduate level. We might speculate that these are MBA graduates, although the data do not refer to specific qualifications. For the remaining major fields of study the proportion of postgraduate qualifications is very low. Only 29 doctoral qualifications were reported by the eight participating universities.

Figure 3: Graduates by field of study and level of study

Sources: SARUA university questionnaires (2008 and 2011)

The largest number of graduates (at all levels of study) are found in the humanities, followed by business, management and law. Although graduates from science, engineering and technology (SET) currently account for 18.8 per cent of all graduates, the actual number of graduates (1 643) is relatively low considering the importance accorded to expanding higher education output in the area of SET. Also concerning, given the importance of SET, is that there was only one doctoral graduate in this major field of study for the 2010 academic year.

While understanding the number, level and type of graduates produced by any higher education system is important, these numbers do not say much about the value of this higher education output, unless there is evidence that the qualifications meet certain standards. The following section discusses quality assurance in Tanzanian higher education.

Quality assurance

Issues of quality assurance have taken centre stage in Tanzanian education. The HEDP document (URT 2010:26) identifies the following areas in which quality challenges are experienced:

- overcrowding as a result of expansion in student numbers without the corresponding expansion of infrastructure;
- inadequate teaching and learning facilities, partly due to the pressures of expanding student numbers, but also because teaching and learning facilities are old and outdated;
- poor learning techniques, with most universities still making use of lecturer-centred pedagogies using traditional teaching and learning methods;
- inadequate supply and use of books and other learning materials – in general, there is a scarcity of textbooks and other learning materials, and those available tend to be outdated;
- staff members who are not well qualified for university teaching as a result of a freeze on employment in the mid-1990s to early 2000s, which meant that universities were not able to appoint and develop the next generation of academics; and hence now have newly appointed young staff members who lack experience and require further training; and
- less competent entrants to the university sector, with many secondary school leavers being reported to have problems with spoken and written English as well as a lack of exposure to practicals in science subjects.

The Tanzania Commission for Universities (TCU) is responsible for setting the quality standards and accreditation of institutions and the degree programmes that they offer and for co-ordinating quality assurance efforts across the sector. While five of the eight universities participating in this study reported having internal quality assurance processes in place, the HEDP document notes

that many higher education institutions in Tanzania do not have well-organised quality assurance units.

In terms of the Public Service (Amendment) Act No. 9 of 2008, all public service institutions (including universities) must put in place results management and open performance and review systems. This system involves self-evaluation, peer evaluation, student appraisal, as well as management review and evaluation (URT 2010:27).

At the institutional level, six of the eight participating universities reported having peer review quality assessments in place, three regularly conduct internal evaluations, and three sometimes conduct internal evaluations. Most of the universities reported that they have training and orientation for new staff members, and five universities have mechanisms in place for ongoing staff development. Six of the eight universities make use of external and independent moderators for their examinations.

Research output

Higher education in Tanzania has recognised knowledge as a key instrument in national development. Knowledge output has been observed in diverse formats. Besides the production of human capital through the training and throughput of graduates, the main form of knowledge and research output is that of peer-reviewed publications. Despite the relatively large numbers of staff with doctorates in Tanzanian public universities, research output remains low, with fewer than 300 peer-reviewed journal articles reported for 2008, 2009 and 2010. Interestingly, four patents were registered in 2010. Although not usually considered for promotion and international recognition, participating universities noted various other forms of knowledge output including seminar papers, workshop presentations, policy briefs and student dissertations.

The establishment of the Nelson Mandela African Institute of Science and Technology (NM-AIST) in Arusha can be regarded as a significant milestone in the country's attempt to boost its research capacity in science and technology. The institute is solely dedicated to the advancement of scientific research in Africa. Despite only recently having opened, the institute has a vision of becoming a renowned leader in scientific research. Plans are in the pipeline for the establishment of four other campuses across the continent (Daily News 2011). With a strong national emphasis on knowledge and innovation for national development in the knowledge economy (URT 2011), it is expected that this research institution will enhance knowledge production in science and technology and contribute towards national development.

Recent developments and debates in higher education

Like many countries in the region, Tanzania is confronted with the problem of increasing access to higher education institutions for the many youth who qualify for entry into tertiary education, but who cannot enrol due to inadequate infrastructure. Recently, the University of Dar es Salaam received a major boost of funding that will see the construction of a number of world-class facilities on its premises. This is part of the World Bank programme to improve higher education infrastructure in the country (Domasa 2012).

The role of higher and tertiary education in Tanzania is linked to meeting the developmental needs of the country's economy. Recently the higher education sector was applauded for its role in contributing to the development of the rural areas through research that promotes the use of renewable energy amongst the rural population (Domasa 2011). The sector has also been commended for its contribution towards addressing the millennium developmental goals, given that the goal of research is to create knowledge that will improve the livelihoods of the local people (Bloom et al. 2006).

The role that research, researchers and higher education institutions have played in contributing to the development of the Tanzanian economy caused the government to consider tripling the budget allocated to research in 2011 (The Citizen 2011a). Such a drive by government can be linked to the shared notion that the generation of knowledge is the key to industrialisation and innovation.

Another critical issue that has taken centre stage in the Tanzanian education system is the use of information and communication technology (ICT). The Tanzanian situation is not unique among African countries when it comes to the use of ICT. The country's education system is lagging behind,

despite recent calls by government and efforts to integrate ICT into the education system from secondary level upwards (The Citizen 2011b). It is believed that such efforts will help the economy in the long run, and will also help with building the higher education sector in terms of both quantity and quality (URT 2010).

Regionalisation

Tanzania places a high value on issues of regionalisation. This can be seen, for example, by the Ministry of Education's efforts to include material on SADC in its primary and secondary school curricula in an attempt to promote consciousness about the regional community. In showing its support for the integration of the SADC region, the ministry reports that it is working towards creating a system of facilitating credit transfers from one university to another in the region. This would promote student mobility for exchange programmes. Tanzania is also a signatory of the SADC Protocol on Education and Training.

As in the previous SARUA profiling study (Kotecha 2008), the public institutions that took part in this study were in support of the regionalisation agenda, but identified a number of challenges that hinder the progress of regionalisation, including:

- lack of funding to finance collaboration;
- limited awareness of the benefits of regional collaboration;
- small numbers of students from SADC countries;
- brain drain;
- stiff competition; and
- inadequate infrastructure.

Despite these challenges, regionalisation offers a number of benefits, including:

- training staff at a cheaper cost;
- exchange of staff and students;
- undertaking joint research;
- contribution to regional development through research;
- provision of solutions to the social issues confronting the region;
- linkage of researchers; and
- increasing regional research output and publications.

At present, there appears to be little evidence of student and staff mobility in Tanzania. According to the institutional responses there were only 49 students from the SADC region studying in Tanzania, and 5 staff members working at universities. Interestingly, the HEDP also makes no reference to the SADC region or to regionalisation, apart from stating that the development of the plan took 'into consideration Regional and International Conventions and Protocols of which Tanzania is a signatory' (URT 2010: v).

