

**SCIENCE AND TECHNOLOGY DOCUMENTATION CENTERS:  
STATUS AND SERVICES**

**A thesis submitted to the Central Department of Library and Information  
Science in partial fulfillment of the requirements for the Master's Degree in  
Library and Information Science**

**Submitted by  
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2011**

## **LETTER OF RECOMMENDATION**

This thesis entitled "SCIENCE AND TECHNOLOGY DOCUMENTATION CENTERS: STATUS AND SERVICES " has been prepared by Mrs. Sita Devi under my supervision. I hereby recommend this thesis for examination as a partial fulfillment of the requirements for the Degree of MASTER OF LIBRARY AND INFORMATION SCIENCE.

Date: 2068/01/

.....  
**Mrs. Nirmala Shrestha**  
Thesis Supervisor

## **LETTER OF ACCEPTANCE**

We certify that this thesis entitled "SCIENCE AND TECHNOLOGY DOCUMENTATION CENTERS: STATUS AND SERVICES" by Mrs. Sita Devi to the Central Department of Library and Information Science, Faculty of Humanities and Social Sciences, Tribhuvan University, in partial fulfillment of the requirements for the Degree of MASTER OF LIBRARY AND INFORMATION SCIENCE has been found satisfactory. Therefore, this thesis as a part of the said Degree has been accepted.

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Sita Devi

## ABSTRACT

This thesis entitled "*Science and Technology Documentation Centers: Status and Services*" has been carried out to fulfill the partial requirements for the degree of Master in Library and Information Science. The existing status of the three documentation centers has been taken as the problem of this thesis. The objectives of this thesis are to find out the status of the documentation centers, compare the services rendered by these documentation centers and to find out the users' satisfaction. This study includes collections, service, physical facilities, services, budget of these documentation centers.

Related literature has been reviewed in chapter two. The focus of this dissertation has been limited to three science and technology documentation centers, namely Nepal Academy of Science and Technology, Nepal Agricultural Research Council and Ministry of Environment documentation centers in chapter three. A simple random sampling method has been employed for sampling purpose. Two sets of questionnaires, for the users and the library staffs, have been used for the collection of data. A survey has been carried out on these documentation centers to explore their status, and services. The time period of this study is from December 2010 to January 2011.

A total of 59 questionnaires have been distributed among the users of the documentation centers. 51 questionnaires have been returned by the library users. Additionally, 6 questionnaires have been returned by the library staffs. The information obtained has been tabulated, presented and analyzed in chapter five by means of tabulation, pie chart, and diagram.

The greatest numbers of the visitors are the researchers who go to these documentation centers. The most frequently collections which have been used are journals/ periodicals followed by magazines/newsletters. The collections in these documentation centers are 'fairly adequate' as it has been reported by 30% respondents. The two conventional services the largest numbers of respondents (29%) have used are the display of new books followed by abstracting and indexing (19%) and subject and bibliography (13%). The two methods which have been used to locate the information are by self-search (37%) and with the help of staff (42%). The two modern services which have been used by the higher percentages of the users are internet and database in interrelated subjects.

Almost half of the total respondents (37%) are not satisfied with these documentation centers as these documentation centers do not have adequate library tools. The needs of the largest number of users are not met by the collection in all documentation centers. Majority of respondents (86%) have replied that the library staffs are helpful.

The summary, findings and recommendations have been presented in chapter six. The precise status of these documentation centers differs. They all are related to science, technology and agriculture. They follow the same classification scheme, i.e. DDC. Document loan is provided only to the members of the parent organizations. The documentation centers spend some amount of budget for the management of the documentation centers. Taking into consideration several factors such as budget, management, manpower, users' satisfaction, NAST documentation center is best among these documentation centers. Above all, researchers' needs are not met by these documentation centers. Recruitment of professional manpower and subscription of international journals and databases are major recommendations suggested for the effective delivery of library services.

Sita Devi

## **PREFACE**

This research work held on *Science and Technology Documentation Centers: Status and Services* primarily focused on the services and status of the documentation centers. This is the study made about the documentation centers related to science and technology of various governmental organizations of Nepal.

Chapter one of this study describes about the brief history of the origin of the term 'documentation', its development and various activities. This chapter also includes the background of the study, definitions of the terms, objectives and history of documentation centers. It also includes the statements of the problems as well as the objectives.

Chapter two is the review of literature summarizing the previous studies related to the documentation centers.

Chapter three is the focus of the study. It provides information related to these three documentation centers.

Chapter four deals with the research methodology. Since the main objective of this study is to find out the status and services of the documentation centers, a comparative research design has been adopted for this study.

Chapter five presents the data obtained from the field. This chapter compares several aspects of the documentation centers such as users' needs, collections, services, library rules, users' satisfaction etc. The information related to these aspects of the documentation centers as well as the comparative status has been presented.

This study attempts to contribute something to the people involved in library profession. I hope it will be able to draw the attention of the authorities to solve the current problems of documentation centers and make aware to the users as well as the documentalists to improve the services of the documentation centers in much better way.

Sita Devi

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## **LIST OF ACRONYMS**

AACR:	Anglo-American cataloguing rules
ALA:	The American Library Association
CAS:	Current awareness service
DDC:	Dewey Decimal Classification
DOC:	Documentation Center
ME:	Ministry of Environment
NARC:	Nepal Agricultural Research Council
NAST:	Nepal Academy of Science and Technology
SDI:	Selective dissemination of information
TEEAL:	The Essential Electronic Agriculture Library

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of the study

The term 'documentation' refers to the collection of documents. Messrs, Lafontaine and Otlet took possession of the word, and at the beginning of the century gave it a wider meaning when they said that the documentation refers to the "the systematic organization of information and of documentation (Khanna, 1994)." The term thus refers to the identification, investigation, assembling, and use of documents." In addition to printed matter, documentation comprises manuscripts, drawings, and objects collected for purposes of evidence, verification, or study.

In ancient times, library was regarded as storehouses, and books were meant for preservations. The library staffs did not encourage the use of books but now-a-days the concept of librarians has changed. In modern concept, a library is a collection of books and other form of records housed for organized and interpreted. Libraries serve the broad and varying needs of people for information, knowledge, recreation and aesthetic enjoyment. With the advancement of democracy and formal education system the library gradually moved forward towards the service-oriented center to its reader. Libraries today are categorized under many groups, such as academic, national, private, public, special, depository, government, digital and virtual library. Documentation center is a sort of special library.

#### a. History

The details of complex history of documents are not within the scope of this study. However, there are certain landmarks agencies and services the importance of which can not be ignored in even so brief a discussion as this. The Royal Society of London, which published *Catalogue of Scientific Papers*, to index scientific periodicals of the nineteenth century. The society also collaborated in the publication of *The International Catalogue of Scientific Literature*. Its purpose was to prepare a subject index to the twentieth century literature of seventeen branches of science but which was never carried beyond the year 1914.



The *Concilium bibliographicum* began in 1895 and terminated in 1930. It appeared as a bibliographic service in card form. The best-known documentation is the organization founded in 1895 by Paul Otlet and Henri La Fontaine as the International Institute of Bibliography. Its original objectives were (a) to publish a journal that would serve as a medium for the exchange of information on bibliographic organization; (b) to serve as a clearing-house for bibliographic information; (3) to expand the Decimal classification and (d) to establish a union catalog of world literature among others.

The name of *Concilium bibliographicum* was changed six years later in 1937. Its name was again changed into the International Federation for Documentation (FID). Its American affiliate is the American Documentation Institute, which began to publish *American Documentation*. At the national level, documentation in America may be conveniently classified into four categories. There were some international organizations which served to publish the materials. Marcel Goder edited *Index bibliographicus: An International Catalogue of Sources of Current Bibliographical Information (Periodicals and Institute)*. The Association of the Special Libraries and Information Bureaux (ASLIB) began the publication of *Journal of Documentation*. Shera (1951, p.16) mentions that the documentation in America got support from the following four sources (a) The federal government (b) Learned societies, professional associations, and academic institutions (c) commercial enterprises, and (d) special libraries.

According to Guha B. (1983) 'Documentation center' was used for the first time when the name of the International Institute of Bibliography was changed to the "International Institute of Documentation" in 1931. Paul Otlet and Henry La Fontaine were the first persons who attempted to define the term documentation. Paul Otlet in his work "trait de documentation" in 1934 defined it "as a process by which are brought together the activities of classification and distribution of all kinds of the areas of human activity." S.C. Bradford in 1948 noted that "documentation' is the art of collecting, classifying and making readily accessible the records of all kinds of intellectual activity."

These definitions were accepted mostly in Europe, America, and in other countries of the world. Then national documentation centers were established in many countries with the assistance of UNESCO, such as Pakistan National Scientific

Documentation Center (PANSDOC), Iran National Documentation Center (IRANDOC), Indian National Scientific Documentation Center (INSDOC).

Many documentation centers have been established as an essential branch, or part of their research centers in Nepal. Some noted documentation centers in Nepal are:

- (1) Nepal Agricultural Research Council (NARC) Documentation Center, Khumaltar
- (2) Nepal Academy of Science and Technology (NAST) Documentation Center, Khumaltar
- (3) Ministry of Environment (%) Documentation Center, Singh Durbar, and
- (4) Nepal Academy Library, Kamaladi

Similarly, Tribhuvan University has also established four research centers embedded with documentation centers. These research centers are the organs of Tribhuvan University. These research centers are: Center for Economic Development and Administration (CEDA), Research Center for Educational Innovation and Development (CERID), Research Center for Applied Science and Technology (RECAST), and Center for Nepal and Asian Studies (CNAS).

## **b. Definition**

John M. Reitz in dictionary of Library and Information Science notes that the documentation center is an organization or agency that specializes in receiving, processing, preserving, abstracting, and indexing publications, usually within a scholarly discipline or field of research and study. Documentation centers also issue bulletins on the progress of such work for distribution to interested parties and may also prepare bibliographies on special topics, make copies or translations, and engage in bibliographic research. Retrieved February 2, 2011, from <http://lu.com/odlis/search.cfm>.

The term was used for the first time in International Institute of Bibliography. Paul Otlet's and Henry La Fontaine were pioneers of the term 'documentation'. It is derived from the word 'document'. Several documents related to each other by their contents are often referred to as documentation. It works for special clientele in special subject field. Documentation center takes all characteristics of the special library.

Oxford English Dictionary mentions, "Documentation means the action of documenting or fact of being documented, instruction, admonition, lecturing, the furnishing of a ship with the requisite papers, preparation or use of documentary evidence and authorities, the documentation, classification and dissemination of information the material so collected."

According to Ranganathan and Girja Kumar (eds), "Documentation work is the complex of process involved in pin-pointed, exhaustive, and expeditious service of nascent thought to specialists. So, documentation is the aspect of librarianship."

'Documentation' is not a new terms and has been defined by various scholars in various ways. Shera (1951) states that the term documentation is defined in vague terms as "a process by which are brought together classified, and distributed, all the documents of all kinds of all the areas of human activity." UNESCO states that these libraries may be attached to various bodies such as a parliament or a government department, a scientific or other research institution, a learned society, professional association, museum, industrial association, chamber of commerce etc (Encyclopedia of Library and Information Science Vol, 28, p. 25).

Stratuss, Strieby, and Brown are of the view that, 'any organization, actively concerned with the sciences and related technologies must be cognizant of the great body of published information that comprises the scientific literature....To take full advantage of this information of this important resource, it is imperative that there be a unit in the organizational structure that is charged with the responsibility of locating and making available , whatever knowledge and experience that may advance its activities. This unit is commonly called documentation center because of its unique functions (Khanna, 1994).

Godet (1939, p. 187) mentions the three main features of the documentation centers. They are as follows:

- (1) Most of the great libraries, at least in Europe, do not furnish documentation in the restricted sense and could not furnish it. As a rule they undertake merely to list in their catalogs the books and periodicals they hold without analyzing their contents, and then refer their readers for further help to tables of contents and to special printed bibliographies.
- (2) In the second place, one must recognize that the field of documentation overlaps that of the libraries. It is natural that the former Institute of Bibliography became an Institute or Federation of Documentation.

- (3) In the third place, we should grant, or rather state, that the scholarly libraries, while they share the ambition of the centers of documentation to facilitate intellectual work, can not follow them in one direction without denying their *raison detre*. For the documentalists, the ideal would be so to extract useful material from the documents that the user would find it all ready with nothing more for him to do except sometimes to pay for it.

The center of documentation, then, will do more than assemble documents; it will undertake no less to work them over into summaries, to extract the useful material and make it available, on cards or in analytic and detailed indexes, always up to date. Those interested will eventually be kept informed by regular bulletin or by a card service to which they will subscribe.

### **c. Objectives**

Ranganathan (1987) says that the main aims of documentation centers are (a) books are for use, (b) every reader his book (c) every books its reader (d) save the time of the reader (e) library is a growing organism. Ranganathan further mentions that the special library is built up to supply detailed information in respect of some limited subject field.

The objectives of the documentation centers, as pointed out by Krishan Kumar (1991, p. 63) are given below:

- (a) It provides information service, which enables the members of the organization to keep tract of the significant developments in their field of interest.
- (b) Documentation centers search literature exhaustively and brings it to their notice before the start of the project to be undertaken by the organization, assuring them to go ahead.
- (c) It provides information promptly, thereby saving time of the users,
- (d) It provides inspiration and stimulation to users by means of balanced collection and fine services.

The documentation centers may perform the following functions:

1. Selection of documents and sources of data/information
2. Acquisition of documents and data/information
3. Processing of documents and data/information
4. Storage of documents and data/information

5. Retrieval of documents and data/information

6. Publication or reproduction of documents and data/information

Kumar (1991, p. 67) notes that the time of users must be saved. Therefore, in a special library, very often the users have to be helped to the maximum. More often, the information has to be provided in a ready form. It is required and also expected. Generally, a documentation center has the following services:

1. Issue of documents

2. Routing of periodicals

3. Inter-library loan

4. Replies to enquiries received personally through letter, telephone

5. Retrospective search

6. Selective dissemination of information

7. Referral service

8. Bibliographic information

9. Translation services

10. State of art report.

It is necessary to accelerate the development through the maximum adaptation of advanced technologies at national and international sectors. As a developing country it is essential for Nepal to incorporate and utilize new innovations and available technologies for expediting the development pace (HMG, 2007). Use of science and technology should focus on fulfilling basic needs, alleviating poverty, and promoting income generating activities, generating employment and conserving natural resources.

Nepal lacks adequate scientific research. The main barrier for scientific research in developing countries is lacking of information. Therefore, these day developing countries have established a unit for information support services in each scientific and industrial organization. The information support service unit is being called as a special library or documentation center or information center where all types of documents related to the organizations have tried o preserve according to the needs and objectives of the organizations (Karki, 2002).

Special libraries are those maintained by associations, government services, parliament, learned society, research institutions (including university institute), firm, industrial enterprises, chamber of commerce etc; or other organized groups, greater part of their collections being in a specific field or subject, e.g. botanical science, soil

science, forestry, medicine, engineering, and so on (International Organization for Standardizations, 1982, p. 13).

Special library is a library established, supported and administered by a business firm, private corporation, association, government agency, or other special interest group or agency to meet the information needs of its members or staff in pursuing the goals of the organization. Scope of collections and services is limited to the subject interests of the host or parent organization (ALA Glossary, 1983, p. 375).

Special libraries are often attached to official institutions such as government departments, hospitals, museums and the like. For the most part, however, they come into being to meet specific needs in commercial and industrial organizations. They are planned on strictly practical lines, with activities and collection carefully controlled in size and scope, though they may be and often are large and wide-ranging in their activities, they cooperate widely with other libraries. They are largely concerned with communicating information to specialist users, in response to, or preferably in anticipation of, their needs. They have therefore been much concerned with the theoretical investigation of information techniques, including the use of computers. Their activities have led to a critical reappraisal of library practices and have thus greatly benefited library network in general (Encyclopedia Britanica, 1978)

Shera (1951, p.22) mentions that the functions of documentation centers are also served by some libraries such as (a) Large research libraries (b) Storage libraries (c) Special libraries (d) Bibliographic centers.

Documentation centers have special users (Shera, 1951, p.18) such as pure scientists, technicians, educators and students, and the laymen. They are briefly discussed in the following paragraphs because the documentation centers we are dealing with have these main users.

*Pure scientists:* The characteristic of the literature which is of primary interest to the pure scientists is that it records the establishment of a new fact or data already known. They need comprehensive and primary materials for the results. They need not only single, isolated facts but all facts of a given class for bases of comparison and relationship. In addition, he requires easy access to all established descriptive facts about one particular element, compound, or substance, such as the physical and chemical properties of aluminum, or of newly developed alcohol. They also must be kept informed of activities in related areas of research.

*Technicians:* The second major groups of users of documentation are the technicians, a class composed of engineers, mechanics, inventors, and manufacturers. They are primarily concerned with the results rather than the materials, methods, or verifications of the experimental methods. The technician must also have readily available the large body of literature that reports the activities of his colleagues in identical or related technologies.

*Educators and students:* The bibliographic needs of the educator and the student at the level of professional preparation are decided by the character of the research pursued or the course of study involved. Every graduate student should be made fully conscious of the purposes and limitations of the documentary services and bibliographic tools in his area of specialization. Personals can be trained only through the pedagogic methods.

*The layman:* The public should be informed of the importance of such scientific development. It will interpret the social utility of science in lay terms.

