



**Statistics
South Africa**

Preferred supplier of quality statistics



An overview of environmental data and statistics within South Africa

**Paper: Workshop on
environmental statistics, Addis
Ababa, Ethiopia
16 – 20 July 2007**

Contents

List of Figures.....	ii
List of Abbreviations.....	iii
1. Introduction.....	4
2. Environmental Economic Accounting and NRA within Stats SA.....	4
2.1 National Accounts.....	5
2.2 Application of National Accounts.....	6
2.4 Budget.....	9
3. Natural resource accounts developed in Stats SA up to the present.....	9
3.1 Water.....	9
3.2 Minerals.....	9
3.3 Land.....	9
3.4 Energy.....	10
4. Availability of sources of data.....	10
4.1 Current.....	10
4.2 Future.....	10
5. Initiatives.....	10
5.1 London City Group.....	11
5.2 Oslo City Group.....	11
5.3 Natural Resource Accounting in East and Southern Africa.....	11
5.4 NRA Advisory Committee.....	11
6. Future Projects.....	12

List of Figures

Figure 1.1: Stats SA Organisational Structure	5
Figure 1.2: National Accounts Structure	6
Figure 1.3: Procedure for the development of NRAs in South Africa	8

List of Abbreviations

ANA	Application of National Accounts
ARC	Agricultural Research Council
CEEPA	Centre for Environmental Economics and Policy in Africa
CSIR	Council for Scientific and Industrial Research
DEAT	Department of Environmental Affairs and Tourism
DDG	Deputy Director General
DME	Department of Minerals and Energy
DWAF	Department of Water Affairs and Forestry
EEA	Environmental – Economic Accounting
GDP	Gross Domestic Product
ICP	International Comparison Program
NAD	National Accounts Development
NRA	Natural Resource Accounting
NRAESA	Natural Resource Accounting in East and Southern Africa
RSC	Regional Steering Committee
SA	South Africa
SAM	Social Accounting Matrix
SEEA	System of Environmental and Economic Accounts
SEI	Socio-Economic Integration
SG	Statistician General
SNA 93	System of National Accounts 1993
Stats SA	Statistics South Africa
SU-tables	Supply and Use tables
TSA	Tourism Satellite Account
UN	United Nations
UNSD	United Nations Statistical Division

1. Introduction

The purpose of this paper is to give an overview of environmental data and statistics within South Africa (SA), to provide an introduction as to how Natural Resource Accounting fits into the structure of Statistics South Africa (Stats SA), the work that has been done on NRAs thus far as well as future plans and projects to further develop NRAs.

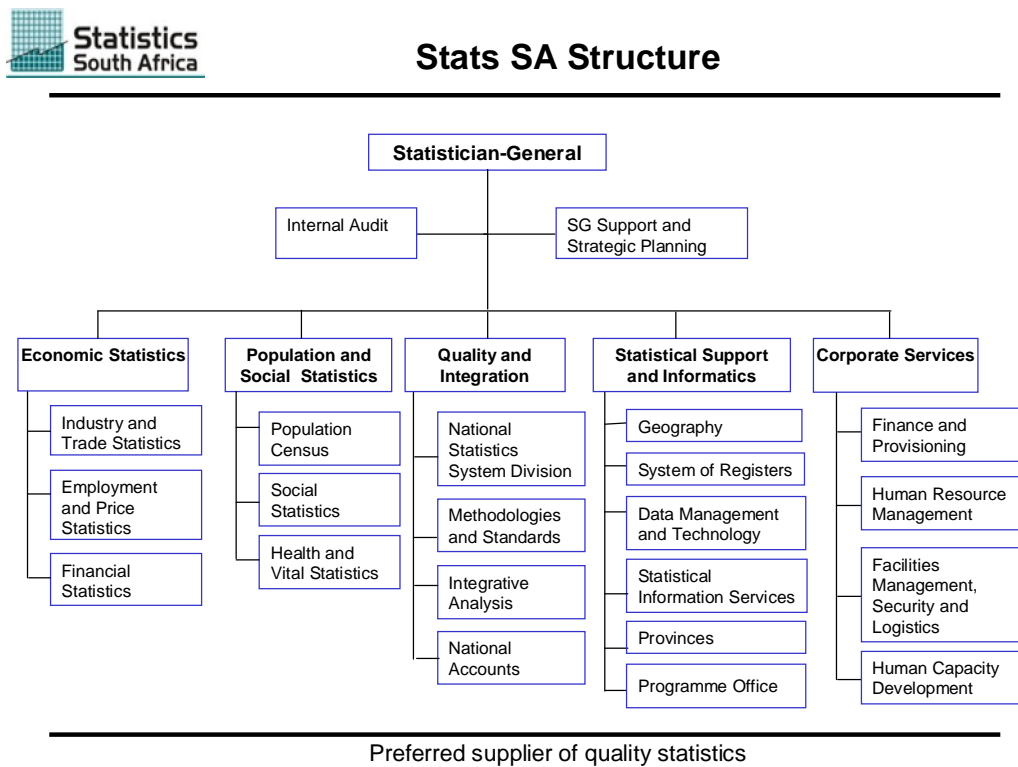
Part 2 explains the organisational structure of Stats SA and looks at which division is responsible for the development of Natural Resource Accounts (NRAs) within Stats SA, and the steps followed in the compilation of an official NRA report as well as the funding of these projects. Part 3 provides an overview of the work that has been done in the past to develop NRAs and the way forward. Part 4 discusses the various data sources that Stats SA utilises and the research into possible future data resource that Stats SA could make use of. Part 5 examines the various local and international initiatives that Stats SA is a member of and the vital role they play in the bettering of NRAs in SA. Finally; part 6 looks at all the future and current projects that are planned to improve the quality and the presentation of NRAs at Stats SA.