Conclusions

This chapter provides a snapshot of higher education in Tanzania. It is clear from the information presented that in recent years there have been a number of policies and structures put in place to improve access to, and the quality of, higher education in the country. From having only one university at independence, the higher education sector (public and private) has expanded tremendously over the years. Key to this development is the participation of private organisations in the provisioning of higher education. The government's initiative of increasing primary and secondary school graduates has also played an influential role in increasing the demand for post-secondary education.

Higher education in Tanzania has been recognised by government and in policy as a key instrument in social and economic development. The link between higher education and development has, however, not been consolidated with policies aimed at increasing access and

throughput in the SET-related fields. There is a need for policy and investment to increase access and knowledge production from fields able to produce relevant scientific and innovative knowledge for development.

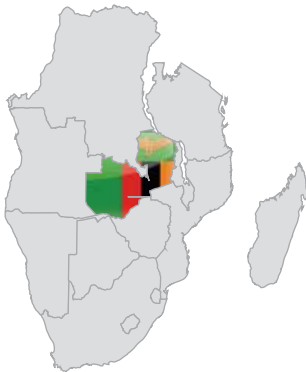
Prominent in the education system of Tanzania is the issue of quality. The government has gone to considerable lengths in ensuring that quality is upheld at all levels from primary to secondary to higher and tertiary education. At the post-secondary level, the TCU has been tasked with ensuring that quality is maintained and sustained, and future studies will be better placed to assess the extent to which the work of the TCU has impacted on quality at the institutional level.

Looking at participation issues, the greatest portion of those enrolling at universities are studying towards their first degree, with relatively low postgraduate enrolment and graduation rates. While the high undergraduate enrolments are likely to increase human capital production, there is cause for concern regarding the small extent of intensive research and knowledge that is being produced. The large gender disparities at both student and staff levels is also concerning and requires attention (a challenge that has been explicitly noted in the HEDP).

While there appears to be a favourable disposition from the higher education sector towards regionalisation, very little seems to have been achieved in practice. This chapter is part of an initiative aimed at increasing and enhancing regional participation and collaboration which, it is hoped, will help to open up Tanzanian higher education to the international academic community.

15 Zambia

Compiled by Godfrey Hampwaye and Liberty Mweemba

COUNTRY CONTEXT STATISTICS	
	Population: 13.5 million (2011)
	GDP per capita: US\$1 238 (2010)
	Human development index: 0.430
	Unemployment: 14% (2006 est.)
	Key economic sectors: mining, agriculture, manufacturing, tourism
	Principal exports: cobalt, copper, cotton, flowers, electricity
	HIV and AIDS prevalence: 13.5% (2009 est.)
Gross primary enrolment ratio: 115% (2010)	
Gross secondary enrolment ratio: 28% (2002)	
Gross tertiary enrolment ratio: 2% (1999)	
Country context data were obtained from a variety of sources: CIA (2012), SADC (2007), UNAIDS (2011), UNDP (2011), UNESCO (2011).	

Zambia is a landlocked country in Southern Africa, with a tropical climate. It consists mostly of plateau, with some hills and mountains, dissected by river valleys. With an area of 752 614km², it is the 39th-largest country in the world, slightly larger than the US state of Texas. According to the 2010 population census, the total population is 13 046 508 (CSO 2011). Zambia is one of the most urbanised countries in sub-Saharan Africa, with 44 per cent of the population concentrated in a few urban areas along the major transport corridors, while rural areas are sparsely populated. Unemployment and under-employment are serious problems in the urban areas, while the majority of Zambians in rural areas depend on subsistence farming (CIA 2008; Bloom, Cuning and Chan 2006).

Historically, the Zambian economy has been based on the copper mining industry. Output of copper fell to a record low of 228 000 metric tons in 1998 after a 30-year decline due to lack of investment, low copper prices and uncertainty over privatisation. In 2002, following the privatisation of the industry, copper production rebounded to 337 000 metric tons. Improvements in the world copper market have magnified the effect of this volume increase on revenues and foreign exchange earnings (CIA 2008; Bloom, Cuning and Chan 2006).

The Zambian government is pursuing an economic diversification programme to reduce the economy's reliance on the copper industry. This initiative seeks to exploit other components of Zambia's rich resource base by promoting agriculture, tourism, manufacturing, gemstone mining and hydro-power. Agriculture plays a very important part in the economy, providing many more jobs than the mining industry. Zambeef is the leading Zambian private company in agri-business, with over 4 000 employees and a total land capacity of about 6 500 hectares (5 000 irrigated and 1 500 non-irrigated). Some of the agricultural outputs from agri-processing include cattle by Zambeef, pork by Master Pork, chicken by ZamChick, eggs by ZamChick Egg, feedstock by Novatek and edible oil by Zamanita. Other agriculture-related products are dairy products, leather and fish. Zambeef operates eight abattoirs, four farms and numerous retail stores (also in co-operation with Shoprite) and a fast-food chain (ZamChick Inn) throughout the country (GRZ 2011).

In 2003, exports of non-metals increased by 25 per cent and accounted for a 3 per cent overall increase in all export earnings to 38 per cent. The Zambian government has recently granted licenses to international exploration companies to prospect for minerals such as nickel, tin, copper and uranium. It is expected that nickel will take over from copper as the country's top metal export. In 2009, Zambia was adversely affected by the world economic crisis. However, the economy has been improving, as observed in the June 2011 Euromoney Country Risk (ECR) rankings, in which Zambia was ranked the 112th safest investment destination in the world, moving 14 places up the table (ECR 2011).

Higher education landscape

The three public universities in Zambia operate under legislation that makes them responsible to parliament through the Ministry of Education. The legislation confers academic freedom and managerial autonomy on each university. Academically, each university is responsible for determining its own programmes of instruction at undergraduate and postgraduate level, determining and regulating the requirements for admission, regulating and conducting examinations, and conferring degrees and other awards. The universities are also responsible for promoting, co-ordinating and controlling the direction of academic research. Each university engages its own staff, manages its own internal and institutional affairs, charges fees and carries out its business as it perceives fit. The universities derive their income from annual government grants, student fees and income-generating undertakings.

Brief historical overview of higher education

At independence in 1964, Zambia had just over 100 university graduates and no public university. The University of Zambia, the first public university, was established in 1966 and opened its doors to 310 students in its first year. By 1994, the University of Zambia and the Copperbelt University had a total enrolment of almost 6 000 students, with 4 592 enrolled at the University of Zambia and 1 393 enrolled at the Copperbelt University. By then both universities had cumulatively awarded more than 16 000 degrees, diplomas and certificates (UNESCO 2007; Bloom, Cunning and Chan 2006). The University of Zambia is the country's largest university with a student population of over 15 000 on its two campuses. The main campus is called the Great East Road Campus and is on the Great East Road about 7km from Lusaka. The second campus is the Ridgeway Campus in Lusaka, located at the University Teaching Hospital (popularly known as UTH). This campus specifically houses students pursuing courses in medical and pharmacological fields. The University of Zambia has nine Schools (known in some universities as faculties): Agricultural Sciences, Education, Engineering, Humanities and Social Sciences, Law, Medicine, Mines, Natural Sciences, and Veterinary medicine.

