CLARIFYING FAIR VALUE ACCOUNTING CHALLENGES IN THE REPORTING OF BIOLOGICAL ASSETS IN THE PUBLIC SECTOR BY REFERRING TO ASGISA-EC

by

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Dedications

"Clarifying fair value accounting challenges in the reporting of biological assets in the Public Sector by referring to AsgiSA-EC" is dedicated to my loving husband, soul mate, best friend, supporter and the world's greatest motivator – Fanie van Biljon.

We will be judged by what we finish, not by what we start.

Anonymous

Standing together for a better rural Eastern Cape.

AsgiSA-EC motto

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Declaration

I, Marilene van Biljon, declare that **Clarifying fair value accounting challenges in the reporting of biological assets in the Public Sector by referring to AsgiSA-EC,** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of a complete list of references.

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M. van Biljon 12 October 2012

Summary

Title of dissertation

Clarifying fair value accounting challenges in the reporting of biological assets in the Public Sector by referring to AsgiSA-EC

Fair value accounting of biological assets in the public sector was introduced with the adoption of the public sector specific accounting standard, Generally Recognised Accounting Practice (GRAP) 101. The public sector currently uses different bases of accounting: public entities and municipalities must use accrual accounting and apply the principles of GRAP, while government departments report on the modified cash basis. Furthermore, public entities do not consistently apply the requirements of GRAP 101. This lack of a uniform basis of accounting has a negative effect on the comparability of financial information. This study identified the challenges facing the public sector in the application of GRAP 101, specifically regarding the fair value accounting of biological assets. The successful implementation of GRAP 101 by a public entity, AsgiSA-EC, was used as a case study to clarify the fair value accounting challenges in the reporting of biological assets in the sector.

Keywords: fair value, biological assets, agriculture, public sector, rural development, Generally Recognised Accounting Practice (GRAP), accounting basis, conversion challenges, public accountability, modified cash and accrual basis of accounting.

CHAPTER 1

INTRODUCTION

1.1 Background information

The fair value reporting of biological assets in the public sector is regulated by the standard on Generally Recognised Accounting Practice (GRAP) 101 (ASB, 2006). The requirements of GRAP 101 were not fully implemented in all spheres of government as various bases of accounting are used. The application of GRAP 101 principles at public sector level is regulated by the Accounting Standards Board (ASB), yet a review of the financial statements compiled by these entities revealed that the standard was not consistently implemented and applied by the entities. The objective of the ASB to enforce accounting standards in order to enhance the comparability, transparency and accuracy of financial information will not be achieved when the standards are not unanimously implemented in the public sector (ASB, 2004a:par 20). The challenges experienced in the public sector to determine a fair value for biological assets should be investigated, especially with the focus on the agricultural aspects of rural development as a national priority (South Africa, 2011e:19). If an industry norm is not established to account for rural development activities such as biological assets, the contribution and progress will not be measurable.

1.2 Accounting for agricultural activities

Highlighting the overall importance of agriculture, linked to food security and rural development, brings forward the importance of a study regarding the challenges that the industry faces. The growth of this vital industry should not be hindered or restricted merely because of accounting or reporting challenges experienced by the financial departments as the accounting for biological assets is a new concept in the public sector. Many great initiatives are not implemented or are aborted when the finance departments are not supporting the projects due to cash flow management, changed environments, the application of new or amended accounting standards or political decisions. Therefore fair value accounting and reporting on the agricultural

activities, which are biological assets, should be researched in order to streamline existing processes and explore workable solutions.

Accounting for farming activities, or agricultural activities as referred to in the accounting spheres, is regulated by the International Accounting Standard (IAS 41), on Agriculture. The objective of IAS 41 is to set the standard for the agricultural activities recorded in the financial records (accounting treatment) and the reporting on these activities (disclosure) (IASB, 2011e:par 1).

In terms of IAS 41 (IASB, 2011e:par 5) agricultural activity is defined as the management by an entity of the transformation of biological assets into agricultural produce. Furthermore, a biological asset is defined as a living plant or animal (IASB, 2011e:par 5). IAS 41 regulates the recognition, valuation, measurement and disclosure of all plants and animals. Crops grown, in the process of securing food, clearly fall within the definition of a biological asset and shall thus be measured, recorded, valued and disclosed in terms of the relevant standard.

1.2.1 Fair value accounting

The accounting standard on agriculture, IAS 41, requires the fair value measurements of a biological asset, at initial recognition as well as at the end of each reporting period (IASB, 2011e:par 12). In terms of IAS 41 (IASB, 2011e:par 8) fair value is regarded as the amount at which an asset could be exchanged between knowledgeable, willing parties in a standard arm's length transaction.

The International Financial Reporting Standard 13 (IFRS), *Fair value measurement*, was issued in May 2011 (IASB, 2011a). The objective of IFRS 13 is to set out a uniform framework to measure fair value. IFRS 13 is effective for annual periods beginning on or after 1 January 2013 (IASB, 2011a:par C1). Management will still need to apply assumptions and principles to determine the fair value amount of the biological assets. Accounting at fair value of a biological asset will require from the accountant to consider the condition and location of the biological asset at each reporting date (IASB, 2011e:par 9). This implies that, should costs need to be incurred to transport the biological asset to the *market* required for selling it, these costs should be taken into account when determining the fair value.

1.2.2 Public sector

The public sector consists of national government departments, provincial government departments, public entities, and local government (municipalities and their entities). Local government financial reporting is done directly to the regulatory Treasury Departments while public entities report to provincial departments which in turn report to the national departments. All spheres of government are audited by the Auditor General as per the requirements of section 188 of the Constitution and section 4 of the Public Audit Act 25 of 2004 (South Africa, 1996:section 188; South Africa, 2004:section 4).

The Public Finance Management Act (PFMA) (Act No.1 of 1999 as amended by Act No. 29 of 1999) (South Africa, 1999:par 3) was developed to regulate the activities undertaken in government spheres (at the level of national and provincial government, excluding local government). The PFMA requires the Accounting Standards Board (ASB) to determine accounting practices in terms of GRAP to guide national and provincial departments, public entities, constitutional entities, parliament and the provincial legislature. The ASB assesses the international accounting standards, as developed by the International Accounting Standards Board (IASB), in the development of the government specific required standard (South Africa, 1999:par 89).

The IASB developed the statement on Agriculture, IAS 41 (IASB, 2011e). The ASB then realised that the developed standard, IAS 41, does not address the requirements of the public sector reporting and cannot be implemented and applied as such. The ASB performed a review on IAS 41 with the approval from the IASB. Government specific standards have been developed to address the challenges faced in the public sector. Standards on Generally Recognised Accounting Practice (GRAP) have been developed, approved and phased in at government level. GRAP 101 was issued in May 2006 to guide the public sector to account for agricultural activities (ASB, 2006:par 1). The ASB and the Minister of Finance ruled that GRAP 101 be implemented and effective for financial years commencing on or after 1 April 2009 (ASB, 2009:10).

GRAP is not applied in all spheres of government. Government departments apply the modified cash basis of accounting and do not account for biological assets with a cost less than R5 000 (South Africa, 2010a:107). Public entities apply the principles of accrual accounting and need to conform to GRAP 101. All municipalities should comply with GRAP from 1 July 2012. However, reporting on biological assets in the public sector is a challenge, as no standard approach is adopted by the various spheres of government.

1.2.3 GRAP Review

The International Public Sector Accounting Standards Board (IPSASB) was established in 1997 to develop accounting standards for public sector application in the preparation of financial records and financial statements. The standards developed by the IPSASB are referred to as International Public Sector Accounting Standards (IPSAS) (IPSASB, 2011:5).

With the development of a standard to report on biological assets, a public sector specific standard to account for biological assets has not been developed by the IPSASB. In the absence of public sector guidance, the ASB developed GRAP 101 in May 2006, based on the principles of IAS 41. GRAP 101 was thus based on IAS 41 in the absence of an IPSAS to guide the accounting treatment of agricultural activities in the public sector (IPSASB, 2011:209). IPSAS 27, *Agriculture*, was only developed by the IPSASB with final approval and implemented in December 2009 with an effective date of 1 April 2011. IPSAS 27 is based on the principles and requirements detailed in IAS 41, with modifications to the terms and providing clarity for application in the public sector environment. The requirements of both IPSAS 27 and GRAP 101 were thus based on the available standard, IAS 41, with IPSAS 27 recognising the public sector specific requirements.

IPSAS 27 uses public sector specific terms such as ‘future economic benefits’ and ‘service potential’ (IAS 41: ‘future economic benefit’), ‘statements of financial performance’ (IAS 41: ‘revenue statement’), as well as ‘surplus and deficit’ (IAS 41: ‘profit or loss’) to ensure that users of the statements understand the reporting requirements. Transitional provisions have been included in IPSAS 27 to guide the public sector to develop an implementation process to adhere to the requirements of

the standards, while the biological asset disclosure when funded from government grants had to be clarified. Clarity had to be provided in the IPSAS 27 to provide exemptions to the public sector on certain biological assets held. The Eastern Cape Parks Board experienced a dilemma with the adoption of GRAP 101 as all biological assets (living plants and animals) were to be disclosed on the statement of financial position. GRAP 101 exempts animals and plants safeguarded for recreational purposes from the definition of agricultural activities (ASB, 2006:par10). The fauna and flora conserved by the Eastern Cape Parks Board do not need to be accounted for as biological assets. The entity's board of directors required the entity to disclose the quantities of controlled fauna and flora on the financial statements. The entity could not physically perform an exercise to count each plant and animal, while valuation techniques and values had to be attached to the animals earmarked for sale (ECPB, 2009:92).

As IPSAS 27 provides public sector specific guidance on the accounting treatment of agricultural activities and biological assets, the principles of IPSAS 27 were applied by the ASB and a revision process of GRAP 101 was initiated. Exposure Draft (ED) 89 (ASB, 2011a:4) was issued by the ASB in July 2011 to incorporate the changes and clarity provided in IPSAS 27 into the approved GRAP 101. When the commenting and revision process is finalised the standard on agriculture will be assigned a new number and be referred to as GRAP 27 (ASB, 2011a:5).

1.3 The problem statement

After analysing financial statements prepared in the public sector, it was found that there is no uniform application of the accounting standards for reporting on biological assets. GRAP 101 has not been implemented on adoption as a uniform basis of accounting to account for biological assets in the public sector. The challenges facing the public sector in the application of the fair value accounting of biological assets and agricultural activities as well as the reporting thereof should be investigated to determine the reasons for not implementing the requirements set in GRAP 101. Currently the financial information cannot be consolidated or compared because they are not prepared on a uniform basis (cash basis vs accrual basis).

1.4 The purpose and objectives of the study

The purpose of this study is to detail the challenges experienced in the public sector with the fair value reporting of biological assets. The study will aim to provide guidelines to the public sector with the implementation of the GRAP standard on biological assets, the methods available and applied, and the fair value reporting of biological assets in the public sector.

Fair value accounting in the public sector in South Africa is a relatively new concept. To analyse the challenges of fair value accounting for biological assets, the specific objectives of the study include:

- Identifying the conversion challenges experienced with the first time adoption of fair value accounting in the public sector. Financial reporting by government departments in the public sector is done on a modified cash basis while public entities apply the accrual basis of accounting. Alignment between the modified cash basis and the accrual basis of accounting needs to be established.
- Establishing the impact of fair value accounting on biological assets and agricultural activities in the public sector. The focus on agricultural processes in the national priorities to secure food and enhance rural development refocused priorities on government entities and departments to get involved in agricultural processes and thus report on such activities.
- Reviewing the impact of the fair value accounting on biological assets on the budgetary procedures in the public sector. The legislative frameworks prohibit any government department or the public sector from reflecting deficits on the Statements of Financial Performance, while the fair value adjustments on biological assets impacts on this statement.
- Identifying the reporting standards and related requirements of the public sector in terms of legislative frameworks and establishing the impact of fair value accounting on biological assets thereon.
- Establishing an alignment between the fair valuing of biological assets in the public sector and the private sector.
- Identify the available methods that are applied for the fair value reporting of biological assets in the public sector.

1.5 Importance of the study

Fair value accounting in the public sector is a relative new concept in South Africa. Research studies on the implementation of GRAP standards in South Africa are limited. Research studies on the international equivalent of the GRAP standards, IPSAS, are also limited as the international standard regulating fair value accounting of biological assets, IPSAS 27, only has an effective date of 1 April 2011. A study undertaken by the Institute of Chartered Accountants of Scotland (Elad & Herbohn, 2011:94) details the inconsistent valuation methods applied in the private sector equivalent standard, IAS 41. Implementation of the standards of GRAP in general, but specifically GRAP 101, regulating the fair value accounting for biological assets in the public sector, is important to ensure its uniform disclosure in the financial statements by all spheres of government. The application of the standards of GRAP 101 and the fair value accounting of biological assets in the public sector is a challenging issue, especially as commercial market forces are not fully present and the disclosure may have a material effect on food security, especially in the rural areas. The National Priorities of South Africa includes the development of rural areas and enhancing food security yet an industry standard was not adopted to account for the achievement of these priorities. This study might make a contribution to suggest improvements to the reporting of biological assets at a fair value in the public sector in the application of the requirements of GRAP 101.

1.6 Research methodology

GRAP and related standards will be thoroughly studied to get an understanding of the requirements and reasons why a separate accounting standard was developed to account for biological assets and how this standard was adapted to address the unique reporting requirements of a public sector entity. A content analysis will be performed on the financial statements and supporting financial documentation of the Accelerated and Shared Growth Initiative South Africa (Pty) Ltd (AsgiSA-EC), a public entity reporting in terms of GRAP 101 on biological assets in the public sector. The content analysis will assist to establish the methods applied to account for biological assets and the challenges experienced in the fair value reporting of the biological assets. The development in the fair value reporting procedures and techniques with accompanied challenges researched by other academics will be

investigated to determine whether any possible guidance is available to address the challenges experienced in the public sector. The study will focus on the implementation of GRAP 101 and the reporting in terms of the standard by the AsgiSA-EC.

1.7 Structure of study

The remainder of this dissertation will be organised as follows:

Chapter 2

Conceptualisation of the issues impacting on the fair value of biological assets

This chapter will conceptualise the importance of food security and the related agricultural procedures that warrants the fair value reporting of biological assets in the public sector. The importance of food security in government currently places more emphasis on the fair value reporting on biological assets in the public sector as public entities and government departments are prioritising agricultural activities to achieve the goal of securing food for the citizens of the country. Similar academic studies performed on the fair value accounting and reporting on biological assets will be assessed to seek guidance on the challenges experienced in the public sector to account for and report on biological assets at a fair value.

Chapter 3

Reporting of biological assets

Chapter 3 will analyse the accounting treatment of biological assets and will provide an overview of the financial reporting in the public sector as detailed in GRAP 101. Definitions applied in the fair value accounting of biological assets in the public and private sectors will be compared. The similarities and differences between the different reporting standards (IAS and GRAP) will be set out to provide an understanding of the GRAP standards applied in this study. GRAP 101, ED 89, IAS 41, the proposed GRAP 27 and fair value accounting will form the pillars of this investigation.

Chapter 4

Research design

The chapter will define the selection of the financial statements utilised in the content analysis that will be performed to identify the reporting methods and challenges experienced in the public sector. The methods applied in collating background information and supporting documents to the financial statements will be detailed.

Chapter 5

Challenges experienced in the application of fair value accounting

This chapter will discuss the accounting treatment shifts experienced in the public sector. The challenges experienced with the first time adoption of GRAP and the fair value accounting of biological assets on an accrual basis of accounting will be explored in detail. The chapter outlines the specific challenges experienced in the public sector on the fair value measurement of agricultural activities and biological assets. The financial statements of relevant public sector and private sector entities will be analysed to determine the trend set to report on the fair value accounting of biological assets.

Chapter 6

Fair value reporting aligned with statutory reporting requirements

The impact of fair value reporting on the financial statements will be detailed in Chapter 6. The legislative reporting requirements will be linked to the accounting practises and standards. The recording of transactions to account for fair valued biological assets and the disclosure thereof on the financial statements are illustrated to detail the reporting requirements.

Chapter 7

Analysis of research

A summary of the findings on the challenges and the identified gaps will be detailed to provide possible recommendations to the public sector. These recommendations will form the basis of the guidelines for the public sector to report on biological assets at a fair value.

Chapter 8

Summary and conclusion

A summary of the study will be detailed in Chapter 8, based on the challenges and recommendations derived from the study.

1.8 List of abbreviations

ASB:	Accounting Standards Board
AsgiSA-EC:	Accelerated and Shared Growth Initiative South Africa – Eastern Cape
ED:	Exposure Draft
GIS:	Geographical Information System
GRAP:	Generally Recognised Accounting Practice
IAS:	International Accounting Standard
IASB:	International Accounting Standards Board
IFAC:	International Federation of Accountants
IFRS:	International Financial Reporting Standards
IMFO:	Institute of Municipal Finance Officer
IPSAS:	International Public Sector Accounting Standard
IPSASB:	International Public Sector Accounting Standards Board
PFMA:	Public Finance Management Act 1 of 1999 (Act No.1 of 1999 as amended by Act No. 29 of 1999)
PPP:	Public Private Partnership
SAICA:	South African Institute of Chartered Accountants
SAFEX:	South African Futures Exchange
SANparks:	South African National Parks
SCOPA:	Standing Committee on Public Accounts

CHAPTER 2

CONCEPTUALISATION OF THE ISSUES IMPACTING ON THE FAIR VALUE OF BIOLOGICAL ASSETS

2.1 Introduction

As the study focuses on the challenges experienced in the fair value accounting of biological assets, the underlying concepts of agricultural activities and food security need to be analysed and understood. As a result, Chapter 2 will conceptualise the issues that impact on the fair valuing of biological assets in the public sector. In conceptualising one would "form a concept or idea" of biological assets and agricultural processes (*Oxford dictionaries,* 2012). The *Computing Dictionary* defines "conceptualising"' as: "The collection of objects, concepts and other entities that are assumed to exist in some area of interest and the relationships that hold among them. A conceptualisation is an abstract, simplified view of the world that we wish to represent" (*Computing dictionary,* 2012).

The public sector in South Africa does not have a uniform prescribed accounting standard to fair value biological assets as there are two bases of accounting being the modified cash basis and accrual basis of accounting and they apply different accounting treatments to account for biological assets. The focus on food security as part of the National Priorities of government justifies a review on the accounting principles to account for these agricultural activities. Especially in the light of the public sector that needs to deal with this priority and thus focus on food security by means of implementing agricultural processes. To account effectively for agricultural processes a uniform accounting standard is required. The lack of available guidelines to handle challenges experienced does not exempt the public sector from implementing the set strategic objectives but places it in the spotlight to implement measures to overcome the industry shortcomings.

In this chapter the importance of rural development in South Africa will be explored to highlight the importance of the implementation of the principles of GRAP 101 and the fair value reporting on these biological assets. The principles of accounting for

biological assets, the development of the accounting standards and the highlight of the importance of rural development will illustrate the importance of overcoming the reporting challenges that exist.

2.2 Conceptualising agricultural accounting and accounting principles

The accounting and reporting on activities is a tool used by management, creditors, interested investors, the general public and other users of the financial statements to analyse the operations of an entity. To illustrate the importance of accounting for biological assets the concept of accounting on agricultural activities first needs to be detailed. It is important to get a clear understanding that accurate and complete accounting methods applied to account for activities will result in reliable financial information (IASB, 2011b:par 15).

Financial reporting forms the basis on which decision-makers and users of the financial information will act (Heathcote & Human, 2008:24). A uniform accounting basis or standard is thus required to enable these decision-makers and/or users to compare financial information before acting. The financial information should empower the decision-makers/users to either confirm or predict outcomes required and is thus required to be relevant, complete and an overall fair presentation (IASB, 2011b:par 15-24).

Public accountability on government funds spent in the public sector remains a responsibility mainly dealt with through financial reporting requirements. Public accountability is regulated in the Public Finance Management Act (PFMA) (Act No. 1 of 1999 as amended by Act No. 29 of 1999) to assist in public sector financing and reporting (South Africa, 1999:par 2). The development and adoption of a uniform accounting framework will assist with public accountability and supporting the stakeholders in the analysis of financial information presented that is associated with a sound governance system. Madue (2007:306) detailed that ‘PFMA compliance in government would contribute to effective corporate governance practices’ while Roos (2009:12) highlighted that PFMA compliance will enhance accountability.

Public accountability and reporting by government is further enhanced by the requirements of the Public Audit Act 25 of 2004. The auditor general acts as the

"watchdog" of public finances by ensuring that the information presented and disclosed on the financial statements are fairly presented. As part of performance auditing, the auditor general needs to ensure that value for money is achieved in the public sector and that funds are used effectively and efficiently (Roos, 2009:43).

The accounting and reporting responsibilities of the financing department need to deal with the governance, regulatory and accounting principles of an entity. With food security and the related food production as the driving force of agriculture, IAS 41 and the related GRAP 101 is not considered to be an easy standard to interpret and apply. This is the case, especially since agronomists and farmers will not be concerned with the drafting of complex financial reports and valuations, but would require hands-on, reliable, updated, budget and cash flow information, rather than historic information.

The direct contribution to the biological assets and agricultural activities due to fair value reporting on cash flow activities will enhance the agricultural environment and assist decision-makers and the users of financial reports. As highlighted in Chapter 1 (1.2.3 GRAP review), IAS 41 on agriculture was developed by the IASB to account for agricultural activities and was developed for private sector accounting. As there was no public sector guidance available at the time, GRAP 101, an IFRS equivalent, was approved for public sector agriculture accounting.

Developing different sets of standards for the public and private sectors may seem ungrounded, especially when taking into consideration that GRAP is basically derived from IAS. There is however transactions unique to the public sector that needs to be detailed to guide the compilers of the financial information and financial statements (Maranya, 2007:24). These transactions include the payment of government grants, the transfer of assets between government entities and departments, the reallocation of heritage assets and the receiving of taxes, payment of transfers, social assistance grants and subsidised services. Government entities and departments also do not pay or account for Value Added Tax (VAT) or income taxes. These transactions make public sector accounting unique and justify the development of GRAP standards. The history of the development of IAS 41 and GRAP 101 is discussed later in this chapter. IPSAS 27 was issued by the IPSASB in December 2009 to provide a public sector tailor-made accounting standard to account for agricultural

activities. IAS 41 and GRAP 101 form the basis of IPSAS 27 to ensure a uniform reporting standard for both public and private entities (IPSASB, 2009:947).

As GRAP/IPSAS is aligned with IAS, a uniform set of accounting standards and practises can be implemented in various entities and countries. IPSAS assists the public sector to apply fair value accounting in the reporting on governmental spending (Van Schaik & Sanderson, 2008:26).

The benefits of IPSAS according to the United Nations General Assembly, which adopted IPSAS in 2006, are according to Van Schaik and Sanderson (2008:26):

- enhanced control of assets and liabilities
- reliable accrual based accounting standards due to the aligning of accounting practices
- complete and accurate non-expendable equipment records integrated with non-expendable equipment in the financial systems
- comparable financial statements due to standardised requirements and guidance
- enhanced management due to cost-comprehensive information generated

Reporting in terms of the requirements of GRAP 101 will ensure that financial statements analysed by the users of the financial information will be in a position to make informed decisions (IASB, 2011b:par 24). These financial statements will be comparable with financial results from the private sector reporting in terms of IAS 41, and those of international government entities, reporting in terms of IPSAS.

2.3 Conceptualisation of biological assets

The accounting for biological assets and the related agricultural activities on a fair value accounting model and the background to the development of such a concept forms the foundation of the accounting for biological assets. The evolving of such accounting standards to a government specific accounting standard and the importance of rural development and food security are further concepts detailed in this section of the chapter.

2.3.1 Conceptualisation: fair value accounting

In this section the concept of fair value accounting on biological assets is detailed as biological assets and the related agricultural activities have not been dealt with by the IASB prior to the drafting of IAS 41. The accounting standards applied before the adoption of the International Financial Reporting Standards (IFRS) and the related IAS standards – the replaced AC 205 statement – limited the agriculture reporting to the valuation of livestock only (*Shuttleworth*, 2002). The lack of development on the accounting for biological assets is not unique to South Africa or our public sector. A study was done by Maina on the fair value reporting challenges facing small and medium-sized entities in the agricultural sector in Kenya. Maina (2010:31) states that traditionally little attention was devoted to the accounting practices of the agricultural activities. In February 2011 the Institute of Chartered Accountants of Scotland published a study *Implementing fair value accounting in the agricultural sector* that illustrate ”harmonisation of farm accounting practices” does not exist when comparing financial information between the United Kingdom, France and Australia (Elad & Herbohn, 2011:1). Fair value accounting on biological assets is a new concept that was brought on by the development of IAS 41 and the related GRAP 101 with the actual determination of fair value remaining a subjective matter.

Munjanja (2008:18) summarised the concept of fair value accounting as “the value in use is considered to be entity specific, meaning that it cannot be expected to be a uniform base because management assumptions and expectations of the use of an asset may differ between entities”. This statement illustrates the frustration experienced by financial departments in estimating the fair value of biological assets in the absence of guidance by the standard setters during the implementation phase of the fair value accounting principles during the conversion from the AC standards to the IAS standards.

A guide on fair value accounting was not available during the implementation of the standards of IAS or GRAP whilst a definition of fair value merely related to the “amount at which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm’s length transaction” (Munjanja, 2008:11). The ASB realised that the lack of guidance of the concept of fair value accounting resulted in misunderstandings and various interpretations of fair value accounting.

IFRS 13, *Fair value measurement*, which was issued in May 2011 will guide the compilers of financial statements on the fair value accounting (IASB, 2011a:par C1).

Maina (2010:33) stated in his study that the first comprehensive agricultural accounting framework in Australia was developed with a planned effective date of 2001. The accounting principles and the reporting requirements of the framework were responsible for the difficulties experienced by the firms to establish how the required information needed to implement and how the framework had to be obtained. The framework was reviewed and amended to narrow the accounting requirements to establish a standard to specifically address the accounting treatment of the agricultural activities only with an effective date of 1 January 2005 (Maina, 2010:33).

In the United States of America agricultural accounting specific guidance was provided in the Statement of Position (SOP) 85-3, *Accounting by agricultural producers and agricultural cooperatives* from as early as 1985 (Maina, 2010:36). Maina indicates in his study that the SOP 85-3 limited the accounting guidance and principles to inventory, development costs of land, perennial crops and breeding stock only and relied on historical costs.

The limited available accounting guidance will result in reported financial information that cannot be compared or analysed seeing that a uniform basis of accounting is not available. The accounting standards developed in Kenya, the Kenya Accounting Standards, are being replaced by the standards of IFRS as the current accounting standards do not provide regulations on the accounting treatment of biological assets. The adoption of and reporting in terms of IFRS is voluntary and will thus not result in financial statements compiled on a uniform basis of accounting to enable the users thereof to compare financial information (Maina, 2010:41).

The transformation of accounting standards in the application of uniform principles on the accounting of biological assets can thus be considered to be a universal area of concern. The IASB developed a Draft Statement of Principles on agriculture in 1994, as it was recognised that issues on agricultural reporting and the possible solutions to these issues need to be documented and a standard approach adopted. An ED on the comments received was issued in July 1999 by the IASB. The ED was followed

up by questionnaires prepared and sent to agricultural entities to determine whether the fair valuing of biological assets will provide reliable information. The IASB finally approved IAS 41 in December 2000 with the purpose of providing a relevant standard of accounting for biological assets for all businesses (IASB, 2011e:par B1–B7).

Since agricultural activity and biological asset reporting was not included in the total scope of the International Accounting Standards, “producers” of agricultural products was not governed by the statement on inventory, IAS 2 (IASB, 2011c:par 3) and the natural regenerative resources such as forests was not included in the scope of IAS 16, Property, plant and equipment (IASB, 2011d:par 3). The progeny of livestock and the increase in agricultural products due to biological transformation was not regarded as revenue in terms of IAS 18. The regenerative natural resources such as forests were excluded from the definition of investment property (IAS 40). These factors all warranted a unique standard dealing with the accounting treatment of biological assets to be developed.

As the biological transformation of biological assets alter the substance of the relevant asset, it became a priority to the IASB to develop an accounting standard to enhance a uniform accounting model rather than the application of traditional country specific accounting practices (IASB, 2011e:par B1–B7). IAS 41 was developed by the IASB as, from the above detailed considerations, the initial measurement of biological assets, the recognition criteria, the subsequent measurement and financial reporting on these biological assets had to be standardised (IASB, 2011e:par B1–B7). Processing any agricultural harvested goods subsequent to the actual harvest of the biological asset have specifically been excluded from the scope of IAS 41 (IASB, 2011e:par 3) (and the related GRAP 101 – ASB, 2006:par 05) as the statement on inventory, IAS 2, handles the accounting treatment of inventories.

