



Developing a model corporate records management system for sustainability reporting: a case of the Iringa region in Tanzania

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1 Introduction

The long-term survival and profitability of many companies in international business largely depend on the sustainability reporting systems and proper records management in those companies. Sustainability reporting emerged in the early 1990s when companies started producing environmental reports owing to various environmental pressures such as the World Summit on Environment and Development in Rio de Janeiro that demanded ethical corporate environmental behaviour (Hedberg 2002).

The World Business Council for Sustainable Development (2002:7) defined sustainability reporting as:

'Public reports by companies to provide internal and external stakeholders with a picture of corporate position and activities on economic, environmental and social dimensions. In short, such reports attempt to describe the company's contribution towards sustainable development.'

In other words, sustainability reporting not only ensures corporate accountability but also engages corporate stakeholders in a corporate social responsibility dialogue while maintaining focus on profit. To have reliable and accurate sustainability reports, there is a need to first address the question of corporate records management. The absence of proper records management systems may act as a barrier to extracting information to be reported. The failure to manage records through a record management system may lead to a lack of evidence that a company performed a certain sustainable development activity. Furthermore, without a records management system there is a danger of losing individual, corporate and collective memory (McKemmish 1999).

Sustainability reporting and corporate records management have become basic requirements in implementing corporate environmental management systems and quality certification. Typical examples are the International Standards Organization (ISO) 14001 and the Eco-Management and Audit Scheme (EMAS). Both require the creation and tracking of records, with additional strict record keeping and reporting of recorded information provided by EMAS (Brorson and Gösta 1999) on one hand, and ISO 9000 accreditation on the other, to prove that the products and services are of the required quality (Mnjama 2000; Sebina 2001).

1.1 Drivers for sustainability reporting

There are many reasons why sustainability reporting is taking centre stage in the processes of many organisations. To begin with, 'sustainability reporting meets the needs and expectations of key stakeholders' (Andrews 2002:3). Furthermore, consumers are increasingly demanding responsible products through accountability and transparency. Accountability and transparency through sustainability reporting are directly related to corporate records management. To successfully exploit information in records, the records themselves should be managed and organized properly to facilitate their retrieval and use. There is evidence from the literature that demonstrates that corporate records management has not been given reasonable attention as part of corporate strategic management (Mnjama 2000; Sebina 2001). For instance, Sebina (2001:58) points out that for a long time records management was not given high priority by many businesses due to the perception that it was not a direct

contributor to corporate profit and services.

Increasingly, the environmental and sustainability awareness of consumers and other stakeholders pressurizes companies to certify their products with quality standards or environmental management systems in order to obtain a community licence to operate. Mnjama (2000:70) provides a typical example of how quality and environmental pressures were brought to bear on the Botswana Meat Commission (BMC) when it wanted to continue selling on international markets.

Nowadays, many international markets require the certification of products and services with ISO standards such as ISO 9000 for quality or ISO 14001 for environmental management systems. Conforming to certification demands is critical for many companies to be able to trade in international markets. This fact is given credence by Sebina (2001:49) who used evidence from a study to conclude that 'there is no way BMC could have resisted ISO 9000 certification if it was to continue being a player in the world beef industry'.

Almost all the ISO series standards that deal with quality standards, such as the ISO 9000 series or environmental management systems such as the ISO 14001 and EMAS, require records to be created during the design of the product, production processes and distribution and use stages of the product. Most of these standards also require the records to be tracked when needed.

The increase of green purchasing and environmental marketing also fuels the demand for records management systems in business organizations. The main reason is that the quality or environmental friendliness of products or services cannot be proved without evidence. Mnjama (2000: 70) correctly points out that 'customers are not just demanding that quality products be provided, but that evidence be available to show that companies are capable of producing quality products or providing quality service[s].'

Sustainability reporting characterized by efficient records management systems is probably one of the most important aspects to be considered by companies doing or planning to do international business all over the world and in Tanzania in particular. However, the fact that the Tanzania National Archives' mandate is limited to public records and a few private records with high value for society only (United Republic of Tanzania 2002) presents a challenge for information professionals to expand their understanding of private records emanating from the production of corporate sustainability reports.

The XVIII Biennial East and Southern Africa Regional Branch of the International Council on Archives (ESARBICA) General Conference on Archives and Records in the Information Society, held in Botswana in 2005, also underscored the need for national archival institutions in the ESARBICA region to seriously consider expanding their mandate to covering corporate records because they also constitute an important component of the region's heritage (ESARBICA 2005).

1.2 Why this study was necessary

As mentioned in the previous section, managing sustainability-related records seems to be a neglected area. International environmental management systems, such as ISO 14001 and EMAS, and sustainability reporting initiatives, such as the global reporting initiative (GRI), do not adequately reveal how sustainability-related records should be managed. That gap, therefore, underscores the fact that the development of environmental management systems and reporting criteria requires an interdisciplinary approach that should include information professionals who play a crucial role in designing record systems for creating, maintaining, using and tracking records in an effective and efficient manner.

