# A USER NEEDS ASSESSMENT OF THE STATE OF THE ENVIRONMENT (SOE) REPORT FOR THE CITY OF CAPE TOWN

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## Declaration

I, Lize Jennings, hereby declare that the contents of this thesis represent my own work, and that the thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Technikon.

Jennings.....
Lize Jennings

25/11/2004.....
Date

# ABSTRACT

The City of Cape Town (CCT) produced its first State of Environment report in 1999 as part of their Integrated Metropolitan Environmental Policy (IMEP) development process. The first report was developed by the City's Environmental Management Department, assisted by the Environmental Evaluation Unit at the University of Cape Town. It was developed through a synthesis of the findings of specialist baseline studies, information gathered from literature reviews, issues and indicators workshops and consultation with other specialists and authorities in order to obtain a suitable reporting approach and structure.

Every year, the progress in each theme is assessed in the SoE report through the collection of information. This information is compared to the information in the previous year's SoE report and long-term trends are identified.

The CCT has been producing the SoE report since 1999 and has to date produced five full reports and four accompanying summary reports. There is however limited knowledge of who the users of this report are as well as how they use the report in the future. This study attempts to provide the CCT with a better indication of the answers to these questions.

The sample group was limited to those users with e-mail addresses. The data for this study were collected through a questionnaire sent to all the individuals and organisations on the IMEP database who received the SoE report in the past five years. The

questionnaire asked the users how they used the report, what they liked and didn't like about the reports and how the report could be improved in order to meet their information needs and requirements.

The report is used by a number of different sectors of society, especially individuals from government departments. There is however a need to reassess a number of the aspects of the report. These include the use of technical language in the summary report, the gap between the full and summary reports, the needs of the different users, the use of different products and which products are suitable for the different users, the need for a more interactive website, the need for the information in the report to be up-to-date and the assessment of the themes and indicators.

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Thank you to my family and the special people in my life who have pushed me to complete this.

# ACRONYMS AND ABBREVIATIONS

| | | |
|---|---|---|
| CCT | : | City of Cape Town |
| CEIA | : | Centre d'Eustudis d'Informacio Ambiental |
| CEROI | : | City Environmental Reports on the Internet |
| DEAT | : | Department of Environmental Affairs and Tourism |
| DPLG | : | Department of Provincial and Local Government |
| DWAF | : | Department of Water Affairs and Forestry |
| EEA | : | European Environment Agency |
| EEU | : | Environmental Evaluation Unit |
| EMD | : | Environmental Management Department |
| ERD | : | Environmental Resource Directory |
| GEO | : | Global Environment Outlook |
| IDP | : | Integrated Development Plan |
| IMEP | : | Integrated Metropolitan Environmental Policy |
| IPWEA | : | Institute of Public Works Engineering Australia |
| LA21 | : | Local Agenda 21 |
| MEA | : | Multilateral Environmental Agreement |
| MoU | : | Memorandum of Understanding |
| NEMA | : | National Environmental Management Act |
| NGO | : | Non-governmental organisation |
| NSW | : | New South Wales |
| PDF | : | Portable Document Format |

| | | |
|---|---|---|
| RSA | : | Republic of South Africa |
| SoE | : | State of Environment |
| UCT | : | University of Cape Town |
| UN | : | United Nations |
| UNCED | : | United Nations Conference on Environment and Development |
| UNEP | : | United Nations Environment Program |

# Chapter 1 : Introduction

## 1.1 Background and Literature Review

### 1.1.1 Environmental Information

Reliable and timely information is important for sound decision-making and for raising awareness around a number of priority issues (Jones, 2001). This is especially important in terms of environmental information. There was increased recognition of environmental problems during the 1960s and 1970s and a number of governments established Departments of the Environment and Environmental Protection Agencies. This led to a demand for reliable environmental information from government, as well as from business needing to comply with new legislation and environmental regulations and non-governmental organisations (NGOs) requiring it for environmental awareness raising and drawing attention to specific environmental problems (Denisov and Christoffersen, 2001).

Although the term 'environmental information' has been used since the 1960s or even earlier, it was only in 1998 that an official definition was given for environmental information. At the *Convention on Access to Information, Public Participation in Decision-making and Access to Environmental Matters* held in Aarhus, Denmark in June 1998 (also known as the Aarhus Convention), it was defined as

*"Any information in written, visual, aural, electronic or any other material form on:*

*(a) the state of the elements of the environment;*

*(b) Factors...activities or measures, affecting or likely to affect the elements of the environment...and cost-benefit and other economic analyses and assumptions used in environmental decision-making;*

(c) *The state of human health and safety, conditions of human life, cultural sites and built structures inasmuch as they are or may be affected by the state of the elements of the environment"* (Aarhus Convention, 1998).

It has been noted on a number of occasions that environmental information should be available and accessible to all. In principle 10 of the Rio Declaration, which was developed at the United Nations Conference on Environment and Development (UNCED, also known as the Earth Summit), held in Rio de Janeiro in 1992, it points out that:

*"Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities...and the opportunity to participate in decision-making process. States shall facilitate and encourage public awareness and participation by making information widely available"* (United Nations, 1992b).

The Agenda 21 document (United Nations, 1992a), which is the global strategy for sustainable development developed at the Earth Summit, also points to the wider

implications of environmental information in a larger sustainable development context. In Chapter 40: Information for Decision-Making, it states that:

"*In sustainable development, everyone is a user and provider of information considered in the broad sense. That includes data, information, appropriately packaged experience and knowledge. The need for information arises at all levels, from that of senior decision-makers at the national and international levels to the grass roots and individual levels... There already exists a wealth of data and information that could be used for the management of sustainable development*" (United Nations, 1992a).

Environmental information is important for a number of reasons including:

1) Timely, relevant and reliable information is the foundation of sound environmental decision-making, not just in policy terms, but for all members of society as the transition is made to a more sustainable way of life. The correct information can encourage behaviour changes in many people and have a bigger impact than policies that only change the actions of a few (Jones, 2001).

2) The availability of the right information promotes transparency throughout society (Jones, 2001). As Bruch (2000) puts it: "access to [environmental] information allows citizens to know about possible environmental threats, educates the business community about the environmental and social impacts of their operations...and assists the government [by improving] the credibility,

effectiveness and accountability of governmental decision-making processes by encouraging transparent decisions."

3) Environmental information is seen as a significant contributor to improving the global environment and sustainable development and can therefore reconfirm the thesis that "knowledge is power." It is therefore necessary for producers of environmental information to find out how environmental information works and how to extract the maximum use from it in the least costly way (Denisov and Christoffersen, 2001).

### 1.1.2 State of the Environment Reporting

Information helps decision-makers make decisions. However the nature of these decisions and the role of information in decision-making processes can vary considerably. State of the environment (SoE) reporting is only one of the contexts in which environmental information can be presented (Denisov and Christoffersen, 2001). State of the environment reporting is used world-wide at all levels of government. It provides an overview of the health (or state) of the environment for a particular region, track changes in the environment over time, identify human impacts on the environment and/or causes of decline in the environmental health and contribute to the decision-making process (IPWEA, 2002).

SoE reports first appeared in the late 1970s due to the concern over the quality of the environment and the overuse of natural resources (Avèrous, 1989). Several hundred SoE reports have been developed by national, provincial and local authorities as well as corporate companies. In the late 1970s and 1980s, during the early phase of their development, they concentrated on describing the current state of the environment and the depletion of the natural resources. Past trends and conservation strategies were also included. Traditionally the concept of a State of Environment report has tended to be reserved for the description of an authoritative and comprehensive document, recording status and (perhaps) trends in quality across the various media. The principal audience was made up of environmentalists and members of the public already aware of environmental problems. Since that time, SoE reports have

considerably broadened their ambitions and scope. SoE reports are now positioned within the perspective of sustainable development. They examine the relations between the environment and the socio-economic processes and are considered a tool for decision-making (EEA, 2000).

The key aim of SoE reporting is given as "*providing judgement on the state of the environment of a country or a region in relation to the performance of policies and the distance of the current situation to sustainable development*" (EEA, 2000). The purpose of SoE reporting is to provide credible environmental information to support decision-making for sustainable development. Objective, comprehensive and science-based information is developed, which focuses on environmental conditions and trends including their significance (UNEP/DEIA, 1996).

UNEP/DEIA (1996) highlighted three characteristics that are fundamental to SoE reporting:

1) the interpretation, assessment and integration of high-quality data to generate meaningful information;
2) the development of spatial and temporal trend information; and
3) the linkage between environment and socio-economic considerations within a sustainable development context.

One of the priorities for SoE Reporting has become the measuring of policy performance. Agenda 21, for instance, sets out new requirements for environmental information, including;

- integrated and timely access to data and information from many different sources;
- analysis of environment-development interactions and policy and management options, identification of cause and effect relationships as well as emerging issues of potential international importance; and
- assessment of potential impacts and long-term sustainability of alternative development, policy or management scenarios (Swart and Bakkes, 1995).

In the meantime, SoE Reports have also attempted to satisfy a broader readership and are aiming to meet their needs. In this process, the range of outputs from the SoE reporting process has also been broadened encompassing, in some cases, a background report, a summary report, a web version and an educational package. However, there are still various approaches that can be followed to produce a SoE report, in particular as regard the target audience or the policy issues to be addressed. SoE reports still differ widely from country to country. SoE reporting structures and content depend on national environmental conditions, traditions, values, political and institutional systems. Hence different types of SoE reports can be identified and no single SoE reporting model can be established for the time being (EEA, 2000).

### 1.1.3 State of the Environment Reporting in South Africa

The first attempt to produce a National SoE Report for South Africa was made in 1992, when a report was submitted to the United Nations Environment Programme (UNEP) at UNCED in Rio de Janeiro, describing the South African environment and resource base. (South Africa could not participate fully in UNCED and only received observer status). A prototype National SoE Report was compiled by the national Department of Environmental Affairs and Tourism (DEAT) in 1995, but was never published (DEAT, 2002a).

DEAT launched the first comprehensive National SoE Report on the Internet in October 1999. Together with the National SoE Report, four South African Cities: Cape Town, Pretoria, Johannesburg and Durban, produced City SoE Reports as part of the CEROI (City Environmental Reports on the Internet) Initiative. The National SoE Report was designed to improve access to relevant, accurate, up-to-date environmental information, to support the rights of citizens to an environment, which is not harmful to their health or well-being. Although the national SoE Report covers most of the current environmental issues of national importance, it is not intended to provide specific "answers" to all environmental problems in South Africa. Rather, the aim is to improve understanding of environmental issues, and to give guidelines for general management and best practice. The report states where environmental data are required in order to improve decision-making and performance, and makes recommendations for further research (DEAT, 2002b).

As part of South Africa's ongoing SoE initiative, DEAT initiated a programme to develop a core set of environmental indicators for SoE reporting in South Africa. The programme aims to enhance existing tools for decision-making, such as SoE reports. It also aims to eliminate duplication with other national and international reporting obligations, such as reporting on progress towards the implementation of Agenda 21 and various Multilateral Environmental Agreements (MEA). Although South Africa is not a signatory to the Aarhus Convention, the development of environmental indicators for SoE reporting assists in achieving the aims and objective of this agreement.

In addition to this initiative, there are also several other initiatives underway to develop indicators in other sectors of South Africa, including the Department of Provincial and Local Government's (DPLG) Key Performance Indicators developed for reporting on Integrated Development Plans (IDPs) and the Department of Water Affairs and Forestry's (DWAF) Criteria and Indicators for Sustainable Forest Management (DEAT, 2002a).

### 1.1.4 State of the Environment Reporting in the City of Cape Town

The Environmental Evaluation Unit (EEU) at the University of Cape Town (UCT) was commissioned in 1997 to undertake Phase 2 of an Environmental Policy Study, a part of the formulation of an Environmental Policy for the City of Cape Town (CCT). One of the objectives of Stage 2 of Phase 2 was the development of a State of the Environment Report for the CCT, through a synthesis of the findings of specialist baseline studies, information gathered from literature reviews and consultation with other specialists and authorities in order to obtain a suitable reporting approach and structure i.e. the reporting framework (EEU, 1998).

In 1998, the former Cape Metropolitan Council started developing the first Integrated Metropolitan Environmental Policy (IMEP) for the CCT. The goal of this process was to develop an effective environmental policy for local government to address the key environmental issues in the CCT. SoE reporting formed part of the IMEP process as it helped to identify priorities for policy, programmes and projects in the CCT. SoE reporting continues to inform and update IMEP and its sectoral strategies.

Every year, the progress in each theme is assessed in the SoE report through the collection of information and data. This is compared to the previous years' SoE reports and long-term trends are identified. The long-term trends will focus the review of the policy and environmental strategies and give direction for the continued improvement of environmental management in the CCT (CCT, 2002).

### 1.1.5 The Aims and Objectives of this Study

The aim of this study is to determine how the State of the Environment Report is used and whether it meets the information needs and requirements of the users.

Three objectives were identified in order to reach the aim of the study:

1) To develop a profile of the different users of the State of the Environment Report;
2) To determine how the users are using the State of the Environment Report;
3) To determine whether the State of the Environment Report meets the user's information needs and requirements.

### 1.1.6 Significance of the Study

The CCT (previously known as the Cape Metropolitan Council or CMC) has been producing the SoE report since 1999 (the 1999 report reported on 1998 data) and has to date produced five full reports and four accompanying summary reports as well as a number of accompanying products. These documents have been circulated to all those on the SoE database (forming part of the IMEP database) as well as handed out at workshops, presentations, and exhibitions and to people who have expressed an interest in the report. There is however limited knowledge of the users of the SoE report as well as how they use the report and how they would like to use the report in the future. This study provides the CCT with a better indication of who is using the report and how they are using the report, which will attempt to assist the CCT in producing a document that meets the needs of the user's.

### 1.1.7 Limitations

There were a number of factors limiting this study. Firstly, the amount of literature available on the topic was limited. During an extensive literature review, it was evident that few journal articles were written specific to this topic. Other reports related to the more general theme of environmental information were used as part of the literature review.