The Copperbelt University (CBU) is located in the city of Kitwe and has four Schools: Business Studies, Environmental Studies, Forestry and Wood Sciences, and Technology. CBU was established as an autonomous university, having started in 1987 as a satellite campus of the University of Zambia. Since becoming a fully-fledged university, CBU has enjoyed significant growth, particularly since the turn of the 21st century. The School of Business and Industrial Studies and the School of Environmental Studies were inherited from the University of Zambia when CBU was transformed from a satellite campus to a full university. In 1989, the Zambia Institute of Technology was incorporated into the university as the School of Technology. This was followed in 1995 by the School of Forestry and Wood Science which was later renamed the School of Natural Resources. Currently, two new schools are in the process of being incorporated into CBU: the School of Mathematics and Natural Sciences (which will comprise biological sciences, chemistry, computer science, mathematics, physics, and mathematics and science education, with each offering BSc degrees with prospects for postgraduate studies), and the School of Graduate Studies (which will co-ordinate and encourage all existing postgraduate academic programmes as well as seek international research linkages).

The third public university is the Mulungushi University, which was established in January 2008. Mulungushi University is still in development and not a fully operational higher education

institution. Starting with just 1 000 students in 2008, the projections are that enrolments will reach 10 000 by 2018. This new university combines third-stream income activities and private-public partnerships. Thus far, partnerships exist between the university and Konkola Copper Mines operating in the Zambian Copperbelt Province, and the university and the Massachusetts Institute of Technology in the United States. Some of the income-generating innovations on the drawing-board include promoting Mulungushi Rock as a tourist attraction, investing in the stock exchange, and establishing a commercial radio station. The university is also looking for other opportunities for third-stream income-generating activities. The core business of a university is not being ignored, however, in the excitement of income generation and commercially viable partnerships, and two campuses are in the process of being developed. The main campus is being built on a lavish site on the banks of the Mulungushi River, 26km north of Kabwe, while the town campus will be situated on the site of the Zambia Railways Training School in the heart of Kabwe, some 140km north of Lusaka (GRZ 2009). The academic structure of the university includes three main schools (faculties): Business Studies, Social Sciences, and Agricultural Development Studies. In addition to the schools, three academic centres have been identified to boost the academic contributions from the university. These are the Centre for Labour Studies, the Centre of ICT Education and a Disaster Management Training Centre. An Institute of Distance Learning promotes that mode of academic delivery, while a Directorate of Research and Postgraduate Studies co-ordinates these essential academic activities.

National higher education policy context

The higher education policy environment in Zambia is increasingly diverse and complex, with more institutions, students and regionalisation. It is regulated by autonomous, semi-autonomous and government institutions. The main regulator of higher education is the Higher Education Authority through the Ministry of Higher Education.

There are various pieces of legislation, regulation and policy governing education in Zambia. Goals and objectives for the higher education sector have been set through consultative processes, involving all stakeholders (including civil society, non-governmental organisations and co-operating partners). In addition, Zambia's Poverty Reduction Strategy Paper (2007) identifies a series of broad roles for higher education.

Table 1: Higher education legislation

Higher education legislation	Brief description
The Education Act of 1966, supported by the Zambia Statutory Instrument No. 43 of 1993	Provides a legal framework for the development of the education system in Zambia (basic, high school, college education and university education).
The Technical Education, Vocational and Entrepreneurship Training (TEVET) (Amendment) Act, 2005	Provides the necessary legal framework for the development of TEVET in general and the establishment of the TEVETA and management boards for training institutions in particular. It also provides for the active participation of the private sector in the provision of TEVET programmes in Zambia.
The University Act No. 11 of 1999	Provides a legal framework for university education in Zambia. It stipulates the legal requirements for the establishment and governance of university education. It also defines the conditions and parameters for establishing private institutions and for maintenance of academic standards.

Source: Umlilo we Mfundo (2007)

Table 2: List of statutory bodies in the higher education sector

Statutory body	Brief description
The Technical Education and Vocation Training Authority (TEVETA)	The regulatory body for technical and vocational training institutions.
The Examination Council of Zambia	The body responsible for regulating examinations with the exception of university examinations.
University councils	The bodies responsible for overseeing university education within the institutions themselves at policy level.

Sources: SARUA MoE questionnaires (2011)

Other important documents that inform higher education policy and planning include the Zambia Vision 2030 document, the fifth National Development Plan (2006–2010) and the sixth National Development Plan (2011–2015) (GRZ 2006a, 2006b). Vision 2030 is Zambia's first long-term plan, expressing the country's aspirations by the year 2030. Its intention is to provide a common planning interface for all sectors and a source of direction for subsequent short and long-term plans.

With the growing number and types of higher education institutions, the policy considerations imply that, in the absence of an integrated national policy for higher education, provision at this level tends to be fragmented and uncoordinated. To remedy this situation, the government plans to establish a Higher Education Authority (HEA) for the co-ordination of all higher level education, and will mandate the Ministry of Education to facilitate its establishment. The HEA will have advisory, planning, quality assurance, financial and administrative functions.

Six points sum up the higher education policy context in Zambia:

1. The Ministry of Education promotes the co-ordination and harmonisation of higher education and policy through the Higher Education Authority (HEA).
2. The ministry's policy framework for publicly-funded universities is that: (a) their teaching and research programmes be responsive to the real needs of society; (b) their teaching, research and service be of international standards; and (c) they establish suitable quality assurance and public accountability systems.
3. The financing of higher education will be shared between the government, the institutions themselves, and students.
4. Higher education institutions will develop strategies for widening their resource base and diversifying their sources of revenue.
5. Government support for students in higher education institutions will be in the form of loans that will be recovered once the students find employment.
6. Higher education institutions will be given equal opportunity to access government consultancies for which they will compete on an equal footing with other applicants.

Size and shape of higher education

Higher education is provided by three public universities, 32 private universities and colleges, and 48 public technical universities and colleges, including 14 teacher training colleges which fall under the Ministry of Education. In addition there are 239 technical and vocational institutions which fall under TEVETA.

Table 3: Higher education institutions

Type of higher education institutions	Number of institutions	Percentage of students enrolled
Publicly-funded universities	3	22
Publicly-funded technical universities and colleges	48	32
Privately-funded accredited universities and colleges	32	20
TEVETA	239	26
Total	317	100

The apparent inconsistency in the data is explained by the Ministry of Education as being due to the fact that 'it was difficult to get data on private universities. Even data on registered private universities and students enrolled in these institutions could not easily be obtained' (SARUA MoE questionnaire response).

