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**THE STATE OF ENVIRONMENT  
REPORT FOR UGANDA; 1994:  
AN EVALUATION REPORT**

**NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY  
GOVERNMENT OF THE REPUBLIC OF UGANDA  
KAMPALA-UGANDA**

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The views contained in the report reflect those of the authors and not those of the National Environment Information Center, the National Environment Management Authority or the Government of the Republic of Uganda

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## LIST OF ACRONYMS

ANOVA	Analysis of Variance
AIDS	Acquired Immune Deficiency Syndrome
CBOs	Community Based Organisations
EEC	European Economic Community
EMCBP	Environment Management Capacity Building Project
HIV	Human Immuno Virus
KCC	Kampala City Council
LCs	Local Councils
NEAP	National Environment Action Plan
NEIC	National Environment Information Center
NEMA	National Environment Management Authority
NGOs	Non-Governmental Organizations
NRC	National Resistance Council
NWGS	National Working Groups
PHC	Primary Health Care
PVOs	Private Voluntary Organisations
SOER	State of the Environment Report
STV	Sanyu Television
UMTE	Uganda Media Trust for the Environment
UNEP	United Nations Environment Programme
UTV	Uganda Television
USAID	United States Agency for International Development
WRI	World Resources Institute

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## 1 INTRODUCTION

The need for national environmental reporting in Uganda was recognized in the early 1990s to support the National Environment Action Plan (NEAP) process. It was also a direct follow up of the United Nations Conference on Environment and Development held in Rio de Janeiro, Brazil, in 1992. In addition, it was a requirement under the National Environment Management Policy (which was already drafted by the time of preparing the State of Environment Report [SOER]). Preparation of the SOER biennially is now a requirement under the National Environment Statute, 1995.

The first ever SOER for Uganda was launched in November, 1994. Since then, copies of the publication have been distributed to over three thousand organizations, institutions and individuals. The underlying theme of state of environment reporting is the link between human activities, natural processes and environmental conditions. The two main target groups of the report are

- i) the public which needs to appreciate the consequences of its own actions and hold policy and decision makers accountable for their actions, and
- ii) Policy makers who can use the report to understand the various environmental problems the country faces and develop strategies to address them.

The objectives of the SOER'94 were threefold

- i) To inform the public about the state of the environment in the country, the importance of its natural resources and their value to society,
- ii) to indicate key trends and projections, and opportunities for improvement, and
- iii) to provide an accurate and useful reference document for those interested in environmental and natural resources issues.

During preparation of the report, two national consultants were retained. One handled the economic and social aspects while the other dealt with the ecological and natural resources aspects of environmental management. Each of the consultants was provided with two research assistants. In order to ensure that the contents of the report were correct and provided a true reflection of the policies and strategies of various lead agencies in resource management in the country, an inter ministerial working group of experts was constituted to review the report at various stages of its preparation. However, the overall responsibility of the report, including technical editing remained with the National Environment Information Center of the Ministry of Natural Resources. Valuable technical backstopping was provided by the World Resources Institute, which has a long and proven experience in environmental reporting. Preparation of the report took six months.

With this background, and given the fact that this was the first report of this nature produced by Government, it was necessary to carry out an evaluation of the report. The main areas of focus were the preparation process, results and outputs of the reporting program. It was

also important to establish whether the objectives had been met given the wide range of users and their needs

In addition, since there is a provision to prepare the SOERs biennially, this evaluation should provide a basis for improvement of future reports

In a technical meeting on August 8, 1995, it was decided that evaluation with the use of questionnaires and interview schedules be used for the varying respondents. These were administered to selected readers in order to assess the usefulness of the report and to solicit for opinions on how the next SOER could be improved

## **2 EVALUATION METHODOLOGY**

### **2.1 Objectives of evaluation**

The overall goal of the evaluation was to solicit information on how to produce a report that informs the public, and provides a source of action for environment and natural resource management. The main objective of such an evaluation is usually to learn from experience. The evaluation therefore considers both positive and negative aspects, and offers a unique opportunity to reinforce the strong points and build the lessons learned in future publications. Deficiencies can also be addressed and improvements to products and processes incorporated as the opportunity arises.

The specific objectives were

- i) To test the degree of readability,
- ii) to assess the quality of presentation,
- iii) to determine deficiencies of the report,
- iv) to determine new areas of emphasis for future reports, and
- v) to assess the usefulness and impact of the report

Several evaluation models were studied by the authors and the Canadian model<sup>1</sup> was found relevant and adapted to fit the Ugandan situation

### **2.2 Test Criteria**

Four aspects were tested, namely

- i) Efficiency - this is an assessment of the resources (time, human and financial resources) used in report preparation. The main issue here is whether the same level of output could have been achieved with less cost and effort or in

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<sup>1</sup> Evaluation of Canada SOE 1993

less time

- ii) Effectiveness - this provides a measure of the results actually achieved against the objectives that were set or anticipated, i.e. how well did the report meet its objectives?
- iii) Relevance - this addresses the degree to which the results obtained corresponded to the actual needs, i.e. do the objectives need to be refined?
- iv) Impact - this is an assessment of the longterm effects whether or not these were anticipated at the start of the report preparation process

### **3 EVALUATION OF EFFICIENCY**

#### **3.1 Analysis of Costs, Schedules, and Resources**

##### **3.1.1 Cost Structure of the SOER Proposed Versus Actual Budget**

Analysis of costs was carried out using ANOVA and a probability value of 0.3016 obtained overall, it was established that both budgets (proposed and actual) were not significantly different from each other (at 5% level of significance). There were, however, very significant differences between various items in the budget. It was found that although the expenditure for the SOE national working group, advisory committee, production specialist/desktop publishing, copy editor, administrative costs to NEIC and fuel remained the same as originally proposed, expenditure on research assistants/fact checkers, launching of the report, distribution and outreach decreased by 33.3% and 3.7% respectively. On the other hand, expenditure on communications, stationery and duplication, production and printing costs, and contingency had increased by 100%, 33.3%, 50.5% and 14.16% respectively. Overall, the actual expenditure exceeded the proposed expenditure by US\$ 3,726 (8.79%), but was still within the total amount of funds (US\$ 40,000) available for the preparation and production of the National SOER '94.

From this evaluation one would firmly recommend that the actual budget could be used a proxy to budget for the preparation and distribution of future SOERs.

##### **3.1.2 Time and human resources**

As mentioned earlier, the SOER was a direct follow up of the Agenda 21 recommendations and was also aimed at supporting the National Environment Action Plan process and implementation of the National Environment Management Policy. Following an internal review of the functions and responsibilities of NEIC, it was decided that producing the SOER was one of the center's main objectives. Other major key players in preparation of the SOER were the Government of Uganda, the United States Agency for International Development (USAID) and the World Resources Institute. Prior to the preparation of the SOER, a number of resource persons, both Consultants and Research Assistants had to be selected based on the expected content of the SOER. The SOER was

- i) to show the link between economic development and the status of the

environment,

- ii) to link social conditions (population interactions) to environment management, and
- iii) to make reference to SOERs of other countries and other reports in order to determine how Uganda was faring compared to other countries

Based on the above, the Consultants had to include on with a background in environmental economics/valuation of natural resources, and one natural resource management specialist. These were responsible for drafting most sections of the report and guiding research assistants to collect, check and analyze data. The basic criteria for this responsibility was to have good writing skills with ability to write clearly in one's technical field as well as putting across certain concepts in a readable fashion.

The draft table of contents and schedule of duties were developed at the beginning of the exercise to act as a guide to the report. This was done in close collaboration with WRI staff. The consultants were expected to submit regular reports to the editor-in-chief to allow for corrections, changes in content and to identify gaps that required to be filled.

**Overall, the editor-in-chief felt that the time structure for data collection had been underestimated** the time extended from the original 4 to 6 months. It was suggested that a total of 6 months would be required for preparation of the SOER (4 months or data collection, 2 months for typesetting and editing).

Some limitations at the data collection stage were identified as the following:

- i) Inconsistent tables and graphs
- ii) Poorly cited data (i.e. with no indication of the sources)
- iii) In certain cases, the areas selected were broad and data was sometimes not readily available
- iv) With the large number of on-going projects in the country, new data was always being released. The SOE team had to make a decision on the time limit after which no new data could be incorporated into the report. It was decided that the end of the 1st quarter of 1994 would be a reasonable time limit.

In spite of the limitations, it was felt that four research assistants are capable of handling this task especially since they only deal with SOER related activities. **It was suggested that with the next SOER, a short paper to guide the consultants and research assistants should be prepared in order to ease the flow of work and avoid delays.**

Other reasons that contributed to the delays included the following:

- i) The Inter-Ministerial working group which was supposed to provide a critique on historical trends, datasets and technical notes had most of its members held up on other commitments. Nevertheless, they were found a useful group in providing a link to data available in their respective institutions. For

**purposes of future reports, it was suggested that the Inter-Ministerial working group should be used to strengthen this link and only review the report at its scoping stage and in its final draft form. A group of dedicated experts not necessarily representing sectoral institutions should instead be used to continuously review the report and provide timely and valuable technical input**

- ii) Lack of internal capacity for desktop publishing coupled with costly services elsewhere. For example, typesetting costs about US\$ 4 per page in the private sector. This had not been budgeted for and would increase the costs by over US\$ 1000. Given that this and other reports would be produced by the center on a regular basis, it was decided that the report production process be halted to enable staff develop capacity in desktop publishing through undertaking the relevant courses locally. There was also vertical mobility of staff and someone else had to be drafted in to complete producing the report. This caused further delays.
- iii) Editing of the report also delayed the process since the editor-in-chief was also the Programme Manager of NEIC. Several national, regional and international obligations interrupted the editing activities. **In future it may be necessary to have an independent technical editor with enough time to dedicate to the SOER process or for more responsibilities to be assumed by the deputy editor-in-chief**

Publication of the document was undertaken by a private firm. The quality of printing was good and the reports were delivered on time. It is thought that if the SOER'96 can be prepared by the same group of consultants and research assistants, it may be possible to make savings that may be used to improve the quality (presentation) of the report. The SOER'94, being the first, was justifiably lengthy. **The next report should include changing trends from where the last SOER left off, areas and issues omitted, and new and emerging environmental issues in the country. The need to develop a reliable set of indicators to identify trends is urgent and should form the basis of the preparatory phase for SOER'96**

It should be noted that a lot of datasets were dropped during preparation of SOER'94. The National Environment Management Authority has toyed with the idea of making this data available in form of a statistical annex. However, this would be time consuming and may in the long run have relatively little value to the SOER'96 process. **It has therefore been recommended that line agencies and ministries be requested to prepare statistical and map compendia for their own sectors. That way, these institutions will focus on sector data and NEMA will concentrate on the cross-cutting issues and synthesis of the report**

It is gratifying to note that under the World Bank/Government of Uganda-funded Environmental Management Capacity Building Project (EMCBP) adequate funds have been budgeted for funding the SOER 1996 and SOER 1998 versions. This is partly attributed to the valuable contribution the SOER 1994 process in preparation of the National Environment Action Plan and the ECBP.