Previous empirical studies on records management in Africa have tended to concentrate on public records and do not adequately address the management of corporate records. For instance, Abbott (1999), Kitalu (2001), Ndibalema (2001) and Ngulube and Tafor (2006) do not cover records of private companies, and particularly the records that emanate from sustainability reporting. Equally, studies in the developed world, such as Bjarnadottir (2002), Hedberg (2002) and Hussey, Kirsop and Meissen (2001), that assessed the sustainability reporting systems of various companies, ignored the management of records that were generated daily through sustainability reporting systems. Despite the fact that these studies provide a considerable understanding of records management and sustainability reporting, the missing link between a corporate records management system and a sustainability reporting system that creates a massive amount of records makes these studies slanted.

An understanding of the relationship between sustainability reporting systems and corporate records management systems would support the realization of sustainable development goals at company level in developing countries and particularly in the Iringa region of Tanzania. In that light, this study investigated the management of corporate records in exporting companies in Tanzania, focusing mainly on sustainability-related records. The main objective was to develop a model for their management. The model aimed at demonstrating the synergy between a corporate records management system as an internal system and sustainability reporting as an external system (Figure 2).

The research process drew on a 'modified' records life-cycle framework and the sustainability reporting criteria developed by GRI (Hussey *et al.* 2001) to establish variables for data collection and attributes of the proposed model. The 'modified' records life-cycle theory resulted from blending the pre-natal phase of the records continuum and the three phases of the records life-cycle model. The discussion of these models is beyond the scope of this article and readers are referred to textbooks such as Robek, Brown and Stephens (1996), McKemmish, Piggott, Reed and Upward (2005) and Shepherd and Yeo (2003) for further details. The decision to use the GRI criteria as a benchmark was based on the fact that 'the GRI guidelines appear to be the best available tool for reporting comprehensive progress towards all aspects of sustainable development' (Hussey *et al.* 2001:18). However, this study used GRI guidelines released on 3 September 2002. The first version of the guidelines came out in 1999 (Wood 2003).

The investigation was guided by the following research questions:

- What records are kept in the corporate sustainability reporting systems?
- What are the procedures in creating records for sustainability reporting?
- What are the information technology challenges for corporate records management systems?
- What are the tools used to retrieve and distribute corporate records?
- How are records from sustainability reporting transferred and disposed of?
- What are the appraisal procedures and retention schedules for corporate records?
- Does management support record management activities?
- Are there record management systems policies in the companies?
- Based on the findings, what model for corporate records management systems can be developed for the Iringa region?

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2 Sustainability reporting and corporate records management

The sustainability reporting process starts with the recording of sustainability-related information, extracting and compiling sustainability recorded information and publishing the sustainability reports. The sustainability-related records created in the organizations are

evidence of sustainability activities undertaken by the organization. These sustainability records are particularly useful during the sustainability auditing or sustainability third party verification process. The verification process is essential to guarantee that the sustainability reports are trustworthy. According to Environmental Australia (2003), independent verification of triple bottom line (TBL) reports or sustainability reports is 'increasingly sought by organizations to provide assurance to stakeholders'. Since corporate records management systems provide information that appears in the sustainability reports, the system would be used by third-party verifiers as a benchmark to compare the sustainability reported information and sustainability recorded information.

Verification becomes very important when considering the fact that some companies do not report what they do in practice. For instance, Nike in its code of conduct reports that, 'There shall be no discrimination based on race, creed, married or maternal status, religious or political beliefs, age or sexual orientation' (Welford 2002: 6). However, shortly after the release of their code of conduct, one of Nike's employment advertisements in China stated: 'Requirement: Female; Age 17–21; Qualification: Junior secondary or above; No colour blind or disability; wages at piece rate' (Welford 2002:6).

In essence, the verification process involves checking whether environmental, social and economic information reported in the sustainability reports is consistent with corporate records created during the conduct of sustainability-related activities. It is therefore important to ensure appropriate corporate records management systems in the organization to simplify the extraction of information from records for sustainability reporting and to facilitate the verification process, which is very important to legitimize the sustainability reports and provide corporate competitive advantage through enhanced reputation.

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3 Methodology

The study used survey techniques to investigate corporate records management systems with special reference to sustainability reporting in the Iringa region. Many researchers investigating existing records management practices (e.g. Chinyemba and Ngulube 2005; Ndibalema 2001) and corporate social responsibility and sustainability strategies (Brady 2005; Douglas, Doris and Johnson 2004) in business organisations used the survey methods for data collection and analysis. Their data collection techniques included interviews, observations, questionnaires and scenario modelling. In that regard, the survey method was considered appropriate for the study.

The study used a population of nine cases of exporting companies from the Iringa region in Tanzania. The exporting companies were considered to be a homogenous group with common characteristics. As opposed to other business organizations operating in the Iringa region, exporting companies work in the international arena where sustainability reporting is likely to be a major concern.

A list of the population was obtained from the business profile of the region in the Iringa Regional Trading Office. The study only included companies doing export business at the time of the study. The study left out Southern Paper Mills, the largest pulp and paper export company in Iringa and possibly in East Africa, because it was not operating at the time of the study. The study also excluded the Lupembe Tea Factory because the Tanganyika Wattle and Kibena Tea Company, included in this study, exported on behalf of the Lupembe Tea Factory.