There were also some factors limiting the results chapter of this study. This was mainly due to the small sample of the study and that the sample was made up only of users who had supplied their e-mail addresses. The opinions given and the subsequent results of the study come from that sector of the SoE population and not the population as a whole. But the results and recommendations from this study can be used by the CCT as a guideline for the future development and planning of the SoE report.

People with e-mail, have access to high speed information over the Internet, which would mean that they are less likely to need the SoE reports. This could be one reason for the small number of completed questionnaires received.

People generally do not like to complete questionnaires and five users did respond to the e-mail without the completed questionnaire, but provided reasons why they did not complete it.

Individual interviews may have provided information or opinions that were not received through the questionnaire. It was however decided that the questionnaire would be a better method for this study. A second study is being done for the CCT on an Evaluation of the Impacts of SoE Reports on Decision-making: The Case of Cape Town. This study was done through personal interviews and focussed group discussions.

Different methods of sourcing data for studies will have different advantages and disadvantages that need to be compared before commencing with such a study.

# Chapter 2 : Materials and Methods

## 2.1 Study Design

Meetings were held with the CCT SoE Co-ordinator (Craig Haskins) to determine what he required from the study. During these meetings the aim and objectives, the method of data collection and the population and the sample of the survey were decided on.

The IMEP, Environmental Resource Directory (ERD) and Schools databases formed the population of the study. The IMEP database is made up of individuals who have expressed an interest in the CCT's Environmental Policy and who played a role in the IMEP development process. The ERD database is made up of all entries in the Environmental Resource Directory, which is a resource book of all the environmental organisations and institutions within the City of Cape Town area. The Schools database contains the details of all the schools (both primary and secondary) within the City of Cape Town. Each entry on the database has received either the full or summary report in the past four years. The population was made up of governmental department on local, provincial and national levels, non-governmental organisations, tertiary education institutions, schools, the media, the private sector and members of the public.

It was decided that the sample would be limited to those in the databases with e-mail addresses. This was, in part, due to the length of the questionnaire. The questionnaire consisted of four pages, and the cost of postage or faxing was taken into consideration. It was decided that the use of e-mails rather than post or telephonic surveys, would be the easiest on the part of the recipient.

The majority of the questions were multiple choice along with an opportunity to provide an opinion in the other block. The multiple-choice questions also allow for a rating system if more than one answer was selected. There were also three open-ended questions which allowed the user to give their own opinions on the reporting process as well as that they would like to see in the report in the future. (*See Annexure A for the Questionnaire*).

Before the questionnaire was sent to the identified population group, it was sent to three students who had used the SoE report before as a test sample. Once these completed questionnaires were returned, the necessary changes were made. The questionnaire was then approved by the SoE co-ordinator before being sent out.

## 2.2 Data Collection

The questionnaire was sent to the 500 people on the database with e-mail addresses. Sixty-five (13%) of the addresses were no longer active or messages could not be sent to them due to other problems. The total number of people who received the

questionnaire could be greater than the number sent out as some of the addresses were the general address for the organisation and the questionnaire could then have been forwarded to a number of people within the organisation.

The total number of responses received was 43 (9.8%) as well as five responses from people who did not fill in the questionnaire, but gave reasons why they did not complete it. These responses came from government, the private sector, NGOs, the media, schools, tertiary institutions and the public. The original e-mail sent out allowed for a month to send the completed questionnaires back. At that stage the number of responses was 32 (7.3%) and an extra two weeks was given to send back the completed questionnaire to the CCT offices. A second e-mail was sent, with the questionnaire, indicating the extended timeframe. The completed questionnaires were received by e-mail, fax and through the CCT's Internal Mail System.

The results of the completed questionnaires were then recorded and analysed.

# Chapter 3 : Results and Discussion

The questions are not discussed in the order that they are presented in the questionnaire. The questions are discussed in groups depending on their general theme. This allows for the results of the questions to be discussed in a more ordered format.

## 3.1 Who is using the SoE Report

### 3.1.1 Results of Question 9: What is your area of specialisation?

Figure 3.1 portrays the results of question 9, which gives an indication of the respondent's area of specialisation. This question looked at all areas in the options of the question, which could impact on the respondents work, but not necessarily be their core business. For example, one respondent from the government sector selected natural sciences, environmental management and administration as areas of specialisation. Administrative work may not be a core function or their area of specialisation in terms of their studies, but is an area that plays an important role in their work.

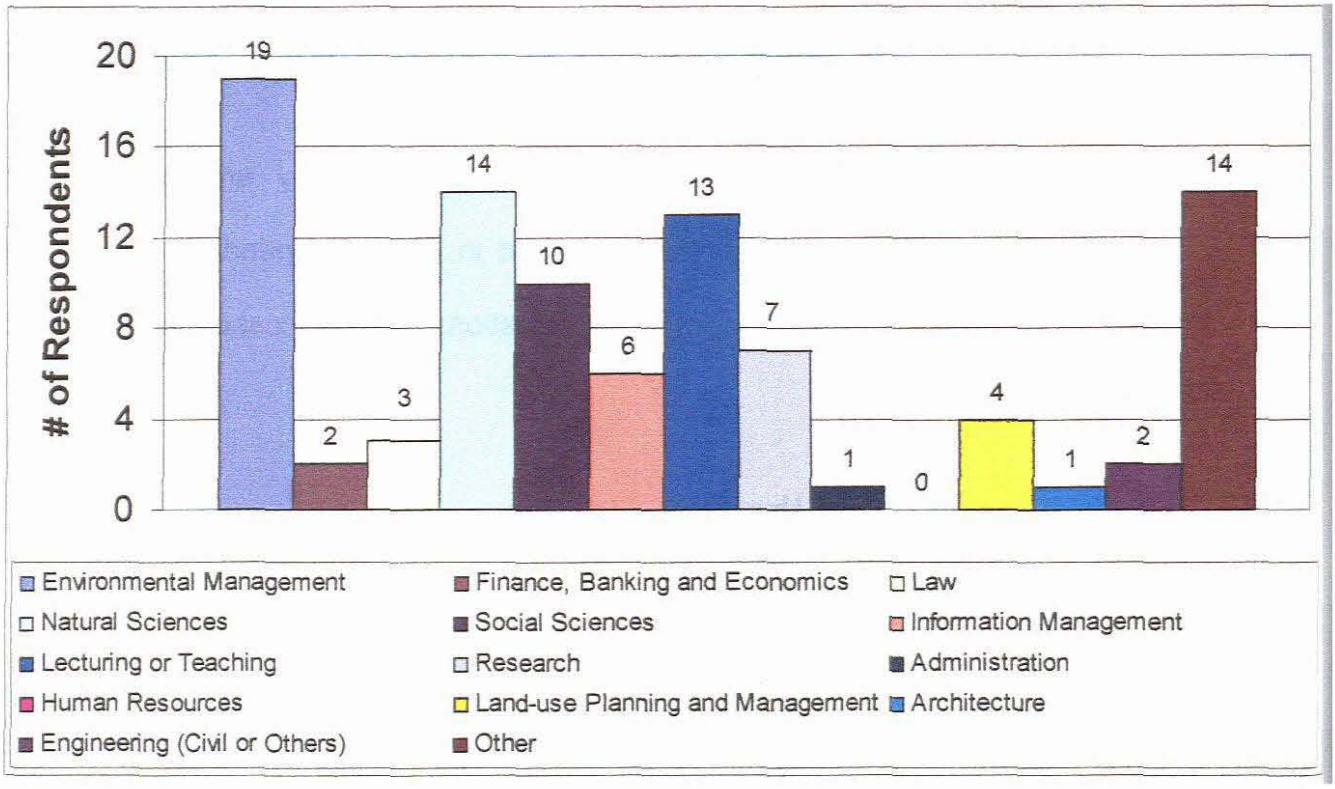


**Figure 3.1: The Results of Question 9: What is your area of specialisation (n = 43)**

As one can see from Figure 3.1, nineteen respondents (44%) stated that environmental management was one of their areas of specialisation. It is also shown that a substantial percentage came from a natural sciences background (32%), specialised in lecturing or teaching (30%) and social sciences (23%) as compared to the other options. Fourteen respondents (32%) selected the other option. These answers included: Investment facilitation and management consulting, sustainable development, air quality, environmental health, marine and coastal management, environmental education, animal protection, media/communication, commercial forestry and eco-tourism.

In Table 3.1, the results of the ranking of the options for Question 9 are given.

| Table 3.1: Response in ranking order for the question: What is your area of specialisation? | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Ranking** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| Environmental Management | 10 | 5 | 2 | | 1 | | | | |
| Finance, banking, economics | 1 | | | | 1 | | | | |
| Law | 1 | 1 | | | | | | | 1 |
| Natural Sciences | 7 | 2 | 4 | 1 | | | | | |
| Social Sciences | 4 | 1 | 1 | 1 | | | | | |
| Information Management | 4 | | 2 | | | | 1 | | |
| Lecturing or Teaching | 9 | 3 | 2 | | | 1 | | | |
| Research | 1 | 1 | 1 | 3 | | | | 1 | |
| Administrative | 1 | | | | | | | | |
| Human Resources | | | | | | | | | |
| Land-use Planning and Management | 2 | 1 | | | | 1 | | | |
| Architecture | 1 | | | | | | | | |
| Engineering (Civil or Others) | 1 | 1 | | | | | | | |
| Other | 13 | 2 | | 1 | | | | | |

All options were selected, except for human resource. Environmental management, natural sciences, lecturing or teaching and other were selected by the most respondents as their first choice. 52% of the respondents who selected environmental management ranked it one, and 26% ranked it two. 50% of the respondents who selected natural sciences ranked it one. 53% of the respondents who selected lecturing and teaching ranked it one. 78% of the respondents who selected other ranked it one. This was expected as it is natural for one to select other, if their area of specialisation is not given under the specified options as their first choice.

### 3.1.2 Results of Question 10: How would you describe your organisation?

Figure 3.2 portrays the results of Question 10, which gives an indication of the sector of society that the respondents come from. The results of this question are only shown in graphical form as the respondents did not select more than one option in this case.

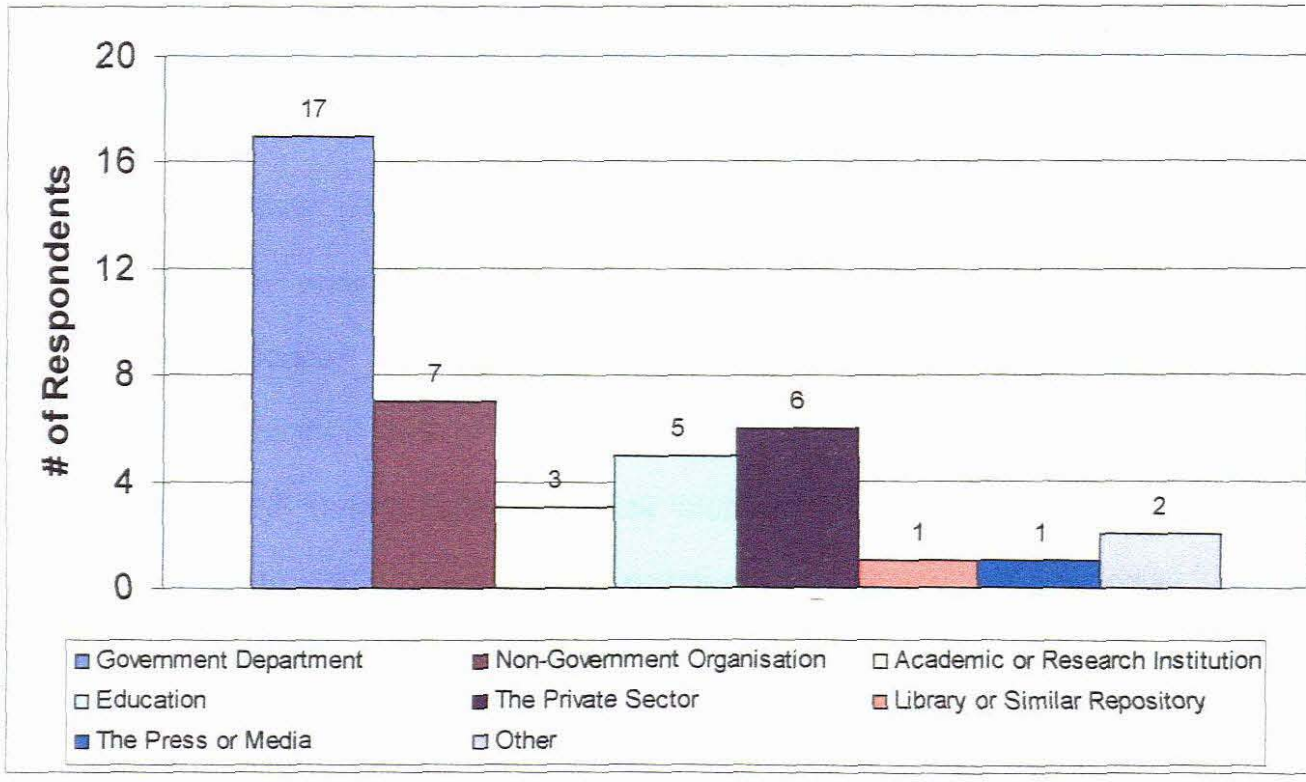


**Figure 3.2: Results of Question 10: How would you describe your organisation? (n=42)**

From Figure 3.2 it is noted that government department has a definite majority with 39% of the respondents selected it. Non-governmental organisation / civil society

with 16%, the private sector with 13% and education with 11% of the respondents also seemed to be more popular choices than the others given.

### 3.1.3 Discussion: Who is using the SoE Report

In the early phase of their development (1970s and 1980s), SoE reports were descriptive and focused on the current state of the environmental media and the depletion of natural resources, the past trends and conservation strategies. The principal audience was made of environmentalists and the public already aware of environmental problems. According to the European Environment Agency (EEA), there are four main groups of potential users: policy makers, media, the general public and environmental stakeholders (EEA, 2000).