Demand for higher education

The demand for higher education institutions is very high and is far from being satisfied. More than 50 000 pupils complete secondary school each year. Of these, 30 000 or more obtain a full certificate. The higher education institutions have a total intake of about 10 000, including some mature students. Hence, only about a quarter of the applicants to higher institutions are admitted

each year. While it can be argued that not all applicants satisfy institutional admission requirements, the main reason for this mismatch is the lack of institutional capacity and financial and material resources to admit all the applicants who qualify.

Student profile

Students in the three public universities follow different types of programmes. Currently, public universities have students enrolled at bachelors level in the following categories: 558 students enrolled in agriculture sciences; 3 335 enrolled in business, management and law; 7 030 students in the school of education; 1 009 enrolled in health sciences; 4 144 are in humanities and social sciences; 5 981 enrolled in science, engineering and technology; 208 in mineral sciences; and 41 in environmental sciences. At masters level 643 students are enrolled, and at PhD level only 11 are enrolled. Public universities are predominantly contact institutions, although some distance learning is also provided. In 2010, the universities had a total enrolment of 24 425 students, of whom 18 477 were contact students and 5 948 distance students. The majority of the students enrolled were Zambian nationals, with 92 SADC nationals and 23 students from non-SADC countries.

Enrolment patterns

The University of Zambia is Zambia's largest university with a student population of over 15 000 (51 per cent of all enrolments in public universities). Copperbelt University has a student population of approximately 8 000 (39 per cent), while Mulungushi University has about 2 000 students (10 per cent). Mulungushi University is based on a public-private partnership and is administered by an independent board of trustees (Manyukwe 2008).

Enrolments have increased over the past five years in Zambia, and the country has attempted to provide some higher education programmes in fields of study essential for national development (such as agriculture). However, increasing enrolments have placed enormous constraints on institutional capacity and impacted negatively on academic quality. This has resulted in overcrowded lecture halls and libraries, dilapidated infrastructure, high student-lecturer ratios, lack of expansion in facilities, high levels of indebtedness, and inadequate education materials and ICT. The low levels of funding over the years meant that the bulk of financial subventions is used to cover recurrent expenditure such as salaries, leaving insufficient funds for investment, staff development and research activities. Enrolments in science, engineering, technology and the health sciences are insufficient to meet the country's needs. The vast majority of students in public universities are enrolled in undergraduate programmes, with the largest enrolments being in education (7 130), followed by science, engineering and technology (5 986), humanities and social sciences (4 194), business, management and law (3 858) and health sciences (1 009). Less than 3 per cent of all registered students at public universities are enrolled at postgraduate level. From a gender perspective, there are significant disparities in enrolment patterns as about 65 per cent of students are male (MoE 2005).

Staff profile

Most of the academic members of staff are Zambians (95 per cent), while staff from other SADC countries represent about 1 per cent and other international staff approximately 4 per cent. 70 per cent of the academic staff are appointed on contract and 30 per cent are permanent staff with pensionable conditions. Out of a total of 1 024 academic and research staff, only 255 (approximately 22 per cent) have a doctoral degree. A wide gender disparity in staff numbers is evident, with only 25 per cent of academic and research staff members being female. The gender disparity for management and administrative staff is equally biased against women, with only 31 per cent being female. The greatest number of staff members (46 per cent) are employed in the humanities and social sciences, with the rest distributed as follows: education 14 per cent, health sciences 12 per cent, and science, engineering and technology 11 per cent.

Weakening socio-economic conditions in Zambia and low standards of living have made it difficult for the universities to attract and retain the services of nationals and foreign qualified staff. Although university conditions of service are relatively better than those in other sectors of the civil service, they are low compared to what is offered in other SADC countries or in careers in politics or the private sector (MoE 1996). There is therefore an exodus of highly-qualified staff (some of them being PhD holders with considerable experience). The threat of further losses will continue for as long as a large gap remains between the terms and conditions of service that Zambian universities can offer and those offered elsewhere. Critical staff shortages have been identified in various areas, particularly in science, engineering and technology.

Additional higher education providers

In addition to public universities there is an array of higher education institutions in Zambia designed to meet the human capital and special skills needs in various sectors of the national economy. Government-supported institutions fall under different ministries, depending upon the particular ministry's function and the type of qualified person the ministry requires. Currently, a variety of ministries interface with specific higher institutions in respect of different areas of responsibility, as follows:

- Agriculture, food and fisheries sector: The Natural Resources Development College and other agriculture-based institutions
- Cabinet office: The National Institute of Public Administration
- Defence: The Military Training Establishment of Zambia
- Education: Teaching colleges and the three public universities
- Environment: Mwekera Forestry College
- Health: Colleges of nursing, medical training and dental training
- Science, technology and vocational training: Technical education, vocational training, arts and business colleges, etc.

National higher education outputs and alignment with policy imperatives

Quality assurance

There is no doubt that higher education has enormous social, economic, private and public benefits. Hence nations that designed and invested in well-structured quality higher education systems have leap-frogged significantly and are well advanced in their socio-economic development initiatives. Proper higher education systems are important in terms of a nation's long-term survival or sustainability. Much still lies within the sphere of higher education that needs to be harnessed for sustainable economic development. A high standard of quality is a *sine qua non* for relevant higher education (MoE 1996, UNESCO 2007, GRZ 2009). The quality of teaching, research and development that is undertaken by the higher institutions is critically important for economic growth, national prosperity and social cohesiveness. However, in Zambia, the contribution that higher education can make in this regard is being severely compromised by consistent and significant lack of resources and adequate funding. This has been observed by the recently elected President Michael Sata (2011) who has stated that 'our universities and colleges do not only have dilapidated infrastructure but are also faced with shortage of staff and apt teaching and learning materials'.

In terms of quality control, Zambian universities use both internal and external examiners. In addition, there are regular curriculum reviews, staff and student exchange programmes and staff performance appraisal systems. Examinations are administered and moderated within the institutions, and the delivery of lectures and class attendance are monitored.

The government intends to establish a Higher Education Authority (HEA) for the co-ordination of all higher education, and will mandate the Ministry of Education to facilitate its establishment. The HEA will have advisory, planning, quality assurance, financial and administrative functions over higher education institutions. According to the Ministry of Education (2005), quality in tertiary institutions was addressed mainly through improved academic staff training, curriculum reforms

and supply of adequate teaching and learning resources to colleges and universities. Quality is used as an indicator to measure the level of human resources input in terms of student: academic staff ratio in a particular subject discipline. The higher the ratio, the lower the access of students to academic assistance and hence the lower the quality of higher education offered. However, many other factors contribute to the quality of learning and teaching, such as the availability of teaching and learning materials, lecturer qualifications, contact time between students and staff, and the motivation levels of lecturers.