Documentation center acquires and organizes information in anticipation of users' demand. It draws attention to request relevant information, and is intended to serve a section of the subject specialists. It can be said that documentation center is different in location, subject scope, collection stocks, service clientele, size, equipment rather than other types of general library.

A comparative study of the science and technology documentation centers has been carried out in this study to find out their current status, service and users' satisfaction. Detailed description of these documentation centers is presented in Chapter three. They are:

- (a) Nepal Academy of Science and Technology (NAST) Documentation Center
- (b) Nepal Agricultural Research Council (NARC) Documentation Center
- (c) Ministry of Environment (ME) Documentation Center

## **1.2 Statement of the problem**

All these science documentation centers located at Nepal Academy of Science and Technology, Nepal Agricultural Research Council and Ministry of Environment serve a special group of readers, and researchers. The documentation center professional staffs support the documentation centers by supplying information to the users. They share common problems such how the services benefit the users, and what services the staff units provide to the users. The documentation centers lack

rules and regulations and enough budget is not allocated for them. Although the documentation centers share the problems mentioned above, the following are the main problems this thesis is focused on:

- (1) What is the current status of the documentation centers in terms of collection and services in these documentation centers?
- (2) What kinds of services are provided by these documentation centers ?
- (3) Are the users satisfied in these documentation centers ?

### **1.3 Objectives of the study**

The general objective of this study is to find out the existing situation of documentation centers of NARC, NAST, and ME on the basis of their collection and service facilities. The specific objectives of this study are to:

- (a) find out the current status and services provided by these documentation centers,
- (b) compare the services provided by the documentation centers, and
- (c) find out the users' satisfaction from these documentation services.

### **1.4 Scope and limitation of the study**

This study is related to three science and technology documentation centers located in the Kathmandu valley. Therefore, the researchers and staffs of NAST, NARC and % documentation centers are the subjects of the study. Furthermore, some researchers who occasionally visit these documentation centers during the period of data collection are also the subjects of this study. This study discusses the status, services and users' satisfaction of these science and technology documentation centers. This study includes the data obtained from the users and library staffs of these documentation centers during December 2010 to January 2010. This study will not include other things.

### **1.5 Significance of the study**

This study focuses to highlight the existing status of science and documentation services in the Kathmandu valley. This study helps to get information the sorts of collection the researchers in the areas of science and technology. The significance of the proposed study is mentioned in the following points:



- (1) It helps to obtain the information related to users' needs, interest, and demands.
- (2) It helps the researchers who like to carry out the research about these documentation centers.
- (3) It helps to up-to-date the resource services and facilities provided by the documentation centers.

### **1.6 Definition of the terms**

Definitions of the terms are given below.

**Special library:** Special library is a library in a parent body and all other institutions forming part of or associated with an institution of research.

**Documentation:** Documentation work is the complex of process involved in pinpointed, exhaustive and expeditious service of nascent thought to specialists.

**Documentation activities:** Documentation activities mean locating the documentations abstracting the documents, classification, indexing and documentation lists.

**Documentation center:** An organization or agency that specializes in receiving, processing, preserving, abstracting, and indexing publications, usually within a scholarly discipline or field of research and study. Documentation centers also issue bulletins on the progress of such work for distribution to interested parties and may also prepare bibliographies on special topics, make copies or translations, and engage in bibliographic research. Retrieved December 25, 2010 from <http://lu.com/odlis/index.cfm>.

**Information:** Information is a property of data resulting from a produced by a process that produced data (ALA World Encyclopedia of Library and Information Science, 1980)

**Information service:** Library information center process information bearing documents and organizes them for use to those who seek it. A library makes extensive and intensive efforts to inform the users what information is available in what

document through its various bibliographical and documentation services (Prashar, 1991).

**Information technology:** The application of computers and other technology to acquisition, organization, storage, retrieval and dissemination of information.

**Research libraries:** Institutions whose collections are organized primarily to meet the needs of scholars to facilitate effective action on the frontier of every field of knowledge, traditional and novel.

**Reference service:** Reference service means contact between the right reader and the right book at the right time and in the right personal way.

**User:** A person or an organization needed specialized information from an existing or planned information service or information or documentation system.

**Resource sharing:** Resource sharing refers to the activities that result from an agreement, formal or informal, among a group of libraries (usually a consortium or network) to share collections, data, facilities, personnel, etc., for the benefit of their users and to reduce the expense of collection development. Retrieved December 8, 2011 from [http://lu.com/odlis/odlis\\_r.cfm](http://lu.com/odlis/odlis_r.cfm).

**User satisfaction:** User satisfaction has been recognized as an important measure of library performance. User satisfaction is defined as the degree to which the library is able to meet the demands of the user (D'Elia and Walsh, 1983, p.109).

## **1.7 Organization of the study**

The organization of the study is as follows:

The first chapter deals with background of the study. It discusses the origin and brief history of documentation center. Statement of the problem, objectives of the study, scope and limitations of the study are also included in this chapter. Definition of terms, glossary and organization of the study are also provided in this chapter.

The second chapter is the review of relevant previous studies, i.e. review of literature. The saying and opinions of the experts are quoted in different places according to their relevance.

The third chapter is about the focus of the study. This chapter discusses the brief introduction to the Documentation centers of NAST, NARC, and %, their collection, services, etc.

The fourth chapter deals with research methodology which includes research design, population of the study, sampling techniques or procedures, data collection procedure and data analysis procedure.

The fifth chapter analyzes the obtained facts, figures and data of documentation centers.

The sixth chapter deals with summary, findings of the study, recommendations and conclusion.

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## **CHAPTER 2**

### **REVIEW OF LITERATURE**

Review of literature means reviewing research studies or relevant propositions in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted. It is an integral and mandatory in research work. The main reason for a full review of research in the past is to know the outcomes of those investigations in areas where similar concepts and methodologies had been used successfully (Joshi, 2003).

Similarly, a research study is to go through the existing literature in order to acquaint yourself with the available body of knowledge in the research area. Review of literature has three main functions, i.e. to bring clarity and focus to the research problem, to improve the methodology and to broaden the knowledge base in the research area (Kumar, 1996, p.27).

During review of literature, different kinds of written documents, namely books periodicals, theses, reports, brochures, were consulted related to the documentation centers.

Although comparative studies of science and technology documentation centers are not found in at one place, there are some studies related to libraries of science and technologies. Following are some of the studies carried out related to science and technology documentation centers, readers' satisfaction, user's need of information, library services etc. related to the problem of this study. The review also highlights other aspects such as user satisfaction, delivery of library services etc.

Godet (1939, pp.85-86) highlights the term and explains in the following paragraphs:

Already current in historical circles about 1870, it then referred to the collecting of documents or to a collection of documents. Lafontaine and Otlet took possession of the word, and at the beginning of the century gave it a wider meaning when they advocated "the systematic organization of information and of documentation." It now means, as defined by the French Union of Documentation Services, "the identification, the investigation, the assembling, and the use of documents," the "documents" in addition to printed matter comprising manuscripts, or

drawings, or objects collected for purposes of evidence, verification, or study. Thus defined, the field of documentation takes in the libraries, the collection of archives, the museums, the work of publishers, of printers, and even of authors; and the librarian, whether he likes it or not, and whether he knows it or not, makes "documentation" as Monsieur Jordain made prose. So it seems that there should be no separation of libraries from documentation, since the former are merely a special form of the latter, and every library may claim to be a center of documentation.

D'elia and Walsh (1983, p.109-133) explore a user's self reported degree with library services. The degree to which the library is able to meet the documents of the users has been measured and used in a variety of ways. Each participating user's satisfaction with the library was measured in two ways (a) an indirect measure by means of which a scale on which the user was asked to evaluate the overall quality of library services; and (2) a direct means by means of a scale on which the user was asked to report his general satisfaction with the library's services. They conclude that the user's satisfaction scale (the user's overall satisfaction with the library) appears to be generalized, positive reaction to the library. Library users appear to be satisfied with the library. On the other hand, the most important correlation of the library grade scale (the user's overall evaluation of the library) was the user's evaluation of the library's physical facilities. The construct may be useful for diagnosing the performances of specific services within a library.

D'Elia and Walsh (1983, p.109) discuss the subjective and objective approach to the user satisfaction. They explain how the subjective and objective tests of user satisfaction can be conducted among the libraries. They explain the construction of subjective tests, design of the study, instrumentation and measurement, construction of tests, data collection and data analysis for the evaluation of the public library. They conclude:

The user may be useful for diagnosing the performance of specific services within a library. However, the construct should be used cautiously. User behavior both in terms of evaluation and use of the library appears to be enigmatic. In the final analysis, this study demonstrates the complex nature of user behavior and our limited understanding of such behavior.

The subjective approach to evaluate the user satisfaction is very useful for analyzing the user satisfaction in this research.

Shrestha (1983) makes a study of information needs and patterns of information use of university faculty, research scholars and graduate students in Tribhuvan University Central University library in Nepal. She discusses about the library, library services in the following words:

Any library must have a through knowledge of user's needs and their information seeking behaviour patterns with regards to their felt needs. In other words, their utilization of services and the sources, they rely on most and the techniques of information awareness they must be known. The profession of the user generally affects his information seeking behaviour. There are several environmental factors which have to be considered. Hence any action taken for the improvement of the services rendered by libraries and information content must take into account the pattern of information seeking behaviour of different types of users in its services.

Information services have been developed to meet the needs of individuals and of organization seeking to perform their respective allotted functions. These services are being continually developed to meet the needs. Individually or in groups most of them are intended for a limited user group restricted to a narrow subject field or to a single medium of a communication. Information services include personal assistance provided to users in pursuit of information. The character and extent of such services will vary with the kind of library or information center, the type of user whom it is going to serve and the skill, competence and professional training of the librarian providing the service. Thus information services are to be developed not only to meet user need and improve present services but also to anticipate the user's needs in the future. The information of any information service can be measured only by the degree to which its resources are utilized.

Shrestha (1984) conducted a study about the relationship between information searching behaviour of users and the level of awareness, needs and adequacy of information services. This study reveals that the information seeking behaviour of students in terms of methods adopted to seek information have strong bearing upon the level of awareness, intensity of information needs and perception regarding the adequacy of library collection. Under the present state of information dissemination service, librarian would remain the most favored and effective sources of information

for the needy few. Survey mentions that for over 80 % of teachers more than 89 % of students, textbooks were the most frequently used sources of information.

Dahal (1988) makes a study of science and technology libraries in Philippines. He also suggests some implications to Nepal. He finds that the library collection is growing. The libraries have networks of their own. He suggests that resource sharing with other science and technology library will be very useful.

Kumar (1991) has mentioned that documentation center is the one which is specializing in a particular subject or group of subjects or a particular form of documents. It provides information in anticipation of demand. He stated that documentation centers' main objectives are to provide the depth information to their users at the same time. It should provide inspiration to use the collection. He highlights about the function of documentation center such as selection of documents, information, acquisition, processing, storage, retrieval of information, publication and reproduction of information, translating, preparing documentation list and indexing, and abstracting periodicals.

Shrestha (1998) prepared a report related to science libraries in Secondary schools in the Kathmadu valley. She concludes:

The use of library resources by the students and teachers is also increasing along with the introduction of higher secondary school. In this context, the existing secondary library policies to be reviewed an improved so as to encourage school management committee/board of public and private sector both to deliver efficiently and effectively service to the students and teachers. It is also necessary to determine minimum standards for secondary school library so as to support current development of new syllabus introduced by Ministry of Education. Considering librarians or library staff skill, there should be policy on training for librarians as well as library staffs.

Shrestha (1998) discussed the institution building process of the Tribhuvan University. There should be manageable research centers for effective communication generation. There should be proper management and utilization of the resources available in the country. He further comments:

In the developing countries, optimum utilization of resources depends to a great extent on the environment for human activities. This environment is composed of several factors including customs and ad hoc events but it is largely determined by the government policies and the set of economic, social



and political institutions serving the societies. The development process involves the introduction and acceptance of numerous changes or innovations in modernizing societies. In fact, a very large portion of significant change in the developing countries is deliberately planned. It is engineered and takes place primarily in and through formal organization.

Any developmental work in any country can properly carried out by experiences show that one of the major causes of development failure is inefficient and ineffective institution in the particular field or area or country.

Karki (2002) made a study of the emergence and development of libraries, information centers and information professionalism in Nepal. He mentions:

The role of special libraries for research activities has long history in the global context. But Nepal remained in the Dark Age for longer period. Therefore, importance of special libraries was not realized up to the year 1950. Not a single research library was established before 1950. After the establishment of democratic government in Nepal many national and international organizations and government offices were established. Such organizations and offices had started libraries and information centers for the achievement of organizational goals.

Giri (2002) prepared a profile of NARC documentation center. She has included some details of the NARC documentation center in this report. She includes:

There is urgent need of improvement of library service at NARC central library on trained manpower for smooth functioning of library, establishment of electronic library service, systematic arrangement of document and scientific cataloguing system, document collection regarding recent books, journals and other documents is insufficient as well as its utilization system. It should be improved immediately.

Srivastava and Kanjia (2004) highlighted the conventional documentation and information services namely bibliographic services, current awareness services, abstracting and indexing services, reprographic and newspaper clipping services. It gives availability of software operating system, library work package, and electronic services like CD-ROM, online, email multimedia etc. Finally highlighted the reprographic service provided by these libraries as the part of information services (Srivastave and Kanjia, 2004).

Sharma (2005) made a comparative study of the documentation centers of four research centers of TU on the basis of services. She mentions that most users visit to take the latest information for research work. Except for research work, the users visit the teaching and to take current information for updating their knowledge. In documentation centers most users used primary sources for more research work. It shows that primary sources are more used in these documentation centers than secondary and tertiary. Most of the users visit daily can continue improving their knowledge in documentation centers than weekly and monthly. From the daily visits they continue improving their knowledge for research work. The users in documentation centers are found using the reports of conference, project, seminar and workshops etc. than other sources. Many of the users are found not satisfied with the reference materials.

Dhami (2009) carried out research on the information needs and patterns of information services of two documentation centers. He concludes that the majorities of people who visit these libraries are from science discipline and further mentions that most of the respondents were against the satisfaction of library services.

Lackie, Pettigrew and Sylvian (1996, p. 116) propose a model of information seeking behaviour of professionals. This model may be applicable the entire professional. The general model and its six major components are presented in detail. This model stresses that the conceptualization of why and how a professional seeks information can not be reduced to a simplistic analysis of sources alone but, rather, involves a greater understanding of various roles a professional performs and the associated tasks that prompt a need for information, while the need for information is conceptualized as heavily influenced by the role-task relationship, there are also general factors (such as career stage or whether the need is recurring) that characterizes the professional's needs. The resulting information seeking activity is thus viewed as being contingent upon two major interacting factors: sources and awareness. These two factors in turn are compared of a constellation of distinct variables that may or may not come into play, creating the dynamic nature of information seeking activity and outcome.

Kumar (1996, p.12) mention that library services include the following services: (a) interlibrary loan, (b) Reservation of documents, (c) user education, (d) library loan, (e) holding of library exhibition including display of new editions (f) users of library use permit to casual readers, (g) contributing to or preparing library

publications, (h) indexing or abstracting services (i) compiling of bibliographies, (j) maintenance of clippings, (k) maintenance of vertical files containing pamphlets like prospectus, reports etc.

Environment, science and technology are the areas Nepal is proposing to highlight. *The Three-Year Interim plan* (2007, p.13-14) states the priorities in the areas of environment, science and technology.

Pokharel (2009) makes an evaluation of the need and usages of information dissemination techniques in Government departmental libraries where various professional groups work together and want to get solution of any new raised problem in any time. Use of computer keeps vital importance for the CAS and SDI services but these CAS can be provided without computers as well. He concludes that there are not adequate staffs in the library.

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## **CHAPTER 3**

### **FOCUS OF THE STUDY**

The study deals with three different science and technology documentation centers. The documentation centers discussed in this chapter are NAST, NARC and ME documentation centers.

This study is an attempt to study some documentation centers related to science and technology located in the Kathmandu valley. Some noted documentation centers related to science and technology in the Kathmandu valley are documentation center of Nepal Academy of Science and Technology (NAST), documentation center of Nepal Agriculture and Research Council (NARC) and documentation center of Ministry of Environment (ME).

#### **3.1 Nepal Academy of Science and Technology**

##### **Background**

Nepal Academy of Science and Technology (NAST) is an autonomous body established in 1982 to promote science and technology in the country. The Academy has the major objectives such as advancement of science and technology for all-round development of the nation; preservation and further modernization of indigenous technologies; promotion of research in science and technology; and identification and facilitation of appropriate technology transfer.

NAST was established with the Nepal Academy of Science and Technology Act 2048 (1991)<sup>1</sup>. It also has the objective such as "...to conduct or cause to conduct research work in the field of the science and technology and to find out the appropriate technology for the Nation to assist in transferring such technology".

##### **Objectives**

The Academy is entrusted with the following four major objectives:

- To develop or cause to develop the science and technology for the overall development of the country,
- To protect or cause to protect and modernize the indigenous (domestic) technology,

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<sup>1</sup> The institution was formerly named RONA (Royal Nepal Academy of Science and Technology).

- To conduct or cause to conduct research work in the field of the science and technology and to find out the appropriate technology for the Nation and to assist in transferring such technology, shall be the fundamental objectives of the academy.