Since no stylistic guidelines were provided to the consultants, there was need to retain a copy editor in order to harmonize the style, language and presentation of the report. However, it was later felt that the time allowed for copy editing was insufficient. **It was suggested that for the next SOER, a copy editor with technical knowledge, time and capability to handle style, language and delivery should be hired**

Other suggestions include the following

- i) Use of more graphics e.g. pie charts, graphs etc,
- ii) There was a problem of satisfying the wide and varied users of the report. At the outset, it had been agreed that the target group be any person who has completed four years of secondary education. However, there were still limitations in that the use of scientific language and strong economic terms could not be avoided in certain instances. The use of boxes was adopted in order to provide more in-depth technical discussions while at the same time not breaking the flow of the main report. Reading of the contents of the boxes was thus optional. **It was recommended that the idea of using boxes to provide more technical and scientific material should be retained**

On the whole, the SOER'94 process was a learning experience for all those involved, was generally well done, and provided a basis for future reporting on the status of Uganda's environment

### 3.2 Participants and Consultants

This group comprised of 2 consultants, 4 research assistants and 2 production specialists. Their major tasks included the data collection, entry and analysis, report writing, typing, typesetting and partly editing the report. The type of data collected consisted of both primary and secondary data, although the latter was more commonly used. Collection of primary data is mainly the responsibility of sector institutions responsible for the management of natural resources and/or certain activities.

Secondary data is more valuable in environmental reporting since it allows easy synthesis and value-adding without necessarily dragging the report deeper into technical issues. The most commonly used method of data collection was review of existing literature, but in a number of cases, oral interviews using interview schedules were used. Both these methods have limitations, first, they may have gaps that require additional research, and secondly, one has to rely on interpretation of the issues and these may vary from one individual to another.

It was confirmed that most of the data required was not readily available and a number of reasons have been suggested to explain this.

- i) Sources of data were unknown especially where research assistants were not conversant with the existing institutional structures for resource management in the country,
- ii) some owners of data were unwilling to provide the required information since

they were unsure on how it was going to be used, and were also unaware of the importance of the a state of environment report,

- iii) data was commonly scarce and scanty as well as contradictory (i.e. did not tally for given sources),
- iv) slow response from respondents requested to provide information,
- v) inadequate facilities at the National Environment Information Center (e.g. transport, computers, etc),
- vi) respondents did not clearly understand which data was of environmental nature, and
- vii) there was lack of quantitative environmental indicators on some aspects of resource use and environmental quality

Of these limitations, the first three were experienced very often (40%) More so, there were particular sections that posed greater data difficulties than others These included

- i) Roads status, lengths, vehicle numbers and types,
- ii) number, type and status of water sources, water quality, etc,
- iii) demographic profiles of minority groups in Uganda, and
- iv) quantitative measure of resource degradation

With respect to data entry and analysis, the following were observed

- i) Data compiled for the SOER required further analysis For example primary and secondary data brought in by research assistants on any natural resource management aspect required a certain level of synthesis before it could be usefully incorporated in the report,
- ii) Presentation of information, analysis of the data (including analytical procedures) required standardization at an early stage in order to reduce delays As this did not seem to happen data on a similar aspect had to be entered several times depending on the preferred format of presentation and the various stages of analysis There appears to have been limited balance among the chapters of the report For example, chapter 5 on Population, Health and Human Settlement received about 25% coverage It was suggested that chapters which cover broad areas, and where information is largely abundant will continue to receive greater coverage.

The content and understanding of the SOER are two elements that had to be considered seriously throughout its preparation owing to the fact that this was to be a report for direct or indirect public consumption As mentioned earlier, the users had varying levels of

education. It also had to be clear enough for the educators and the media to interpret for the schools and the general public. From the responses received, the following seemed to emerge

- i) To some the report was too simple, summarized and required more analysis. This was mainly from the technical, research and academic institutions
- ii) To others it was too detailed, or too scientific or too technical, not user-friendly and difficult to understand. This was mainly from local NGOs, pre-university institutions and the general public
- iii) Some found it satisfactory-mainly the average reader with sufficient technical background
- iv) Some chapters (especially chapter 5, had so many tables and graphs which were difficult to re-do for better presentation

**Generally, it was observed that in editing the document to a reasonable size while retaining valuable technical information, some detail is usually lost. The level of understanding (50%) was generally good, and fundamental issues were adequately highlighted**

It was also suggested that the report layout should be improved, figures and tables should be more uniform in size and smaller than the text of the report, and where financially feasible charts could be presented in colour

Another aspect that was considered important is the **level of guidance**. This was found to be satisfactory (50%) during preparation of the report with room for self-motivation and expression. However, the following recommendations were made in this respect

- i) Publishers should be brought in at a much earlier stage to ease coordination of designing the report
- ii) The Advisory Committee should be replaced with a few technical experts with time and ability to comment on the content of the report as it progresses
- iii) The National Working group members should be made substantial authors of their various sectors under the guidance of a senior consultant
- iv) There were no editing guidelines. This was done on the basis of understanding what was expected in an SOER and the constant backstopping from experienced editors in WRI. Editing guidelines may have to be developed in the longterm (in case of staff turn over, etc) to provide continuity in style and presentation of the report

It is also important to set deadlines at each stage of editing since it is both helpful to the editors and the authors/consultants

In summary, the following were identified as the major strengths, weaknesses and limitation of the SOER'94

**Strengths**

- i) The report was very comprehensive at national level and as a baseline report
- ii) It provided a basic benchmark to revision and updating subsequent issues of this report

**Weaknesses:**

- i) Some aspects related to environmental management were not addressed e.g the role of indigenous communities in biodiversity conservation, issues of climate change, gender and the environment, etc
- ii) Although the report was well prepared, it was lengthy

**Limitations**

- i) Preparation of such a report requires a computer with better processing capability (clock speed, RAM) to enable all programs to run together and to speed up the process of report preparation. This was not available at NEIC at the time

## 4 EVALUATION OF EFFECTIVENESS AND RELEVANCE

### 4.1 Analysis of distribution/demand

Altogether over 3,500 copies were circulated to various institutions in the country (see table 1). Initially, only 2250 copies had been printed and distributed free of charge. However, continued requests from local and international organisations and individuals led to an additional 1250 copies being printed with assistance from WRI and also Government of Uganda funds.

It was observed that demand for the SOER'94 started when the document was still in draft form. Students from the Makerere University Institute of Environment and Natural Resources used the drafts extensively before final production.

Currently only 50 copies have been retained and these are not for distribution. However, requests for copies still come from local and international institutions with an increasing number coming via electronic mail. It has also been noticed that most of the requests are coming from institutions not originally targeted for distribution (200 more have since been printed for the launch of NEMA in July 1996).

An interesting finding in the analysis of demand is the willingness to pay by users. The survey established that schools and non-profit making organisations can pay an equivalent of US\$ 6 per copy, while international organisations and agencies were willing to pay up to US\$ 75. The average figure that most respondents quoted is an equivalent of US\$ 10.

It was recommended that for SOE'96, the cost of printing and distribution should where possible be recovered. It was also suggested that bookshops could be used as outlets to enable wider public access to the publication.

Table 1: Distribution of SOER'94 by Category

Recipient Category	Percentage of Copies Received
Government	47.6
Foreign missions	6.32
Media	0.7
NGO/CBO/PVOs	7.3
Individuals and Consultants	1.8
Institutions of learning and libraries	14.9
Parastatal organisations	5.2
Projects	1.6
Copies sent for WRI distribution	7.1
Exhibitions	1.7
UN organisations and the World Bank	5.7

Source: National Environment Information Centre

## 4 2 User Survey

All respondents were familiar with the SOER, with the majority reading only parts of the report whenever the situation warranted. It is important at this point to appreciate that there were variations in the users' opinions about the report. On readability of the report, the majority found it was easy to read, understandable, clear, well structured and referenced, to others, it was satisfactory, straight-forward, simple and interesting as well as reader-friendly with short paragraphs, a good use of statistical data and a variety of illustrations. And yet to others, it was an excellent authoritative "resource" book, which provides background information on specific issues. On the contrary, some found the report to be just fair, not reader friendly to ordinary readers owing to use of scientific terms, language barriers, and statistical interpretation difficult for those readers with a limited level of education. **However, overall the respondents are certainly more environmentally aware of the Ugandan issues as a result of reading the State of Environment Report 1994.**

### 4 2 1 Central Government

The most common issues referred to in general are available resources, their utilisation, and the policy issues therein. In particular, environmental issues in Uganda, legislation and policy, chapters 1 and 5, the level of industrial water pollution by major industries, energy resources, mining and wetland issues. The use made of the SOE varied from one respondent to another. The majority of central government officials use it for policy formulation and to provide information to their institutions. Other uses are research, staff training, decision making and teaching. The report is used regularly on a weekly or monthly basis by most respondents.