Research output

The main activity of a university is the production of new knowledge. This could be in the form of graduating students, academic publications, innovation and through informal networks. However, knowledge from the university is predominantly measured in the form of academic publication in accredited journals, student output at undergraduate and postgraduate level, and through scientific innovation and patents. In Zambia the majority of universities are characterised by low research output and few scientific publications (as is common in most African countries). If not addressed promptly, the low number of postgraduate students is likely to exacerbate the problem of knowledge output in the future. It was not possible for the research team to gather accurate information on specific research output, because the Directorate of Research and Graduate Studies merely co-ordinates research activities of the university. Research is conducted in specific schools and the directorate rarely receives research reports from schools, despite many requests. The university academic staff have published a number of journal articles, but such information still has to be properly captured and documented.

Recent developments and debates in higher education

In addition to the three public universities, more than ten private universities have been permitted to open in the last five years. For university education, the focus has been on increasing access to higher education through traditional contact instruction and distance learning modes, particularly for those with special education needs, women and vulnerable groups. A second area of concern has been to re-organise the universities' financial management systems in order to reduce an exceedingly onerous debt burden and establish a more effective university management system to address administrative and financial needs (especially those related to cost-recovery of student loans).

Another major development was the 2011 announcement of the construction of a new state-of-the-art university for teachers in Chinsali in the Northern Province. The university is aimed at addressing challenges facing teacher training as stated by the Education Minister Dora Siliya (Phiri 2011). This has been emphasised by the president, who has acknowledged the importance of higher education in development planning. Two colleges and a mission have been converted into universities in order to increase human capital provision and enhance economic and social development²⁹.

Regionalisation

The Ministry of Education and the three public universities in Zambia value regional co-operation highly. The country emphasises regional collaboration and integration as part of its planning in the higher education sector. The Ministry of Education implements programmes and activities as required by the SADC protocol and reports progress on the protocol to SADC meetings of ministers of education. Elements of the SADC Protocol on Education and Training have had direct influence on higher education policy and practice in Zambia. Developments include the following:

- Regional policies such as the SADC protocol and qualifications framework, as well as participation in SARUA, which is focused specifically on higher education in the region, are regarded positively.

29 www.zimtelegraph.com/?p=4361

- On the issue of gender, which is a cross-cutting issue, there is a deliberate policy to increase female participation in higher education through bursaries and the reservation of 30 per cent of places for female students.
- Other specific regional development priorities include a regional focus on university entrance requirements, consideration of credit transfer from one university to another, and harmonisation of the academic year across countries. The funding challenges faced by national higher education sectors limit the focus on regional collaboration.
- At present, the University of Zambia and Copperbelt University provide a 5 per cent admission quota each year for non-Zambian students. Currently, the three public universities have a total of 92 foreign students enrolled.
- The three public universities have various academic or research programmes involving collaboration with other higher education institutions.

The study found that the public universities expect the following tangible benefits from regional collaboration:

- staff development, exchange and training;
- access to academic and research facilities;
- capacity-building in research methodology and access to study materials focused on research skills;
- development of graduate studies;
- improved skills and knowledge; and
- improved learning and teaching facilities.

Based on this findings of this study, it could be argued that the Zambian government could further promote regional collaboration by providing adequate funding to higher education institutions, and by promoting a legal, political and economic environment conducive to attracting and retaining potential staff and students. It could also be proposed that donor support be sought to facilitate meetings among universities in the region, the training of human resources to implement regional initiatives, and for the provision of technical and financial support for collaboration between Zambia and other SADC countries.

Conclusions

Higher education in Zambia mainly consists of university education, which is offered by three public universities. The University of Zambia is the largest and oldest higher education institution, while Mulungushi University is the smallest and most recently established. As a result of high demand for higher education, there has recently been a proliferation of private universities offering a variety of programmes. By and large, the majority of the students in Zambian universities are pursuing undergraduate studies and there is a small proportion of international students. There seems to be little emphasis on postgraduate training at the universities.

Zambian higher education institutions experience several challenges. Among these are inadequate funding resulting in poor infrastructure, unattractive working conditions, and a lack of co-ordinated knowledge output. These challenges have adversely affected the quality of education to varying extents, and have compromised research and development for national socio-economic development. The lack of investment in higher education over a long period of time has significantly compromised the capacity of the higher education institutions to provide the places needed to meet the increasing demand for higher education among school leavers.

The study reveals that many faculties in Zambia's public universities have been critically affected by a staff exodus, thus increasing the staff: student ratio. This problem is compounded by the fact that the majority of the remaining teaching staff do not have doctoral degrees. This limits the output and quality of knowledge production from the higher education system.

From a regional perspective, the higher education system in Zambia is making significant efforts to align itself with the SADC regional framework – the SADC Protocol on Education and Training. However, quality assurance remains an area of concern, and a greater focus on the collection and

accumulation of institutional data would enable the country to measure its knowledge output more effectively.

In spite of these constraints, there are opportunities to invest in university education, both by the public and private sectors, but a robust regulatory framework by the Ministry of Education needs to be established and implemented to ensure quality control.

There are expectations around the creation of new higher education institutions to increase access and build human resources for the economy.

16 Zimbabwe

Compiled by Israel Mawoyo

COUNTRY CONTEXT STATISTICS	
	Population: 12.8 million (2011)
	GDP per capita: US\$573 (2010)
	Human development index: 0.376
	Unemployment: 95% (2009 est.)
	Key economic sectors: agriculture, mining, tourism
	Principal exports: platinum, cotton, tobacco, gold, ferroalloys, textiles/clothing
	HIV and AIDS prevalence: 14.3% (2009 est.)
Gross primary enrolment ratio: 101% (2006)	
Gross secondary enrolment ratio: 40% (2006)	
Gross tertiary enrolment ratio: 6% (2010)	
Country context data were obtained from a variety of sources: CIA (2012), UNAIDS (2011), UNDP (2011), UNESCO (2011).	

The Republic of Zimbabwe is a landlocked country in Southern Africa. Like South Africa, Namibia and Botswana, Zimbabwe's post-colonial experience was different from most countries in sub-Saharan Africa. Zimbabwe gained independence from its British colonial masters in 1980 after a long period of resistance. Post-independent Zimbabwe enjoyed a growing economy in the decade that followed, becoming one of the strongest economies on the continent. This was before the current political and economic crisis, which struck the country at the turn of the millennium.

Zimbabwe has an estimated population of 12.8 million people, with a significant part of the population residing in Botswana, South Africa, the United Kingdom and several other countries due to socio-economic and political unrest (Makumbe 2009), natural crises (such as droughts) and poor social, macro-economic policies (including land reform policies and limited freedom of speech and democracy).

The Zimbabwean economy has witnessed a significant socio-economic downturn for the last decade or more. This has resulted in, amongst other things, the devaluation of the Zimbabwean dollar and the transition to the US dollar as the local currency in Zimbabwe. More recently the country's economy has been recovering steadily. The formation of the Government of National Unity (GNU) has been considered by many as a sign of socio-political and economic improvement. Also important in this recovery has been the discovery of rough diamonds in the eastern parts of the country.