From its inception, NAST has played a unique role in scientific investigation in the nation because of its dual role as a repository and as a center for scientific investigation. Its location in Khumaltar gave added significance to this role, for after its establishment NAST became the "Center for Scientific investigation" home to an amalgam of scientists and researchers. NAST plays a key role in the scientific research these days. It also provides scholarships for the university teachers, researchers, and students to conduct research in different areas of science and technology.

This academy stands today as one of the Nepal's foremost facilities dedicated to the preservation and interpretation of Scientific materials in Nepal. NAST is the leading organization of the research to be conducted in Nepal, and therefore considered the apex body. The documentation center was created when the RONAST was established in 1982 and has never stopped growing. The documentation center collects the better part of world literature in all scientific and technical fields including the exact sciences, life sciences, earth sciences, and technology.

## **Functions**

NAST (n.d.) points out the following functions:

- Undertake and promote studies and research in priority areas of Science and Technology
- Advise Nepal Government on the matters of Science and Technology (S & T) Policy and programs
- Collection and disseminate Science and Technology information through a central (S & T) information system
- Organize seminars and conferences on S & T topics and help facilities S & T publications
- Establish and strengthen linkages with regional and international institutions in order to promote mutual cooperation

- Mobilize internal and external resources, both financial and technical, for S & T development as well as supporting the activities of the Academy
- Give recognition to outstanding individuals and institutional contribution for development, promotion and application of S & T
- Promote public awareness about the importance and usefulness of S & T as well as to create conditions conducive for S & T application
- Undertake studies and prepare reports on the programs and achievements of S & T related national institutions
- Advise Nepal Government on establishment of new institutions or laboratories for S & T related research and development
- Promote the establishment and development of new S & T institutions/laboratories
- Set up exhibit centers for S & T related inventions and innovative models
- Undertake all necessary measures towards achieving the goals and objectives of the Academy

### **Activities**

NAST conducts in-house research and innovation in some priority areas of S & T either on its own initiation or in collaboration with other national and international agencies. The research activities are mainly in the field of (a) Biodiversity and Biotechnological application (b) Environment and climate Change (c) Natural product chemistry and (d) Alternative energy. NAST has initiated NAST-Universities/Degree awarding institutions. NAST also provides research fellowships/assistant research fellowships to young researchers to work at its laboratories. Its organizational structure is given in Figure 1.

### **Facilities**

- Research Laboratory
- Instrumental Center
- Library and Information Resource Center
- Radiation Monitoring Unit
- Dendrochronology Lab



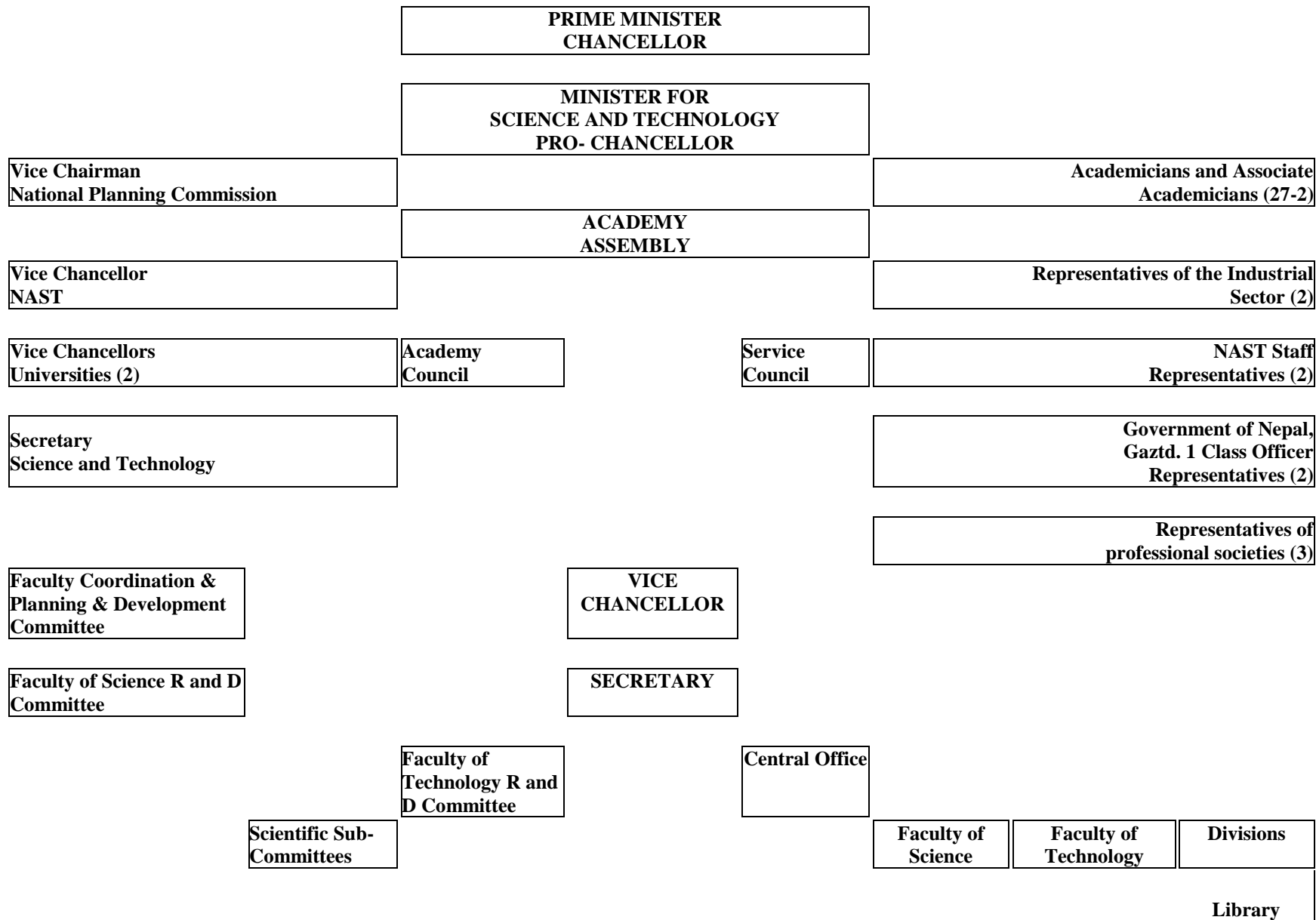


Figure 1 Organizational structure of NAST

### **Documentation centre**

One of the specific functions of NAST is development and disseminates science and technology information through a Central Information System. Keeping in view of this, it has established a Library and Documentation Centre (LDC) which provides information services to the scientists, technologists, researchers' students, teachers, entrepreneurs, policy makers, planners, farmers and other communities involved in science and technology activities with various purposes. Retrieved 11 March, 2011, from <http://www.nast.org.np/page.php?page='pagename'&id=63>.

### **Objectives of the documentation center**

The objectives of library and documentation center are as follows:

- (a) Developing system and procedures for enhancing the information resources sharing.
- (b) Developing a sound infrastructure based on computing communication and application of IT in the information field.
- (c) Establishing online access to international database services.
- (d) Generating local information materials in order to strengthen information exchange capacities.
- (e) Developing skill manpower in the field of information.
- (f) Generating awareness to information among the target population, and promoting information use through user education.
- (g) Establishing information networks linkages with regional and international networking system such as Program for Enhancement of Research Information (PERI).

### **Collection**

The documentation center has a collection of more than 13,500 collections on different subjects on science and technology. It has a collection on physics, chemistry, technology, biology, geology, mineralogy, natural resource management and other areas of science. The library also has about 7,000 monographs, and 6500 other documents. In addition to these collections, the documentation has subscribed 9 national dailies and other daily newspapers. The documentation also includes 45 serials and 1,000 back volumes of journal, bibliographic database of the collection,

NAST archival materials, database on S and T manpower and institutions, database on union list of serials.

NAST documentation center has a collection of reference sources viz, bibliographies, encyclopedias, doctoral theses, research project reports, books on scientific research methodology, computer and information technology, research surveys and also on all social science disciplines.

### **Budget**

Although planning of the budget is not very scientific for managing and updating the NAST library, the expenditure on budget for the last two years as follows:

- |     |                        |                 |
|-----|------------------------|-----------------|
| (a) | Financial year 2065-66 | 3,00,000.00 NRS |
| (b) | Financial year 2066-67 | 3,20,000.00 NRS |

The library professional say that the budget allocated for this documentation center is inadequate.

### **Library personnel**

There are a total of five library personals in documentation center of NAST. They include one professional staff, three semi-professional and 1 non-professional staff.

### **Services**

NAST documentation center is automated. All members of the documentation centers are allowed to borrow the books from this documentation center. All the members in general and researchers in particular borrow the books from the documentation center. The duration of the borrowings is not limited. However, all the visitors can use the materials as the reading materials.

It also has database services such as monographs, serials, networking services such as internet, email, PERI resources, selective dissemination of information (SDI), Current awareness, current content, technical inquiry services and NAST archives. The documentation center also displays a list of new arrivals and other services such as photocopy service, reference services, referral services, circulation services.

### **Library hours**

Documentation center of NAST is an organ of Nepal Academy of Science and Technology. Therefore, its opening time is decided by NAST rule which is as follows:

Summer: 10 AM – 5 PM

Winter: 10 AM – 4 PM

### **Resource sharing with other documentation centers**

Documentation center of NAST has the facilities such as resource sharing with other documentation centers such as sharing and getting gifts from other resource centers, particularly the books, journals and various sorts of (research reports).

### **Physical facilities**

Documentation center of NAST has facilities of the library space, approximately 1000 sq. meters. Users' space covers about 200 sq. meters and reading capacity is only about 10 seats. It has the physical facilities such as photocopy, computer and online journals. Although we made attempts to obtain the services such as availability of camera, tape recorder and so on, there were not available at present.

### **Regular publications of NAST**

Regular publication of NAST includes *Bigyan Lekhmala*, Nepal Journal of Science and Technology, NAST communicator, Proceedings of Conference and Seminars and Occasional Papers.

## **3.2 Nepal Agricultural Research Council**

### **Background**

The agriculture sector forms the basis for overall development of the country. The sector is important for any attempt to increase income and uplift the living standard of the Nepalese people to meet the national goal of poverty alleviation. A scientific research based system for sustainable growth in agriculture is essential to meet the demand for food and nutrition of the ever growing population of the country (NARC, 2006).

Nepal is an agricultural country. The research in agriculture is within the top priority of the country. Nepal Agricultural Research council was established in Nepal under Nepal Agricultural Research Council Act, 2048 (1992) "to carry out high-level research work in agriculture and to find out the problems in the areas of the agriculture."

### **Objectives**

The objectives of the research council are to:

- (a) To do, or cause to be done, high-level study and research works on agriculture.
- (b) To find out problems in the field of agriculture and measures to resolve them and do investigative studies on necessary technology, knowledge and skills for the enhancement of agro-products or quality of such products.
- (c) To render assistance to Government of Nepal for the formulation of national agricultural policies.

### **Functions**

The main functions and responsibilities of NARC are (a) to conduct high level research work on various fields of agriculture required in line with the national agricultural policies (b) to prioritize studies and researches to be conducted (c) to provide research and consultancy services to its clients (d) to coordinate, monitor and evaluate the agriculture research activities in Nepal and (e) to document the research activities (NARC, 1991).

### **Activities**

- (a) Implement research programs, by itself or in collaboration with other institutions, on:
  - (i) Cereal and Cash crops
  - (ii) Horticulture
  - (iii) Livestock and Animal Health
  - (iv) Fisheries
  - (v) Pasture and Fodder
  - (vi) Agro-Forestry/Farm-Forestry
  - (vii) Soil and Irrigation Management

- (viii) Botany and Bio-Technology
  - (ix) Entomology, Plant Pathology and Plant Protection
  - (x) Farming Systems
  - (xi) Agri-Extension
  - (xii) Agri-Economic and Marketing
  - (xiii) Food Science; and
  - (xiv) Other subjects related to agriculture
- (b) Implement research with a focus on generation of agricultural technology suitable for various agro-climates of Nepal.
  - (c) Provide client-oriented contract out research services to the farmers, agri-extensionists and agro-entrepreneurs.
  - (d) Conduct research works to increase long-term-agricultural productivity without depleting the environment.

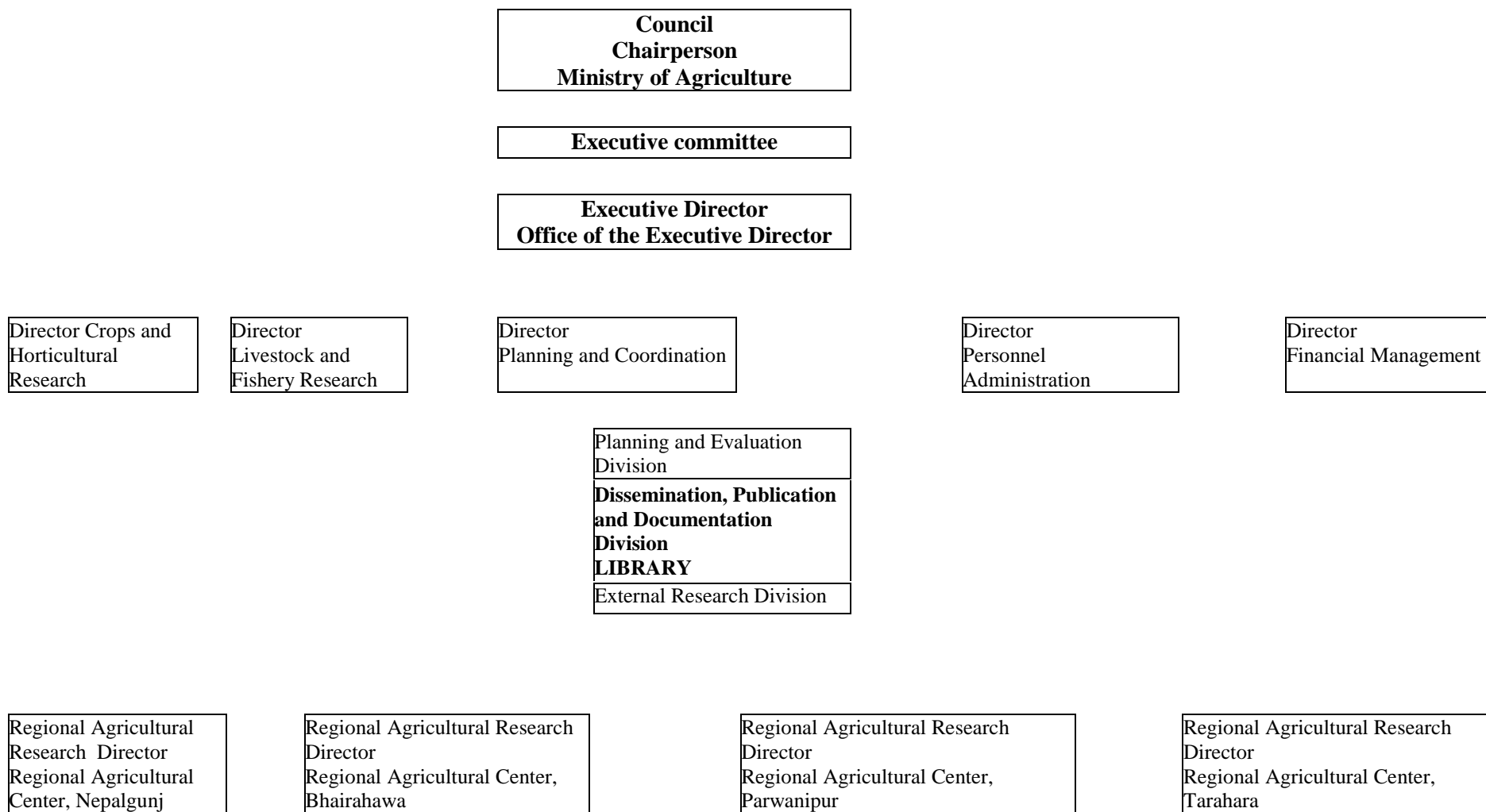
### **Priorities of NARC**

NARC research priorities include the problems and immediate needs of farmers and other user groups. The present priorities of the NARC research programs are outlined below (NARC, 2006):

- Varietal improvement/development of crops and horticulture including pasture, forages and crops of high commercial value
- Breed improvement/development of livestock and fisheries
- High-value commodities (citrus, apple, off-season vegetables, vegetable seeds, sericulture and apiculture)
- Integrated plant and livestock nutrient management
- Post-harvest storage, handling and value addition
- Integrated pest and disease management for crops, horticulture, livestock and fisheries
- Natural resource management through agro-forestry and soil conservation
- On-farm water management and resource conservation technologies (RCTs)
- Development of technologies with competitive and comparative advantages
- Application of biotechnology to crops, horticulture, livestock and fisheries
- Genetic resource conservation and utilization
- Socio-economic and gender-related research

- Policy and market research

Among several priorities areas, NARC has the functions of prioritizing the research activities in the related areas. Additionally, NARC also has the objective of documenting the research activities. Therefore, the documentation center at NARC should serve this purpose. The documentation center was established in order to enhance the research activities in the respective areas. The organogram of NARC is given in Figure 2.



**Agro-Ecological Sites**

Figure 2: Organizational structure of NARC



### **Research institutes**

In order to generate appropriate agricultural technology and professional skill, NARC, at present, has two (2) research institutes:

- (a) National Agricultural Research Institutes (NARI)
- (b) National Animal Science Research Institute

To identify the problems of the farmers, agri-entrepreneurs and other clients in different regions and generate agricultural technology suitable for the different agro-climates, NARC, at present, has four regional stations with a regional Director in each. In addition to these, NARC has sixteen ARCs to help as testing sites for the research programs.