The SOER highlights the need to manage and utilise resources in a sustainable manner, it covers various sectoral policies which focus on addressing these problems, it acts as a reference manual on environmental problems, issues and environmental data in Uganda, it reflects on the high rate of environment degradation which requires combined efforts of government ministries, NGOs and the populace, it helps one appreciate the limitations of measuring sustainable development vis-a-vis the environment, it has a wide sectoral coverage and provides links between the sectors, and finally it provides a base to appreciate environmental problems.

More than 85% of the respondents agreed that the report provided one with enough information to appreciate the importance of the resources and their value to society, and to be able to make decisions on what actions to take or policies to recommend. Those with negative responses felt that most chapters do not have in-depth gender analysis and what implications they may have on the environment, no information on climate, climatic conditions, drought and desertification, chapter 8 on legislation and policy provides some outdated policies which do not reflect current changes and there is a need to indicate the opportunity cost of varying uses of resources and the cost of environment degradation. These aspects need to be reviewed to enhance decision making processes.

It was suggested that the following sector-specific issues be either included (i-ix) or expounded on (x-xiv)

- i) Chapter 5 should consider use of herbal and medicinal plants, and how they influence the population, especially women, in relation to the environment
- ii) Climate, climatic changes, drought and desertification
- iii) Sewage and waste material disposal e.g plastic bags disposal, recycling solid wastes and garbage recycling
- iv) Effect of the depletion of the ozone layer, the case for Uganda
- v) Highlights on the international conventions and protocols in environment and their implementation in Uganda
- vi) Actions to be taken at national, regional and international level in order to address environmental concerns and challenges in accordance with Agenda 21
- vii) Linking employment development and environment
- viii) Attainment of rapid industrialisation with minimal damage to environment
- ix) Review of the existing environmental legislation and strategies for its implementation
- x) Control of the water hyacinth (origin and problems)
- xi) Issue of coordination in chapter 8 on legislation and policy needs to be expounded on
- xii) Highlight issues raised with use of case studies to improve on level of appreciation by readers For example monitoring land degradation
- xiii) Environmental education programmes and/or projects in Uganda could be highlighted to enhance networking and coordination

The most useful sector-specific policy issues were

- i) Information on environmental education and public awareness which was used for a country assessment report by the Ministry of Education, curriculum development centre on "the state and status of environment education in Uganda" because it is a cornerstone of the country's environment protection
- ii) Chapter 5 because it highlights the development needs of a growing population
- iii) Wildlife, forestry and energy resources (environment assessments)
- iv) Energy, mining, water and the environment
- v) Water policy issues
- vi) The balance between population growth and land utilisation

The report does provide ideas for research. The research interests that have arisen as a result of this report are

- the gender roles and wetland resource use and/or misuse,
- gender analysis on the impact of degraded urban and rural environments, on employment,
- health and nutrition,
- effort spent on environmental management in Uganda,
- the impact of environment education in the formal and non-formal education sectors,
- the expertise and competence of environment education deliverers e.g teachers,
- identifying priority areas for government intervention in view of scarce resources,
- implementation of the environment law and international conventions,
- effects of poverty on the environment,
- environmentally friendly methods of regional use of existing resources, and
- costing of environmental degradation

On format presentation, the main areas of concern were unclear maps, lack of gender disaggregation in most of the tabulated data and oversight in explaining technical terms

With respect to the integration of human activities, information from ecosystems and economics sectors, over 75% found that these components were well articulated in the text. A clear relationship was shown between man's reliance on and use of the resources, quantities available, impacts, economic value and policies for sustainable use. However, where as some preferred to have more information on economic status of different levels and categories of people, others felt there was a general bias to economics with less of the other components

According to respondents from the Central Government, the following emerged as the main limitations

- The report was too broad and should be focused on specific issues which can then be explained in detail
- In general, tools for gender analysis are not effectively and sufficiently employed

- There is lack of district summaries (district profiles) in the report to benefit community and district workers
- The report lacks data and information on the climate resource of Uganda
- The report does not point out clearly priority areas requiring immediate attention in view of scarce resources e.g. desertification and drought, water hyacinth infestation etc
- The report does not point out costs of dealing with environmental problems
- It does not have sufficient comparisons with other countries
- The report should have provided an in-depth sector-specific analysis vis-a-vis the environment
- There is too much information in a small volume and not exhaustively analysed
- There is need to incorporate the effects of external factors and processes on the environment
- The report should have discussed the effects of investment policy on the environment
- There is no indication on whether the formulation of policies takes into account of indigenous knowledge or not
- The report is rather biased to economic aspects

There was general agreement with the proposal to use bookshops as outlets for the report suggesting that some readers prefer buying books especially those on open market. In addition, bookshops would enable easy access by the public, although publicity of the report has to be ensured before wider readership can be expected. Since the country is pursuing the policy of decentralisation, it would be reasonable to provide all public libraries in the district with copies. This would allow a wider distribution especially within the urban communities. For the rural communities, there is need for simplified versions with translations into local languages, where possible.

#### **4.2.2 Local Government**

According to this category, the main issues commonly referred to are related to wetlands, agriculture and land use, sand/stone quarries, aquatic and wetland resources, population, health and human settlements. On use of SOER, the majority have used it to provide information to district planners and leaders. Other uses have been policy formulation and decision making. Over two-thirds of the respondents use the book occasionally, with some using it more frequently on a weekly or monthly basis.

The report has enabled local government officials appreciate environmental problems in Uganda. It acts a reference manual on environmental problems, issues and environmental data in the country. It also initiates thought for a proper course of action, and it was more useful whenever district-specific problems were discussed since it relates changes in the environment to overall socio-economic conditions in Uganda. It was also the case that the report provides information to allow one to appreciate the linkage between decision/policies and the state of the resources. A number of respondents felt that the statistical data presented did not tally well across various sources, making interpretation difficult. Examples in the chapter on population, health and human settlement were cited.

Respondents in this category felt that the following areas require more attention

- Legislation clearly defining areas along lake, river and swamp banks that are not for human activity
- Participatory practices in promotion of energy policies
- Issue of family size and how it affects the environment

The most useful sector-specific policy issues were listed as follows

- Sustainable yield management in the forestry sector
- Water policy issues
- Energy resources and policies

The report has also provided some areas of interest for research by the local authorities, specifically on the disadvantages of farming along river banks

With respect to the format of presentation the following emerged as the main comments

- Figures and tables were not easily understood
- Language should interpret the document and provide some reports in local language

Otherwise the general consensus was that the report was well integrated showing a clear relationship between man's reliance on and use of the resources, quantities available, impacts, economic value and policies for sustainable use

The following limitations were identified by this group

- The report is not accessible and reader-friendly to the rural as well as the non-technical populace who most need it
- The need for sensitization and environmental education should be emphasised

- The report assumes all readers will know or understand the implications of the status/data/ trends

The proposal to use bookshops as outlets for the report was also endorsed, as long as its adequate publicity is ensured

#### **4.2.3 Resident International Organisations**

Very few individuals in this category had read the entire report, rather it was more common to find respondents who had read only those sections of interest. These included wetlands, forests, wildlife and agricultural resources, environmental degradation, agriculture-land use, environmental education and government policies, environment and sustainable development, energy resource, and population issues (particularly referring to statistical data). Of the above, the most popular sections were those on wetlands, forests and wildlife, and agricultural resources.

The use of SOE varied from one respondent to another. The following uses were cited: policy formulation, to provide information to internal planning and decision making, research, and project formulation. The most common uses were policy formulation and provision of information. The report is usually used on a monthly basis, with some respondents using it weekly, periodically, or occasionally when required.

The report provided the resident international organisations with a base to appreciate environmental problems in Uganda and the possible courses for action. For most organisations, the report continues to provide background information to project preparation activities aimed at assisting programmes on the environment. It also acts as a reference manual on environmental issues, problems, and data in Uganda, and ably relates changes in the environment to overall socio-economic conditions in the country. Furthermore, it provides an up-to-date status of the environment with clear analysis and recommendations, while at the same time equipping one with an increased understanding of the existing gaps that form a basis for proposing actions and areas for research.

On whether the report provided one with enough information to appreciate the importance of resources and their value to society, as well as make decisions on what actions to take or policies to recommend concerning the environment and related issues, the respondents in this category gave affirmative responses. It was, however, suggested that chapter 7 on industry and mining did not meet the required level of information, and analysis of the status, problems and likely solutions. With a move towards industrialisation it will be necessary to critically review this sector in future.

It was further suggested that the following sector-specific issues be either included/provided or expounded on:

- Put economic values and indicators to forests, wildlife and wetlands
- Provide detailed maps on each of the 4 regions showing drainage and wetlands, parks, forests distribution and levels of encroachment

- A correlation between the rise in number of cars and number of accidents should be made
- Land tenure should be dealt with in more detail
- Chapter 1 should stress the relation between the environment and the economy more explicitly
- Discussions on management of natural resources outside protected areas
- Biodiversity conservation in Uganda

The most useful sector-specific policy issues were

- Industry- one of the fastest growing sectors in Uganda and yet potentially the most harmful to the environment,
- wetlands, forests and wildlife resources and agriculture which relate to current policies for development cooperation,
- chapter 1 on Environment and Development which is useful to formulate project ideas,
- discussion of forest products demand and supply which forms a basis for planning afforestation and reforestation programmes,
- health, agriculture, water and energy resources,
- land and development, population, health and human settlement and other natural resources,
- forests and wildlife because there is hardly any information on this topic elsewhere,
- transport and communication system,
- policy framework for sustainable agriculture because it is a very good and coherent text

To this category, the report does also provide ideas for research. The research interests that have arisen as a result of reading this text include the relationship between poverty and environmental degradation, wetlands, relationship between conservation and development, and sustainable management of natural resources especially resource and management trends. Already as a direct or indirect result of the report, the following studies have been initiated by the resident international organisations: the link between poverty and the environment, research on wetlands, World Food Programme's project's impact on the environment, integration of conservation with rural development, multiple use of Uganda's wildlife resources, and a case study on forest patches around Kampala city: exotic species versus

indigenous species and their ability to withstand pressure of constant utilisation

On the format of presentation the following comments were raised

- The report lay out is not reader-friendly and could be improved
- The size of the report could be increased to allow more discussion
- Maps were very few in the section on forestry and wildlife resources
- Figures and tables need to be up-dated, table showing different protected areas (forests and national parks) and respective acreages should be included
- Charts should include percentage of forests outside protected areas, secondly the report could benefit from more charts
- The language requires improved editing

On the integration of human activities, information on ecosystems and the economic sector, the majority found these components well articulated in the text. A clear relationship was shown between man's reliance on, and use of the resources, quantities available, impacts, economic value and policies for sustainable use. The report was also found to emphasise the importance of sound environmental management as the basis for sustainable development. It was however suggested that the integration and linkages between sectors could be improved, for example, water sector and agriculture, population and the environment.