At the point of harvesting biological assets, these assets are either ready for sale in the current condition or will be used in the process of the production of other outputs. In both instances, the definition of inventory (IASB, 2011e:par 13) is met and the harvested agricultural product will be classified as such. The harvested goods shall be measured in terms of the requirements of IAS 2 (IASB, 2011e:par 13) as the lower of the cost of the goods or the net realisable value. As the cost of the biological asset

at the point of harvest is measured at fair value less costs to sell (IASB, 2011e:par 12), the value of the biological assets harvested (IASB, 2011e:par 13) and derecognised on the financial records will be equal to the inventory recognised .

From the analysis of the fair value accounting conceptualised, the definition of "fair value" derived for purposes of this study is: The value at which a biological asset will sell/transfer in an orderly transaction between market participants at measurement date under current market conditions. Fair value derived or estimated when the biological asset has not yet matured should consider discounting at official interest rates, maturity stages and expected market prices. GRAP 101 defines "fair value" as "the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction" (ASB, 2006:8). The challenge with the fair valuing of biological assets in the public sector lies mainly in the valuation of these assets at a non-maturity stage when management needs to apply techniques and assumptions to estimate the growth of the assets.

2.3.2 Conceptualising GRAP 101

The IPSASB is an international accounting board that customises the IAS accounting statements to deal with the financial reporting needs of government. Guidance manuals on the proposed standards are developed and inputs on the proposed standards are obtained, evaluated and where applicable, changes affected to the proposed standard. Consultation with the International Federation of Accountants (IFAC), who develops the International Financial Reporting Standards (IFRS) to ensure that the public-specific proposed standards comply with the IAS requirements is an important role of the IPSASB (Maina, 2010:57).

The developed standards of IPSAS do not have the ability to ensure the implementation and compliance with the standards. This is due to IFAC being a private federation and the IPSAS being proposed standards only. The proposed IPSAS are a general international consideration to the treatment of transactions in a government environment. IPSAS can be regarded as good practice guides on accounting in the public sector.

IPSAS were reviewed by the Accounting Standards Board (ASB). The recommended IPSAS was then modified to attend to the South African accounting requirements. The South African public sector standards, once developed and approved by the ASB, were referred to as standards of GRAP. IAS 41 was developed by the IASB with an effective implementation date of 1 January 2009. At this date a review of IAS 41 had not been performed by the IPSASB or IFAC (ASB, 2011a:4). A public sector modified accounting standard (IPSAS) on agriculture was thus not available for the ASB to consider. The absence of a developed IPSAS resulted in the ASB approving a standard of GRAP based on the requirements and guidance of IAS 41. The immediate adoption of GRAP 101 is believed to be a direct result of the implementation of IAS 41 set as 1 January 2009.

Subsequent to the implementation of GRAP 101 a review was done by the IPSASB to tailor the standard to a public sector specific standard. ED 36 was issued during March 2009 with the proposed amendments to the standard. IPSAS 27 followed in December 2009 based on the inputs received and the reviews performed on the ED (ASB, 2011a:4).

The issued IPSAS 27 warranted a review of the implemented South African equivalent, GRAP 101. A review was performed by the IPSASB and an ED 89 was issued during July 2011. The inputs and amendments will be incorporated into the ED and the revised GRAP standard on agriculture will be published as GRAP 27. Standards of GRAP are the public sector's accounting framework to account for the spending of public funds.

Reporting on agricultural activities in terms of GRAP 101 will detail the public spending and illustrate the performance of government to address rural development and food security. The public sector specific biological asset disclosure on the financial statements is a measure provided by the ASB for government to prepare financial results that can be compared to international government results as well as private sector companies. This comparison will guide and assist government in enhancing and strengthening processes to address rural development and the related priorities in South Africa.

2.3.3 Conceptualisation: rural development and food security in South Africa

Poverty and hunger are important elements of the socio-economic challenges that South Africa is faced with. The consequences of these socio-economic crises are so severe that the ruling party of South Africa prioritised rural development and land reform as a national priority (South Africa, 2011e:4). Rural development has become one of the focus areas of our everyday living. With the identification of rural development as a key priority in the national policy, citizens of South Africa face a significant challenge in handling both the developmental and the accounting challenges brought on by the programmes and interventions. Rural development is directly linked to food security whilst the accounting principles needed to record and measure the food produced is a direct application of the fair value accounting of biological assets. Rural development and food security are therefore interconnected in such a way that it cannot be set as independent objectives and should thus be achieved simultaneously.

The national priorities of the South African government, as detailed in the State of the Nation Address are the provision of education, the supply of health care, rural development and land reform, the fight against unemployment and the related poverty and the fight against crime (South Africa, 2011a:3). The Department of Agriculture, Forestry and Fisheries underwent a strategy review to assist the Department of Rural Development and Land reform, to specifically attend to the national priorities. Section 27 of the Constitution of South Africa, 1996, (the Constitution) stipulates the rights of each individual to have access to sufficient food and water (South Africa, 1996). Government established a food security strategy to align the constitutional requirements to the priorities of government and the related spending. The focus of the strategy was to ensure that the various projects and initiatives taken on by government are integrated and aligned.

Food security can only be achieved when the whole of South Africa will be able to manufacture/grow/import, retain and sustain the food that is needed to feed the entire population. Limited resources and other challenges will definitely be difficulties to face on the road to success, but should be overcome to fight hunger (Du Toit, 2011:16; Maponya, 2008:15). This national priority places pressure on financial

departments in the public sector to account for and report on the biological assets and agricultural processes at a fair value.

2.4 Summary and conclusion

Chapter 2 conceptualised the principles applicable to the public sector for the reporting of biological assets to indicate the consistency and similarities with the accounting treatment and reporting requirements applicable to the private sector. The fair value reporting of biological assets can thus not be regarded as a new or unknown field, as the correlating IAS 41 has been implemented in the private sector. Lessons learnt during the implementation of IAS 41 in the private sector and the techniques and methods developed in the private sector can thus be evaluated and referred to by the public sector for guidance on how to overcome challenges experienced in reporting on the biological assets. The reviews performed on GRAP 101 during 2011 as detailed in ED 89 align the requirements of the statement with the developments in IAS 41. The aim of the ASB to have a uniform set of accounting requirements for all compilers of financial statements will thus be achieved when GRAP standards are modified and updated to conform to the developments in the IAS standards. However it seems that the public sector will have to overcome some challenges and limitations experienced in the implementation of GRAP 101 and the fair value reporting of biological assets to avoid total non-compliance with updated standards of accounting.

The second part of the chapter conceptualised the history of the accounting on biological assets. The development of the IAS 41 statement applied in the private sector was analysed, followed by a comprehensive overview of the GRAP 101 standard. The comprehensive overview of the development of these standards clearly details the link between the standards and the reasons for tailor-made public sector accounting standards.

The agricultural accounting processes were evaluated. The focus on the accountability of agricultural reporting was detailed under the accounting principles examined. A review of the accounting treatment of biological assets in a public sector environment highlighted the importance of the standards of GRAP. Furthermore the Constitution of South Africa provides all citizens of the country with the right of

access to food. This forms the foundation of the rural development national priority and the related food security programmes. The direct link between the food security priorities and the agricultural processes required to deal with the socio-economic concerns is evident. The increased focus of government on the food security programmes will attend to rural development and ensure economical and personal growth in South Africa. The positive effects of the fight against hunger and a decrease in unemployment will contribute positively to the economy as a whole.

CHAPTER 3

REPORTING OF BIOLOGICAL ASSETS

3.1 Introduction

The increasing importance of the agricultural activities to enhance food security in the public sector, as detailed in Chapter 2, requires a comprehensive accounting standard to report on biological assets. An understanding of the principles to account for the agricultural activities can be obtained by a review of the accounting definitions and principles on agriculture. An analysis was conducted to detail the similarities and differences between the reporting standards applicable on private sector companies, IAS 41, and government entities, GRAP 101, to get an understanding of the overall fair value reporting requirements of biological assets. The fair valuing of biological assets and the related reporting thereon should not hinder the process of rural development or food security. The accounting sphere should rather seek methods to overcome the challenge experienced in the public sector to account for the agricultural activities and the related biological assets.

3.2 Definitions

The definitions detailed use the terms generally applied in the accounting of agriculture related transactions. These definitions are detailed in the accounting standards. ED 89, (ASB, 2011a:8-31) issued to revise GRAP 101, was considered in the table below. The variances between the standards have been underlined for ease of reference.

Table 1: Definition comparison between IAS 41 (IASB, 2011e:par 5) and GRAP 101 (ASB, 2006:par 07)

IAS 41	GRAP 101
Agricultural activity is the "management by an entity of the biological transformation and harvest of biological assets for sale or for conversion into agricultural produce or into additional biological assets.".	*Agricultural activity* is the "management by an entity of the biological transformation of biological assets for sale, into agricultural produce, or into additional biological assets." ED 89 has incorporated the variances identified between the two standards. It has also included a consideration that transactions in the public sector can be at *no charge or a nominal charge.*
"Agricultural produce is the harvested product of an entity's biological assets."	*"Agricultural produce* is the harvested product of an entity's biological assets*."*
"Biological transformation comprises the process of growth, degeneration, production, and procreation that cause qualitative or quantitative changes in a biological asset."	*"Biological transformation* comprises the process of growth, degeneration, production, and procreation that cause qualitative or quantitative changes in a biological asset."
"Costs to sell are the incremental costs directly attributable to the disposal of an asset, excluding finance costs and income taxes."	Costs to sell have not been defined in GRAP 101, whilst ED 89 included the definition as: *"Costs to sell* are the incremental costs directly attributable to the disposal of an asset, excluding finance costs and income taxes. Disposal may occur through sale or through distribution at no charge or a nominal charge."

IAS 41	GRAP 101
"A *biological asset* is a living animal or plant."	"A *biological asset* is a living animal or plant."
"A *group of biological assets* is an aggregation of similar living animals or plants."	"A *group of biological assets* is an aggregation of similar living animals or plants."
"*Harvest* is the detachment of produce from a biological asset or the cessation of a biological asset's life processes."	"*Harvest* is the detachment of produce from a biological asset or the cessation of a biological asset's life processes."

Analysing the definitions applied in the public and private sector accounting records emphasises the uniform approach applied. With the exception of a consideration of transactions at no charge or minimal charge the uniform standards will enable users of financial information to successfully understand and interpret the information on hand.

Transactions at no charge or minimal charge are unique to the public sector and are regarded as government grants. As a result a standard to account for government grants had to be developed for the public sector to account for such transactions. In terms of IAS 20 local, national and international bodies and government agencies fall under the definition of *government.* When an economic benefit is provided the action is defined as *government assistance. Government grants* will be identified when resources are transferred to an entity as a result of past events or the adherence to conditions set for future activities. If the entity or organisation receiving a grant needs to purchase long-term assets with the grant funding, the transaction is regarded as a *grant related to assets* in terms of IAS 20. Grants are often in the form of premiums, subventions, assistance, subsidies or any other monetary payment received from government (IASB, 2011f:par 3).

As a result of the requirements on government grants reporting, biological assets transferred from one entity to another in a government sphere will be regarded as a government grant according to the definitions detailed above. The principles of both

IAS 20 and IAS 41 will thus need to be considered in accounting for these transactions in the financial records (IASB, 2011f:par 37). An unconditional government grant relating to a biological asset will be accounted for at its fair value less costs to sell (accounting for the asset) when the grant becomes receivable, and the related income is accounted for (accounting for the grant in the statement of financial performance) (IASB, 2011f:par 34). Conditional government grants are only recorded as income once all the terms and conditions have been complied with (IASB, 2011f:par 35).

3.3 Biological asset accounting in terms of GRAP

GRAP 101 clarifies that agricultural activities such as the herding or raising of livestock, cropping, forestry and plantations, floriculture, horticulture, aquaculture and the cultivation of orchards fall within the scope of agricultural activities (ASB, 2006:par 08). The following are the common features of these activities that classify them as agricultural (ASB, 2006:par 08; IASB, 2011e:par 6; Maina, 2010:15):

- *Capability* to change. Fauna and flora can undergo biological transformation and are thus subject to change. A maize pip can be planted to grow into maize stem from which crop is harvested, whilst a cow can produce milk to the farmer for breakfast.
- *Management of change.* Human interference in the agricultural environment in the managing, controlling or changing of light, temperature, fertility, nutrient levels and moisture, distinguish agricultural activities from other activities. The application of fertiliser, adjusting temperatures and light exposure in vegetable tunnels and breeding houses and the irrigation of plants and animals are all agricultural related activities.
- *Measurement of change.* The control of the biological transformation by management is inherent to agricultural activities. The harvesting of peppers at the various stages of the growth process of the plant will produce either cheaper green peppers or more expensive yellow peppers to management. With the human ability to control the ripeness of the plant the change is monitored. Similar measurement of change will be identified when processes relating to progeny, the weight, protein content or the fat cover are managed on livestock.

The common features detailed clarify that capability to change, management of change and the measurement of such change are aspects that need to be considered when agricultural activities are recorded. In addition to this requirement, the recognition of a biological asset will only be done when the asset is controlled due to an event of the past, the entity will benefit from economic inflows or service potential derived from the asset and when the cost or fair value of the specific asset can be measured reliably. IAS 41 does not include a consideration to any service potential that may arise from the biological asset to be recognised (ASB, 2006:par 13; Maina, 2010:54).

The public sector's unique "biological assets" will not be regarded as biological assets as GRAP 101 specifically excludes assets used in the following circumstances to be accounted for in terms of GRAP 101 on biological assets that are used for:

- educational purposes
- recreation
- any customs control
- researching of the unknown
- the educating of pupils
- any other non-agricultural or farming procedure

The revision of GRAP 101, in ED 89 (ED) (ASB, 2011a:par 10) includes these items in the classification of biological assets. In terms of ED 89 the policing animals such as horses and dogs will be regarded as an agricultural activity related to animals and will now fall into the definition of a biological asset (ASB, 2006:par 10; ASB, 2011a:par 10). Recreational parks and game farms will specifically be included in the definition of a biological asset even if their primary role is conservation and they are not held and managed for production purposes. The result is that game farms, recreational farms and policing animals will need to be accounted for as biological assets (ASB, 2011a:par 10; Maina, 2010:18).

ED 89, issued for the review of GRAP 101, will incorporate the changes and comments received to finalise the reviewed statement on Agriculture, GRAP 27. The Accounting Standards Board has indicated that the effective date of GRAP 27 will be

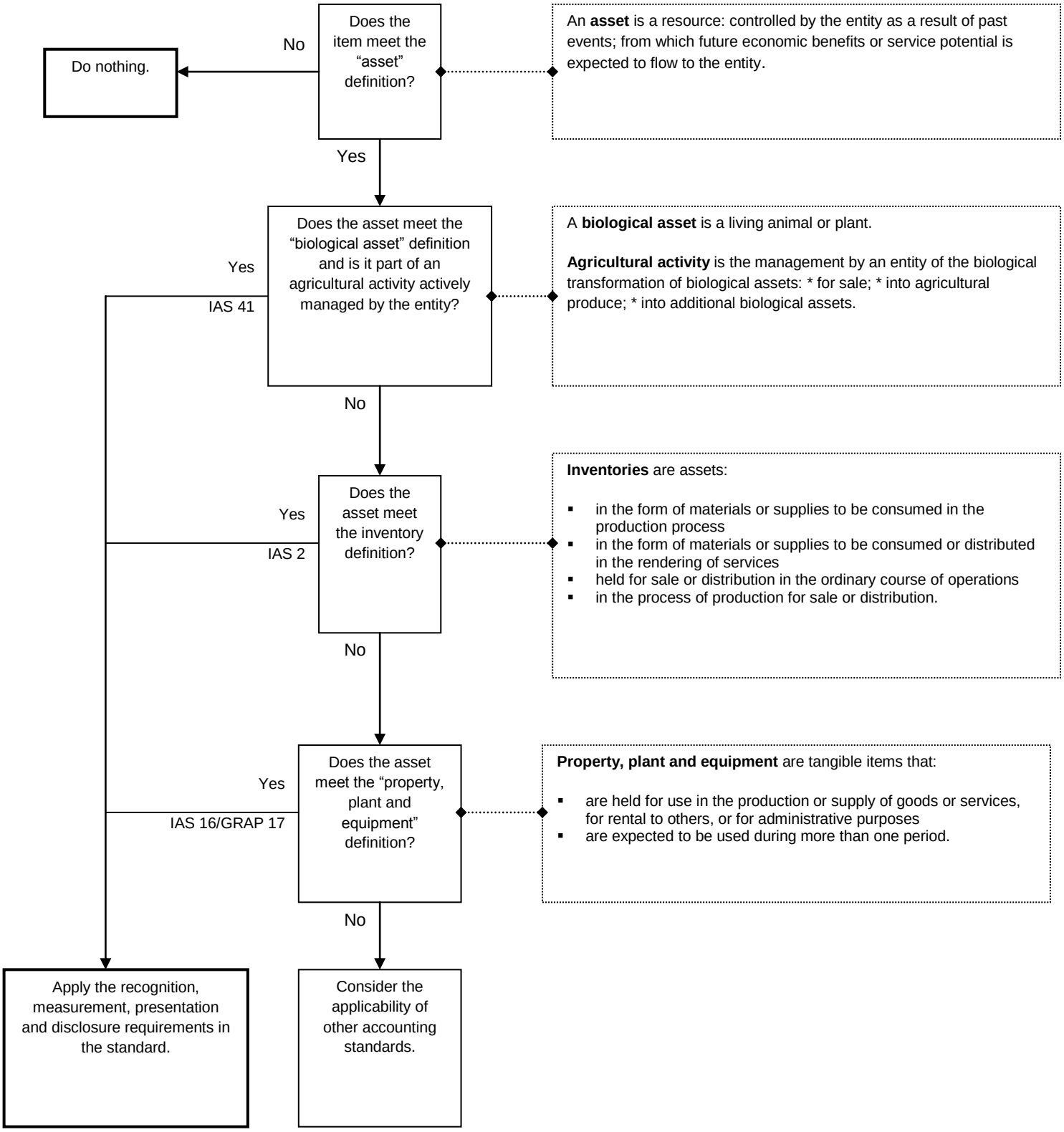
1 April 2013 (ASB, 2011a:5). As the deletion of the scope of policing animals and recreational parks or game farms is not yet effective, the current accounting treatment is done in terms of IAS 16, Property, plant and equipment, or in the public sector in terms of GRAP 17 (ASB, 2011a:par 10).

According to the definitions detailed in GRAP 17 (ASB, 2004c:par 10), "Property, Plant and Equipment are tangible items that are (a) held for use in the production or supply of goods or services, for rental to others, or for administrative purposes, and (b) are expected to be used during more than one reporting period". Policing animals meets the definition of an asset in terms of GRAP 17 as these animals are held in the supply of services (security measure/policing/serving the citizens) and will be used for more than one reporting period (more than 12 months).

Without the specific exclusion GRAP 27 (replacing GRAP 101) will require the policing animals, recreational parks and game farms to be classified as biological assets, whilst the applied GRAP 101 provides a gap for interpretation. The current disregard for the requirements of GRAP 101 and the fair valuing of biological assets, as detailed in Chapters 5 to 7, causes concern, as the public sector will require guidance on how to identify these new biological assets, how to measure these assets and how to determine a fair value on it. The inclusion of conservation areas and policing animals will require the public sector to develop methods to sufficiently disclose these biological assets at a fair value.

The decision tree detailed below, detailed in the Accounting Guide of the office of the Auditor General in May 2008, may be useful in establishing whether wildlife from either a recreational park or game farm should be classified as biological assets or property, plant and equipment under GRAP 101 (office of the Auditor General, 2008:68-70; *South Africa*, 2011k).

Figure 1: Decision tree: Classification of an asset (office of the Auditor General, 2008; *South Africa*, 2011k).



The flowchart presented in figure 1 might be useful to management in considering whether an asset meets the definition of a biological asset or property, plant and equipment. This distinction might assist management to identify the correct accounting standard of GRAP to apply to account for the asset.

3.4 IAS 41 vs GRAP 101

Section 3.2 “Definitions” analysed the definitions detailed in IAS 41 (IASB, 2011e:par 5) and GRAP 101 (ASB, 2006:par 07). The comparison indicated that apart from transactions that may occur in the public sector at nominal or no charge, the definitions applied are the same. A detailed comparison between the standards of GRAP 101 and IAS 41 was done to identify the similarities and to highlight any differences between the standards. This comparison is detailed in the Annexure A.

The comparison between GRAP 101 and IAS 41 clearly highlights that fair value reporting on agriculture in the private and public sector are based on similar requirements and principles. Variances identified between fair value reporting on agriculture, and thus biological assets, on these standards can be summarised as follows:

- IAS 41 does not address transactions on agricultural activities and biological assets at nominal value or no value. GRAP 101 specifically includes the possibility of transactions of this nature.
- GRAP 101 does not detail reporting requirements for transactions incurred from government grants as these standards of GRAP was specifically developed to deal with and already address transactions incurred in the public sector.
- GRAP 101 considers service potential whilst IAS 41 considers future economic benefits. Other terminology variances includes the reference to revenue (IAS: income) and surplus or deficit (IAS: profit or loss). The effect of these terminology variances does not have an impact on the implementation and/or application of the standards.

3.5 Summary and conclusion

In assessing the definitions detailed in IAS 41 and GRAP 101 a clear link was established between the principles applied in the fair value reporting of biological

assets in the private sector and the requirements set for the government spheres. The guidance provided in GRAP 101 to the users of the accounting standard is clear on the exclusions from the definition of biological assets to assist with the recognition, measurement and reporting of the biological assets.

The detailed comparison between the requirements of IAS 41 and GRAP 101, according to the Annexure A to this study and Chapter 3, clarified the variances and similarities between the reporting standards. The assessment identify that the differences between the standards are immaterial. The standards contain similar requirements on the identification, recognition, measurement, subsequent measurement and disclosure of the biological assets on the financial statements. This basis of understanding is important as the challenges experienced by the public entities that follows in Chapter 5, may be overcome when the methods, techniques and assumptions applied in the private sector by companies that adopted IAS 41 are applied in the government spheres.

CHAPTER 4

RESEARCH DESIGN

4.1 Introduction

The fair value reporting of biological assets in the public sector in South Africa is regulated by the requirements of GRAP 101. This standard is not implemented in all spheres of government, resulting in difficulty in comparing or consolidation that may possibly lead to misinterpretation by users. A review of the financial statements compiled in the public sector, reflecting biological assets, may detail the challenges experienced in the reporting of biological assets. These challenges could be handled by government before the departments commence with the conversion to the accrual basis of accounting and the related implementation of the requirements of GRAP. This chapter will define the research design as well as the population used in the sample group. The sample design, the methods applied to collect the information and the limitations applicable to this study will be detailed in the latter part of this chapter.

4.2 Research design

There are various research techniques available to conduct a study on the challenges of the fair value reporting of biological assets in the public sector. These include content analysis, experiments, interviews, questionnaires, surveys and statistical techniques.

Consideration was given to these research techniques to ensure that the best design is chosen for this research. It was determined that experiments cannot be performed on financial information. Furthermore, interviews, surveys and questionnaires may produce minimal or biased information as the fair value accounting processes is regarded as a specialised field which is not known to the general public. It may also be difficult to receive the feedback on the surveys and questionnaires back on time, if this research design was chosen. Statistical techniques cannot be applied in this study, as the aim of the study is to identify entities that adopted and applied a specific standard and to identify the challenges applicable to the implementation of this specific accounting standard. This study did not require an analysis of statistical

information and was not based on high volumes of data. A content analysis approach was considered to be the best fitted for this research. It provided the researcher with a standard, non-judgemental and reliable research technique that produced the data required to conduct a valid research study.

Thus, clarifying the challenges in the fair value reporting of the biological assets in the public sector by referring to AsgiSA-EC was investigated by means of content analysis of the relevant financial statements of public entities that report on biological assets. As the study had a specific focus on AsgiSA-EC, the detailed challenges experienced by this public entity will be detailed. The relevant financial statements compiled by organisations other than public sector entities were evaluated to determine how biological assets were reported on by other organisations.

Content analysis is used to identify information and/or terms and concepts and analyse the data obtained. The Colorado State University (2012) defines content analysis online as “a research tool to determine presence of certain words or concepts within texts or sets of texts” The Colorado State University (2012) indicated that the content analysis research method is very broad and can actually consist of conceptual analysis and/or relational analysis. In this study the conceptual analysis was used to identify organisations that disclosed biological assets, followed by the relational analysis on how the information is disclosed and/or derived as to identify a meaningful relationship in the data analysed (Satu & Helvi, 2007:108; Hofstee, 2010:124).

Content analysis was identified to be a technique to identify financial statements in the public sector that reported on biological assets. These financial statements were analysed to identify the methods and possible challenges experienced in the reporting of the biological assets. The content analysis approach is reliable, time efficient, unbiased and focussed. By using content analysis the study was not delayed and the outcome of the study is not based on personal preferences, opinions or subjectivity. It is unbiased. The availability of the information required to perform the content analysis and the cost effectiveness of this method had a positive impact on the research. Although content analysis is a time consuming research technique which might cause time constraints, it seemed to be the best suited for this research.

4.3 Methodology

The content analysis method established the methods applied to account for biological assets and to identify the challenges experienced in the fair value reporting thereof. The developments in the fair value reporting procedures and techniques, with accompanied challenges researched by other academics, were investigated to determine whether any possible guidance was available to address the challenges experienced in the public sector. An overview of the fair value accounting treatment of biological assets on the relevant financial statements of private sector companies assisted in evaluating the challenges experienced in the public sector to implement the requirements of fair value reporting on biological assets.

Up to the time of the research a uniform basis of accounting had not been adopted in the public sector to account for biological assets. Government departments prepare financial information on the modified cash basis of accounting where biological assets with a cost exceeding R5 000 is only recognised once the transaction has been paid in full (South Africa, 2009b:1). On the other hand public entities need to account for biological assets at a fair value in terms of the accrual basis of accounting (ASB, 2006:par 13-29), which is not done consistently.

The content analysis will reflect the entities that disclose biological assets on the financial statements. An indication of whether the requirements of GRAP 101 were met in the disclosure of the biological assets will be evident from the analysis. In identifying the challenges experienced by the entities, as detailed on the financial statements, a comparison analysis can be effective to identify similar problems experienced by other organisations.

4.3.1 Sample group

Researching the disclosure of biological assets on the financial statements of various public sector entities/departments, and the process of identifying the challenges experienced in such disclosure, requires that a number of financial statements be obtained, analysed and interpreted. The identification and collating of the financial statements are considered to be a specialised function as there are limited entities in government (the public sector) and the private sector that have biological assets

disclosed on financial statements. To identify public sector entities that may have biological assets, the PFMA was consulted for a list of public entities and departments. This annexure to the PFMA was compared to the updated list of government entities as disclosed on the websites of both the National Treasury and the office of the Auditor General to validate the obtained information and to ensure the completeness of the data to be used (Chapter 7 contains detailed information on the evaluation of the PFMA listing and the assessment of the methods adopted for the accounting of biological assets.)

The complete list of government entities was then analysed to identify all entities that may have biological assets. The professional knowledge and experience gained while working as an audit manager and later as an accountant in a government sphere was applied to identify the key operations of the entities to consider the existence of biological assets and a short list was prepared. In the shortlisting process the operations and mandate of the entities were considered to identify the key operations of the entity. Once the key operations, or reason for existence, were established the accounting policies of the entity as contained in the financial statements were considered to evaluate the operations and to establish whether the entity has or deals in biological assets.

The shortlisted entities were communicated to audit managers currently employed in the audit field to verify whether the list was considered to be complete. In addition, the report published by the office of the Auditor General published on the key outcomes of the prior year audit reports was consulted to identify problem areas or challenges experienced or identified on the disclosure of biological assets or agricultural activities. As there are limited entities reporting on biological assets the process did not identify additional entities reporting on biological assets or challenges experienced in the reporting on the biological assets. Regular follow-ups, revealing no progress, were made to track the progress on the adoption of the requirements of GRAP 101 and the reporting on the biological assets.

A total of ten (10) listed PFMA entities disclosed biological assets on the financial statements as at 31 March 2011. The financial statements of these ten entities were evaluated to determine whether GRAP 101 has been adopted and implemented to

report on the fair value of biological assets. As detailed in Chapter 7 only one of the ten entities disclosed the biological assets in terms of GRAP 101.

As the challenges experienced in the fair value reporting of biological assets should address financial information disclosed in terms of GRAP 101, a review was performed on the municipalities (local government) to identify municipalities that have converted to fair value reporting and accounting for biological assets. Chapter 5 details that, from three municipalities that have converted to fair value reporting; only one municipality manages biological assets. This municipality was however still in the phased-in approach stage of the fair value reporting on biological assets. As a result all biological assets were merely disclosed at a value of R1. The fair valuing process of the biological assets had not yet been implemented at this municipality. A review of these available financial statements reporting on biological assets might detail the challenges experienced in the application of GRAP 101. Similar studies conducted on the fair value accounting in the private sector were compared to the norms of the public sector to establish whether fair value reporting challenges experienced in the public sector are unique or whether it can be considered an overall challenge in the disclosure of fair valued biological assets.

In this study the accounting policies and additional disclosed information of the different units of analysis were compared to identify the basis of accounting and the industry norm. Strategic documentation from the various public entities was obtained while searches were done for articles, books, reports, newspaper articles, accounting journals, exposure drafts and developments in the accounting fields, technical guides and books to collect as much information and data as possible on the disclosure of biological assets at a fair value and related developments in the accounting field.