A census approach was adopted since the population was small. Previous researchers in the field of records management and sustainability reporting used relatively small populations with reasonable success. Hedberg (2002) used 12 companies and Ngulube and Tafor (2006)

used 13 units of analysis. In our case, the size of the population was compensated for, to some extent, by what Babbie and Mouton (2001:270, 272) refer to as the 'thickness' of the reporting, that is, the thoroughness of the review of relevant issues in the literature and the in-depth data collected by the survey.

The first author administered a pre-tested interview protocol with 56 items to heads of the records management systems in the study cases. The researcher used the observation schedule with 20 items and filled in all the observable predefined themes to verify data collected through interviews. The use of more than one method of collecting data enhanced the validity of the collected data. The study achieved a 100% response rate, which can be partly attributed to the personal administration of the interview protocol and observation schedule.

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4 Overview of the findings

The findings of the cross-sectional exploratory survey carried out in nine exporting companies in the Iringa region represent a snapshot of corporate records management systems, but it raises some issues that merit discussion.

The findings showed that the surveyed companies kept sustainability-related records in varying degrees. For instance, it was found that all companies kept social and financial records but few kept environmental-related records. Only two companies kept emission composition records, biodiversity records, material reuse records and emission quantification records. The findings also revealed that only three companies kept material recycling records and wastewater composition records. The findings also established that six companies did not publish sustainability reports.

Furthermore, six companies indicated the availability of findings aids. However, only two companies had open and visible file lists as records finding aid tools. A company's filing system, finding aids and other forms of assistance could explain the amount of time used to locate records when needed. Therefore it was established that six companies retrieved information from paper-based records within six to ten minutes while the rest retrieved recorded information in less than five minutes. In properly maintained records management systems, the retrieval time of records is less than five minutes (Ndibalema 2001). Therefore the findings showed inefficiency in records retrieval time.

In the case of controlling records, the study revealed that four companies used a combination of centralized and decentralized systems. The remaining five companies either used decentralized or centralized systems. In total, eight responses indicated that companies used either functional or subject filing systems. The findings also showed that only one company had a vital records and disaster management programme. In the different approaches used in managing inactive records, the observation revealed that only one company sent non-current records to an onsite archive. The observation also revealed that there was unprofessional treatment of inactive records in almost all companies, except one with an international affiliation. Worse still, one company dumped inactive records in the attic.

The findings indicated that all nine companies used computers mainly for e-mail, word processing, spreadsheets and Internet access. It was also revealed that three companies owned a Web site while the rest did not. In the creation of electronic records, five companies indicated the use of templates and four did not use templates.

Some of the results in Table 1 show that the companies were not dealing adequately with challenges posed by information technology. For instance, metadata (see Table 1, item 5), which is key to preserving electronic records were rarely used. Authors such as Abbott (1999)

and Sejane (2004) argue for the use of metadata to preserve the evidential value of electronic records. The companies seem to have adopted what Katundu (2001) refers to as the 'wait and see' syndrome, which is prevalent in relation to managing electronic records in Africa.

With regard to the companies' top management support for corporate records management systems, the findings demonstrated that two thirds (six companies) strongly agreed that the top management of their companies was very supportive of records management activities. The fact that five companies had a records management item in their budgets demonstrates some degree of management support for the records management function. Studies have shown that management support is key to a sustainable records management programme.

The results in Table 1 show that records management in the surveyed companies was very unsatisfactory. None of the records management practices scored 100% although items 10 and 11 came relatively close. At face value, there were more negative responses than positive ones. The affirmative responses were 47% of the possible total of 171. The essential aspects of the existing records management activities are further highlighted in the conceptual model in Figure 1.

Table 1 Records management practices in selected companies in the Iringa region

| Existing records management practices | | Responses | |
|---|--|---------------------|---------------------|
| | | Yes | No |
| 1 | Availability of standardized forms for creating records | 5 | 4 |
| 2 | Incidence of companies having Web site | 3 | 6 |
| 3 | Use of template to create electronic records | 5 | 4 |
| 4 | Incidence of companies with e-mail policy | 5 | 4 |
| 5 | Metadata use for electronic records | 3 | 6 |
| 6 | Incidence of electronic and paper records loss | 5 | 4 |
| 7 | Availability of policies to protect records from alteration | 6 | 3 |
| 8 | Availability of policies for migration of electronic records | 5 | 4 |
| 9 | Availability of procedures for records migration processes | 4 | 5 |
| 10 | The effectiveness of filing systems to support users' functions | 8 | 1 |
| 11 | The response to whether files were regularly closed | 7 | 2 |
| 12 | Inventorying of electronic records | 1 | 8 |
| 13 | Inventorying of paper-based records | 2 | 7 |
| 14 | Availability of retention schedules | 4 | 5 |
| 15 | Availability of finding aids | 6 | 3 |
| 16 | Accessibility of findings aids | 2 | 7 |
| 17 | Presence of records committees | 2 | 7 |
| 18 | Availability of records management items in income and expenditure statement | 5 | 4 |
| 19 | Availability of a budget allocation specifically for records management | 2 | 7 |
| Cumulative score for each category of responses out of a possible score of 171 | | 80 (47%) | 91 (53%) |

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5 Modelling corporate records management systems

After carrying out the survey described above, or what Hestenes (1996) terms the situation

analysis, the boundaries of the records management systems were established and certain systems attributes to be included in the model of the existing situation were selected. Models facilitate the capturing of essential components of reality and represent them in a simplified visual manner.