### **Collection**

Documentation center of NARC has a collection of books in about 5,000. It also houses about 8,000 documents. The documentation center also has 284 journals. In addition to these books and journals, the online journals are available in the library and researchers from various parts of the country use this library. This documentation center also receives reports from other institutions but have to buy the books and journals. The reports have not been classified yet.

Students (of agriculture, and biotechnology) and researchers from various parts of the country use this library. The documentation center is a unique literature collection and information service developed by NARC. It provides services to students, teachers, researchers, professional communicators and others who are interested in communications related broadly to agriculture, food, natural resources and rural affairs. Most of them contain agriculture-related books and references. The collection contains the materials related to specific communications skills. The users may use the documentation center to explore the unique professional issues of this field, to plan and carry out stronger communications programs, and to focus your efforts on top-priority goals.

Kent (1986, p.127) mentions that the majority of agricultural libraries can be divided into three large categories: those associated with governmental agencies such as ministries of agriculture; libraries serving agricultural colleges and experiment stations affiliated with them; and document centers or special libraries designed to support the research work of industrial firms or privately supported research agencies. In addition, there are a few libraries serving internal organization.

Scientific agriculture began to receive attention in Nepal in the latter part of the nineteenth century. The beginning of the twentieth century witnessed the establishment of agricultural research institute in Nepal. It was only after the establishment of NARC that rapid strides were made in the advancement of scientific agriculture. More than 7 divisions/centers are functioning under NARC at present.

Based on the concept of fullest integration of research, education, and extension, there are institute of agriculture and animal science. There are at present about some agricultural colleges and with some of them having facilities for graduate and postgraduate training. The investment in agricultural research and education has shown a marked increase in recent years.

This documentation center is following DDC classification schemes for classification of the books. It follows WINNIS, a computer software program for listing books. The books were classified by employing library professionals from on contract basis.

This documentation center has more than 200 theses on different topics submitted by the personnel of NARC as well as others related to agriculture field.

### **Budget**

Although some amount of budget is allocated for the library, the staffs in NARC are not willing to tell the exact figure the documentation spends each year in the purchasing of books and so on.

### **Library Professionals**

Only three persons are involved in the documentation center. Among them, one semi-professional and 2 are non-professional.

### **Services**

NARC documentation center is automated. It provides the computerized database. All members of the NARC are allowed to borrow the books from this documentation center.. They may borrow the books for two weeks from the library. However, all the visitors can use the materials as the reading materials. The documentation center also displays a list of new arrivals. The main library services are Internet and email, reprography, news clipping, search, current awareness services,

selective dissemination information service, exchange photocopy service, printing service, exhibition and conference service, video film service, etc.

AGRIS and CARIS are two worldwide cooperative information systems in which member countries as well as international and regional search centers cooperate and share agriculture information in support of agricultural research and developing activities. The AGRIS and CARIS network centers in almost universal and recognized as the world's largest multi lingual information network, both established and coordinated by FAO of United Nations.

TEEAL (The Essential Electronic Agriculture Library) is also called library in box. NARC library has collection of CDs of TEEAL of (60 types of journals with their full texts from 1993 to 1999).

### **Library hours**

Documentation center NARC documentation center is an organ of NARC which is under the Department of Agriculture, Ministry of Agriculture. Therefore, its opening time is decided by the Ministry, which is as follows:

Summer: 10 AM – 5 PM

Winter: 10 AM – 4 PM

### **Resource sharing with other documentation centers**

Documentation center of NARC documentation center shares the items with other documentation centers. It gives the gifts to other documentation centers and also receives other instead. It is reported that they shares the books, journal and other kinds of reports with other documentation centers. Sometimes it also shares the kits with other documentation centers. Additionally, it participates in the activities of cooperation and resource sharing.

### **Physical facilities**

NARC documentation center also has facilities of the library space. The reading capacity is only about 25-30 seats. The documentation is also characterized by the facilities such as photocopy, computer, camera, online journals, and tape recorder.

### **3.3 Ministry of Environment**

#### **Background**

It is the fact that science related activities has been begun since the studying period of science subject in Trichandra College in 1919 in Nepal. After that the teaching of diploma level and masters degree began in 1940 and 1965 respectively in Nepal, and then science and technology reformation research and to do hand to development on that field in international level, there is the establishment of National Science and Technology council under National Planning Commission in 1976 A.D., NAST in 1979. Ministry of Science and Technology was instituted on 2053/02/02 BS (15 April 1999 AD) to make coordination amongst all the bodies to perform the functions related to science and technology in the process of national development and to effectively accelerate the activities relating thereto by creating a conducive environment for the proper development of science and technology.

The historical development of science and technology identifies two periods. Ancient history dominated by traditional science and technology before 1950 and modern history dominated with the adoption of modern science and technology after 1950. The year 1950 had been the landmark year since it was after this that Nepal formally opened up to the outer world. The review of current institutional capacities starts from Science and Technology in schools, through vocational education and up to higher education in universities (Pokhrel, 2008).

The major objectives of the Ministry are to:

1. Promote environmentally sustainable economic development of the country.
2. Identify a new technology through the development and promotion of research activities in the field of science and technology and contribute to achieving the national objectives regarding poverty alleviation by developing appropriate and new technology through the research.
3. Develop and promote traditional indigenous technologies.
4. Encourage the intellectual groups working in the field of science and technology by creating appropriate opportunities.

Three Year Interim-plan talks about environment, science and technology mentions about it in the following paragraph (2007, p.13-14) in the following words:

The environmental impact assessment work, as specified by environment law, has been internalized in order to embed environmental management with

development works. Work of producing human resources by including environmental education from primary level to university level has been carried out. Environmental standards is operational in order to reduce and manage vehicle emission and industrial pollution. Work has been initiated to gain benefit from clean development mechanism under the Kyoto Protocol. Similarly, rural information centers have been established in various part of the country. Science and Technology policy has been revised, and various legal and institutional mechanisms including Biotechnology Policy, Rural Energy Policy, Electricity Trading Act and regulation, have been established. For the first time in Nepal work for DNA testing has started. In the alternative energy sector, some 170 thousand biogas plants have been established, 9.5 MW hydro electricity produced, 81 thousand solar home systems installed, and 213 thousand improved cooking stoves built. Similarly, renewable energy subsidy policy and procedures has been implemented, and 5.1% of the people are getting electricity service from alternative energy. Despite the above mentioned achievements, environmental aspects have not been able to receive priority in program implementation due to inter agency coordination. It is seen that in the sector of science and technology, research, development, and use of appropriate technology should be used in accordance with the country's needs.

Policy of Interim plan (2007) are given below:

In order to face the problems and challenges in this sector, to maintain a healthy environment by making environmental management effective, and to attain sustainable development through wise use of natural resources, and to raise Nepali people's living standard through development and use of science and technology, the following main

policies will be adopted:

- By emphasizing conservation of natural environment, rehabilitation and sustainable use, water, air and noise pollution reduction methods will be implemented.
- By implemented the country's international commitments and conventions, treaties and agreements to which Nepal is a party, projects related to Clean Development Mechanisms will be promoted.

- By strengthening environmental good governance, local bodies will be strengthened and implementation of environmental management works will be emphasized.
- By creating clarity in the role and responsibility of various agencies involved in institutional development for environmental management, infrastructure related development works will be made environment-friendly.
- Encouragement will be provided to carry out feasibility studies for alternative fuel development including bio-fuel.
- Special priority and assistance will be provided for use of environment friendly fuel.
- Rural people's lives will be improved through development of alternative energy system.
- The access of information technology in rural regions will be increased by mobilizing private sector in the information technology sector.
- People's standard of living will be increased through development, improvement and use of science and technology.

This Ministry has, after the dissolution of the Ministry of Population and Environment on 2061/12/18 B.S. (31 March, 2005 A.D.) and the merge of the Environment Division of the said Ministry in this Ministry, been named as "Ministry of Environment, Science and Technology". The Ministry of Environment, Science and Technology was later split into Ministry of Science and Technology and Ministry of Environment. However, there is a single documentation center when there was 'Ministry of Environment, Ministry of Science and Technology and after the split into two ministries, the documentation center is located within Ministry of Environment. Since the objectives, functions and activities are not available, they are not included in this section. The documentation center is now situated within Ministry of Environment and this is referred to as the documentation center of Ministry of Environment. The organizational structure of Ministry of Environment is shown in Figure 3.

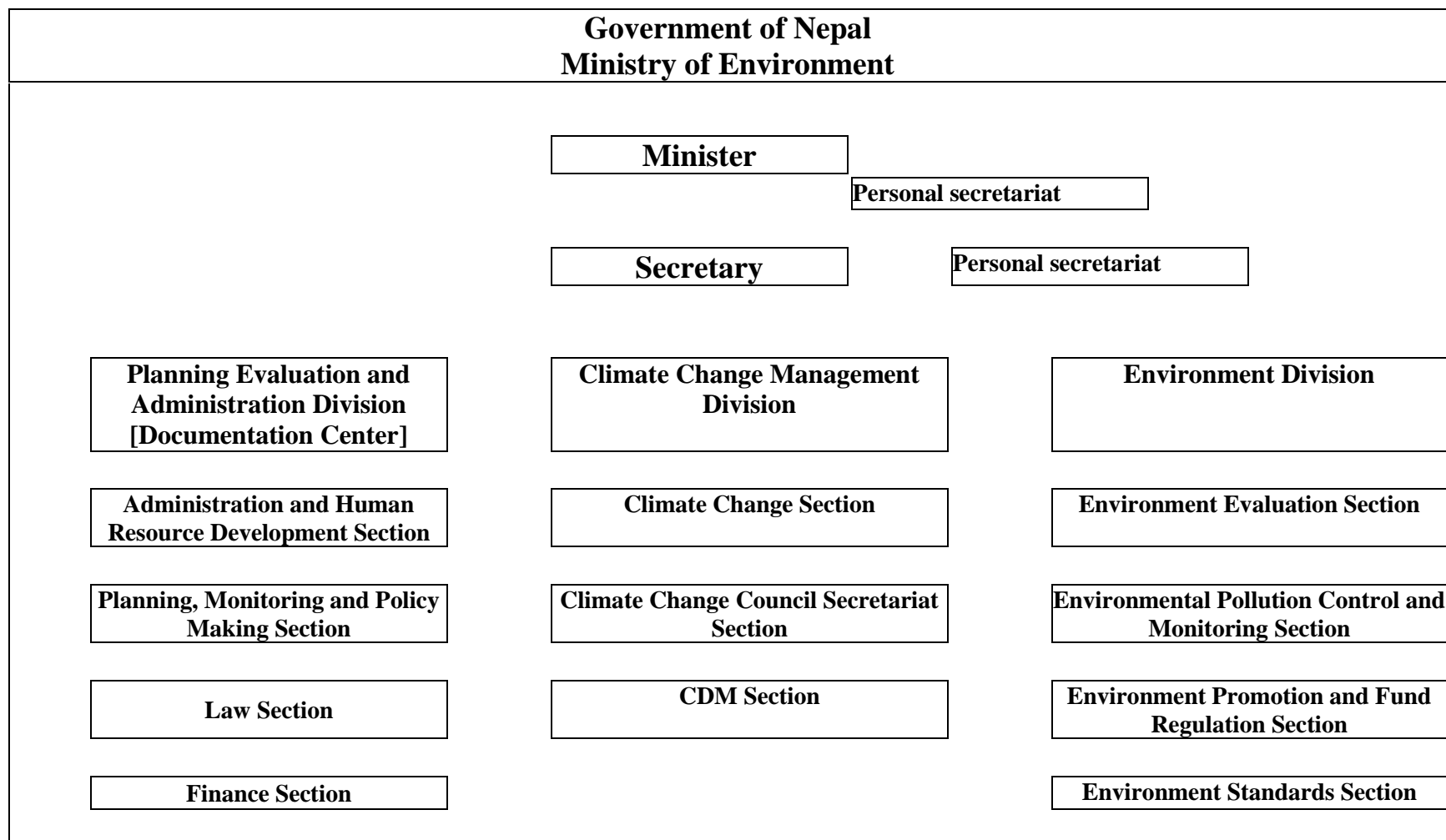


Figure 3: Organizational structure of Ministry of Environment

## **Collection**

The ME documentation center, located in the Ministry of Environment has a total of 4000 volumes of books and other materials. In addition to this, there are other 3,000 volumes of monographs (and books). The documentation center also has 40 journals, and 43 reports. This documentation center has some the national daily newspapers. This documentation center has the specialization on:

- Environment
- Science-event
- Forestry

This documentation center also has a computerized database and the users actually utilize the resources the materials available in the documentation centers.

## **Technical processing**

This documentation center is following DDC schemes of classification and the code it is following is AACR. It follows Microsoft forms. The other technique to search is searching by computer. It also has computerized database and researchers and other users use them when they visit the library.

## **Budget**

The budget is annually allocated for the purchasing of books and materials for this documentation center. For example, NRS 2,00,000.00 was allocated for the library in the fiscal year 2065-67 and 1,50,000.00 for the fiscal year 2066-67 respectively. The library professional say that the allocated budget for the documentation center is inadequate.

## **Library Professionals**

The documentation is run simply by one library professional. It seems that the documentation center severely lacks some library professional and semi-professional.

## **Services**

ME documentation center is automated. All members of the documentation centers are allowed to borrow the books from this documentation center. All the members in general and researchers in particular borrow the books from the



documentation center. The duration of the borrowings is unlimited. Any Ministry staff is allowed to use the library. However, all the visitors can use the materials as the reading materials. The documentation center also displays a list of new arrivals. The other library services are Current Awareness Service, Abstracting and Indexing.

### **Library hours**

ME documentation center is an organ of Ministry of Environment Science and Technology. Therefore, its opening time is decided by the Ministry which is as follows:

Summer: 10 AM – 5 PM

Winter: 10 AM – 4 PM

### **Resource sharing with other documentation centers**

ME documentation center shares the items with other documentation centers. It gives the gifts to other documentation centers and also receives other instead. It is reported that they shares the books, journal and other kinds of reports with other documentation centers. Sometimes it also shares the kits with other documentation centers. Additionally, it participates in the activities of cooperation and resource sharing.

### **Physical facilities**

ME has facilities of the library space, approximately 2000 sq. meters. Users' space covers about 500 sq. meters and reading capacity is only about 20 seats. The documentation center lacks the facilities such as photocopy, computer and online journals. Although we made attempts to obtain the services such as availability of camera, tape recorder and so on, there were not available at present.

The summary of current status and services of these documentation centers are summarized in Table 1.

Table1: Comparison of the documentation centers

		Documentation Centers		
	Facilities	NAST Doc.	NARC Doc.	ME Doc.
1	Established year	1982	1991	-
2	Size of collection	13,000	13,500	7,900
3	Newspapers			
	National Dailies	9	12	-
	National Weeklies	5	-	-
		Times of India	-	-
4	Technical processing			
	Classification scheme	DDC	DDC	DDC
	Cataloguing code	Bibliographical database	WINIS	AACR
5	Budet (2066-67)	3,20,000.00	-	1,50,000.00
6	Document loan	Only to NAST staff	Only to NARC staff	Only ME staff
7	Specialized areas	Science Technology Agriculture	Agriculture Botany Bio-technology	Environmental Science Forestry Water Resource
8	Main users	Researchers Students	Students Teachers Researchers	Administrative staffs
9	Library staff			
	Professional	1	-	1
	Semi-professional	3	1	-
	Non-professional	1	2	-
10	Services	SDI, CAS, Current content, Technical inquiry service, PERI resources, Internet, Display of new arrivals, Xerox	SDI, CAS, Internet, Display of new arrivals, News clippings, TEEAL	CAS, Abstracting, Indexing, Display of new arrivals,
11	Physical facilities			
	Number of seats	10	25	20
	Photocopy service	Yes	Yes	No
	Online journals	Yes	Yes	No

The sign (-) indicates that the information is not available.

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## **CHAPTER 4**

### **RESEARCH METHODOLOGY**

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically (Kothari, 1990, p. 10). The methodology in this study includes observation, questionnaire, and interview techniques.

#### **4.1 Research design**

A research design is a strategy decided upon by a researcher for his own guidance for determining answers to research questions (Kumar, 1999). A research plan is a procedural plan adopted by the researcher to answer questions validly, objectively, accurately and economically (Kumar 1999, p. 74). Kerlinger (1986, p. 279) notes:

A research design is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems. The plan is the complete scheme or program of the research. It includes an outline of what the investigator will do from writing the hypotheses and their operational implications to the final analysis of data.

Thyer (1993, p.94 as cited in Kumar 1996, p.74) notes:

A traditional research design is a blueprint or detailed plan for how a research study is to be completed- operationalizing variables so they can be measured, selecting a sample of interest to study, collecting data to be used as a basis for testing hypotheses, and analyzing the results.

As mentioned above, the research designs have main two functions, i.e. identification and/or development of procedures and logistical arrangements required to undertake a study and to emphasize the importance of quality in these procedures to ensure their validity, objectivity and accuracy.

This is a comparative study design as it seeks to compare the status and effectiveness of documentation centers in the Kathmandu valley. As Kumar (1996, p.94) points out it is a non-experimental comparative study design. Different variables of the documentation centers are compared to show the effectiveness among them. The researcher wants to compare the status and users' satisfaction in three different

documentation centers in the Kathmandu valley related to science and agriculture. Then the status and users' satisfaction of the documentation centers are compared and contrasted.