Chapter 3 details the content analysis results from the comparison of the reporting standards of the public and private sectors, which is GRAP 101 vs IAS 41. Chapter 5 details the specific challenges identified in the reporting on the biological assets from the financial statements inspected on AsgiSA-EC and other entities. The effect of these challenges on reporting is detailed in Chapter 6.

4.3.2 Data collection

From the detailed analysis of the methods applied to report on biological assets in Chapter 7, it was identified that only AsgiSA-EC disclosed biological assets in terms of the requirements of GRAP 101. With only partial application of the standard at the Eastern Cape Parks and Tourism Board the application of GRAP 101 requirements was not regarded to be sufficient at this entity. The research was done on the challenges experienced by the entity that fully adopted the fair value reporting requirements of GRAP 101, namely AsgiSA-EC. As a result, the challenges experienced by this entity since establishment in 2008 will be detailed to provide possible guidance to the public sector to establish a norm for accounting for biological assets at a fair value. A brief consideration to the challenges experienced by other public entities will conclude whether the challenges are entity specific or an industry concern.

The public sector financial statements identified to do the data collection from were AsgiSA-EC (Pty) Ltd, ECRFC, Parks Boards, SANParks, Casidra (Pty) Ltd, Sugar Beet (Pty) Ltd and the Johannesburg Metropolitan Municipality. For further analysis of the information collected of private sector financial statements were evaluated that includes Innscor Africa Limited, Nutreco, Agrimarine Holdings Inc and The Atlas South Sea Pearl Ltd that have adopted IAS 41 and disclosed the biological assets on their financial records (Innscor Africa Limited, 2010:31-84; *Nutreco*, 2010; Agrimarine Holdings Inc, 2011:1-28; Atlas South Sea Pearl Ltd, 2011:7-24).

The financial statements of the listed public entities and municipalities reflected the actual disclosure of the biological assets on the financial statements but did not allow the researcher to identify the challenges in the fair valuing or the reporting of the biological assets. Once the disclosure method and technique adopted at the entities was established further investigation was done on the actual challenges experienced in the valuation methods applied to calculate the fair values. The challenges experienced in the actual underlying valuation process can thus not only be identified by analysing financial statements but by further investigation into the methods, techniques and market trends set as these underlying issues are not disclosed on the financial statements but forms part of the management reported challenges and deviations.

In the identification and analysis of the challenges the knowledge and experience of the researcher was vital. The researcher is employed by an entity facing the challenges applicable to this study, and therefore the researcher has access to available documentation, technical support and updated information on developments in the dealing of biological assets that is vital for this research. The data (financial statements, annual reports and other management reports) that is used in this study was verified as authorised, certified and complete. All data used have been subjected to both internal and external audits and unqualified audit opinions have been obtained on all the AsgiSA-EC (Pty) Ltd documentation used in this research. Therefore the analysis of the available data produced reliable results.

4.3.3 Data analysis

The financial statements disclosing biological assets were analysed to determine whether a standard approach, accounting policy, basis of calculation and reporting standards had been implemented in the public sector. This comparative analysis revealed that there had been no standard set and that the requirements of GRAP 101 have either not been applied or where it was applied, it was not done in a consistent manner. As this study focuses on the challenges experienced in the fair value accounting of biological assets of AsgiSA-EC, it is entity specific and will detail the specific challenges experienced by this entity.

The aim of this study is to provide guidelines to the public sector with the implementation of the GRAP standard on biological assets, the methods available and applied, and the fair value reporting of biological assets in the public sector. The underlying documentation to the fair valuing of biological assets at AsgiSA-EC was studied to identify the actual challenges experienced as this information does not form part of the published financial statements or annual reports.

4.4 Limitations

The review of the challenges in the fair value reporting of biological assets in the public sector with specific reference to AsgiSA-EC might have the following limitations.

4.4.1 Technical challenges

The concept of fair value accounting is relatively new in South Africa. The introduction of the application of fair value accounting in government, via the standards of GRAP, was a consequence of the fair value accounting in the private sector. As a result, there are limited specialised individuals in the public sector that deals with fair value accounting. As detailed in section 3.3 there are limited entities with biological assets. Hence, there will be limited financial accountants in the public sector dealing with the accounting of biological assets. Therefore this research will do groundbreaking work in this regard and may be the foundation for further research.

4.4.2 Industry challenges

An analysis of the accounting standards confirmed that the requirements of IAS 41 and GRAP 101 are of a similar nature. As a result, the researcher will be able to compare the information obtained from the public sector review, to that of the private sector. With the exception of the listed companies, the information on private sector companies is of a more sensitised nature and is not published as is the requirement on public sector entities. As a result, financial information on companies that trade in biological assets are not accessible and available. The available information found on the websites of companies was used in this study while a bigger population might have revealed alternatives to deal with the challenges experienced in the public sector. An analysis of the financial statements and available company information does however not indicate the challenges experienced by the companies in the fair valuing of the biological assets.

4.5 Summary and conclusion

Content analysis was selected as the best research technique to identify entities reporting on biological assets in the public sector and to compare the reporting done thereon. The population reporting on the fair value of biological assets in the public sector was determined. As all the initial analysis units did not meet the criteria of a uniform basis of accounting, it was not possible to base this study on a comparison of challenges experienced in the industry.

In Chapter 3 the research design was discussed in depth. Information on how the data was collected, verified and analysed during the research illustrated the reliability of the findings. The limitations applicable to this study were also detailed. However, these limitations were not considered to be restrictive of the study or to impact negatively on the reliability of the study.

As the reporting on biological assets in the public sector is of a specialised nature, the study detailed the technical information on the accounting standards in Chapter 3. Definitions applied on biological assets and a comparison between the requirements of IAS 41 and GRAP 101 were done.

The challenges identified in the fair value reporting identified from the population and the measures implemented to address these challenges will be detailed. The reporting on the fair value of biological assets, the impact thereof on the financial system and the journal entries applicable to the fair valuing will be detailed in this study.

CHAPTER 5

CHALLENGES EXPERIENCED IN THE APPLICATION OF FAIR VALUE ACCOUNTING

5.1 Introduction

The government departments of South Africa apply the modified cash basis of accounting, which does not meet the scope and criteria of the standards of GRAP (IPSASB, 2003:1). Public entities in South Africa are required to adopt the accrual basis of accounting and adhere to the requirements of GRAP. In terms of section 55 of the PFMA, annual financial statements are compiled on the basis of accounting of the entity. These financial statements are subject to a statutory audit as required by the Public Audit Act 25 of 2004 by the office of the Auditor General (South Africa, 2004).

The office of the Auditor General performs statutory annual audits of the public sector and issue an audit report to detail whether the financial statements fairly represent the financial affairs of the entity. A report issued by the office of the Auditor General highlighted that a total of 225 public entities existed at 15 September 2011 (office of the Auditor General, 2010:3). Of these 225 public entities reporting in terms of GRAP, only a total of 88 entities (in 2009 there were a total of 110 entities) received unqualified audit opinions (an unqualified audit opinion is an opinion expressed by the Auditor General to state that the information disclosed on the financial statements is fairly presented and misstatements have not been identified). National Treasury updated the PFMA schedule to detail that at 30 September 2011 a total of 297 entities was listed (South Africa, 2011c:1). The accountability of public funds needs to be enhanced, especially when the listed entities are increasing. Qualified audit opinions should receive serious attention by management.

The development of GRAP and the related application of fair value accounting should be regarded as a tool to enable the public sector to compile reliable financial statements and reports. GRAP will provide a clear pathway for financial reporting in a

public entity environment. The GRAP standards, supported by the financial reporting requirements of the PFMA, formed a foundation to ensure that the public sector apply the same criteria for the recording and reporting of all financial transactions. Enhancing the accountability for public spending may provide the tools to ensure reliable financial reporting (Conradie, 2007:16). This may in turn result in public sector departments and entities receiving unqualified audit opinions.

In this part of the study the difference in the basis of accounting for departments, being the modified cash basis, and the accrual basis for accounting applied by the public entities, is highlighted. The use of the modified cash basis of accounting by a department and the accrual basis of accounting by a public entity may distort information disclosed to the users of financial statements. The adoption of GRAP 101 will be investigated to highlight the challenges that have been experienced at the public entity level, with specific reference to AsgiSA-EC. The methods applied by AsgiSA-EC to deal with these challenges will be analysed to provide possible guidance to the industry to apply fair value accounting on biological assets, as the last part of the chapter will consider whether the industry experiences challenges with the fair valuing of biological assets.

5.2 Basis of accounting

There are two bases of accounting, namely modified cash basis and the accrual basis of accounting. This section of Chapter 5 sets out the difference between these bases of accounting, providing clarity on how information from the different bases are consolidated and highlighting the benefits of accrual accounting.

5.2.1 Modified cash basis vs accrual basis of accounting

Reporting on the modified cash basis of accounting recognises transactions and events only when cash is either received or paid. Transactions incurred on debt, for example normal purchases and sales where the creditors and debtors will pay/be paid later, are not recorded in the financial records when the transactions occur. Recording is done only when the actual cash is received or paid on the credit sales and/or purchases (IPSASB, 2011:13-15). Government departments apply the

modified cash basis of accounting, while public entities are required to report on the accrual basis of accounting.

The public sector entities that report in terms of the modified cash basis of accounting will recognise a biological asset on payment. Biological assets of a value not exceeding R5 000 will not be capitalised and disclosed as an asset on the financial records. National Treasury issued a circular excluding purchases of a value lower than R5 000 from the asset listing and these purchases are directly expensed (South Africa, 2010a:107). Biological assets exceeding R5 000 are recorded on the financial records as assets with no consideration to the fair valuing principles in terms of the modified cash basis of accounting. Biological assets will thus either be disclosed as expenses or assets held at cost.

GRAP requires public entities to apply the principles of accrual accounting. The accrual basis of accounting implies that transactions are recorded as and when they occur and include both cash and credit transactions. Reporting in terms of the accrual basis of accounting will provide detailed information on the available resources and committed funds by considering credit transactions.

Biological assets accounted for in terms of the accrual basis of accounting is recognised when purchased or at delivery, whichever event occurs first. The accrual basis of accounting will reflect the biological asset as a non-current asset in the financial records when this asset is held for a period longer than 12 months. The principles of GRAP 101 will be applied to measure and disclose the biological assets on the financial statements at reporting date. As the users of financial statements need to make informed decisions on the information at hand, accrual financial statements are considered to be more reliable than those presented on the modified cash basis (IPSASB, 2011:5).

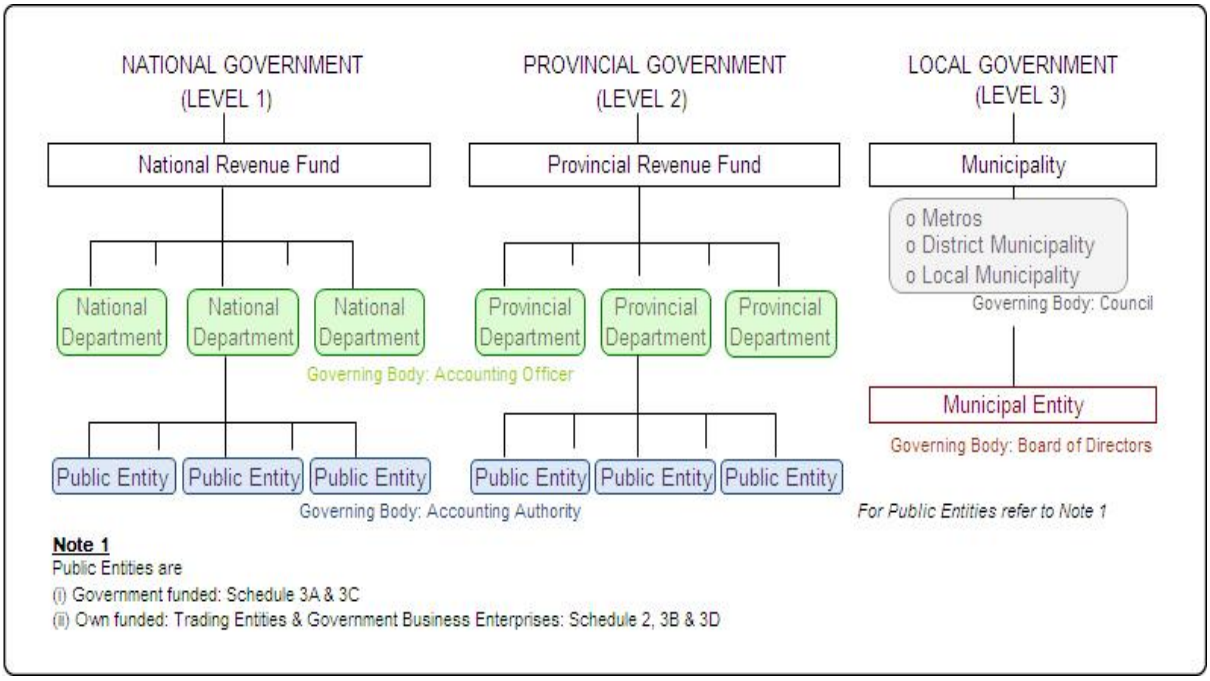
5.2.2 Integration of financial information

Annual financial statements are prepared by public entities and should be submitted to the controlling departments according to the signed memorandums of understanding. By norm this submission is a month before the submission of the

annual financial statements to the National Treasury and the office of the Auditor General, on 31 May.

The departments are responsible for compiling a set of financial statements detailing the operations of the department and a consolidated set incorporating all public entities reporting to the department. The figure below demonstrates the reporting structure in the public sector, as drafted by the South African Institute of Chartered Accountants (SAICA, 2011):

Figure 2: Public sector reporting structure (SAICA, 2011)



As indicated in figure 2, public entities report to government departments. The departments in turn, will report to either provincial or national government. Consolidation of financial information from the various public entities thus needs to be done on departmental level. Financial information compiled on different bases of accounting cannot be consolidated on a line-to-line basis. To consolidate financial results compiled on the modified cash and accrual bases, a process of elimination of accrued transactions is performed at departmental level. This process entails:

- Reverse all impairments, depreciations, fair value adjustments, valuation adjustments and impairments recorded by the public entity.
- Eliminate sales made by the public entity which has not been paid for by debtors.

- Eliminate purchases made by the public entity which has not been paid for.
- Eliminate all other non-cash transactions not already reversed.
- Analyse the payments to creditors and payments received from debtors to include the cash spending in the correct financial year.
- Eliminate the inter-governmental transactions between the department and the public entity.

The net result on the financial statements should only reflect cash transactions incurred by and with the public entity during the financial year. Additional disclosure of non-cash events are disclosed by the public entity to the controlling department in the prescribed template of the National Treasury. The cash transactions are consolidated on a line-to-line basis to disclose the overall functions, responsibilities and achievements of the department.

It has become the norm for the National Treasury to require of public entities to submit two sets of financial statements on an annual basis. The one set will be the standard GRAP compliant financial statements and an additional set submitted by means of completing templates developed by National Treasury to assist the departments in the consolidation processes. As departments need to report in terms of GRAP (Higgings, 2009:21) by 2015 it might be beneficial to have all public entities adopt the standards of GRAP as required. The benefits of reporting in terms of the accrual basis of accounting at public entity level might assist the departments in their change-over process.

5.2.3 Benefits of the accrual basis of accounting

The benefits of accrual accounting might be a tool for management to monitor and report on financial activities. Currently GRAP is prescribed for all public entities with a default application of the principles of accrual accounting. In Chapter 7 it becomes clear however that a number of public entities still report on biological assets in terms of the modified cash basis of accounting. The information disclosed on the modified cash basis of accounting is not readily comparable with the accrued/fair value reporting as prescribed by GRAP 101.

Financial reporting in terms of the accrual basis of accounting not only reflects more accurately the financial position of the public entity, but also assists the users of the financial statements to make informed decisions on where to commit resources. The following benefits of accrual accounting were identified in the study of the financial statements and the related accounting standards (IPSASB, 2011:12):

- The accrual basis of accounting provides a foundation from which the performance of the public entity can be evaluated and compared to similar public entities and the private sector.
- The efficiency and accomplishments of the public entities can be assessed when the financial position and the financial performance is detailed, with a clear comparison of financial information to demonstrate the changes in the financial position.
- Management can enhance the ability to allocate resources and commit finances with available comprehensive cash flow information.
- Accrual accounting enhances the asset and liability management of the public entity, while the funding demands for the maintenance and replacement required for assets can be planned in an efficient manner.
- Debt can be monitored and management will be accountable for financing decisions that were made.
- Assets and liabilities will be better managed as accrual accounting requires financial records to be sufficiently maintained and safeguarded. In turn, this assists in the auditing process and contributes to the possibility of an unqualified audit opinion.
- The costs of depreciation recognised on assets, the amortisation of intangible assets, impairment losses and gains and any revaluation reserves or losses detailed in the financial records enables management to monitor budgets and plan for future activities.
- Remuneration options can be compared to market trends and similar entities with the recognition of all employee-related costs and benefits on the accrual accounting process.
- Resources can be managed by the public entity when the procurement of goods and services is accounted and cost-recovery policies are put in place.

Determining the actual cost of the procurement will assist the public entity to allocate available resources whilst controlling and enhancing service delivery.

As GRAP is the current accounting standard prescribed for all public entities, and departments are to convert to GRAP by 2015 (Higgings, 2009:21), management might want to consider early adoption and/or conversion to reap the benefits of accrual accounting. Challenges to fair value biological assets during the implementation and/or conversion process might be addressed by the challenges experienced by AsgiSA-EC in the application of GRAP 101. These challenges, as detailed in the remainder of this chapter, might assist management to account for and report on biological assets at a fair value.

5.3 Background to the challenges in the implementation of GRAP by AsgiSA-EC

The Accelerated and Shared Growth Initiative of South Africa – Eastern Cape (Pty) Ltd (AsgiSA-EC) is a 100% government owned company, classified as a public entity. The shares of AsgiSA-EC are held by the Eastern Cape Rural Finance Corporation (ECRFC), a listed Schedule 3C public entity. In turn, the ECRFC is controlled by the Department of Agriculture, Forestry and Fisheries. AsgiSA-EC specialises in rural development and agrarian transformation and needs to comply with the requirements of GRAP and the PFMA.

AsgiSA-EC reports financial results in terms of the prescribed GRAP standards. The fair valuing of the biological assets of AsgiSA-EC was a challenge that management had to analyse and address in order to disclose accurate financial information and receive unqualified audit reports from the office of the Auditor General. The challenges experienced in the valuation of the biological assets are not necessarily unique in kind, but a lack of comparable public entity guidance, policies, principles and techniques challenged management to comply with the requirements of GRAP 101. In short, the challenges experienced in the fair valuing of the biological assets are:

- The absence of an active market: In the absence of markets, management needs to rely on estimates and judgements to determine the fair value of the biological assets.
- A lack of available valuation techniques: With the adoption of GRAP 101 National Treasury was not in a position to provide detailed guidance on the actual valuation process, methods and techniques that can be applied by public entities to determine the fair value of biological assets
- A lack of understanding and application of the GRAP requirements: In terms of the general definitions of GRAP 101 the term “service potential” is considered in conjunction with the “future economic benefits” which may be anticipated by a public entity to determine whether an item meets the definition of an asset.
- High costs related to the fair value accounting of biological assets: The costs associated with the determining of the fair value of biological assets are excessive, especially when an expert in the field needs to perform the valuation. Fees charged by experts, the related reviews conducted on these valuations by auditors and professionals and the actual cost to purchase the required technological devices might exceed the benefit of valuing biological assets for an entity.
- A lack of guidance and/or templates on policies or procedures that should be adopted at the entity: Section 50(1) of the PFMA requires an accounting authority (the Board) of a public entity to safeguard all assets and records of the entity and to manage the finances in the best interests of the entity.
- Unavailable templates or application of an accounting policy in terms of GRAP 101: The accounting policy on biological assets needs to comply with the requirements of GRAP 101.
- Restricted budgets and budget management reporting with fair value accounting: A budget projection detailing the expected revenues and expenditures of the entity is required by section 52 of the PFMA. The fair value accounting of biological assets at each reporting date, being year-end, may result in a fair value adjustment

These specific challenges experienced by AsgiSA-EC are detailed in the remainder of this chapter. The entity specific solutions developed and implemented at AsgiSA-EC to address these challenges that are detailed below might guide the public sector

to set an industry norm to assist public entities to implement the requirements of GRAP 101.

5.3.1 Challenge 1: The absence of an active market

In the absence of markets, management needs to rely on estimates and judgements to determine the fair value of the biological assets. GRAP 101 (ASB, 2006:par 22) provides guidance to management to calculate a fair value when active markets do not exist for the biological assets held (Maina, 2010:60). Paragraph 22 requires of management to use the most recent market information; use market prices of similar assets or to use sector benchmarks to derive a fair value for the biological assets.

The absence of active markets requires management to assess the available markets and market information and to perform a review on the economic trends and conditions from the previous reporting date to the current reporting date. Should the economy appear to have been stable during the financial period, the most recent market prices may be used in the calculation of the fair values of the biological assets (ASB, 2006:par 22; Maina, 2010:60; Munjanja, 2008:23).

Management needs to assess similar market information in instances where the biological asset is so scarce or rare that an active market has not existed during the reporting period, or where the economic trends are significant and historic information is considered to be unreliable (ASB, 2006:par 22). Information on the similarities between the biological assets identified, the valuation methods applied and the calculations are to be documented. Section 55(1) of the PFMA requires a portfolio of evidence to be maintained for all calculations, data, assumptions, market information, techniques and estimates applied by management to support the information disclosed on the financial records.

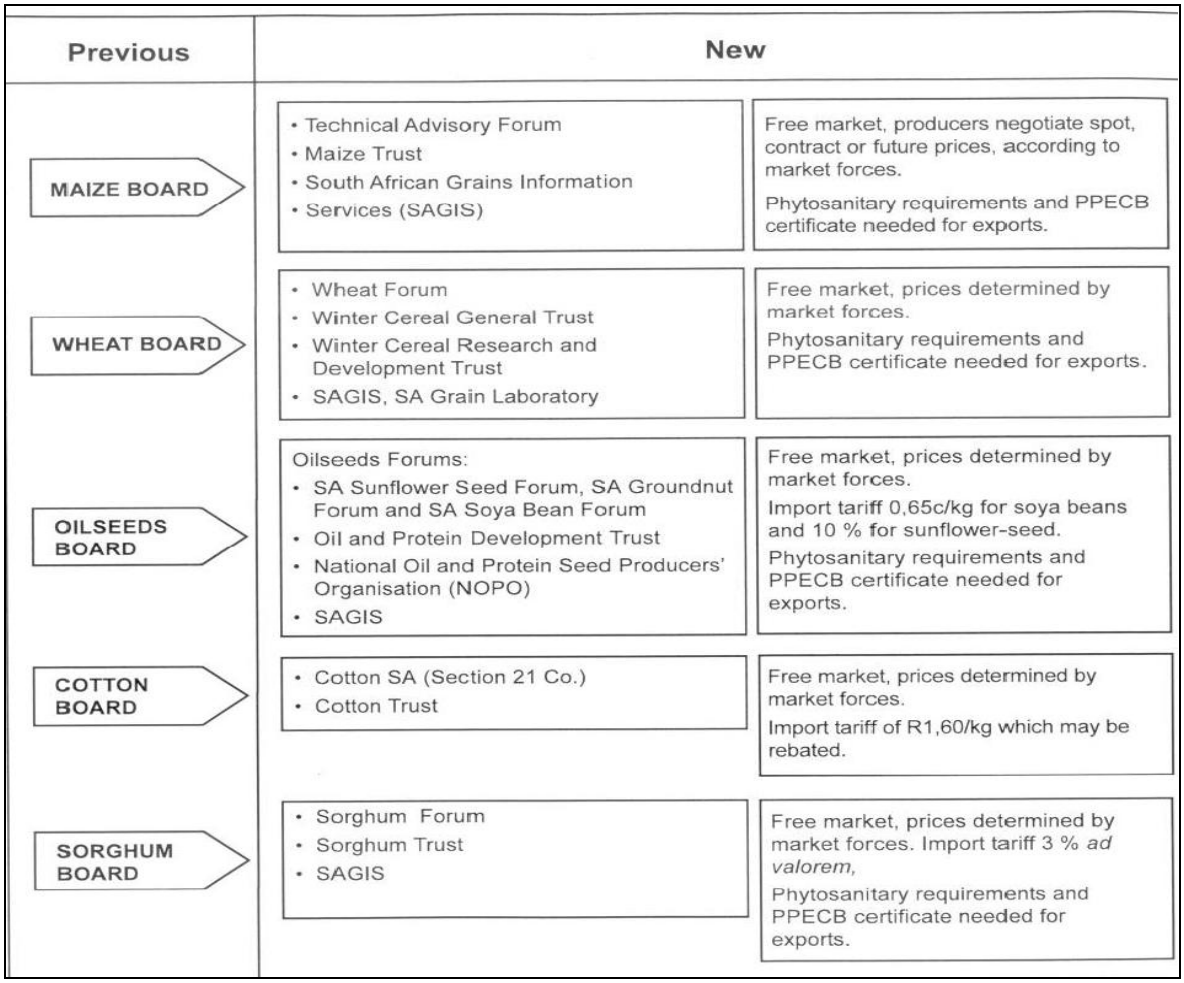
Unavailable active markets and market information may result in management deriving judgements and estimates from sector benchmarks at the reporting date. The sector information applied in the valuation should be narrated and supported by substantiating evidence of the variables and prices used in the valuation process (Maina, 2010:60). The fair valuing of biological assets in the absence of active markets may be a costly exercise in the public sector. To validate the judgements,

assumptions and estimates applied, an independent review by the internal auditors will provide guidance and recommendations in support of the overall valuation process. The internal audit report will support management during the external audit process where public accountability takes priority.

Helmut van Schweitzer regards internal audit reviews as the “conscience of the organisation” (Van Schweitzer, 2009:19) as it provides stakeholders with assurance of responsible public funds spending. In the absence of an active market it is vital that management understands the underlying factors to be considered to establish a price per biological asset. As such, consideration of the Marketing Act, SAFEX (South African Futures Exchange) and the actual tariffs applied in the price establishment need to be considered. The Marketing Act of 1937 was reintroduced in 1968 to regulate the marketing of the agricultural industry. This Act was reviewed and updated to the Marketing of Agricultural Products Act 47 of 1996. The objective of this updated Act is to enhance market efficiencies, to support the export of agricultural products, to support food security, especially at household level, and to increase the overall sustainability of agricultural activities (South Africa, 2011h:18-22). SAFEX was established as an Agricultural Market Division as a result of the strengthening of the marketing of produce. New entities have been registered to sustain agricultural activities and for food security. The factors contributing to the determination of prices of various commodities is illustrated in figure 3 (South Africa, 2011h:2).

The strengthening of the crop markets and the regulations on the crop will assist public entities and other organisations to access market information in the valuation of biological assets. The lack of an active market might however impact on the available information, thus the basis on which management needs to place a fair value on the biological assets. Figure 3 details how different stakeholders and factors impact on the determination of markets compared to the previously applied method of allowing a board to establish the markets of commodities.

Figure 3: Field crop marketing model (South Africa, 2011h:2)



Previous	New	
MAIZE BOARD	• Technical Advisory Forum • Maize Trust • South African Grains Information • Services (SAGIS)	Free market, producers negotiate spot, contract or future prices, according to market forces. Phytosanitary requirements and PPECB certificate needed for exports.
WHEAT BOARD	• Wheat Forum • Winter Cereal General Trust • Winter Cereal Research and Development Trust • SAGIS, SA Grain Laboratory	Free market, prices determined by market forces. Phytosanitary requirements and PPECB certificate needed for exports.
OILSEEDS BOARD	Oilseeds Forums: • SA Sunflower Seed Forum, SA Groundnut Forum and SA Soya Bean Forum • Oil and Protein Development Trust • National Oil and Protein Seed Producers' Organisation (NOPO) • SAGIS	Free market, prices determined by market forces. Import tariff 0,65c/kg for soya beans and 10 % for sunflower-seed. Phytosanitary requirements and PPECB certificate needed for exports.
COTTON BOARD	• Cotton SA (Section 21 Co.) • Cotton Trust	Free market, prices determined by market forces. Import tariff of R1,60/kg which may be rebated.
SORGHUM BOARD	• Sorghum Forum • Sorghum Trust • SAGIS	Free market, prices determined by market forces. Import tariff 3 % *ad valorem*, Phytosanitary requirements and PPECB certificate needed for exports.

Figure 3 illustrates how different factors and stakeholders impact on the determination of the markets of the various crops. As such, where the maize board used to determine and establish available markets, this function is now a joint effort of the Technical Advisory Forum, the Maize Trust and the South African Grains Information Services. It is thus clear that the available market information is better regularised compared to the previous methods of a board identifying available markets. Market information should thus be readily available and more accessible with the newly implemented structure. Available market information will assist management to derive at fair values of crops.