The major limitations of the report were given as follows

- It required an in-depth comprehensive sector specific analysis vis-a-vis the environment
- Detailed recommendations should have been provided on the why? and how? within each sector to improve environmental awareness
- Not enough attention was given to the importance of environmental considerations for long-term economic development
- Not enough emphasis was made on the linkages between sectors
- The report lacks a plan for action
- The report is too broad and should be focussed on specific issues which can then be explained in detail
- Figures in Table 3 6 pp 59 are misleading (e.g. Mabira, Kibaale and Kisangiri)
- Statistical information does not cater for trend analysis

- There is limited coverage on forest resources trade information especially in the informal sector which requires more rigorous approach to measure (e.g. firewood, charcoal and poles)
- The report should have an introductory chapter on Uganda as a country, its size, location, population, etc., before it touches on environmental issues
- There is a lack of economic valuation of resources showing clearly losses from degradation and benefits from utilisation

The resident international organisations agreed to the use of bookshops as outlets of distribution within society (urban and rural) suggesting that it would be easier to access the public, as long as publicity of the report should be ensured

#### 4.2.4 Foreign International Organisations

The respondents in this category preferred to read the sectors on legislation and policy, wetlands, water, and energy resources, forest vegetation, water pollution and environmental education, plant production and protection aspects, and the executive summary. The use of the book is majorly in teaching, research and to provide information. Other uses are policy formulation and staff training. The report is used frequently on a weekly or monthly basis, although some respondents use it only occasionally.

According to this group, the report highlights problems and initiates thought about proper course of action, and provides background information on central government roles in environment management. It also sheds light on the mandates of various organisations in the sustainable management of the environment. **The majority of respondents also agreed that the SOER provides information to allow one to appreciate the importance of resources, although to some the report was still too general and thus allowed limited room for decision making.**

They further suggested that some sector-specific issues need to be either included (i to iii) or expounded (iv) on in the next issue of the SOER. These include

- i) The provisions of the constitution as finalised, the national environment statute, along with the progress of NEMA (probably as appendices)
- ii) Guidelines for environment impact assessment when completed and adopted by the country
- iii) A section on the soils of Uganda
- iv) Aquatic and terrestrial biodiversity should be discussed separately and in more detail

The most sector-specific issues which the foreign international organisations found useful included

- i) Water policy issues

- ii) Industry, one of the fastest growing sectors in Uganda and yet potentially the most harmful to environment
- iii) Aquatic and wetland resources
- iv) Industrial pollution, regulatory policy and demographic information
- v) Forestry sector because of research interests

The report does also provide one with ideas for research. Research interests that have arisen include control of water hyacinth, the extent of deforestation in Uganda, and levels of optimal harvest rates. Those to be undertaken include land tenure and resource utilisation, and empirically testing the extent of deforestation.

Although the relationship between man's reliance on and use of the resources, quantities available, impacts, economic value and policies for sustainable use is shown, the exact nature of the link between varying sections is not specified.

Other limitations of the report were given as follows

- i) In addition to a table of contents it would be useful to have an index
- ii) There is lack of data on the effectiveness and implementation of policies and legislation
- iii) No indication on whether the formulation of policies takes account of indigenous knowledge or not is made
- iv) The report should use up-to-date data e.g. population projections for 1994
- v) In some of the cases, there is a great level of generality to suggest specific policy interventions

**The use of bookshops as outlets for SOERs was supported by many. However, it was suggested that this should be considered in the long term and presently, priority should be given to environmental education and public awareness, and to win government support and commitment. They also requested that ordering by e-mail should be facilitated and certain tourists would be interested to see the report at travel agencies.**

#### **4.2.5 Academic Institutions**

These respondents tended to concentrate on specific issues of interest, which included agriculture and land use, forest resources, environmental policy, problems of wetlands, environment and sustainable development, wildlife resources, energy resources, population issues and trends, other natural resources, water pollution, environment education, environmental health, industry and mining.

The use of the SOE varied from one respondent to another. It has been used for teaching

and research, policy formulation, to provide information, decision making and farm management. The most common uses were teaching, research and information provision. Most of the respondents use the report on a monthly basis, with some using it more frequently (on daily or weekly basis), and some just occasionally.

Their comments on whether the report provides one with a base to appreciate environmental problems in Uganda and course for action were favourable and are as follows: the report highlights problems and initiates thought about proper course of action, it acts as a reference manual on environmental issues, problems, and data in Uganda, it provides background information to project preparation work in assisting programmes on the environment, it also relates changes in the environment to overall socio-economic conditions in Uganda, it is an enlightening report on Uganda's resource base, and it provides a base to appreciate environmental problems. **The most common observation was provision of information for project preparation work.**

To most respondents the report also provided enough information for one to appreciate the importance of resources and their value to society as well as being able to make decisions on what actions to take or policies to recommend concerning the environment and related issues. Some respondents felt it was sufficient but stated that some misgivings existed. For example, there was no information on climate, climate changes, drought and desertification, chapter 1 on environment and development, and issues on water resources were found lacking.

They further suggested that some sector-specific issues need to be either included (i to v) or expounded (vi) on in the next issue of the SOER.

- i) The use of herbal and medicinal plants and how they influence the population, especially women, in relation to the environment needs to be reflected in chapter 5.
- ii) Climate, climate changes, drought and desertification.
- iii) Detailed maps on each of the 4 regions showing drainage and wetlands, parks, forests distribution and levels of encroachment.
- iv) Provisions of the constitution as finalised, and the National Environment Statute, along with the progress of NEMA (probably as appendices).
- v) The impact of land use changes in wetlands with reference to Doho rice scheme.
- vi) Boxes 2 1/2 pp 26 and 27 can be integrated to produce a number of agro-ecological zones and farming systems.

**The most common issue raised was on the climate and climate change.**

The most useful sector-specific policy issues were

- i) Information on environmental education and public awareness,

- ii) forests and wildlife resources because there is hardly any information on this topic elsewhere,
- iii) relationship between population growth and deforestation,
- iv) environmental legislation and policy creates awareness and recognises the importance of public participation in environment issues and it is very informing,
- v) agriculture and forestry due to the teaching and research activities of the faculty of veterinary medicine,
- vi) agriculture and wetlands for teaching and research purposes,
- vii) conservation and sustainable agriculture,
- viii) chapter 5, agriculture, forest and wildlife are major topics in A'level biology and geography and are useful for teaching

**The most common issues were on environment legislation and policy**

The report has also presented issues that provide ideas for research. These include among others energy resources, industrial and aquatic pollution, Ruhija station pilot project on agroforestry, community resource related issues and community management issues in environmental protection, control of the water hyacinth, environment impact assessment, land use and land tenure aspects, legal aspects on environment, malnutrition and starvation of livestock, status of nutritional resources, population and environment, street children, urbanisation issues, the energy crisis, issues pertaining to fish farming in Uganda, urban environmental health, impact on environment and natural resource management of the decentralisation programmes, effects of increased and improved awareness on soil productivity and degradation, the need to form environment clubs for students who would then give advice within the school to fellow students, and at home on how to protect the environment, environment, development, and agriculture

Of these the following research areas are to be undertaken: Energy planning and environmental management, Models for passing environmental information to rural communities, a survey on environmental awareness in Uganda, Performance of on-farm woodlot plantations, Charcoal burning of wasteful tree cut-offs in timber extraction, Conservation attitudes of people around Bwindi Impenetrable forest, Encroachment on wildlife resource zones and conflicts on wildlife outside protected areas, Land use dynamics, Legal aspects of the environment, Nutritional, immunological, epidemiology and anti-helminthic aspects of Acacia forages in the Ankole-Masaka ranching scheme, Urbanisation issues and the environment, Population and environment degradation, Aspects of wetlands destruction due to agriculture, Levels of forest destruction due to brick making in Mpigi District, and Problems of orphans and street children in relation to the environment

Some comments on the format of presentation

- i) The lay out is not reader-friendly and could be improved

- ii) The report is short and inadequate with short discussions on relevant issues
- iii) Maps were very few and they could also be improved, for example, figure 4 2, pp 79
- iv) Figures and tables should immediately follow the text, there is need for updates e g Fig 2 8 pp21, Figure 5 14, pp 157 is not complete
- v) The use of scientific terms limits the scope of people who can understand the text Where possible, there should be use of simpler terms In addition, the report could benefit from further editing

On the integration of human activities, information from ecosystems and economic sectors, some respondents felt the level of integration was sufficient, others felt otherwise In the next issue of the SOER, there is need to spell out how the human activities can cause environmental degradation, and how in return communities can be affected by this trend, (focusing on present development trends)

The academic institutions cited the following as the major limitation of the SOER'94

- i) The report was too broad, it should be focused on specific issues which can then be 'explained in detail
- ii) It required an in-depth comprehensive, sector specific analysis vis-a-vis the environment
- iii) The relationship between politics and the environment was not addressed i e evaluation of the impact of political instability and militarism to the environment in Uganda
- iv) Maps need to be more elaborate and up to date
- v) Use of mainly secondary data with little or no primary data for confirmation purposes
- vi) Some sectors are sketchy, not detailed enough e g pollution on Lake Victoria
- vii) There was no key word register, some technical terms need background and explanations, therefore, the report should have a glossary to define technical terms
- viii) Coverage on NGO involvement in environmental issues should be added
- ix) Should up-date data e g on demography
- x) It assumes all readers will understand the implications of the status/data/trends
- xi) There is need to compile sector-specific reports to enable people to buy exactly what they need

