PRESERVATION AND CONSERVATION OF RECORDS IN THE NATIONAL ARCHIVES AND NATIONAL MUSEUM, KADUNA

By

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A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTERS DEGREE IN RECORDS AND ARCHIVES MANAGEMENT

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE,

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NIGERIA

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DECLARATION

I declare that this thesis has been carried out by me. It has never been presented anywhere, either wholly or partially, for the purpose of the award of a higher degree. All the quotations and sources of information are, however, duly acknowledged by means of references

…… **……..……**

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CERTIFICATION

This Thesis entitled: “Preservation and Conservation of Records in National Archives and National Museum, Kaduna”, by Abdulfatah Abdulrahim meets the regulations governing the award of the Degree of Master of Records and Archives Management at Ahmadu Bello University, Zaria, and is approved for its contribution to knowledge and literary presentation.

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DIDECATION

This work is dedicated to my late Mother and Wife in respect of Hajiya Raliyat Bello and Jamila Abdulazeez. May Allah (SWT) let their soul rest in perfect peace (Ameen).

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ABSTRACT

This study is on the Preservation and Conservation of Records in National Archives and National Museum, Kaduna. The study formulated five research questions. A qualitative research methodology using the case study approach was adopted. An Interview guide, focus groups and observations were the instruments used to collect data. The target population of the study comprised the Management and preservation staff of the National Archives and National Museum, Kaduna. 22 respondents purposively sampled and data were collected, analyzed and interpreted descriptively, using tables. The findings showed that both the National Archives and the National Museum in Kaduna preserved records such as government documents, gazettes, Newspapers, historical documents, private collections, scholarly journals, photographs, maps, reports, atlases, documents attached to artifacts etc. However, most of these records both print and non-print were affected by dust and particulate matters, high temperature, air pollution, bad storage, overcrowdness, wear and tear due to excessive photocopying, oxidation and excessive light. Though the finding revealed that some measures were taken to curtail the deterioration, but this was not enough as some of the records continue to deteriorate. Also, direct observation revealed that the written preservation policy could not be reached as at the time of collecting data for the study. At the National Museum, it was discovered that the preservation policy mostly caters for their artifacts and therefore give little room for records preservation. The study therefore, concludes that the preservation and conservation activities in both the National Archives and the National Museum were not fully and appropriately carried out. In view of this a number of recommendations were made, some of which are: the use of air conditioning for 24 hours in the storage rooms and to ensure regular and frequent repairs, cleaning and dusting of the environments, Both institutions should fully engage in electronic preservation in order to meet up with the required standard of service in the 21st century and they should also exploit other sources of funding through advocacy, solicitation, endowment, consultancy, organizing seminars and workshops etc.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

According to Esse (2000), records are the means by which many operational processes and functions are performed. Records are synonymous with human activities and have existed for centuries. “Record” or “records” as defined by Southern Illinois University of Edwardsville Records Management Manual (2006) means all books, papers, maps, photographs, or other official documentary materials, regardless of physical form or characteristics, made, produced, executed or received by any agency in the state, pursuance of state law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its successor as evidence of the organization, function, policies, decisions, procedures, operations, or other activities of the state or the state government, or because of the informational data contained there in. Similarly, Ifedili and Agbaire (2011) defined records as any recorded information, regardless of form or medium received and maintained by an agency, institution or organization, or individual in pursuance of its legal obligations or in the transaction of business of any kind

Records therefore, include all recorded information created or received by an organization in the course of performing its business. Records often take the form of conventional documents on paper, but they may also be in microform, or on machine-readable media, such as computer tapes or disks, and they include photographs, sound recordings, motion pictures, and all other media on which information may be recorded or conveyed in the process of performing an organization's functions. The notion of a record carries with it more meaning than that of a document: a document is merely a means of recording information, whereas the notion of a record encompasses the roles the underlying document plays within an organization over time,

the relationship the participant in a society has to that record and the relationship between the record and other records.

Records play a vital role in the progress of mankind because they contain all the information vital to the daily operation of a business, organization, government, association, institutions and even persons. According to Millar (2012), records are created in the course of the functions and activities of organizations and the personal lives of individuals, and are preserved and maintained to support business and accountability and for cultural use. They provide evidence of, and information about, the actions of their creators and the environment in which those actions occurred. They extend and corroborate human and corporate memory and play a critical role in maintaining awareness of how the present is shaped by the past. Records are kept by almost everyone, but their management (and especially their medium-term and long-term management) is a professional discipline with its own distinctive body of knowledge.

Within governments, records are created and used on a daily basis to document actions, confirm decisions, identify rights and responsibilities, and communicate information. Without records, governments and businesses simply could not operate. Governments use records for such wide-ranging purposes as documenting the work of employees, confirming pensions, leave, and health benefits, confirming or reviewing policies and procedures, confirming citizens' rights, such as benefits, or land ownership providing information about past actions or decisions. While most records do not need to be kept permanently, small but significant portions have enduring value such as educational value, historical value, research value, fiscal value and so on. It is this portion of a government's records that are preserved within public archival institution. Individuals also create records from their daily activities and equally preserve them for future use because of their significant values to the individuals and society at large (IRMT 2000).

The US National Archives and Records Administration (NARA), as cited in Asogwa and Ifeanyi (2012), developed the concept of the records life cycle to model how their functions,

uses and responsibility for records change as records get old and move from the control of the creator to the physical custody of the archivists. The life cycle or the journey of records to archives passes through the following:

- The current/active stage: In the first phase of this model called primary use, the documents or records are newly produced or procured and are highly demanded by administrators, managers, and individuals;
- The semi- current/semi active stage: As records get old they gradually become less heavily referenced and finally become inactive. This is a stage when the frequency of their demand has reduced or died. At this stage of the model, record managers, and or archivists schedule how the records are arranged for systematic elimination or permanent retention or transfer to the archives.
- The non-current/inactive stages: a stage when they are no longer being demanded. At this period, these documents are appraised and if they are adjudged worthy of permanent preservation, they are transferred to the archives. When they enter the archives, they are physically and intellectually integrated to ensure preservation.

Preservation and Conservation of Records

The records with enduring values constitute a natural resource and are indispensable to the present generation as well as to the generations to come. Any loss to such materials is simply irreplaceable. Therefore, preserving this intellectual and cultural heritage becomes the proffessional responsibility of librarians, archivists and information scientists, who are in charge of these repositories. Besides, proper dissemination of library and archival materials is possible if the documents are in good and usable condition. Lewis (2000) opined that "without adequate protection, the records that contain important historical information will deteriorate beyond their usefulness. Consequently, consultation of these records by governments and citizens will not be possible and the information that is vital for the safe of any culture will not be available – it will

not be accessible. The primary function of any service charged with the management of information (including historical records) is to provide the means of access to that information

Preservation as defined by IFLA Principles for the Care and Handling of Library Material (2010) include "all the managerial and financial considerations including storage and accommodation provisions, staffing levels, policies, techniques, and methods involved in preserving library and archival materials and the information contained in them.". Preservation is a core function of any record office as it is central to a record office's role as guardians of archival heritage. Preservation helps to ensure that all stakeholders have an equal opportunity to see and enjoy unique and important records. According to Kathpalia (1973), the art of preservation is as old as human civilisation itself. In a way, it may be said to be derived from the instinct of self-preservation common to all animate beings. Although, in spite of all odds, the past must be kept alive, yet, it must be born in mind that the cycle of nature dictates that all things of organic matter will decay. Thus, the life expectancy of paper-based material heritage, the core of archives and libraries can only be increased. According to Blade (1980) as cited in Walker (2013), "the surest way to preserve your books in health is to treat them as you would your own children, who are sure to sicken if confined in an atmosphere which is impure, too hot, too cold, too damp or too dry."

According to Public Records Office of Northern Ireland (2006) preservation is a word commonly used by record offices, libraries and museums to describe the ways in which their collections are safeguarded and kept in good physical condition. This can be done through a variety of measures aimed both at minimising the risk of loss of records and slowing down, as much as possible, the processes of physical deterioration which affect most archival materials.

The term 'Conservation' has also been defined by IFLA Principles for the Care and Handling of Library Materials (2010) as "specific practices taken to slow down deterioration and prolong the life span of an object by direct intervening in its physical or chemical make-up. The composition of some of the media of storing information makes deterioration inevitable.

Deterioration may set in through the natural ageing process or as a result of other factors such as chemical composition of the media of information, biological agents, environmental factors, physical agents and improper handling. There is, therefore, the need to take certain conservation measures to slow down deterioration to avoid losing these information resources. Conservation involves taking protective measures to prevent decay and, consequently, the loss of information resources. It also includes taking preventive measures against agents of deterioration of books and other information resources

Preservation and conservation are two related concepts that are used interchangeably by people outside the library, archives and records profession. Though they have the same objectives to achieve, they are two related variables. Information resources cannot be conserved without making effort to preserve, and preservation cannot be done without learning how to conserve. According to Baker, as cited in Ovowoh and Iwhiwhu (2010), Preservation is the action taken to anticipate, prevent, stop, or slow deterioration. It can also be described as the art of anticipating and preventing decay, while conservation is direct physical intervention arresting or slowing down deterioration of information resources, preservation involves both the direct and indirect action. In preservation, consideration is given to every element that promotes the protection of the materials including the housing, storage system and security against such threats as theft, mutilation and poor handling. Preservation is, therefore, a more embracing concept and it includes conservation.

Asogwa and Ifeanyi (2012) opined that Preservation is a branch of Library and Information Science that is concerned with maintaining and restoring continued access to records and archives collections. It is the study, diagnosis, treatment and prevention of deterioration, decay and damage to those collections in cultural heritage institutions. Conservation on the other hand is the treatment and repair of individual items in the collection in order to slow their decay and damage and to restore them to a usable state.