5.3.1.1 The absence of an active market as experienced by AsgiSA-EC

AsgiSA-EC experienced a challenge to place a fair value on dry beans as an active market does not exist for dry beans. AsgiSA-EC planted dry beans, soya bean and

maize in the cropping seasons. At financial year end, which is 31 March 2010 and 31 March 2011, the crop planted had to be valued and disclosed in terms of GRAP 101 on the financial statements.

Maize and soya beans are market driven crops. The valuation of these commodities can be done on the traded SAFEX prices as at financial year-end. A market for the buying and selling of dry beans does not exist in South Africa. The Dry Bean Producer's Organisation of South Africa and the trading company, Beanex (Pty) Ltd, are responsible for the price setting of dry beans in the market. The market is driven by the economical drivers of supply, demand and the related quality of the beans.

As the valuation of the dry beans at financial year-end should be based on the expected tonnages to be harvested, discounted for the growth-stage factor and the applicable interest rate and the fair value price of the commodity at year-end, adjusted for the costs to sell the dry beans, a fair value should be determined by management for the dry beans (ASB, 2006:par 15-22).

5.3.1.2 Method applied by AsgiSA-EC to deal with the absence of an active market

The absence of an active market for the dry beans required of management to assess the available markets and market information to calculate a fair value for the dry beans at year-end (ASB, 2006:par 22). The expected selling price of these dry beans, during the harvest season (June to July 2011) was calculated by the Dry Bean Producer's Organisation of South Africa based on the contracts already secured with the known expected quantities and prices (ASB, 2006:par 15-22). AsgiSA-EC was able to obtain the expected selling price per ton of dry beans from the Dry Bean Producer's Organisation of South Africa, to apply in the calculation of the fair value. The prices provided by the Dry Bean Producer's Organisation of South Africa had to be assessed by management to determine whether the prices supported the economic trends and conditions. The assumptions and reviews performed to determine a fair value for the dry beans had to be documented to support the valuation performed (AsgiSA-EC, 2010:96; AsgiSA-EC, 2011a:117).

The maize and soya beans planted by AsgiSA-EC could be valued based on the available SAFEX prices, with expected delivery in July 2011 at completion of the harvesting process. Where market information is not available and management opted to use alternative sources or market information to estimate a fair value for the biological assets, a comparison should be done to the methods and assumptions applied in the previous financial year. Management should consider the effects of changes in accounting estimates and possibly the accounting policies when unavailable market information forces management to apply a different basis for estimation from year to year.

5.3.2 Challenge 2: A lack of available valuation techniques

The Parks Board Entities in South Africa have not reached consensus on the accounting of biological assets. The Eastern Cape Parks and Tourism Agency discloses the biological assets earmarked for sale as biological assets and limited application of GRAP 101 in contrast to SANparks (South African National Parks) that do not value biological assets. SANparks detailed the following in their accounting policy; "*Recognition of fauna and flora: As part of its mission, SANParks, is responsible for managing a wide range of bio-diversity, encompassing fauna, flora, geological structures and unique scenery. The exact quantity and value of these assets cannot be measured with reliable accuracy. SANParks therefore does not reflect the value of these assets in its financial statements. Produce from any biological assets is also not recognised until sold*" (SANParks, 2010:102).

The application of different accounting principles by similar entities might be as a result of the lack of guidance from the National Treasury. Treasury provides entities with interpretation guideline publications and prescribes specific requirements regarding the financial statements of the public sector. Guidance and industry norms are however not channelled to public entities to guide the valuation process and available techniques. The estimates and assumptions applied are to be developed and reviewed by internal auditors and possibly experts, and detailed in a customised policy. Furthermore, the assumptions and techniques applied are not distributed to similar entities to set an industry norm or standard.

The lack of guidance may result in unreliable fair values when experts and internal auditors do not assist the public entity to determine a basis for the calculations. This lack of guidance does however not exempt management from applying the requirements of GRAP 101. Ignorance of the GRAP 101 requirements may result in a qualified audit opinion from the office of the Auditor General. The Board and specifically the Chief Executive Officer and Chief Financial Officer of the entity may be held personally accountable for the non-compliance by the Standing Committee on Public Accounts (SCOPA).

5.3.2.1 The lack of available valuation techniques as experienced by AsgiSA-EC

As the public entities do not apply a uniform approach to account for biological assets, guidance has not been given on how management should value these biological assets. The physical valuation process and the underlying factors that management should consider when valuing biological assets are not guided or detailed in manuals or policy documents. In addition, when crops mature on a date different from the reporting, and thus valuation date, management should consider factors such as the growth/maturity stages and discounting of market prices. AsgiSA-EC experienced a challenge on valuing biological assets at financial year-end when the biological assets will only mature later. The planting of crops, specifically soya beans, dry beans and maize, is done from October to December. Harvesting occurs once the biological transformation process has completed and the expected moisture levels have been reached, usually around June. The financial year-end is on 31 March (the middle of the agricultural year) when the plants are in a growing stage and thus not in a condition to be harvested (Asgisa-EC, 2011b:1). Management needs to consider the agricultural timeframes and growth factors in the calculations supporting the fair value determination.

The SAFEX prices, and related determined dry bean price, available for the valuation of the crop, is stated as at July on the Johannesburg Stock Exchange. The time value of money between 31 March and 31 July needs to be accounted for in the calculation of the fair value of the biological assets at year-end (ASB, 2006:par 25; AsgiSA-EC, 2011a:117; AsgiSA-EC, 2011b:1; AsgiSA-EC, 2011c:1). The lack of

guidelines and valuation techniques available to derive at a fair value for the biological assets warranted management to develop a procedure manual to detail step-by-step procedures to be followed to value the biological assets.

5.3.2.2 Method applied by AsgiSA-EC to deal with the lack of available valuation techniques

The procedure manual was developed to assist management to place a fair value on biological assets at reporting date, namely year-end. The following procedures were implemented at AsgiSA-EC to derive a fair value for the biological assets as at 31 March:

- Determine the size of the land planted

  By means of Geographical Information Systems (GIS) and the supporting software, a physical measurement of each field planted during the cropping season was done. The planted areas were plotted on the GIS to produce detailed maps. The exact number of hectares planted per commodity was calculated once all contours and geographical obstructions were accounted for. Unplanted areas and ungerminated patches of land were identified and eliminated from the planted sites. The exact planted area was thus mapped out to account for the hectares on which an expected growing crop existed.

- Confirm the commodity planted

  A verification process was undertaken whereby the projects department physically visited the project field (with the GIS specialist in the measurement of the areas planted). Management determined that during this verification phase the commodity type should be confirmed by an independent third party. Procedures have thus been established to discourage reliance placed only on management assumptions by relying on an independent verification report from an external party.

- Determine the expected yield

  At financial year-end the crops/commodities are between three and five months into the production cycle. As the biological asset is not in a condition to be sold, the valuation cannot be based on expected delivery. Management had to develop

alternative procedures to determine the actual growth stage of the biological assets. The agronomist, being a specialist in his field, visit each project field and document the condition of each land, the commodity planted and the growth stage of the field.

The yield estimation is done by locating three random sampling areas in each field. The plant population per 10m in the marked areas needs to be determined across a standard area of three rows. Measuring tapes and devices are used to ensure consistency in the procedures applied. The plants in the marked areas are counted and the number of cobs per plant is determined and documented. The population is calculated and mathematical calculations are done to extrapolate the expected cobs to be harvested on the total field. The expected yield estimate is then determined by the agronomist.

The nature of the calculations and the inherent risk of misstating the fair value of the biological assets on the financial statements warrant an independent person to attend the yield estimations. The total fair valuing depends on the completeness and accuracy of the yield estimates performed as close as possible to year-end. The independent verification of the commodity planted substantiates this step in the valuation process as the information is corroborated by an external verifier.

- Determine the fair value of the biological assets at year-end

  The crop/commodity, expected yield, hectares planted and the growth stage per field is summarised, reviewed by the projects unit and approved by the manager in charge. The inputs are checked against the inputs from the expert to ensure that the data is correct and complete.

  The SAFEX (or the dry bean price obtained according to 5.3.1) per commodity type is obtained from the JSE website. As the crop will be harvested during June and July the SAFEX price as at 1 July (mean of harvesting process) is used in the fair value calculations. This SAFEX price is discounted to 31 March at the interest rate on this day to calculate the present value of the expected SAFEX of the crop. The expected yield per commodity, per field, is discounted to reflect the growth

stage of each land as at the financial year end. The discounted SAFEX is multiplied by the growth-adjusted expected yields per commodity to reflect the fair value of the biological assets at financial year-end.

The crop on the land is not at the location where it will be sold. Costs will need to be incurred by AsgiSA-EC to transport the crop to the markets and these costs should be deducted from the discounted SAFEX price when the fair value of these biological assets is calculated. Harvesting or off-take contracts are signed in advance to assist in the determination of the transport costs to be accounted for (AsgiSA-EC, 2011a:117; AsgiSA-EC, 2011b:1; AsgiSA-EC, 2011c:1).

5.3.3 Challenge 3: A lack of understanding and application of the GRAP requirements

To meet the definition of a biological asset, GRAP 101 requires "service potential" to be considered in conjunction with the "future economic benefits" which may be anticipated by a public entity (ASB, 2006:par 13). The service potential of a public entity might refer to the ability of the entity to sign contractual agreements to sustain operations. It may also refer to the relationships between stakeholders and the ability for the entity to perform in order to deliver on predetermined objectives set by government.

"Service potential" to public entities is seldom measured in terms of a pure economic value. An entity like the Eastern Cape Parks and Tourism Agency, a listed Schedule 3C public entity, was established to act as caretakers of the fauna and flora in the nature reserves in the Eastern Cape. The agency has a responsibility towards the public to manage the fauna and flora in a manner that will conserve it for future generations. The Eastern Cape Parks and Tourism Agency may regard service potential as the ability to be allocated rare or threatened species to conserve, the ability to enter into Public Private Partnerships (PPP) to prevent poaching and possibly to be mandated to control additional parks.

Public entities should define their service potential strategies to determine how future economic benefits will be derived from the controlled biological assets. Public entities

should not disregard the recognition and accounting of biological assets merely as a result of not defining service potential abilities.

5.3.3.1 A lack of understanding and application of the GRAP requirements as experienced by AsgiSA-EC

One of the biggest challenges for AsgiSA-EC is that it does not own any land. The lands used in the agricultural production and biological transformation processes belong to the communities. Community contracts are signed between the relevant Chief of the community and the individual land owners of the patches of land. AsgiSA-EC in turns signs a contract with the Chief and the community representative for the rights to plant on the community lands. Service potential to AsgiSA-EC will not only relate to the biological transformation but also the strengthening of the relationships with the community for the future use of the lands (AsgiSA-EC, 2011a:107).

GRAP 101 does not provide guidance on the procedures or disclosure requirements of unique situations where the public entity does not own land yet plants on communal lands. GRAP 101 requires of an entity to manage the biological transformation according to the definition of *agricultural activity* (ASB, 2006:par 07) which is “to manage the biological transformation of living plants and animals into either produce or offspring/new plants.” A public entity needs to recognise, measure and account for living plants and animals that are managed as a result of their mandate, operations and predetermined objectives (AsgiSA-EC, 2011a:54-58). Furthermore, there are environmental requirements and regulations that should be considered by a projects department before the tilling and planting of a field may be done (South Africa, 1998:section 21; South Africa, 2009a:6). A feasibility study is done to determine whether the input costs to plant an identified field will be viable for food security and in turn justify the costs associated with the project. The community development and enhancement and the contribution towards job creation per village are measures to be taken into account in the planning of projects.

5.3.3.2 Method applied by AsgiSA-EC to deal with the lack of understanding and application of the GRAP requirements as experienced by AsgiSA-EC

The "service potential" criteria for AsgiSA-EC will be measured on whether the communities are willing to extend their land usage contracts. In the event of communities cancelling their contracts with AsgiSA-EC there will be no service potential for the public entity and the definition of a biological asset will need to be reassessed by management. The cancellation of these contracts with the communities might result in planted crops on the field that are derecognised as biological assets when the service potential no longer exists. Management thus needs to enhance communication processes and stakeholder relationships to limit fair value losses as a result of such service potential loss.

5.3.4 Challenge 4: High costs related to the fair value accounting of biological assets

The costs associated with the determining of the fair value of biological assets are excessive, especially when an expert needs to perform the valuation. There are specific requirements that need to be met when an expert is consulted or contracted in the valuation, for example professional membership to a recognised professional body, such as a valuer's institution, is required by the office of the Auditor General. Management needs to perform an assessment on the qualifications and experience of the valuer before contracting the individual. This review will ensure that the best valuation methods are applied in the accounting of biological assets (IRBA, 2011:637).

Management will remain responsible for the valuation process despite the use of experts. The management oversight might result in additional costs being incurred as a result of extensive feedback that the expert may be required to provide. The responsibilities of the contracted expert during the valuation process should be stipulated and agreed upon by the parties prior to the valuation. Management needs to implement measures to ensure that the work performed by the expert is objective and unbiased (IRBA, 2011:642). Management remains accountable for the information compiled and presented by the expert as such management should assess the work performed, approve and accept the valuation process and results as

prepared by the expert. The underlying valuation documentation and calculation will be subject to the statutory audit by the office of the Auditor General and management must therefore be able to provide the auditors with appropriate audit evidence that supports the valuation process (IRBA, 2011:642).

In the public sector, where discounting is not a standard practice and calculations of this nature are not performed regularly, the review of the calculations performed may be subject to an external review. An external review will result in additional costs for the public entity, which may not have been budgeted for (Van Schweitzer, 2009:19). In terms of GRAP 101, the discounted cash flow model needs to be applied to determine the fair value of the biological assets, with special consideration of the condition and location of the biological assets at financial year-end (ASB, 2006:par 25).

Costs associated with the auditing of biological asset valuations might be substantial for the public sector. In terms of paragraph 27.2 of the National Treasury Regulations and section 51(1)(a)(ii) of the PFMA, all public entities are required to have an internal audit function, either in-house or as an external appointed audit firm to the entity (South Africa, 1999:section 51). Effective and efficient controls should be derived from the internal audit processes by management when recommendations for improvements by the auditors are implemented (ISSAI, 2011a:43; ISSAI, 2011b:16). The stated legislation requires the internal audit function to perform a review of the controls on the information systems, the financial and operational information and the effectiveness of these operations, the safeguarding of the entity's assets and the compliance with the prescribed laws and regulations applicable to the entity (South Africa, 1999:section 51). The safeguarding of the biological assets held by the public entity will form part of the scope of the internal audit. Tests of control will be developed and executed by the internal auditors to assess the risks identified at the entity, the control requirements in terms of the approved policies and the procedures established.

5.3.4.1 High costs related to the fair value accounting of biological assets as experienced by AsgiSA-EC

AsgiSA-EC is a Schedule 3C public entity by default as 100% of the shares of AsgiSA-EC are held by the ECRFC, a PFMA listed Schedule 3C public entity. As a result, AsgiSA-EC is dependent on government grants to fund the operational costs of the entity. AsgiSA-EC operates from a budget determined by the government. Additional costs relating to the use of an expert, the audit procedures executed by the internal and external auditors and the implementation of additional procedures to ensure compliance with recommendations from these auditors should be in line with the budget approved by the National and Provincial Treasury Departments (South Africa, 1999:section 53; South Africa, 2005a:section 6). These additional costs required for the valuation of biological assets are excessive as experts and professionals are used, which are often not budgeted for.

5.3.4.2 Method applied by AsgiSA-EC to deal with the high costs related to the fair value accounting of biological assets

The payment of consulting costs is a challenge at any public entity. Internal and external auditors charge the prescribed SAICA (South African Institute of Chartered Accountants) hourly rates during their reviews. A small entity with limited funding experiences operational restrictions as a result of such fees. An appeal by public entities in the Eastern Cape was submitted to Provincial Treasury during February 2011 to decrease the audit budgets determined by the office of the Auditor General. At the time of publishing this study feedback or consideration has not been received.

Excessive audit fees are charged by the internal and external audit firms in the performance of audit procedures on public entities (as detailed in table 3). As the audit functions are statutory requirements a public entity does not have an option of non-payment. These significant charges limit the entity to fund the operational costs of the entity. Currently the only measure that can be applied by public entities to handle this pressing challenge is the continuous budget monitoring and the submission of an adjustment budget to re-align the voted funds between operational expenses (South Africa, 1999:section 53; South Africa, 2005a:section 6). The table below illustrates the audit fees charged at public entity level.

Table 2: Audit fees paid by AsgiSA-EC from 2009–2011 (AsgiSA-EC, 2009:73; AsgiSA-EC, 2010:111; AsgiSA-EC, 2011a:136)

Line item extract from financial statements	2009	2010	2011
Actual grant income	100 000 000	150 000 000	75 000 000
Actual operational expenses excluding finance cost and fair value adjustments	52 809 270	134 397 305	126 613 921
Total expenses relating to audit fees	1 056 276	2 616 943	1 847 484

As public entities receive limited funding from government, the audit fees need to be budgeted as part of operational activities and spending. As indicated in table 2, the total operational expenditure incurred in 2009 amounted only to R52,8 million of which a total of R1 million related to audit fees. This fee increased in 2010 to a total of R2,6 million when the operational expenditure increased to R134 million. Public entities thus need to plan carefully for the statutory audit fees and need to incorporate budgetary measures to estimate a reliable anticipated audit fee.

5.3.5 Challenge 5: A lack of guidance and/or templates on policies or procedures that should be adopted by the entity

Section 50(1) of the PFMA requires an accounting authority (the board) of a public entity to safeguard all assets and records of the entity and to manage the finances in the best interest of the entity. Furthermore, section 51 of the PFMA requires an efficient and effective financial and control system to be established and carried out (section 57) by each employee of the public entity (South Africa, 1999). Compliance with the PFMA will be dealt with as the entity develops, approves and implements policies detailing the legal requirements and the desired procedures. National Treasury developed a guide for departments detailing the policies and procedures that should be in place to ensure compliance with regulations (South Africa, 2011b:3-20). Public entities did not receive any published guide from National or Provincial Treasuries on the policies that should be in place to ensure an efficient and effective control system. Currently each public entity assesses the available guide and develops policies and procedures on the financial components applicable to the entity.

Technical Memorandum 16 of 2009 (office of the Auditor General, 2009:1), issued by the office of the Auditor General on 3 July 2009, provided guidance to departments and public entities on the treatment of biological assets on the financial records. The memorandum highlighted that the intended use of the biological asset should be considered by management to determine the standard of GRAP that should be applied on the accounting treatment. The accounting treatment guidance can assist management to compile an entity-specific internal control policy and procedure manual. The policy and related procedure manual on the biological assets should detail the requirements of the legislative requirements and those of GRAP 101. The objective of the procedure manual is to provide guidance on the identification, recognition, valuation, safeguarding, reporting and managing of the biological assets.

The lack of industry norms was highlighted when the Technical Memorandum detailed that biological assets actively managed will be reported in terms of GRAP 101, while biological assets held for recreational purposes and those held for a period longer than 12 months, in the production or supply of goods and services, will be treated as Property, Plant and Equipment (GRAP 17). GRAP 12, Inventories will be applied to the biological assets that are used in the production of goods or further biological assets. Biological assets held by a public entity for investment purposes will be treated and disclosed in terms of GRAP 16, Investment Property.

The entity-specific policy needs to address the unique circumstances of the entity and the management of its biological assets. Management will need to assess the nature of the biological assets held and the intended use of these assets. A review of the mandate of the public entity and the operational activities may be required to establish the various kinds of biological assets applicable to the entity. Detailed guidance on the biological assets needs to be included in the manuals to provide clarity to the users of financial information on the distinction of the biological assets (office of the Auditor General, 2009:1). The biological assets held by the entity are thus evaluated by management to determine the required internal controls. Detailed guidance and assistance on the application of the standards and the related controls are not available to management to ensure a uniform application of controls and accounting principles.

5.3.5.1 Lack of guidance and/or templates on policies or procedures that should be adopted at the entity as experienced by AsgiSA-EC

A policy to handle the prescriptions on how to identify, manage, report and value the biological assets held by the entity had to be developed by AsgiSA-EC. Adherence to the policy needs to be supported by a procedure manual. The procedure manual will guide the employees of the entity on the procedures that need to be performed to ensure compliance with the biological asset policy. As industry norms and guidance are not available, management had to implement practical, feasible and logical procedures that can be executed by the employees. The policies and procedure manual needs to be updated continuously to deal with weaknesses identified and enhance internal control.

5.3.5.2 Method applied by AsgiSA-EC to deal with the lack of guidance and/or templates on policies or procedures that should be adopted at the entity

The PFMA and the Treasury Regulations require management to safeguard the non-current assets. The biological assets are regarded as non-current assets in the financial records of a public entity. According to the auditors the policy and procedure manual should include guidance to specify the measures that will be undertaken to ensure that the information disclosed on the financial statements is complete, correctly classified and at the accurate fair value.

The policy needs to detail specific measures to guide the operations that result in the fair valuing at year-end. Crops planted cannot be tagged and detailed in a fixed asset register, as with livestock. Alternative measures need to be applied to ensure that the biological assets can be identified and monitored. A separate register for projects and the project fields can be maintained. On this “crop register” the size of the land, the date of tilling and planting, the type of crop planted, the growth stage at year-end and the expected yield can be documented to serve as a monitoring tool (South Africa, 2011d:33).

The monitoring of assets includes the performing of physical counts to verify the existence of the assets. To confirm the existence of crop, evidence of physical

attendance and inspections on the fields can be documented and supported by a verification signature and photographs detailing the growth stages of the crop.

The safeguarding of the biological assets, the crop, is part of monitoring of assets. AsgiSA-EC addressed this challenge by fencing the field. Fencing is an infrastructural expense, which is the responsibility of the Department of Agriculture, Forestry and Fisheries or the Department of Public Works. A public entity will not have the available funding to erect fencing on the communal lands. As an alternative measure in safeguarding the biological assets, rangers have been employed to guard the crop from trespassers and animal graze.

5.3.6 Challenge 6: Unavailable templates or application process of an accounting policy in terms of GRAP 101

Section 55(1) of the PFMA and paragraph 28.1.6 of the Treasury Regulations (South Africa, 2005b) require an accounting authority (the board of the public entity) to prepare financial statements for each financial year in terms of the standards approved by the ASB. The financial statements of an entity should include detailed accounting policies detailing the principles and methods applied in the recognition, measurement, valuation and disclosure of biological assets. The accounting policies should be based on the requirements of GRAP 101 as the ASB prescribed this standard as the basis of accounting for public entities that apply the principles of accrual accounting with departments reporting in terms of the modified cash basis (South Africa, 1999:section 89; ASB, 2006:par 02). The application of the multiple bases of accounting in public entities impaired the objective of enabling users of financial information to compare financial results of the public sector to other industries. A uniform application of the standards of GRAP at public entity level resulted in only one entity, AsgiSA-EC, applying the required principles.

5.3.6.1 Unavailable templates or application process of an accounting policy in terms of GRAP 101 as experienced by AsgiSA-EC

The accounting policy of a public entity is included in the notes to the financial statements. The accounting policy on biological assets needs to comply with the

requirements of GRAP 101. The objective of an accounting policy is to provide information to the users of the financial statements on the measurement of the biological assets that have been disclosed on the statement of financial position.

5.3.6.2 Method applied by AsgiSA-EC to deal with the challenge of unavailable templates or application process of an accounting policy in terms of GRAP 101

The accounting policy and the organisational policy of the entity should be aligned to one another and to the requirements of GRAP 101. These policies should be reviewed on an annual basis by management and the Board of Directors to ensure that legislative requirements and development are incorporated and that the accounting treatment is still relevant and applicable (South Africa, 1999:section 51).

The accounting policy should detail when biological assets are recognised and at what value. The valuation of biological assets in the absence of a market, for example the context surrounding dry beans, should be detailed. Consideration of the impairment of biological assets and the conditions warranting the derecognition of the biological assets are detailed in the policy (AsgiSA-EC, 2011a:107; AsgiSA-EC, 2010:87). The accounting policy should guide the financial department to account for and report on biological assets. In turn, this policy allows the auditors to verify the methods, techniques and assumptions applied to determine the fair value of the biological assets. The accounting policy forms the backbone of the underlying transactions in support of biological assets and should thus be compiled with due care.

5.3.7 Challenge 7: Restricted budgets and budget management reporting with fair value accounting

The fair value accounting of biological assets at each reporting date, being year-end (ASB, 2006:par 15), may result in a fair value adjustment (ASB, 2006:par 30). A fair value adjustment will occur when the fair value of the biological asset exceeds the value at which the biological asset has been recorded on the financial system. A positive fair value adjustment will result in a credit on the financial system; thus an increase in the revenue items reported on by public entities. In turn, a negative fair

value adjustment will result in a debit on the financial system, being an expense on the financial statements. The fair value adjustment on the biological assets will impact on the net surplus or deficit of the public entity.

When fair value adjustments result in a net deficit the financial information will not comply with the Treasury Regulations. Budget management of a public entity is regulated by the PFMA and the Treasury Regulations. Under no circumstances may a public entity budget for a deficit, as regulated by section 53 (3) of the PFMA (South Africa, 1999).

The entity's budget should detail the projected cash flows and anticipated revenues and expenses. There will not be any consideration for the non-cash-based fair value adjustments on the biological assets included in the entity's budget. The actual financial results of the entity will include these fair value adjustments and can result in a reported net deficit for the entity. The onus will be on management to provide management plans and documentation to the Standing Committee to substantiate the accounting deficit. Management will be able to misrepresent the financial results of the entity when a fair value profit 'hides' the actual deficit incurred for the year.

5.3.7.1 Restricted budgets and budget management reporting with fair value accounting as experienced by AsgiSA-EC

The net result of the entity is affected by the fair value adjustment by either increasing or decreasing the results. As such, the financial statements of AsgiSA-EC included a revenue item "Valuation adjustment on biological assets and agricultural produce" on the financial statements to disclose the increase in the fair value of the biological assets. These revenue items are considered to be income by the legislature and are regarded as self-generated income earned by a public entity, which is to be substantiated by management. In 2009 a total of R11,5 million was disclosed as the valuation adjustment income, in 2010 a total of R14,7 million and in 2011 a total of R4,2 million was reported (AsgiSA-EC, 2009:57; AsgiSA-EC, 2010:84; AsgiSA-EC, 2011a:104). The fair value adjustment may thus distort the financial results of the entity. The fair value adjustment on biological assets is recognised as a surplus/deficit in the statement of financial performance for the financial year (ASB,

2006:par 30-33). Management should include the valuation adjustments on the biological assets as reconciling items on the notes to the cash flow statement of the entity to reflect the actual cash disbursements and receipts generated during the financial year (ASB, 2004b:par 42). The users of the financial statements should thus consider the financial statements as a whole to interpret the financial results of the entity.

5.3.7.2 Method applied by AsgiSA-EC to deal with the restricted budgets and budget management reporting with fair value accounting

The fair value adjustments are calculated based on the results of the valuation techniques and methods applied, as detailed in Chapter 6. The fair value adjustments are journalised on the accounting system to ensure that the financial information on the system is aligned with financial reporting and the supporting documentation (AsgiSA-EC, 2011c:1). A positive fair value adjustment is recognised as “other revenue” disclosed on the statement of financial performance. This “other revenue” will increase the net result of the entity but is not supported by cash. Justification of this surplus needs to be done in the annual report of the entity as National Treasury may request the surplus to be repaid into the National Revenue Fund.

The reporting templates of National and Provincial Treasuries base the reporting information on the actual cash flows of the entity. Reporting on the actual cash flows requires a constant elimination of non-cash expenditure from the financial records to update the cash flow statements of the entity (ASB, 2004b:par 42). To overcome this challenge, the reporting to Treasury at AsgiSA-EC is done on the ordering system information that is cash based. Additional disclosure is made to Treasury on the financial system information with a reconciliation of the non-cash items between the two systems. Reporting the actual result of the entity in terms of the approved budget and addressing the requirements of the PFMA and King III is detailed in Chapter 6.

5.4 The implementation of fair valuing of biological assets in other institutions

The financial statements of other public sector entities that reports on biological assets were evaluated to determine whether the challenges experienced by the AsgiSA-EC are universal and might assist other entities to conform with the requirements of GRAP 101. The manner in which The Eastern Cape Rural Finance Corporation, Department of Agriculture (Western Cape), Eastern Cape Parks and Tourism Agency, government departments, local government and international companies disclose biological assets were considered to determine whether a trend exists and whether possible industry norms could be established to guide the public sector to apply GRAP 101.

5.4.1 Eastern Cape Rural Finance Corporation (ECRFC)

As a listed Schedule 3C public entity, the entity needs to conform to the requirements of the PFMA (South Africa, 1999:section 46). The entity compiles the financial statements on the accrual basis of accounting and in adherence with the requirements of GRAP (ECRFC, 2011:82). The ECRFC, like AsgiSA-EC, acts as an implementing agency on behalf of the Department of Agriculture, Forestry and Fisheries. The entity receives funding from the department to implement agricultural projects, like Sugar Beet RSA (Pty) Ltd (Sugar Beet).