2. Environmental Economic Accounting and NRA within Stats SA

This section provides a brief overview of the organisational structure of Stats SA and indicates how NRAs and environmental statistics fit into the overall structure of the organisation.

Figure 1.1 shows the organisational structure of Stats SA. It indicates the 5 clusters and the divisions within the clusters. The Statistician General (SG) is the head of the organisation along with his supporting divisions namely Internal Audit and SG support and strategic planning. The structure is further divided into 5 main clusters namely: Economic Statistics, Population and Social Statistics, Quality and Integration, Statistical Support and Informatics and Corporate Services. Each cluster has a Deputy Director General (DDG) as a head.

Figure 1.1: Stats SA Organisational Structure¹



Each cluster is further divided into divisions with an executive manager heading each division. The cluster which is of importance to this paper is the cluster of Quality and Integration within which the division of National Accounts is located. The National Accounts division will now be further explored.

2.1 National Accounts

Figure 1.2 shows the organisational structure of the division: National Accounts. National Accounts consist of three components namely:

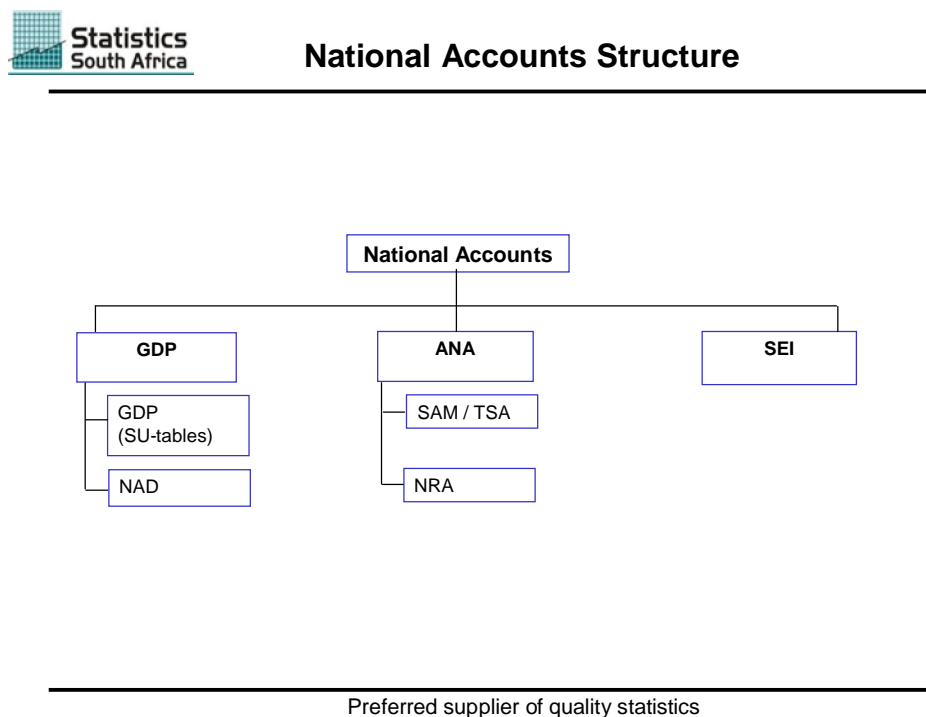
- Gross domestic product (GDP) (also responsible for the compilation of supply and use tables (SU-tables) ;
- Application of National Accounts (ANA)²;
- Socio-Economic Integration (SEI).