The Institute of Public Works Engineering Australia (IPWEA) Environmental Management Panel recognised the usefulness of SoE Reports and was concerned that the reports were not being used to their full potential by engineers and Councils in general. As a result, the Panel conducted a survey of all New South Wales (NSW) Councils to determine:

- The Council's attitude towards SoE Reporting;
- The level of involvement of engineers in the process;
- How Councils and engineers were using the reports.

According to the results of the IPWEA survey, just over half of all Councils indicated that they wrote the SoE report for several audiences. Community and Council was the most common mix, followed by Community, Council and State Government. Despite the high number of Councils preparing the SoE report because it is mandatory, only 12% indicated that they were writing it for the State Government alone. Very few Councils considered Government Agencies as part of the SoE report's target audience. This may be based on the assumption that Government Agencies would have little use for the Council's SoE report (IPWEA, 2002).

In the "State of the Environment Reporting Framework for Australia" developed by the Department of the Environment, Sport and Territories[1], a broad community of users of state of the environment information was identified, including:

- The general public and specific interest groups and sectors;
- Government decision-makers and policy analysts;
- Primary, secondary and tertiary education institutions;
- Industry groups;
- Natural resource planners and managers;
- The print and electronic media;
- Scientists; and
- International agencies.

[1] This Department is now known as the Department of Environment and Heritage

The GEO User Profile and Impact Study was commissioned in response to the Governing Council decision 20/1 for a "*Global Environment Outlook user profile and qualitative analysis of the actual use of the first and second Global Environment Outlook report and the GEO process.*" As part of this survey the recipients and users of the GEO Reports were classified into the following categories:

- Policy development and decision-making community;
- Research community;
- Academic sector;
- Environmental information depositories and distributors;
- Awareness raising groups such as NGO's; and
- Information users such as compilers of data and reports (UNEP, 2000).

From the information above and the results of this survey, it can be seen that the users of the CCT's SoE report fit in with the users groups determined in other studies. The majority of the respondents selected government sector, followed by the civil society and the private sector. The CCT SoE Report is seen as an information source for decision-making in the government sector and secondly it is seen as a source of environmental information for the general public, which includes NGOs, the private sector and the media. The distribution list of the SoE report is also heavily populated with officials from government departments.

When looking at areas of specialisation, the natural and environmental sciences had the highest number of respondents selected them (Environmental management was

selected by 44% of the respondents and natural sciences was selected by 32% of the respondents). When looking at the ranking system, 52% of the respondents who selected environmental management ranked it one and 50% of the respondents who selected natural sciences ranked it one. Lecturing or teaching was selected by 30% of the respondents and selected by many in the government sector as one of their areas of specialisation.

From the results of these two questions, one can see that the majority of the users come from the government sector with specialist knowledge of environmental management or the natural sciences and many of them are involved in lecturing or teaching in some way or another. The lecturing and teaching can be done through actual lecturing as a guest lecturer or through general awareness raising.

## 3.2 Presenting Environmental Information

### 3.2.1 Results of Question 8: What do you think is the most effective way of presenting environmental information?

Question 8 is not directly related to the CCT's SoE report, but does give us an indication of what forms of media are used to present environmental information and what are the most effective forms of media according to the respondents. The options for this question have been divided into non-electronic and electronic forms of media, but are reported on together.

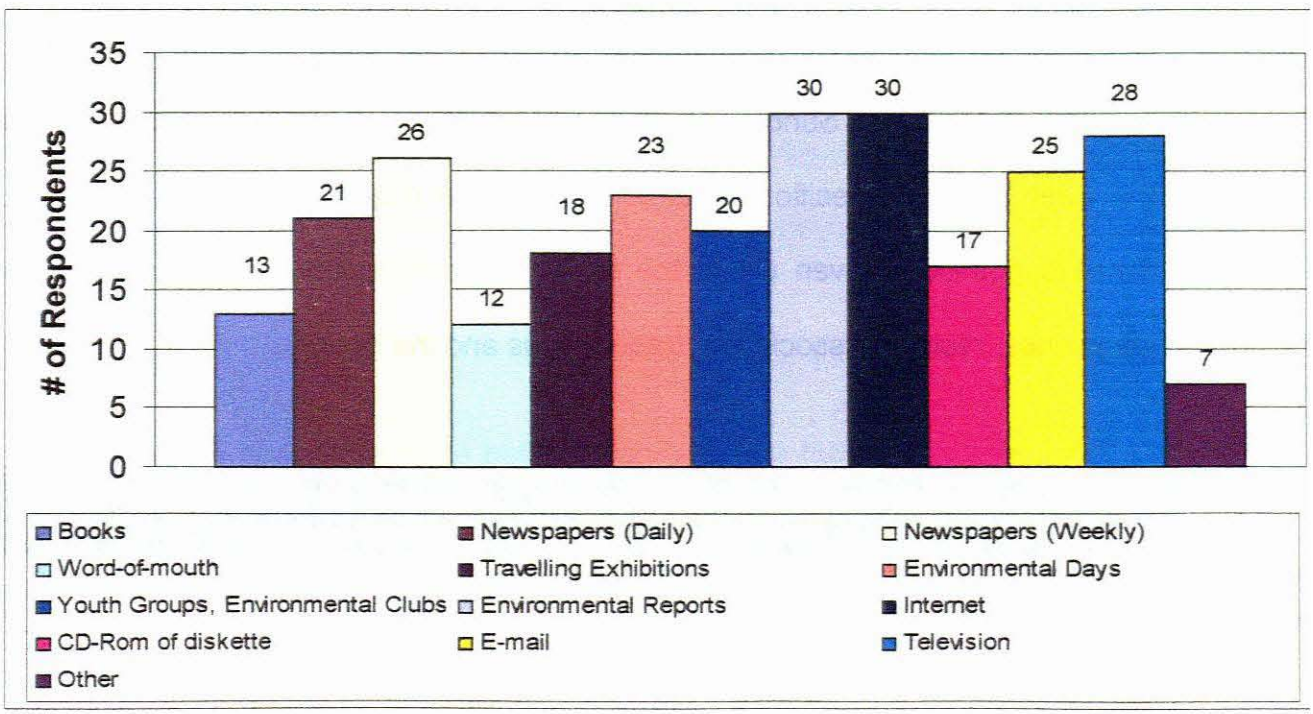


**Figure 3.3: Results of Question 8: What do you think is the most effective way of presenting environmental information? (n=43)**

From Figure 3.3, one can see that environmental reports and the Internet were both rated as the most effective way of presenting environmental information. In both cases 30 respondents (69%) selected the option. It should also be noted that environmental reports in this case are not limited to SoE Reports, but include annual reports from organisation and other reports that are produced that provide information on the environment whether it be general or specific.

Television was also rated as one of the more effective ways of presenting environmental information with 28 respondents (65%) selecting the option. This is followed closely by newspapers (weekly) with 60% of the respondents selecting it and e-mail with 58% of the respondents selecting it. Weekly newspapers can be classified as community newspapers, which in the case of Cape Town are area specific; Saturday or Sunday newspapers, which could contain specific inserts and the weekly theme specific inserts in some of the major newspapers in the country. Some suggestions given under the other option included newsletters, fact sheers, magazines, resident association, trade unions and the radio.

Table 3.2: Response in ranking order for the question: What do you think is the most effective way of presenting environmental information?

| **Ranking** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Non-electronic** | | | | | | | | | | | | | |
| Books | 2 | 2 | 1 | 2 | | | 1 | 4 | 1 | | | | |
| Newspaper (Daily) | 9 | 2 | 2 | 1 | 4 | 1 | | | | 1 | | 1 | |
| Newspaper (Weekly) | 4 | 6 | 6 | 3 | 2 | 3 | 1 | | | | 1 | | |
| Word-of-mouth | 2 | 1 | 1 | | 2 | 2 | 2 | | | | 1 | 1 | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Travelling exhibitions | 3 | 2 | 4 | 3 | 4 | 1 | 1 | | | | | | |
| Environmental Days | 5 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | | | | | |
| Youth or Environmental Groups | 5 | 3 | 5 | 3 | 1 | | 1 | 1 | | | | 1 | |
| Environmental Reports | 11 | 5 | 4 | 2 | 3 | | 1 | | 1 | | 2 | 1 | |
| **Electronic** | | | | | | | | | | | | | |
| Internet | 10 | 9 | 4 | 1 | | 2 | 1 | | 1 | | 1 | 1 | |
| CD-Rom or *diskette* | 2 | 2 | 2 | 4 | 1 | 1 | 1 | 1 | | 2 | | | 1 |
| E-mail | 6 | 6 | 6 | 1 | | 1 | 1 | 1 | 1 | 2 | | | |
| Television | 10 | 7 | 4 | 2 | | 1 | | 3 | 1 | | | | |
| Other | | 2 | | 3 | 1 | 1 | | | | | | | |

From Table 3.2, it can be seen that the options that ranked high for rating one (nine or more) were similar to those that were shown in Figure 3.3. These include environmental reports, the Internet, television and newspaper (daily). It is interesting to note that newspaper (daily) was ranked one by 42% of the respondents who selected it, but newspaper (weekly) was ranked one by only 15% of its respondents. Newspaper (weekly) is however selected by 23% of its respondents for both rankings two and three.

Word-of mouth and books were both selected by two respondents for rating one and are seen as the least effective way of presenting environmental information, in terms of the results of this survey. They are still selected by an average number of respondents; namely 12 (27%) and 13 (30%) respectively. Word-of-mouth can be seen as a highly effective means of presenting environmental information, when used in a specific group of people or forum where the information will be relevant. Books

will also serve a specific purpose on a specific theme, but may not be effective as a source of environmental information for the general public, who are looking for an overview of environmental information in their area.

As mentioned before, the options for this question were divided into electronic and non-electronic forms of media. In some cases, the respondents did not distinguish between the two forms of media for the ranking of their answers i.e. ranking from one to thirteen. In other cases the respondents did distinguish between the two forms of media, ranking non-electronic from one to eight and ranking electronic from one to four. This is, however not looked at in the results, as the number of respondents who divided up the electronic and non-electronic choices in their results, don't make up a significant percentage.

Generally the same pattern as in Figure 3.3. is shown in Table 3.2. Those options that were selected by the larger number of respondents, also received most of the higher rankings.

### 3.2.1 Discussion: Presenting environmental information

There are a number of ways of presenting environmental information. Many studies indicate that traditional mass media like newspapers and television are still the main sources of general environmental knowledge despite the growing usage of the Internet. "An information system is...viewed as a 'narrow band' vehicle, which

although capable of providing detailed information about a specific topic, cannot compete with 'old media' on the general provision of news" (Haklay, 2000).

In 1998, the Centre d'Eustudis d'Informacio Ambiental (CEIA) performed a survey among 100 European Environmental Journalists in order to analyse the variables related to both supply and demand of environmental information. According to the CEIA study, the journalists felt that newspapers and television channels were the principal communication methods for environmental information. Only 10% believed that environmental information leaders in European countries are magazines and specialised book and a smaller percentage, 8%, considered informal conversation. The same percentage agreed that radio broadcasts were the essential route used by Europeans to obtain environmental information. According to the CEIA study, most of the environmental information transmitted to society originates from written media. However, audio-visual media, especially television, have a greater impact on the European population. Only 7% of those polled by the CEIA chose the Internet as the main communication route to be promoted for supply of environmental information. The majority continue to think that efforts should be directed towards increasing the number of environmental articles in general (29%), the number of discussions with experts in audio-visual media, television or radio (20%) or the number of specialised programs (19%). In contrast to these data, statistics performed by the European Environment Agency (EEA) on the routes chosen for information requests by European actors, locate the Internet at the first place[2]. Of the total number of

[2] Information of the statistics reports generated by the EEA Information Centre for May, June, July and August of 1998.

environmental information requests received by the EEA between May and August 1998, 32% were performed through the Internet, 27% through telephonic routes, 19% by means of a letter and 15% by fax. Only 6% of the requests were made by means of a visit, and 2% were forwarded (CEIA, 2000).

Haklay (2002) in a study on Public Environment Information in London asked the respondents the question: "Do you ever seek information?" 17% stated that they did not seek environmental information. Table 3.3 presents the sources of information that the respondents currently use to retrieve environmental information.

Table 3.3: Sources of information used to retrieve environmental information

| Rank | Source | Percentage |
|---|---|---|
| | Never Seek Environment Information | 17.9 |
| 1 | National Newspaper | 61.3 |
| 2 | TV/Radio | 48.7 |
| 3 | Local Newspaper | 48.1 |
| 4 | Internet | 43.4 |
| 5 | Environmental Organisations | 34.6 |
| 6 | Magazines | 25.8 |
| 7 | Governmental Reports | 18.5 |
| 8 | Environmental Professionals | 15.8 |
| 9 | Regulatory Bodies | 12.9 |
| 10 | Legislation | 9.7 |
| 11 | CD Rom | 2.9 |

Source: Haklay, 2002

Among those who do actively seek information, there are a number of common combinations. The top ten combinations are presented in Table 3.4 They account for approximately 37% of those who seek information. Both tables show that the main sources of information are still 'old media' and the role of computerised sources is still

limited. National and local newspapers and television/radio are seen as the top sources of environmental information. It is interesting to note that Internet only falls into two of the top ten combinations of environmental information sources and therefore not considered one of the main sources of environmental information. Haklay's survey was in the form of an internet survey, but yet the Internet is rated average as a source of environmental information.

Table 3.4: Popular combinations of information sources taken from Haklay's study on Public Environmental Information

| National Newspapers | TV/Radio | Local Newspapers | Internet | Environmental Organisation | Magazines | % |
|---|---|---|---|---|---|---|
| X | X | X | | | | 7.1 |
| X | X | X | X | X | X | 5.0 |
| X | X | | | | | 3.9 |
| | | X | | | | 3.6 |
| X | X | X | | | X | 3.6 |
| X | X | X | X | | | 3.6 |
| X | | X | | | | 3.2 |
| X | | | | | | 2.5 |
| | X | X | | | | 2.1 |
| X | X | | | | | 2.1 |

Source: Haklay, 2002

Some of those who seek information connect information gathering with an action or activity, such as finding out about air pollution levels before deciding whether to cycle to work or not. However, far more important is the use of information to simply inform. More than half of the respondents claim that they use environmental information to consider possible future actions, to develop political stances and generally "to know what is going on" as two respondents wrote (Haklay, 2002).