The ECRFC does not recognise the crops grown in the Sugar Beet project as *agricultural activity* and does not recognise, value or disclose the produce as biological assets. On the statement of financial position of the ECRFC the Sugar Beet project is disclosed as an administered fund. The accounting policy of the ECRFC details that the “amounts received under service level agreements from government departments on an agency basis are recognised as a liability to the extent that the funds have not been disbursed” (ECRFC, 2011:89). A liability is created on the accounting records for the funding received with a related bank account or investment opened for the ring-fenced funds. As the ECRFC implements the project through purchasing inputs and disbursing funds, the liability is decreased (debited) with the funds utilised from the ring-fenced bank account/investment (credit). Biological assets are thus not recognised and disclosed.

The biological assets disclosed on the consolidated financial statements of the group of entities (i.e. Sugar Beet RSA (Pty) Ltd, AsgiSA-EC and the ECRFC) are understated. The administered funds from the Sugar Beet project are disclosed as a liability with the biological assets from AsgiSA-EC disclosed as current assets on the statement of financial position. Within a group of public entities a norm has not been established on the treatment of biological assets (AsgiSA-EC, 2011a:117; ECRFC, 2011:108).

5.4.2 Department of Agriculture, Western Cape

Public entities submit their financial statements to the controlling departments. The Department of Agriculture in the Western Cape owns the shares in Casidra (Pty) Ltd. Casidra (Pty) Ltd (aka Casidra) is also a listed Schedule 3D public entity specialising in agricultural and economic development in rural areas. Casidra's operations are regarded similar to that of AsgiSA-EC. The biological assets disclosed in the annual report of the Department of Agriculture, Western Cape are only for purchases in excess of R5,000 and does not include accruals or payables, i.e. modified cash basis. The accounting principles applied by the ECRFC to administer the funds have been adopted by Casidra (Casidra, 2010:4). However, the biological assets of the department are not disclosed at a fair value on the financial statements. The disclosure only relates to biological asset settled procurements (South Africa, 2010c:104).

5.4.3 Eastern Cape Parks and Tourism Agency

The conservation of fauna and flora by the Eastern Cape Parks and Tourism Agency includes the management of the various species and the physical safeguarding thereof against poachers and other unnatural elements. The safeguarded fauna and flora falls within the definition of a biological asset, being a living plant or animal, and is regarded as part of the agricultural activities of the entity as management is actively managing the species (ASB, 2006:par.10; ECPB, 2009:92).

An argument on the active management of species can be founded on the principles applied by the Eastern Cape Parks and Tourism Agency, as it should be acknowledged that the entity surely does not manage all species of fauna and flora. Naturally formed rivers pass through the nature reserves conserved by the entity. At financial year-end, or the reporting date, there may be a school of fish in a particular river, with live birds and small animals (like hyraxes) surrounding the river. Management does not actively manage this particular school of fish, the passing hyraxes or the flock of birds, at the reporting date. As a result, these animals will not be counted and a fair value will not be placed on them. They will not form part of the biological assets of the entity that needs to be disclosed on the financial records (ASB, 2006:par 10).

The Eastern Cape Parks and Tourism Agency disregards the living plants and animals that are not actively managed. An evaluation of the principles and accounting standards applied at the entity confirmed that the entity only account for, and value, the biological assets identified to be held for sale at year-end. The principles of GRAP 101 are only applied to this selected class of biological assets held in the financial statements (ECPB, 2009:100; ECPB, 2009:92).

5.4.4 Government departments

Section 5.2 of this chapter detailed that the government departments account for transactions in terms of the modified cash basis of accounting. Accrual accounting principles need to be developed for these departments as they are required to adhere to the standards of GRAP by 2015 (Higgings, 2009:21). Conversion challenges might be experienced by the government departments with the move to accrual accounting, as the financial systems in place at the departments do not support accrual accounting as it was programmed for the implemented modified cash basis of accounting principles. A restriction of available funding to implement the requirements of GRAP and the related fair value reporting may further challenge departments to find alternative and cost-effective solutions to the conversion challenges. Higgings (2009:21) furthermore indicates that another limitation that the departments might experience with the implementation of the standards of GRAP is the existence of skills shortages in the departments. Individuals employed in the

financial units may not be technically skilled and equipped to implement and apply the standards of fair value accounting.

These limitations might be minimised if management performs an early analysis of the possible challenges and concerns that the departments may need to overcome in the implementation of GRAP. This early analysis may assist management to phase in procedures to address the challenges. Currently biological asset purchases below R5 000 are expensed and not recorded in an asset register while the adoption of GRAP 101 will require identification, management and valuation of all biological assets. Procedures can be implemented to identify and record these assets on a register before the actual conversion to GRAP. The actual valuation of these biological assets will be fast-tracked when the underlying information is readily available.

5.4.5 Local government

National Treasury and the Accounting Standards Board initiated a process of developing accounting standards for municipalities to conform to fair value accounting in August 2002 (ASB, 2011c:4). These standards are referred to as Generally Accepted Municipal Accounting Practice, or GAMAP, and are based on GAAP (Generally Accepted Accounting Practice) principles. The implementation of GAMAP in the local government spheres was the first step towards fair value accounting at local government level. Subsequently GAMAP was replaced by standards of GRAP to be adopted and implemented as a uniform accounting standard throughout the public sector. National Treasury published guidelines for municipalities to adopt the standards of GAMAP and the applicable standards of GRAP (ASB, 2011b:4-7; ASB, 2011c:9). All GAMAP standards will eventually be replaced by standards of GRAP.

Eventually the mandatory GRAP/GAMAP standards that municipalities had to convert to did not include a statement on biological assets. An inspection of the financial statements of municipalities indicated that only the Johannesburg Metropolitan Municipality reported on biological assets (Johannesburg Metropolitan Municipality, 2005:62). Note 17 to the financial statements for the year ended 30 June 2005 details the biological assets as inventory. The biological assets relates to

zoo animal breeding stock managed by the municipality. The financial statements for the year ended 30 June 2009 details the breeding stock as biological assets in note 13 (Johannesburg Metropolitan Municipality, 2009:281). The animals are however recorded at a value of R1 each. A closer investigation into the methods applied by the municipality in valuing the animals at R1 each confirmed compliance with the implementation requirements set by the ASB. The guideline to the adoption of GRAP by municipalities allows municipalities a total of three years to recognise and measure biological assets (ASB, 2011b:5). The guide stipulates that the municipality needs to perform procedures to identify the biological assets. The identification is followed by the recognition of the biological assets in the financial records at a provisional amount or nil with a narrative description on the nature and quantity of these assets (ASB, 2011b:5). The initial recognition process is followed by a measurement phase where the fair values less costs to sell needs to be determined and recorded on the financial system (ASB, 2011b:5). In the records of 30 June 2010 the biological assets have been derecognised by means of a disposal (Johannesburg Metropolitan Municipality, 2010:41). The various treatments of the biological assets at the Johannesburg Metropolitan Municipality highlight the challenges experienced in the application of fair value accounting principles.

5.4.6 International companies focussing on the fair valuing of biological assets

The detailed information in Chapter 2 highlighted that the principles of GRAP 101 are based on IAS 41. IAS 41 is applied by private sector organisations around the world. As the application of the requirements of GRAP101 is similar to the requirements of IAS 41 the methods and assumptions applied in the private sector can be used as a guideline or point of reference when implementing GRAP 101.

Companies focussing on food production like Innscor and Nutreco have adopted IAS 41 and sufficiently disclosed the biological assets on the financial records (Innscor Africa Limited, 2010:65; *Nutreco*, 2010). Innscor is a company incorporated in Zimbabwe. The company produces crocodiles, cattle and pigs. Nutreco's headquarters is in the Netherlands. Nutreco aims to increase food production and manages pigs and poultry. Canadian company Agrimarine Holdings Inc specialises in the biodiversity of eggs, juveniles, smolts and fish (Agrimarine Holdings Inc,

2011:14). The Atlas South Sea Pearl Ltd conserves oysters and specialises in pearl production in Indonesia (Atlas South Sea Pearl Ltd, 2011:14). These companies have all adopted the requirements of IAS 41 and disclose their biological assets at a fair value less the estimated costs to sell these assets on the financial records. The underlying documentation to support the valuation methods applied and the policy documentation developed by management is not accessible to determine whether the challenges experienced by AsgiSA-EC were experienced by these entities in the adoption of fair value principles. Chapter 7 details the results of a study undertaken by the Institute of Chartered Accountants in Scotland where Elad and Herbohn (2011) evaluated the implementation of IAS 41 in Austria, the United Kingdom and France by 103 entities. The fair values of biological assets could not be compared as various valuation methods were applied to derive at a value for the biological assets. These methods included (Elad & Herbohn, 2011:94):

(a) net present value
(b) the historic cost method
(c) the fair value method
(d) the independent valuations
(e) the market prices of similar assets
(f) the recent market prices
(g) the lower of cost or net realisable values.

The adoption of IAS 41 and the related fair value disclosure of biological assets by companies in various countries promote comparability of the performance and position of the biological assets of the various companies. Analytical reviews can be performed on the information disclosed by the various companies to study market trends, sector performance and for the enhancement of management processes in the management accounting and budgetary forecasts.

As the principles of IPSAS 27, the government specific international standard, is based on the principles of IAS 41, entities that report in terms of IPSAS 27 can be compared with those reporting in terms of IAS 41. Organisations have a choice of applying the principles of either the cash basis or accrual basis of accounting. The requirements of IPSAS 27 are only applicable to organisations applying accrual accounting. As detailed in Chapter 7, IPSAS 27 is not widely adopted in Asian countries as the modified cash basis of accounting is still applied. The adoption of

IPSAS 27 internationally and GRAP 101 by government entities will ensure that the financial information disclosed by private sector companies can be compared to government performance. The uniform standard will assist management to assess the performance of the private sector companies to enhance, strengthen and broaden initiatives taken by government to have effective and efficient systems monitoring and reporting on biological assets. The implementation of enhanced systems will focus management's efforts and attention to the developing of techniques and methods to focus on the core business, being food production and the related fight against hunger and poverty.

5.5 Summary and conclusion

Chapter 5 detailed the challenges in the fair valuing of biological assets that exist in the public sector in the South African context. Public entities need to compile financial statements in terms of the accrual basis of accounting. As these financial statements are consolidated by the governing department based on the modified cash basis of accounting, there is a risk of misrepresentation of the financial information. The accounting treatment of biological assets in terms of the different bases of accounting was detailed in the second part of this chapter. The benefits of accrual accounting were detailed and the integration of the information on the different bases of accounting was highlighted.

The third part of the chapter described the specific challenges that were experienced in the adoption of GRAP 101 and the related fair value accounting of the biological assets by AsgiSA-EC. The methods developed by AsgiSA-EC to overcome the challenges experienced have been detailed. The accounting treatment of biological assets in the public sector remains a challenge to the public entities as a uniform approach has not been applied. In the last part of Chapter 5 a review was done on the financial statements of relevant public entities, government departments, local government and international companies. It is clear that an industry norm was not established and that guidance is required in the adoption of the principles of GRAP 101.

This chapter revealed that the requirements of GRAP 101 in the public entities are not implemented and complied with on a uniform basis. It appears that management

of a public entity can use their discretion to either implement the requirements of GRAP 101 and account for the biological assets as required by the ASB, or merely document the judgements and principles applied at the public entity to treat the biological assets in terms of another standard of GRAP. As the biological assets with a cost not exceeding R5 000 is not recognised by a department, but expensed only when the transaction is paid for, the financial records of a department cannot be regarded as complete or a true reflection of the actual state of affairs thereof. Consolidated financial information that is compiled by departments cannot be regarded as a fair representation of the financial affairs of government when different bases of accounting are applied by the subsidiaries of the departments. It is evident that there is a gap in the financial reporting procedures of government on the overall reporting of financial affairs and especially the reporting on the fair value of the biological assets. Government is faced with significant challenges to overcome in order to address deal with the basic principles of accounting and the ultimate objective of financial statements: to fairly reflect the accurate, complete and correctly classified financial affairs of the entity at a given date. The public sector thus faces a challenge to set an industry norm to account for biological assets at a fair value and to implement the principles of GRAP 101.

The solutions developed by AsgiSA-EC can assist to set the required industry norm and provide guidance to apply the principles of fair value accounting on biological assets in the public sector.

CHAPTER 6

FAIR VALUE REPORTING ALIGNED WITH STATUTORY REPORTING REQUIREMENTS

6.1 Introduction

Financial reporting standards set the foundation on which users of financial information, especially investors and creditors, base their decisions. Heathcote and Human (2008:25) state that the standards are responsible for the shift in emphasis from the financial statements to the overall financial reporting process. The principles of fair value reporting of biological assets in the public sector are regarded as the "alpha and omega" of GRAP 101, as it is the objective of this standard (Heathcote & Human, 2008:24).

The first part of this chapter will be a discussion on the fair value reporting of the biological assets on the financial statements. This discussion will include an overview of the financial transactions (journal entries) that are required to account for the fair value transactions. The disclosure requirements of GRAP 101 on the financial statements will be detailed to clarify how biological assets should be disclosed at a fair value.

The second part of Chapter 6 will detail the legislative reporting requirements of the PFMA to ensure that the fair value accounting complies with the prescribed legislation. A brief overview of King III will assist in clarifying how proper financial reporting results in good governance.

6.2 Fair value on biological assets treatment and disclosure

The underlying transactions and the related accounting entries in the financial records to the fair value of biological assets are detailed as it forms the basis of the information to be disclosed on the financial statements according to the GRAP

requirements. The detailed disclosure requirements and an illustration of how the biological assets should be disclosed on the financial statements follows.

6.2.1 Financial transaction overview

Biological assets held, managed and reported by AsgiSA-EC were found to be in compliance with the requirements of GRAP 101 as unqualified audit opinions were expressed on the financial statements for the financial years ended 31 March 2009; 31 March 2010 and 31 March 2011 (AsgiSA-EC, 2009:50-74; AsgiSA-EC, 2010:78-113; AsgiSA-EC, 2011a:97-136). Biological assets held by AsgiSA-EC are disclosed as current assets on the statement of financial position. These biological assets relate to seasonal crops (maize, soya beans and dry beans) that will be harvested, reclassified as inventory and sold within a period of 12 months.

AsgiSA-EC's biological assets are of such nature that it is not classified and recorded as biological assets on the procurement date. Physical seeds are purchased that do not meet the definition of "biological assets" according to GRAP 101 (ASB, 2006:par 07), being a living plant or animal. At procurement date the seed is regarded as an input into the "production process" and will form part of inventory according to GRAP 12 (ASB, 2004d:par 07). The accounting entries in the financial records will require an increase in inventory (debit) with a related decrease in cash (credit).

As the planted seed germinates, it will grow into a living plant. AsgiSA-EC will recognise the germinated plants as biological assets in the accounting records at the actual cost price as the definition of a biological asset is met with the crop controlled due to the procurement and physical planting of the seeds and the expectation of a successful harvest, as a service potential (ASB, 2006:par 13). GRAP 101 requires the biological assets to be valued at cost as the fair value (at this stage of growth of the germinating seeds) cannot be determined and the success rate and factor cannot be estimated or calculated. The input costs accounted as inventory at purchase date are thus reclassified as biological assets. The journal entries in support of the recognition of the biological asset will derecognise inventory (credit) and recognise the biological asset (debit). The net result on the inventory account will thus be nil when the biological assets are recognised.

The biological asset will be carried at cost until such time that the agronomist can, with reasonable assurance, estimate the germination success factors and perform yield estimations. This yield assessment will assist the agronomist to establish success factors and implement required rectifying measures. There may be a need to fertilise the lands or spray with pesticides or herbicides to enhance biological transformation. The fair value of the crop calculated on the outcome of the preliminary yield assessment is calculated but not recorded on the financial system, as the yield assessment is not done at reporting date. The increase/decrease in value between the actual input costs and the estimated fair value is not recorded on the financial system.

The fair value of the biological assets needs to be calculated and recorded at financial year-end, which is 31 March, as regulated in GRAP 101 paragraph 15. Accordingly a second yield estimate is performed during the last two weeks of March. The crop has now reached a desired growth stage exceeding 50% which allows an accurate yield assessment. The expected yield (tonnages), the anticipated selling price according to the published SAFEX prices, the discounted interest rates and the growth stages (maturity) are used to calculate the fair value of the crop on the yield assessment date. The expected economic benefits that will accrue to AsgiSA-EC during the harvesting period can thus be estimated at this point. These expectations should include consideration of estimated point-of-sale costs to derive at a fair value for the biological assets (ASB, 2006:par 15).

The “growth” of the biological asset, namely the increase/decrease from the cost to the calculated fair value is recognised in the statement of financial performance for the year. An increase in value (calculated fair value exceeds the cost price) is recognised as an increase in the biological assets (debit the biological asset account) and a related increase in revenue (credit the fair value adjustment account). A decrease in the value (calculated fair value is less than the cost price) will lower the value of the biological assets (credit the biological asset account) when the fair value adjustment is expensed (debit the fair value adjustment account). The fair value adjustment account is an “income statement” account and is reflected in the statement of financial performance (AsgiSA-EC, 2011a:135; AsgiSA-EC, 2010:110).

GRAP 1 (ASB, 2004a:par 43) does not allow the offsetting of revenue and expense items in the accounting records. These fair value adjustments per class of biological assets are disclosed as separate line items on the statement of financial performance. An increase in the value of the crop (a biological asset), being a credit on the fair value adjustment account, is disclosed as revenue on the statement of financial performance. A decrease in the value of another biological asset, maybe livestock (debit on the fair value adjustment account) requires a separate expense line item on the statement of financial performance. The fair value adjustment account is biological asset specific and not regarded as a general account to account for all fair value adjustments on the various biological assets.

A final fair value of the biological assets is calculated at the point of harvest. The actual tonnages harvested, the actual spillage, SAFEX price and costs to sell are known at the point of harvest. The journal entries to support the increase/decrease in fair value on the biological assets are recorded on the principles detailed earlier. GRAP 101 (ASB, 2006:par 05) requires that the biological assets are reclassified as inventory at the point of harvest and measured at the fair value less the estimated costs to sell (ASB, 2004d:par 30). The biological assets are derecognised (credited) and the inventory is recognised (debited). The sale of the harvested inventory will be done in terms of the requirements of GRAP 12, Inventories, and GRAP 9, Revenue from exchange transactions. Table 4 sets out an illustrative example of how the entity accounts for the biological asset transactions in the financial records, as narrated in this chapter.

Table 3: Illustration of the financial transactions (required journal entries) to account for biological assets (AsgiSA-EC, 2011b; AsgiSA-EC, 2011c)

Description	Debit	Credit
Entries to be recorded at the transaction date when inputs are procured		
Inventory: Maize seed	150	
Inventory: Fertiliser	100	
Bank		250
Purchased inputs to be utilised during the production process at transaction date are recorded in the accounting records at cost as inventory.		
Entries to be recorded after the first yield estimate after germination		
Biological assets: maize	250	
Inventory: Maize seed		150
Inventory: Fertiliser		100
Recording of biological assets at cost price when germination occurred and a yield estimate was formed to confirm the service potential of the planted fields.		
Entries to be recorded at financial year-end (reporting date) if the fair value calculated exceeds the cost of the biological asset recorded:		
Biological assets: Maize	50	
Fair value adjustment on maize		50
Recording the increase in the fair value of the maize as calculated on the yield estimate and the fair value calculations performed.		

Description	Debit	Credit
Entries to be recorded at financial year-end (reporting date) if the fair value calculated is less than the cost of the biological assets recorded at purchase date:		
Fair value adjustment on maize	20	
Biological assets: maize		20
Recording the decrease in the fair value of the maize as calculated on the yield estimate and the fair value calculations performed.		
Entries to be recorded at the point of harvest when the final fair value less the estimated cost to sell the biological asset exceeds the value of the biological asset already recorded:		
Biological asset: maize	120	
Fair value adjustment on maize		120
Recording the increase in the fair value of the maize as calculated final yield estimate at the point of harvest.		
Entries to be recorded at the point of harvest when the final fair value less the estimated cost to sell the biological asset is lower than the value of the biological asset already recorded:		
Fair value adjustment on maize	70	
Biological asset: maize		70
Recording the decrease in the fair value of the maize as calculated final yield estimate at the point of harvest.		

Description	Debit	Credit
Entries to be recorded at the point of harvest to reclassify the biological assets to inventory at the fair value less the estimated cost to sell		
Inventory: maize	420	
Biological asset: maize		420
Derecognising the biological asset and recording the inventory at the point of harvest.		

Table 3 illustrates the financial transactions recorded in the accounting records of the entity in support of biological assets and the fair valuing thereof. These accounting entries will support the final valuations of the biological assets that are disclosed on the statement of financial performance and position. Additional disclosure requirements are detailed in GRAP 101 to provide narrative information to the users of the financial statements to understand the operations of the entity.

6.2.2 Disclosure requirements of GRAP 101

GRAP 101 (ASB, 2006:par 38–51) details the information to be disclosed on the financial statements (Annexure A details all disclosure requirements per GRAP 101). The required information will be incorporated in various sections of the financial statements, like the statement of financial position, the statement of financial performance, in the notes to the financial statements, the accounting policy and possibly in sections of the annual report. To be in compliance with these disclosure requirements might be a challenging task in the public sector, and an assessment was done to determine how AsgiSA-EC met these requirements:

Table 4: AsgiSA-EC specific solutions to comply with the disclosure requirements of GRAP 101 (ASB, 2006:par 38-54; AsgiSA-EC, 2011a:103-136)

Requirement	Disclosure by AsgiSA-EC
Par 38 Disclose the aggregate gain or loss that occurred in the current financial year on initial recognition and from the change in fair value less the estimated costs to sell.	The gain or loss is disclosed in the fair value adjustment item detailed on the statement of financial performance. AsgiSA-EC had an increase in the value of the biological asset (credit) and disclosed the balance as a revenue item. The unique name for this account used by AsgiSA-EC is the "valuation adjustment on biological assets and agricultural produce"
Par 39–45 A description of the biological assets that should be detailed in the financial statements, in either a narrative or quantified description.	The financial statements are published as a chapter in the annual report of an organisation. In the annual report a broad overview of the activities of the organisation and the activities can be detailed to clarify and support the information disclosed.
Par 39–45 cont. The methods and significant assumptions applied to determine the fair value of each group of biological assets at the point of harvest should also be disclosed.	A section on the agricultural activities of AsgiSA-EC was detailed in the annual report (page 54) to support the agricultural activities and the biological asset description. Note 3 (page 117) to the financial statements details that the biological assets of the organisation consists of agricultural produce. This will enable the users of the financial statements to link the note to the information detailed in the annual report.

Requirement	Disclosure by AsgiSA-EC
Par 46 The estimates, methods and assumptions applied to determine the fair value less the cost to sell the biological assets should be disclosed in the financial statements.	Note 3 (page 117) to the financial statements of AsgiSA-EC details the "Methods and assumptions used in determining the fair value". Information on the yield estimates, the consideration of the maturity levels of the crop, the discounting rates applied and the use of market prices in the calculation of the fair value less the estimated cost to sell the agricultural produce were detailed in the note.
Par 47 Restrictions to the title of biological assets or the capacity to sell the biological assets, biological assets pledged as security for liabilities, commitments for the development and the financial risk management strategies of the organisation should be disclosed.	AsgiSA-EC does not have liabilities that warrant any securities. A schedule 3C public entity is prohibited from incurring liabilities as regulated by the PFMA. Risk management is detailed in note 32 to the financial statements (page 130). The report on the agricultural activities detailed on page 54 provides detailed information on the agricultural and production processes. Notes 7 (page 120) and 10 (page 122) to the financial statements detail that receivables have not been pledged as securities.
Par 48 A reconciliation on the changes in the carrying amount of the biological assets should be disclosed in the financial statements.	Note 3 to the financial statements details a reconciliation between the opening balance of the biological assets, transfers to inventory, gains/losses on fair value adjustments and any impairment losses.

Requirement	Disclosure by AsgiSA-EC
Par 49–51 Changes to the fair value less the estimated costs to sell the biological asset due to physical and price changes should be disclosed in the financial statements. Changes in this fair value due to harvesting are considered to be a physical change that should be disclosed to provide useful information to the users of the financial statements. Events that result in a material change in the fair value such as floods, droughts or a plague of insects should be detailed in the financial statements. Par 52–54 Details additional information to be disclosed when entities cannot measure the fair value reliably.	Note 3 (page 117) to the financial statements details the adjustment to the fair value in the reconciliation. Note 3 further contains a narrative description to provide clarity to the users of the financial statements on why the material losses were incurred. Note 1.2 (page 107) details the accounting policy regulating the financial recording and reporting done at AsgiSA-EC on the biological assets. The crop (biological assets) held by AsgiSA-EC is disclosed as a non-current asset on the statement of financial position (page 103).

The information disclosed by AsgiSA-EC to deal with the requirements of GRAP 101 demonstrates that compliance with the standard is possible at public entity level. The manner in which AsgiSA-EC presented the biological asset information should be applied throughout the public sector to disclose fair valued biological assets in terms of GRAP 101. The following extract from the financial statements, as detailed in the tables below, illustrates how biological assets are disclosed on the statement of financial position and financial performance.

Table 5: Disclosing the fair value adjustment in the statement of financial performance of AsgiSA-EC (AsgiSA-EC, 2011a:104):

AsgiSA Eastern Cape (Pty) Ltd

Annual Financial Statements for the year ended March 31, 2011

Statement of Financial Performance

Figures in Rand	Note(s)	2011	2010
Revenue from exchange transactions	16	14,945,456	5,004,333
Cost of sales	17	(15,151,206)	(5,024,298)
Gross surplus		**(205,750)**	**(19,965)**
Other income		118,890,033	156,010,878
Operating expenses *		(126,613,921)	(134,397,305)
Remaining funds	18	**(7,929,638)**	**21,593,608**
Interest received	19	1,781,806	1,874,059
Valuation adjustment on biological assets and agricultural produce	20	4,202,466	13,792,195
Finance costs	21	(300,675)	(1,912,763)
Surplus/(deficit) before taxation **		**(2,246,041)**	**35,347,099**
Taxation	22	-	(593,840)
Surplus/(deficit) for the period		**(2,246,041)**	**34,753,259**

*** The 2010/11 deficit results from the 2009/10 crop production cycle which spans over more than one financial year*

Deficit is funded from the accumulated surplus *(2,246,041)*

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The fair value adjustment is disclosed as the 'Valuation adjustment on biological assets and agricultural produce' on the face of the statement of financial performance. As indicated on this extract from the financial statements, the gain or loss on the biological asset is disclosed as a separate item on the face of the statement of financial performance.

Table 6: The statement of financial position of AsgiSA-EC discloses the biological assets as follows (AsgiSA-EC, 2011a:103):

AsgiSA Eastern Cape (Pty) Ltd

Annual Financial Statements for the year ended March 31, 2011

Statement of Financial Position

Figures in Rand	Note(s)	2011	2010
Assets			
Non-Current Assets			
Property, plant and equipment	4	6,910,635	5,793,143
Intangible assets	5	418,054	633,388
Livestock loans receivable	7	5,692,320	3,903,416
		13,021,009	**10,329,947**
Current Assets			
Inventories	8	4,700,940	11,763,511
Trade and other receivables - Exchange transactions	10	9,136,746	1,787,993
Trade and other receivables - Non-exchange transactions	10	25,343,383	82,444
Biological Assets and agricultural produce	3	10,590,000	21,061,452
Livestock loans receivable	7	3,319,680	1,318,155
Cash and cash equivalents	11	68,775,930	66,827,902
Investments	11	6,500,000	-
		128,366,679	**102,841,457**
Total Assets		**141,387,688**	**113,171,404**
Net Assets and Liabilities			
Net Assets			
Share capital	12	100	100
Accumulated surplus		93,694,827	95,940,868
		93,694,927	**95,940,968**
Liabilities			
Non-Current Liabilities			
Finance lease obligation	13	-	82,586
Current Liabilities			
Finance lease obligation	13	82,586	72,821
Trade and other payables	14	10,201,383	13,818,677
Trade and other payables - Non-exchange transactions	14	5,174,513	2,962,782
Payable to SARS	25	-	116,426
Operating lease liability	26	266,960	177,144
Land claims liability	9	31,967,319	-
		47,692,761	**17,147,850**
Total Liabilities		**47,692,761**	**17,230,436**
Total Net Assets and Liabilities		**141,387,688**	**113,171,404**

The biological assets and agricultural produce is disclosed as a current asset on the statement of financial position. Detailed information on the methods applied, the nature of the biological assets and the required reconciliations will be included in the notes to the financial statements.

6.3 Legislative reporting requirements

As AsgiSA-EC is a registered private company in terms of the Companies Act with 100% shares owned by government, the entity needs to conform to the requirements of the PFMA and the Companies Act 71 of 2008. The King Code, currently King III, was developed to guide companies to comply with the requirements of the Companies Act (PricewaterhouseCoopers, 2011:1-4; Madue, 2007:306). A brief overview of the requirements of the PFMA and King III is detailed to determine whether there are legislative prohibitions for a public entity to disclose fair value adjustments.