- xii) The role of environment assessment and management should be provided
- xiii) The link between poverty and the environment needs to be clearly brought out
- xiv) Urban environmental issues should be added
- xv) It is not accessible and reader-friendly to the rural populace who most need it as well as the non-technical populace
- xvi) Some sectors are too difficult for students especially O'level, make simpler versions

The majority also agreed to the use of bookshops while others declined to their use. The following reasons were given for (i-iii) and against (iv-vi)

- i) With decentralisation, all public libraries in the districts can receive copies,
- ii) would have wider distribution within the society urban and rural,
- iii) easy access by the public although publicity of the report should be ensured,
- iv) bookshop owners are profit-driven and may thus exploit the customers by selling it at a very high price,
- v) the report is too important to be sold, everyone should have a free chance to become environmentally aware,
- vi) not everybody can access bookshops especially in rural areas where, very few people visit bookshops

The majority of the respondents suggested that (iv) above is most likely to occur

### **Media response**

The media comprised of very few respondents indicating the low level of media participation in the state of environment report, and thus the views represented here are those of 6 individuals involved with the media. Respondents comprised of personnel from Uganda Television (UTV), Sanyu Television (STV), Uganda Media Trust for the Environment (UMTE) and The People Newspaper. Even though the number is small, comments provided here below reflect strongly that with the next issue of SOER the media should be called upon to play a major role in the dissemination of the information thus gathered. This is because they can reach a much wider section of the public than any other method used.

All the media respondents had heard of the report, although for some who are administrators it does not come into much use in their daily routine. It is used mainly by the junior personnel who are actually involved in informing the public. Following the launching of the state of environment report on November 28, 1994 it has since been used for several purposes.

- i) For reference in developing an environmental education programme for STV
- ii) To widen knowledge on the state of the environment in Uganda
- iii) For reference purposes to verify (authenticate) news and act as a cross-check e.g. articles on environment are checked to see that the facts hold before the information is presented in the news
- iv) Chapter 5 was used for general paper lecture notes on family planning for senior six class of Lincoln College school, Mukono
- v) It provides updated environmental information and research findings
- vi) It contains a good use of statistical data which is of great use in message development and dissemination e.g. population census figures, rainfall patterns, soil forms and distribution, population changes in animals and plants, natural distribution of biodiversity, uses and threats in forestry and wetland biodiversity
- vii) It is a reference for UTV local productions e.g. Our Environment, Economic Desk, Current Affairs, Drama on matters of the environment, features and documentaries

#### 4.1.6 Media analysis

Media analysis of the State of the Environment Report for Uganda 1994 was largely not achieved. Despite the growing interest in environmental issues by the people of Uganda, the News Paper editors do not seem to accord due priority to the environmental sector. One is more often likely to find short articles on the environment hidden somewhere in the inner sections of the paper. During this assessment, it was found out that adequate space for analysis of the report would have been provided had it been paid for. Media analysis is so important that this assessment recommends that negotiations with editors be done well ahead of time, or funds should be set aside to pay for adequate analysis and coverage. It was also evident that in cases where the report was used, no due credit was given. At the time of its publication, the report begs the question whether it was news or old news to journalists.

It was found that on several occasions, they have written excerpts from the report either as direct quotation or as paraphrases. The following citations were made and only represent a small portion of how the SOER has been used.

- i) The report was quoted in a documentary entitled 'Man and Environment Uganda Today' by STV,
- ii) several aspects of the SOER were paraphrased and used in writing a Public Information Magazine by the Department of Information, Ministry of Information. These were mainly on tourism and the environment,
- iii) for news on radio or UTV they paraphrase issues of interest to fit into the structure of the news,

- iv) report quoted in an article to 'The People Newspaper' entitled 'State of Environment Launched' examples are

*"with 50 births per 1000 per population each year, Uganda has one of the highest birth rates in the world Uganda's fertility rate stands at 7.1 births per woman, crude death rate is 20 per 1000 population while the dependence ratio is 102.6%"*

*" Uganda has lost 79% of its original forest land Uganda loses about 50,000 hectares (0.8%) of its forest lands annually"*

*Ref The People, Week Ending December 7, 1994, pp 7*

- v) some sections from the Executive Summary, pp xiii and chapter 5 section 5.3 on environmental health were paraphrased for a piece in the Friday Monitor's Citizen's Alert to express concern about environmental pollution caused by Kampala city council's garbage disposal,
- vi) use of data e.g. size of wetlands, gazetted forest reserves, projection of number of tourists,
- vii) films produced by UMTE for various organisations and projects utilising information obtained from the SOER
- a) Natural Forest Management and Conservation/EEC "Forests Uganda's Conservation Struggle"
  - b) National Biomass Study Project 'Living with Trees'
  - c) World Vision 'From Despair to Hope'
  - d) World Vision 'Scatched Soils of Buruli'
- viii) used direct quotations and also paraphrased for UTV talk shows on environment, economic programmes etc

The majority of the media tend to use the SOER on a regular basis, with UTV it is used several times a week. The authors of the Public Information Magazine have used it once since it is also their first issue but intend to use it for all subsequent issues of this quarterly magazine. Yet others use it only occasionally when the need arises. Their main target readers and viewers range from

- i) Viewers of STV who are mainly policy makers, business community in and around Kampala and farmers who have direct impact on the natural resources,
- ii) with the Public Information Magazine it is the general public both in and outside Uganda including diplomatic missions which use it to help foreign investors, tourists, travellers, etc, to get some information on Uganda in their home countries,

- iii) similarly radio news is wide spread to the general public and goes beyond the country,
- iv) politicians, Kampala city council (KCC), local council members,
- v) resource users (mainly grass root users),
- vi) environmentalists and resource managers, and finally
- vii) UTV which can access viewers who comprise less than 50% of the population This is because can access approximately  $\frac{1}{3}$  of the country stretching from Masindi in the west to Soroti in the east Also power supply is not well distributed in these areas

The comments on the impact on viewers and readers varied from one respondent to another They are as follows

- i) The report provides readers with facts which are not in other books,
- ii) it shows the scope of environment deterioration and the necessity to formulate viable policies to conserve it,
- iii) the articles in Friday Monitor's Citizen's Alert are helpful e g issue on garbage disposal has been discussed by LCs at Mambule place, Gayaza road The person dumping the garbage has begun to cover it with murram, which shows that the article achieved desired results,
- iv) the impact is clear and positive through films through which viewers have learnt about dangers threatening their environment, the role of various species in their environment, and advantages of sustainable management of the environment However, like in any other country one will not fail to find those who are still stubborn and egoistic on issues of environment management, and this puts this country's resources at stake,
- v) viewers are informed about the state of the environment in the country, the key trends and projections opportunities for improvements and the importance of resources and their value to society,

All of them agreed to the fact that the report provides one with well integrated information on ecosystems and economic sectors

There were a number of limitations cited by the respondents

- i) The introduction should include the physical geography of Uganda,
- iv) there is need a more portable report (summarised version),
- v) the report is brief and requires detailed analysis,

- vi) adequate coverage on specific issues e.g. garbage disposal is not provided and yet these are relevant topics in environmental pollution in Uganda,
- vii) there is no discussion on linkages between politics, militarism and the environment

The following recommendations were made

- i) Human activities on environment can be regulated for sustainable development by sensitizing the public about the environment
- ii) Information on varying sectors can be efficiently integrated for sustainable development and environment conservation
- iii) Copies of the report should be available to the print media, particularly the New Vision and the Monitor Newspapers since these are two serious and commonly read papers
- iv) There should be a glossary to explain terms used in the text

#### **4.2.6 Non-Governmental Organisations**

The majority tended to concentrate on specific issues in the report which included mainly legislation and policies. Others included problems of wetlands, environment and sustainable development, forests and wildlife resources, energy resources, industrial pollution, population housing and sanitation, AIDS epidemiology, climatic and pedological degradation, agricultural resources and land use, water quality, fuelwood consumption, agro-climatic zones, and urbanisation.

The use of the SOER varied from one respondent to another. It has been used mainly to provide information. It has also been used in teaching and research, policy formulation, decision making, and staff training. It is used occasionally with some using it more frequently on a weekly basis.

The report highlights problems and initiates thought about proper courses of action, it acts as a reference manual and provides a base to appreciate environmental problems and issues in Uganda, it provides one with increased understanding of the facts, and a basis for proposing actions and research. However, this group believes that the report tends to highlight more of economic situations than environmental ones. Some shortcomings were also identified, for example, there was a lack of clear strategies on health and energy e.g. primary health care (PHC) and energy saving methods, and chapters 4, 5, 6 and 7 do not give environmental setbacks, effects and consequences experienced as a result of issues discussed. To most respondents the report also provided enough information for one to appreciate the importance of resources and their value to society as well as being able to make decisions on what actions to take or policies to recommend concerning the environment and related issues.

They suggested that some sector-specific issues need to be either included (i-v) or expounded (vi-x).