Although MacKay (2003) lists five types of models, this study used qualitative conceptual models. The major attraction of qualitative conceptual models is that they are flexible and they may be used to develop more complex models (MacKay 2003). In that light, a conceptual model of the existing corporate records management system (Figure 1) was developed and used as a basis for the construction of a new contextual model for the proposed records management system (Figure 2).

5.1 Model of existing corporate records management systems

Based on the empirical findings of the study discussed above, the conceptual representation of the existing corporate records management system in the Iringa region of Tanzania is illustrated in Figure 1.

Figure 1 The existing corporate records management system in exporting companies in the Iringa region

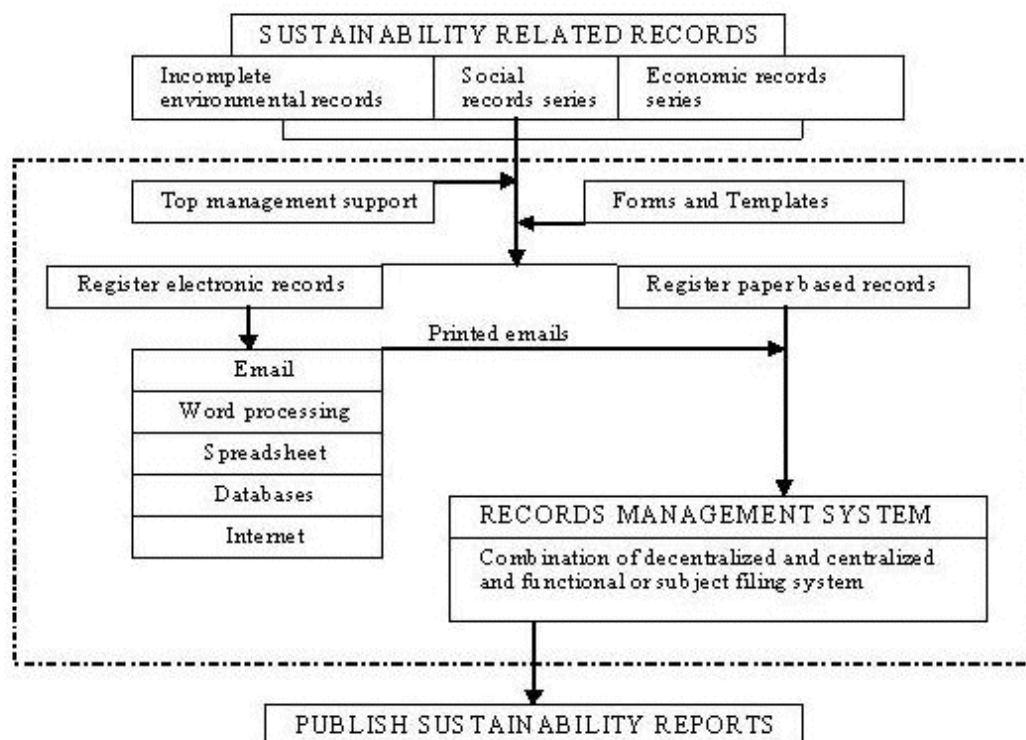


Figure 1 indicates that sustainability-related records in terms of environmental, social and economic-related records series are the inputs into the system. The environmental records series are not complete because they exclude environmental-related records with global impacts as revealed by the survey.

In the records management process, top management of companies provides support for managing sustainability-related records. Furthermore, companies use standardized forms and templates to capture records. Electronic and paper-based records are captured in the system. In the case of electronic records, only e-mails are printed and captured in the records system. The current model does not provide proper management of database-generated records and

records downloaded from the Internet.

To manage captured records, the system used a combination of centralized and decentralized strategies and functional and subject-based filing systems. The findings revealed that only three companies published sustainability reports. The existing system indicated that the systems did not have a provision for verification of sustainability reports against the sustainability-recorded information in the record management system since there was no feedback loop into the system.