When comparing the results of the present study (refer to Figure 3.3) with those of the CEIA and Haklay studies, the one obvious difference besides the fact that they are in developed countries and the present study is located in a developing country, is the importance given to electronic sources of environmental information. The internet, television and e-mail are all rated as good or effective ways of presenting environmental information by the respondents to this questionnaire. The emphasis is still to a lesser degree on the 'old media' such as television and newspaper (weekly); there is a strong emphasis on the 'new media' such as internet and e-mail. There is also emphasis placed on specific environmental publications (environmental reports), which are considered a one-stop shop for environmental information. The reason for the emphasis being placed on the electronic media could be because the method for circulating this questionnaire was through an electronic medium (e-mail) and therefore the respondents generally have access to the Internet and use this as their information source. Generally what people required when looking for environmental information is something that is easy to find and use and presented in an informative, innovative and interactive way.

"*It is very difficult to find the correct page. What about people that do not have document retrieving skills? What about the person that won't want to bother after the first failed attempt? The document should be easy to find otherwise there is no need for it to be on the internet.*"

Respondent from the Government Sector.

## 3.3. Using the SoE Report

### 3.3.1 Results of Question 1: For what purpose do you use the SoE Report?

Figure 3.4 portrays the results of Question 1. The results of this question will give us an indication of whether the SoE report is meeting its aims.

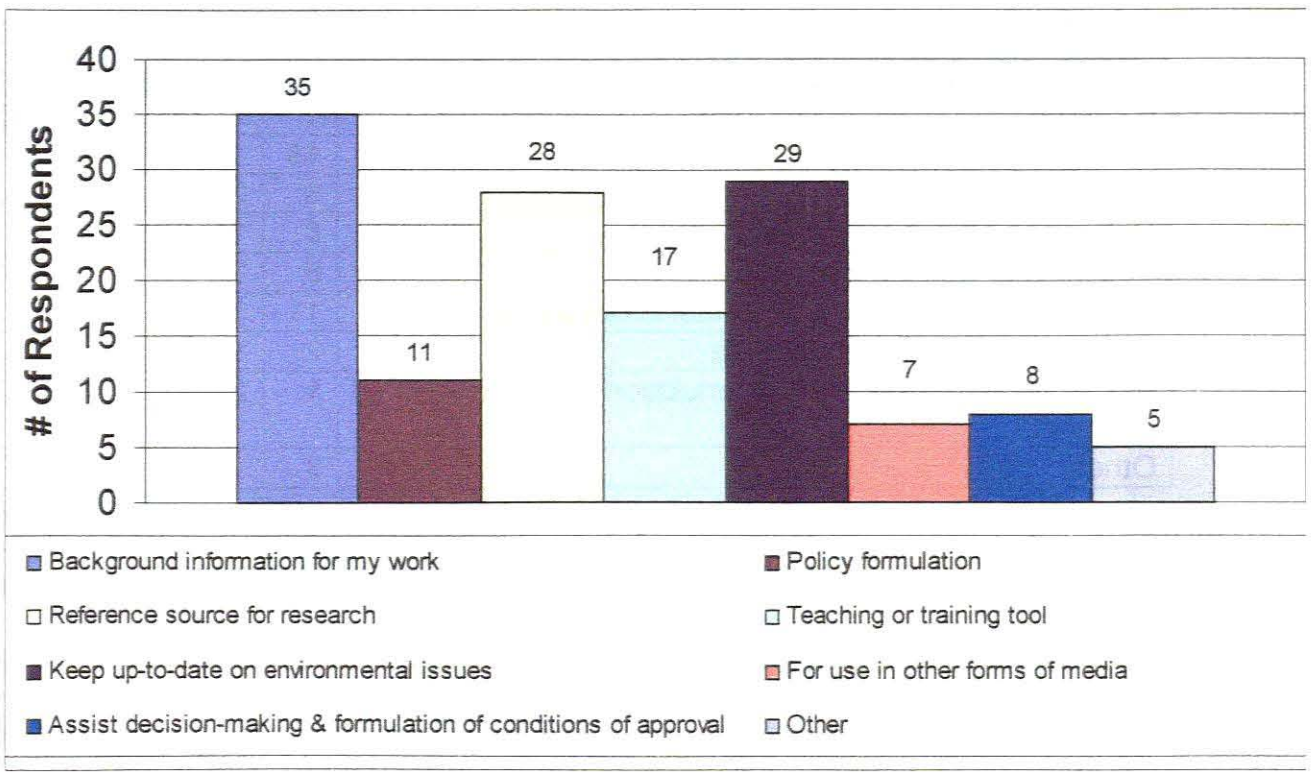


**Figure 3.4: Results of Question 1: For what purpose do you use the SoE Report? (n=43)**

From Figure 3.4, it can be seen that 'background information for my work' was selected by the majority of the respondents (81%) as the reason why they use the SoE report. This is followed by 'keeping-up-to-date with environmental issues' with 67% of the respondents selecting it and 'reference source for research' with 65% of the respondents selecting it. Fewer respondents are using it for purposes around decision-making. 25% of the respondents selected 'policy formulation' and 18% of the respondents selected 'assist decision-making and formulation of conditions of approval.' The answers given under the other option were predominantly around the use of information for indicators in other reports.

**Table 3.5: Response in ranking order on the question: For what purpose do you use the SoE Report?**

| **Ranking** | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
|---|---|---|---|---|---|---|---|
| Background information for my work | 18 | 10 | 4 | 2 | 1 | | |
| Policy formulation | 3 | 2 | 3 | 2 | 1 | | |
| Reference source for research | 8 | 11 | 5 | 2 | 1 | | 1 |
| Teaching or training tool | 8 | 3 | | 5 | 1 | | |
| Keep up-to-date on environmental information | 11 | 3 | 9 | 4 | 2 | | |
| For use in other forms of media | 2 | 1 | 1 | 2 | 1 | | |
| Assist decision-making & formulation of conditions of approval | 1 | 2 | | 1 | 2 | 2 | |
| Other | 3 | | 1 | | 1 | | |

In Table 3.5 one can see that 'background information for my work', 'keeping up-to-date on environmental issues' and 'reference source for research' all rated high for rating one as it was selected by 51%, 28% and 37% of the respondents respectively. This trend is followed for rating two, with 28% of the respondents who selected 'background information for my work' rating it two and 39% of the respondents who selected 'reference source for research' rating it two. The results of the rest of the

options follow the trends of those with the highest number of respondents receiving the highest ratings. As in other questions, the majority of the respondents who selected the other option, ranked it one.

### 3.3.2 Results of Question 2: How do you use the SoE Report?

Figure 3.5 portrays the results of question 2, which gives an indication of how respondents use the SoE Report.

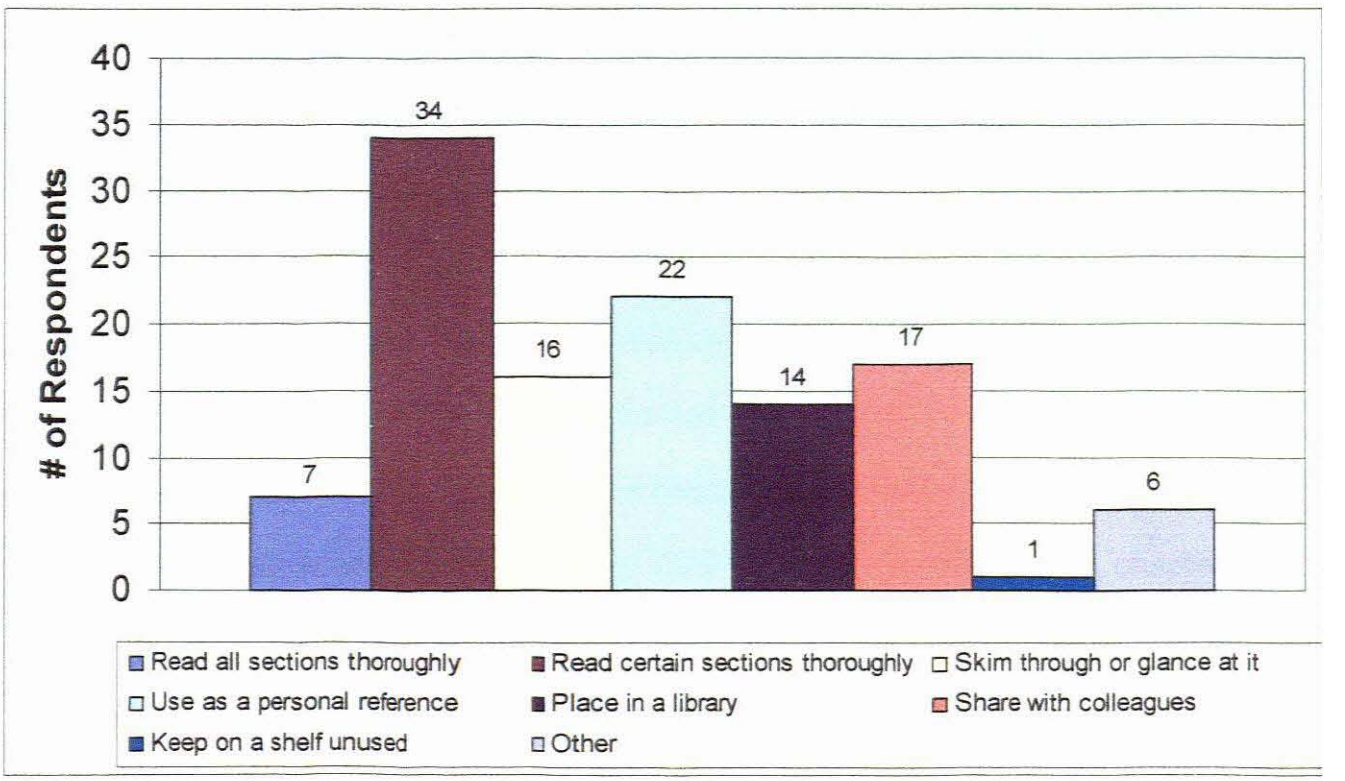


**Figure 3.5: Results of Question 2: How do you use the SoE Report (n=43)**

As one can see from Figure 3.5, the majority of the respondents (79%) read through certain sections of the report thoroughly. The majority of the readers would read through those sections that are of interest to them and the work that they do. This would especially be in the case of the full report, which is a document of approximately 200 pages. 51% of the respondents use the report as a personal reference, which is emphasised by the results of Question 1, which shows that 81% of the respondents use the report as background information for their work. One respondent acknowledged that they kept the report on a shelf unused and 16% stated that they read through all sections of the report thoroughly. It is however not stated whether they were referring to the full or summary report. Some of the answers under the other option include: indicator related work, use it as a teaching tool and to evaluate gaps in service delivery and to plan accordingly.

### 3.3.3 Results of Question 5: Which theme do you refer to the most?

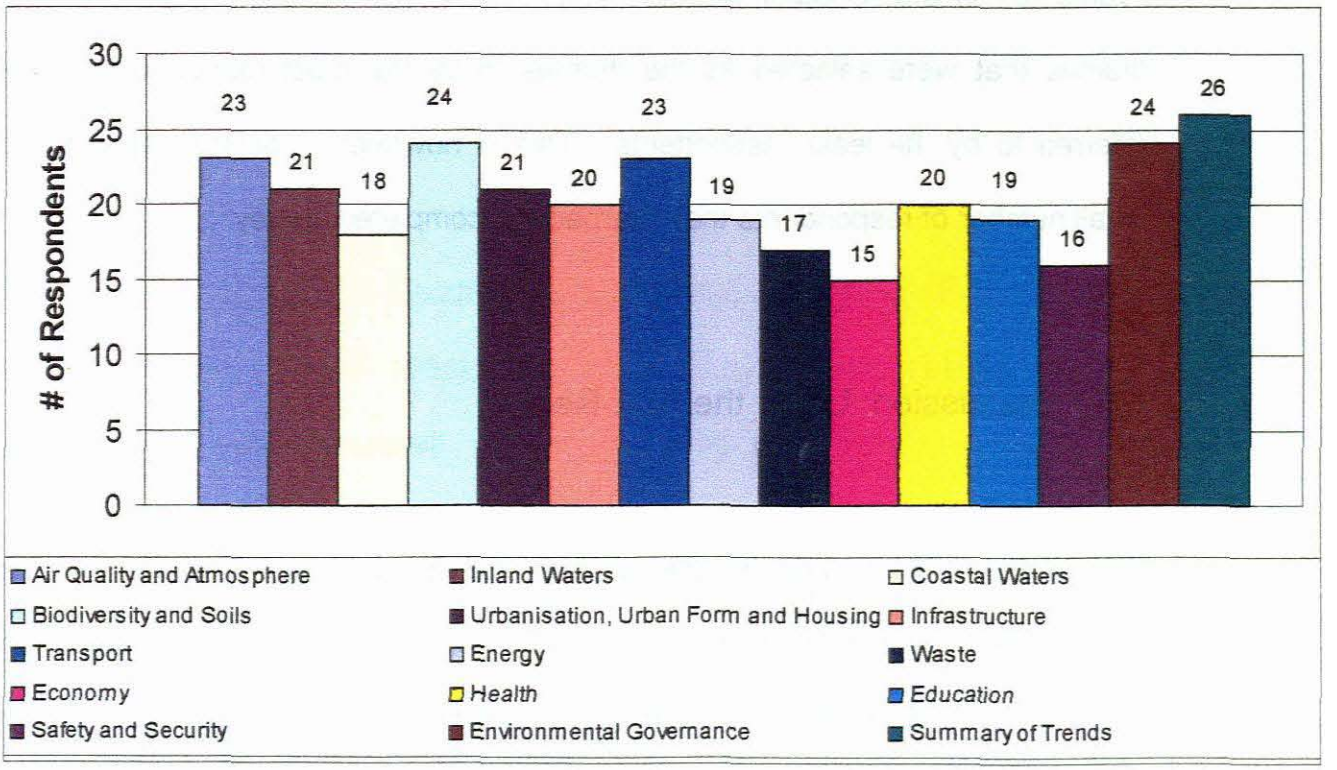


**Figure 3.6: Results of Question 5: Which theme do you refer to the most? (n=43)**

It should be noted that some of the respondents did not make use of the ranking system for this question and just selected themes, and in such cases all the options were rated one. According to Figure 3.6, the theme that is referred to the most is the summary of trends, which was selected by 60% of the respondents. This chapter provides a summary of all the themes reported on in the report. 55% of the respondents selected biodiversity and environmental governance as the theme that they referred to the most. 53% of the respondents selected air quality and atmosphere and transport as the themes that they referred to the most and 48% of the respondents selected inland waters as the theme that they referred to the most.