Although diverse, the economy of Zimbabwe is driven mainly by mining and agriculture. The discovery of diamonds in the eastern town of Chiyadzwa, about 100km from Mutare, the provincial capital of Manicaland, has been of great importance in the recovery of the economy. Agriculturally, the past years have seen an increase in output which can be attributed to the change in weather conditions and the significant success of the land reform programme over recent years, compared to when it was initially instituted.

Higher education landscape

The first democratic government of Zimbabwe inherited a racially biased education system that favoured the white minority at the expense of the black majority. At the time of independence the country had only one university. One of the major tasks of the Zimbabwe African National Union–Patriotic Front (ZANU–PF) government was to extend education (and specifically higher education) to previously disadvantaged groups (Kanyongo 2005). This led to the building of hundreds of primary and secondary school facilities across the country. According to Vision 2015, the target is to ‘guarantee Zimbabwe as a regional leader in the creative use of new and existing knowledge, skills, attitudes and resources through local mobilisation of provision and quality of higher and tertiary education’ (National Action Plan 2005).

During the first ten years of independence much attention was paid to financing primary and secondary education. This caused enormous pressure on the one university in the country, as a good number of secondary school graduates were unable to enrol for higher education due to limited capacity of the university to accommodate the increasing demand. This prompted the establishment of a second state-funded university in Bulawayo in 1991, the National University of Science and Technology (NUST) (Kariwo 2007). This is the second largest university after the University of Zimbabwe and, as is reflected in its name, NUST focuses mainly on ‘hard’ or natural sciences.

The drive to increase access to tertiary education has resulted in the establishment of more than seven publicly-funded universities in a period of less than two decades. The expansion of higher education in the country is ongoing because even more state universities are needed to respond to the needs of access and quality in the higher education sector. As indicated by the president during his 32nd Independence Day speech, it is expected that three more universities will be created in the near future.

The main governing body for higher education in Zimbabwe is the Ministry for Tertiary and Higher Education (MTHE), which has as its mission ‘to provide an effective system for the production of patriotic and competent high level manpower through the provision and accreditation of higher and tertiary education programmes and institutions for sustainability and global competitiveness’ (see www.zim.gov.zw/index.php/ministries/ministry-of-higher-and-tertiary-education).

Brief historical overview of higher education

Higher education in Zimbabwe started with the establishment of the University College of Rhodesia and Nyasaland in Salisbury in 1957. This institution became the University of Zimbabwe after independence. Higher education in Zimbabwe has been governed by a number of policies which have informed the establishment and management of higher education institutions in post-colonial Zimbabwe. Documents and policies which have influenced the Zimbabwe higher education landscape include:

- the Manpower and Planning Act of 1984, which was amended ten years later, providing for the establishment, maintenance and operation of technical and vocational institutions, and universities promoting human capital development;
- the National Council of Higher Education Act of 1990, which was to ensure the maintenance of academic standards with regard to teaching, courses of instruction and others; and
- the Zimbabwean Council of Higher Education Act No. 1 of 2006, which established a council to register and accredit institutions of higher learning.

Higher education in Zimbabwe is provided through universities, technical colleges, teacher training institutions, vocational and skills training centres and polytechnics.

With the limited capacity of the contact universities to respond to the demand for higher education, it became imperative to develop a distance education system to cater for those who could not be admitted to contact universities or who could not relocate to areas in which universities are situated. Studies were commissioned to probe the feasibility of a distance education alternative. The recommendations from these studies provided the policy context for the establishment of distance education programmes at the University of Zimbabwe in the early 1990s. Some of the aims and objectives of establishing a distance education system at the university were to:

- develop an efficient, equitable, cost-effective and high quality alternative tertiary education delivery system;
- increase the capacity of the country to produce educational training materials and textbooks for university-level courses;
- increase tertiary educational opportunities for females;
- significantly increase access to educational opportunities at tertiary level in Zimbabwe; and
- develop an accessible, affordable delivery system of tertiary education that is responsive to the human resources development objectives of Zimbabwe as a developing nation.

Today Zimbabwe has a dedicated distance education, the Zimbabwe Open University, that has centres in all provinces and through which students can access information, course syllabuses and sit for their examinations.

After independence Zimbabwe's tertiary education system focused primarily on increasing access, without paying as much attention to issues of quality. At the start of the new millennium the ministry took a strategic decision not only to increase higher education access, but also to improve its quality (see below). The establishment of the Zimbabwe Council for Higher Education (ZIMCHE) can be regarded as a major milestone in monitoring the quality of higher education in the country.

National higher education policy context

There are a number of statutory bodies that monitor and regulate the provision of higher education in Zimbabwe. These bodies address various issues including quality assurance, identification of training and research needs, representation of lecturing staff and monitoring occupational standards. The most important statutory bodies responsible for higher education provision in Zimbabwe are:

- The Zimbabwe Council for Higher Education (ZIMCHE), which monitors and regulates the quality of qualifications being offered by private and public institutions of higher learning within the country;
- The National Manpower Advisory Council (NAMACO), which acts as an intermediary between industry and higher education and supervises the industrial committees that identify, determine and monitor training needs;
- The Zimbabwe Manpower Development Fund (ZIMDEF), which is responsible for levy collection, and supplements voted funds for the procurement of training materials and consumables;
- The College Lecturers Association of Zimbabwe (COLAZ), which represents lecturers in collective bargaining;
- The National Economic Consultative Forum, which recommends economic priority programmes including human capital development; and
- The Zimbabwe Occupational Standards Service (ZOSS), which carries out job profiling and develops occupational standards upon which technical and vocational education and training (TVET) curricula are based, and which form the basis upon which examinations, test items and trade tests are developed.

The Ministry for Tertiary and Higher Education (TMTHE) is the custodian of post-secondary education in Zimbabwe. According to SARUA's previous profiling study (Kotecha 2008), the ministry sets out a number of goals for higher education in the context of the country's needs and priorities. These goals were part of a five-year strategic plan implemented between 2006 and 2010. The paragraphs to follow pay particular attention to each of the goals (Kotecha 2008).

- **Enhancing quality education and relevance of higher and tertiary education and training**
Contrary to the goal of the early 1980s of increasing access to education in order to reverse the racial disparities caused by the previous government, at the beginning of the new millennium the government of Zimbabwe took the bold step of shifting focus from increasing access to higher education to paying more attention to the quality of higher and

tertiary education being offered by institutions. The establishment of ZIMCHE in the early 2000s is a clear indication of how issues of quality assurance have become critical importance in the provision of tertiary education in the country.

Along with increasing the quality of education, the responsible ministry also saw fit to ensure that institutions of higher learning link the programmes that they offer to the economic and developmental needs of the country (for example, curricula with a specific focus on poverty eradication, improved health standards and contributions to the creation of wealth).