Senapti and Nagta (1996) identify the need for preventive measures in conservation and preservation of library materials and records. These include proper housing of documents, protection against heat, humidity, light, air pollution, dust, insects, fungi, fire, water, and mishandling. They suggest inclusion of conservation and preservation in library education and training. Alegbeleye (1996) advocates a preventive conservation and preservation approach in African countries, which should focus on improving the environment, controlling light, temperature, humidity, and pollution. Nevertheless, the preservation and conservation are two inevitable variables that work harmoniously in ensuring the continuous existence of records, regardless of their format or characteristics.

National Archives and Museums

Archives is a body of non-current permanently valuable records, it applies also to their place of deposit or a building dedicated to their care and use, and to the organization or agency responsible for administering them. The term 'archives' can also be used more widely to refer to collections of historical materials maintained by organizations, individuals, families or community groups, or to the locations where such materials are held (Millar, 2012).

Originally, archival and library resources were preserved in the same place. The distinction between repositories holding of archives and library resources dates from the fifteenth century and the development of printing. The creation as an administrative technique of separate archival agencies, first for the records of a particular government department or office and then as general repositories for the records of the central government of the emerging nation states of Western Europe, dates from this same period.

According to Encyclopedia of Library & Information Science (1968) the concept of archives as a national public service agency however, did not reach its full development until the French revolution. The recognition of the importance of records to organized society was one of the important gains of the revolution and resulted in three major contributions to the

development of archives administration. (1) The establishment in France of an independent national system of archival administration in 1789. (2) Proclamation of the principles of public access to records and (3) recognition of the responsibility of the state for the care of the valuable cultural resources represented by its records.

It is further submitted that during the past two centuries almost every country has made some provision for a system of national archival services, adopted to its particular governmental structure and today it is an established maxim that in every civilized state there should exist a system of archives administration corresponding to the native of the state.

According to Gbaje (2011), records acquired and preserved by the National Archive include federal government gazettes, proceedings and laws promulgated by the National Assembly, reports of various administrative and judicial commission of enquires, Federal Executive Council conclusions, Non-current records from federal ministries, publications from ministries, departments and agencies, photographs of some public officers.

A Museum is an institution that conserves collection of artifacts and other objects of scientific, artistic, cultural, or historical importance and makes them available for public viewing through exhibits that may be permanent or temporary. The International Council of Museum (ICOM), as cited in Okpoko (2006), had recognized museum as any permanent institution which conserves and displays for purposes of study, education and enjoyment collection of objects of cultural or scientific significant.

Museum also houses some valuable records attached to the artifacts and even library to support the users of museum. To support this point, Wythe (1998) noted that some permanent or archival records are also permanently active and may well never physically reside in the archives. When a work of art is accepted into the permanent collection, a body of records is created, which these records will be consulted, revised, and added to as long as the object

remains in the collection. According to wythe, documents in the permanent record of a museum object may include donor agreements, accession forms, trustee approvals, cataloguing data, releases and receipts, conservation reports, letters from the artist, donor or vendor, research, exhibition and publication history, and installation data etc. Similarly, Van der (1995) posited that in museums, records may be collected along with paintings, sculpture, textiles and other artifacts. Records can be important to curators and exhibit designers not only for their high aesthetic or market value, but also for their research value in illuminating history.

Based on the literature consulted by this researcher; there are different opinions of what lead to the establishment of Museum. But Hole et al as cited in Okpoko (2006) is of the view that Museum had its origin from the period 555 – 538 BC during the reign of Nabonidus, the last king of Babylon, father of Belshzzar. During the second century B.C. the Greeks colonized different parts of the Mediterranean region. It was at this period that Ptolemy Soter established what was known as 'Museum', based on Greek model, at Alexandria in Egypt in about 300 B.C. The Museum building, according to Bazin as cited in Okpoko (2006) was a repository of cultural artifacts and natural specimens. It served as a citadel of learning and was dedicated to the nine daughters of Zeus (the muses). The centre was called museiom from which the English word museum derived.

The first "public" museums were often accessible only by the middle and upper classes. It could be difficult to gain entrance. When the British Museum opened to the public in 1759, it was a concern that large crowds could damage the artifacts. Prospective visitors to the British Museum had to apply in writing for admission, and small groups were allowed into the galleries each day. American museums eventually joined European museums as the world's leading centers for the production of new knowledge in their fields of interest. A period of intense museum building, in both an intellectual and physical sense was realized in the late 19th and early 20th centuries (this is often called "The Museum Period" or "The Museum Age").

National Archives and Museum in Nigeria

The National archives came into being as a need to preserve cultural heritage. Abioye (2009) submitted that the National Archives of Nigeria came into being in Ibadan as the Nigerian Records Office due to the untiring efforts of Kenneth Onwuka Dike who showed much concern about the state of public records in Nigeria. The National Archives of Nigeria, was established on the 14th Novenber, 1957 as a result of the passage of the Public Archives Ordinance No 43. The Act empowered the National Archives to preserve public archives and establish as many branches as might be deemed necessary and convenient. The 1957 Archives Ordinance has since been repealed by the promulgation of the National Archives Decree No. 30 of July 8th 1992. The new Decree requires that the National Archives preserve under adequate security conditions, all original constitutional instruments, treaties, laws, decrees and other legal enactments of the Federal Government. The policy thrust as enshrined in the Act of 1992, entrusts the National Archives of Nigeria with the permanent custody, care and control of all archives of the Federal Government and of such other archives and historical records as may be required, from time to time pursuant to the Act. As the apex archival institution in Nigeria, the Act further provides for the management and preservation of public records, records of individuals, private bodies and companies. The National Archives of Nigeria has three main branches and several minor branches. The three main branches are The National Archives, Ibadan, (NAI) The National Archives, Kaduna, (NAK) and The National Archives, Enugu(NAE). The minor branches are found in Lagos, Sokoto, Akure, Abeokuta, Benin, Calaber, Jos, Ilorin, Maiduguri, Owerri and Port Harcourt.

The Kaduna branch was established in 1962 along with the Enugu and Lagos branches. The archives cover Northern Nigeria, including not only the area north of the Niger and Benue rivers but also the present-day states of Kwara, Kogi and Benue. The Kaduna branch of the Nigerian National Archives has a large, comprehensive and unique collection of official papers of the British colonial and Nigerian independence periods; papers of native and local authorities;

and newspapers, magazines, and other publications, as well as Arabic manuscripts. The bureaucratic records do stretch well into the 1960s and 1970s, unlike the Ibadan archives which stops in the late 1950s. The library of the archives also contains annual reports, blue books of statistics, government gazettes, and the laws of Nigeria. There are several reference books available in the search room on the Kaduna Secretariat Record Group at the Archives.

The Nigerian National Museum came into being after the discovery of Nok Head artefacts during tin mining, on 28 July, 1943. Kenneth Murray became the Nigeria's first Surveyor of Antiquities in the newly created Nigeria Antiquities Service (which became the Nigerian National Commission for Museums and Monuments in 1979). During his tenure as the Director of the Department of Antiquities of the colonial administration, he founded the Nigerian Museum in Lagos in 1957. He was succeeded as Director by Bernard Fagg. The Museum has a notable collection of Nigerian arts, including pieces of statuary and carvings and archaeological and ethnographic exhibits. Other branches were later founded in Benin City, Oron Museum, Jos Museum, Esię Museum, Kaduna Museum, Owo Museum, Gidan Makama Museum, Kano, Kanta Museum, Argungu, Uli Beier Museum, Centre for Black and African Art and Civilization, Lagos.

The Kaduna Museum was opened in 1975 following the donation of the old Northern People's Congress (NPC) building by the North Central State Government. The Kaduna Museum contains a substantial collection of archaeological, ethnolographic and crafts exhibits and has a live crafts centre in which traditional craftsmen and women can be observed making crafts

1.2 Statement of the Problem

Archives and museums hold collections in a variety of media, presenting a vast body of knowledge accumulated over institutions' history, with the mission of making their collections accessible to intended users. This is why Sekler (2001) rightly observed that

"*Tangible cultural heritage has the great advantage over its intangible counterpart, such that with proper care it will remain authentic over centuries. As long as historic monuments remain without falsification and misleading imitations, they will, even in a neglected state, create a sense of continuity that is an essential part of cultural identity".*

Records, objects and artifacts collections are the major cultural heritage housed by both Archives and Museums. Therefore, Archives and Museums have over time significantly contributed in preserving the intellectual heritage of societies. While archives deal with records in various forms, Museums keep artifacts and other objects. Museums also houses valuable records that go to explain about the artifacts and objects being kept in the Museum. To support this view, Van der (1995) posited that in Museums, records may be collected along with paintings, sculpture, textiles and other artifacts. Records are important to curators and exhibit designers not only for their high aesthetic or market value, but also for their research value in illuminating history.

Archives and Museums have a lot in common. Apart from the fact that they both preserved social, intellectual and cultural heritage, they also deal with records in form of documents, files, books, photographs etc. Preservation is also very common to both. While records are preserved in Archives; in Museum both records and artifacts are preserved. According to Varlamoff (2005) among the essential missions of Archives and Museums, two are complementary: preservation and access. Preserving for the sake of preserving is useless and giving access lavishly to all information resources without taking into account preservation measures will sooner or later, lead towards making the documentary heritage inaccessible for

future generations. Supporting this view, Osayuwa-Odigie and Eneh (2011) submitted that preservation and conservation involved a rigorous respect for the integrity of the information resources and on appreciation of its role as an object of cultural heritage. They note that it was a commitment to prolonging the life of the information resources through preventive action and through the use of stale materials and appropriate techniques of treatment. Therefore, for National Archives and Museums to ensure it continuity and effective delivery of services, there must be a well-structured preservation and conservation programmes.