The chapters referred to least were Safety and Security (37%), Economy (34%), Waste (31%) and Coastal Waters (41%). There isn't a large gap between those themes that were selected as the themes to by the most respondents and those referred to by the least respondents. This is however, understandable due to the small number of respondents that returned the completed survey.

### 3.3.4 Discussion: Using the SoE Report

UNEP/DEIA (1996) states that the purpose of SoE reporting is to support sustainable development decision-making through the provision of credible environmental information. Balanced environmental reporting aims to answer fundamental questions about the interactions between the environment and socio-economic factors which are significant to policy decision-makers and the public. From this perspective, three objectives can be specified for SoE Reporting:

- To increase awareness and understanding of environmental trends and conditions and their causes and consequences among all stakeholders;
- To provide a foundation for improved decision-making at all levels, from the individual to national government and international organisations; and
- To facilitate the measurement of progress to sustainability (UNEP/DEIA, 1996).

The purpose of the CCT's SoE Report is to:

- Update the issues, indicators and other information in the annual SoE report for the CCT area;

- Investigate, demonstrate and explain tendencies in the data; and
- Report on progress, or lack thereof, of current responses and policies to the environmental issues and trends identified in the state of the environment (CCT, 2000).

The principles outlined in South Africa's National Environmental Management Act (NEMA, Act No 107 of 1998) entail decision-making on matters affecting the environment and procedures for co-ordinating the functions related to the environment of various organs of state. This can only be attained through the assessment of environmental problems in the context of the state of the environment. The aim of SoE reporting is, however, to provide useful information to improve environmental management, not to fulfil legal obligations. An assessment in May 2000 by DEAT concluded that the National SoE Report was being used extensively as a source of useful information. Metropolitan Councils have also confirmed the usefulness of SoE reports in reaching other sustainable development objectives. The results of the present study echo those of the May 2000 assessment, stating that the SoE report for the CCT is used predominantly as a source of information (DEAT/CSIR, 2002).

"*It is the only report that provides detailed information on the state of the environment (stats, trends, etc) at local level, for the City of Cape Town. In this regard, it assists us as we are focussing on work at local levels and are able to provide our partners and readers information on progress in the CCT on the state of the environment.*"

Respondent from the NGO/Civil Society Sector

One of the objectives of SoE Reporting is to provide a foundation for improved decision-making at all levels and although only one option contains the words decision-making, most of the identified options do impact on decision-making in one form or another. 'Assist decision-making and formulation of conditions of approval' serves a specific purpose and was selected by 18% of the respondents. The majority of these respondents came from the government sector, as formulation of conditions of approval is seen as a government function.

Most of the respondents use the SoE report as 'background information for their work'. They require this information to assist in the development of their projects and activities and to decide on the best way forward. Denisov and Christoffersen (2000) feel that decision-makers want information that will enable them to meet public requirements and to demonstrate and encourage commitments to environmentally friendly policies and consumer behaviour. Use of information in SoE reports is assumed, at some level, to have an influence on decision-making. This may be either directly through the use of information by decision-makers or indirectly through pressure from other users – such as the public – who have used the information themselves. This may eventually create a change of some kind (Jones, 2001).

There is a correlation between the use of information for background information for their work and the use of the information to keep up-to-date with environmental information. In both cases they use the information for background information

whether it be for personal development or for work-related reasons. 67% of the respondents did select personal development as the reason why they used the report.

Eleven respondents (25%) selected policy formulation as the reason why they use the SoE report. This, again, was mainly selected by respondents from the government sector. The CCT used their SoE report in the development of the Integrated Metropolitan Environmental Policy (IMEP). The SoE report helped to identify priorities for policy, programmes and projects in the CCT area. The SoE report continues to inform and update IMEP as well as the IMEP sectoral strategies, which focus on some of the key SoE themes such as Biodiversity, the Coastal Zone and Environmental Education. SoE reporting can also benefit local government in the implementation of the Local Agenda 21 (LA21) mandate. The Durban Metropolitan Council believed that the production of a State of the Environment Report was the first step in the development of a broader environmental management strategy, for meeting the objectives of LA21. SoE Reporting is a useful tool in the assessment and prioritisation of issues, and in making recommendation for policy formulation and planning. Updates of the Durban SoE Report can be used to monitor and assess the programme (DEAT/CSIR, 2002).

One of the objectives of local government (as outlined in the Constitution (RSA, 1996)) is to ensure the provision of services, such as environmental information to communities in a sustainable manner and to encourage their involvement in local government issues. The Integrated Development Plan (IDP) process mentioned in the Constitution involves a strategic assessment of the current reality of municipal

areas and their environmental impact. Such information can be clearly outlined in the SoE Report. To ensure the involvement of local communities in decision-making, the IDP process plays a prominent role in assisting local municipalities with their planning. SoE reports can provide adequate information for an assessment of existing levels of development in the IDP.

The SoE Report can easily be used as a teaching or training tool. As the SoE report is considered a one-stop shop for environmental information, it can be a useful teaching tool. The CCT has developed a SoE Workbook for Foundation Phase (Grade 1 to 3) to accompany the SoE Summary Report and the SoE Colouring Book.[3] The Workbook provides the educator's with a number of example lesson plans based on themes described in the Summary report. Here educators can use the SoE report as a teaching tool. The CCT will be developing workbooks for other grades in the future. The CCT also ran the SoE Schools Competition for High Schools. Schools were given basic training in SoE reporting and requested to complete a short SoE report on their school, community or area

A number of respondents also noted how they used the SoE report as a teaching or training tool. These respondents came from a number of different sectors, including government, NGOs and Education.

[3] The Workbook and the Colouring Book are two more products that make up the family of products developed by the CCT as part of the SoE process The products developed as part of the SoE process include the SoE full Report, the SoE Summary Report, the SoE Colouring Book, the SoE Workbook for Foundation Phase, the SoE Poster Series, the SoE Website and the SoE Schools Competition

*"As an educator, I find it most instructive for learning areas like natural sciences, life orientation and for providing learners with an integrated background to living in Cape Town."*

Respondent from the Education (primary or secondary) sector

*Updating educators on environmental issues, which we can use for lessons and own development. Gives ideas of how to address various environmental issues to students and offer materials. Good factual and well-researched information can be used for other forms of research and education."*

Respondent from the Government sector

*"Quick up-to-date source of information. Material can be used for environmental awareness training."*

Respondent from the Government sector

Seven respondents (16%) selected it for use in other forms of media, although only one respondent stated that they are from the press or media. It is understood from these results that a number of respondents from other sectors use this information in newsletters and other forms of media that are sent out for the public's information. As only one person from the press/media responded there can be no definite information about the use of this report by this sector.

From the results of this questionnaire, one can see that the majority of the respondents read through certain sections of the report thoroughly rather than

reading the whole report. The full report is usually up to 200 pages and it is therefore not surprising that most of the respondents would only read the sections that are relevant to them. Many used the report as a personal reference, but did not specify whether this was as a work-related reference or for personal information such as used for research or personal growth. One respondent did however say that they did not refer to the themes that were their area of specialisation as they were well aware of the problems in the sector and were up-to-date with the data. They however, referred to the other themes, as they used this information to assist them in the planning of projects and activities according to the work that they were doing at the time.

"*It affords me an easy glance, an opportunity to see what is happening in fields outside of my scope of work. It's also a great reference guide for all sorts of socio-economic / environmental data which I don't have access to.*"

Respondent from the Government sector

Figure 3.7 provides an overall impression of the users based on the level of detail of the SoE information.

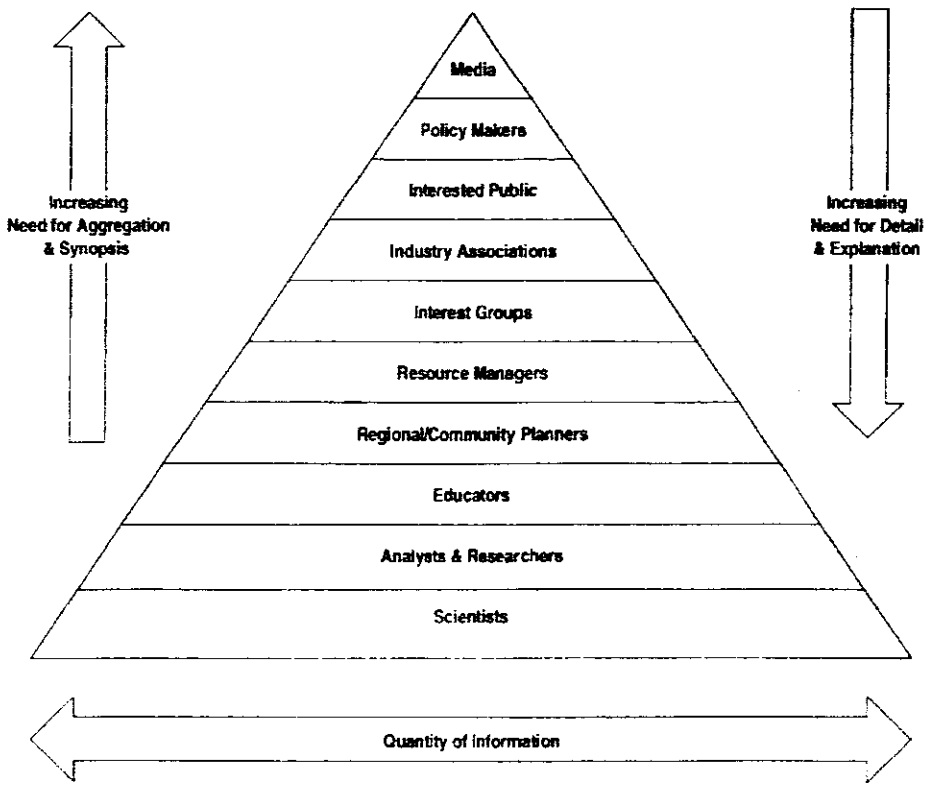


Figure 3.7: The hierarchy of needs of users of state of the environment information

Source: UNEP/DEIA: 1996

From Figure 3.7, one can see that groups like media, policy-makers and interested parties require less detailed information and those at the bottom of the pyramid e.g. scientists, analysts and researchers and educators required more detailed information. The further up the pyramid the greater the need for the aggregation and synopsis of the information. The lower down on the pyramid, the greater the need for more detailed information and more explanation of the scientific facts. The bottom arrow shows that the wide the section of the pyramid i.e. the lower down on the pyramid, the more information is required. Scientists and analysts will require more detailed information, which can be used for analytical and scientific purposes,

whereas the media will require the most important facts to be used in their articles. They do not have the time to read through a long report in order to take out the most important information.

Figure 3.7 can also be used to determine what products, as part of a family of products for SoE reports will be relevant for the different sector of society. The appropriate range of products must be determined by individual reporting programs taking into account objectives, user needs and budget. In addition to greater user satisfaction, a diverse family of products has other advantages. From a practical viewpoint, interim and derived products, by providing a more stable workload, are less demanding on the staff and fiscal resources of the reporting agency. In addition, a steady stream of products will have greater appeal to potential partnerships, which may be interested or have the expertise to contribute to SoE reporting. In summary, an integrated family of products can better serve specific client needs.

"*The report is very useful as a technical reference for a selected target group. Different versions need to be developed for other groups, i.e. politicians, decision-makers, schools and NGOs. Politicians and decision-makers do not read lengthy reports. They would like headline indicators to determine the trends, whereas schools and NGOs may require a less technical format with more visual information.*"
Respondent from the Government sector

60% of the respondents selected summary of trends as the theme or chapter that they referred to the most. The chapter provides a brief description of the state of the

environmental for each theme on one page. This is emphasised by one respondents who called the report a one-stop shop.

In the Australian Framework for State of Environment Reporting, the selection of issues being reported on is discussed. The framework states that "*State of the environment reporting will periodically examine specific priority environmental issues. These issues will vary over time, and their coverage will assist in the long-term development of environmental indicators for reporting. A reporting system predominantly guided by public opinion of environmental issues would tend to be reactive rather than scientifically informed and proactive. For this reason, reporting on topical issues will form only one component of a more systematic review of environmental conditions and trends. Opinion surveys, undertaken from time to time, will provide an indication of major environmental issues of public concern. Reporting needs for these issues will be determined after consultation with community representative, ... and with representative of environment, scientific, industry and government agencies and organisations*" (Department of the Environment, Sport and Territories, 1994).

An important aspect of selecting issues to be reported on in the report is the need for monitoring and measuring activities to be taking place in terms of that indicator. If there is no baseline information and no plan to measure this indicator in the future, then it would not be feasible to use this indicator. In the development of the SoE report for the CCT a picture was gained of the monitoring activities that were already taking place in the City of Cape Town area. These were particularly located in the

domains of air pollution, water volume and quality, transport and traffic, agriculture, radio-active waste, housing, services such as water, sanitation, electricity and refuse collection, human protection and health and general information regarding the inhabitants of the metropole. These monitoring activities provide the basis for deciding on the themes to be included in the report (EEU, 1998).