- i) Actions to be taken at national, regional and international level in order to address environmental concerns and challenges
- ii) Section on soils should be included
- iii) Promotion of indigenous species (nutritious vegetables)
- iv) Review implementation of environmental law, change it into various languages
- v) Population issues
- vi) Urban environment issues and infrastructure, transport and communications should be covered fully in a separate chapter
- vii) HIV/AIDS
- x) Water and sanitation

The most useful sector-specific issues were

- i) Information on environmental education and public awareness
- ii) Aquatic and wetland resources, forests and wildlife resources, agriculture, and soil management, because they are related to policies for development cooperation
- iii) Environment legislation and policy as it creates environment awareness and recognises the importance of public participation in environment issues
- iv) Conservation and sustainable agriculture
- v) Energy resources/policies
- vi) Chapter 5 because it highlights the development needs of a growing population
- vii) Wildlife policy in relation to expansion of tourism industry has provided information for a proposal on a venture in tourism

The report also does provide one with ideas for research. The research interests that have arisen as a result of reading this report include Wetlands research, Relationship between forests and wildlife resources, Community resource related issues and community management issues in environmental protection, Macro-environmental policy framework, Soil conservation, Agroforestry and forest conservation, Water management, Sanitation, Use of wind energy, Methods of sustainable energy resource utilisation, and The effects of Kampala city council (KCC) refuse dumping and industrial waste pollution to water bodies. From these broad areas those to be undertaken include Urbanisation and the environment, Population and environmental degradation, Environmental management at district level, Integration of environmental policy in structural adjustment policy framework, On-farm woodlot plantations, Charcoal burning of wasteful tree cut-offs in timber harvesting, Milling

grain and pumping water with windmills, Fuelwood and charcoal consumption and its effect on the environment, Bioenergy and solar energy consumption and its importance in forest preservation and effects on man, Hydro-electricity consumption and the possibility of rural electrification, Possible introduction of alternative energy i e production of briquettes, The status of the wetlands to whom do they belong, Long term effects of KCC dumping sites, and The consequences of industrial development

#### Comments on the format of presentation

- i) Layout is not reader-friendly could be improved,
- ii) Maps were not relevant to the title of the report, it should also contain maps and photographs of environmentally degraded areas to allow readers to appreciate the problems
- iii) Where possible, the report should be interpreted into local language

On integration, a clear relationship was shown between man's reliance on and use of the resources, quantities available, impacts, economic value and policies for sustainable use. The report was however found lacking in some of these aspects, for example, on integration and linkages between sectors could be improved. These include water sector and agriculture, and population and the environment. Environmental implications are unclear and should illustrate or discuss how the rural communities benefit from sustainable environmental management.

The major limitations of the report were given as follows

- i) The report does not provide detailed recommendations on how to improve environmental awareness within each sector
- ii) There is lack of district summaries (district profiles) in the report to benefit community and district workers
- iii) The technical words require background and explanation, and there is no key word register or glossary to define technical terms
- iv) Very few copies of the report were distributed
- v) Some principal factors constraining agriculture sustainability in Uganda have been left out (pp 41 & 42)
- vi) The role of environment assessment and management should be provided
- vii) There is need to compile sector-specific reports to enable people to buy exactly what they need
- viii) The document is too bulky

- ix) Chapter 8 on legislation and policy, should have provided up-dated laws in order to be relevant
- x) The report should have an introduction on economic and social status of Ugandans of different shades

There were varied opinions on the use of bookshops as outlets, some felt they should be used because some readers prefer buying books especially those on the open market and it would provide easy access to the public. However publicity of the report should be ensured and pricing should ensure affordability at district level. On the contrary others felt that bookshop owners are profit-driven and may thus exploit the customers by charging very high prices. Secondly they felt that the report is too important to be sold, everyone should have a free chance to become environmentally aware. In addition, not everybody can access bookshops especially the rural populace, since very few visit bookshops.

#### **4.2.7 National Resistance Council**

Although the responses in this category have been very minimal (15% response) the comments presented do reflect the line of thought that is presumed to be representative of other respondents. Most of the report has been read and chapters 2 to 8 were the main areas of focus. The report is used in decision making, staff training, policy formulation, to provide information, teaching and research. The report is used on a daily basis owing mainly to the on-going review of policies especially by the various sectoral committees of the NRC. The report provides enough information for one to appreciate the importance of resources and their value to society and make decisions on what actions to take or policies to recommend concerning the environment and related issues. It was, however felt that existing bye-laws on the environment should be included and updated to incorporate recent changes. As noted earlier chapters 2 to 8 have been useful in providing background information in the drafting of the laws and training trainers in environment law.

Perhaps the most important use of the SOER'94 by the NRC was during the debate and consequent passage into law of the National Environment Management Bill, 1994 (now referred to as the National Environment Statute, 1995). Each member of the NRC received a copy of the State of the Environment Report some three weeks before debate on the Bill commenced. It was very clear to members that this greatly improved their understanding of Uganda's environmental issues and making firm decisions on what needs to be done. Thus, the quality of the debate was high and there was overwhelming positive contribution from the NRC members. Most importantly there were no questions raised on the necessity, general content and urgency of the Bill. Every member who contributed to the debate was also able to share with the house the environmental problems characterising his/her constituency.

The research interests developed are mainly in legal aspects including management of shared resources, and women leaders and the environment.

On the format of presentation it was felt that maps showing national parks and reserves should be included. The report did not have any noted limitations as it was appreciated that it was a good effort for a first report of its kind. Members of NRC therefore commended

the efforts of the Minister responsible for environment and requested his colleagues to consider directing their institutions to prepare detailed "State of Sector Reports" on a regular basis. Although no price was suggested it was felt that bookshops should be used.

#### **4.2.8 Private Sector**

Areas of particular interest included energy resources, industry and mining. The report is used on a monthly basis, mainly to provide information, but it is also used for decision making and staff training. The report highlights problems and initiates thought about proper courses of action. It provides enough information for one to appreciate the importance of resources and their value to society, as well as being able to recommend actions concerning the environment and related issues.

Some sector-specific issues which need to be expounded on are

- i) Issues of coordination in chapter 8
- ii) In chapter 5 the education section is not covered adequately

The report has presented issues that provide ideas for research. These included the impact of environment education in the formal and non-formal education sectors, the expertise and competence of environment education deliverers e.g. teachers, and barn modifications. From these areas specific research to be undertaken includes strategies for passing environment information to rural communities, a survey of environmental awareness in Uganda, and Energy usage up-country, furnace fuel barns modifications.

The comment on format of presentation was that the report should be interpreted into the local languages.

However, the following limitations were identified

- i) The report is not accessible or reader-friendly to the rural as well as non-technical populace who need it most
- ii) The size of the document does not permit easy distribution

There were varied opinions on the use of bookshops. It was felt by some that the bookshops may not sell the report effectively and it should therefore be marketed by the ministry. On the other hand, it was suggested that the bookshops would provide easy access to the public, although publicity of the report should be ensured.

#### **4.2.9 Parastatals**

The respondents had read parts of the book mainly on forestry, fisheries, mining, animal husbandry, and water resources. It has been used in teaching, research, decision making and to provide information. It is usually used on a monthly basis and sometimes, just occasionally. The report is basically informative, with good presentation of facts and figures which help one to appreciate environmental problems for example, decreasing forest cover.

It was noted that the report leaves out feasible solutions and provides only symptoms as a result it falls short in providing enough information for one to make decisions on what to take or what kind of policies to recommend

Some sector-specific issues which need to be included are

- i) Sewage and waste material disposal e g plastic bags disposal, recycling solid wastes and garbage recycling
- ii) Control of the water hyacinth (origin & problems)
- iii) Include discussion on the furniture industry
- iv) Up to date data on exports of natural resource products e g fish, minerals, hides and skins
- v) Should provide information on non-traditional crops by district
- vi) Environment impact assessments
- vii) Section on soils

On the most useful sector-specific policy issues the following was given

- i) Regulations on use of forest resources through gazetting because these regulations may have reversed the rates of forest destruction
- ii) Energy resources
- iii) Aquatic and wetland resources

Research into types of wood available to improve on furniture for export is a major concern

Comments on the format of presentation

- i) Figures/tables should quote sources in reference to allow for follow-up
- ii) Language use "english" and not "american"

The following limitations were given

- i) Should update data e g population statistics
- ii) The cover page should get a better picture of the bird and why are the women the only ones shown?
- iii) Lack of district summaries (district profiles) in the report to benefit community and district workers

- iv) As an initial report it should have been more detailed, no data on the climate resource of Uganda
- v) Edit the document thoroughly before printing
- vi) Use harvard reference system i e write authors on first page of every chapter
- vii) For 1996 version enclose questionnaire for comments with the book to allow for immediate response after one has read

It was suggested that bookshops be used because the report would have wider distribution within the society both urban and rural, it would be in easy reach for students and it would provide easy access for the public, although publicity of the report should be ensured

#### **4 2 10 Other (Individuals)**

Many read only parts of the report These included aspects of environmental law, agriculture, aquatic (problems of fishing immature fish or over fishing) and wetland resources, forests, wildlife and energy resources, population issues, legislation and policies, environment and development, the level of industrial water pollution by major industries, and the executive summary

The report has been used in several ways but mainly to provide information Other uses are policy and project formulation, decision making, staff training, teaching and research The report is used periodically sometimes on a daily, weekly or monthly basis or just occasionally

The respondents stated that the report provides a base to appreciate environmental problems They also felt that it provided one with enough information to appreciate the importance of resources and their value to society, as well as make decisions on what actions to take or policies to recommend concerning the environment and related issues But it was also noted that the report is vague and too brief on environment law enforcement, so one can not know what is already being done or what should be recommended

It was further suggested that the following sectors-specific issues be either include (i-vii) or expounded on(viii-x)

- i) Review implementation of environmental law, change it into various languages, legal aspects and policy issues, bye-laws on environment
- ii) Sewage and waste material disposal e g plastic bags disposal, recycling solid wastes and garbage recycling
- iii) The role of the local community in environment protection- community based initiatives
- iv) The relationship between gender and environment

- v) The role of indigenous knowledge, traditional resource management systems, and the common property system
- vi) Environment impact of fish processing factories and solutions to arising problems
- vii) Recommended fish net sizes for various types of fish
- viii) HIV/Aids
- ix) Urban environment issues, infrastructure, transport and communications should be covered fully in separate chapters
- x) Discussion on biodiversity (both aquatic & terrestrial should be discussed separately)

The most useful sector-specific policy issues were

- i) Forests and wildlife resources hardly any information on this topic elsewhere
- ii) Information on environment education and public awareness which can be used to cultivate a culture of environmental consciousness, this should start with the young
- iii) Forests, wildlife, aquatic and wetland resources because they are very informative well researched and presented fairly well
- iv) Fisheries cause it is field of interest and the health sector cause of direct impact on man

The report also provides one with ideas for research in legal aspects, issues pertaining to fish farming in Uganda, water resources and forest conservation. From these broad areas those to be undertaken are modern methods of smoking fish instead of firewood usage, how to dispose of factory wastes instead of continuously dumping them into our fresh water, research on lake areas favourable for afforestation, fish feed formulation, integrated fish farming, and problems of stunting in Tilapia fish species and captive breeding of fish.