The responsibility for compiling NRAs is that of the component ANA. This component will now be discussed in more detail.

¹ Statistics South Africa, Annual report 2005/06.

² National accounts is responsible for their own research to improve projects, papers etc.

Figure 1.2: National Accounts Structure



2.2 Application of National Accounts

This component is responsible for compiling the social accounting matrix (SAM) and satellite accounts. The satellite accounts that are currently compiled are the tourism satellite account (TSA) and the various NRAs. Anemé Malan is the manager for ANA.

2.3 Procedures in the compilation of an official NRA report

Stats SA compiles NRAs, using the methodology set out in the Integrated System of Environmental and Economic Accounts (SEEA)³. The reasons for using the SEEA are:

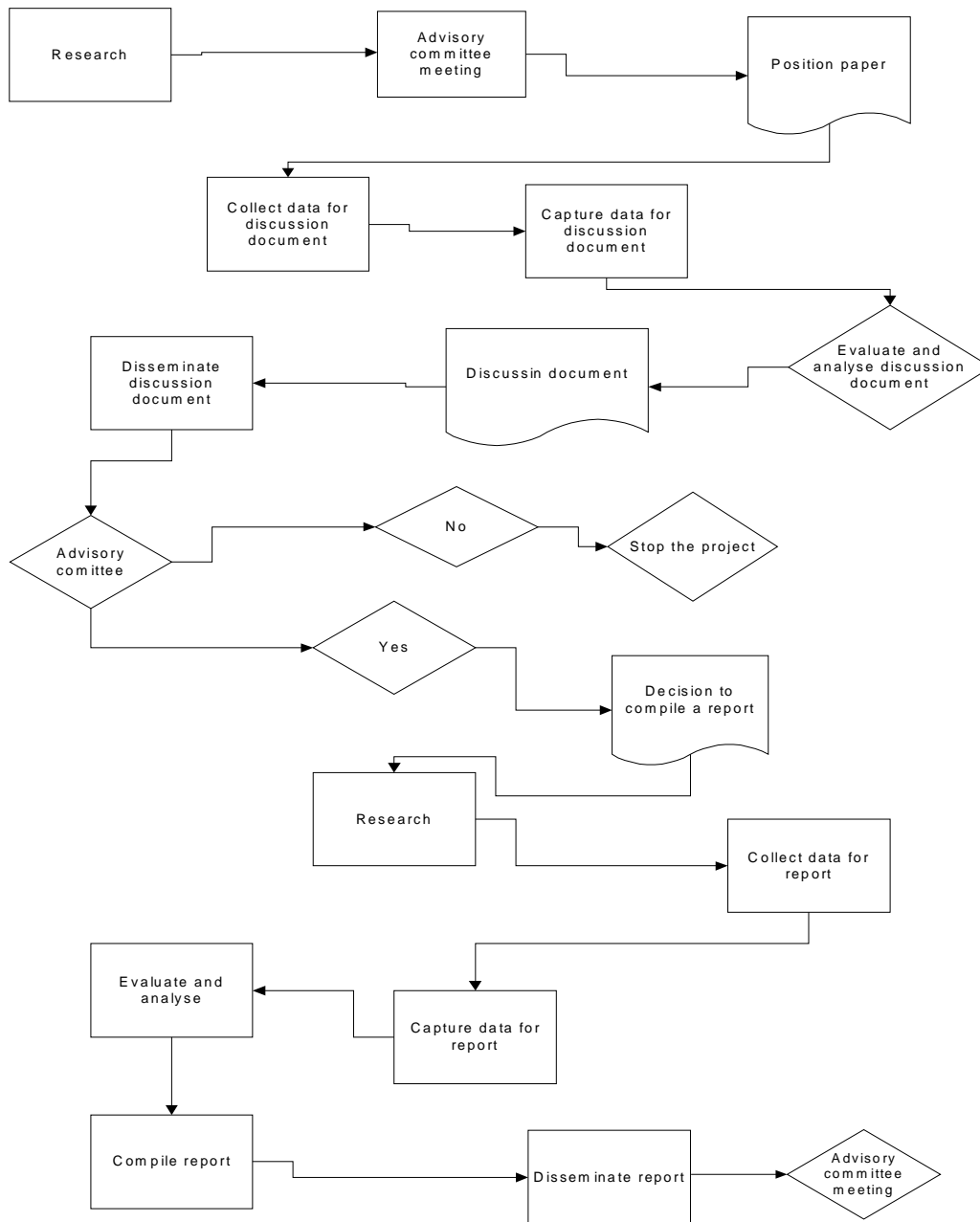
- there is a direct link between the SEEA and the System of National Accounts (SNA 93) that Stats SA currently uses to produce the national accounts; and
- the SEEA is an established methodology used internationally by the majority of countries engaged in natural resource accounting.