It is also important to focus on issues that have a significant impact on the surrounding environment. In the first SoE Report there was a chapter that focused on Soil, but in the development of the report over the last five years, it has been determined that there are no new data related to soil. It was first decided to merge the Soil chapter with the Biodiversity chapter (in the Year Four Report). In the Year Five Report, the Soil chapter/section was removed from the report because of a lack of data.

The media-based themes are referred to the most, as well as the themes that have a tangible effect on the natural environment. The themes referred to the least are Safety and Security and Economy. In the case of Safety and Security this could be for a number of reasons, including outdated data[4], it could also be because the crime statistics are not very specific and just focus on the City of Cape Town area as a whole, crime is however considered one of the important aspects in the CCT that

[4] This is because the CCT rely on the South African Police Services (SAPS) for the crime statistics. The Minister of Safety and Security imposed a moratorium on the release of the crime statistics in 2000 and this was only recently lifted. For two years, the CCT was unable to release any crime statistics and could therefore not update this section.

need to be considered (This is according to the CCT Mayor's Listening Campaign[5]). There is however, no clear reason why the Safety and Security chapter is referred to less than the other chapter other than perhaps the sample size.

The Economy chapter is also referred to less than the other chapters. This could be because economics are a specialised field and people may not have a clear understanding of what it is reporting on. Although it contains information on unemployment, which is an important issue for the CCT (once again, according to the CCT's Mayor's Listening Campaign), many of the indicators are quite specific and could not be of interest to those who refer to the more media-based chapters. The Economic Development and Tourism Department, who produce this chapter, do bring out other more specific economic documents, which could fill the requirements of their users. Again, there are no clear reasons why this chapter is reported on less than other chapters when looking at the results of the questionnaire. The reasons above, are only assumptions.

[5] The Mayor's Listening Campaign was a campaign launched by the Mayor of the CCT. She met with the communities in Cape Town and discussed problems in these areas. There problems were highlighted as priorities for action in the future. (See www.capetown.gov.za for more information.)

## 3.4 Principles and Attributes of SoE Reporting

### 3.4.1 Results of Question 3: How do you rate the SoE Report for the following attributes?

**Table 3.6: Results of Question 3: How do you rate the SoE Report for the following attributes**

| | **Excellent + Good** | **Good + Adequate** | **Adequate + Poor** |
|---|---|---|---|
| Technical Information | 36 | 27 | 3 |
| Accuracy | 32 | 30 | 5 |
| Coverage | 31 | 27 | 9 |
| Being up-to-date | 25 | 28 | 13 |
| Rigor of analysis | 36 | 35 | 14 |
| Objectivity | 31 | 34 | 8 |
| Innovation | 27 | 30 | 11 |
| Organisation | 34 | 31 | 7 |
| Presentation and Readability | 38 | 23 | 4 |

In the discussion of this question, the results given by the respondents are divided into three groups namely; Excellent + Good, Good + Adequate and Adequate + Poor, as shown in Table 3.6. Those attributes that rated high for Excellent + Good included: technical information, accuracy, coverage, rigor of analysis, organisation and presentation and readability. Those attributes that rated high for Good + Adequate included : being up-to-date, objectivity and innovation. Although the respondents rated the SoE report very positively, there are a few areas that are areas of concern. These include being up-to-date, which rated higher than other attributes

in the Adequate + Poor section, others included rigor of analysis and innovation. It can however be seen that the majority of the respondents are very happy with the report, but admit there is room for improvement.

### 3.4.2 Discussion: Principles and Attributes of SoE Reporting

There are several principles of SoE reporting that should be remembered when compiling a SoE report. These principles will help ensure a successful SoE reporting process. These principles include:

- SoE reporting should be driven by the demands of end-users, this can only be achieved through a participative process.
- SoE reporting must reflect the diversity of the area.
- SoE reporting gains additional value through the integration and interpretation of data for assessing the state of the environment.
- SoE reporting is made successful through partnerships and participation.
- SoE reporting must be guided by a conceptual framework that facilitates the development of information that answers the basic SoE reporting questions, and makes the links between society, economy and the environment.
- SoE reporting should identify spatial and temporal trends.
- SoE reporting should portray a balance of information on the environment, society and economy.
- SoE reporting lies in a niché somewhere between the scientists or expert and various types of decision-makers. Interpretation and analysis within the SoE is

essential in order to transform scientific know-how into meaningful and useful information.

- SoE reporting relies on a family of products that are specifically designed to meet the needs of each diverse user (DEAT/CSIR, 2002).

In order to meet the principles of SoE reporting, the SoE report needs to rate high in terms of attributes shown in Table 3.6. The SoE report was rated according to a number of attributes ranging from technical information to coverage to presentation and readability. Generally the SoE report rated high in the good and excellent rating as compared to the adequate and poor ratings for most attributes.

According to Denisov and Christoffersen (2001), people no longer have time to read. He went on to say that different products with the same content might be received differently depending on how attractive – or unattractive – they are packaged. A publication that is nicely designed, laid out and illustrated may be better received and this may have a higher impact that one that is considered ugly and dull-looking. According to the results shown in Table 3.6, the respondents feel that the presentation and readability of the SoE report and summary report are satisfactory. The summary report gives a brief introduction of the state of each theme and is accompanied by strategically placed graphs and relevant photographs. It is seen as an attractive document with a clear layout and glossy pages and is an easy-to-use and simple document.

It is, however, important to have the most appropriate information in the report, but as UNEP/DEIA (1996) noted the report should not totally be constrained by data limitations. If one produces a glossy and attractive report, without the necessary level of information, the report may not be useful and could end up unused.[6]

It has been noted in the results of the questionnaire that the summary report does not provide enough information and that the full report is too lengthy for the average interested party. There is a need for a report between the summary and the full report, that will provide more information, but in an attractive and innovative format. There needs to be a balance between the presentation of the information and the detail of information presented. According to a report by UNEP/GRID-Arendal, SoE reports should be user-friendly, concise and understandable. Conclusion should be formatted and presented in such a way that non-specialists will be able to grasp them easily (UNEP/GRID-Arendal, 1998).

SoE reports should strive for balance and completeness with data[7] and indicators[8], which adequately reflect conditions and trends within the environment and socio-economic domains. Unfortunately, this is not always possible and organisations must

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[6] In Figure 3.5 it is shown that one respondent acknowledged that they keep the SoE Report on a shelf unused and that 14 respondents stated that they placed it in a library. Although no indication is given of how often the report is used in the library it may also be 'placed on a shelf unused.'

[7] Robust environmental and socio-economic data provides the foundation for the analysis and interpretation of the state of the environment. In the absence of such data, SoE reporting is reduced to descriptive, anecdotal and non-systematic observations: not an acceptable basis for rational decision-making.

[8] Environmental indicators can be used on physical, chemical or biological measures associated with environmental quality or natural assets. They summarise some aspects of the state of the environment, natural resource assets, and related human activities. To be useful in a sustainable development context, environmental indicators should relate environmental aspects to socio-economic factors. A key characteristic of environmental indicators is that they track changes over time.

frequently be satisfied with surrogate data. This situation applies to many other areas where an organisation may have relatively good records for socio-economic and emissions stressors, but are relatively weak on data reflecting ambient conditions and societal responses. For such cases, the use of statistical relationships or cause-effect models can provide useful results although with a higher degree of uncertainty. Reducing data inadequacies, wherever possible, represents an important long term goal for SoE reporting to foster. The CCT is aware of some limitations of the report. Certain sections of the report cannot be updated because the data are not available or because no new information on the state of the environment for that theme is available. This is a weakness evident in environmental reporting systems around the world and compromises where timeous, accurate and up-to-date information is required for sound decision-making.

In terms of the content covered in the SoE Report, it is suggested that common environmental issues present in the environment of the area be reported on, be used as the starting point for deciding which chapter to include in the SoE report, but to adjust the final selection to the areas priorities and data that is available. In addition to environmental issues, include chapters describing the development of the main economic sectors influencing the environmental situation in the country or area and include chapters about the use of environmental management indicators (UNEP/GRID-Arendal, 1998).

The respondents are generally happy with the content covered in the report, the accuracy of the data was rated good as was the rigor-of-analysis. One respondent did acknowledge the problem with the information being out of data:

*"It's [the SoE Report] already outdated when launch..."*

Respondent from the Government sector

The CCT's SoE Report is the only report produced annually by a Metropolitan Council or Government Department in South Africa. By 2004 six years of baseline information will be available to assist in the development of the future reports. The report, therefore, provides the most up-to-date information on the state of the environment in Cape Town. Although some feel that the report is already outdated by the time it is launched, there are some limitations in producing an annual report. In the CCT there is no dedicated team for SoE Reporting. There is one official assigned to compiling the report (this is as part of his other tasks) and the official is dependent on others within the City of Cape Town and external stakeholders for the data. Some data are not available when deadlines are reached, but are crucial to the report such as the crime statistics and the South African Census data, which means that the report will be delayed.

In general the report is a highly effective document that attempts and in most cases succeed, in meeting the aims of the SoE report. There are a number of limitations and problems in producing this report.

## 3.5 An Integrated Approach to Environmental Reporting

### 3.5.1 Results of Question 4: What does the SoE Report offer that is not provided by other sources?

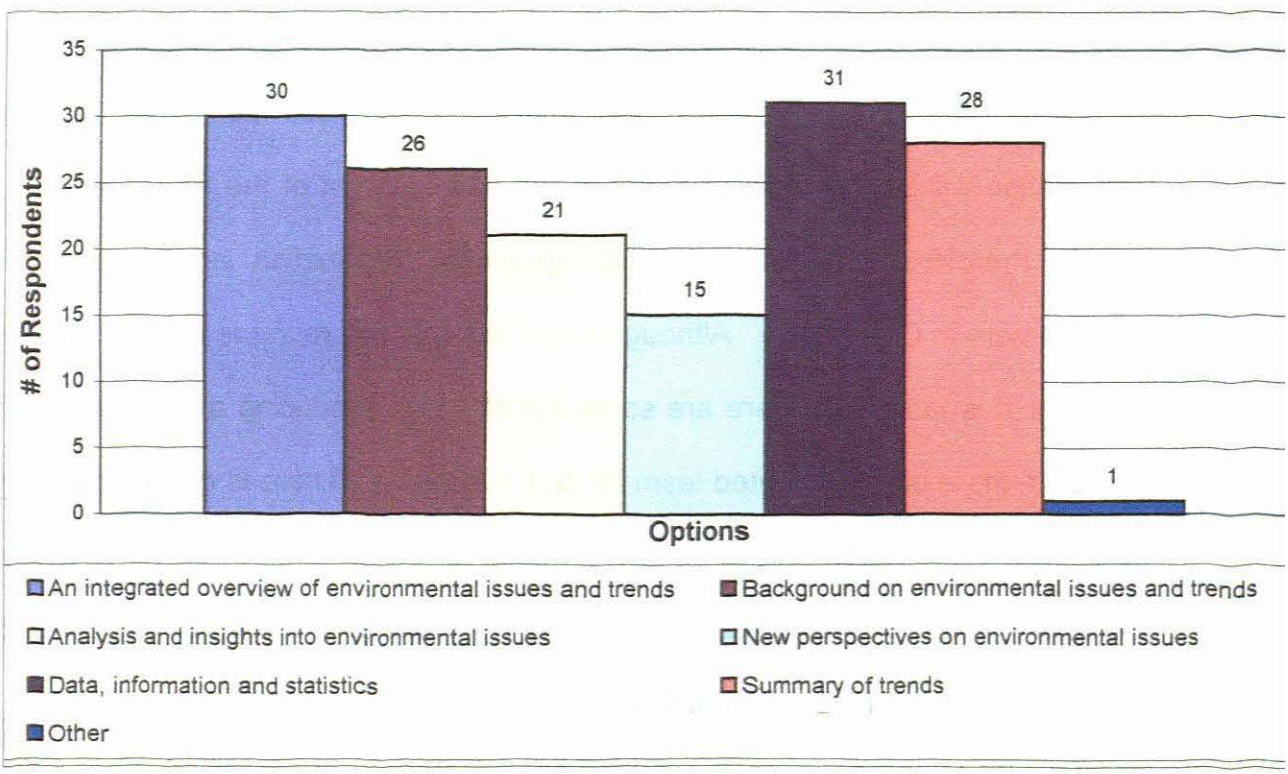



**Figure 3.8: Results of Question 4: What does the SoE Report offer that is not provided by other sources? (n=41)**

Question 4 asks what the SoE Report offers that is not provided by other sources of environmental information. As shown in Figure 3.8 most of the respondents feel that the SoE report provides a useful source of 'data, information and statistics' (75%) and

that it provides an 'integrated overview of environmental issues and trends' (73%). 68% of the respondents also selected 'summary of trends', which is emphasised by the fact that in Question 5, 60% of the respondents selected summary of trends as the chapter that they referred to the most. 63% of the respondents stated that the SoE report provided 'background to environmental issues and trends' and 51% felt that it 'analysed and gave insight into environmental issues'. Generally from the results of this question one can see that the respondents are happy with the way in which the information is presented in the SoE report and with what the report aims to achieve in comparison with other similar reports.

### 3.5.2Results of Question 6 and 7: What do you like least and most about the SoE Report?

Question 6 and 7 are discussed together as they are covering the same options.