Comments on the format of presentation

- i) Length is just right
- ii) Maps were very few (e.g. maps on forestry and wildlife resources are inadequate)
- iii) Charts were not enough
- iv) Language should interpret and provide some reports in the local language

On integration, a clear relationship was shown between man's reliance on and use of the resources, quantities available, impacts, economic value and policies for sustainable use. But the relationship between rural dwellers and the environment (soil, water and woodfuel, etc.) should be discussed and the report should also indicate to the reader how the various aspect

can be harmonised to achieve sustainable utilisation of the resources

The limitations of the report were given as follows

- i) As an initial report it should have been more detailed, no data on the climate resource of Uganda
- ii) Coverage on NGOs, CBOs, PVOs involvement in environment issues should be added
- iii) Very few copies of the report were distributed
- iv) Lack of quantification of the problems i.e. lack of concrete data in some cases
- v) Inconsistencies and accuracy of data questionable

There were varied responses on the use of bookshops. Those in favour suggested that it would allow for easy access by the public, although publicity of the report should be ensured and reduced prices at district levels should be ensured. On the contrary, others felt that bookshop owners are profit-driven and may thus exploit customers, the book is too important to be sold, everyone should have a free chance to become environmentally aware, and that the report is very technical hence may not attract the public to purchase it.

### **4.3 Advisory Committee**

The advisory committee was set up basically to advise on the content and quality of the report through the preparation of the report. The main contribution was to review the draft and submit comments on a regular basis (editorial role). Other duties included setting aims and objectives of the SOER and framing the structure of the report, coordination of data gathering, having discussions with key officials on the pertinent issues of the SOE, supervision to ensure implementation of policies and projects are carried out as quickly and effectively as possible therefore government had a stake in issuing SOER.

Most of the committee members worked for a period of 5 months with a mean time of 8½ months since some were involved for a longer time i.e. 12 months. For most of them data was readily available. There were however a few setbacks noted on availability of data i.e. the quality of data was out-dated or inconsistent, data collected was not easily verified, natural resource data for example, on vegetation is dynamic, sometimes people supposed to vet information were not technical enough, data on components of the SOER which depended on inputs from districts and private sector was not readily available, therefore coordination of input was not easy, up-to-date data on natural resources is generally lacking or conflicting, and opted for data from Ministry of Finance and Economic Planning which at times was at variance with data from sectoral institutions.

Their comments on the report also varied although, it was appreciated that for a first edition it was an excellent effort of the ability to present Ugandan environmental issues in one report and that it makes easy reference on the status of natural resources i.e. provides a basis for this information. Some members felt that some of the information is out of date but that was

inevitable, it covers very broad areas therefore should be more precise i.e. presenting sectoral issues, the depth of coverage was limited, and key district issues were not readily available

In order to address these weaknesses it was suggested that

- i) Have a continued research component, or liaison with researchers on relevant subjects
- ii) Have supplementary publications focused on specific areas of focus e.g. water hyacinth, soil erosion
- iii) Interaction at district level through district profiles
- iv) More time needs to be spent on data collection, the data needs to be verified. This calls for involvement of more capable local staff

On the organisation of the advisory committee members came out clear that some adjustments had to be made. The following suggestions were made

- i) Select a small group of highly motivated and well informed individuals, no more than 5 or 6
- ii) Should be technical group of persons willing to read and make critical comments, should have clear terms of reference and incentive to make them work. A technical advisory committee from NGOs, Universities, Private Sector, and Government can focus on the data and analysis of issues
- iii) Should have a more senior advisory committee from all walks of life to provide a solid political review
- iv) Should maintain the ability to do work efficiently
- v) Should formulate a strategy to ensure active involvement of the advisory committee, one which encourages cross fertilisation of ideas, and national ownership of the report
- vi) Require more sectoral people for sectoral representation even at the drafting stage

As a result of their participation and short comings experienced they also recommended that the contributions of the advisory committee should be acknowledged in the report, they should be given contractual assignments with a reasonable package of remuneration and clear terms of reference, and a specific time span in which to accomplish the task, should choose members who like reading e.g. from academic and/or research institutions plus government (policy makers), should have meeting of 'friends of the SOE' to discuss arrangement of advisory committee and attempt at apportioning responsibilities and duties, and members should have a general overview of the report but concentrate also on specific areas where they have expertise. It is important to note that some felt that there were no flaws in advisory committee, so it should be maintained and the members should maintain the ability

## 6 PRINCIPAL FINDINGS AND RECOMMENDATIONS

### 6.1 Principal findings

The following constitute what the assessment team regards as the principal findings, which should assist in guiding future editions of the State of the Environment Report for Uganda

- 1 The SOER'94 both drew information from and contributed to the Uganda National Environment Action Plan
- 2 Prior to preparation of any SOE, a short concept paper to guide research assistants, consultants and other participants is necessary
- 3 The Advisory Committee is a useful group that provides a link to data and information available in the various institutions they represent. However, it was found that the majority of them are very busy and hardly have time to devote to report editing. It appears that the most logical strategy is to limit the committee's participation to oversight of the SOER process and general policy guidance. Editing of the report should be the responsibility of a small dedicated technical group (maybe a technical committee or working group) which should be remunerated to carry out this function
- 4 Development of internal capacity for SOER production is critical if sustainability (continuity) is to be achieved. However, in cases where the institution responsible is overwhelmed with other activities, use of a national subcontractor should be considered. This implies the need to build internal capacity in the private sector
- 5 The first SOER was justifiably lengthy, however, the subsequent editions should concentrate on developing indicators for identifying trends, cover the areas omitted in the previous one and also report on new and emerging issues. The establishment of an SOER database should be a major output of the SOER'96
- 6 The SOER requires proper editing in order to be user-friendly. Future editions should use the services of a competent technical expert, with time and capacity to handle the issues discussed in the report
- 7 In subsequent reports there should be more use of data, figures, tables and balance use of text in order to convey the message much faster. In addition, since the report has both technical and non-technical material, pictorial illustrations could be used to reduce the amount of technical language

There was a general feeling that there was inadequate use of maps in the report. **Given the capacity of NEMA/NEIC's GIS/RS laboratory this shortcoming needs to be urgently corrected**

- 8 According to the assessment, the readership was wide and varied with respect to levels of education, interest and intended use of the report. Indeed there were conflicting responses with regard to report size, structure, content, user-friendliness,

simplicity/complexity and dissemination of the report. This indicates that fresh effort needs to be injected in the subsequent editions in order to produce a family of products each aimed at a specific group. This should be done by the appropriate division of NEMA or under subcontract, extracted from the main document or other sources for wider distribution. These could be in the form of fact sheets, policy briefs, state-of-resource reports, school resource materials or even a specific report on an environmental issue of national concern at any given time.

This is perhaps more important than production of the report once every two years. It is recommended that the reporting cycle be revisited and lengthened to at least 3 years with the period in-between dedicated to production and dissemination of the products mentioned above.

Trend analysis in the SOER'96 should help in determining the appropriate reporting cycle.

- 9 For the illiterate members of the Ugandan Community but who are one of the major stakeholders in natural resource management, it was recommended that an audio-visual component be added to the SOER process and widely disseminated. There is available capacity in the country to achieve this. There was also an overwhelming call to translate the report in local languages. The feasibility of this is questionable, however, this is an issue that can be discussed with the Ministries responsible for Education and Information.
- 10 Coupled with the above, there were varying ideas on how to achieve wider dissemination and readership, and this increased use of the report. There was support for the use of bookshops as outlets for the report as long as release of the report was widely publicized. However, this has to be balanced against the major aim of such reports - which is to improve environmental awareness and garner support of the population in moving towards sustainable environmental management. The logical conclusion seems to be that some institutions and groups have to be targeted and the report delivered in order to ensure access. These are particularly the ones that cannot afford to pay the price charged or are rural based.
- 11 On the major strengths and weaknesses of the report, there was again lack of consensus across the board. This need for a family of products. However, the following emerged as areas of major agreement, The report
  - a) Enabled readers to understand and appreciate the country's environmental problems. In so doing, it enabled readers to understand the necessary actions that were required in order to deal with the issues facing the country. It also allowed appreciation of the value of resources to society.
  - b) Was able to relate changes in the environment the overall socio-economic conditions in Uganda.
  - c) Allowed one to appreciate the linkages between decisions/policies and the state of the natural resources.