6.3.1 Public Finance Management Act 1 of 1999 (PFMA)

Fair value adjustments on biological assets result in income and expense items on the statement of financial performance that were not budgeted for. Unbudgeted line items on the financial statements might restrict the operations of the entity as section 53(4) of the PFMA restricts spending by the accounting authority (the board) to the approved budget. Furthermore, a public entity may not budget for a deficit or surplus in terms of section 53(3) of the PFMA (South Africa, 1999). The restrictions by the PFMA do not consider the impact of fair value adjustments on the net result of the entity. Fair value adjustments, especially an expense (fair value of the biological asset is lower than the cost thereof), may result in the public entity deriving a net deficit for the financial year, as with AsgiSA-EC in the statement of financial performance (table 6).

The derived deficit is interpreted in legislature as a weakness in the management of the entity. The impact of non-cash items, which are fair value adjustments, on the net result of the entity is not disregarded in the evaluation of the performance of the entity. As the non-cash transactions do not result in an outflow of economic

resources of a public entity it is crucial that fair value adjustments are considered by legislature to evaluate the actual performed of the entity.

A comparison between the budgeted and actual performance of the entity is included in the financial statements of the entity, regulated by GRAP 24. GRAP 24 (ASB, 2007:par 12) requires an analysis of spending per line item of the approved budget. The public sector does not budget for fair value adjustments and cannot justify this adjustment in terms of GRAP 24. The fair value adjustment will be regarded as a normal expense or revenue item. The recognition of this expense might result in overspending of the approved budget. The requirements of GRAP 24 do not prohibit management from disclosing a reconciliation between the surplus/deficit realised on the statement of financial performance to the net result of the budget spending with consideration and/or elimination of non-cash items. Management may disclose detailed information on the financial statements and the annual report to give detail to the users of the financial statements of the net results of the public entity. These additional disclosures may contribute to the disclosure of transparent financial statements of the public entity.

At departmental level overspending the budget vote is regarded as “unauthorised expenditure” in terms of the PFMA. Section 1 of the PFMA (South Africa, 1999) which defines unauthorised expenditure as:“(a) Overspending of a vote or the main division within a vote; (b) Expenditure not in accordance with the purpose of a vote, or in the case of a main division, not in accordance with the purpose of the main division.” The PFMA defines a “vote” as the total amount appropriated to the department by means of an approved budget. Section 38 of the PFMA requires of an accounting officer to avoid unauthorised expenditure, implying either an under-spending or an overspending per budget item. As departments do not apply accrual accounting and the related GRAP accounting treatments, a fair value measurement or any adjustments to the fair values will not occur and cannot impact on budget spending and the related incurrence of unauthorised expenditure. The accrual basis of accounting that is applied in public entities and the fair value adjustments on the financial statements will impact on the spending per budget line item. This principle was realised by the legislature as the sections of the PFMA regulating public entities do not refer to unauthorised expenditure (section 51) (South Africa, 1999).

As the accounting authority will not be exempted from compliance with the requirements of the PFMA, alternative disclosures might be required to detail the substance and nature of fair value adjustments to provide clarity to the users of the financial statements. The PFMA thus do not prohibit management to apply the principles of fair value accounting but requires additional disclosure to provide clarity to the users on the substance of the transactions.

6.3.2 King III

The requirements of the King Code are applicable to private sector companies. King III was developed by the King Committee, effective 1 March 2010, to regulate corporate governance in South Africa while focussing on leadership, sustainability and corporate citizenship (Braxton, 2010:18-19). King II, preceding King III, was not widely adopted in government as the requirements of the PFMA were not considered in the King Code. King III was developed to regulate all organisations, public and private, in all economic sectors. The aim of King III is to account for the corporate governance of the organisation by either applying the requirements or explaining why the principles have not been applied (PricewaterhouseCoopers, 2011:2-4; Roos, 2009:10-11).

King III focuses on the following priorities to encourage the public sector to strive towards good governance: Ethical leadership and corporate citizenship, boards and directors, audit committees, the governance of risk, the governance of information technology, compliance with laws, rules, codes and standards, internal audit, governing stakeholder relationships and the integrated reporting and disclosure requirements (Braxton, 2010:18-19). King III requires that companies focus on integrated reporting. The integrated report will detail financial and sustainability (covering environmental and economic factors) information. An integrated report will contribute to the increase in the company's business opportunities, improve service delivery, assist with policy-making and the implementation thereof and assist with economic development and the related poverty alleviation (Braxton, 2010:18-19; Wadee, 2011:6). Roberts (2010:13) highlighted that the 'true picture of a company' is

reflected by integrated reporting as it provides more detailed information than financial statements and sustainability reports of a company.

As compliance with laws and regulations is a statutory obligation, King III details the recommended principles and practices to be adopted to ensure this compliance (Roos, 2009:11) in order to 'increase trust and confidence of the stakeholders'. Organisations cannot only consider the impact of non-compliance with the legislation to weigh the consequences thereof but should be proactive in the managing of compliance procedures. Likewise, compliance with section 53(4) of the PFMA should be enforced by public entities when measures are taken to ensure that spending is only in terms of the approved budget. Measures should be implemented to forecast the anticipated fair value adjustments and to report these adjustments to the National Treasury. All reasonable procedures should be implemented at the public entity to control and limit losses and shrinkages to avoid a negative fair value adjustment (fair value of the biological asset is less than the cost thereof) (PricewaterhouseCoopers, 2011:49). In terms of the King III reporting requirements there are no restrictions on management to fair value biological assets and disclose the biological assets as such on the financial reports. Management needs to substantiate the assumptions and methods applied and disclose detailed information on the financial statements. As the objective of the King Code is to regulate governance compliance with the code it will enhance reporting to the public.

6.4 Impact of fair value reporting on the public sector

The aim of the adoption of IAS 41 and the related fair value disclosure of biological assets by companies in various countries promote comparability of the performance and position of the biological assets of the various companies. Analytical reviews can then be performed on the information disclosed by the various companies to study market trends, sector performance and for the enhancement of management processes in the management accounting and budgetary forecasts. Likewise, the adoption of GRAP 101 in the public sector will ensure that the financial information disclosed by private sector companies can be compared to overall public sector performance. The uniform standard will assist management to assess the performance of the private sector companies to enhance, strengthen and broaden

initiatives taken by government to have effective and efficient systems monitoring and reporting on biological assets.

The fair valuing of biological assets in the public sector should not be constrained by the challenges that AsgiSA-EC experienced in the adoption of GRAP 101. The challenges experienced by AsgiSA-EC as detailed in Chapter 5 might guide the public sector to implement the fair value accounting principles of GRAP 101. In addition the following positive factors might assist the public sector's implementation of fair value accounting of biological assets:

The public entities have converted from the SA GAAP (South African Generally Accepted Accounting Practices) to GRAP. The principles of GAAP are based on accrual accounting and all transactions have been recorded in the accounting records before the conversion to GRAP was initiated. Government departments might face a major challenge with the conversion to GRAP as non-cash transactions are not currently recorded in the financial records of the departments.

Government developed a phase-in approach in the implementation of the requirements of GRAP. The phase-in approach allowed ample time for public entities to study the reporting requirements and to implement policies and procedures to sufficiently address the reporting requirements. The lessons learnt should be analysed and implemented in the conversion to GRAP by the departments. The methods, assumptions and disclosure techniques applied by private sector companies on the fair valuing of the biological assets can be referred to for guidance as the requirements of GRAP 101 are similar to those of IAS 41.

The public entities in South Africa are part of a select group in the world reporting in terms of accrual accounting in a government environment (Van Schaik & Sanderson, 2008:26). The accounting revolution in public sector accounting commenced in 2003 with the adoption of the standards of GAAP and the subsequent GRAP standards. Disclosing transparent information in a government sphere enhances resource allocations and better management of available funding (Van Schaik & Sanderson, 2008:26).

The challenges experienced in the public sector to report on biological assets at fair value should not restrict the operations of the entity. The National Key Priorities, which are rural development and food security, can be achieved in the public sector and fair value reporting can be done in terms of the requirements of GRAP 101. Challenges need to be identified at the specific entities to allow management to apply measures to handle the concerns. Techniques and methods need to be explored to derive the most suitable solution to the challenges experienced.

6.5 Summary and conclusion

Chapter 6 detailed the effect of the fair value reporting of biological assets on the financial statements. An overview of the accounting journals reflecting the financial information demonstrating the application of the transactional accounting treatment guidance provided in GRAP 101 was given. A statement of financial performance and a statement of financial position were included in the first part of this chapter to indicate the biological asset disclosure in the financial statements.

The financial statement disclosure was followed by a discussion of the effects of fair valuing biological assets on the reporting requirements as set by the legislative frameworks applicable to public entities, PFMA. As public entities are mainly registered companies and need to conform to the regulations, a brief overview of the governance regulations as prescribed in King III was included in the chapter. The accounting entries and disclosure requirements regulated by GRAP 101 might guide the public sector to apply the principles of fair value accounting of biological assets. The underlying methods and techniques to perform such required valuations are however not detailed and guidance of that is not available to these entities. An industry norm should be established and guidance should be accessible to these entities to allow them to focus on their mandates and deliver the much needed public services like rural development and food security mechanisms.

CHAPTER 7

ANALYSIS OF RESEARCH

7.1 Introduction

The challenges experienced in the public sector on the fair valuing of biological assets and the related reporting requirements were discussed in Chapters 5 and 6 respectively. As set out in Chapters 1 and 2, food security and the entwined rural development will be enhanced when the public sector reports on a uniform basis of accounting as users of the financial statements can make informed decisions when information can be compared to other public sector results. The aim of Chapter 7 is to summarise the findings on the challenges and link it to the accounting treatment currently applied in the public sector. The challenges identified in the public sector for fair valuing biological assets might be dealt with by the lessons learnt in the application of GRAP 101 by AsgiSA-EC, as explained in the previous chapters. As an industry norm does not exist for the application of fair value accounting and the underlying GRAP principles, the solutions implemented by AsgiSA-EC might guide the public sector to apply fair value accounting on biological assets. As detailed in this chapter, the GRAP 101 equivalent IPSAS 27 developed for the international public sector and the private sector equivalent, IAS 41, have not followed a smooth implementation process to set an industry norm to guide fair value accounting on biological assets.

7.2 Establishing the basis of accounting for biological assets

The National Treasury published a listing of public institutions listed in terms of the PFMA as at 30 September 2011 (South Africa, 2011c:1). In terms of this schedule the various entities subject to compliance with the PFMA can be divided into Schedule 1, Schedule 2 and Schedule 3 entities. The schedule, annexed to the PFMA and compiled by the legislature, consists of various government entities that are classified according to their operations, their mandates and their sizes. These

entities report to government departments as illustrated in figure 2, Chapter 5. Table 8 provides the number of entities listed in each Schedule of the PFMA.

Table 7: Summary of number of entities listed in terms of the PFMA (South Africa, 2011c:1-10)

Schedule	Number of entities regulated
Schedule 1	9 Constitutional institutions
Schedule 2	21 Major public entities
Schedule 3A	152 National public entities
Schedule 3B	26 National government business entities
Schedule 3C	72 Provincial public entities
Schedule 3D	17 Provincial government business entities

The entities reflected in table 7 details all the listed public entities mandated by the PFMA to conform to the requirements of GRAP and to disclose the financial statements accordingly. The operations of these entities do not all involve biological assets and will thus not necessarily need to comply with GRAP 101.

To determine the number of entities that need to comply with GRAP 101, the PFMA listing of public entities were evaluated per individual entity to determine the core business of the entity. The entities trading in agricultural or any related activities that may result in biological assets for the entity were then shortlisted to determine the entities reporting in terms of GRAP. Background information was collated on these shortlisted entities and a set of financial statements of these entities were inspected to determine whether biological assets are indeed held/traded by the entities. The study of the financial information of these entities confirmed the basis of accounting for biological assets at the various entities. As these entities are subject to the requirements of GRAP all entities holding, managing and trading in biological assets had to adopt the requirements of GRAP 101. Biological assets thus have to be disclosed at a fair value on the financial statements as per GRAP 101. The identified entities that operate/manage biological assets' financial statements were analysed to determine the basis of accounting applied to value the biological assets. The results are detailed in table 9.

Table 8: Identification of biological assets held by PFMA listed entities (South Africa, 2011c:1-10)

Public entity classification	Number of entities identified possibly holding/trading in biological assets	Entity actually holding/trading in biological assets	Corroborating document	Reference to document/source
Schedule 1: Constitutional institutions – 9 listed entities	None	No	Not applicable	Not applicable
Schedule 2: Major public entities – 21 listed entities	One entity South African Forestry Company Limited	No	Forestry South Africa 10th annual report for the year ended 31 December 2011	(South Africa, 2011l:29)
Schedule 3A: National public entities – 152 listed entities	Six entities Agricultural Research Council	No	ARC annual report – 2010/2011	(South Africa, 2011i:131)
	Agricultural Sector Education and Training Authority	No	Agriseta annual report – 2010/2011	(South Africa, 2011f:80)
	Food and Beverages Manufacturing Industry	No	Background information and entity overview	(*South Africa*, 2012a)

Public entity classification	Number of entities identified possibly holding/trading in biological assets	Entity actually holding/trading in biological assets	Corroborating document	Reference to document/source
	Marine Living Resources Fund	Yes – accounted for in terms of the modified cash basis of the department. Only cash transactions thus recorded at cost. GRAP 101 is thus not implemented at the entity.	Department of Environmental Affairs and Tourism annual report – 2009/2010	(South Africa, 2010d:12)
	National Agricultural Marketing Council	No	Annual report – 2009/2010	(South Africa, 2010e:104)
	South African National Parks	Yes – Biological assets are however only recognised and recorded when sold. GRAP 101 is thus not implemented at the entity.	2010/2011 Annual report	(SANParks, 2010:102; SANParks, 2011:101)
Schedule 3B: National public entities – 26 listed entities	Two entities Onderstepoort Biological Products Limited	No	Background information and entity overview	(*South Africa*, 2012b)
	Overberg Water	No	Background information and entity overview	(*South Africa*, 2012c)

Public entity classification	Number of entities identified possibly holding/trading in biological assets	Entity actually holding/trading in biological assets	Corroborating document	Reference to document/source
Schedule 3C: National public entities – 72 listed entities	Six entities Eastern Cape Parks and Tourism Agency	Yes – Only biological assets held for sale are valued and recorded.	Annual reports for 2008/2009	(ECPB, 2009:92)
	Eastern Cape Rural Finance Corporation Limited (ECRFC) Accelerated and Shared Growth Initiative – South Africa (Pty) Ltd – subsidiary of the ECRFC	Yes – ECRFC expenses the biological assets as part of normal purchase procedures. AsgiSA-EC accounts for the biological assets in terms of GRAP 101.	Annual reports and financial statements	(ECRFC, 2011:82; AsgiSA-EC, 2009:64; AsgiSA-EC, 2010:96; AsgiSA-EC, 2011a:117)
	Limpopo Agribusiness Development Corporation	No	Annual report and business information	(*South Africa*, 2012d)
	Limpopo Tourism and Parks Board	Yes – Biological assets are however only recognised and recorded when sold. GRAP 101 is thus not implemented at the entity.	Annual report – 2009/2010	(South Africa, 2010b:86)
	Mpumalanga Tourism and	Yes – accounted for in terms of the	Annual report – 2010/2011	(South Africa, 2011j:93-

Public entity classification	Number of entities identified possibly holding/trading in biological assets	Entity actually holding/trading in biological assets	Corroborating document	Reference to document/source
	Parks Board	modified cash basis of the department. Only cash transactions thus recorded at cost. GRAP 101 is thus not implemented at the entity.		104)
	North West Parks and Tourism Board	Yes – accounted for in terms of the modified cash basis of the department. Only cash transactions thus recorded at cost. GRAP 101 is thus not implemented at the entity.	Annual report – 2010/2011	(*South Africa*, 2011g)
Schedule 3D: National public entities – 17 listed entities	Two entities Mpumalanga Agricultural Development Corporation	Yes – accounted for in terms of the modified cash basis of the department. Only cash transactions thus recorded at cost. GRAP 101 is thus not implemented at the entity.	Annual report – 2010/2011	(South Africa, 2011j:93-104)

Public entity classification	Number of entities identified possibly holding/trading in biological assets	Entity actually holding/trading in biological assets	Corroborating document	Reference to document/source
	Casidra (Pty) Ltd	Yes – accounted for in terms of the modified cash basis of the department. Only cash transactions thus recorded at cost. GRAP 101 is thus not implemented at the entity.	Annual report – 2010/2011	(Casidra, 2010:4; Casidra, 2011:47)

Table 8 provides the review performed on the 18 public entities that might hold/manage biological assets. From the review of the financial statements of these entities, it was confirmed that the core business of these entities does not all include operations relating to agricultural activities and thus biological assets. Table 9 supplies a summary of the 10 entities that were identified in the review from table 8. Table 9 provides an overview of the accounting treatment applied at these 10 entities to value the biological assets to determine the trend set for valuations at public entities.

Table 9: Summary of the accounting basis of reporting on biological assets per entity

Public entity schedule classification	**Listed public entity holding/trading in biological assets**	**Method of accounting for biological assets**
Schedule 3A	Marine Living Resources Fund	Modified cash basis of accounting where only biological assets actually purchased are recorded via the payment process. Biological assets of a value not exceeding R5 000 are expensed. Fair value accounting is not applied and valuations are not performed as the assets are carried at cost.
	South African National Parks	Biological assets are only accounted for when sold.
Schedule 3C	Eastern Cape Parks and Tourism Agency	Only biological assets held for sale are valued and recorded.
	Eastern Cape Rural Finance Corporation Limited (ECRFC)	The ECRFC expenses biological asset purchases as part of the normal procedures of accounting for expenses.

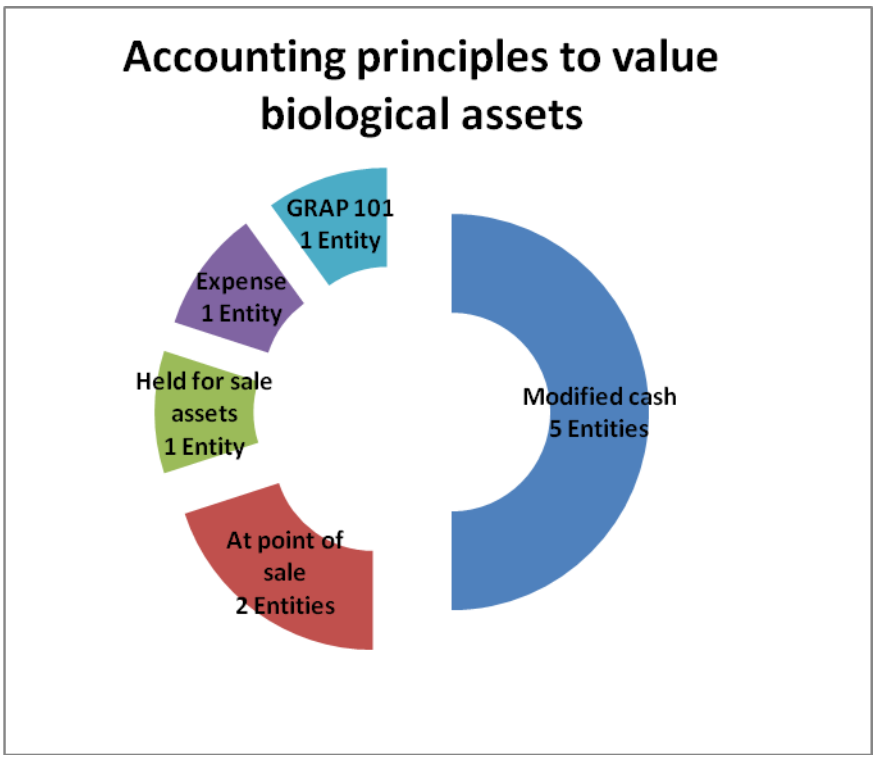
Public entity schedule classification	Listed public entity holding/trading in biological assets	Method of accounting for biological assets
	Accelerated and Shared Growth Initiative – South Africa (Pty) Ltd – subsidiary of the ECRFC	AsgiSA-EC adopted GRAP 101 and discloses biological assets in terms of the standard, regardless of the fact that the holding company does not account for biological assets on the same principles.
	Limpopo Tourism and Parks Board	Biological assets are only accounted for when sold.
	Mpumalanga Tourism and Parks Board	Modified cash basis of accounting where only biological assets actually purchased are recorded via the payment process. Biological assets of a value not exceeding R5 000 are expensed. Fair value accounting is not applied and valuations are not performed as the assets are carried at cost.
	North West Parks and Tourism Board	Modified cash basis of accounting where only biological assets actually purchased are recorded via the payment process. Biological assets of a value not exceeding R5 000 are expensed. Fair value accounting is not applied and valuations are not performed as the assets are carried at cost.
Schedule 3D	Mpumalanga Agricultural Development Corporation	Modified cash basis of accounting where only biological assets actually purchased are recorded via the payment process. Biological assets of a value not exceeding R5 000 are expensed. Fair value accounting is not applied and valuations are not

Public entity schedule classification	Listed public entity holding/trading in biological assets	Method of accounting for biological assets
		performed as the assets are carried at cost.
	Casidra (Pty) Ltd	Modified cash basis of accounting where only biological assets actually purchased are recorded via the payment process. Biological assets of a value not exceeding R5 000 are expensed. Fair value accounting is not applied and valuations are not performed as the assets are carried at cost.

Table 9 clearly illustrates that the principles of fair value accounting and reporting in terms of GRAP 101 are not uniformly applied in the public sector. The summary details that five of the 10 entities, thus 50%, applies the modified cash basis of accounting. As discussed in Chapters 2 and 5, the modified cash basis of accounting is applicable to departments only as public entities are subject to the requirements of GRAP and accrual accounting. The audit reports of the public entities listed in table 10 were evaluated to determine whether the office of the Auditor General expressed concerns or possibly qualifications on the adoption of an incorrect accounting basis at the entities. Such concerns and qualifications have not been noted.

From the information detailed in the summary in table 9, the following graph was compiled to reflect the number of PFMA listed public sector entities that implemented the accounting principles to value and report on biological assets as identified in the accounting policies of the financial statements inspected, according to table 9:

Graph 1: Accounting application for biological assets in the public sector listed entities



Graph 1 summarises the accounting principles applied by the 10 public entities holding biological assets. From the graph it is clear that five of the public entities apply the modified cash basis of accounting principles to value their biological assets. GRAP 101 was adopted and implemented at only one entity. The remaining entities adopted their preferred methods of valuing biological assets that is neither according to the modified cash basis of accounting or the accrual based GRAP principles. The objective of this study is to set out the challenges experienced by AsgiSA-EC, the GRAP compliant entity, in applying the fair value principles of accounting to value its biological assets. As such, these experienced challenges need to be analysed to determine whether it might be experienced by the entities that apply other accounting principles to value their biological assets.

7.3 Accounting applications linked to the challenges regarding the fair valuing of biological assets

The research identified that the requirements of the prescribed accounting standard GRAP 101 was fully implemented by only one public entity namely AsgiSA-EC. The

challenges experienced by AsgiSA-EC in the fair valuing of biological assets and in Chapter 5, is summarised in table 10.

Table 10: Summary of the challenges experienced by AsgiSA-EC in the fair valuing of biological assets

Challenge	Description of challenge
Absence of an active market	In the absence of markets, management needs to rely on estimates and judgements to determine the fair value of the biological assets.
Lack of available valuation techniques	With the adoption of GRAP 101 National Treasury was not in a position to provide detailed guidance on the actual valuation process, methods and techniques that can be applied by public entities to determine the fair value of biological assets.
Lack of understanding and application of the GRAP requirements	In terms of the general definitions of GRAP 101 the term "service potential" is considered in conjunction with the "future economic benefits" which may be anticipated by a public entity to determine whether an item meets the definition of an asset.
High costs related to the fair value accounting of biological assets	The costs associated with the determining of the fair value of biological assets are excessive, especially when an expert in the field needs to perform the valuation. Fees charged by experts, the related reviews conducted on these valuations by auditors and professionals and the actual cost to purchase the required technological devices might exceed the benefit of valuing biological assets for an entity.
Lack of guidance and/or templates on policies or procedures that should be adopted at the entity	Section 50(1) of the PFMA requires an accounting authority (the board) of a public entity to safeguard all assets and records of the entity and to manage the finances.

Challenge	Description of challenge
Unavailable templates or application process of an accounting policy in terms of GRAP 101	The accounting policy on biological assets and the application and valuation methods therefore need to comply with the requirements of GRAP 101.
Restricted budgets and budget management reporting with fair value accounting	A budget projection detailing the expected revenues and expenditures of the entity is required by section 52 of the PFMA. The fair value accounting of biological assets at each reporting date, being year-end, may result in a fair value adjustment.

Table 10 reflects on the specific challenges experienced by AsgiSA-EC to report on biological assets at a fair value in terms of GRAP 101. The solutions developed and implemented by AsgiSA-EC's managements (as detailed in section 5.3 onwards) to deal with the challenges experienced were assessed by the office of the Auditor General. Inspection of the opinions expressed by the office of the Auditor General on the financial statements compiled by AsgiSA-EC confirmed that the biological assets have been correctly valued and disclosed in terms of GRAP 101 (AsgiSA-EC, 2011a:99-100; AsgiSA-EC, 2010:77-79; AsgiSA-EC, 2009:50-53).

AsgiSA-EC thus managed to identify the challenges, develop management solutions that sufficiently handled these challenges and sufficiently adopted the requirements of GRAP 101 to disclose the biological assets at a fair value. Should these challenges be considered to be general areas of concern in the adoption of fair value accounting on biological assets in the public sector the methods and procedures established by AsgiSA-EC, as provided in Chapter 5, could be adopted and amended by other public sector entities to assist in the fair value accounting of their biological assets. Some entities might only experience a number of these challenges but might find possible guidance or solutions from the procedures implemented at AsgiSA-EC.

AsgiSA-EC specific solutions might thus assist the public sector to sufficiently address the challenges identified to fair value biological assets. An industry norm

can be established and the requirements of GRAP 101 can be implemented in the public sector. In turn, government initiatives such as rural development and food security, as highlighted in Chapter 2, can be dealt with and achieved once the industry norm is set, monitored and regulated. The developed solutions, the methods applied and the established procedures might thus be used as a guideline to assist the public sector to implement the requirements of GRAP and the related fair value accounting of biological assets.

7.4 Accounting for biological assets in other countries

The limited application of the requirements of GRAP 101 in the public sector warranted a review of the international accounting treatment applied to disclose biological assets at a fair value. The international standard regulating fair value accounting of biological assets, IPSAS 27, only has an effective date of 1 April 2011. A standard approach should thus be followed in the adoption of the requirements of this standard to value and report on biological assets. The IPSAS accounting framework allows entities to choose between cash accounting and accrual accounting. The requirements of IPSAS 27 are only applicable to organisations applying accrual accounting and will thus not be applied by those international entities that opted to apply the cash basis of accounting. Organisations that adopted the cash-basis IPSAS will account only for cash transactions and apply the historic cost methods to report on financial affairs (IPSASB, 2009:par 2). As the cash-basis IPSAS is similar to the modified cash basis of accounting applied at the five entities listed in table 10, fair value accounting principles are not applied at these entities. As discussed in Chapters 2 and 5, the modified cash basis of accounting will only recognise the biological assets at cost when payment occurs.

Pasha (2011) detailed a review adopted requirements of IPSAS in Asian countries while he studied the IPSAS standards. He detailed in his study that he considered the application of IPSAS by five neighbouring countries and his findings are according to the following table:

Table 11: IPSAS application in Asian countries (*Pasha*, 2011)

Country	Accounting basis applied
Afghanistan	In the process of adopting the cash-basis IPSAS
Malaysia	Applying the cash-basis IPSAS
Nepal	Applying the cash-basis IPSAS
Sri Lanka	Applying the cash-basis IPSAS with the goal of implementing accrual accounting
India	Limited application of cash-basis IPSAS combined with accrual standards on IPSAS

From the five countries listed in table 11 the cash-basis IPSAS appears to be the preferred accounting application to account for financial transactions. India appears to be the only country that adopted accounting principles of both cash-basis and accrual standards of accounting. Consistent with the application of the modified cash basis of accounting in South Africa, the entities reporting on the cash-basis IPSAS only account for the actual purchases of biological assets. The cash-basis IPSAS accounting treatment does not consider fair value accounting. As the requirements of IPSAS 27 are only effective for reporting periods commencing on or after 1 April 2011, financial statements complying with the requirements of IPSAS 27 was not identified to analyse and detail in this study. The international preference of cash-basis principles of accounting might result in a delay in the adoption of the principles of GRAP and thus accrual accounting in South Africa.