With the creation of the National Archives and National Museum in Nigeria, the Nigerian government demonstrated its willingness to preserve and promote its' national heritage. Following this, various records, artifacts and objects have been collected, organized, managed and preserved. However, preliminary observations carried out by this researcher in the National Archives and National Museum revealed that most of their records are deteriorating without adequate maintenance, the atmospheric condition is not friendly to their records, inadequate equipment for the preservation and conservation activities, in the case of Museum, there is no much concentration to the preservation of their records compared to their artifacts.

More so, in spite of the awareness and technological advancement in the field of preservation and conservation, there seems to be records deteriorating in the National Archives and. Museum Kaduna. This observation therefore, suggests that the significant proportions of their information resources/records are in poor physical conditions. Could this be attributed to inappropriate preservation and conservation activities in the centres? Could this be attributed to lack of funds to carry out preservation and conservation activities in the centres? Could this also be attributed to lack of preservation policy and techniques in the centres?

Therefore, attempt to provide answers to the above questions will no doubt reveal those factors that are responsible for the poor physical conditions of records in the National Archives and Museum Kaduna

1.3 Research Questions

In carrying out this study, the researcher intends to answer the following questions:

1. What types of records are available in the National archives and National Museum Kaduna?

2. What policies guide the preservation and conservation of the records in the National Archives and National Museum, Kaduna?

3. What types of deterioration affect records in the National Archives and National Museum Kaduna?

4. What are the methods used in preservation and conservation of records in the National Archives and National Museum Kaduna?

5. What are the sources of funds to carry out preservation and conservation activities in the National Archives and National Museum Kaduna?

1.4 Objective of the study

The specific objectives are to:

1. Find out the types of records available in the National Archives and National Museum Kaduna.

2. To find out the policies that guide preservation and conservation of records in the National Archives and National Museum, Kaduna

3. To find out the types of deterioration affecting records in the National Archives and National Museum, Kaduna

4. To investigate the strategies used in preservation and conservation of records in the National Archives and National Museum Kaduna

5. To determine the sources of funds for preservation and conservation activities in the National Archives and National Museum, Kaduna.

1.5 Significance of the Study

The essence of preservation and conservation is to facilitate access and ensure continuous existence of records. However, this will only be possible if relevant stakeholders understand and appreciate the benefits of preservation and conservation and the potential dangers of ignoring it. The outcome of this study would enhance preservation and conservation performance in the National Archives and Museum by developing an appropriate policy, methods and techniques as well as enlightening archivists/ curators and other stakeholders on the importance of preserving and conserving their records in the most suitable way. It would also enable Archivists and Curators to make quick decisions on what to preserve immediately to reduce further deterioration and what can be postponed for future generations.

The expected benefit of preservation and conservation is the awareness of the need to adequately reduce the rate of deterioration of valuable information resources of the archives and museum, thus making the materials available for future use. Similarly, the study would be of significant value to researchers and scholars in related field of study because it would contribute to the body of knowledge in Nigeria and the world at large.

1.6 Scope of the Study

The study covers two national institutions that have within their mandate the need to collect, preserve and provide access to their collections. The national institutions to be studied are: National archives and National Museum both located in Kaduna. The study is centred on the preservation and conservation of records in National Archives and National Museum Kaduna.

1.7 Operational Definition of Terms

The following terms are defined operationally to ease understanding and usage in the context of this work.

Archives: is a body of non-current permanently valuable records, it applies also to their place of deposit or a building dedicated to their care and use, and to the organization or agency responsible for administering them.

Conservation: conservation is the direct application of appropriate techniques and treatment to already deteriorated information resources/records.

Museum: is an institution that conserves collection of artifacts and other objects of scientific, artistic, cultural, or historical importance and makes them available for public viewing through exhibits that may be permanent or temporary

Preservation: Preservation is the means by which information resources/records (right from their creation, up to their disposition) are protected from all forms of deterioration, mutilation and lost, for the use of present and future generations.

Records: for the purpose of this study, records is used to include, apart from documents, photographs, letters etc, also artifacts and objects.

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CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter examines and review the literature related to the study. To achieve this successfully, literature related to the study would be reviewed under the following sub-headings:

2.2 The Concept of Records

2.3 Concept of Preservation and Conservation of Records

2.4 Preservation and Conservation Policy

2.5 Causes of Deterioration of Records in National Information Centres

2.6 Techniques of Records Preservation and Conservation

2.7 Records Management in National Information Centres

2.8 Summary of the Review

2.2 The Concept of Records

The term record is defined differently by various scholars and agencies. This is why International Records Management Trust (2000) submitted that there is sometimes a lack of clarity about what is meant by 'records' especially in relation to the more general term 'information'. While Reitz (2004) define record as an account of something, put down in writing, usually as a means of documenting facts for legal or historical purposes, IRMT spelt out that records include all the documents that institutions create or receive in the course of administrative and executive transactions. While all records convey information, not all sources of information are necessarily records. For example, a published book or an externally provided database (on- or offline) will not be a record, although information selected from it and reused in a new context may itself become a record. Association of Records Managers and Administrators (ARMA 2010) simply defined records as the evidence of what the organization does, which capture its business

activities and transactions, such as contract negotiations, business correspondence, personnel files, and financial statements.

However, a more precise and comprehensive definition of records is the one given by Millar (1999) who defined it as a document regardless of form or medium created, received, maintained and used by an organisation (public or private) or an individual in pursuance of legal obligations or in the transaction of business, of which it forms a part or provides evidence.

A more robust definition of records was provided by the Society for American Archivists (SSA; 2010). The definition tried to capture all the elements mentioned in other definitions by providing seven elements:

1. A written or printed work of a legal or official nature that may be used as evidence or proof; a document.
2. Data or information that has been fixed on some medium; that has content, context, and structure; and that is used as an extension of human memory or to demonstrate accountability.
3. Data or information in a fixed form that is created or received in the course of individual or institutional activity and set aside (preserved) as evidence of that activity for future reference.
4. An instrument filed for public notice (constructive notice); see recordation.
5. Audio · A phonograph record.
6. Computing; a collection of related data elements treated as a unit, such as the fields in a row in a database table.
7. Description; An entry describing a work in a catalog; a catalog record.

Discussing the role and functions of records, Wamukoya (2000) revealed that the need for records and the role of record keeping operates in three distinct domains; The Business domain consists of records needed to conduct business and to support further service delivery. While the accountability domain consist of both internal (such as reporting relationships) and external (to regulators, customers, shareholders and the law), records show that whether the organisation or

individuals in it have met defined legal, organisational, social or moral obligations in specific cases. In all accountability forums, records are consulted as proof of activity by senior managers, auditors, etc. The last of the domain is cultural domain which demands that records are preserved and made available to society for posterity and for historical research. The cultural domain provides the basis for writing a country's cultural and national history. This is when records are used for any purpose beyond the support of the business activity which created them or for accountability for that business activity. Records may be regarded as becoming part of the resources available to society to account for its collective behaviour. Records function as the memory of individuals, organisations and society.

Sharing the above view, Thomassen (2002) & NARS (2004) distinctively divide the role and functions of records into primary and secondary. A distinction is made between the primary and secondary functions of records. The primary functions of records are the functions that the creator had in mind when creating them and in particular the evidential functions. The primary or administrative value is the current value that records have for the office from which they originated. In their primary function records play an active role: they document and regulate social relations and are used for administrative and accounting purposes. The secondary function of records is the function which the creator generally does not have in mind and which records only acquire once they have fulfilled their primary functions: the cultural-historical function or the function of source for historical research.

Following the above discussions, it may be appropriate to indicate that records exist in order to remind organisations of their previous activities. It can therefore be submitted that records have administrative, legal, financial value, education value, research value etc.

2.3 Concept of Preservation and Conservation

Preservation and conservation are sometime confused to be synonymous According to steward as cited in Osayuwa-Odigie and Eneh (2011) although the precise definitions of the two concept (Preservation and Conservation) are endlessly arguable, both preservation and conservation involved a rigorous respect for the integrity of the information resources and on appreciation of its role as an object of cultural heritage. They further note that it was a commitment to prolonging the life of the information resources through preventive action and through the use of stale materials and appropriate techniques of treatment.

In line with the above view, Walker (2013) see the two concept differently, he defined Preservation As 'all managerial, technical and financial considerations applied to retard deterioration and extend the useful life of (collection) materials to ensure their continued availability, while Conservation is the treatment of information resources by interventive procedures. It should be seen as one option in a programme of collection care.

Similarly, Baker as cited in Ovowoh and Iwhiwhu (2010) opined that Preservation is the action taken to anticipate, prevent, stop, or slow deterioration. It can also be described as the art of anticipating and preventing decay. According to smith as cited in Osayuwa-Odigie and Eneh (2011) sees preservation to involves all activities that serve to prolong the life of information resources in a library's collection, while Roberts and Etherington as cited in Ngulube (2003) see conservation as a field of knowledge concerned with the coordination and planning for the practical application of the techniques of binding, restoration, paper chemistry, and other material technology, as well as other knowledge pertinent to the preservation of information resources. Conservation in other words deals with all the activities that involve physical treatment of individual item by professional conservator or conservation technicians.

Asogwa and Ifeanyi (2012) posited that preservation is a branch of library and information science that is concerned with maintaining and restoring continued access to records and archives collections. It is the study, diagnosis, treatment and prevention of deterioration, decay and damage to those collections in cultural heritage institutions. Conservation on the other hand is the treatment and repair of individual items in the collection in order to slow their decay and damage and to restore them to a usable state.

A more precise and comprehensive definition of preservation is the one given by IFLA Principles for the Care and Handling of Library Material (2010) to include "all the managerial and financial considerations including storage and accommodation provisions, staffing levels, policies, techniques, and methods involved in preserving library and archival material and the information contained in them.". While conservation is specific practices taken to slow down deterioration and prolong the life span of an object by direct intervening in its physical or chemical make-up. Preservation involves both the direct and indirect action. In preservation consideration is given to every element that promotes the protection of the materials including the housing, storage system and security against such threats as theft, mutilation and poor handling. Preservation is, therefore, a more embracing concept and it includes conservation.