When a researcher compares the effectiveness of different treatment modalities, a comparative design is appropriate (Kumar 1999, p.94). Thus the study is comparative, descriptive and analytical. The opinions of administrative personnel and library professionals were interviewed for this purpose. Both primary and secondary data were collected for carrying out this research.

This research compares the status and services of three documentation centers related to science and technology. To undertake the study, the status and services of the documentation centers are compared. The differences in the status and services, user satisfaction are compared to find out the effective delivery of services among these documentation centers.

#### **4.2 Population**

This is a comparative study of status and services of the three documentation centers. Users of these documentation centers and administrative staffs were the population selected for this study. The population comprises the total users during December 2010 and January 2011 as well as the library staffs of these documentation centers. The documentation centers include the NAST documentation center, NARC documentation center and ME documentation center.

#### **4.3 Sampling procedure**

Simple random sampling is the technique used for this study. The researcher has distributed 59 questionnaires to the users and 6 library staffs of the concerned documentation centers. Most of the users have filled up the questionnaires enthusiastically without any hesitation after they were explained the purpose of this study. Out of 59 questionnaires distributed to the users, only 51 questionnaires have been returned. Several follow up request was made for this purpose. All these 51 returned questionnaire were included in this study.

The researcher has also distributed 6 questionnaires to the library staffs of these documentation centers. A total of 6 questionnaires have been filled up and returned. These questionnaires have also been included in this study.

Questionnaire that were designed and developed for collecting the necessary information complete this research work. Questionnaire is a written document listing series of questions that shows the pertaining problem under study, to which the research requires the answers (Kumar, 1992). The questionnaire that has been distributed for the collecting the data consists of twenty items organized into seven sections. They are as follows:

Section A: Personal information

Section B: User needs

Section C: Collection

Section D: Services

Section E: Library rules

Section F: Users' satisfaction

Section G: General suggestions

Regarding the information related to the documentation centers the questionnaire was prepared to elicit basic information. The questionnaire which has been used for interview with the librarians contains the following kinds of information:

Section A: Documentation center details

Section B: Documentation center management

Section C: Collection

Section D: Services provided

Section E: Library rules

Section F: Resource sharing with other documentation center

Section G: Physical facilities

Section H: General suggestion

#### **4.4 Data collection procedure**

Although the study is primarily based on the primary data, both the primary as well as secondary data were used for this study. The primary data were collected using structured questionnaire given in Appendices (I and II). There are two sets of questionnaires: questionnaire for the library professional (Appendix II) and the other set of questionnaires was for the library users (Appendix I). The questionnaire for the library staffs has been filled up in order to obtain various sorts of information related to the documentation center. The secondary information was collected by means of

booklets, journal articles, theses, reports and official publications. The records (such as annual reports, booklets and brochures) were used for the activities and role of documentation centers.

Similarly, another set of questionnaire was used to obtain the information related to the documentation centers, their effectiveness as well as the users' satisfaction. The researcher herself has visited the field sites and has requested them to fill up the questionnaires.

The objectives of the study were considered while preparing the questionnaires. In selecting a method of data collection, the characteristics of the population play an important role. Some populations, for a number of reasons, did not feel at ease with the kind of method of data collection, such as filling up the questionnaire. In order to obtain the reliable data, the purpose of the study was explained to the respondents. It has been done so to make them understand the purpose and relevance of the data collection.

#### **4.5 Data analysis procedures**

The data presented in this study includes the 51 users and 6 library staffs from three documentation centers. The filled up questionnaires were checked to remove the possible errors and inconsistencies. The collected data were tabulated, presented and analyzed by using simple statistical tools using arithmetic techniques such as calculation of percentage, addition, division, estimation, etc.

The basic information of this study is the status and services provided by the scientific documentation centers provided NARC, NAST and ME documentation centers. Although the informants were chosen to represent a broad range of users of these documentation centers and types of academic employee, as well as of graduate and undergraduate students and faculty, the selection of informants is not considered to be a representative sample of the community.

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## CHAPTER 5

### DATA ANALYSIS AND PRESENTATION

The data required for this research have been collected by means of two sets of questionnaires. The next phase of the research is to arrange, sum up and synthesize the data thus collected. The collected data have been organized, summarized, synthesized to arrive at the results and conclusions of this research. The collected data have been presented and interpreted in this section.

This section consists of two broad sections. Sections (5.1-5.7) present the information obtained from the library users and section (5.8) presents some comparative analysis of these centers based on the respondents of library staffs.

A total of 59 questionnaires have been distributed to the users of the respected documentation centers. Among the 59 questionnaires distributed, only 51 questions have been returned by the respondents which are 86% of the questionnaire. Table 2 shows number of questionnaires distributed and returned by the respondents.

Table 2: Number of questionnaires distributed and returned by respondents

SN	Documentation centers	No. of questionnaire distributed	Number of questions returned	
			No.	%
1	<b>NAST</b>	23	20	86
2	<b>NARC</b>	23	20	86
<b>3</b>	<b>ME</b>	13	11	84
Total		59	51	86

*Source: Field survey 2067*

Table 2 shows the number of questionnaires distributed to the respondents and returned by their librarians. It shows that the users in NAST and NARC documentation centers returned 86% of the questionnaires whereas the respondents in ME returned only 84 % of the distributed questionnaires.

In addition to 51 respondents, 6 library staffs, 4 library staffs from NAST documentation center, 1 from NARC documentation center and 1 from ME documentation center have also been interviewed using the questionnaire given in Appendix (II). Some information obtained from then has been included in 'Focus of the Study'. Some other information related to library status and service has been presented in (5.8).

## 5.1 Personal information

### Users' sex

There are many more male users than female users. The ratio is more than 3 to 1. This shows that the users of the documentation centers are predominantly male. This is shown in Figure 4.

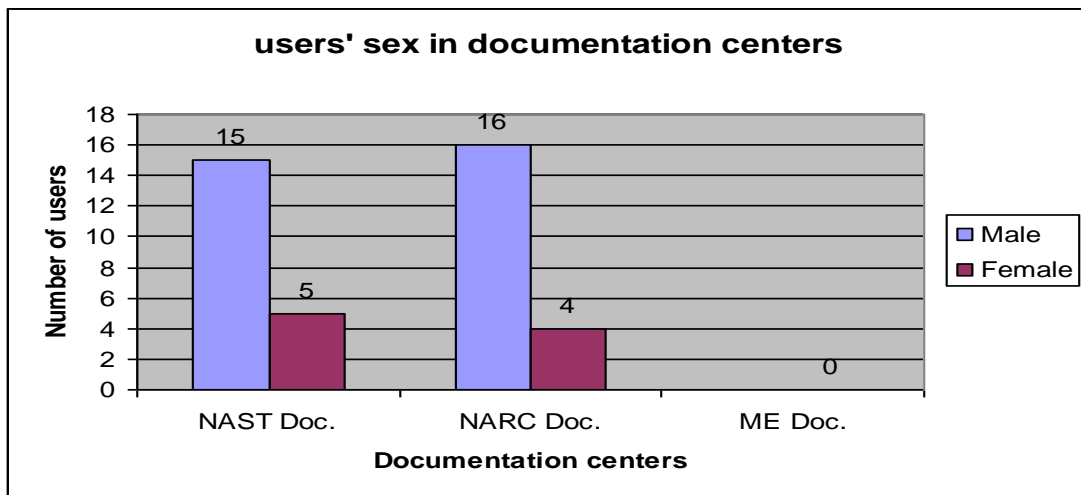


Figure 4: Users' sex in documentation centers

Figure 4 (related to section A) shows the users of these documentation centers. In terms of sex, most of the users are male. It is very high compared to female users which occupies only 18 % of the total respondents. It is also indicative of the fact that greater numbers of male are involved in the information seeking process. It is also indicative of the fact that less number of women, and in some documentation number is completely absent, participate in the information seeking process. This is shown in Figure 4.

### Qualification of the users

The information seeking behaviors of specific groups may also be applicable to all professionals. In this context, the researcher has tried to obtain the qualification of the respondents of these documentation centers. Specific respondents might have specific kinds of purposes and information seeking behaviors. Personal information of the people in terms of academic qualification is therefore presented in Table 3 (related to section A). The table shows the number of 'visitors' who use these documentation centers intending to use their books or special facilities. On the whole it is seen that the respondents who have Master's degree are greater in number followed by the respondents who have Bachelor's degree. However, 20% of the users have PhD degree.

Table 3: Qualifications of the users

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
PhD	6	30	4	20	-	-	10	20
Masters	11	55	8	40	6	54	25	50
Bachelors	1	5	8	40	5	45	14	27
Intermediate	2	10	-	-	-	-	2	4
SLC	-	-	-	-	-	-	-	-
<b>Total</b>	20		20		11		51	

Source: Field survey 2067

Table 3 shows that the 30% of the respondents with PhD degree are with NAST documentation center and 20% with NARC documentation center. In terms of the number, NAST documentation center has the highest number of respondents who visit the documentation center.

NAST documentation center again stands at the top in terms of the respondents who have Master's degree in the respective areas. 55 % of respondents have Master's degree of science in NAST documentation center followed by NARC documentation center which simply has 40 % of respondents who have Masters' degree. On the other hand, ME documentation center does not have any users who

have PhD degree. Because some respondents (administrative staffs etc) also visit the library for reading journals, they do not use the main library collection.

On the basis of information in Table 3, we know may draw the conclusions such as (a) people of different job categories visit and use the library, (b) The composition of the user population shows that the researchers to be the largest users, and (c) The people who have held the Bachelor's groups are the next major users. The users' qualification is also shown in Figure 5.

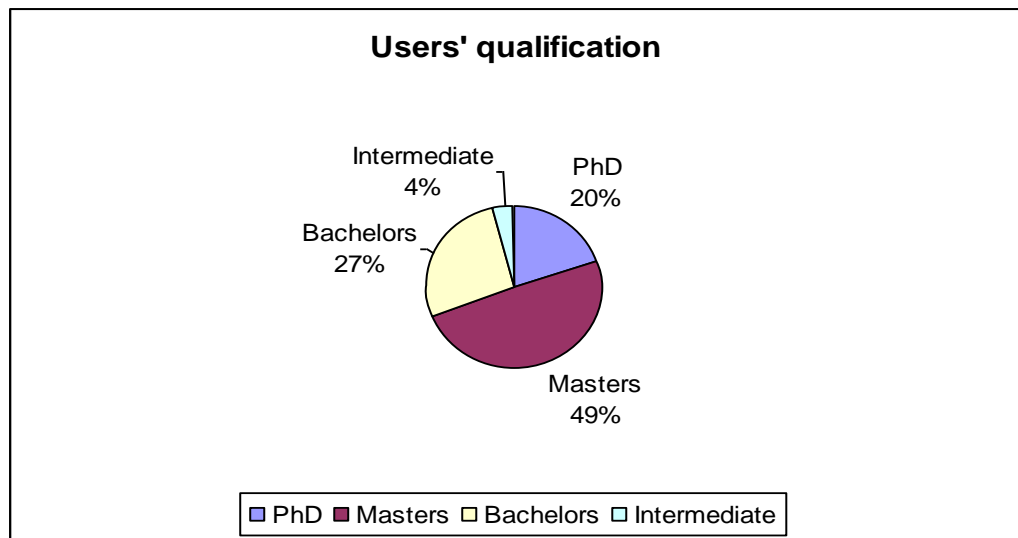


Figure 5: Users' qualification

### Users positions

Users' positions in all the documentation centers are listed in Table 4 (related to section A). NAST documentation centers have the greatest number of PhD scholars. 60% of users in NARC documentation center are students. It is the greatest number of users in NARC documentation center. On the other hand, 28 % of the users which is also the greatest number of users in ME documentation centers are researchers.

Table 4: Users positions

<b>NAST Doc.</b>	No.	%	<b>NARC Doc.</b>	No.	%	<b>ME Doc.</b>	No.	%
Research assistants	2	10	Soil Scientist	1	5	Agriculture economist	1	9
Researchers	3	15	Students	12	60	Section officer	1	9
Senior scientific officer	2	10	Senior scientist	5	25	Chemistry	1	9
Office assistant	1	5	PhD scholar	1	5	Researchers	3	28
ARF	1	5	Technician	1	5	Students	2	18
Technical officer	1	5				Non-gudgeted officer	2	18
Officer	1	5				Senior Divisional engineer	1	9
PhD scholars	5	25						
Scientific officer:	1	5						
Program officer	1	5						
Promotion officer	1	5						
Computer operator	1	5						
<b>Total</b>	<b>20</b>			<b>20</b>			<b>11</b>	

Source: Field survey 2067

## 5.2 User needs

The understanding of information needs and information-seeking behavior of various professional groups is essential as it helps in the planning, implementation, and operation of information system, and services in work settings. If academic librarians are to realistically serve academic researchers, they must recognize the changing needs and variations in information gathering and provide services that would be most useful.

Tahir, Mohammad Khalid and Farzana Shafique (2008) note:

The present era is called the "Information era." Information has become the most important element for progress in society. To thrive in this modern era, one needs a variety of information, no matter how well versed one is in a field or profession. Questions that provoked this study include: What constitutes a need for information? What people think at that particular time? What actions people take? and what problems are faced while seeking the information ? Retrieved December 10, 2010, from <http://www.highbeam.com/doc/1G1-200184521.html>.

The information seeking behaviors of specific groups may be applicable to all professionals. The model has developed through the specific professional groups: agriculture engineers, agriculture scientist and scientist. The evaluation is done considering six components. These components are (1) work roles, (2) associated tasks, and (3) characteristics of information needs and three factors affecting information seeking: (4) awareness, (5) sources, and (6) outcomes. In turn, each component contains a number of variables that are described with examples from the literature.

Leckie, Pettigrew and Sylvain (1996, p.180) propose the model for professionals of all groups. The basic supposition of the model is that the roles and related tasks by the professionals in the course of the daily practice. They are in particular information needs which in turn give rise to an information seeking processes. However, the information-seeking is influenced by a number of variables which affect the outcome.

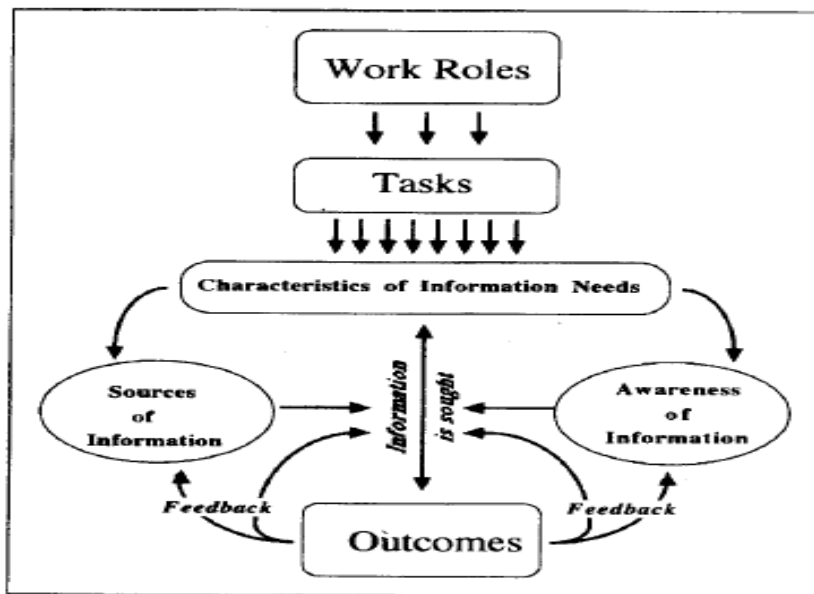


Figure 6: A model of the information seeking of professionals  
(Leckie, Pettigrew and Sylvain 1996, p.180)

As shown in Figure 3 (related to question no. 1), people of different occupational categories have different kinds of needs. For the purpose of this study, six options have been given to the users about their visiting the documentation centers. They have been asked as many purposes as are applicable. From this

question, we can determine the fraction of all visitors who perform one or more of any of the tasks included in the questionnaire. The responses of the users are presented in Table 5.

Table 5: Purposes of visiting documentation centers

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. For current and updating approach	10	34	4	17	4	28	18	26
b. For teaching purpose	-	-	-	-	-	-	-	-
c. For research purpose	12	40	7	31	3	21	22	32
d. For study of own related subject	4	14	6	26	4	28	14	20
e. To borrow books	3	10	3	13	-	-	6	8
f. For all purposes	1	2	3	13	3	21	7	10
<b>Total</b>	<b>30</b>		<b>23</b>		<b>14</b>		<b>67</b>	

Source: Field survey 2067

Among the people who visited the documentation centers, purpose of 32% people is to find the reference materials for the research works. The researchers are the user groups of these documentation centers. This is followed by the people who use the library for current and updating approach. This group of people consists of 26% of the users. It should be noted that no visitors go to these documentation centers for the purpose of collecting reference materials for classroom teaching purposes. These documentation centers thus serve the purpose of a specific group of readers. It thus indicates that the documentation centers are for special readers and they have specific objectives.

Users' needs vary across these documentation centers. For example, 40% respondents go to the NAST documentation center for the purpose of research. The same is true for the NARC documentation center. On the other hand, 28% of respondents go to ME documentation center for two purposes: for current and updating approach and for study of own study approach.