³ Statistics South Africa, Strategy for NRAs for South Africa 2005.

Figure 1.3 shows the procedure for compiling an NRA report. An official NRA report goes through three major steps during its development, namely:

- Firstly, research is conducted to determine the feasibility of the compilation of accounts for the specific resource. This is done through the compilation of a position paper;
- Secondly if it is feasible, the NRA is developed and published as a discussion document on the Stats SA's website. The purpose is to encourage discussions and debates on the data, structure, usefulness and findings of the specific NRA. In this regard the NRA advisory committee plays an important role. The role of the NRA advisory committee is to insure continued relevance and reliability of NRAs produced by Stats SA, as well as to assist with priorities in the compilation of NRAs. The committee can also, as needed, assist with technical matters. The NRA advisory committee consists of representatives from DEAT, DWAF, the Council for Scientific and industrial Research (CSIR), CEEPA, the University of Pretoria, the Agricultural Research Council (ARC) and a representative for each natural resource account area from relevant departments.
- Lastly the recommendations received from stakeholders are incorporated. If the quality of data, methodology etc are not satisfactory then the process stops at the discussion stage but if the quality of data, methodology etc is found to be satisfactory, the NRA is updated, published and disseminated as an official report.

Figure 1.3: Procedure for the development of NRAs in South Africa⁴



⁴ Statistics South Africa, Strategy for NRAs for South Africa 2005.

2.4 Budget

In the NRA division there are currently 3 funded posts. These posts consist of 1 team leader and 2 economists. The total budget for the NRA project is about R800 000.

3. Natural resource accounts developed in Stats SA up to the present

This section provides a brief overview of the work that Stats SA has done in the past regarding the official reports and discussion documents published on water and minerals accounts, the discussion documents for land and energy accounts and the positions papers in the process of been completed for air quality, timber and forest and aquatic ecosystem and biodiversity accounts. The future plans for each account will be mentioned.

3.1 Water

- A discussion document on 'NRA: Water Accounts of the Upper Vaal Water Management Area, 1991-2000' was published in September 2002. This discussion document concluded that it is possible to compile water recourse accounts for the Upper Vaal Water Management area using the framework proposed by the UN.
- A report was published in January 2004 on 'NRA - Water accounts for 19 water management areas, 2000'. This report contains the first water account (in physical terms) for all 19 water management areas in SA.
- A discussion document for 'Water quality accounts for SA, 2000' was published in April 2005. This discussion document contains water quality accounts for SA and aims to assess the quality of water recourses to determine their fitness-for-use for various water use sectors.
- A discussion document "Updated Water Account for SA, 2000" was published in December 2006. This discussion document contains updated water accounts so as to improve the measurement of the value of water for economic well-being and to monitor the interactions between the environment and economic activity.
- At present stakeholder workshops are being held on the publication of the Water Accounts for 2006.

3.2 Minerals

- A discussion document 'NRA: Mineral accounts for SA 1980 – 2000', was published in September 2002; and
- An official report was published in September 2004 for 'NRA, Mineral accounts for SA, 1980-2001'.
- Currently looking at the classification of minerals in SA and the link with the SEEA classifications and this document will be available by March 2008.

3.3 Land

- A discussion document has been published in December 2004 for 'Land accounts– including land-use and land cover – for SA, 1994/1995'.
- This project has been stopped due to staff resignations.