From the foregoing discussions, it can be deduced that Preservation and conservation are two related concepts that are often used interchangeably, though they have the same objectives to achieve, Information resources cannot be conserve without making effort to preserve, and preservation cannot be done without learning how to conserve. Thus, Preservation is the means by which information resources/records (right from their creation, up to their disposition) are protected from all forms of deterioration, mutilation and lost, for the use of present and future generations, While conservation is the direct application of appropriate techniques and treatment to already deteriorated information resources/records.

However, Varlamoff (2005) postulated that the aims of preservation and conservation are to increase the longevity of active materials through careful storage and use. He further argued that among the essential missions of Archives and Museums, two are complementary: preservation and access. Preserving for the sake of preserving is useless and giving access lavishly to all documents without taking into account preservation measures will, sooner or later, lead towards making the documentary heritage inaccessible for future generations Similarly, IFLA-PAC China Centre as cited in Olatokun (2008) puts it: the core activity of preservation and conservation is to ensure that significant library and archive materials, published and unpublished, in all formats, will be preserved in accessible form for as long as possible.

Thus, preservation and conservation are core function of any record office. It is central to a record office's role as guardians of archival heritage. Preservation and conservation helps to ensure that all of us have an equal opportunity to see and enjoy unique and important records.

2.4 Preservation and Conservation Policy

Based on the literatures consulted, preservation and conservation policy varies from one institution to another depending on the nature of their collections and nature of their institutions, as well as their goals. According to City of Westminster Archives Centre (2009) preservation and conservation policy sets out appropriate practice for the care and management of the collection and guidance for the preparation of master plans and detailed management plans. Similarly, Gbaje (2011) submitted that preservation policy should explain how preservation can serve the major needs of an institution and state some principles and rules on specific aspects which then laid the basis of implementation.

Gray (2009) is of the view that any institutional policy should be directly connected to the aims and goals of the institution and the preservation policy is no exception. Clearly establishing the benefits of a preservation strategy at an early stage will allow these benefits to be measured

and will spell out the need for organisational commitment in preservation measures. It further posited that it is important that a preservation policy is implemented as soon as possible. It is best practice to have a preservation strategy in place even before any material is preserved, so that everything can be captured to standards spelled out in the policy.

Similarly, Public Record Office of Northern Ireland (2007) submitted that the formulation of a preservation policy for information centres is therefore an essential step in fulfilling all their responsibilities and gives them the direction it requires to initiate measures which are necessary for the protection of its information resources. The policy also enables staff to meet, or extend, nationally and internationally agreed standards for the preservation of archival materials. Sharing this view, Forde as cited in Ngulube (2005) described preservation policies for cultural materials as indispensable tools for organisations that are committed to facilitating the survival of materials in their custody. Policies are important because they set out goals to be achieved as well as guidelines for implementing them. While Feather & Eden (1997).On the other hand, codified and stipulated or prescriptive policies facilitate a creative allocation of funds and staff, and specify other aspects of implementation and monitoring.

However, Wamukoya & Mutula (2005) stated that most African countries do not have a national information policy which makes the formulation of preservation and conservation policies in the libraries and information centers out of the question.

Although the existence of preservation policies does not guarantee their implementation, so without funding and personnel with expertise, the implementation of preservation policies would be extremely difficult, but all the same efforts must be made to formulate policies that encompass all activities that are fundamental to the preservation of documentary materials into the future.

Based on the above views, most of the literatures reviewed did not specifically define the concept of preservation and conservation policy. Thus, Preservation and conservation policy can

be seen as all those processes aimed at ensuring the continuity of heritage materials for as long as they are needed.

In terms of preservation and conservation guidelines and standards, Rene (2001) submitted that Preventative measures for information resources/records are generally consistent with the accepted guidelines for a professional preservation policy. Such a policy should include:

• Measures to minimise the rate of deterioration;

• Housekeeping routines to clean, protect and extend the life of information resources;

• Staff and user training programmes to promote and encourage correct handling and transport of information resources;

• Security measures and contingency plans for disaster control and recovery;

• Protective measures, such as boxing, binding, and wrapping, to reduce wear and tear on information resources;

• A substitution programme for replacing valuable or very brittle originals with surrogates such as microforms etc.

• Conservation treatments to repair damaged originals;

• Disposal programmes for information resources of no further use;

• Procedures for reproducing originals;

• Procedures for the exhibition of information resources within the institution or while on loan to another organisation.

Sound preservation and conservation programmes are multifaceted. Chapman as cited Ovowoh and Iwhiwhu (2010) has outlined, the starting point of conservation programmes which

is the creation of a policy document specifying, among other things: Preventive measure to minimize deterioration in storage and handling, Staff and user training programmes, housekeeping routines to clean, protect, and extend the life of materials, Security measure and contingency plan for disaster control and recovery, Substitution programmes, Conservation treatment for repair of damaged originals, Procedures for exhibitions and loans.

Chapman further posited that it is doubtful that many Nigerian information centres have such policy documents. Sharing the same view, City of Westminster Archives Centre (2009) noted that Conservation-Preservation Projects to be carried out in-house or by external conservators should be based on the following principles: All materials must be of archival standards, all repairs must be reversible, all repairs should respect the integrity of the original object, no repairs should conceal documentary evidence, No repairs should attempt to restore missing information, and no repairs should attempt to restore to an original condition

But generally preservation and conservation programs appeared to be the same all over the world. Supporting this view, Osayuwa-odigie and Eneh (2011) posited that basically, the principle of preservation and conservation are the same all over the world and apply to all type of information centres. It is the practical approach to the problem that varies according to environmental factors. Thus, the principles of conservation should adhere to the following: Conservation must not diminish, falsify or obscure the original document or the information within it, Conservation must not damage or weaken the original document, Conservation must be sympathetic to, and compatible with the original document, The nature and extent of all applied conservation treatment must be evident and not treated as restoration, All conservation should be the minimum required to stabilize the document and reversible without further damage to the document.

2.5 Causes and Types of Deterioration Experienced in National Information Centres

Causes and types of deterioration experienced in National Information centres have been discussed extensively in many literatures. Walker (2013) observed that deterioration due to natural ageing will continue but can be considerably diminished by minimising the effects of external causes of deterioration. Each can be tackled separately, but they do interact: for example, incorrect temperature and relative humidity can increase the risk of pest infestation, and poor storage may increase the risk of fire and flood damage. Similarly, City of Westminster Archives Centre (2009) noted that all printed information resources tend to natural deterioration over time. But they can also further deteriorate or be destroyed by several inter-related factors, such as unstable environmental conditions, acidity, light, pollution, biological enemies, poor handling and storage, theft, fire and flood.

This discussion is in conformity with Popoola (2003) which stated that information resources are bound to deteriorate or breakdown with time through the aging process, and to replace them may be difficult and expensive if not practically impossible. The modern day libraries and information centres are faced with the problem of deterioration of information resources in their holdings. Their information resources have deteriorated to the extent of losing their intellectual contents. It must be noted that thousands of volumes of information materials in most African academic libraries and information centres are either in state of brittleness or disrepair because of preservation problem. In addition to this, National Library of Australia (2004) submitted that one of the major crises facing libraries and information centres throughout the world is the rate of deterioration of their collections. Since information resources are composed primarily of organic materials, they are subject to natural deterioration. Most information centres' collections today are based on paper – either in book or sheet form - bound volumes, newspapers, serials, manuscripts, maps, water colours, prints and drawings.

In terms of causes and types of deterioration experienced in National Information centre. Walker (2013) discovered that the external causes of deterioration of collections include: poor handling or storage, theft or vandalism, fire and flood, pests, pollution, light, incorrect temperature and relative humidity(RH).The different types of deterioration of the paper based information resources are reflected in wear and tear, shrinkage, cracks, brittleness, warping, bio infestation, discoloration, abrasion, hole, dust and dirt accumulation etc

In lines with the above view, Mahapatra and Chatevabarti as cited in Ogunbode and ejibuke (2013) postulated that the following physical and chemical situations are responsible for deterioration of information resources, either by one or more.

1. Natural aging of paper since the major constituents are of organic nature. Such inevitable deterioration can be minimized to a large extent by proper housekeeping.
2. In the manufacturing of paper sometimes fibres are used with low cellulose content or sometimes non-cellulose materials of the lignin type are used by which paper becomes degenerated very easily.
3. Mineral and chemical compounds used as basic constituents of paper affect the durability of paper.
4. Impurities in the ingredients used as basic constituents of paper cause inevitable deterioration.
5. Presence of acidic sizing materials such as, alum, rosin, etc, causes the acidic effect.
6. Oxidizing agents present in the constituents of paper make the paper weak, discoloured and disintegrated. Presence of metal accelerates oxidation.
7. Alkalis used in the manufacture of paper affect it if used in a higher quality. Fungi grow very easily on such paper.
8. Heat and exposure to light make the paper brittle and fade in colour.
9. Dust particles make the paper discoloured, invite chemical impurities and accelerate biological growth.

10. Acidic impurities present in the atmosphere make the paper discoloured and degenerated.

11. Sulphuric acid is formed from Sulphur dioxide present in the air.

12. Moisture and humidity by which not only the tissues of paper are disintegrated but also conditions are created for biological attack.