### **Frequency of documentation center visit**

The purpose of their visiting the library may determine the frequency of their visit. In order to check how often they visit the library, the respondents have been given five options. They have been asked what actions are performed during their visits. Their responses are presented in Table 6 (related to question no. 2).

Table 6: Frequency of documentation center visit

	NAST Doc.		NARC Doc.		ME Doc.		Total	
		%		%		%		%
a. Daily	9	45	6	30	-	-	15	29
b. Twice a week	-	-	2	10	4	36	6	12
c. Weekly	3	15	2	10	2	18	7	14
d. Twice a month	2	10	1	5	3	27	6	12
e. Often	6	30	9	45	2	18	17	34
Total	20		20		11			

Source: Field survey 2067

Table 6 shows that 34% of the respondents have reported that they 'often' visited the documentation centers followed by 29% respondents who have visited the documentation centers 'daily'.

The frequency of respondents' visits across these documentation centers varies to some extent. 45 % of the researchers use NAST documentation center for the purpose of finding materials for their research work, whereas no respondents have replied that they visited the NAST documentation center 'twice a week'.

Similarly 45% respondents 'often' visit the NARC documentation center. And, 36% respondents visit the ME documentation center twice a week. The reasons why the respondents do not go to visit the ME documentation center may be complex. However, its management may be one of the reasons for this. It is also obvious that ME is located in the premises of main administrative building of Nepal Government and visitors have to pass through tight security channels. In addition to other factors, it may be a reason why the visitors find this documentation center difficult to reach.

The behaviour of scientists, agriculture professionals belonging to agriculture and animal science as well as agriculture engineering has been considered in this survey. They are specialists, trained at a university level in the numerous area of



science, agriculture and animal science. The numerous work roles assumed by them can lead to different information needs. Therefore, they have been asked to respond about the kind of information they need. Users' needs are presented in Table 7. This is also shown in Figure 7.

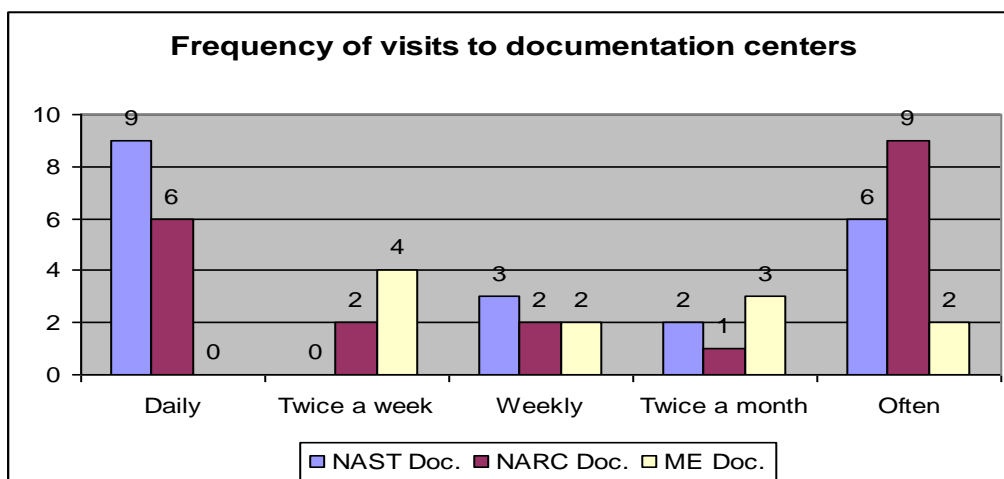


Figure 7: Frequency of visits to the documentation centers

Thus, there is a correlation between the purpose of visit and frequency of visit. In other words, information seeking behaviors of specific groups is applicable to all professionals. This is shown in Table 7 (related to question no. 1 and 2).

Table 7: Correlation between the purpose and frequency of visit

	NAST Doc.	NARC Doc.	Total
For research purpose	12	7	19
Daily	9	4	13
%	75	57.1	68

Source: Field survey 2067

There is a correlation between the respondents' needs and their frequency of visit. As Table 7 shows, 75% of the respondents who are involved in research go to the NAST documentation center daily. Similarly, 57.1% respondents, which are more than half of the total respondents in NARC documentation center involving in research work, visit the documentation 'daily'. It can therefore be concluded that there is a correlation between the information need, and frequency of information search. It

is further supported by the fact that 68 % of the total users in average visit these documentation centers.

### **5.3 Collection**

#### **Collection**

Depending upon the nature of the supporting organization, the special library collection may contain a variety of forms such as reports, theses, periodicals, drawings, illustrations, photographs, maps, monographs, treaties, official publications, company reports and accounts, reviews, handbooks, manuals, encyclopedias, yearbooks, dictionaries, handbook manuals, yearbooks, bibliographic reference materials, biographical reference materials, abstracting and indexing sources and services, current awareness periodicals and service, citation indexes, periodical lists etc (Khanna, 1994, p.95).

The first of Library Collection Development is the process of planning and acquiring a balanced collection of library materials of many formats, including books, periodicals, online resources, and other media. Collections are developed by librarians and library staff by buying or otherwise acquiring materials over a period of time, based on assessment of the information needs of the library's users. In addition to ongoing materials acquisition, library collection development includes:<sup>1</sup>

- (a) the creation of policies to guide material selection
- (b) replacement of worn or lost materials
- (c) removal (weeding) of materials no longer needed in the collection
- (d) planning for new collections or collection areas
- (e) cooperative decision-making with other libraries or within library consortia

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<sup>1</sup> Retrieved December 11, 2010, from [http://en.wikipedia.org/wiki/Library\\_collection\\_development](http://en.wikipedia.org/wiki/Library_collection_development).

Table 8: Collections

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Texts and monographs	2	4	6	12	4	18	12	10
b. Dictionaries	5	9	2	4	-	-	7	6
c. Encyclopedia	4	8	4	8	1	4	9	7
d. Handbooks	2	4	4	8	1	4	7	6
e. Journals/periodicals	13	25	11	21	4	18	28	23
f. Magazines/ newsletters	12	23	9	17	6	26	27	22
g. Patents	-	-	-	-	-	-	4	3
h. Progress reports	3	6	1	2	-	-	2	1
i. Government official publication	-	-	2	4	1	4	17	14
j. Scientific reports	8	15	8	15	2	9	2	1
k. Standards	1	1	-	-	1	4	2	1
l. Treaties	-	-	-	-	1	4	1	0
m. Database information	3	5	5	9	2	9	7	6
<b>Total</b>	53		52		23			

Source: Field survey 2067

The respondents have been asked the question (related to question no. 3) to check which materials they use in the documentation center. The composition of the user population shows that professional journals or periodicals are the most frequently used materials among the library collections. This covers 23% of the total library collection. This is followed by the magazines and newspapers which occupies only 22%. The most frequently used collections are journals/periodicals, magazines/newsletters and government official publications. This fact can be a guide for (a) planning of new collection or collection areas, (b) creation of policies to material selection.

There is again a relationship between the users and their search for information. On the other hand, the use of the collections such as progress reports, scientific reports and standards are negligible, i.e. 1 % each. No users use the treaties in these documentation centers. Only 1 % of the users use progress reports, scientific reports and treaties.

The same trend is seen in the use of the library collection. For example journals/periodicals and magazines/newsletters are the most frequently used materials in NAST documentation center. 25% respondents have replied that they have used the

journals/periodicals and 23% respondents have noted that they also use the magazines. Similar trend is also seen in NARC documentation center. Among the respondents, 21% respondents have said that they use the journals/periodicals and 17% respondents have noted that they use the magazines. However, 26% respondents use magazines and newsletters in the ME documentation center followed by journals/periodicals and textbook and monographs.

**Rate the collection**

It is to be noted that the documentation centers must understand the information needs of the users. As noted earlier, one of the major groups of these documentation centers are the researchers. In order to accomplish their research, they need different sorts of services such as journals/periodicals, government publications and so on. Documentation centers should realize the development policy as discussed earlier.

It is relevant to check the relevance of these collections. The respondents have therefore been asked about the usefulness of these collections (related to question no.4). Indication as to the usefulness of the various sources of information is obtained from the respondents. They have been given four options to indicate whether the collections in these documentation centers are 'very adequate' to 'inadequate'. Their responses are summarized in Table 9.

Table 9: Rate the collection

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Very adequate	-	-	2	10	-	-	2	4
b. Fairly adequate	11	55	6	30	2	18	19	37
c. Adequate	2	10	8	40	3	27	13	26
d. Inadequate	7	35	4	20	6	55	17	33
<b>Total</b>	<b>20</b>		<b>20</b>		<b>11</b>		<b>51</b>	

Source: Field survey 2067

Table 9 shows the rate of the library collection in these documentation centers. The highest % of the respondents, which is also more than one-third of the total respondents, have reported that they found the collection 'fairly adequate'. It is significant to mention that 37% users say that the collection is fairly adequate. On the other hand, the respondents who reported that the collection is 'very adequate' is very low, i.e. only 4%. Despite some limitations of these documentation centers, most of the users find these documentation centers adequate in these documentation centers. This is shown in Figure 8.

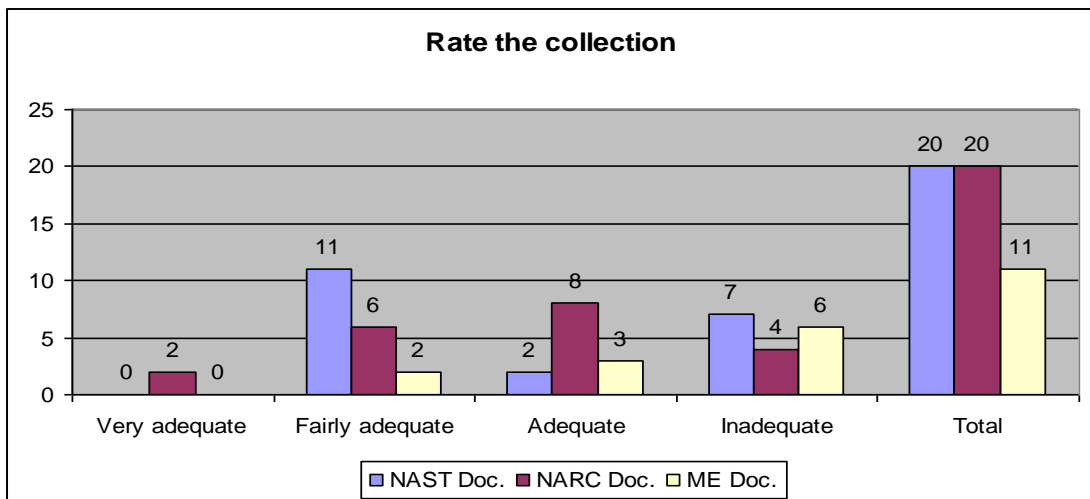


Figure 8: Rate the collection

When we compare the adequacy of the documentation collections, 55% of the respondents which is also more than the half of the population reply that the collection is 'fairly adequate'. Similarly, 40% of the respondents, which is more than one third of the total respondents, who visit NARC documentation center have replied that the collection is 'adequate'. On the other hand, 55% respondents from ME documentation center have replied that the collection is 'inadequate'. In terms of the richness of collection, NAST documentation center is the best of these three and the collection in ME documentation center may be regarded 'not adequate'.

### **Suggestions**

In addition to the information they use in Table 8 (related to question no. 5), the users have given the following suggestions for the improvement of library collections:

**For NAST documentation center**

- (a) Subscription of journal related to every field of science and technology should be subscribed.
- (b) Online access to journal is necessary. They should provide online journals to the users.
- (c) Recent publications related to research should be added.
- (d) International scientific peer-reviewed journals and e-library should be subscribed.
- (e) Recent information about subject related areas should be available.
- (f) Add standard internationally edited books on various subjects in the collection.
- (g) It is necessary to have electronic database of international journals.
- (h) Purchase new edition of books.
- (i) Reference collection must be updated.
- (j) Autobiography of the well-known persons should be added.

**For NARC documentation center**

- (a) The journal facilities are not updated. The journals related to agriculture should be available.
- (b) New journals should be added.
- (c) Periodic journals on crops, vegetables and potato should be subscribed.
- (d) Books of various faculties should be included.
- (e) New electronic materials and international journals should be subscribed.

**For ME documentation center**

- (a) Collect journals on time.
- (b) Environment related books (sustainable development, energy, climate change, waste management, pollution control strategies, land use planning, sustainable agriculture, sustainable tourism, green economy, climate change on mountainous region etc. should be added.
- (c) Add government and scientific journals.
- (d) The library should update recent collection.

The suggestions show that these documentation centers should purchase and update their collections, manage the library well, and electronic libraries and databases. These suggestions help create the policies to guide material selection and plan for new collections and collection areas.

#### 5.4 Services

Special libraries are to provide reading facilities for recreation, academic attainment, and scholarly research and so on. They provide right information to the right readers at the right time in the right amount and in the right form. The main function of the documentation is to file, retrieve, and disseminate information for immediate and utilization purposes (Khanna, 1994).

The respondents have been asked how they got the information from the documentation centers. The question intended to check how they get the information they needed. They have been asked to check as many options as possible in the process of getting information. This is shown in Table 10 (related to question no. 6).

Table 10: Services

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Consulting catalogue	-	-	1	7	2	18	3	5
b. Using computers	2	9	5	17	3	27	10	16
c. Self search	5	23	13	45	5	46	23	37
d. With the help of staff	15	68	10	35	1	9	26	42
<b>Total</b>	22		29		11		62	

Source: Field survey 2067

Table 10 shows that 42% of the respondents locate the information with the help of the staff. Similarly, 37% respondents also locate the information by self search. 16% respondents use the computers to locate the information. Only 5% respondents consult the catalogue to locate the information.

Table 9 also shows that 68% respondents in NAST documentation center searches for the information with the help of the staff. However, the respondents report that they do not consult the catalogue to get the information.

Among the total users, 45 % of the users in NARC documentation center get the information with the help self search which stands at the top. Again, 35% users get the information with the help of the staffs in NARC documentation center. Only 17% users in NARC documentation center use computers to get information. Finally, only 7% get the information by consulting the catalogue in the NARC documentation center. This is shown in Figure 6.

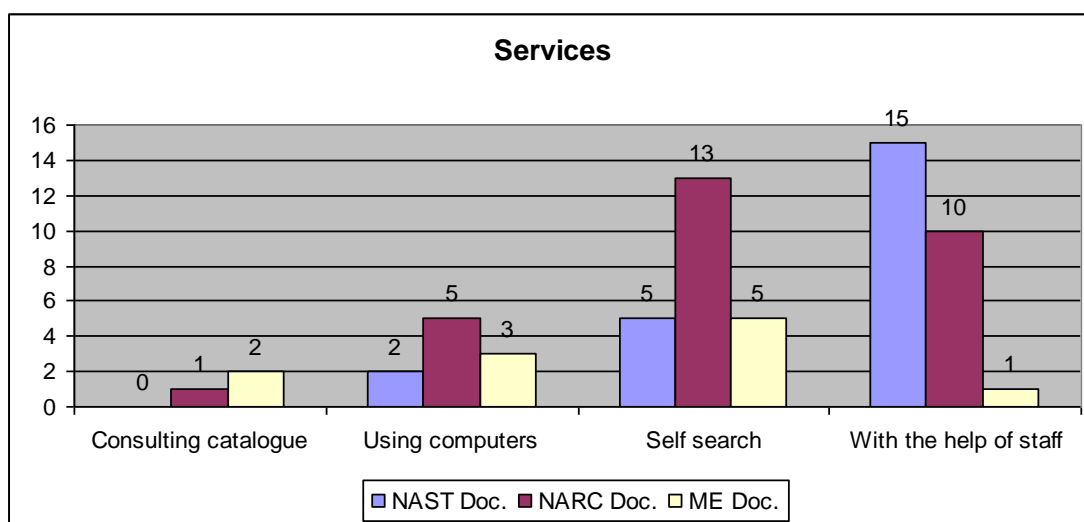


Figure 9: Services

A few libraries consider their task to be that of collecting, managing, and disseminating and preserving the books. Most libraries consider it also their task to make these available to their users. Therefore, the functions of libraries are also to make these books available to their users in a convenient ways.

When we analyze the situation of ME documentation center, we find somehow similar picture. 46 % of the users get the information by self search followed by 27 % users who get the information by using computer. Only 18 % consult the catalogue to get the materials and only 9% users get the information taking the help of staffs.



### Conventional services

Various kinds of conventional services are given in Table 11 (related to question no. 7).

Table 11: Conventional services

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Abstracting and indexing	4	13	9	24	5	24	18	19
b. Translations and reprography	1	3	4	10	-	-	5	6
c. Subjects and bibliography	7	22	4	10	1	4	12	13
d. Review, digests, state of the art report	6	18	1	3	2	10	9	10
e. Current awareness services	4	13	-	-	1	4	5	6
f. Display of new books	7	22	14	37	6	29	27	29
g. Exhibitions	2	6	1	3	3	15	6	7
h. Selective dissemination of information (SDI)	1	3	4	10	2	10	7	8
i. Union catalogue	-	-	1	3	1	4	2	2
j. Users orientation	-	-	-	-	-	-	-	-
k. Inter library loan	-	-	-	-	-	-	-	-
<b>Total</b>	<b>32</b>		<b>38</b>		<b>21</b>		<b>91</b>	

Source: Field survey 2067

Table 11 shows the conventional services in NAST documentation center, NARC documentation center and ME documentation center. First of all, it shows that conventional services such as inter-library loan and users' orientation are not found in any of these documentation centers. Secondly, 'union catalogue' is not found in NAST documentation center but is available in NARC documentation center and ME documentation centers. ME documentation center also lacks the conventional service like translation and reprography. As a whole, 29% users reply that they use the display of new books and 19% users reply that they use abstracting and indexing.