- **Promoting science and technology in higher and tertiary education**
In line with the millennium development goals (MDGs), especially goals 1, 2 and 5, the ministry has embarked on a drive to promote the teaching of science and technology in higher and tertiary education. Such a drive is expected to trigger innovation in various industries (for example in manufacturing and health). The spin-offs from these industries should help to improve the livelihoods of people in Zimbabwe as envisaged by the MDGs.
- **Enhancing the resource base and management of higher and tertiary education by intensifying income-generating projects for institutions and involving the private sector**
While the government remains the main funder of higher education, this goal seeks to bring more stakeholders into the funding process. This will enable higher education institutions to generate their own income through consultancy projects and knowledge commercialisation, and encourage the private sector to partner with government or individual institutions in funding the provision of higher and tertiary education. This goal also aims to facilitate the contribution of higher education to poverty reduction, enhancing partnerships for development and promoting gender empowerment.
- **Strengthening life skills education, including education about HIV and AIDS**
By the turn of the 21st century Zimbabwe was one of the sub-Saharan countries ravaged by the high prevalence of HIV infections and related deaths. In a bid to reverse the impact of this epidemic the ministry placed high priority on ensuring that tertiary education plays a critical role in teaching and imparting life skills, especially relating to HIV and AIDS. This is in line with the MDGs and the national policy goal of combating HIV, AIDS, malaria and other diseases, and will be achieved through offering training in prevention, care and support.
- **Promoting regional and international co-operation by intensifying the implementation of the SADC Protocol on Education and Training and seeking the transformation of education in the region**
As a signatory to the SADC Protocol on Education and Training, the ministry fully subscribes to the mandate of this protocol. Hence the ministry seeks to put all necessary means in place for the promotion of an integrated region, a harmonised system of education, an education management information system (EMIS), a common quality assurance approach, and an effective open distance learning system in the region.
At the core of these goals is the issue of promoting sustainable economic development, reducing poverty and meeting the basic socio-economic needs of the people of Zimbabwe as reflected in the MDGs and the National Vision 2020. In order to monitor the progress of these goals, the ministry has put in place a number of mechanisms, including:
 - departmental and institutional performance agreements and individual work plans;
 - monthly, quarterly, and annual reports by departments and institutions; and
 - audit reports.

Size and shape of higher education

Higher education in Zimbabwe has expanded significantly in the last two decades. There has been an increase in the number of public and private higher education institutions and in the number of students enrolled in post-secondary institutions. There are nine public institutions, which account for about 77 per cent of all higher education enrolments, with private institutions accounting for about 23 per cent. The data from the ministry does not make reference to the existence of technical institutions.

The main private universities, Solusi University and Africa University, were the first two privately-owned universities in Zimbabwe. Most private higher education in Zimbabwe is funded by religious organisations. Solusi University is funded by the Seventh Day Adventist Church, and Africa University is funded by the United Methodist Church. In recent years other religious organisations have joined the trend, for example the Catholic University which is associated with the Roman Catholic Church, Zimbabwe Ezekiel Guti University which is affiliated to the Zimbabwe Assemblies of God Africa (ZAOGA), and the Reformed Church University which is linked to the Dutch Reformed Church.

At the public institutions listed in Table 1 below, it can be observed that the majority of students are male. The majority of enrolments are in business, management and law, followed by the humanities. Among the major fields of study agriculture has the lowest enrolment. Although the science, engineering and technology (SET) fields have a relatively high level of enrolment, more needs to be done if higher education is to produce the human capital needed to meet the demands of the knowledge economy.

Table 1: Distribution of enrolments in public universities by field of study and gender*

Major field of study	Total number of students	Female students	Male students
Agriculture	1 822	598	1 224
Business, management and law	17 597	8 220	9 377
Education	4 820	2 457	2 363
Health sciences	2 022	888	1 134
Humanities and social sciences	10 042	5 122	4 920
Science, engineering and technology	6 567	2 541	4 783
Other	749*	166	266

Sources: SARUA university questionnaires (2011)

* A total of 317 students enrolled at the University of Zimbabwe were included in the total number of students, but data broken down by gender was not available. This explains why the total for 'other' is larger than the sum of female and male students referred to in the table.

Table 2 shows that the majority of students in the higher education sector are contact students and only a small percentage are part-time students. Another important observation from the data is the relatively small number of foreign (international and SADC) students in the higher education system in Zimbabwe.

Table 2: Student enrolment by categories

Student category	Number of students
Contact students	18 755
Distance students	11 604
Full-time students	28 878
Part-time students	2 789
National citizens	26 535
SADC country citizens	131
Other international students	3

Sources: SARUA university questionnaires (2008 and 2011)

Enrolment at the postgraduate level accounts for a very small proportion of the total enrolment in public universities in Zimbabwe. While there are more than 36 000 enrolments at undergraduate level, there are fewer than 4 000 students registered for masters degrees and fewer than 350 pursuing doctoral studies in Zimbabwean higher education institutions.

Staff profile

The higher education sector in Zimbabwe was not spared the socio-economic turmoil that engulfed the country and led to the mass exodus of professionals at the end of the 20th century. Experienced academics and researchers left Zimbabwean universities for neighbouring South Africa, Botswana and beyond due to low salaries and challenging working conditions. As a result, institutions started hiring underqualified personnel for lecturing posts. This can be seen by the data presented in the Zimbabwean data profile, where less than one-fifth of all academics have doctoral degrees (259) while academics with masters degrees (1 415) dominate the staff complement. This staff profile is bound to hamper and limit the institutional and national research output as these junior lecturers do not have adequate research skills. The Minister for Higher Education and Training has developed a turnaround policy to address this limitation by calling on all academic staff to be in possession of a doctoral qualification by 2015 (University World News 2012).

Table 3 shows the nationalities of staff members at Zimbabwean universities.

Table 3: Staffing at Zimbabwean public higher education institutions

Staffing categories	Nationality	Number of staff
Academic and research staff	National citizens	2 309
	SADC citizens	11
	Other international staff	12
Management and administrative staff	National citizens	2 201
	SADC citizens	0
	Other international staff	0

Sources: SARUA university questionnaires (2011)

One aspect from Table 3 that is important to note is the small number of staff members from other SADC countries, as well as from outside SADC. While there are a number of regional memorandums of understanding (MoUs) between Zimbabwean institutions and other higher education systems in the region, the relatively small number of foreign academics (and students) is likely to be closely related to the political and socio-economic unrest that has plagued the country in recent decades.

National higher education outputs and alignment with policy imperatives

Graduate patterns

Based on data collected from the participating universities, there is a relatively low graduation rate when compared to the enrolment figures. Table 4 provides an overview of graduation patterns by major fields of study.