13. Films are very sensitive to excessive heat, dryness, humidity and moisture.

14. Chemicals present in audio-visual materials can cause deterioration under adverse environmental condition.

However, Roper (1989) and Sahoo (2014) have grouped the above causes of deterioration into the following causes: Environmental (climatic factors) factors like light, heat, humidity and moisture, dust and dirt, water. Biological factors: - Microorganisms, insects and rodents. Chemical factors, Human factors and Disasters

2.6 Measures and Techniques of Records Preservation and Conservation

There are different views by different scholars on the measures and techniques of preservation of information resources. Senapti and Nagta (1996) identified the need for preventive measures in conservation and preservation of records/information resources which include proper housing of documents, protection against heat, humidity, light, air pollution, dust, insects, fungi, fire, water, and mishandling. Alegbeleye (1996) advocates a preventive conservation and preservation approach in African countries, which should focus on improving the environment, controlling light, temperature, humidity, and pollution. Kroon (1997) is of the view that "all information centres need to preserve and conserve their collections against deterioration from a variety of sources including chemical and biological threat, as well as physical damage through handling. And information centres should prepare a disaster plan for dealing with emergencies and ensure that all materials treated are fully documented.

According to Sahoo (2014) there are two aspect of preserving information resources: preventive measures and curative measures. The preventive measures which include all forms of indirect actions aimed at increasing the life expectancy of undamaged or damaged elements of

cultural property. It comprises all the methods of good house-keeping, caretaking, dusting, periodical supervision and prevention of any possibility of damage by physical, chemical, biological and other factors. The Curative measures consist of all forms of direct actions aimed at increasing the life expectancy of undamaged or damaged elements of cultural property. It includes repairing, mending, fumigation, deacidification, lamination, and other jobs which are required considering the physical condition of the individual document.

However, the techniques of records preservation and conservation have been reviewed differently in many literatures, here; the researcher is going to review related literatures on the techniques of records preservation and conservation, using the general factors of deterioration of records as postulated by Roper (1989), and Sahoo (2014).

Techniques for environmental factors:

Sahoo (2014) posited that Control of environmental factors partially begins from selection of site, the planning and the construction of the library and archival building and also the soil on which it will be constructed because these elements have greater impact over the environmental control inside the building. It is very important to choose the best architectural design for the information centre having cross ventilation facilities for free air circulation within the building. Similarly, Lewis (2000) is also of the view that the building must be situated in an area that is identified as secure - i.e. not close to any military installations or the petro-chemical industry. It must be situated well away from sources of water, especially rivers and lakes. All vegetation in close proximity must be removed and a clear perimeter area established around the building. It is always better to construct the building away from traffic to avoid dust and dirt. Provision of adequate number of electric fans and few exhaust fans will facilitate air circulation inside the information centres.

Regarding light, Sahoo (2014) submitted that Sunlight should be prevented from falling directly on information resources because the sun is a great emitter of ultraviolet rays. The windows must be provided with colour curtains, which will prevent falling of direct light as well as absorb ultraviolet rays. Lemon yellow or green coloured glass panes should be fitted in window panes as these are more effective in blocking ultraviolet rays. The UV rays of fluorescent tubes should be filtered by covering the tubes.

In the case of temperatures and humidity, Ogunbode and ebijuwa (2013) discovered that much research has been done on finding out the ideal condition of humidity and temperature for the storage of information resources. Gallo, an Italian chemist suggested that the ideal humidity between 40% and 65%, and the temperature between 180C and 200C are good for conservation of information resources.

It is very difficult to control atmospheric conditions which are constantly fluctuating. The control of temperature and humidity inside the room implies their constant measurement. That is why Arizona (2010); Sunil and Kumar (2009); Mahapatra and Chalkrabarti (2003); and Olatokun (2008) suggested the use of air condition in storage area. The use of thermometer and barometer are necessary to check temperature and relative humidity level in the storage area.

Regarding dust and dirt, Sahoo (2014), further posited that Floors can be cleaned by wet dusters. As accumulation of dust and dirt accelerate the physical damage of information resources, a cleaning schedule should be made considering the sequence of operations following daily and weekly routines. The best way is to use a vacuum cleaner because it sucks the dust and cannot resettle on the surfaces.

Techniques for Biological Factors:

Since stagnant air, dampness, dark and dingy places in an information centres facilitate the growth of biological pests, good housekeeping and maintenance of optimum storage condition is

necessary to control the propagation of the insects. Provisions of cross windows, ventilators, exhaust fans(Sahoo 2014). Rene (2001) postulated that the most successful form of rat control is to build them out, also called rat proofing. Other control tactics include trapping and poisons. When using rodenticide baits and tracking powders, care must be taken to avoid risks to people, children, pets, and non-target animals.

Similarly, Roper (1989) opined that where an infestation of fungi, micro-organisms, insects or vermin is discovered, immediate steps should be taken to treat the affected documents by cleaning, disinfestation, etc. to clean and disinfect the area (aerosol sprays should not be used - they will spread the infestation) and to eradicate the cause of the infestation, e.g. improving the environment (i.e. lowering the temperature and relative humidity), repairing broken windows or damaged screens. Food and drink should never be brought into storage areas (or, ideally, into the archive). Documents should not be replaced in the area until the source of the infestation has been eliminated. According to Lewis (2000) Pesticides and fumigation chemicals do not prevent damage occurring to information resources as applications are made in response to an observed outbreak of mould or pest damage. The chemicals used can pose health hazards to staff and damage to paper-based collections. Furthermore, unless the cause of the problem is ascertained it is likely to reoccur. Newer extermination methods such as controlled freezing and oxygen deprivation are effective alternatives to chemical application but they do not prevent the outbreak occurring. Monitoring for pests and mould is the most effective way to prevent damage to paper-based collections.

Techniques for Chemical Factors:

Roper and Millar (1999) posited that most paper containing acids which eventually lead to its disintegration; alkaline baths or sprays will neutralize the acids and substantially prolong the life of the paper. Roper and Millar further submitted that the information resources/ records that are highly acidic can also be separated from the ones that are not acidic in nature, boxes can be

used. PH indicator stick or indicator paper can be used to discover those information resources that are highly acidic and those that are moderate. Sharing this view, Ogunbode and Ebijuwa (2013) submitted that some standards should be followed while using chemicals for preservation. Examination of the object thoroughly and the isolation of deterioration factors must be the starting point. Only standard materials must be used. The methods and materials used should not damage the original condition of documents.

Sahoo (2014) discovered that if the air pollution is controlled there will not be any external acidity in the paper materials. One of the best ways of controlling atmospheric pollutants is filtering of the air intake in to storage areas, which can be attained by air conditioning system operating for 24 hours throughout the year. Without this facility simple measures like wrapping the books and manuscripts in cloth or placing them in containers reduces the effects of pollution to a great extent. The books kept inside cupboards are better protected than those which are kept outside. Documents kept inside folders are safer than those which are kept in the open.

Techniques for Human Factors:

Regarding handling of information resources, Lewis (2000) submitted that 'An early target must be to ensure that all staff are aware of the importance and responsibility of handling. It is crucial that high standards are maintained in the public areas, where trained staff must ensure that users are aware of their responsibility when handling original material. Strong standards of supervision must be maintained, and it is recommended that pencils only be used for note taking. The expected standards of behaviour must be published and available to users – no smoking, eating or drinking, etc.

However, Sahoo (2014) summarize the do's and don'ts which the staff and the users should follow to increase the longevity of the records/information resources. These are among others:

- Important information resources should be kept in specially prepared containers.

- For carrying a large number of information resources trolleys should be used. Utmost care should be taken while transporting rare, valuable and delicate information resources
- Care should be taken while photocopying the books or records as at that time considerable stress is imposed on the material and the bindings suffer most and also the spine damages.
- Information resources should not be shelved too tightly or too loosely.
- It must be always ensured while opening the books and manuscripts, pages are not torn or covers are not damaged.
- Pages should never be folded otherwise creases will be formed and they may be torn at the folds. Corner of pages should not be folded to mark pages.
- Avoid licking of fingers as an aid to turn pages.
- Information resources should not be left open on the reading table, face downwards..
- When a book is displayed open, never use metal clips or pins to hold book pages open.

Techniques for Mitigating Disasters:

According to Sahoo (2014) disasters are generally unexpected events with destructive consequences to a collection. Therefore it is vital for any information centres to take every possible precaution to prevent the occurrence of an unavoidable disaster. A disaster planning is an essential element of preventive conservation. Asogwa & Ifeanyi (2012) indicated that disaster preparedness is the practice of arranging for the necessary resources and planning the best course of action to prevent and/or minimize damage to a collection in the event of a disaster of any level of magnitude, whether natural or man-made. One example is the installation of fire extinguisher in many strategic locations in our information centres.

Lewis (2000) recommended that all institutions that hold information resources develop an emergency plan. This will enable staff to react effectively and efficiently if an emergency event occurs. The plan must be clearly written and understood by all the staff who will be involved.

2.6 Records Management in Information Centres

Record management has been discussed in many literatures. Ngulube (2000); Yusof & Chell (1999) sees records management as the process by which an organisation manages all the elements of records, whether externally or internally generated and in any format or media type, from their inception/receipt all the way through to their disposal. On the other hand, Place and Hyslop as cited in Ngoepe (2008) view records management as a "process of controlling organisational information from creation through to its final disposition". The thrust of all the above definitions is that records management manages records from creation to disposal.

Records management is used here to identify the early part of the archival process of managing recorded information, regardless of physical form or characteristics, from the point of creation to its controlled transfer to a records centre. The records may then be destroyed immediately if authorized, or held in inactive storage for a specified period of time, and then destroyed or transferred to archival vaults for indefinite retention. Records may also move directly from the source agency to an archival vault if so approved under prescribed authority.

Fust and Graf (2002) argue that the proper management of records is the foundation of any information centres to provide services, to fulfil its obligation of accountability towards its customers and to protect their rights. Chinyemba and Ngulube (2005) assert that "proper records management involves establishing systematic controls at every stage of the record's life cycle, in accordance with established principles and accepted models of records management". Practising proper records management in information centres leads to good public management because government activities are based on access to information contained in records. One can imagine a country without records of birth and citizenship, property ownership, health, social grants, etc. Without the records, government will not be able to address issues such as poverty, crime, social grants, AIDS, land rights and even the provision of basic services (water and electricity).