The top three conventional services in NAST documentation center are (a) Abstracting and indexing, (b) Display of new books and (c) Review, digest and state of the art report in that order. When we analyze the situation of NARC documentation center, it seems that display of new books ranks the highest, followed by abstracting and indexing. The top two conventional services in ME documentation center are the display of new books followed by abstracting and indexing.

### Modern services

The availability of modern services in the three documentation centers is given in Table 12 (related to question no. 7). The table shows that databases in interrelated subject are not found in NAST documentation center. It is seen that Internet facility is accessible to the users in NAST documentation center. 43% users in NARC documentation center say that they have database facilities in interrelated subject. Similarly, 27% respondents say that they have internet facilities. This is a bit lower percentage compared to NAST documentation center. The situation of modern services in ME documentation is a bit different. 45% respondents, which is the highest percentage of respondents says that they have good facilities of databases in interrelated subject.

Table 12: Modern services

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Current contents	5	22	7	23	3	33	15	25
b. Online	6	28	2	7	1	11	9	15
c. Internet	11	50	8	27	1	11	20	33
d. Databases in interrelated subject	-	-	13	43	4	45	17	27
<b>Total</b>	22		30		9		61	

Source: Field survey 2067

Among the facilities, Internet is accessibility is at the top with 33 % in average. This is followed by databases in interrelated subject. This is also shown in Figure 10.

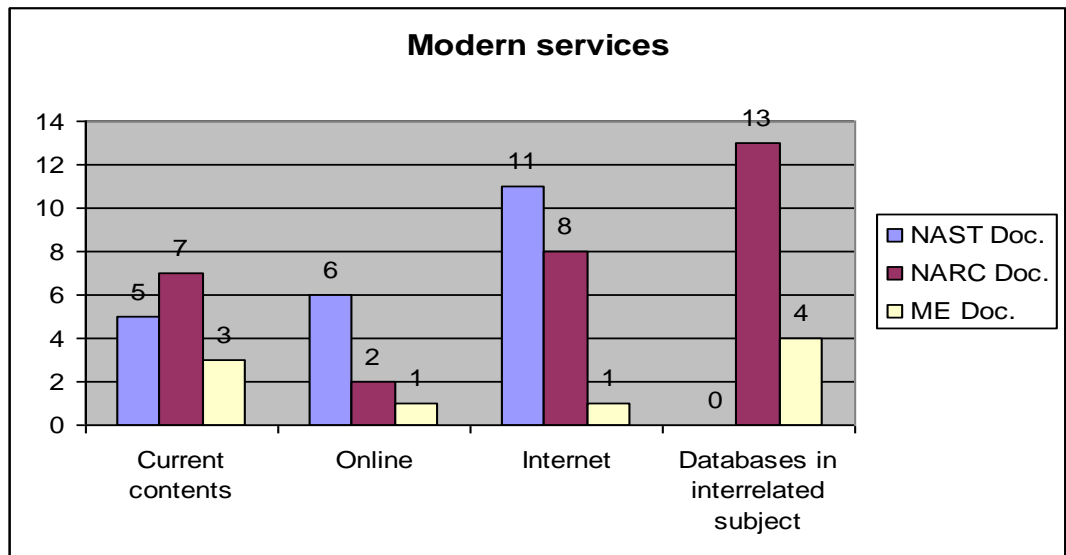


Figure 10: Modern services

### Physical facilities

Physical facilities in a library include the building itself, exterior and interior design, furnishings, shelving, equipment, and so on. The questionnaire in these parts includes some interior physical facilities such as tables and chairs, lights and the like. Tables, chairs and lights are essential things to the users. Among the options, 'Air conditioning' is not available in all these documentation centers. 50% respondents say that facility of Internet is good in NAST documentation centers. (related to question no.8)

Physical facilities in NARC and ME documentation centers are identical in the sense that the top ranked facility is the availability of comfortable tables and chairs in NARC documentation center and in ME documentation center. However, they differ in the sense that light is the second top ranked facility in ME but Internet is the second ranked top facility in NARC documentation center.

Table 13: Physical facilities

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Comfortable tables and chairs	12	30	18	34	3	38	33	32
b. Lights (natural and artificial)	5	13	11	20	2	26	18	18
c. Drinking water and sanitation facilities	3	7	9	16	1	12	13	13
d. Air conditioning	-	-	-	-	-	-	-	-
e. Telephone	5	13	4	7	1	12	10	10
f. Internet	15	37	12	22	1	12	28	27
<b>Total</b>	40		54		8		102	

Source: Field survey 2067

### **Ranking current services**

Table 13 shows the rank order of the different materials the respondents use (related to question 9). Most of the respondents in NAST documentation center have replied that the current services are good. On the other hand, 38% respondents in NAST documentation centers report that the services are unsatisfactory. A very few respondents report that the services are excellent and poor.

Similarly, unlike in NAST documentation center, 70% respondents report that the current services are good. 50% respondents reported that the services are the services are poor. There are no respondents who find the services unsatisfactory. Only 10% respondents have claimed that the services are excellent.

Among the users, 54% respondents in ME documentation center reply that the services are unsatisfactory. Thus, more than half of the respondents claim that the services are unsatisfactory. This is followed by a group of respondents who claimed that the services are poor in ME documentation center. This group consists of 28% respondents. Only 18% respondents have reported that the services are good. It is an indicative that the services are poorer in ME documentation center compared to NARC documentation center and NAST documentation center.

Table 14: Rank of services rendered by documentation centers

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Excellent	1	5	2	10	-	-	3	6
b. Good	9	42	14	70	2	18	25	48
c. Poor	1	5	3	15	3	28	7	13
d. Unsatisfactory	8	38	-	-	6	54	14	26
e. Others	2	10	1	5	-	-	3	6
Total	21		20		11		51	

Source: Field survey 2067

If we divide the responses into either 'good' or 'poor' in average most of the responses are on the former group. This is also shown in Figure 8.

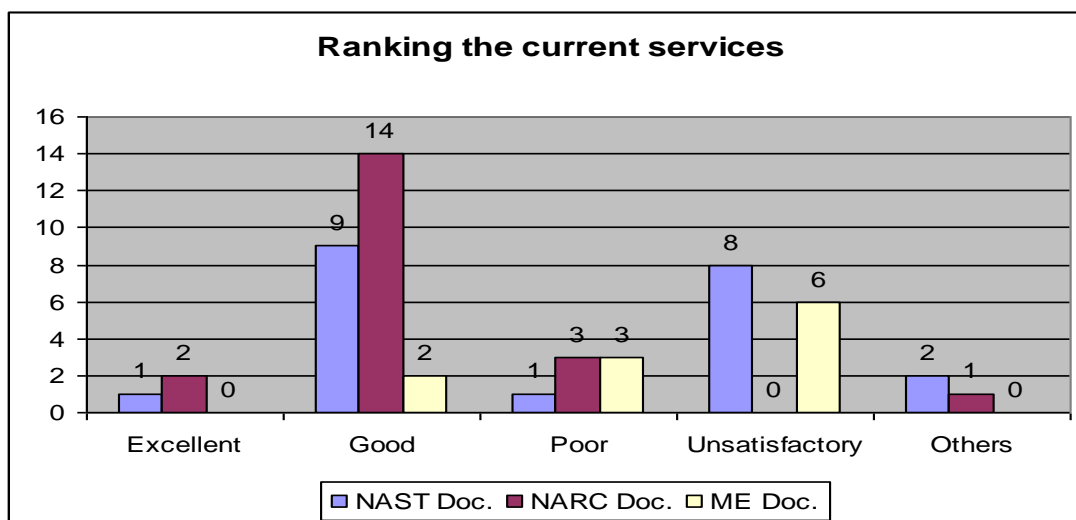


Figure 11: Rank of services rendered by documentation services

The respondents have been asked which specific documentation services they consider most useful to them (related to question 10). Their responses are shown in Table 15.

Table 15: Ranking the current services

Types of services	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Circulation of books	7	13	10	16	6	18	23	15
b. Reference services	10	19	13	20	9	26	32	21
c. Current awareness services	7	13	6	9	5	5	18	12
d. Routing of abstract and journals	7	13	8	13	1	2	16	11
e. Selective dissemination of information	3	6	4	8	2	6	9	6
f. Reprographic services	2	4	2	3	-	-	4	3
g. Arranging periodic books exhibition in libraries	2	4	7	10	3	8	12	8
h. Displaying latest arrivals	15	28	64	22	8	23	37	25
<b>Total</b>	<b>53</b>		<b>64</b>				<b>151</b>	

Source: Field survey 2067

One fourth of the respondents, i.e. 25% of respondents reply that the service related to displaying the latest arrivals is found in all the documentation centers. The other services ranked are reference services, circulation of books, current awareness services, routing of abstract and journals in that order.

The top two services delivered effectively in NAST documentation centers are display of latest arrivals followed by reference service. Similarly the same trend is found in NARC documentation center because the top two services delivered effectively in NARC documentation center are display of latest arrivals followed by reference service. On the other hand, the top two services delivered effectively in ME documentation center are reference service followed by displaying of latest arrivals.

## 5.5 Library rules

This question is related to library regulation. Regulation refers to "rule or restriction prescribed and enforced by a constituted authority for the sake of order, uniformity, discipline, etc., as in the regulations of a school or society (Kent 1986, p. 397).

### **Library opening hours**

88 % of the respondents, which is more than three fourth of the total respondents, reply that the opening hours of these documentation centers are convenient for them (related to question no. 11). One of the respondents from ME documentation center say that the library should practically between 10AM -5PM. When the researchers interacted with some of the staffs in ME documentation center, she observes that ME documentation center does not remain practically open during the hours mentioned above. Since the opening and closing time is decided by the parent organization of each of these documentation centers, the library rules are unlikely to be unchanged immediately.

Table 16: Library opening hours

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Yes	18	90	19	95	8	73	45	88
b. No	2	10	1	5	3	27	6	12
Total	20		20		11			

Source: Field survey 2067

Among the total users, 88% of respondents reply that the services are suitable and only 12% respondents reply that the services are not suitable.

### **Library staffs' cooperation**

Library staff's cooperation is very significant in these centers because largest 42 % of the researchers locate the information with the help of the library staff. The majority of the respondents reply that the library staffs are helpful (related to question no. 13). The library staff's cooperation as a whole is satisfactory because 86% respondents have replied the question positively.

Table 17: Library staff's cooperation

	NAST		NARC		ME		Total	
	No.	%	No.	%	No.	%	No.	%
a. Yes	19	95	16	80	9	82	44	86
b. No	1	5	4	20	2	18	7	14

Source: Field survey 2067

The situation of individual documentation center is different. For example, 18% respondents in ME and 20% users in NARC documentation centers have said that they do not get enough cooperation documentation center from the library staff. One of the reasons why the cooperation in NARC documentation center is not good may be because of the lack of professional manpower. NARC documentation center does not have a library professional and it is run by semi-professional staffs. On the other hand, this ME documentation center seriously lacks library manpower because the complete responsibility of the library rests on a single person. This is shown in Figure 9.

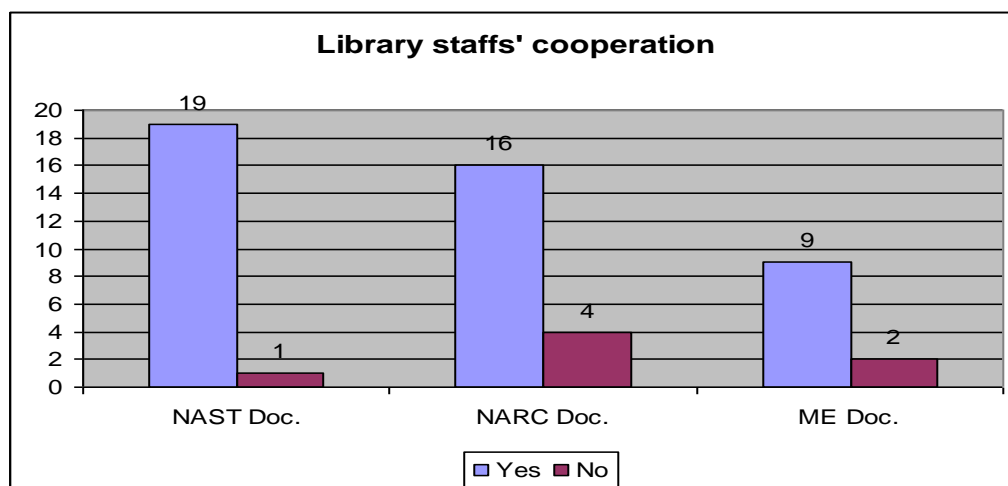


Figure 12: Library staffs' cooperation

Some respondents make a list of comments about the unwillingness of the library staff to get the intended information. Following is a list of comments they have made when they filled up the questionnaire:

***For NAST documentation center***

- (a) Library staffs do not have proper knowledge of library management.



***For NARC documentation center***

- (a) New journals and SDI services should be properly implemented.
- (b) The documentation center needs more staffs.
- (c) The staffs do not respond to the people who visit the library.

***For ME documentation center***

- (a) There are only a few staffs and they are not regular.

**5.6 Users' satisfaction**

This is a survey of user satisfaction investigating the science and technology documentation centers, i.e. NAST documentation center, NARC documentation center and ME documentation center. The users have been asked if they are satisfied or dissatisfied with the current library services including the "help provided by the librarian". The users have been asked to report his degree of satisfaction with various services as a direct measure of user satisfaction. Both of the direct and indirect approaches have been used in this study. The users have been asked to report his degree of satisfaction with a service from which the quality of performance is inferred and indirect approach in which the user is asked to evaluate the performance of a service from which his satisfaction with the service is inferred. D'Elia and Walsh (1983, p. 109) write that with both approaches, the purpose of studying user satisfaction is to obtain from library users their opinions about library performance.

**Availability of collections**

Table 18 is related to the question whether the users find the enough reading materials in these documentation centers (related to question no. 14). As a whole, 37% users find news letters and notes in these documentation centers. Users say that they also find the subject books in these documentation centers which occupy 27% of the total respondents.

Table 18: Availability of collections

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Subject books	1	5	13	32	5	46	19	27
b. Scientific journals	6	30	6	15	3	27	15	21
c. News letters, notes	10	50	13	33	3	27	26	37
d. Reports of conference, project, seminar, workshop	3	15	8	20	-	-	11	15
<b>Total</b>	20		20		11			

Source: Field survey 2067

Exactly half of the respondents at NAST documentation center have found that the news letters and notes are plenty at NAST documentation center. Among the respondents, 30% respondents have found that there are plenty of scientific journals in this documentation center. The same is true in NARC documentation center. The highest percentages of respondents have found that there are plenty of news letters and notes in NAST documentation center. Similarly, 32 % respondents have mentioned that there are plenty of subject book in the NARC documentation center. On the other hand, 46% respondents at ME documentation center feel that there are plenty of subject books. They have claimed that enough newsletters and scientific journals are available in ME documentation center center. This is shown in Figure 10.

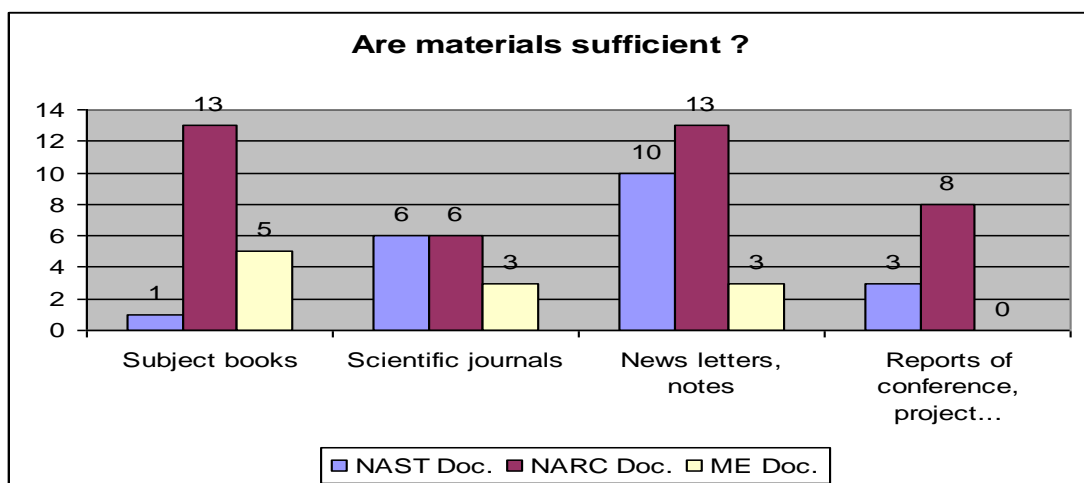


Figure 13: Are the materials sufficient?

### **Sufficient tools of reference materials available**

The respondents have been asked whether the reading materials in the respective documentation centers are sufficient or not (related to question no. 15). The responses are summarized in Table 19. Majority of the respondents (69%), which is more than two third of the total population, have replied that the sufficient reading materials are not available in these documentation centers. Thus, many people do not find that there are sufficient reading materials.