3.4 Energy

- A discussion document for 'Energy accounts for SA, 1995-2001' was updated in April 2005.
- Currently looking at the classification of energy in South Africa and the link with the SEEA classifications and this document will be available by March 2008

4. Availability of sources of data

This section looks at the availability of data sources that Stats SA currently makes use of as well as the future projects that are planned which have a main purpose of researching new possible data sources for Stats SA to utilise for NRA development.

4.1 Current

Stats SA is currently fully dependant on the line ministries (e.g. The Department of Water Affairs and Forestry (DWAF), the Department of Minerals and Energy (DME), the Department of Environmental Affairs and Tourism (DEAT), etc) for the data needed to compile NRAs. This presents certain challenges, namely:

- Getting 'buy-in' from the line ministries for the usefulness of compiling NRAs;
- Co-ordination between the current formats and structures according to which the line ministries gather their information, and the data needs from a SEEA and NRA perspective; and
- Limited control over the quality and integrity of the data that is used (in terms of definitions, methodology, sampling, etc);

Representatives from the line ministries that work with the environmental data are actively involved in the NRA project through their participation in the NRA advisory committee.

4.2 Future

A project which is currently running is a Stats SA survey area audit. The main aim of this project is to perform an audit of all Stats SA surveys and questionnaires to identify possible internal data sources that can be used to compile NRAs and to make improvements on the data sources that are identified. Ideally Stats SA should one day be in the position to collect all the environmental data needed for the compilation of NRAs on its own, and not be dependant on the line ministries for environmental data.

5. Initiatives

This section gives a brief overview of the various local and international initiatives that Stats SA is a member of as well as how these groups play a vital role in the bettering of NRAs in SA. These initiatives are the United Nations Committee of Experts on Environmental-Economic Accounting, London city group, Oslo city group, Natural resource accounting in East and Southern Africa group and the NRA advisory committee.

5.1 London City Group

Stats SA is a member of the London Group on Environmental Accounting. The London Group on Environmental Accounting was formed in 1993 to provide an informed forum for practitioners to share their experience for developing and implementing environmental satellite accounts linked to the economic accounts of the system of national accounts. Participation includes representatives from statistical offices and international organisations. Stats SA had the pleasure of hosting the 11th London Group Meeting in March 2007.

5.2 Oslo City Group

Another City Group which Stats SA is a member of is the Oslo City Group on energy statistics. The Oslo Group is designed to be a forum for the countries to discuss methodological issues, learn from good practices and to contribute to the methodological development of energy statistics. In a longer perspective, an objective will also be to harmonise energy statistics among countries, and thereby support the improvement of international energy statistics.

5.3 Natural Resource Accounting in East and Southern Africa

Stats SA is also a member of Natural Resource Accounting in East and Southern Africa (NRAESA). The regional steering committee (RSC) consists of representatives from agencies in the project, which includes Centre for Environmental Economics and Policy in Africa (CEEPA), the coordinators of NRA country team and project technical advisors. The countries which are involved include SA, Namibia, Botswana, Tanzania, Ethiopia and Uganda. The mission of CEEPA is to enhance the capacity of African researchers to conduct environmental economics and policy inquiry of relevance to African problems and increase awareness of environmental and economic managers and policy makers in the role of environmental economics in sustainable development.

CEEPA facilitates training of Stats SA NRA staff, [the same applies to the other countries participating in NRAESA]. In particular, CEEPA is provided with information on who is involved in constructing the different accounts and what their specific training needs are. CEEPA will then organize to either deliver the training or enlist the assistance of appropriate manpower [e.g., from the United Nations Statistical Division (UNSD)].

5.4 NRA Advisory Committee

The NRA advisory committee consists of representatives from DEAT, DWAF, CSIR, CEEPA, the University of Pretoria, ARC and a representative for each natural resource account area from relevant departments. The role of the NRA advisory committee is to insure continued relevance and reliability of NRAs produced by Stats SA, as well as to assist with priorities in the compilation of NRAs. The committee can also, as needed, assist with technical matters.

6. Future Projects

Stats SA is currently conducting research to improve the presentation of its water account. The main aim of this research is to look at better methods to present the water account in a more user friendly way. This will be done through the development of a pamphlet.

A longer term vision is the establishment of an Environmental- Economic Accounting (EEA) division within Stats SA. This section would ideally be responsible for the collection of environmental data and statistics for SA, as well as the compilation of NRAs for SA.