Cowling (2003) further identified two main reasons motivating organisations to manage records, i.e. financial and legal value. An organisation needs long-term documentary evidence of the way in which funds were obtained, allocated, controlled and expended (budget). This includes budget records, which provide evidence of how income and expenditure were planned, and various accounting records documenting financial transactions. Legal records provide evidence of contractual obligations, duties and privileges agreed upon by governments, organisations or individuals. They provide a record of matters such as property titles, charitable status and other legal and civil rights. Supporting this view, Popoola (2000) postulated that what actually keeps the civil service going in any modern system of government is recorded information called "records," which are used for planning, decision making, and controlling. The need for a records management programme in all organizations cannot be overstressed in the digital age.

Stressing the use of technology in records management, McDonald as cited in Ngoepe (2008) opines that "in developing record keeping solutions, it is necessary to understand the evolution that is taking place in the use of technology." The application of Information and Communication Technology (ICT) to the management of records therefore, will go a long way in making such records accessible and usable.

In addition, proper records management results in good archives because the product that is transferred to an archives repository is maintained according to its 'original order' as in line with the principle of Respect des Fonds (IRMT 1999). This implies that if records are not managed properly in the office of origin; the product transferred to the archives repository will also be poor and this will compromise the history of the nation as records would not be easily retrievable. In this light, it is essential that information centres should implement and maintain a systematic approach to managing records from their point of creation to their ultimate disposal.

Hounsome (2001) noted that while records management may be regarded as just a mere filing, it plays a tremendous role in the governance of any National information centres. According to him records management objectives usually fall into one of three categories:

(i) Service (effective and efficient);

(ii) Profit (or cost-avoidance); and

(iii) Social (moral, ethical and legal) responsibility.

Diamond (1995) postulated that National Information centre without a record management programme run the risk of destroying records too soon and consequently of not being able to produce them when legally required, or else they adopt the costly practice of keeping everything forever – a practice that can also backfire in legal proceeding. The organisation is then required to produce everything it has relating to the proceedings, not just what it is legally required to have. At the very least, producing all related records is time-consuming and expensive Similarly IRMT (2000) summarise some of the symptoms of a failure to manage records effectively are:

• The loss of control over the creation and use of records

• The loss of control over access

• The fragmentation of official records

• The existence of different versions of the same information and the absence of a definitive or authentic record

• The loss of contextual information, such as the originator and the date of creation

• The ease with which electronic records can be changed

• Technology-related difficulties in retrieving records

• The misuse of records, such as unauthorised access to or alternation of records.

IRMT further submitted that the breakdown of records control has prompted archivists and records managers to attempt to design national and international codes of practice and standards for records management. These codes provide guidance on implementing strategies and procedures in any organisation that needs to control and manage its records in order to meet its

own business, legal and accountability requirements, as well as the needs of staff and clients and society at large.

2.7 Summary of the Literature Review

The literature reviewed relevant concept related to the research questions of the study. The review started with the concept of records in national information centres, given that records are document produced or received by a person or organisation in the course of activities. The aim of preservation and conservation is to increase the longevity of records through careful protection, storage and use. The review revealed that for information centres dealing with information resources/records to achieve their aims and objectives, they must draw up a long term preservation policy; this is due to the fact that records are subjected to deterioration by human factors, biological factors, chemical factors, environmental factors and disaster factors. Although, from all the literature consulted by the researcher, there is none that recently deal with preservation and conservation of records in National Archives and National Museums. The literature also revealed that there is need for preventive measures in conservation and preservation of information resources/records. These measures include proper housing of information resources/records, protection against heat, dust, humidity, light, insects, mishandling, etc. The literature reviewed further highlight record management in national information centres as well as the development of National Archives and National Museum.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This Chapter presents the research method adopted for carrying out the research. It discusses the population of the study, the sampled population and sampling procedure, the research instrument used for the study and the procedures for data collection and analysis.

3.2 Research Method Adopted for the Study

The researcher used case study research approach. According to Tellis (1997), case studies are designed to bring out the details from the viewpoint of the participants by using multiple sources of data. Also Tellis as cited in Zainal (2007), posited that case study is significant in that it provides a 'chain of evidents', either quantitatively or qualitatively, and are systematically recorded particularly when interviews and direct observation by the researcher are the main sources of data.

3.3 Population of the Study

The population of the study consisted of 42 staff of the National Archives, Kaduna and National Museum, Kaduna. The Table 3.1 below shows the population of the study for both the institutions used.

Table 3.1**:** Population of the Study

S/n	Institution	Category of the Staff	NO.
1	National Archives, Kaduna	Director & preservation staff	13
2	National Museum, Kaduna	Director & preservation staff	29
Total			42

Sources: The population of National Archives was obtained from the staff representing the Chief Executive Officer (CEO) of the institution and that of National Museum was obtained from the Secretary to the CEO of the institution as at 2014.

3.4 Sample and Sampling Procedure

The Sampling method was purposive sampling. Schwandt (2007) in Sage Dictionary, refers to purposive sampling as a form of non-probability sampling in which decisions concerning the individuals to be included in the sample are taken by the researcher, based upon a variety of criteria which may include specialist knowledge of the research issue, or capacity and willingness to participate in the research. 10 professional staff and 1 top management from each of the institutions selected for the study were sampled for data collection.

Table 3.2 Sample Size

S/NO	Institutions	Staff	population	Sample size
1	National Archives, Kaduna	Director and staff	13	11
2	National Museum, Kaduna	Director and staff	29	11
TOTAL			42	22

3.5 Instruments for Data Collection

The instruments for data collection for this study were mainly semi-structured and structured interviews. However, physical inspection was personally carried out in order to observe the records and how preservation was being carried out.

3.5.1 Interview

According to Ibrahim (2013) an interview is a conversation between two people; the interviewer and the interviewee, where questions are asked by the interviewer to obtain information from the interviewee. Two sets of interview schedules were constructed and administered to professional staff and one top management. The interview schedules consist of two parts. Part one was semi-structured and parts two was structured.

The semi-structured interviewed was used to collect information. The researcher systematically interviewed the staff of the Preservation Unit as a focus group. According Lofland and Lofland as cited by Gbaje (2011), “considering focus group interviews as a supplement to intensive, one-on-one interviews, if the topic is reasonably public and not something that would

cause embarrassment to participants. They believe that the focus group offers "the advantage of allowing people more time to reflect and recall experiences.

The unstructured interview emanated from follow-up questions in response to some of the structured questions as well as observations during the visit. This will be administered to the heads of the two institutions.

3.5.2 Observation

Direct scrutiny of the preservation policy and inspection of the facilities available for preservation and conservation activities such as paper trimmer, electric drill, Spray gun, board cutter, etc, and conditions of storage medium were all made which provided additional information needed for the research.

3.6 Validation of the Instruments

In order to ensure that the structured and semi structured interviews designed were capable of eliciting the required data and information from the respondents, the instrument were subjected to face validation. This means that the two instruments were presented to experts and research supervisors where they made necessary inputs that strengthened their appropriateness.

3.7 Procedure for Data Collection

There was a personal visit to each of the institutions selected for this study. During the visits, the semi structure interview was conducted personally. In the same vein, physical inspection of records and preservation process was made and documented. A follow up visit was later done to administer the structured interviews. Two weeks were used to collect the necessary data for the study.

3.7 Procedures for Data analyses

The data collected from the research instruments were organized for analysis. It was then tabulated, analysed and discussed descriptively.

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CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

This Chapter deals with the analysis of the data generated from the documentary sources consulted through direct observation and semi-structured and structured interviews. The findings are based on the responses collected during the semi-structured interviews and on the transcribed data obtained during formal interviews with the senior administrative staff of the National Information Centres studied.

4.2 Response Rate

Out of the 22 respondents selected for the study, only 19 (86.4%) responded. The remaining 3 (13.6%) could not participate in the study because they were on training or annual leave during the data collection. The response is very high and could therefore be used to analyse the data.

Table 4.1 Response Rate

S/NO	Institution	Staff	Sample size	Response rate	% of response
1	National Archives	Director and staff	11	10	45.45
2	National Museum	Director and staff	11	9	40.91
TOTAL			22	19	86.4

4.3 Data Analysiss

This section analyzed the data collected with regards to the research questions raised in the study. Hence, the findings and discussion are presented as follows:

4.3.1. Types of Records Available in the National Archives and National Museum, Kaduna

The first research question of this study set out to identify the type of records available in National Archives and National Museum, Kaduna. To achieve this, the researcher first of all interviewed the respondents during which they were asked to confirm the types of records available in their respective places. This was followed up by personal observation during which

the researcher physically inspected the records and noted them in the field notes. Table 4.2, below shows the records available in the places of the study.

Table 4.2: Types of Records in National Achieves and National Museum, Kaduna

S/N	Types of Records	Archives	Museum
1	Government document/records	✓	x
2	Gazettes	✓	x
3	Newspapers	✓	x
4	Historical documents	✓	✓
5	Private collections	✓	x
6	Business documents	✓	x
7	Scholarly journals	✓	x
8	Donor agreements	x	x
9	Accession forms	x	✓
10	Conservation reports	✓	✓
11	Trustee approval	x	✓
12	Documents attached to artifacts	x	✓
13	Photographs	✓	✓
14	Reports	✓	✓
15	Maps	✓	✓
16	Atlases	✓	x

Key:
✓ Available, x Not available

Table 4.2 shows that out of the 16 types of records listed, National Archives had 12 (75%) while the National Museum had 8 (50%). However, historical document, conservation reports, reports and photographs are discovered to be the common records kept by both institutions. It is interesting to find out that both keep conservation reports. This therefore, indicates that conservation of records and artefacts are carried out in the institutions. This confirmed an early observation made by Wythe (1998) who noted that documents in the permanent records of a Museum object may include accession forms, trustee approvals, conservation reports etc.