- d) Was used in policy formulation, Project development and decision making
- e) Has become a reference document for many users and has thus become an important source of information, some of which does not exist elsewhere in the manner it is presented
- f) Provided ideas for research, and indeed some research ideas stimulated by the report are already under implementation
- g) Was a major factor in influencing passage of the National Environment Bill, 1994 into law
- h) Is widely used for environmental education, general environmental awareness, student and staff training
- i) Provides information on the policies and mandates of sectoral institutions and their roles in sustainable management of the environment

12 On areas that require attention in the next edition, the following emerged as the major ones

- a) Climate and climate change
- b) The role of indigenous minority groups in natural resources management (also indigenous knowledge and traditional resource management systems)
- c) Industry, its growth and impact on the environment This includes the fish processing factories
- d) Gender and the environment
- e) The soils of Uganda
- f) Detailed information on the origin and problems of water hyacinth, government's plans and activities to control it
- g) Relevant aspects of the National Constitution and the National Environment Statute, 1995
- h) NEMA, its activities and progress/achievements so far
- i) Information on the current status of HIV/AIDS in the country
- j) The furniture industry and its potential in value-added export of timber products
- k) Information on non-traditional agricultural export crops

- l) Environmental Impact Assessment (EIA) guideline, and examples of EIAs that have been successfully carried out
  - m) Sewage and waste disposal and recycling, with specific attention paid to plastic (polyethylene) bags
  - n) **Involvement** of non-governmental organisations, Community based organisations and Private Voluntary Organisations in environmental management
- 13 On the front and end-matter of the report, it was recommended that future editions should have a glossary of terms Reference should also be properly cited

## **6.2 Recommendations**

The assessment detected the need for the report always to look out for “visual” or “hot” issues that the public is interested in at the time and try as much as possible to provide information on them The assessment further realised the need for district or local level input In the report To this end, the on-going UNDP-funded exercise to produce District State of Environment Reports will meet this concern Their continued revision and update is highly recommended

Finally, it is recommended that in-depth reviews of the SOER be commissioned in order to get valuable feedback on the structure, content, detail, indicators, layout, readability and dissemination strategies of document These commissioned reviews require ample allocation of resources

It was recommended that in the next subsequent reports, there should be more use of data, figures, tables and maps and a balanced use of text in order to convey the message much faster In addition, since the report has both technical and non-technical material, pictorial illustrations could be used to reduce the amount of technical language

What seems to be a cross-cutting recommendation is that in future a family of products should be produced by NEMA, extracted from the main document, for wider distribution These would be in the form of Fact sheets, Policy briefs, State of resource reports, School resourced materials, or even a specific report on an environmental issue of national concern at any given time

## Appendix 1 (a)

Questionnaires and interview schedules were used in data collection. The profile of respondents included 11 categories, (Central Government, Local Government, International Organizations (Resident), International Organizations (Foreign), Academic Institutions, The Media, Non Governmental Organisations (NGOs) both Local and International, Legislature (NRC/CA), Private Sector (Consultants and Small Scale Industries [SSIs]), Parastatals, Other [Individuals, etc ]) from which the samples were selected.

Since the total number of respondents representing each category were not the same, unequal cluster sampling methods were used in selecting the samples. The proportion (percentage) of each category varied depending on the total number of respondents in each category and the relevance of the institution and/or organization in the use of the SOER. In selection of the final sample purposive and systematic sampling techniques were used concurrently. Purposive selection was necessary because some of the respondents have in one way or another participated in providing information for the report and therefore, reflect a high level of keenness which the researchers find necessary to capture. The remaining part of each sample was selected using systematic sampling owing to the ease of use of this method when dealing with large sample sizes. A total of 330 respondents were selected from the 11 categories.

## Appendix I(b)

The statistical justification of the selected respondents is as presented in Appendix I(a) The test criteria were measured using the following tools

### 1 Efficiency

- Analysis of costs and schedules using ANOVA
- Feedback from participants and consultants using a questionnaire (see Appendix 2)

### 2 Effectiveness and Relevance

- User-survey to assess clients needs and satisfaction Questions on substance of the report and the presentation format (Appendix 3)
- Media coverage - This brought out information on the use of the report by a specific audience i.e journalists It is an indirect measure of public interest in the report, and a measure of the effectiveness of the communication plan (see Appendix 4)
- Commissioned reviews - Experts from various professional categories and disciplines representative of the target audience offered their opinions and observations on the report The following categories were covered with the use of a questionnaire
  - Government Policy and decision makers,
  - environmental groups,
  - industry and business representatives,
  - scientists,
  - media representatives,
  - educators,
  - environmental consultants
- Advisory Committee review

These provided their observations and opinions with the use of an interview schedule (see Appendix 5)

### 3 Impact

This was difficult to measure given the short period between production of the report and the assessment exercise Specific pointers that emerged during the exercise were used to indicate possible impact



- 11 Which chapters of the report did you give most attention  
(Tick)
- |  |     |
|--|-----|
| (a) Environment and Development            | [1] |
| (b) Agriculture                            | [2] |
| (c) Forests and Wildlife Resources         | [3] |
| (d) Aquatic and Wetlands Resources         | [4] |
| (e) Population Health and Human Settlement | [5] |
| (f) Energy Resources                       | [6] |
| (g) Industry and Mining                    | [7] |
| (h) Environmental Legislation and Policy   | [8] |
- 12 What are your comments on the above listed chapters in terms of
- 1) Content
  - 11) Understanding
- 13 Do you have any major suggestions on the format of the report?
- 14 What are your major comments on the entire report
- 15 Were you guided throughout the preparation of the report?  
(Give comments on level of guidance and whether or not it should be altered)

PLEASE IF SPACE PROVIDED IS NOT ENOUGH USE OTHER SHEETS AND  
ATTACH FIRMLY



- 14 If yes in 13 above, which issues are they?
- 15 Do you have any sector-specific issues that need to be either included or expounded on in the next report?
- 16 What are your comments on the sector-specific policy issues articulated in the report?
- 17 Does the report provide your institution with ideas for research? (a) Yes [1] (b) No [0]
- 18 If yes, in 17 above,  
(a) specify the research interests that have arisen as a result of reading this text  
  
(b) list the research areas which you intend to undertake
- 19 What are your comments on the format of presentation? (Give a sector-specific example)
- 20 Is the integration of human activities, information from ecosystems and economic sectors well articulated by the text? (explain)
- 21 Can you list the major limitations of this report
- 22 How many copies of this book would your organization/ institution like to have?
- 23 What is a sufficient length for the report?
- 24 How much are you willing to pay to receive this book?
- 25 Should book shops be used as outlets for distributions (explain) (a) Yes [1] (b) No [0]

PLEASE IF SPACE PROVIDED IS NOT ENOUGH USE OTHER SHEETS AND ATTACH FIRMLY

**Interview schedule media**

- 1 What use was made of the state of environment report for Uganda, 1994?
- 2 Have you written any excerpts from the book as direct quotation or translation?
- 3 How often has this been done and which column does it usually feature?
- 4 What impact do you think this has on the readers/viewers? (give specific examples where possible)
- 5 What is the scope of your clientele to whom have you directed these messages?
- 6 Does the report provide you with well integrated information on human activities, information from ecosystems and economic sectors? (explain)

Advisory committee (NWGS) interview schedule

- 1 What were your major contributions to the making of the state of environment report for Uganda, 1994?
- 2 How long were you required to take to accomplish the task at hand? (Specify days, months)
- 3 Was the data readily available for your use?
- 4 If No in 3 above, what were the major set-backs and where these worked out in the process of report write -up?
- 5 What are your comments on the report as a whole? (Specify clearly strengths and weaknesses)
- 6 In your opinion, how should the weaknesses in 5 above be addressed
- 7 How should the Advisory Committee be organized for the next report write-up?
- 8 Give specific recommendations on how duties of the committee should be carried out for the next issue

Interview schedule for Editor-in-chief SOER

- 1 Which type of people participated?
- 2 What criteria was used for selection?
- 3 How did you ensure that participants and consultants covered the work allocated?
- 4 In your view, were the number of participants enough for the task at hand?
- 5 Did you at any one time in the process of report writing have to increase on this number?
- 6 Were the participants working on the SOER on a full-time basis?
- 7 In your opinion, how many participants do you think you will require on a full-time basis to get the job done?
- 8 When was the table of contents made?
- 9 Did you have a schedule of duties to work from?
- 10 Did you have a set of stylistic guidelines?
- 11 Comment on the time frame
- 12 By how much did you exceed your timing of the original deadlines set at the start of the work?
- 13 What were the causes of these extensions and/or delays?
- 14 Comment on the publication stage, was it up to your expectations?
- 15 Were the staff salaries paid for from the SOER funds?
- 16 What is your comment on the level of participation of the advisory committee?
- 17 Do you have any suggestions to make on the composition of the advisory committee?
- 18 Can you comment on the work and performance of the copy editor?
- 19 Can you comment on your role as the editor-in-chief? guidelines, constraints, solutions, timing of editing per chapter and for entire report

**Table 1. Mean Number of Copies, Sufficient Length and Price (Ushs) of the Report**

Category	Mean Number of copies	Mean Sufficient Length	Minimum Price of Report	Maximum Price of Report	Mean Price of Report
Central Government	2509	262	5000	30000	11000
Local Government	39	316	10000	20000	15000
Resident International Organisations	10	260	10000	30000	18333
Foreign International organisations	4	181	10000	25000	13000
Academic Institutions	18	223	4000	75000	14656
Non-Governmental Organisations	8	254	500	50000	12110
National Resistance Council/Constituent Assembly	5	-	-	-	-
Private Sector	3	350	0	30000	15000
Parastatals	24	200	10000	20000	16000
Other	21	229	1000	15000	8667

**Note** It was noted that the majority of respondents preferred the length to remain the same as the original SOER and are willing to pay equivalent of cost price

The majority of respondents in local government are willing to pay Ushs 10000

The majority of respondents in academic institutions are willing to pay Ushs 5000

In the category-other, it was common to find that only one copy was required since many of the respondents were individuals it was also suggested that 200 pages of the text of the report could do

## Appendix 8

### Words in the State of Environment Report not easily understood by the average reader

Acidification	Riparian systems
Acreage	River inundation
Agrochemicals	Salinization
Agro-climatic zone	Salvage
Agro-ecological zone	Seismograph
Ameliorative actions	Silvicultural practices
Aquaculture	Species
Aquifer systems	Structural shift
Biodiversity	Sustainable development
Bioleaching process	Sustainable economic growth
Buffer zone	Sustainable methods
Buttressing	Sustainable solutions
Carbonization	Sustainable yields
Conservation zone	Terrain
Deforestation	Tillage practices
Degradation	Tourism zone
Denudation	
Depletion	
Diminutive dikdik	
Diversification	
Ecological zone	
Ecosystem	
Effluent	
Eland	
Endowment	
Environment profile	
Fallow system	
Falls zone	
Fauna	
Flora	
Forage production	
Gazetted reserves	
Genetic base	
Genetic diversity	
Genetic manipulation	
Habitats	
Intensive use zone	
Land fragmentation	
Limnology	
Montane systems	
Oxidation	
Paradigms	
Patrilineal system	
Precipitation	