5.2 Shortcomings of existing records management systems

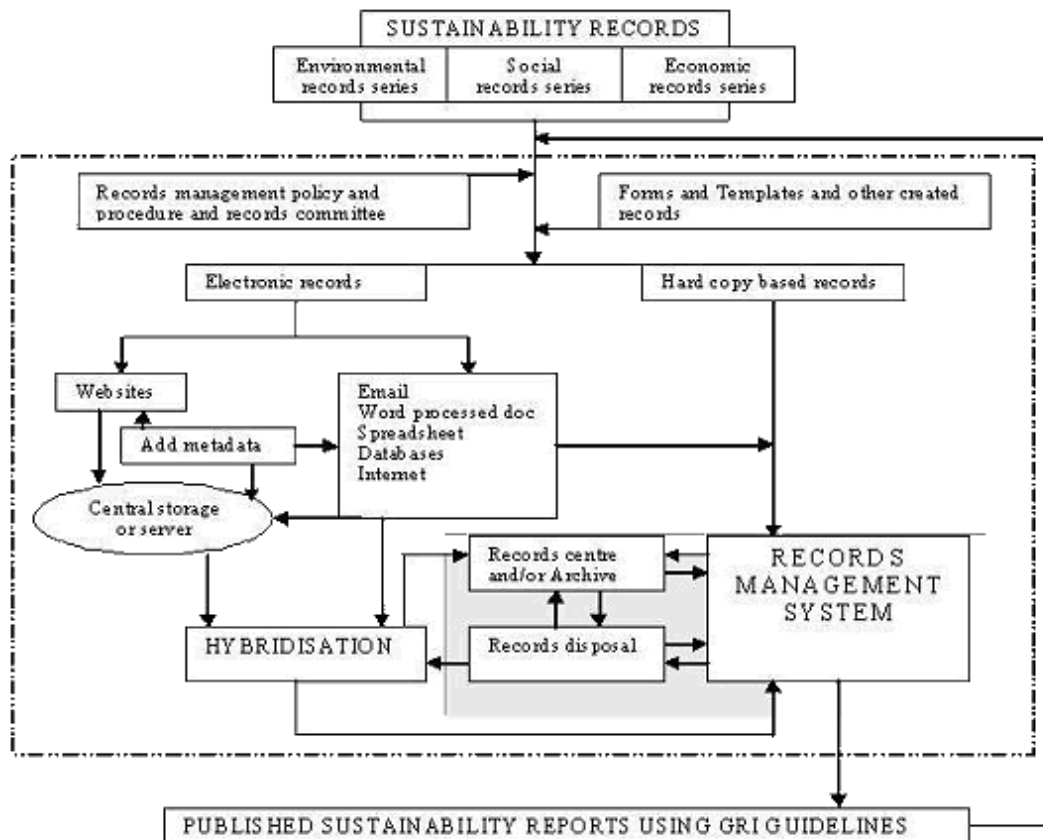
- The input into the system ignored the environmental-related records with global impacts. The input needed to comprehensively cover all environmental, economic and social-related records.
- The existing model did not have a records management committee (see Table 1 item 17) to set up policies and procedures to oversee the appraisal and retention schedules and the overall management of the corporate records systems.
- The existing model did not have a programme for managing Web sites as part of the corporate records. Furthermore, the existing model did not have a subsystem to maintain the context and structure or metadata of the electronic records.
- The existing model did not appraise, make inventories or establish retention schedules (Table 1, item 14) for records series in the records management system.
- The existing model did not have a subsystem for treating semi-current records and inactive records.
- The existing model used different filing systems in different departments, which is likely to have increased direct and indirect costs for maintaining the records management system. The use of different filing systems also inhibited records management departmental resource sharing.
- The output of the system did not provide a smooth exchange of information between the records management system and the sustainability reporting system.

All the shortcomings of the existing model of the corporate records management system that were identified are addressed in the proposed model of a corporate records management system discussed below.

5.3 Proposed conceptual model for a corporate records management system

Based on the shortcomings of the existing conceptualization in Figure 1 and the secondary data from the literature review, which provided attributes for the proposed model, Figure 2 presents the proposed conceptual model.

Figure 2 Proposed model for a corporate records management system (COREMS)



The proposed corporate records management system (COREMS) model shows that it requires the identification of a comprehensive sustainability-related records series based on the aspects provided by GRI guidelines (Global Reporting Initiatives 2002). The process of determining sustainability records to be captured in the COREMS model could take the form of a sustainability information audit. It is important for the companies to specify what exactly should be captured in the record keeping system before adopting the proposed COREMS model. The captured records for sustainability reporting purposes add value to sustainability reporting as they legitimize the sustainability reports and also provide legal, historical and administrative value to the organization. Unnecessary records should be prevented from entering the system by proper and integrated policies and procedures.

The proposed model indicates that a records committee must be established to identify what should be kept and captured in the records management system. The records committee formulates policies and procedures for the entire records management system with the support of top management as demonstrated in the old model.