ICT has brought a lot of revolution in the way records are stored, processed and disseminated. Apart from the fact that records can now be created electronically, the old manual records can now be digitized and stored electronically. It is in this light that the first research question further tried to find out whether these institutions have jointed the new trends. Table 4.3 below shows the results:

Table 4.3: Types of Electronic Records

S/N	Types of Electronic Records	Archives	Museum
1	Government documents/records	✓	x
2	Gazettes	✓	x
3	Newspapers	x	x
4	Historic documents	x	x
5	Private collections	x	x
6	Business documents	x	x
7	Scholarly journals	x	x
8	Donor agreements	x	x
9	Conservation reports	✓	x
10	Trustee approval	x	x

✓ Available, x Not available

It is rather unfortunate that the two institutions are seriously keeping behind in the applications of ICTs. As shown in Table 4.3 above, while the National Archives had government documents, gazettes and conservation reports in electronic format. National Museum had none. It was gathered that the National Museum is yet to commence computerization of their records. This implies that both institutions would not be able to fit into current trends in the society where most of the institutions have adopted the use of ICTs in generating and preserving their records.

4.3.2 Preservation and Conservation Policies in the National Archives and National Museum, Kaduna

The second research question of this study set to find out the availability of preservation and conservation policies in both National Archives and National Museum Kaduna. In this regard, Directors/ Chief Executive and other preservation staff were interviewed in order to find out the existence of preservation policy, the content of such policy as well as other preservation issues.

The data collected through the interview schedule revealed that there was a preservation policy in the National Archives Kaduna and the policy was written and adopted from the National Archives Decree of 1992. However, the policy could not be cited during the observation sessions. With regards to National Museum, the data from the interview schedule had show that there was preservation policy and it was written by a committee. The finding further revealed that the policy was subjected to review when the need arises and majorly caters for their artifacts and therefore give little room for records preservation.

The findings above point to the fact that although many institution claim of having written policies, Wamukoya & Mutula (2005) attested that most African countries do not have a national information policy which makes the formulation of preservation and conservation policies in the libraries and information centers out of question. Similarly, Chapman as cited in Ovowoh and Iwhiwhu (2010) argued that it is doubtful that many Nigerian information centres have such policy documents. This implies that preservation and conservation activities would be done haphazardly and consequently led to the damage or loss of records of enduring value in the centres.

4.3.3 Types of Deterioration that Affect Records in the National Archives and National Museum Kaduna

Deterioration of records has been reported in many literature as a major problem encountered in national archival institutions. As one of the variables of the study, a research question was raised to find out the types of deterioration that affect records in the National Archives and National Museum, Kaduna. Respondents were interviewed which was followed by direct observation in order to physically see the effects of deteriorations on these records. Table 4.4 shows the results.

Table 4.4 Types of Deterioration that affect Print Records in the National Archives and National Museum, Kaduna

S/N	Print records	National Archives	National Museum
1	High acidity levels	✓	✓
2	Wear and tear due to excessive photocopying	✓	✓
3	Air pollution	✓	x
4	High temperature level	✓	✓
5	Relative humidity	✓	✓
6	Excessive light	✓	✓
7	Dusts and particules	✓	✓
8	Biological agents (termite,spiders,rodents etc)	x	✓
9	Bad storage	x	x
10	Overcrowded	x	x

✓ :Affected, x : Not affected

From Table 4.4, it was discovered that out of the ten agents of deterioration identified by most literature, both institutions were affected by at least seven. As shown in the Table above, the two institutions shared in six agents. It is interesting to note that both institutions do not have problem of bad storage and overcrowdings.

This finding confirms an earlier observation made by Walker (2013) who discovered that the external causes of deterioration of collections include: poor handling or storage, pests, pollution, light, incorrect temperature and relative humidity (RH) etc. Similarly, City of Westminster Archives Centre (2009) noted that all printed information resources tend to naturally deteriorate over time. But they can also further deteriorate or be destroyed by several inter-related factors, such as unstable environmental conditions, acidity, light, pollution, biological enemies, poor handling and storage etc.

Non-print records too are affected by agents of deterioration. Therefore, the research question further identified the types of deterioration that affect non print-records in the National Archives only, since as indicated in Table 4.3 National Museum do not have non print records.

Table 4.5 Types of Deterioration that Affect Non- print Records in the National Archives and National Museum, Kaduna

S/N	Non-Print records	National Archives
1	Oxidation	✓
2	Magnetism	x
3	High humidity and heat	✓
4	Moisture	✓
5	Dust	✓
6	Biological agents (termite, etc.)	x
7	Atmospheric pollutants	✓
8	Excessive light	✓

✓ :Affected, x : Not affected

From Table 4.5, it was discovered that oxidation, high humidity and heat, moisture, dust, atmospheric pollutants and excessive light were the causes of deterioration of non-print records in the National Archives Kaduna. The findings confirm an earlier observation made by Mahapatra and Chatevabarti as cited in Ogunbode and Ejibuke (2013) that non-print records are very sensitive to excessive heat, dryness, humidity and moisture. Chemicals present in audio-visual materials can also cause deterioration under adverse environmental condition. This implies that non-print records will continue to deteriorate as time goes by, if adequate and appropriate measures are not taken in the centre.

4.3.4 Methods Used in Preservation and Conservation of Records in the National Archives and National Museum Kaduna

The Strategies used in Preservation and Conservation of Records play a significant role in prolonging the life span of the records. Therefore, in order to identify the types of strategies used in preserving and conserving records in the National Archives and National Museum, Kaduna, a list of appropriate methods were provided during the focus group interview and respondents were asked to indicate those applicable in their centre. The field note was also used during the observation sessions to note those employed in the centres. Table 4.6 shows the methods adopted in preserving and conserving records.

Table 4.6 Methods used in Preservation and Conservation of Records in the National Archives and National Museum, Kaduna

S/N	Preservation & Conservation Techniques	National Archives	National Museum
1	Repairs	✓	✓
2	Microfilming	✓	x
3	Digitization	✓	x
4	Deacidification	x	x
5	Binding	✓	✓
6	Encapsulation	x	x
7	Cleaning and dusting of records	✓	✓
8	Photocopying	✓	✓
9	Fire fighting equipment	✓	✓
10	Air conditioning	✓	✓
11	Provision of adequate security to prevent theft,	✓	✓
12	Proper storage	✓	✓
13	Application of fungicides and insecticides	✓	x

✓ :Employ, X: Not employ

From Table 4.4, it was discovered that out of the thirteen methods of preservation and conservation identified by most literatures, both institutions employ at least eight. As shown in the Table, the two institutions shared in eight strategies. It is unfortunate to note that both institutions do not employ the use of deaccidification and encapsulation which prolong the life span of records. However, during the observation sessions in the National Archives, it was discovered that there was no ventilation in the storage rooms and the air conditioning was not functioning, the dusting and cleaning as well as the storage were not properly done. This implies that the records of enduring value will continue to deteriorate beyond their usefulness. Lewis (2000), opined that "without adequate protection, the records that contain important historical information will deteriorate beyond their usefulness. Consequently, the consultation of these records by governments and citizens will not be possible. That is why Arizona (2010), Sunil and Kumar (2009), Mahapatra and Chalkrabarti (2003), and Olatokun (2008) suggested the use of air condition in storage area. The use of thermometer and barometer are necessary to check temperature and relative humidity level in the storage area.

Regarding dust and dirt, Sahoo (2014) posited that floors can be cleaned by wet dusters. As accumulation of dust and dirt accelerate the physical damage of information resources, a cleaning

schedule should be made considering the sequence of operations following daily and weekly routines. The best way is to use a vacuum cleaner because it sucks the dust and cannot resettle on the surfaces.

4.3.5 Sources of Funds for Preservation and Conservation Activities in the National Archives and National Museum, Kaduna

The researcher carried out an interview with the staff of the National Archives and National Museum in order to answer the last research question, which sought to find out the sources of funds for preservation and conservation activities in the institutions. From the data collected, it was discovered that there were inadequate funds to carry out preservation and conservation activities in the National Archives Kaduna, while National Museum is adequately funded. Their official sources of funds were allocations from the Federal Government. Although, as revealed, there were internally generated sources of income like registration fees and other charges from the researcher that come to the Archives and Museum, the funds to cater for preservation and conservation activities in the centres were still inadequate.

Definitely a lot of funds are required to purchase new equipment to carry out the preservation and conservation projects as most of the equipment and facilities in National Archives, Kaduna are old and not appropriately functional. And though there are adequate and qualified staffs to support the preservation and conservation activities in both centres, funds are also needed to support staff to acquire new skills and training through continuous education, short trainings, workshops etc

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CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter presents the summary and major findings of the study. It also presented the conclusion of the study as well as recommendations.

5.2 Summary of the Study

The study investigated the Preservation and Conservation of Records in National Archives and National Museum, Kaduna. To achieve the objectives of the study, five research questions were formulated, among which are: What types of records are available in the National Archives and National Museum, Kaduna, What policies guide the preservation and conservation of records in the National Archives and Museum, Kaduna, What are types of deterioration affect records in the National Archives and National Museum, Kaduna. Related literature were reviewed. The literature review revealed that, for information centres dealing with records to achieve their aims and objectives, they must draw up a long term preservation policy. This is due to the fact that records are subjected to deterioration by human, biological, chemical, environmental and disaster factors. Most of the literature reviewed suggested that the preventive measures should include proper housing of information resources/records, protection against heat, dust, humidity, light, insects, mishandling, etc.