The lack of IPSAS based financial statements to evaluate the treatment of biological assets abroad resulted in the consideration of the application of IAS 41, as the requirements are consistent with those of IPSAS 27/GRAP 101. A study was undertaken by Elad and Herbohn (2011:94) to evaluate fair value accounting in three countries. This study focussed on the application of the requirements of IAS 41 in Australia, the United Kingdom and France. Despite the objective of IAS 41 to enhance comparability between financial statements, Elad and Herbohn identified inconsistencies in the underlying methods of valuing biological assets. From a review on a total of 103 annual reports (Elad & Herbohn, 2011:94) the various methods of valuing biological assets were found to be as follows:

Table 12: Valuation of biological assets per country according to Elad and Herbohn (Elad & Herbohn, 2011:94)

Valuation basis	Country		
	Australia	United Kingdom	France
Net present value	41%	27%	5%
Historic cost	15%	21%	45%
Fair value	11%	19%	25%
Independent valuer	11%	14%	15%
Market price of similar asset	18%	14%	0%
Recent market price	2%	5%	10%
Lower of cost or net realisable value	2%	0%	0%
Total	100%	100%	100%

The underlying methods of determining the fair value of biological assets by these organisations in the application of IAS 41 demonstrate that a uniform application of the standard does not exist. The study further highlighted the inconsistency in the auditors' expression of an opinion on the non-implementation of the requirements of the standard (Elad & Herbohn, 2011:105). It is thus evident that the overall application of the fair value accounting requirements for biological assets is a challenge in the public and private sector and that an industry norm has to be established.

7.5 Summary and conclusion

This study highlighted the challenges experienced in the public sector in accounting for biological assets. The reporting of biological assets by means of five different accounting applications by public entities confirmed that the public sector does not apply a uniform accounting framework.

The objective of reporting in terms of GRAP by all spheres of government, once the transitional period of local government concluded and government departments converted, will result in comparable financial results between public sector institutions. The conversion from the currently applied accounting principles to GRAP

compliant financial reporting at these entities is not expected to be without challenges. This study analysed the specific challenges experienced by a public entity (AsgiSA-EC) that successfully implemented the fair value accounting principles on biological assets in terms of GRAP 101. The solutions developed by AsgiSA-EC to deal with the challenges of fair value accounting might be entity specific. However, these solutions might be customised to handle the challenges experienced by other public sector entities in the implementation of the principles of fair value accounting of biological assets. The methods applied and the procedures established at AsgiSA-EC might assist the public sector to develop manuals, guidance documentation and possible templates to set an industry norm to guide the public sector through the process of GRAP implementation. With an industry norm set, developed procedure manuals and with available guidance, the public sector can attend to fair value accounting and focus its efforts on the achievement of food security and rural development. With established reporting procedures and the benefits of access to comparative information might enhance the applied agricultural procedures and encourage the public sector to focus resources on the actual service delivery associated with food security and rural development.

CHAPTER 8

SUMMARY AND CONCLUSION

8.1 Introduction

The objective of GRAP 101 is to establish a uniform accounting standard to account for and report on biological assets at a fair value. Regardless of the fact that the Accounting Standards Board (ASB) prescribed GRAP 101 to account for biological assets other entities were not investigated in this research. The challenges experienced in the fair value accounting and reporting of biological assets by AsgiSA-EC was analysed in this study. The methods applied by AsgiSA-EC to deal with these challenges to disclose biological assets in compliance with GRAP 101 were discussed to describe the practical management solutions applied. As an industry norm for the implementation of GRAP 101 and the fair value accounting of biological assets does not exist, the procedures developed by AsgiSA-EC should be useful for other entities. The adoption of GRAP 101 to account for biological assets should assist government in decision-making regarding agricultural activities as information on operations and results will be comparable within the public sector as well as with other institutions.

8.2 Summary of the research

The objectives and the research problem are revisited, followed by a concluding summary per chapter of this study to outline how the chapters handled the research objectives. From these concluding paragraphs, the overall research conclusions, recommendations and areas identified for possible further research are set out.

8.2.1 Objectives of the study and the research problem

The lack of a uniform application of the accounting standards to report on biological assets at a fair value in the public sector necessitated a study to clarify the fair value accounting challenges experienced in the reporting of biological assets in the public sector. In Chapter 1 it was established that the aim of the study is to provide guidelines to the public sector with the implementation of the GRAP 101 accounting standard by explaining the challenges experienced and the methods applied by AsgiSA-EC. The study aimed:

- to identify the challenges that AsgiSA-EC experienced to apply the fair valuing procedures on biological assets
- to establish the impact of the fair value accounting on biological assets in the public sector by means of reference to relevant public sector entities
- to review the impact of fair value accounting on biological assets on the budgetary requirements in the public sector
- to identify the reporting standard and related reporting requirements in the public sector and the impact that fair valuing biological assets has thereon
- to assess whether the private sector has established an industry standard to account for biological assets at a fair value

Chapter 2 highlighted the importance of rural development and food security in the public sector with the conclusion that agricultural processes need to be enhanced to increase production. The challenges to report on, and to fair value biological assets need to be analysed and effective methods need to be described to ensure that the public sector complies with reporting requirements. The application of a uniform accounting standard will result in financial information that can be analysed and compared amongst various entities in the public sector.

8.2.2 Conceptualisation of the issues impacting on the fair value of biological assets

As government operates with public funds, there is an obligation on the public sector to accept accountability and report on the spending from these funds. This reporting

process is driven by the underlying accounting principles applied in the public sector to account for the individual transactions. The Accounting Standards Board developed and prescribed the standard of GRAP 101 as the accounting principle to be applied by public institutions to account for and report on activities that relates to agricultural activities and thus biological assets.

GRAP 101 was derived from the international private sector equivalent standard, IAS 41 as a public sector specific standard was not available at the time of the prescription of GRAP 101. Uniform standards of accounting are prescribed to set an industry norm and to enhance comparability between financial statements. The concepts of accountability by means of accounting principles, the development of the IAS 41 standard and the subsequent tailored public sector standard, GRAP 101, are explained in Chapter 2 as these concepts form the basis of fair value accounting on biological assets.

Reporting on biological assets in the public sector should be guided by the National and Provincial Treasuries as rural development and the underlying food security were declared national priorities. As the Constitution of South Africa grants each citizen the right of access to food, the public sector has the obligation to facilitate increased agricultural activities and ensure the production of the required commodities. AsgiSA-EC was established by government to attend to food security and other principles of rural development. AsgiSA-EC adopted the principles of GRAP 101 and dealt with the subsequent challenges effectively.

8.2.3 Reporting of biological assets

Chapter 3 dealt with the technical information that forms the basis of the challenges experienced in the valuation of the biological assets. The chapter outlined the general definitions used in the reporting of biological assets and established the link between the standards of IAS 41 and GRAP 101. Annexure A to the study details a comprehensive comparison between these standards and identified immaterial variances. As these standards are considered to be similar, the methods, techniques and principles applied in the private sector in the fair valuing of biological assets might handle the challenges experienced in the public sector. As explained later in

Chapters 5 and 7, an industry norm has not been established in the private sector in the implementation of IAS 41. It is thus evident that even though GRAP 101 is based on the private sector equivalent, IAS 41, an industry norm does not exist to assist the public sector in the fair valuing of biological assets.

8.2.4 Research design

Content analysis was considered to be the appropriate research design to investigate the challenges and methods applied and evaluated in this study. A population of public sector entities that holds biological assets were identified. A verification of the accounting principles applied at these entities to account for and report on biological assets confirmed that AsgiSA-EC was the only public entity that adopted the requirements of GRAP 101 to report on biological assets at a fair value. As this study is specific to those challenges experienced by AsgiSA-EC in the adoption of GRAP 101, the study is not considered to be restricted or biased. The methods applied by AsgiSA-EC to overcome these entity specific challenges were audited by the office of the Auditor General to verify the adequacy of the techniques and principles applied to handle the identified challenges. These methods and principles can thus assist to establish an industry norm in the public sector.

8.2.5 Challenges experienced in the application of fair value accounting

There are two bases of accounting, namely the modified cash basis of accounting and the accrual basis of accounting. In South Africa, the modified cash basis of accounting is prescribed for government departments and the accrual basis of accounting is to be applied by all public entities. As public entities report to departments their financial results should be consolidated. As a result, some public entities opted to adopt the modified cash basis of accounting, despite the prescriptions of the ASB to apply accrual basis of accounting principles. In Chapter 5 the difference between these bases of accounting was detailed as well as the benefits of accrual accounting that should be applied at public entity level.

AsgiSA-EC is one of the public entities that applied the prescribed accrual accounting principles and complies with the standards of GRAP. The fair valuing of the biological assets is still a relatively new concept in the public sector and the lack of guidance, methods, techniques and comparative information from other public entities, resulted in the challenges experienced by AsgiSA-EC to apply the requirements of GRAP 101. These challenges are set out in Chapter 5, supported by the measures taken by management to deal with these challenges.

The techniques, methods, policy documentation and overall approach to the fair valuing of biological assets of AsgiSA-EC were audited by the office of the Auditor General in 2009, 2010 and 2011. The results reflected in this study are thus considered to be reliable and adequate to ensure compliance with the requirements of GRAP 101. These methods, techniques and developed policies might thus assist to establish an industry norm for the public sector to report on biological assets at a fair value. AsgiSA-EC was established by government to handle the key priorities of rural development and the much needed food security principles. The challenges experienced by AsgiSA-EC might thus be considered to be entity specific. As the fight against hunger will not only be fought by AsgiSA-EC, these challenges and implemented solutions might assist other entities to enhance their processes to report on fairly valued biological assets and the underlying agricultural activities.

8.2.6 Fair value accounting and reporting aligned with statutory reporting requirements

The challenges experienced by AsgiSA-EC as outlined in Chapter 5 refer to the accounting treatment in the financial records of an entity. These accounting entries and the related journals are discussed in Chapter 6 to explain the technical requirements of GRAP 101. The disclosure requirements set out in GRAP 101 and the manner in which AsgiSA-EC dealt with these requirements, supported by an illustrative extract from the financial statements clarify how compliance with GRAP 101 can be achieved by a public entity.

As public entities are regulated by the PFMA, consideration of the additional reporting requirements in terms of the PFMA was discussed in this chapter. The

PFMA specifically prohibits public entities from deriving at an assessed loss for the financial year. A fair value adjustment on biological assets might however result in such prohibited loss. Chapter 6 set out the measures that management should take to report on these fair value transactions to clarify the nature and extent thereof to legislature.

Public entities are usually registered private sector companies and not only need to adhere to the PFMA, but also the Companies Act. An overview of the additional requirements as set out in the updated King III was included in Chapter 6 to ensure that the overall reporting of biological assets adhere to the requirements of GRAP 101, the PFMA and the Companies Act. As there are no prescribed list of reporting standards, techniques or methods available to guide the public sector in the reporting of biological assets the measures implemented by AsgiSA-EC might be useful to other public sector entities to report on biological assets, rural development or even food security achievements.

8.2.7 Analysis of research

In Chapter 7 an assessment of the listed public entities according to the PFMA was done to identify the entities that hold biological assets. The financial statements of the short-listed entities were inspected to determine the basis of accounting and the underlying accounting principles applied at the entities to account for and report on biological assets. A total of 10 entities trading in biological assets were identified. From these, only AsgiSA-EC implemented GRAP 101.

As the principles of GRAP 101 are similar to IAS 41 and the newly developed IPSAS 27, an assessment was done to determine whether an industry norm existed for the implementation of the other standards. IPSAS 27 is only effective for financial periods commencing on/after 1 April 2011 and is only prescribed to government entities that apply the accrual basis of accounting. A review of five Asian countries confirmed that the modified cash basis of accounting is currently the preferred accounting treatment. It is thus doubtful whether fair value accounting of biological assets and the underlying requirements of IPSAS 27 will be implemented in the near future in government departments in South Africa.

The study also investigated whether a possible private sector norm existed for the application of the requirements of IAS 41. It was confirmed that only 11% of Australian companies, 19% of the United Kingdom companies and 25% of French companies applied the principles of fair value accounting on biological assets. The underlying methods to derive at these fair values are however not consistent and it appears that an industry norm to report on biological assets at a fair value in terms of IAS 41 does not exist. The challenges and experiences by AsgiSA-EC with the successful implementation of GRAP 101 could be valuable in the establishing of an industry norm and the development of an implementation manual, for the public sector. AsgiSA-EC established reporting procedures that would benefit the users of financial information as well as possible investors that might want to contribute to the objective of food security and rural development initiatives.

8.3 Research conclusion

The study reflected on the challenges that AsgiSA-EC experienced to report on the biological assets at a fair value. The challenges experienced by AsgiSA-EC were reflected upon and the specific management solutions implemented to deal with these challenges were explained. As these solutions were considered to be appropriate by means of an external statutory audit, these solutions might assist other entities to deal with the challenges they experience to account for biological assets at a fair value.

One of the main challenges that AsgiSA-EC experienced in the fair valuing of its biological assets is the absence of an active market. With unavailable market information, management should rely on judgements and estimates to derive at a fair value for the biological assets. Alternative market information, a consideration of similar assets, the use of adjusted historical information and the documenting of estimates and considerations applied might assist management to tackle this challenge.

The lack of available methods to perform the actual valuation of the biological assets is another challenge that was experienced by AsgiSA-EC. Guidance, methods and techniques could not be identified to assist the entity to determine the required

procedures to perform the valuation. The entity had to develop a detailed accounting guide to reflect on the required procedures that should be performed to calculate the fair value. Careful consideration of how management would substantiate each financial statement assertion assisted in the drafting of this manual. Inputs are required from all departments to ascertain that the biological assets will be adequately valued.

GRAP 101 requires management to consider aspects of “service potential” and “future economic benefits” when an item is considered to meet the definition of an asset. A lack of understanding of the requirements of GRAP and the application thereof was another challenge experienced by AsgiSA-EC. In general, government does not perform agricultural activities on owned land, but on that of communities or beneficiaries. The legal departments play a vital role to ensure that the legal agreements and all statutory requirements are met before government can plant on non-owned land. In the event that a dispute arises or the biological assets planted on the land in question the communities may refuse the harvest of the biological assets by government. In such instances the biological asset needs to be derecognised at a total loss to government and to the objectives of food security. Stakeholder management should be enhanced and legal departments should strengthen controls to minimise the risk of total loss to the public sector.

The public sector operates from an approved budget and needs to carefully plan to execute the mandate of the entity in terms of such an approved budget. The high costs in contracting experts to assist in the valuation of the biological assets, the increased internal and external audit fees and the required capital outlay in support of technological devices to fair value biological assets is another challenge that faces AsgiSA-EC. Budget monitoring controls, the transfer of skills, the implementation of controls to segregate duties and the increased focus on documenting all decisions, estimates, calculations and other considerations assisted AsgiSA-EC to deal with the challenge of limited available funds.

AsgiSA-EC experienced a challenge to develop internal policies and procedure manuals that comply with the requirements of GRAP, the PFMA and the Companies Act as an industry norm. Templates and available guidance do not exist. Templates to assist management to apply valuation methods to determine fair values do not

exist. Management had to develop procedure manuals, policies, procedures and templates to apply in the fair valuing of the biological assets. Experts had to be consulted to review and assist management to ensure compliance with all reporting requirements.

The accounting treatments applied by other public and private sector entities were evaluated in this study to determine whether an industry norm exists to account for biological assets and to report on their fair value. It was concluded that an industry norm does not exist to report on biological assets at a fair value and that guidance might be derived from the methods applied at AsgiSA-EC to deal with the challenges experienced in such reporting. As the non-adoption of GRAP 101 failed to enhance comparability of financial statements in the public sector, the guidance that can be derived from the entity specific solutions might assist government initiatives to grapple with the priorities of food security and rural development and encourage the adoption of the requirements of GRAP 101.

8.4 Recommendations from results

Significant challenges might be experienced during the conversion from the modified cash basis to the accrual basis of accounting by departments and those public entities that do not report on the standards of GRAP. These challenges might be unique to the specific entity or similar to the challenges that AsgiSA-EC faced with the adoption of GRAP 101. National and provincial treasuries should assist the public sector with the following to enhance the fair valuing of biological assets:

- technical assistance and detailed guides on the interpretation of the standard
- drafting a template accounting policy that complies with the requirements of GRAP 101
- providing guidance on the required internal controls required to manage, safeguard and report on biological assets
- making market information accessible to assist in the valuation of the biological assets
- channelling funds to the entity to afford valuation fees, the use of experts and audit fees

8.5 Areas identified for further research

The study of fair value accounting challenges in the reporting of biological assets only focuses on the public sector. As the standards of GRAP 101 are based on the principles of the International Accounting Standards that are applied in the private sector, the fair value accounting challenges experienced in the private sector should also be explored to provide further recommendations to the public sector to successfully implement fair value accounting. In analysing the challenges experienced in the fair valuing, it is vital that the organisational documentation and face value documentation on the biological assets are available for study as the underlying documentation provides clarity on the specific challenges experienced. An analysis on IAS 41 compliant companies with access to the underlying valuation documentation and procedure manuals combined with the results of this study may form the foundation of an industry guide on the fair valuing of biological assets.

List of tables, graphs and figures

ANNEXURE A

The following comparison between the standards should assist in identifying the similarities and differences between the treatment of agriculture in the public and private sectors. Comparing the standards is essential as the implementation of these standards in the public and private organisations may complement one another. Lessons learnt can also be applied effectively once the comparison has been finalised.

Table 13: Comparison between the standards of GRAP 101 (ASB, 2006) and IAS 41 (IASB, 2011e)

GRAP 101	**IAS 41**	**Differences**
Objective		
.01 The objective of this standard is to prescribe the accounting treatment, financial statements presentation, and disclosures related to agricultural activity.	The objective of this standard is to prescribe the accounting treatment and disclosures related to agricultural activity.	Similar principle applied in the statements.
Scope		
.02 An entity that prepares and presents financial statements under the accrual basis of accounting shall apply this Standard in the recognition, measurement and disclosure of	1. This standard shall be applied to account for the following when they relate to agricultural activity:	GRAP 101 excludes guidance on

GRAP 101	IAS 41	Differences
agricultural activity.	(a) biological assets; (b) agricultural produce at the point of harvest; and (c) Government grants covered by paragraphs 34–35.	accounting for non-exchange revenue from government grants related to a biological asset. GRAP was specifically developed for accounting transactions in the Public Sector. The variances do not have an impact on the application of the standards.
.03 This standard shall be applied to account for the following when they relate to agricultural activity: (a) biological assets; and (b) agricultural produce at the point of harvest.		
.04 This standard does not apply to: (a) land related to agricultural activity (see the standards of GRAP on *Property, Plant and Equipment* and *Investment Property*) (GRAP 17); (b) intangible assets related to agricultural activity (see the standard of GRAP on *Intangible Assets*); and (c) non-exchange revenue from government grants related to biological assets (see the standard of GRAP on *Revenue from Non-Exchange Transactions (including Taxes and transfers)*.	2. This standard does not apply to: (a) land related to agricultural activity (see IAS 16 *Property, Plant and Equipment* and IAS 40 *Investment Property*); and (b) Intangible assets related to agricultural activity (see IAS 38 *Intangible Assets*).	
.05 This standard is applied to agricultural produce, which is	This standard is applied to agricultural produce, which	Similar principle

<table>
<tr><th>GRAP 101</th><th>IAS 41</th><th>Differences</th></tr>
<tr><td>the harvested product of the entity's biological assets, only at the point of harvest. Thereafter, the standard of GRAP on Inventories or another applicable standard of GRAP is applied. Accordingly, this standard does not deal with the processing of agricultural produce after harvest; for example, the processing of grapes into wine by a vintner that has grown the grapes. While such processing may be a logical and natural extension of agricultural activity, and the events taking place may bear some similarity to biological transformation, such processing is not included within the definition of agricultural activity in this standard.</td><td>is the harvested product of the entity's biological assets, only at the point of harvest. Thereafter, IAS 2 Inventories or another applicable standard is applied. Accordingly, this standard does not deal with the processing of agricultural produce after harvest; for example, the processing of grapes into wine by a vintner who has grown the grapes. While such processing may be a logical and natural extension of agricultural activity, and the events taking place may bear some similarity to biological transformation, such processing is not included within the definition of agricultural activity in this standard.</td><td>applied in the statements.</td></tr>
<tr><td>.06The table below provides examples of biological
assets, agricultural produce, and products that are the result of processing after harvest:<table><tr><th>Biological assets</th><th>Agricultural produce</th><th>Products that are the</th></tr></table></td><td>The table below provides examples of biological assets, agricultural produce, and products that are the result of processing after harvest:<table><tr><th>Biological Assets</th><th>Agricultural produce</th><th>Products that are the</th></tr></table></td><td>GRAP 101 includes an additional example (i.e. wildlife) of a biological asset, agricultural</td></tr>
</table>

GRAP 101			IAS 41			Differences
		result of processing after harvest			**result of processing after harvest**	produce, and the product that results from the processing after harvest. Terminology differences (i.e. bacon vs. cured hams) between GRAP 101 and IAS 41 which does not impact on the application of the standards.
Sheep	Wool	Yarn, carpet	Sheep	Wool	Yarn, carpet	
Trees in a plantation forest	Logs	Timber	Trees in a plantation forest	Logs	Timber	
Plants	Cotton	Thread, clothing	Plants	Cotton	Thread, clothing	
	Harvested cane	Sugar		Harvested cane	Sugar	
Dairy cattle	Milk	Cheese	Dairy cattle	Milk	Cheese	
Pigs	Carcass	Sausages, bacon	Pigs	Carcass	Sausages, cured hams	
Bushes	Leaf	Tea, cured tobacco	Bushes	Leaf	Tea, cured	

<table>
<tr><th>GRAP 101</th><th>IAS 41</th><th>Differences</th></tr>
<tr><td>
<table>
<tr><td>Vines</td><td>Grapes</td><td>Wine</td></tr>
<tr><td>Fruit trees</td><td>Picked fruit</td><td>Processed fruit</td></tr>
<tr><td>Wildlife (game)</td><td>Carcass</td><td>Venison</td></tr>
</table>
</td><td>
<table>
<tr><td></td><td></td><td>tobacco</td></tr>
<tr><td>Vines</td><td>Grapes</td><td>Wine</td></tr>
<tr><td>Fruit trees</td><td>Picked fruit</td><td>Processed fruit</td></tr>
</table>
</td><td></td></tr>
<tr><td colspan="3">Definitions</td></tr>
<tr><td>Agriculture-related definitions

.07 The following terms are used in this standard with the meanings specified:

Agricultural activity is the management by an entity of the biological transformation of biological assets for sale, into agricultural produce, or into additional biological assets.

Agricultural produce is the harvested product of the entity's biological assets.

A biological asset is a living animal or plant.

Biological transformation comprises the processes of growth,</td><td>Agriculture-related definitions

5. The following terms are used in this standard with the meanings specified:

Agricultural activity is the management by an entity of the biological transformation of biological assets for sale, into agricultural produce, or into additional biological assets.

Agricultural produce is the harvested product of the entity's biological assets.

A biological asset is a living animal or plant.</td><td>Similar principle applied in the statements.</td></tr>
</table>

GRAP 101	IAS 41	Differences
degeneration, production, and procreation that cause qualitative or quantitative changes in a biological asset. A *group of biological assets* is an aggregation of similar living animals or plants. *Harvest* is the detachment of produce from a biological asset or the cessation of a biological asset's life processes.	*Biological transformation* comprises the processes of growth, degeneration, production, and procreation that cause qualitative or quantitative changes in a biological asset. *Costs to sell* are the incremental costs directly attributable to the disposal of an asset, excluding finance costs and income taxes. A *group of biological assets* is an aggregation of similar living animals or plants. *Harvest* is the detachment of produce from a biological asset or the cessation of a biological asset's life processes.	
.08 Agricultural activities cover a diverse range of activities; for example, raising livestock, forestry, annual or perennial cropping, cultivating orchards and plantations, floriculture, and aquaculture (including fish farming). Certain common features exist within this diversity:	6. Agricultural activity covers a diverse range of activities; for example, raising livestock, forestry, annual or perennial cropping, cultivating orchards and plantations, floriculture, and aquaculture (including fish farming). Certain common features exist within this	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
(a) *Capability to change*. Living animals and plants are capable of biological transformation; (b) *Management of change*. Management facilitates biological transformation by enhancing, or at least stabilising, conditions necessary for the process to take place (for example, nutrient levels, moisture, temperature, fertility, and light). Such management distinguishes agricultural activity from other activities. For example, harvesting from unmanaged sources (such as ocean fishing and deforestation) is not agricultural activity; and (c) *Measurement of change*. The change in quality (for example, genetic merit, density, ripeness, fat cover, protein content, and fibre strength) or quantity (for example, progeny, weight, cubic metres, fibre length or diameter, and number of buds) brought about by biological transformation is measured and monitored as a routine management function.	diversity: (a) *Capability to change*. Living animals and plants are capable of biological transformation; (b) *Management of change*. Management facilitates biological transformation by enhancing, or at least stabilising, conditions necessary for the process to take place (for example, nutrient levels, moisture, temperature, fertility, and light). Such management distinguishes agricultural activity from other activities. For example, harvesting from unmanaged sources (such as ocean fishing and deforestation) is not agricultural activity; and (c) *Measurement of change*. The change in quality (for example, genetic merit, density, ripeness, fat cover, protein content, and fibre strength) or quantity (for example, progeny, weight, cubic metres, fibre length or diameter, and number of buds) brought about by biological transformation is measured and monitored	

GRAP 101	IAS 41	Differences
	as a routine management function.	
.09 Biological transformation results in the following types of outcomes: (a) asset changes through (i) growth (an increase in quantity or improvement in quality of an animal or plant), (ii) degeneration (a decrease in the quantity or deterioration in quality of an animal or plant), or (iii) procreation (creation of additional living animals or plants), or (b) production of agricultural produce such as latex, tea leaf, wool, and milk. .10 The key feature that differentiates agricultural activities from other related activities is the entity's management of the biological transformation. A resource may be managed by government through the use of mechanisms such as licensing and quotas but does not of itself result in the activity being classified as an agricultural activity under this standard. Agricultural activity also does not include using animals such as dogs and horses for policing. Similarly, animals or plants	7. Biological transformation results in the following types of outcomes: (a) asset changes through (i) growth (an increase in quantity or improvement in quality of an animal or plant), (ii) degeneration (a decrease in the quantity or deterioration in quality of an animal or plant), or (iii) procreation (creation of additional living animals or plants); or (b) production of agricultural produce such as latex, tea leaf, wool, and milk.	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
that are used primarily for non-productive purposes, such as recreational parks or game farms, are outside the scope of this standard.		
General definitions .11 The following terms are used in this standard with the meanings specified: An *active market* is a market where all the following conditions exist: (a) the items traded within the market are homogeneous; (b) willing buyers and sellers can normally be found at any time; and (c) prices are available to the Public *Assets* are resources controlled by an entity as a result of past events and from which future economic benefits or service potential are expected to flow to the entity. *Carrying amount* is the amount at which an asset is	**General definitions** 8. The following terms are used in this standard with the meanings specified: *An active market* is a market where all the following conditions exist: (a) the items traded within the market are homogeneous; (b) willing buyers and sellers can normally be found at any time; and (c) prices are available to the Public.	GRAP 101 does not include a definition for government grants as it is scoped out of GRAP 101. GRAP 101 excludes guidance on accounting for non-exchange revenue from government grants related to

GRAP 101	IAS 41	Differences
recognised in the statement of financial position. *Fair value* is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. Terms defined in other standards of GRAP are used in this standard with the same meaning as in those other standards of GRAP.	*Carrying amount* is the amount at which an asset is recognised in the statement of financial position. *Fair value* is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. *Government grants* are as defined in IAS 20 Accounting for government grants and disclosure of government assistance.	a biological asset GRAP was specifically developed for accounting transactions in the Public Sector. The variances do not have an impact on the application of the standards.
.12 The fair value of an asset is based on its present location and condition. As a result, for example, the fair value of cattle at a farm is the price for the cattle in the relevant market less the transport and other costs of getting the cattle to that market.	9. The fair value of an asset is based on its present location and condition. As a result, for example, the fair value of cattle at a farm is the price for the cattle in the relevant market less the transport and other costs of getting the cattle to that market.	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
Recognition and measurement		
.13 An entity shall recognise a biological asset or agricultural produce when, and only when: (a) the entity controls the asset as a result of past events; (b) it is probable that future economic benefits or service potential associated with the asset will flow to the entity; and (c) the fair value or cost of the asset can be measured reliably.	10. An entity shall recognise a biological asset or agricultural produce when, and only when: (a) the entity controls the asset as a result of past events; (b) it is probable that future economic benefits associated with the asset will flow to the entity; and (c) the fair value or cost of the asset can be measured reliably.	GRAP 101 brings in the concept of service potential – A Public Sector specific amendment which does not impact on the application of the standards.
.14 In agricultural activity, control may be evidenced by, for example, legal ownership of cattle and the branding or otherwise marking of the cattle on acquisition, birth, or weaning. The future benefits or service potential are normally assessed by measuring the significant physical attributes.	11. In agricultural activity, control may be evidenced by, for example, legal ownership of cattle and the branding or otherwise marking of the cattle on acquisition, birth, or weaning. The future benefits are normally assessed by measuring the significant physical attributes.	
.15 A biological asset shall be measured on initial recognition	12. A biological asset shall be measured on initial	Similar

GRAP 101	IAS 41	Differences
and at each reporting date at its fair value less estimated point-of-sale costs, except for the case described in paragraph .34 where the fair value cannot be measured reliably.	recognition and at each reporting period at its fair value less costs to sells, except for the case described in paragraph 30 where the fair value cannot be measured reliably.	paragraphs.
.16 When an entity initially acquires a biological asset at no or nominal cost, the biological asset should initially and subsequently be measured in accordance with paragraph .15.		
.17 Agricultural produce harvested from an entity's biological assets shall be measured at its fair value less estimated point-of-sale costs at the point of harvest. Such measurement is the cost at that date when applying the standard of GRAP on *Inventories* or another applicable standard of GRAP.	13. Agricultural produce harvested from an entity's biological assets shall be measured at its fair value less costs to sells at the point of harvest. Such measurement is the cost at that date when applying IAS 2 *Inventories* or another applicable standard.	Similar principle applied in the statements.
.18 Point-of-sale costs include commissions to brokers and dealers, levies by regulatory agencies and commodity exchanges, and transfer taxes and duties. Point-of-sale costs exclude transport and other costs necessary to get assets to		

GRAP 101	IAS 41	Differences
a market.		
.19 The determination of fair value for a biological asset or agricultural produce may be facilitated by grouping biological assets or agricultural produce according to significant attributes; for example, by age or quality. An entity selects the attributes corresponding to the attributes used in the market as a basis for pricing.	15. The determination of fair value for a biological asset or agricultural produce may be facilitated by grouping biological assets or agricultural produce according to significant attributes; for example, by age or quality. An entity selects the attributes corresponding to the attributes used in the market as a basis for pricing.	Similar principle applied in the statements.
.20 Entities often enter into contracts to sell their biological assets or agricultural produce at a future date. Contract prices are not necessarily relevant in determining fair value, because fair value reflects the current market in which a willing buyer and seller would enter into a transaction. As a result, the fair value of a biological asset or agricultural produce is not adjusted because of the existence of a contract. In some cases, a contract for the sale of a biological asset or agricultural produce may be an onerous contract, as defined in the standard of GRAP on *Provisions, Contingent*	16. Entities often enter into contracts to sell their biological assets or agricultural produce at a future date. Contract prices are not necessarily relevant in determining fair value, because fair value reflects the current market in which a willing buyer and seller would enter into a transaction. As a result, the fair value of a biological asset or agricultural produce is not adjusted because of the existence of a contract. In some cases, a contract for the sale of a biological asset or agricultural produce may be an onerous	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
Liabilities and Contingent Assets. The standard of GRAP on *Provisions, Contingent Liabilities and Contingent Assets* applies to onerous contracts.	contract, as defined in IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*. IAS 37 applies to onerous contracts.	
.21 If an active market exists for a biological asset or agricultural produce, the quoted price in that market is the appropriate basis for determining the fair value of that asset. If an entity has access to different active markets, the entity uses the most relevant one. For example, if an entity has access to two active markets, it would use the price existing in the market expected to be used.	17. If an active market exists for a biological asset or agricultural produce, the quoted price in that market is the appropriate basis for determining the fair value of that asset. If an entity has access to different active markets, the entity uses the most relevant one. For example, if an entity has access to two active markets, it would use the price existing in the market expected to be used.	Similar principle applied in the statements.
.22 If an active market does not exist, an entity uses one or more of the following, when available, in determining fair value: (a) the most recent market transaction price, provided that there has not been a significant change in economic circumstances between the date of that transaction and the	18. If an active market does not exist, an entity uses one or more of the following, when available, in determining fair value: (a) the most recent market transaction price, provided that there has not been a significant change in economic circumstances between the date of that	Similar paragraphs.