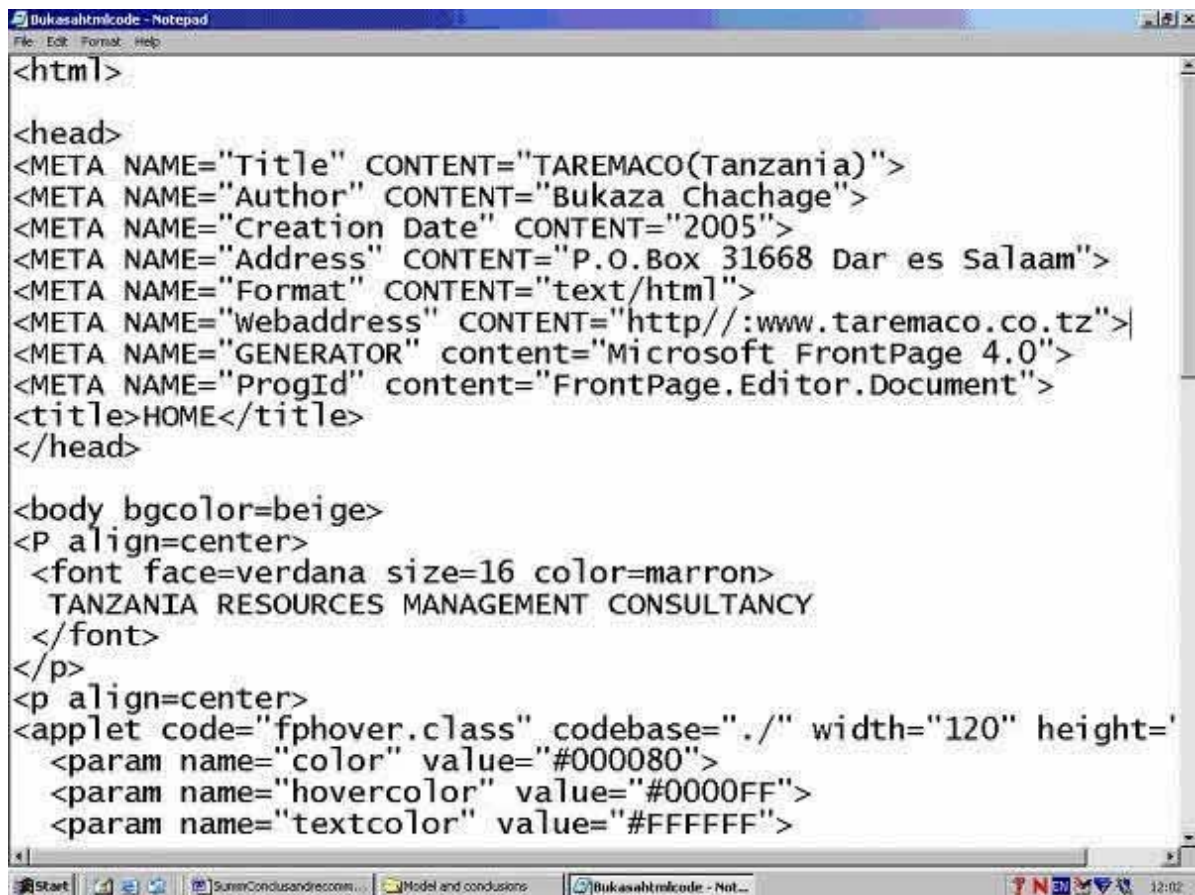
The proposed COREMS model uses forms and templates to capture records in the systems. Other records such as memos and letters, which do not use forms and templates, are also captured, registered and indexed in the system. In this model, records that are captured could be in the form of electronic records or hard copy (paper) records.

In the case of electronic records, the sustainability-related records captured may be in the form of Web sites or e-mails, word-processed records, spreadsheet-processed records, database-processed records and records downloaded from the Internet.

When electronic records are in the form of a Web site, metadata must be added to maintain the evidential value of the Web site records. Technically, metadata of Web sites could be added as shown in the Figure 3, depending on the metadata policy of the company and the

metadata knowledge available.

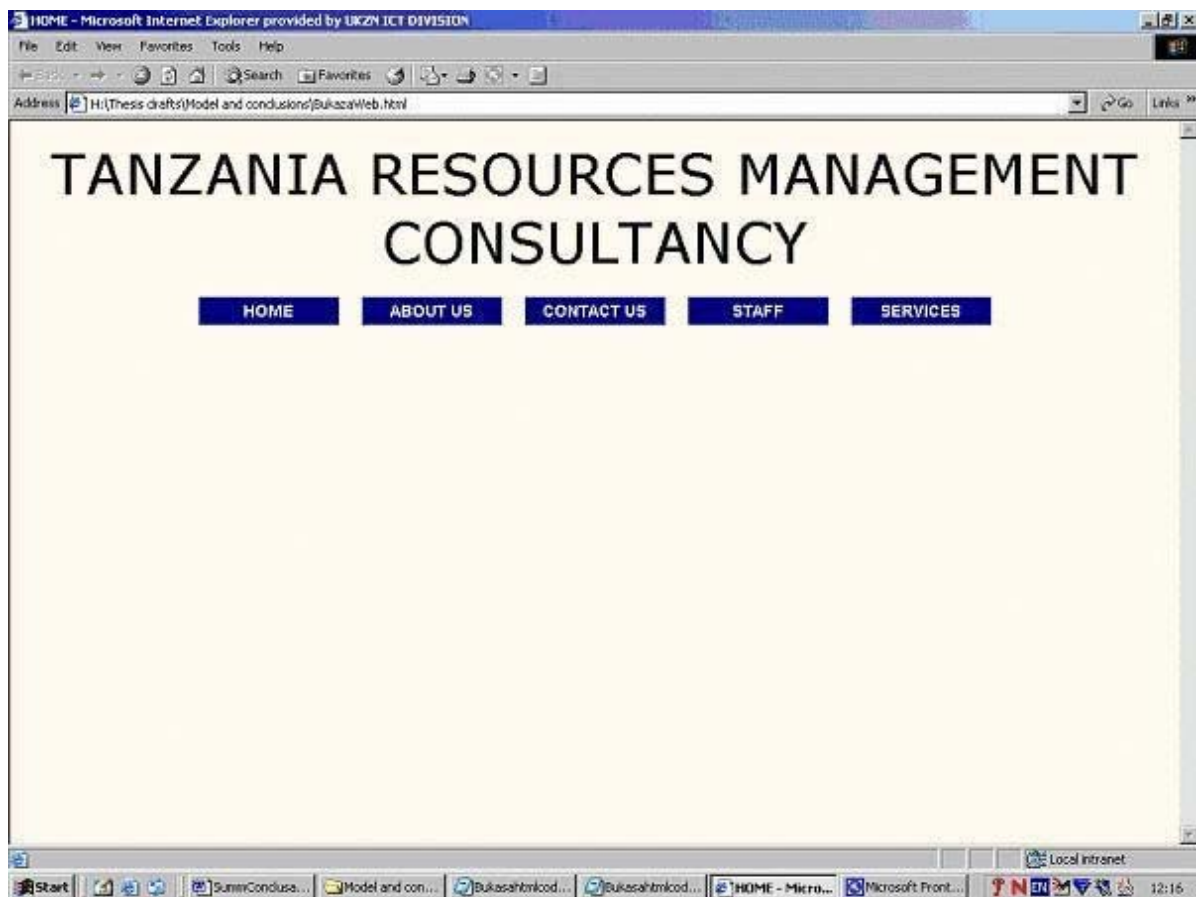
Figure 3 Example of adding metadata to Web sites [this method of adding metadata is adapted from the Dublin Core Initiative as presented by Hillmann (2000)]