Case study method was adopted for this study. The population of the study was made up of 42 staff from both the National Archives and National Museum, Kaduna, 13 of whom were from the Archives and 29 from the Museum. A semi-structured questionnaire and interview were used in collecting data from respondents. Direct observation was also employed. The semi-structured questionnaire covered all the research questions which sought to find out the processes of preservation and conservation of records in the selected centres. The interview sessions elicited responses from senior administrative staff to clear some grey areas on preservation and

conservation of records in both the institutions. Data generated were analysed using descriptive method of analysis. The results of the findings were presented in tables.

5.3 Summary of the Major Findings

Below is the summary of the major finding of the study.

1. Out of the 16 types of records listed, the National Archives had 12 (75%) while the National Museum had 8 (50%). However, historical document, conservation reports, reports and photographs were discovered to be the common records kept by both the institutions.

With regards to records in electronic format, the findings revealed that while the National Archives had gazettes, government documents and conservation reports in electronic format, the National Museum had none. This was attributed to the fact that the National Museum was yet to commence computerization of their records.

2. The findings revealed that there was preservation policy in the National Archives Kaduna and the policy was written and adopted from the National Archives Decree of 1992. However, the policy could not be seen during the observation sessions. The National Museum had a written preservation policy, which was written by a committee and subjected to review when the need arises. The policy, however, majorly takes care of their artifacts and therefore give les consideration to records preservation.

3. The findings revealed that dust and particulate matters, high temperature level, air pollution, bad storage, overcrowded, wear & tear due to excessive photocopying and excessive light were causes of deterioration of print records in the National Archives and National Museum, Kaduna. On the other hand, oxidation, high humidity and heat, moisture, dust, atmospheric pollutants and excessive light were the causes of deterioration of non-print records in the National Archives Kaduna.

4. Although both the institutions employ at least eight out of the thirteen strategies of preservation and conservation identified by most literature, it is unfortunate to note that the institutions do not employ the use of deaccidification and encapsulation which prolong the life span of records.

5. In terms of funding, both the institutions relied on allocations from the Federal Government and internally generated sources of income like registration fees and other charges from the researchers that come to the Archives and Museum. These funds are highly inadequate.

5.4 Conclusion

In the light of the findings of the study, it can be concluded that preservation and conservation activities were being carried out at the National Archives and National Museum, Kaduna, but done inappropriately due to lack of well written preservation policy and inadequate facilities and funding. Though the finding has revealed that some measures were taken to curtail the deterioration, but this was not enough as some of their records continue to deteriorate. Hence, the need for a well written preservation policy to meet up with the international standard and other sources of funding through advocacy, solicitation, endowment, consultancy, organizing seminars and workshops that will address the deficiencies identified in the findings of this study.

A well written preservation policy and adequate funding for preservation and conservation activities based on international standard is needed to provide a well-articulated roadmap for continuous preservation activities in the national archival centres in Nigeria.

5.5 Recommendations

Arising from the findings of this study, the following recommendations are made:

1. Both the institutions should fully engage in electronic preservation in order to meet up with the required standard of service in this 21st century.
2. There is need for a well written preservation policy to meet up with the international standard and to cater for all types of records preservation. The policy should be in both hard and soft copies which can be cited by everybody.
3. The study recommends the use of air conditioning for twenty four hours in the storage rooms and to ensure regular and frequent repairs, cleaning and dusting of the environments.
4. Also the study recommends the adaptation of deaccidification and encapsulation by both institutions to reduce the rate of deterioration of already deteriorating records.
5. Both the institutions are encouraged to exploit others sources of funding through advocacy, solicitation, endowment, consultancy, organizing seminars and workshops etc.

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APPENDIX

Department of Library and Information Science,
Ahmadu Bello University,
Samaru,
Zaria.
23rd March, 2015.

Dear Respondent,

SEMI-STRUCTURED INTERVIEWS ON PRESERVATION AND CONSERVATION OF RECORDS IN NATIONAL ARCHIVES AND NATIONAL MUSEUM, KADUNA

I am a postgraduate student of the above stated department and conducting a research on the "Preservation and Conservation of Records in National Archives and National Museum, Kaduna". Your kind response to the attached semi-structured interviews will help provide data for this study.

All responses will be treated as confidential. Thank you for your time and response.

Yours Sincerely

Abdulfatah Abdulrahim

INTERVIEW SHEDULE ON PRESERVATION AND CONSERVATION OF RECORDS

PART A. ORGANIZATIONL BIO DATA

1. Name of organization ……..
2. Date of establishment ……..
3. Volumes of records ……...

PART B. TYPE OF RECORDS AVAILABLE

1. What type of records does your institution preserve?

a. Government document/records [ ] b. Gazzates [ ] c. Newspapers [ ]

d. Historical document [ ] e. Private collections [ ] f. Business document [ ]

g. Scholarly Journals [ ] h. Donor agreements [ ] i. Accession forms [ ]

j. Conservation reports [ ] k. Trustee approval [ ] l. Documents attached to artifacts [ ]

m. photographs [ ] n. Reports [ ] o. Maps [ ] p. Atlases

q. Others please specify…….

2. Do you have electronic records/documents? Yes [ ] No [ ]

3. If not why ……

…….....

4. If yes, which of the following?

a. Government document/records [ ] b. Gazzated [ ] c. Newspapers [ ]

d. Historical document [ ] e. Private collections [ ] f. Business document [ ]

g. Scholarly Journals [ ] h. Donor agreements [ ] i. Accession forms [ ]

j. Conservation reports [ ] k. Trustee approval [ ]

l. Others please specify…….

PART C. PRESERVATION POLICY

1. Does your institution have a preservation policy? Yes { } or No { }

2. If yes is the policy written? Yes { } or No { }

3. If it is written, who wrote it?

a. committee [ ]

b. The Archivist/ curator [ ]

c. adopted from ……

d. others ……..

4. Please what are the contents of the policy? ……...

……

5. Does the policy enhance preservation positively? Yes { } or No { } others specify ……...

6. Has the policy ever been reviewed? Yes [ ] No [ ].

7. If yes how frequent is the policy reviewed?

a. Annually [ ] b. Once after every two years [ ] c. After every five years

d.When the need arises [ ] e. Never [] f. Others please specify.....

PART D. Types of Deterioration that affect Records in the National Archives and National Museum Kaduna

Does records affected from any of the following

Print records	National Archives		National Museum	
	Affected	Not affected	Affected	Not affected
High acidity levels				
Wear and tear due to excessive photocopying				
Air pollution				
High temperature level				
Relative humidity				
Excessive light				
Dusts and particulate matters				
Biological agents (termite, spiders,etc.)				
Bad storage				
Overcrowded				

Others ----------

Non-Print records	National Archives		National Museum	
	affected	Not affected	affected	Not affected
Oxidation				
Magnetism				
High humidity and heat				
Moisture				
Dust				
Biological agents (termite, etc.)				
Atmospheric pollutants				
Excessive light				

Others----------

PART E. Strategies used in Preservation and Conservation of Records in the National Archives and Museum Kaduna

Do you apply any of the Preservation and Conservation Techniques

Records	National Archives		National Museum	
	Apply	Not apply	Apply	Not apply
Repairs				
Microfilming				
Digitization				
Deacidification				
Binding				
Encapsulation				
Cleaning and dusting of records				
Photocopying				
Fire fighting equipment				
Air conditioning				
Provision of adequate security to prevent theft,				
Proper storage				
Application of fungicides and insecticides				

Others specify ……

PART F. HOW FUNDS ARE SOURCED TO CARRY OUT PRESERVATION

Interview Schedule for Management Staff

1. Do you have adequate funds to carry out the preservation and conservation activities in the centre?

2. What are the official sources of funds for the preservation management of the centre?

3. Is there any other sources of income for preservation management in the centre?

4. Do you have the appropriate facilities to carry out the preservation and conservation projects?

5. Do you have the adequate and qualified staff to support preservation and conservation projects?

6. What effort is the management making in providing requisite skills and training for the preservation and conservation activities?

FIELD NOTES FOR RECORDING OBSERVATION DURING RESEARCH ON APPROCHES TO PRESERVATION AND CONSERVATION OF RECORDS ADOPTED BY NATIONAL ARCHIVAL INSTITUTIONS OF KADUNA

SECTION A: background information

1. Name of place …….
2. Date of recording……
3. Time ……

SECTION B: Type of records inspected in the National Archives & National Museum,

S/N	Types of print-records	ARCHIVES	MUSEUM
1	Government document/records		
2	Gazettes		
3	Newspapers		
4	Historic documents		
5	Private collections		
6	Business documents		
7	Scholarly journals		
8	Donor agreements		
9	Accession forms		
10	Conservation reports		
11	Trustee approval		
12	Documents attached to artifacts		
13	Photographs		
14	Reports		
15	Maps		
16	Atlases		

S/N	Types of electronic records	Archives	Museum
1	Government document/records		
2	Gazettes		
3	Newspapers		
4	Historic documents		
5	Private collections		
6	Business documents		
7	Scholarly journals		
8	Donor agreements		
9	Conservation reports		
10	Trustee approval		

SECTION C Observation of written preservation policy

a. Is it up to an international standard …….
b. Does it covers every aspect of preservation ……..
c. Does the institution apply it as it was written in the policy ……..

SECTION D: Storage conditions

a. Cleanliness …….
b. Ventilation ……..
c. Air conditioning ……
d. Using standard storage devices
    1. Overcrowded ……
    2. Steel Shelving ……
    3. Alkaline boxes and folders ……
    4. Metal Storage Cabinets ……..

E. Instrument for conserving deteriorating records
a. Laminating equipments ……
b. Encapsulation equipments ……..
c. Binding equipments
    1. paper trimmer [ ]
    2. electric drill [ ]
    3. Spray gun [ ]
    4. board cutter [ ]
    5. lettering equipment [ ]
    6. backing hammer [ ]
d. Pesticides and fumigation chemicals ……
e. Chest Freezer ……..
f. Computers and scanner for digitizing ……