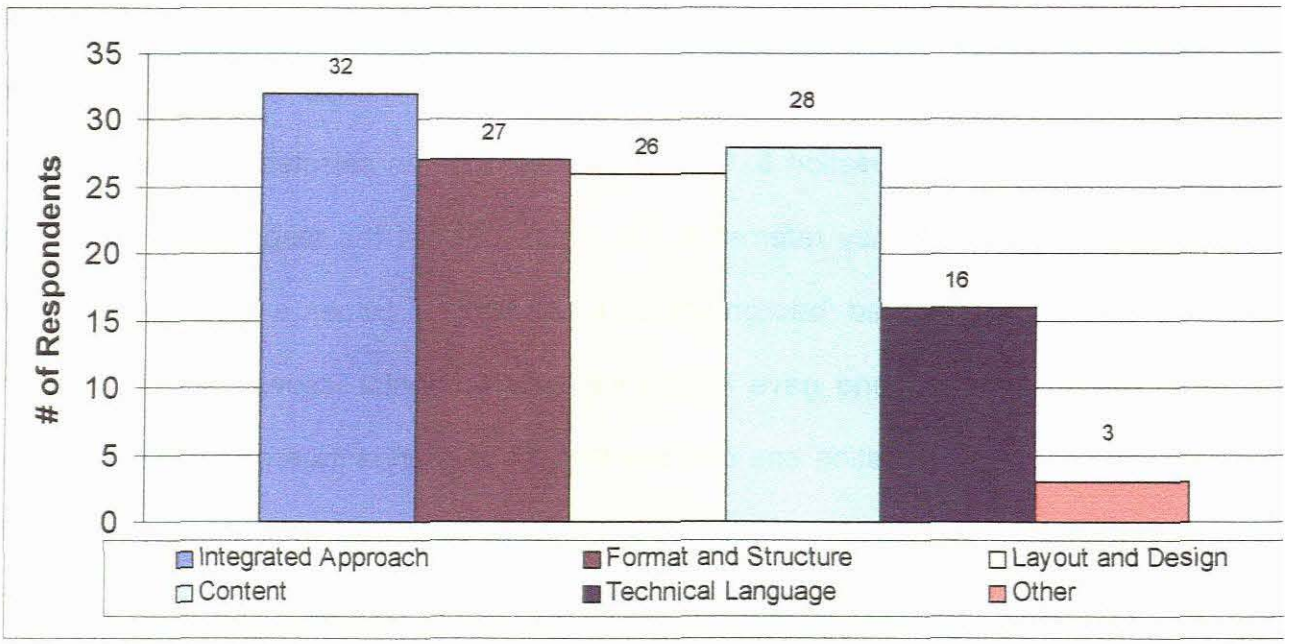



**Figure 3.9: Results of Question 6: What do you like most about the SoE Report? (n=41)**

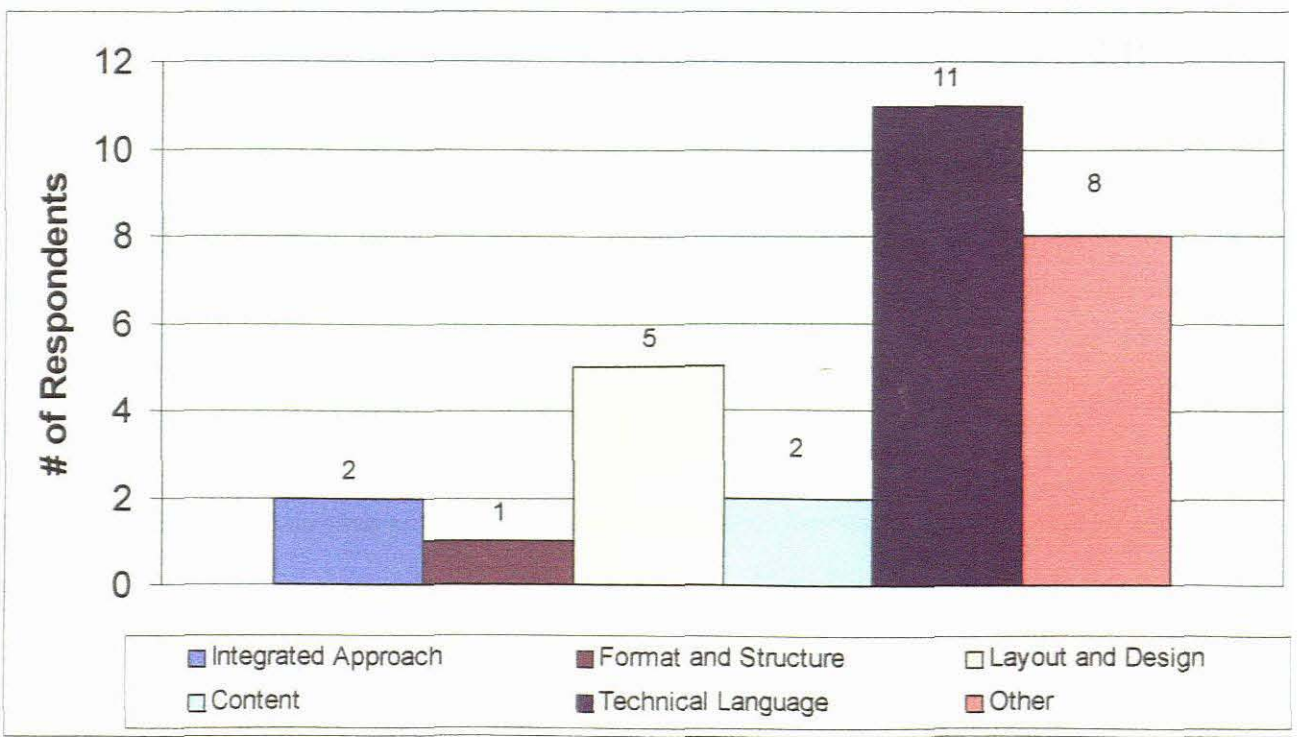



**Figure 3.10: Results of Question 7: What do you like least about the SoE Report? (n=24)**

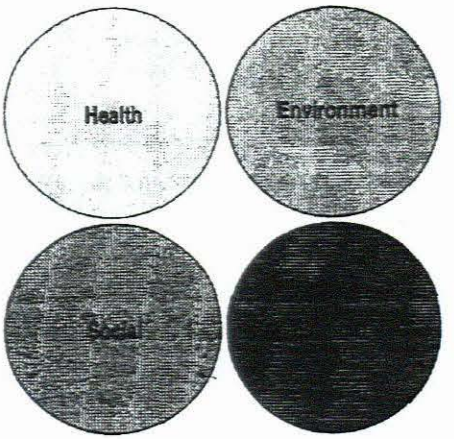
Many respondents did not answer Question 7, which gives the indication that people are generally happy with the report. 25% of the respondents, who answered Question 7, selected technical language as the aspect that they liked least about the SoE report. This could be viewed in two ways. Firstly, the use of technical language in the full report could limit the understanding of the information in the report or secondly the language in the summary report could be too basic (i.e. not technical enough) and thereby limit the use that some users can get out of the report.

Answers under the other option included the need for solutions in the report, the limited detail in the summary report, the name being too green, the fact that the report is outdated by the time it is launched, accessing it on the web has its limitations, the lack of clarity on the definition of environment, the lack of data with respect to indexes and targets and that it is strongly from the CCT's point of view.

74% of the respondents stated that the aspect of the report that they liked the most was the integrated approach to environmental information. 65% of the respondents like the content of the report, followed by 62% who liked the format and structure most and 60% who liked the layout and design the most. One respondent noted that it was easy to use the report as most of the required information around the environment in the CCT can be found in one report.

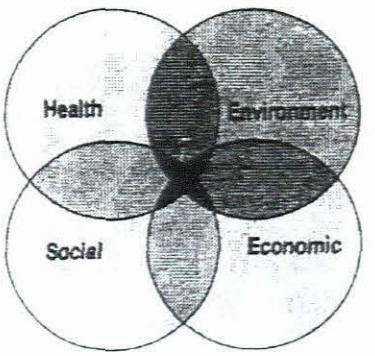
### 3.5.3 Discussion: An Integrated Approach to Environmental Reporting

The SoE report provides an integrated overview of the state of the environment in the CCT. This is, according to the respondents, the most important aspect of the CCT's SoE Report. According to UNEP/DEIA (1996), one of the key characteristics of SoE reporting is the interpretation, assessment and integration of high quality data to generate meaningful information. Environmental, economic and social reporting has, until now, been conducted as distinctly separate entities. SoE reporting attempts to integrate these separate reporting entities, however, the main focus remains on the environmental. SoE reporting represents a significant step forward from this more traditional sectoral reporting, however it does not quite meet the requirements for sustainability reporting as outlined in Figure 3.11. Sustainability reporting requires completed integration for the environmental, social and economic entities.



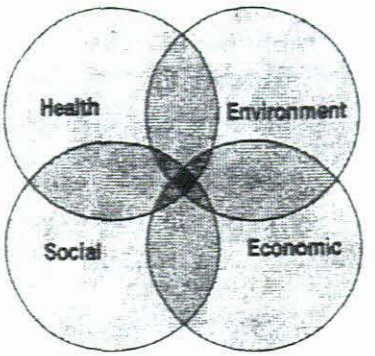

A. SECTORAL REPORTING

Separate; no integration




B. STATE OF THE ENVIRONMENT REPORTING

Integration with environment as the focus; the environment ingredient of SD reporting




C. SUSTAINABLE DEVELOPMENT REPORTING

Full integration; hypothetical & complex

Figure 3.11: Graphical Representation of Sectoral, SoE and Sustainable Development Reporting

*The CCT's SoE report is represented by the second illustration, integrating the four* components, but focussing on the environment. There has been talk of moving towards a sustainability report and this is being actualised in 2004.

Another aspect of the SoE Report that the respondents felt was good, was the availability of data, information and statistics (75% of the respondents selecting it). One respondent stated that they remembered some of the facts and quoted them when discussing environmental issues with others. Thirty-two respondents selected integrated approach as the aspect that they like the most about the SoE report and two respondents stated that that was the aspect that they like least about the SoE report.

One respondent form the private sector, who selected the integrated approach as the aspect he like least about the SoE Report gave the following reason.

"*The Integrated aspect is critical and I am not sure that there is much integration in the report. I do not feel that there is a focus on what some of the alternatives are and what the benchmarks are or where we should be headed in order to give people a good sense of where they might be able to contribute – do not clearly enough answer the question "how can I make a difference – where can I make a difference" in the context of the picture presented.*"

Respondent from the Private Sector

One other aspect that was selected by a number of respondents as the aspect they like least (48% of the respondents) or most (39% of the respondents) about the SoE Report, was the technical language. This can be read in two ways: either that the language used in the report is of such a nature that it is technically suitable for the

users who are using the report, or that it is not technically suitable, which could be the case of the summary report, that is written in a very simple language which could limit the use of the report. A number of respondents made mention of the fact that there is a limit to the amount of use that they can get out of the summary report. There are plans to produce a more detailed document that will fit in between the full report and the summary, in providing enough information to be useful and still be in a usable format.

# Chapter 4 : Findings

The following paragraphs briefly describe the findings of the results discussed in Chapter 3.

1. The majority of the respondents came from a background of environmental management or the natural or social sciences. This was understandable as the report does concentrate on the environmental aspects of the CCT and the majority of the people on the distribution list will be from an environmental background. It was also interesting to note that most of the respondents came from a government department – local, provincial or national. This could be because many government officials use the report or simply because government officials have better access to e-mail and could complete the questionnaire easily.

2. The respondents felt that environmental reports (not limited to SoE reports, but including other reports that focus on the environmental aspects of a company or an area) and the Internet were the most effective methods of presenting environmental information. This was followed by television, newspaper (weekly) and e-mail. The focus here seems to be on the 'new media'/electronic media rather than on the traditional mass media.

3. The majority of the respondents use the SoE report as a source of background information for their work and to keep up-to-date with environmental issues. It

was seen from the results that many viewed the SoE report as a 'nice-to-have' report that provided them with accessible and easy to understand information that could be used for personal knowledge, in reports and to assist with decision-making.

4. The majority of the respondents would refer to the sections within the report that were of interest to them, with a number just skimming through the report or placing it on a bookshelf. This could be due to the report not meeting their information needs and therefore not of use to them.

5. The summary of trends section was referred to the most in terms of chapters referred to by the respondents. This chapter provides a brief description of the state of each of the themes and will provide the user with an idea of which themes would be of interest to them. This again shows that people want easily accessible information and don't want to spend time reading through unnecessary information.

6. Generally people rated the SoE report positively with rankings of good or excellent given to most of the attributes of the SoE report. One area of concern is that it did not rate high in terms of being up-to-date. This can be due to the report only being released up to a year after the reporting year. In terms of other reports, the CCT's report is the only one in South Africa that is produced annually and is therefore one of the most up to date reports available in South Africa at the moment.

7. Another positive aspect of the SoE report is that it provides an integrated overview of the environmental trends and issues within the CCT. This assist people who required environmental information and statistics for their work, as it is a 'one-stop shop' of environmental information within the CCT. This was the aspect that people like the most about the report.

8. In terms of what people liked and didn't like about the report, there were a number of people who were concerned about the gap in terms of technical information between the full report and the summary report. There is a need for the gap between these two reports to be narrowed or for a third report to be added to the list of products. This third product could provide them with enough information to meet their needs, but not too much information to make the report unusable.

# Chapter 5 : Conclusion

Taking into account the information obtained from the research for this study, and weighing these up against the original aims and objectives, the following conclusions have been reached. Once again it needs to be noted that the results of the questionnaire are only from the users who have e-mail addresses in the database, the users therefore have to have access to e-mail and the results of this study cannot be taken as the opinions of all the users of the report, but can be used in the future development of the report.

## 5.1 Profile of the Users

It has been determined that there are five main groups who are using the SoE report for the CCT. These main groups are:

- Government officials (local, provincial and national);
- The private sector;
- The civil society/NGOs;
- The academic/education sector (this includes libraries, schools, tertiary institutions, etc); and
- The press/media.

Many of the respondents have a background of environmental or natural sciences. There are also a number with a background in lecturing or teaching. This would explain an interest in such a report and would need to be taken into consideration when developing further products.

According to the present study, the majority of the users come from the government sector, followed by the private sector and NGOs.

The different user groups will have different needs. The needs of the user groups will need to be acknowledged when deciding on the products that will be suitable for them. Currently the main products produced as part of the SoE process are the Full SoE Report, the Summary SoE Report and the SoE website, which allows users to download Portable Document Format (or pdf) chapters of the full report.

In order to meet the needs of the users, the CCT needs to take a good look at who is using the SoE report and how to modify the products to meet their needs. Some of the possible options are discussed at a later stage in this chapter.