A screenshot of a Notepad window titled 'Bukasahhtmlcode - Notepad'. The window displays HTML code. The code starts with <html>, followed by <head>. Inside the head, there are several <META NAME="..." CONTENT="..."> tags. The metadata includes Title, Author, Creation Date, Address, Format, Webaddress, GENERATOR, and ProgId. The title is 'HOME'. After the head, there is a <body bgcolor=beige> tag, followed by a <p align=center> tag containing a tag with the text 'TANZANIA RESOURCES MANAGEMENT CONSULTANCY'. Below this is another <p align=center> tag containing an <applet code="fphover.class" codebase="./" width="120" height="..."> tag with three parameters: color, hovercolor, and textcolor.

```
<html>
<head>
<META NAME="Title" CONTENT="TAREMACO(Tanzania)">
<META NAME="Author" CONTENT="Bukaza Chachage">
<META NAME="Creation Date" CONTENT="2005">
<META NAME="Address" CONTENT="P.O.Box 31668 Dar es Salaam">
<META NAME="Format" CONTENT="text/html">
<META NAME="Webaddress" CONTENT="http://:www.taremaco.co.tz">
<META NAME="GENERATOR" content="Microsoft FrontPage 4.0">
<META NAME="ProgId" content="FrontPage.Editor.Document">
<title>HOME</title>
</head>
<body bgcolor=beige>
<p align=center>
<font face=verdana size=16 color=marron>
TANZANIA RESOURCES MANAGEMENT CONSULTANCY
</font>
</p>
<p align=center>
<applet code="fphover.class" codebase="./" width="120" height="
<param name="color" value="#000080">
<param name="hovercolor" value="#0000FF">
<param name="textcolor" value="#FFFFFF">
```

The information between <head> and </head> in Figure 3 is the metadata added by the researchers on the Web site to demonstrate the maintenance of evidential value of a Web site using metadata. The coverage of metadata information added depends on the policy of the company. The information could cover all aspects specified in the company's policy on metadata capturing. As indicated in Figure 4, even though metadata information is added in the hyper text mark-up language (HTML) code, the front end of the HTML code does not show the metadata information as demonstrated in Figure 4. The metadata information could also be separate from the captured Web site records and could be added manually without using the computer system.

Figure 4 Front end of the HTML code with metadata (generated by the researchers using Microsoft Front Page 4.0)



If electronic records are in the form of e-mail, word-processed records, spreadsheet-prepared records, database-prepared records, and materials downloaded from the Internet, the information must be saved in the shared space or server as indicated in Figure 2. In capturing the electronic records, metadata information is added to the records. The metadata in this case could be embedded in the electronic records or attached to the records. The metadata must capture all the necessary information regarding the creator, date of creation, system created and other information depending on the policy of the company.

The captured electronic records with the metadata should be saved in labelled folders, preferably in the form of Portable Document Format (PDF) or Tagged Image Format (TIF) or other forms that have options for preserving records integrity. Based on the policy of saving files, PDF and TIF records and documents could be protected from manipulation. The Web site, metadata and PDF or TIF documents must be saved in a shared area or a central server where a corporate information system manager trained in records management could access the records for conversion and disposal using the hybridization approach. According to Ngulube (2001:263), the hybrid approach integrates 'appraisal as document management technique with document imaging' to ensure that all documents produced by organisations are preserved in one document format while addressing the paper avalanche and the problem of storage space.