Table 4: Qualifications awarded by major field of study

Major field of study	Number of qualifications awarded per level of study				
	Undergraduate	Postgraduate < Masters	Masters	Doctoral	Post-doctoral
Agriculture	571	5	47	0	0
Business, management and law	1 680	123	516	1	0
Education	277	20	72	1	0
Health sciences	219	0	32	5	0
Humanities and social sciences	1 378	27	108	4	0
SET	777	0	50	2	0
Other	309	0	1	0	0
Total	5 211	175	826	13	0

Sources: SARUA university questionnaires (2011)

From the table we see that only 5 211 undergraduate students graduated in the 2009/2010 academic year, which is less than one-fifth of all undergraduate enrolments. Consistent with enrolment patterns, more students graduate from business studies and law, followed by the humanities and social sciences. Health sciences recorded the lowest number of graduations at undergraduate level, but a significant number at doctoral level. Less than 10 per cent of all masters graduates move on to doctoral study. This could be attributed to a significant exodus of students to foreign universities as there is limited funding for masters and doctoral studies and few experienced academics are available to supervise research. Confirmation of this can be observed from the recent higher education management information system data from South Africa, which indicate that about 694 doctoral graduates from South African universities were Zimbabwean (HEMIS 2012).

Research output

Table 5 provides a broad summary of research output over a period of three years from 2008 to 2010. However, one has to take note of the fact that neither Great Zimbabwe University nor the University of Zimbabwe (which is the oldest and one of the better-resourced public institutions in the country) provided research output data. The data available points to some increase in research output from 2008 to 2010.

Table 5: Research output*

Category of research output	2008	2009	2010
Peer-reviewed journal articles	100	116	146
Peer-reviewed books	9	17	22
Peer-reviewed book chapters	12	45	50
Patents	1	0	1

Sources: SARUA university questionnaires (2011)

* Note that this table does not accurately reflect the research output of the public higher education sector in the country due to the fact that the University of Zimbabwe and the Great Zimbabwe University did not submit data on research output for this period.

According to some of the responses given by institutions, securing funding for research has been a major challenge that limited the growth of research.

Quality assurance

As noted above, quality assurance is now taking a prominent role in Zimbabwe's higher education discourse. The establishment of the Zimbabwe Council for Higher Education (ZIMCHE), the body that regulates standards of teaching, examinations, academic qualifications and research in higher education, is a clear indication of the direction that the country is taking to ensure that the higher education system produces quality graduates who are capable of competing at an international level (Daily News 2012). In a move to raise the standards and quality of higher education in Zimbabwe, the Minister of Higher and Tertiary Education recently outlined plans for every university lecturer to be in possession of a doctoral qualification by 2015 (University World News 2012).

Issues of quality have also been reflected in responses provided by individual institutions, which report to ZIMCHE on issues of quality assurance. There are also institutional mechanisms in place to ensure that students get quality education, including:

- peer evaluation;
- departmental platforms;
- external evaluation; and
- students' evaluation of staff members and their learning experience.

Recent developments and debates in higher education

Funding has been a major issue in higher education in Zimbabwe and there have been calls by the Ministry of Finance Secretary for the private sector (including banks) to intervene by providing loans and grants to qualifying students in order for them to access tertiary education (Zimbabwe Independent 2011).

Another major concern is the need to improve the quality of academics and researchers in Zimbabwean universities. There have been some negotiations with Zimbabwean scholars, researchers and professors in the diaspora to return to Zimbabwe and take up lecturing posts in order to reduce the pressure on the few academics currently in the universities, most of whom are overloaded with undergraduate teaching and basic research (SARUA 2010). This process is being conducted by the International Labour Organisation, SARUA and the board that represents Zimbabwe public university vice-chancellors.

Although there has been an increase in the number of public higher education institutions in recent years, there is still a growing and unsatisfied demand for higher education access. The government of Zimbabwe plans to expand higher education access to meet this increasing demand, and recently pledged to open a new university in Matabeleland South (The Herald 2011a), known as Gwanda State University. The new university will be housed at Joshua Mqabuko Polytechnic College, but over time it will establish its own facilities. In another interesting turn, the construction of Lupane State University has been moving faster than expected and there are possibilities that it will be completed by November/December 2012 (The Herald 2011b).

Regionalisation

According to the Acting Chief Executive Officer of ZIMCHE, the SADC Protocol on Education and Training is considered at the national planning level, and the Ministry of Higher and Tertiary Education is responsible for overseeing the implementation of this policy. In their questionnaire responses, a number of public universities indicated that they value regionalisation. This is reflected in the number of institutions that have signed memoranda of understanding with other institutions in the region, and also in the sending of students and staff to these universities. These MoUs focus on teacher education, special education and tourism and hospitality (to mention a few). Public institutions in Zimbabwe have also shown willingness to accept students from other countries within the region as a drive to promote regionalisation (Kotecha 2008).

In pursuit of higher education opportunities, Zimbabwean students from well-off families have flocked to South African universities. In addition, the Zimbabwean government, in partnership with a number of South African universities, has agreed to send Zimbabwean students to South Africa on a presidential scholarship. Thousands of students on this scholarship travel to South Africa each year to take up studies. The presidential scholarship is awarded to top achieving high school students. As part of the agreement, the students have an obligation to return to Zimbabwe and work for the public sector for at least the same period of time as the duration of their courses.

Conclusions

The post-independence government of Zimbabwe put in place important policies to transform the racially skewed higher education system. Much attention was paid to increasing access to formal education for the majority of the population who had been deprived of this right by the colonial regime. This transformation produced a higher education system that was initially successful. However, in the last decade the higher education system and its institutions have gone from one extreme to the other. From being a regional leader in education, Zimbabwe has suffered significant setbacks in its higher education system, which has been plagued by economic and academic shortcomings and has been entangled in the political wrangles that have dominated development discourse in the country.

These setbacks notwithstanding, there have been some positive developments. The increase in the number of public and private higher education institutions, and the growing focus on quality (including the establishment of ZIMCHE), is indicative of an improving higher education system.

Nevertheless, there is much to be done. Major challenges include insufficient funding, the need for a more conducive research environment, competitive salaries and working conditions, and institutional autonomy. These conditions could encourage the return of academics currently living outside the borders of Zimbabwe.

At the level of regional collaboration, it can be concluded that Zimbabwe has an open and accommodating policy towards collaboration within the SADC region and beyond. However, due to the socio-political state in which the country has operated in the last decade, these regionalisation policies are yet to be fully translated into action.



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The 15 country profiles in *A Profile of Higher Education in Southern Africa – Volume 2: National Perspectives* provides a wealth of quantitative and qualitative data on higher education in the SADC region.

Four main observations arise from this compendium. First, there has been a tremendous demand for higher education provision in all SADC countries. Governments have responded positively to this need and this has resulted in the growth of the number of public and private institutions across the region. Second, growth in the regional higher education sector brings with it the concomitant demand for qualified and experienced staff. To deliver quality outputs, higher education institutions face a tremendous challenge in recruiting, developing and retaining capable human resources.

Third, it is encouraging to note that countries are increasingly establishing structures to assist and support the governance and quality of higher education. Finally, this volume highlights the low levels of internationalisation of universities in the SADC region. Regionalisation and collaboration between higher education institutions hold enormous potential for improving the quality of higher education.

Ultimately, well-defined and carefully implemented partnerships are expected to revitalise higher education and enable it to make the necessary contribution to the transformation of the region and to the imperatives of a knowledge society.

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