One aspect that needs to be taken into consideration is the need for a database that is continually updated. The problem experienced in this study was that 65 e-mail addresses were not functioning or available at the time that the questionnaire was sent out. There was also the problem that there were a large number of entries on the database who did not complete the e-mail address space. This could be because they did not have e-mail addresses or because they did not wish to supply them. It is

necessary for the database to be updated constantly. If the CCT does not know who is receiving the information, then they cannot be sure of how the users are using the documents and what further information they require. One respondent noted on the questionnaire that it was important for the CCT to keep their database up to date as the respondents details had changed and she had forwarded the information to the CCT, but they were still making use of her old details. This may discourage users from requesting further information, if they feel that the organizations cannot make the necessary changes to their details once they have been informed.

## 5.2 Different Products for Different Users

The SoE report plays an important role in providing information on the state of the environment in the CCT and is one of the only documents that provide such integrated information on the environment in this area. There are a number of respondents who feel that the summary report does not provide enough information to meet their information needs and requirements. The summary report is distributed to approximately 7000 - 10000 people annually and will therefore get to the majority of the users of the report. It is therefore important to modify the current format of the summary report in order for the users to get more use from the report.

Many feel that the summary report is meeting only the requirements of schools (and in some opinions only primary schools) who are using the reports as supplementary

information for the syllabus. This is especially with the CCT producing the SoE Workbook for Foundation Phase (Grade 1 – 3) as an accompanying document.

One respondent stated that the summary report provided the hint of information, but the user who was interested in the topic needed to search for further information. The full report is however available to those who require further information, but there are only a limited number printed each year. These users are then pointed towards the SoE website where they can download the pdf chapters of the full report. There are however those who do not like to or feel comfortable downloading pdf files. There are a number of reasons for this including

- Crashes and software problems, because of the size of pdf files as compared to html files, there is a greater chance of the browsers or computers crashing.
- Most pdf files are large text files with no internal navigation. They don't allow for an effective search engine, except for the ability to jump from one text string to the next matching one. If a user's question is answered on page 75, it could be a difficult search to locate what they area looking for (Nielsen, 2003).

The problem of downloading pdf files can be solved with the development of a more interactive website. Currently the SoE website consists of a main page with a brief description of what SoE reporting is and links to the five annual reports. The links contain pdf versions of the Year Two – Year 5 reports. The link to the Year One report is currently not functioning. The main page also contains links to other pages of interest such as international organizations involved in SoE reporting. There is

however currently a resource limitation to go the website route and therefore the use pdfs.

There is a need for a more interactive website. Such a website could include graphs, pictures and maps. The indicators could be listed under the themes given in the SoE reports. Active links could be used to move from theme to theme or indicator to indicator depending on their requirements. A user-friendly search engine will be required, so that people will be able to find the information they require.

There are however, a number of problems in hosting such a website. There will need to be one identified person who will manage this website. This may not need to be a permanent position as most of the information will only be updated once a year. There need to be commitment from the organization to host and manage such a website. The actual development may take some time and the cost implications should be taken into consideration, but could prove to be more useful than the website in its current form

The family of products should be looked at. There is a need for products to meet the needs of the users. In its current form the SoE summary report is not suitable for use by the majority of the users. The language used in the report is very basic and in the opinion of some, suitable for school level, but not for the rest of the population. Because of the size of the full report (± 200 pages), only 500 copies are printed each year and distributed to a select group of users.

Government officials require facts and figures that will assist with decision-making around priority issues and problem within the CCT. One respondent stated that the report assisted them in evaluating gaps in service delivery and helped them to plan accordingly. Some officials from government, especially at a local government level, expressed an interest in the other projects that are currently taking place within the CCT in order to identify possible linkages with their projects. The national and provincial government officials used the information to assist them with their indicator related work.

Academics and tertiary institutions are also interested in figures that will assist them with their research projects and programmes. There has been some concern from the academics that the SoE report does not provide enough detailed information, even in the full report. The SoE report is not meant to provide all the information on a topic, but will provide some information on a specific indicator for an area, that could assist in more detailed studies.

It has been suggested that producing a "fat summary" may fill the gap that currently exists between the full report and the summary report. This report will be presented in a similar way to the summary report, with graphs, photographs and maps were necessary, but will also contain more detailed information rather than the one or two sentence descriptions currently given in the summary report. This should contain links to the website. It is therefore necessary to have a website that is interactive, updateable when necessary and user-friendly rather than a portal to download information.

## 5.3 Information needs to be up to date

One of the key areas of concern was the report being up-to-date. There are some limiting factors in producing an annual report. The SoE co-ordinator is dependent on a number of internal and external contributors for the information to make up the SoE report. These contributors have different reporting timeframes. Some follow the calendar year, some the financial year, some update their information annually or monthly or in some cases even daily. In other cases the data is only updated every few years, e.g. the Census data, which is updated every five years. Sometimes an indicator that has been reported on for many years is no longer seen as a priority and therefore not measured and monitored by the contributor. This can lead to some gaps in the report. This can make the collection of data for such a report extremely difficult.

It has been suggested that the SoE report only be produced one every two years, which would allow more time to collect the data and fill in the gaps. Thereby a better quality document can be produced and there won't be a rush at the end of the year to get the document completed in time.

The current international trend takes a different line. They only produce a full report once every four or five years. This report contains all the themes and indicators and information on most of the projects that are taking place around the indicators.

During the years in between the complete reports, summaries are produced on specific themes such as Inland Waters or Air Quality. Although there is a great need for up to date information by the users of such a report, the time and resources taken to produce such a large scale annual report could be one of the limiting factors, especially if there is not dedicated team assigned to produce this report.

It could be suggested that a report be produced every four years, which will contain the most up to date information, be presented in an attractive and informative format and be distributed widely. During the years between these reports, the report can be updated on the interactive website as the updated information becomes available. People can subscribe to updates and receive an e-mail when new information becomes available. This will as stated before require one person dedicated to the management of this website. Although this may not be a full time job, some-one will need to be trained in up-dating the information.

## 5.4 An Assessment of the Themes and Indicators

Another aspect that came out of the results of this study was the need to reassess the indicators and themes used in the report. Although all the themes are referred to, there are some that the respondents feel are not as useful to them as others. One of the problems here could be that some of the respondents feel that a SoE report should only focus on the natural and media-based environment, such as is reported on by the US EPA (United States Environmental Protection Agency, who only focus

on the media-based indicators around the themes air quality, water quality, land and biodiversity). The CCT have defined the environment as "our surroundings, including living and non-living elements, e.g. land, soil, plants, animals, air, water and humans. The environment also refers to our social and economic surroundings, and our effect on our surroundings" (CCT, 2000). This means that the environment will refer to everything around us and not be limited to the natural environment.

In Figure 3.11 (in Chapter 3) it was shown that although SoE reports do integrate the social, economic and environmental aspects, the focus is on the natural environment. By moving away from SoE reports and moving towards sustainability reporting, which is the true integration of these three aspects, all themes (looking at environment, social and economic aspects) given in this report should be covered. It was mentioned in Chapter 3 that one of the original themes in the report, Soil, was removed because of a lack of data and many other indicators have been removed due to a lack of data.

There is a definite need for the SoE co-ordinator and team members to assess the indicators used and the data available and report on what are priority issues within the CCT. In the CCT SoE report there are currently ±150 indicators, although only 70% are reported on.

## 5.5 Summary

The SoE report plays an important role in providing environmental information to the people within the CCT and it is therefore important that it meets the needs of the users of the report. Through the results of this study one can see that there are a number of issues that need to be taken into consideration in the production of such a report. These include:

- The use of technical language in the summary report;
- The gap between the full report and the summary report;
- The needs of the different users;
- The use of different products and which products are suitable for the different users;
- The need for a more interactive website;
- The need for the information in the report to be up-to-date;
- The assessment of the themes and indicators.

The City of Cape Town is currently looking at sustainability report for 2004. This will change the direction of environmental reporting in the CCT. It is important to carefully look at his report in order to determine if these changes are meeting the users information needs and requirements.

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# ANNEXURE A: QUESTIONNAIRE

# State of the Environment Report for the City of Cape Town User Survey

*Dear SoE User*

*You have been identified as a key user of the CCT's SoE Report. As such, you are well positioned to assist the City in its' environmental information and reporting function.*

*We are continually striving to improve the SoE report and we highly value your opinion. The purpose of this survey is to determine how the SoE report is used, what the users like / dislike about the SoE report and to assess the users needs in terms of information, in order to better reach the target audiences.*

*Thank you for your time and we greatly appreciate your participation in this process.*

Instructions;

1. Please mark your choice in the block next to the statement with an X.
2. If you have more than one choice for a question, please rank them from one up in order of importance, with one being "most important".

1. For what **purpose** do you use the SoE Report?
If more than one, please rank them in order of importance (1-8)

| Purpose | | Rank |
|---|---|---|
| 1 | Background information for my work | |
| 2 | Policy formulation | |
| 3 | Reference source for Research | |
| 4 | Teaching or training tool | |
| 5 | Keep up-to-date on environmental issues (Personal Development) | |
| 6 | For use in other forms of media such as newspapers or magazines | |
| 7 | Assist decision-making and formulation of conditions of approval | |
| 8 | Other (please specify) | |

2. How do you **use** the SoE Report?
If more than one, please rank them in order of importance (1-8)

| Use | | Rank |
|---|---|---|
| 1 | Read all section thoroughly | |
| 2 | Read certain sections thoroughly | |
| 3 | Skim through or glance at it | |
| 4 | Use as a personal reference | |
| 5 | Place in a Library | |
| 6 | Share with colleagues | |
| 7 | Keep on a shelf unused | |
| 8 | Other (please specify) | |

| 3. How do you **rate** the SoE Report for the following attributes: | | | | |
|---|---|---|---|---|
| | Excellent | Good | Adequate | Poor |
| Technical Information | | | | |
| Accuracy | | | | |
| Coverage | | | | |
| Being up-to-date | | | | |
| Rigor of analysis | | | | |
| Objectivity | | | | |
| Innovation | | | | |
| Organisation | | | | |
| Presentation and readability | | | | |

| 4. What does the SoE Report offer that is not provided by **other sources**?<br>If more than one, please rank them in order of importance (1-7) | | |
|---|---|---|
| | | Rank |
| 1 | An integrated overview of environmental issues and trends | |
| 2 | Background on environmental issues and trends | |
| 3 | Analysis and insights into environmental issues | |
| 4 | New perspectives on environmental issues | |
| 5 | Data, information and statistics | |
| 6 | Summary of trends (getting better, getting worse) | |
| 7 | Other (please specify) | |

| 5. Which **themes** do you refer to the most?<br>If more than one, please rank them in order of importance (1-15) | | |
|---|---|---|
| | | Rank |
| 1 | Air Quality and Atmosphere | |
| 2 | Inland Waters | |
| 3 | Coastal Waters | |
| 4 | Biodiversity and Soil | |
| 5 | Urbanisation, Urban Form and Housing | |
| 6 | Infrastructure | |
| 7 | Transport | |
| 8 | Energy | |
| 9 | Waste | |
| 10 | Economy | |
| 11 | Health | |
| 12 | Education | |
| 13 | Safety and Security | |
| 14 | Environmental Governance | |
| 15 | Summary of Trends | |

6. What do you **like most** about the SoE report?
If more than one, please rank them in order of importance (1-6)

| | | Rank |
|---|---|---|
| 1 | Integrated Approach | |
| 2 | Format and Structure | |
| 3 | Layout and Design | |
| 4 | Content | |
| 5 | Technical Language | |
| 6 | Other (please specify) | |

7. What do you **like least** about the SoE Report?
If more than one, please rank them in order of importance (1-6)

| | | Rank |
|---|---|---|
| 1 | Integrated Approach | |
| 2 | Format and Structure | |
| 3 | Layout and Design | |
| 4 | Technical Language | |
| 5 | Content | |
| 6 | Other (please specify) | |

8. How does the SoE Report **contribute** to your work? Please give examples

9. Are there **Themes / Issues / Indicators (Metro/City wide)** in Cape Town that you feel are not covered in the SoE Report?

| 10. What do you think is the **most effective** way of presenting environmental information? If more than one, please rank them in order of importance (1-13) | | |
|---|---|---|
| | | Rank |
| | Non-Electronic | |
| 1 | Books | |
| 2 | Newspaper (Daily) | |
| 3 | Newspaper (Weekly) | |
| 4 | Word-of-mouth | |
| 5 | Travelling exhibitions | |
| 6 | Environmental Days (e.g Environment Day, Wetlands Day etc) | |
| 7 | Youth Groups, Environmental Clubs | |
| 8 | Environmental Reports | |
| | Electronic | |
| 9 | Internet | |
| 10 | CD-Rom or diskette | |
| 11 | E-mail | |
| 12 | Television | |
| 13 | Other (please specify) | |

| 11. What is your **area of specialisation** If more than one, please rank them in order of importance (1-14) | | |
|---|---|---|
| 1 | Environmental Management | |
| 2 | Finance, banking, economics | |
| 3 | Law | |
| 4 | Natural Sciences | |
| 5 | Social Sciences | |
| 6 | Information Management | |
| 7 | Lecturing or teaching | |
| 8 | Research | |
| 9 | Administration | |
| 10 | Human Resources | |
| 11 | Land-use planning and Management | |
| 12 | Architecture | |
| 13 | Engineering (Civil or others) | |
| 14 | Other (please specify) | |

| 12. How would you describe your **organisation**: | | |
|---|---|---|
| 1 | Government Department | |
| 2 | Non-governmental Organisation, civil society or similar organisation | |
| 3 | Academic or Research institution | |
| 4 | Education (primary or secondary) | |
| 5 | The private sector | |
| 6 | Library or similar repository | |
| 7 | The Press or Media | |
| 8 | Other (Please specify) | |

| 13. Are there any other comments you would like to make about the SoE Report for the CCT? (Positive or Negative) |
| --- |
| |

**Thank you for your participation in this process**