The model indicates that the corporate information systems manager accesses electronic records from the shared space or a server in the case of a networked environment or uses less costly temporal storage devices such as memory sticks or diskettes to transfer records from individual workstations to the hybridization space. In the hybridization process, the system uses hybridization as a document management strategy and as a subsystem to link electronic records and available records management techniques and knowledge. In this case, electronic records are converted straight into microfilm and paper-based records are appraised and converted into microfilm as well. The unit used for conversion onto microfilm (COM) could

be installed in the same way as a printer is installed, in a network environment or at an individual workstation. In fact, some COM units have the same production capacity as printers. For instance, Robek, Brown and Stephens (1996) report that some COM units can microfilm up to 160 pages per minute. Another alternative is for companies to first convert their electronic records to paper and then later convert to microfilm using a special microfilm camera.

The company must have a microfilm reader to facilitate access to microfilmed records. If the company opted for paper conversion there must be a printing strategy and policy in order to reduce the cost of paper. For instance, the company could introduce printers that accommodate four pages double-sided printing methods. Doubtless some records could be in the form of hard copy which can be taken directly to the records management system.

In the case of hardcopy or paper-based records, the model shows that records are captured, processed and entered straight into the system. The records management system follows the traditional records management processes such as registration, classification, indexing, appraisal, inventorying, retention schedules and disposition, tracking systems and filing systems, making use of durable physical storage such as cabinets and shelves, temperature control devices, visible finding aids and other assistances. The elements in this phase could be adopted from ISO 15489 (International Standards Organization 15489-1 2001) and Model Requirement for the Management of Electronic Records (MoReq) (Cornwell Management Consultants 2004; Sejane 2004).

In the records management system, records with less administrative value and inactive records are retired to the records centre or moved to the archives respectively. The archives or records centre could be in less costly buildings, in an empty room within the company or in commercial archives, depending on the options available. When records are transferred to the archives or records centre, the records must be accompanied by a records transfer list (RTL). Copies of the RTL must first be sent to the records centre or archives and then returned to the company or the records management system.

Some paper-based records from the system will be appraised and converted to microfilm and returned to the records management system. After conversion, the paper records may be destroyed, as they would be redundant, and the information may be accessed from the records management system. It is important to note that microfilm records could be converted into paper again if necessary (Robek *et al.* 1996). Therefore, the intention is not to remove records from the records management system but rather to convert paper-based records to less space occupying and less costly media that would save almost 98% of the space that would normally be occupied by paper-based records (Robek *et al.* 1996).

Finally, the model shows that sustainability reports are published using information extracted from an efficient records management system. The model shows that verifiers can confirm the information published against recorded information in the records management system. The published sustainability report is also an input into the records management system. The input into the records management system is indicated by the loop of the arrow which goes back as an input to the system.

An alternative to this model would be established records management software such as TRIM (tower software). However, experience has taught the the use of TRIM software show that the software is very expensive. For instance Stabbins (2001: 86) indicated that TRIM tower software and workflow software cost between R 2 million and R 6 million. These costs render difficulties in justifying huge investments in information management. The previous section of this study demonstrated that corporate records management does not enjoy significant support in many companies in Africa at the strategic level. That is the case because the contribution of records management to competitive advantage is not easily identifiable in

the profit and loss statements of organisations. Furthermore, the payback period of such expensive records management software cannot be determined easily. Therefore, this study preferred in-house solutions such as the proposed model, notwithstanding the teething problems associated with such an approach.

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6 Implications of the study

The first contribution of this study is that in the proposed model, when the records outlive the retention schedules, records are not destroyed but rather converted to microfilm, which reduces the storage space and costs needed to maintain records in the system. The hybridization appraisal method is used for paper-based records as suggested in Ngulube (2001). In the proposed model, hybridization is also used as a link between computer-generated information and traditional records management processes using COM units. Therefore, in the COREMS model, records do not leave the system as is the case in the disposal practices espoused by the record life-cycle theory, but rather all the records are kept and the space occupied is minimized.

The second contribution of this study is the fact that in the proposed COREMS model the top management of private companies needs to make an input early on in the initial system, in terms of policies and procedures and establishment of a records committee. The involvement of top management from the beginning could facilitate the establishment of stringent policies and procedures to capture only necessary records and make the records management function visible, and recognized as contributing to the production of credible sustainability reports.

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7 Opportunities for future research

Validation is an essential step in model development. In that regard, there is a need to carry out further research to test the proposed model. To improve the understanding of the COREMS model, more research should be done to cover different parts of Tanzania and the rest of Africa. An alternative research approach should be used to investigate the attributes of the model in order to increase the understanding of the COREMS model. For example, a case study approach could investigate all the COREMS model attributes in one organization. That would facilitate the testing of the feasibility of the model. The possibility of extending the model to public organizations should be investigated if the tests prove to be positive. The economic feasibility or sensitivity analysis of the COREMS model and other existing options may also be researched in the African context. Lastly, studying the activities of small businesses and comparing their records management practices with large business would also be a worthwhile exercise.

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8 Conclusion

The primary objective of the study was to develop a model for a corporate records management system focusing on sustainability reporting. To achieve this, interviews and observations were carried out in nine exporting companies in the Iringa region of Tanzania. Through primary data, existing practices of records management were conceptualized. It is clear from the existing model that proper and verifiable sustainability reporting was not satisfactory. The proposed COREMS model caters for the shortcomings revealed by the existing practices and offers a verifiable sustainability reporting system.

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