GRAP 101	IAS 41	Differences
reporting date; (b) market prices for similar assets with adjustment to reflect differences. For example, the market price of apple trees producing non-standard varieties may be based on current market prices observed in active markets for apple trees producing standard varieties and which are similar in other aspects; and (c) sector benchmarks such as the value of an orchard expressed per export tray, bushel, or hectare, and the value of cattle expressed per kilogram of meat.	transaction and the end of the reporting period; (b) market prices for similar assets with adjustment to reflect differences; and (c) sector benchmarks such as the value of an orchard expressed per export tray, bushel, or hectare, and the value of cattle expressed per kilogram of meat.	
.23 In some cases, the information sources listed in paragraph .22 may suggest different conclusions as to the fair value of a biological asset or agricultural produce. An entity considers the reasons for those differences, in order to arrive at the most reliable estimate of fair value within a relatively narrow range of reasonable estimates.	19. In some cases, the information sources listed in paragraph 18 may suggest different conclusions as to the fair value of a biological asset or agricultural produce. An entity considers the reasons for those differences, in order to arrive at the most reliable estimate of fair value within a relatively narrow range	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
	of reasonable estimates.	
.24 In some circumstances, market-determined prices or values may not be available for a biological asset in its present condition. In these circumstances, an entity uses the present value of expected net cash flows from the asset discounted at a current market determined pre-tax rate (where applicable) in determining fair value.	20. In some circumstances, market-determined prices or values may not be available for a biological asset in its present condition. In these circumstances, an entity uses the present value of expected net cash flows from the asset discounted at a current market determined pre-tax rate in determining fair value.	GRAP 101 refers to "where applicable" whilst IAS 41 does not detail an option. The terms do not have an impact on the application of the standards.
.25 The objective of a calculation of the present value of expected net cash flows is to determine the fair value of a biological asset in its present location and condition. An entity considers this in determining an appropriate discount rate to be used and in estimating expected net cash flows. The present condition of a biological asset excludes any	21. The objective of a calculation of the present value of expected net cash flows is to determine the fair value of a biological asset in its present location and condition. An entity considers this in determining an appropriate discount rate to be used and in estimating expected net cash flows. In determining the present	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
increases in value from additional biological transformation and future activities of the entity, such as those related to enhancing the future biological transformation, harvesting, and selling.	value of expected net cash flow, an entity includes the net cash flows that market participants would expect the asset to generate in its most relevant market.	
.26 An entity does not include any cash flows for financing the assets, taxation (where applicable), or re-establishing biological assets after harvest (for example, the cost of replanting trees in a plantation forest after harvest).	22. An entity does not include any cash flows for financing the assets, taxation, or re-establishing biological assets after harvest (for example, the cost of replanting trees in a plantation forest after harvest).	GRAP 101 refers to “where applicable” whilst IAS 41 does not detail an option. The terms do not have an impact on the application of the standards.
.27 In agreeing an arm’s length transaction price, knowledgeable, willing buyers and sellers consider the possibility of variations in cash flows. It follows that fair value	23. In agreeing an arm’s length transaction price, knowledgeable, willing buyers and sellers consider the possibility of variations in cash flows. It follows that fair	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
reflects the possibility of such variations. Accordingly, an entity incorporates expectations about possible variations in cash flows into either the expected cash flows, or the discount rate, or some combination of the two. In determining a discount rate, an entity uses assumptions consistent with those used in estimating the expected cash flows, to avoid the effect of some assumptions being double-counted or ignored.	value reflects the possibility of such variations. Accordingly, an entity incorporates expectations about possible variations in cash flows into either the expected cash flows, or the discount rate, or some combination of the two. In determining a discount rate, an entity uses assumptions consistent with those used in estimating the expected cash flows, to avoid the effect of some assumptions being double-counted or ignored.	
.28 Cost may sometimes approximate fair value, particularly when: (a) little biological transformation has taken place since initial cost incurrence (for example, for fruit tree seedlings planted immediately prior to a reporting date); or (b) the impact of the biological transformation on price is not expected to be material (for example, for the initial growth in a 30-year pine plantation production cycle).	24. Cost may sometimes approximate fair value, particularly when: (a) little biological transformation has taken place since initial cost incurrence (for example, for fruit tree seedlings planted immediately prior to the end of the reporting period); or (b) the impact of the biological transformation on price is not expected to be material (for example, for the initial growth in a 30-year pine plantation production	Similar paragraphs.

GRAP 101	IAS 41	Differences
	cycle).	
.29 Biological assets are often physically attached to land (for example, trees in a plantation forest). There may be no separate market for biological assets that are attached to the land but an active market may exist for the combined assets, that is, for the biological assets, raw land, and land improvements, as a package. An entity may use information regarding the combined assets to determine fair value for the biological assets. For example, the fair value of raw land and land improvements may be deducted from the fair value of the combined assets to arrive at the fair value of biological assets.	25. Biological assets are often physically attached to land (for example, trees in a plantation forest). There may be no separate market for biological assets that are attached to the land but an active market may exist for the combined assets, that is, for the biological assets, raw land, and land improvements, as a package. An entity may use information regarding the combined assets to determine fair value for the biological assets. For example, the fair value of raw land and land improvements may be deducted from the fair value of the combined assets to arrive at the fair value of biological assets.	Similar principle applied in the statements.
Gains and losses .30 A gain or loss arising on initial recognition of a biological asset at fair value less estimated point-of-sale costs and from a change in fair value less estimated point-of-sale costs of a biological asset shall be included in surplus or deficit for the	**Gains and losses** 26. A gain or loss arising on initial recognition of a biological asset at fair value less costs to sells and from a change in fair value less costs to sells of a biological asset shall be included in profit or loss for	The principles and requirements of the standards are similar.

GRAP 101	IAS 41	Differences
period in which it arises.	the period in which it arises.	Only terminology variances identified: Surplus/Deficit (GRAP) vs. Profit/Loss (IAS).
.31 A loss may arise on initial recognition of a biological asset, because estimated point-of-sale costs are deducted in determining fair value less estimated point-of-sale costs of a biological asset. A gain may arise on initial recognition of a biological asset, such as when a calf is born.	27. A loss may arise on initial recognition of a biological asset, because costs to sells are deducted in determining fair value less costs to sells of a biological asset. A gain may arise on initial recognition of a biological asset, such as when a calf is born.	Similar principle applied in the statements.
.32 A gain or loss arising on initial recognition of agricultural produce at fair value less estimated point-of-sale costs shall be included in surplus or deficit for the period in which it arises.	28. A gain or loss arising on initial recognition of agricultural produce at fair value less costs to sells shall be included in profit or loss for the period in which it arises.	The principles and requirements of the standards are similar.

GRAP 101	IAS 41	Differences
.33 A gain or loss may arise on initial recognition of agricultural produce as a result of harvesting.	29. A gain or loss may arise on initial recognition of agricultural produce as a result of harvesting.	Similar principle applied in the statements.
Inability to measure fair value reliably .34 There is a presumption that fair value can be measured reliably for a biological asset. However, that presumption can be rebutted only on initial recognition for a biological asset for which market-determined prices or values are not available and for which alternative estimates of fair value are determined to be clearly unreliable. In such a case, that biological asset shall be measured at its cost less any accumulated depreciation and any accumulated impairment losses. Once the fair value of such a biological asset becomes reliably measurable, an entity shall measure it at its fair value less estimated point-of-sale costs. Once a noncurrent biological asset meets the criteria to be classified as held for sale (or is included in a disposal group that is classified as held for sale) in accordance with the standard of	**Inability to measure fair value reliably** 30. There is a presumption that fair value can be measured reliably for a biological asset. However, that presumption can be rebutted only on initial recognition for a biological asset for which market-determined prices or values are not available and for which alternative estimates of fair value are determined to be clearly unreliable. In such a case, that biological asset shall be measured at its cost less any accumulated depreciation and any accumulated impairment losses. Once the fair value of such a biological asset becomes reliably measurable, an entity shall measure it at its fair value less costs to sells. Once a noncurrent biological asset meets the criteria to be classified as held for sale (or is included in a disposal group that is	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
GRAP on *Non-Current Assets Held for Sale and Discontinued Operations*, it is presumed that fair value can be measured reliably.	classified as held for sale) in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*, it is presumed that fair value can be measured reliably.	
.35 The presumption in paragraph .34 can be rebutted only on initial recognition. An entity that has previously measured a biological asset at its fair value less estimated point-of-sale costs continues to measure the biological asset at its fair value less estimated point-of-sale costs until disposal.	31. The presumption in paragraph 30 can be rebutted only on initial recognition. An entity that has previously measured a biological asset at its fair value less costs to sells continues to measure the biological asset at its fair value less costs to sells until disposal.	Similar principle applied in the statements.
.36 In all cases, an entity measures agricultural produce at the point of harvest at its fair value less estimated point-of-sale costs. This standard reflects the view that the fair value of agricultural produce at the point of harvest can always be measured reliably. .37 In determining cost, accumulated depreciation and accumulated impairment losses, an entity considers the	32. In all cases, an entity measures agricultural produce at the point of harvest at its fair value less costs to sells. This standard reflects the view that the fair value of agricultural produce at the point of harvest can always be measured reliably. 33. In determining cost, accumulated depreciation and accumulated impairment losses, an entity considers IAS 2 Inventories, IAS 16 Property, Plant and	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
standards of GRAP on *Inventories, Property, Plant and Equipment* and *Impairment of Assets.*	Equipment and IAS 36 Impairment of Assets.	
Government grants		
	34. An unconditional government grant related to a biological asset measured at its fair value less costs to sell shall be recognised in profit or loss when, and only when, the government grant becomes receivable. 35. If a government grant related to a biological asset measured at its fair value less costs to sell is conditional, including where a government grant requires an entity not to engage in specified agricultural activity, an entity shall recognise the government grant as income when, and only when, the conditions attaching to the government grant are met. 36. Terms and conditions of government grants vary. For example, a government grant may require an	GRAP does not address disclosure on government grants as IAS 20 and other standards on GRAP address the disclosure requirements.

GRAP 101	IAS 41	Differences
	entity to farm in a particular location for five years and require the entity to return all of the grant if it farms for less than five years. In this case, the government grant is not recognised as income until the five years have passed. However, if the government grant allows part of the government grant to be retained based on the passage of time, the entity recognises that part in profit or loss as time passes. 37. If a government grant relates to a biological asset measured at its cost less any accumulated depreciation and any accumulated impairment losses (see paragraph 30), IAS 20 is applied. 38. This standard requires a different treatment from IAS 20, if a government grant relates to a biological asset measured at its fair value less costs to sell or a government grant requires an entity not to engage in specified agricultural activity. IAS 20 is applied only to a government grant related to a biological asset measured at its cost less any accumulated	

GRAP 101	IAS 41	Differences
	depreciation and any accumulated impairment losses.	
Disclosure		
.38 An entity shall disclose the aggregate gain or loss arising during the current period on initial recognition of biological assets and agricultural produce and from the change in fair value less estimated point-of-sale costs of biological assets.	40. An entity shall disclose the aggregate gain or loss arising during the current period on initial recognition of biological assets and agricultural produce and from the change in fair value less costs to sell of biological assets.	Similar principle applied in the statements.
.39 An entity shall provide a description of each group of biological assets.	41. An entity shall provide a description of each group of biological assets.	Similar principle applied in the statements.
.40 The disclosure required by paragraph .39 may take the form of a narrative or quantified description.	42. The disclosure required by paragraph 41 may take the form of a narrative or quantified description.	Similar principle applied in the statements.
.41 An entity is encouraged to provide a quantified description of each group of biological assets, distinguishing between consumable and bearer biological assets or	43. An entity is encouraged to provide a quantified description of each group of biological assets, distinguishing between consumable and bearer	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
between mature and immature biological assets, as appropriate. For example, an entity may disclose the carrying amounts of consumable biological assets and bearer biological assets by group. An entity may further divide those carrying amounts between mature and immature assets. These distinctions provide information that may be helpful in assessing the timing of future cash flows. An entity discloses the basis for making any such distinctions.	biological assets or between mature and immature biological assets, as appropriate. For example, an entity may disclose the carrying amounts of consumable biological assets and bearer biological assets by group. An entity may further divide those carrying amounts between mature and immature assets. These distinctions provide information that may be helpful in assessing the timing of future cash flows. An entity discloses the basis for making any such distinctions.	
.42 Consumable biological assets are those that are to be harvested as agricultural produce or sold as biological assets. Examples of consumable biological assets are livestock intended for the production of meat, livestock held for sale, fish in farms, crops such as maize and wheat, and trees being grown for timber. Bearer biological assets are those other than consumable biological assets; for example, livestock from which milk is produced, grape vines, fruit trees, and trees from which firewood is harvested while the tree	44. Consumable biological assets are those that are to be harvested as agricultural produce or sold as biological assets. Examples of consumable biological assets are livestock intended for the production of meat, livestock held for sale, fish in farms, crops such as maize and wheat, and trees being grown for lumber. Bearer biological assets are those other than consumable biological assets; for example, livestock from which milk is produced, grape vines, fruit trees,	The principles applied in the standards are similar. Terminology variance of Timber vs. Lumber has no effect on the

GRAP 101	IAS 41	Differences
remains. Bearer biological assets are not agricultural produce but, rather, are self-regenerating.	and trees from which firewood is harvested while the tree remains. Bearer biological assets are not agricultural produce but, rather, are self-regenerating.	application of the standards.
.43 Biological assets may be classified either as mature biological assets or immature biological assets. Mature biological assets are those that have attained harvestable specifications (for consumable biological assets) or are able to sustain regular harvests (for bearer biological assets).	45. Biological assets may be classified either as mature biological assets or immature biological assets. Mature biological assets are those that have attained harvestable specifications (for consumable biological assets) or are able to sustain regular harvests (for bearer biological assets).	Similar principle applied in the statements.
.44 If not disclosed elsewhere in information published with the financial statements, an entity shall describe: (a) the nature of its activities involving each group of biological assets; and (b) non-financial measures or estimates of the physical quantities of: (i) each group of the entity's biological assets at the end of	46. If not disclosed elsewhere in information published with the financial statements, an entity shall describe: (a) the nature of its activities involving each group of biological assets; and (b) non-financial measures or estimates of the physical quantities of: (i) each group of the entity's biological assets at the	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
the period; and (ii) output of agricultural produce during the period.	end of the period; and (ii) output of agricultural produce during the period.	
45 An entity shall disclose the methods and significant assumptions applied in determining the fair value of each group of agricultural produce at the point of harvest and each group of biological assets.	47. An entity shall disclose the methods and significant assumptions applied in determining the fair value of each group of agricultural produce at the point of harvest and each group of biological assets.	Similar principle applied in the statements.
46 An entity shall disclose the fair value less estimated point-of-sale costs of agricultural produce harvested during the period, determined at the point of harvest	48. An entity shall disclose the fair value less costs to sells of agricultural produce harvested during the period, determined at the point of harvest.	Similar principle applied in the statements.
.47 An entity shall disclose: (a) the existence and carrying amounts of biological assets whose title is restricted, and the carrying amounts of biological assets pledged as security for liabilities;	49. An entity shall disclose: (a) the existence and carrying amounts of biological assets whose title is restricted, and the carrying amounts of biological assets pledged as security for	The only difference identified between the standards

GRAP 101	IAS 41	Differences
(b) biological assets for which the entity's use or capacity to sell is subject to restrictions imposed by regulations that have a significant impact on their total fair value less estimated point-of-sale costs. The total and restricted amounts of those biological assets shall be disclosed, together with details of the nature and extent of those restrictions; (c) the amount of commitments for the development or acquisition of biological assets; and (d) financial risk management strategies related to agricultural activity.	liabilities; (b) the amount of commitments for the development or acquisition of biological assets; and (c) financial risk management strategies related to agricultural activity.	relates to the GRAP specific disclosure on information in .47(c) which is a government specific disclosure requirement - Biological assets for which the entity's use or capacity to sell is subject to restrictions imposed by regulations that have a significant impact on their

GRAP 101	IAS 41	Differences
		total fair value less estimated point-of-sale costs.
.48 An entity shall present a reconciliation of changes in the carrying amount of biological assets between the beginning and the end of the current period. The reconciliation shall include: (a) the gain or loss arising from changes in fair value less estimated point-of-sale costs; (b) increases due to purchases; (c) increases or decreases due to transfers; (d) decreases attributable to sales and biological assets classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with the standard of GRAP on Non-Current Assets Held for Sale and Discontinued Operations;	50. An entity shall present a reconciliation of changes in the carrying amount of biological assets between the beginning and the end of the current period. The reconciliation shall include: (a) the gain or loss arising from changes in fair value less costs to sells; (b) increases due to purchases; (c) decreases attributable to sales and biological assets classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with IFRS 5; (d) decreases due to harvest; (e) increases resulting from business combinations;	The only difference identified between the standards relates to the GRAP specific disclosure on transfer information in .48(c) which is a government specific disclosure

GRAP 101	IAS 41	Differences
(e) decreases due to harvest; (f) increases resulting from entity combinations; (g) net exchange differences arising on the translation of financial statements of a foreign entity; and (h) other changes.	(f) net exchange differences arising on the translation of financial statements into a different presentation currency, and on the translation of a foreign operation into the presentation currency of the reporting entity; and (g) other changes.	requirement. Terminology difference between GRAP and IAS (entity combination vs. business combination) does not have an effect on the application of the standards.
.49 The fair value less estimated point-of-sale costs of a biological asset can change due to both physical changes and price changes in the market. Separate disclosure of physical and price changes is useful in appraising current period performance and future prospects, particularly when there is a production cycle of more than one year. In such	51. The fair value less costs to sells of a biological asset can change due to both physical changes and price changes in the market. Separate disclosure of physical and price changes is useful in appraising current period performance and future prospects, particularly when there is a production cycle of more	The principles and requirements of the standards are similar. Only

GRAP 101	IAS 41	Differences
cases, an entity is encouraged to disclose, by group or otherwise, the amount of change in fair value less estimated point-of-sale costs included in surplus or deficit due to physical changes and due to price changes. This information is generally less useful when the production cycle is less than one year (for example, when raising chickens or growing cereal crops).	than one year. In such cases, an entity is encouraged to disclose, by group or otherwise, the amount of change in fair value less costs to sells included in profit or loss due to physical changes and due to price changes. This information is generally less useful when the production cycle is less than one year (for example, when raising chickens or growing cereal crops).	terminology variances identified: Surplus/Deficit (GRAP) vs. Profit/Loss (IAS).
.50 Biological transformation results in a number of types of physical change – growth, degeneration, production, and procreation, each of which is observable and measurable. Each of those physical changes has a direct relationship to future economic benefits or service potential. A change in fair value of a biological asset due to harvesting is also a physical change.	52. Biological transformation results in a number of types of physical change— growth, degeneration, production, and procreation, each of which is observable and measurable. Each of those physical changes has a direct relationship to future economic benefits. A change in fair value of a biological asset due to harvesting is also a physical change.	GRAP 101 brings in the concept of service potential – A Public Sector specific amendment that will not affect the initial adoption of

GRAP 101	IAS 41	Differences
		GRAP 101.
.51 Agricultural activity is often exposed to climatic, disease and other natural risks. If an event occurs that gives rise to a material item of revenue or expense, the nature and amount of that item are disclosed in accordance with the standard of GRAP on Presentation of Financial Statements. Examples of such an event include an outbreak of a virulent disease, a flood, a severe drought or frost, and a plague of insects.	53. Agricultural activity is often exposed to climatic, disease and other natural risks. If an event occurs that gives rise to a material item of income or expense, the nature and amount of that item are disclosed in accordance with IAS 1 Presentation of Financial Statements. Examples of such an event include an outbreak of a virulent disease, a flood, a severe drought or frost, and a plague of insects.	The principles and requirements of the standards are similar. Only terminology variances identified: Revenue (GRAP) vs. Income (IAS).
Additional disclosures for biological assets where fair value cannot be measured reliably .52 If an entity measures biological assets at their cost less	**Additional disclosures for biological assets where fair value cannot be measured reliably** 54. If an entity measures biological assets at their cost	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
any accumulated depreciation and any accumulated impairment losses (see paragraph .34) at the end of the period, the entity shall disclose for such biological assets: (a) a description of the biological assets; (b) an explanation of why fair value cannot be measured reliably; (c) if possible, the range of estimates within which fair value is highly likely to lie; (d) the depreciation method used; (e) the useful lives or the depreciation rates used; and (f) the gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period.	less any accumulated depreciation and any accumulated impairment losses (see paragraph 30) at the end of the period, the entity shall disclose for such biological assets: (a) a description of the biological assets; (b) an explanation of why fair value cannot be measured reliably; (c) if possible, the range of estimates within which fair value is highly likely to lie; (d) the depreciation method used; (e) the useful lives or the depreciation rates used; and (f) the gross carrying amount and the accumulated depreciation (aggregated with accumulated impairment losses) at the beginning and end of the period.	
.53 If, during the current period, an entity measures biological assets at their cost less any accumulated depreciation and	55. If, during the current period, an entity measures biological assets at their cost less any accumulated	The principles and

GRAP 101	IAS 41	Differences
any accumulated impairment losses (see paragraph .34), an entity shall disclose any gain or loss recognised on disposal of such biological assets and the reconciliation required by paragraph .48 shall disclose amounts related to such biological assets separately. In addition, the reconciliation shall include the following amounts included in surplus or deficit related to those biological assets: (a) impairment losses; (b) reversals of impairment losses; and (c) depreciation.	depreciation and any accumulated impairment losses (see paragraph 30), an entity shall disclose any gain or loss recognised on disposal of such biological assets and the reconciliation required by paragraph 50 shall disclose amounts related to such biological assets separately. In addition, the reconciliation shall include the following amounts included in profit or loss related to those biological assets: (a) impairment losses; (b) reversals of impairment losses; and (c) depreciation.	requirements of the standards are similar. Only terminology variances identified: Surplus/Deficit (GRAP) vs. Profit/Loss (IAS).
.54 If the fair value of biological assets previously measured at their cost less any accumulated depreciation and any accumulated impairment losses becomes reliably measurable during the current period, an entity shall disclose for those biological assets:	56. If the fair value of biological assets previously measured at their cost less any accumulated depreciation and any accumulated impairment losses becomes reliably measurable during the current period, an entity shall disclose for those biological assets:	Similar principle applied in the statements.

GRAP 101	IAS 41	Differences
(a) a description of the biological assets; (b) an explanation of why fair value has become reliably measurable; and (c) the effect of the change.	(a) a description of the biological assets; (b) an explanation of why fair value has become reliably measurable; and (c) the effect of the change.	
	Government grants 57. An entity shall disclose the following related to agricultural activity covered by this standard: (a) the nature and extent of government grants recognised in the financial statements; (b) unfulfilled conditions and other contingencies attaching to government grants; and (c) significant decreases expected in the level of Ggvernment grants.	GRAP does not address disclosure on government grants as IAS 20 and other standards on GRAP address the disclosure requirements.
Transitional arrangements and Effective date		

GRAP 101	IAS 41	Differences
.55 All provisions of this standard shall be applied to biological assets and/or agricultural produce on or after the effective date of this standard.	58. This standard becomes operative for annual financial statements covering period beginning on or after 1 January 2003. Earlier application is encouraged. If an entity applies this standard for periods beginning before 1 January 2003, it shall disclose that fact. 59. This standard does not establish any specific transitional provisions. The adoption of this standard is accounted for in accordance with IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors.* 60. Paragraphs 5, 6, 17, 20 and 21 were amended and paragraph 14 deleted by *Improvements to IFRSs* issued in May 2008. An entity shall apply those amendments prospectively for annual periods beginning on or after 1 January 2009. Earlier application is permitted. If an entity applies the amendments for an earlier period it shall disclose that fact.	Transitional provisions are not applicable to private entities.
Initial adoption of accrual accounting .56 Where, on adoption of the accrual basis of accounting for the first time, an entity initially recognises a biological asset and/or agricultural produce on adoption of this standard, the entity shall report the effect of the initial recognition of the agricultural activity as an adjustment to the opening balance of accumulated surpluses or deficits for the period in which the standard is first adopted.		
Initial adoption of Standard for entities already applying accrual accounting .57 Prior to initial adoption of this standard, an entity may recognise its biological assets on a basis other than fair value less estimated point-of-sale costs, and/or agriculture produce on a basis other than fair value less estimated point-of-sale		

GRAP 101	IAS 41	Differences
costs at the point of harvest. The standard of GRAP on Accounting Policies, Changes in Accounting Estimates and Errors applies to any change in accounting policies that occurs when an entity first adopts this standard. **Effective date** .58 An entity shall apply this standard of GRAP for annual financial statements covering periods beginning on or after a date to be determined by the Minister of Finance in a regulation to be published in accordance with section 91(1)(b) of the PFMA, as amended.		

Summary

The comparison between GRAP 101 and IAS 41 clearly highlights that fair value reporting on agriculture in the private and public sectors is based on similar requirements and principles. Variances identified between fair value reporting on agriculture, and thus biological assets, on these standards can be summarised as follows:

- IAS 41 does not address transactions on agricultural activities and biological assets at nominal value or no value. GRAP 101 specifically includes the possibility of transactions of this nature.

- GRAP 101 does not detail reporting requirements for transactions incurred from government grants as GRAP was specifically developed to address transactions incurred in the public sector.
- GRAP 101 considers service potential whilst IAS 41 considers future economic benefits. Other terminology variances includes the reference to revenue (IAS: income) and surplus or deficit (IAS: profit or loss). The effect of these terminology variances does not have an impact on the implementation and/or application of the standards.

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