Table 19: Are sufficient reading materials available?

	NAST Doc.		NARC Doc.		ME Doc.		Total	
		%		%		%		%
a. Yes	1	5	14	70	1	9	16	31
b. No	19	95	6	30	10	91	35	69
Total	20		20		11		51	

Source: Field survey 2067

95% respondents in NAST documentation center find that the reading materials are not sufficient. In the same way, 91% respondents in ME documentation center reported that the services are not satisfactory either. On the other hand, 70% respondents, which is near to the three-fourth of the respondents in NARC documentation center also reply that they have sufficient reference materials. On the contrary, 30% respondents in NARC documentation center report that the reference materials are not sufficient.

### **Unavailable reading materials**

As a part of question given in Table 20 (related to question no. 16), some users find that they do not find the materials they look for in these documentation centers. Table 18 shows that they do not get the materials they look for. Table 19 also shows that these documentation centers lack reading materials such as Yearbooks and Patent literature. Among the respondents, 19% respondents have said that these documentation centers lack the audiovisual materials. Yearbooks and patent literature are not available as felt by 13% for each group. 11% of the total respondents feel that these documentation centers lack enough serials. Thus, the top 5 reference materials

which are not available on average in these documentation centers are (a) audiovisual materials, (b) yearbook and patent literature (c) serials (d) standards (e) manuals.

Table 20: Non availability of the reference materials

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Dictionaries	1	2	-	-	-	-	1	1
b. Encyclopedias	3	7	4	8	3	5	10	7
c. Year books	5	12	6	12	7	14	18	13
d. Almanacs	2	5	3	6	3	5	8	6
e. Directories	-	-	5	10	2	4	7	4
f. Manuals	4	9	3	6	4	8	11	8
g. Serials	5	12	4	8	7	14	16	11
h. Patent literature	8	19	5	10	5	10	18	13
i. Standards	3	7	3	6	8	16	14	9
j. Audiovisuals	10	23	11	22	7	14	28	19
k. Geographical references	2	4	6	12	5	10	13	9
<b>Total</b>	43		50		51		144	

Source: Field survey 2067

### Assessing the current information on literature

The users have been asked to assess the current information available in the respective documentation center (related to question no. 16). 31% of the respondents in NAST documentation center have reported that they find bibliographies, indexes and abstracts useful. Similarly, 36% respondents in NARC documentation center have reported that they find bibliographies, indexes and abstracts useful. On the other hand, the most accessible current information literature is trade book catalogues and announcement bulletins.

Table 21: Current information available

	NAST Doc.		NARC Doc.		ME Doc.		Total	
	No.	%	No.	%	No.	%	No.	%
a. Trade book catalogues and announcement bulletins	6	19	10	24	4	27	20	22
b. Bibliographies, indexes and abstracts	10	31	15	36	3	20	28	31
c. Addition list issued by library	3	9.3	8	19	2	13	13	15
d. Book reviews in newspaper and periodicals	6	19	6	14	4	27	16	18
e. Any others	7	22	3	7	2	13	12	13
<b>Total</b>	32		42		15		89	

Source: Field survey 2067

The table shows that 31% respondents have replied that the most accessible current information on literature is bibliographies, indexes and abstracts. This is followed by trade book catalogues and announcement bulletins, book reviews, newspaper and periodicals, book reviews in addition issued by the library in that order.

### Users' satisfaction with services

Most of the users of these documentation centers are not happy with the services (related to question no. 17) provided in these documentation centers. Among the total users, 63% respondents are not happy with the services in average. On the other hand, only 37% respondents feel that they are satisfied with the library services as a whole.

Table 22: Users' satisfaction with services

	NAST Doc.		NARC Doc.		ME Doc.		Total	
		%		%		%		%
a. Yes	9	53	8	40	1	9	18	37
b. No	8	47	12	60	10	91	30	63
<b>Total</b>	17		20		11			

Source: Field survey 2067

Users' satisfaction with library services is not the same in these documentation centers. For example, unlike in NARC documentation center, 53% users find that the library services in NAST documentation center are satisfactory. On the other hand, 60% respondents in NARC documentation center and 91% respondents in ME documentation center reply that they do not find the library services satisfactory. Again the library services in ME documentation center seem very poor. This indicates that the library services in these documentation centers are not effective. This is shown in Figure 11.

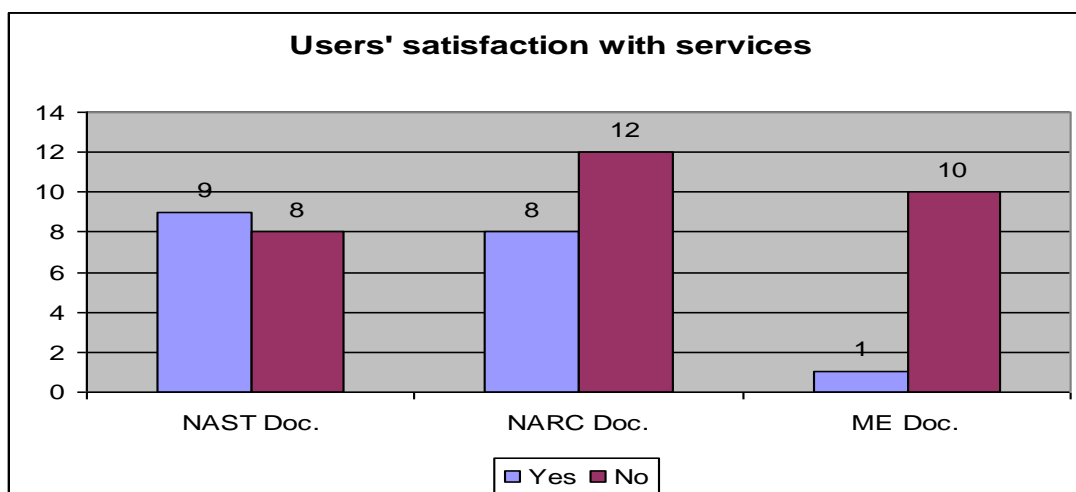


Figure 14: Users' satisfaction with services

The suggestions obtained in this connection are to make available online journals and update the documents.

The users have been asked to check whether they are happy with the current methods of obtaining information (related to question no. 19). Most of the respondents, i.e. 85% have answered the question positively whereas remaining 15% respondents have replied negatively.

Table 23: Present available methods

	NAST Doc.		NARC Doc.		ME Doc.		Total	
		%		%		%		%
a. Yes	16	89	16	84	9	82	41	85
b. No	2	11	3	16	2	18	7	15
<b>Total</b>	18		19		11		48	

Source: Field survey 2067

The respondents who have replied negatively have been asked to mention the reasons for dissatisfaction (related to second part of question 19). Their responses are presented in Table 24. 47% respondents have said that the major reasons of dissatisfaction is the inadequate or library tools and 43% respondents have said that the reason of dissatisfaction is the insufficient/inadequate librarians.

Table 24: Reasons of dissatisfaction

	NAST Doc.		NARC Doc.		ME Doc.		Total	
		%		%		%		%
a. Insufficient /inadequate librarians	4	27	7	41	7	70	18	43
b. Inadequate library tools (indexes, catalogues, bibliographies etc)	7	46	10	59	3	30	20	47
c. Other reason	4	27	-	-	-	-	4	10
<b>Total</b>	15		17		10		42	

Source: Field survey 2067

They also added that library should be well equipped with modern facilities. Additionally, there should be adequate seeking materials on science and technology.

Although the respondents find some services to be added in the documentation centers, 85% of the respondents in average are found to be happy with these documentation centers. As Table 23 shows that one of the useful groups in these documentation centers are the researchers. The respondents have been asked whether their research needs are met by these documentation centers (related to question no. 18). The respondents' opinions in the three documentation centers are presented in the following tables.

60% in NAST documentation center reply that the periodicals are adequate for the need of the respondents. It can be noted that the researchers find the periodicals very useful and meet their needs. On the other hand, some materials are not mentioned at all. For example, they do not mention dissertation/thesis, indexing/abstracting, reviewing periodicals. Only 1% respondents have replied that non-book masteries and books are adequate.

Table 25: Research needs met by the collections of NAST documentation center

	Adequate		Partially adequate		Inadequate	
	No	%	No	%	No	%
a. Periodicals	3	60	8	17	5	11
b. Books	1	20	9	19	4	9
c. Dissertation/Thesis	-	-	9	19	4	9
d. Indexing/Abstracting	-	-	11	23	8	17
e . Reviewing periodicals	-	-	7	14	6	13
f. Non-book masteries	1	20	4	8	11	24
g. Microfilms, microfiche	-	-	-	-	8	17

Source: *Field survey 2067*

Unlike in NAST documentation center where the collection of books did not fulfill the needs of the respondents, the respondents in NARC documentation center have replied that they have found the books adequate. In fact, this is the category which the respondents rated highest among different choices given to them. In addition to this, the periodicals, indexing and abstracting and theses/dissertation are also found to have been adequate in NARC documentation center.

Table 26: Research needs met by the collections of NARC documentation center

	Adequate		Partially adequate		Inadequate	
	No	%	No	%	No	%
a. Periodicals	5	17	9	20	4	10
b. Books	10	33	9	20	1	3
c. Dissertation/Thesis	5	17	13	30	3	8
d. Indexing/Abstracting	5	17	6	14	4	9
e . Reviewing periodicals	2	7	5	11	4	9
f. Non-book masteries	2	6	2	5	3	33
g. Microfilms, microfiche	1	3	-	-	11	28

Source: *Field survey 2067*

Among the options given, only two items got notice in ME documentation center. Adequate materials which can meet the needs of the respondents are



periodicals as felt by 67% respondents and indexing/abstracting as responded by 33% respondents. All other items have been either partially adequate or inadequate. For example, in ME documentation center, many items have been found inadequate. This is shown in Table 27.

Table 27: Research needs met by the collections of ME documentation center

	Adequate		Partially adequate		Inadequate	
	No	%	No	%	No	%
a. Periodicals	2	67	2	97	16	
b. Books	-	-	8	36	6	
c. Dissertation/Thesis	-	-	1	5	16	
d. Indexing/Abstracting	1	33	2	7	6	
e. Reviewing periodicals	-	-	7	32	13	
f. Non-book masteries	-	-	3	13	23	
g. Microfilms, microfiche	-	-	-	-	20	

Source: Field survey 2067

### 5.7 General suggestions:

#### For NAST documentation center

- (a) Library should provide access to e-library and highly rated journals.
- (b) The documentation center should increase recent publications and should increase the journal access.
- (c) The documentation center should be well-equipped with Internet facilities. They should be made available to the users.
- (d) The latest scientific materials should be added to existing library document.
- (e) Training on library usage should be enhanced with cooperation of TU library.
- (f) The documentation center should make access to researchers, students from different fields.
- (g) The documentation center should be well-lighted, and should be well-furnished.
- (h) Library resources should be strengthened. The library staffs should be trained for better library management. The library should use a proper catalogue system to easy access to library information.
- (i) More reference books should be added.

- (j) Government should spend at least 0.5 % of total GDP for scientific reference books.
- (k) The available journals and newsletters should be updated.
- (l) Dissertations and theses of national subject-wise should be made available.
- (m) The documentation center does not have enough materials like the documentation center of a national level. This documentation center should be made a national documentation center.
- (n) Periodicals should be increased.

**For NARC documentation center**

- (a) Books related to all fields should be increased.
- (b) Improvement in e-library.
- (c) All the scientific papers, journals should be made up to date.
- (d) Most important part is to improve resources (manpower, computers, and online access of documents) to the library.
- (e) More staffs are needed to help the users. New books should be immediately purchased.
- (f) The library should also purchase the books such as the books related to literature for the library.
- (g) More space is needed for the readers. More staffs are needed. Proper classification of the books is necessary to locate the books for the readers.
- (h) Periodicals should be continuous and updated time to time.
- (i) Recent annual reports (on agriculture sector) must be available quickly and easily.
- (j) National information and records must be available.
- (k) Good facilities of photocopy are needed for the users.
- (l) Highly qualified manpower should be hired and library should be computerized with modern facilities.
- (m) The librarians should be devoted to their work and there should be proper management of books.
- (n) More staffs are needed to help the users.

**For ME documentation center**

- (a) The latest arrivals should be collected.

- (b) Collection of books related to environment and science and newsletter about current issue should be available.
- (c) E-journals should be subscribed.
- (d) Develop the international catalogue system of the information available in the library.
- (e) Keep sound environment in the library.
- (f) More staffs are needed to the library.
- (g) Catalogue should be updated to get the books easily.
- (h) More staffs are needed to help the users.
- (i) It should be well maintained with all the essential materials like (journals, books, booklets, thesis, proposal etc.).
- (j) The documentation center should fulfill modern tools and equipments in library. Librarians should be trained.

## **5.8 Status of documentation centers**

Since the objectives of this thesis is to make an analysis of status and services of different documentation centers, a set of questionnaire has also been designed in order to obtain information related to documentation center management, collection, technical processing, services provided, resource sharing with other documentation centers, and physical facilities. Details are given in Focus of the study. However, some features related to these are presented here in order to compare and contrast, and to show a comparative picture of these centers. A few basic features will be highlighted in this chapter.

### **5.8.1 Managing the documentation centers**

Effective library management maximizes the use of library spaces, equipment, facilities, collections, staff, and funds. Planning at all levels for library development should reflect both short- and long-range goals, budget cycles, changes in the activity's mission and logistics support responsibilities, department wide programs, and advances in professional library technology, materials, and services. The library should provide secure facilities for the library's collections, adequate space for processing and administering the library's resources, and pleasant and comfortable seating, study, listening, and viewing areas for library users. A brief comparative status of library budget and staff is presented in the following diagram.

### Library budget

Library and information and documentation centers are almost universally service agencies of educational institutions, political subdivisions, industry, or business. As such they practice financial planning and procedures followed by their parent organizations (Kent and Lancour, 1986, p. 430).

Investigation as to the amount of expenditures for the library in the various documentation centers included in this study showed that NAST documentation center spends more amount of budget compared to ME documentation center. For example, NAST documentation center spent 3,00,000.00 NRs in 2065-66, and 3, 20,000 in 2066-67. Compared to this, ME documentation center spent 2,00,000.00 NRs in 2065 and 150000 in 2066-67. On the other hand, the library staffs from NARC documentation center are unwilling to provide amount spent in their documentation center.

Table 28: Allocated budget in documentation centers

	<b>Budget allocated in the respective years</b>	
	<b>(in thousand)</b>	
	<b>2065-66</b>	<b>2066-67</b>
NAST Doc.	300	320
NARC Doc.	-	-
ME Doc.	200	150

*Source: Field survey 2067*

These documentation centers should decide the funds needed, since the departments are in a position to know what books are needed in their respective fields. Library budget is shown in Figure 15.

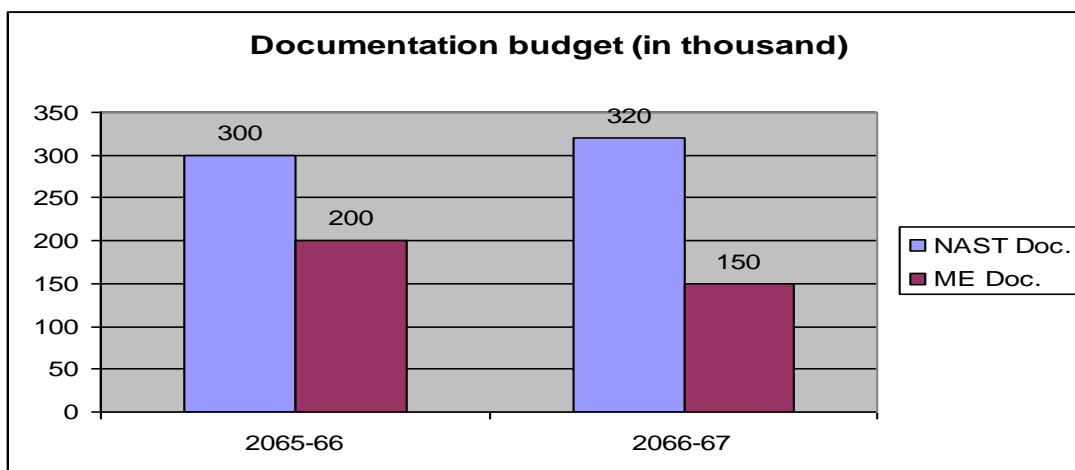


Figure 15: Library budget

### Library staffs

Table 29 shows the professionals involved in the running of these documentation centers. Professional is defined as those who have academic background in library and information science. Similarly, semi-professional are those who have some training in library and information science. And, non-professionals do not have any academic or vocational kinds of training in the library and information science. The number of staff in the documentation center is shown in Table 29.

Table 29: Staffs in documentation centers

	NAST Doc.	NARC Doc.	ME Doc.
Professional	1	-	1
Semi-professional	3	1	-
Non-professional	1	2	-

Source: Field survey 2067

It is seen that NAST documentation center has better staffs compared to other documentation centers, viz. NARC documentation center and ME documentation center. NARC documentation center has one semi-professional and two non-professional staffs. And, ME documentation center has only one professional staff to operate the daily activities. It is seen from the above list that the documentation center does not have adequate manpower to run this documentation center. It seems advisable to have well-trained professional staff to run these documentation centers.

Lack of trained manpower will ultimately result in poor management of the documentation centers. This is also shown in Figure 13.

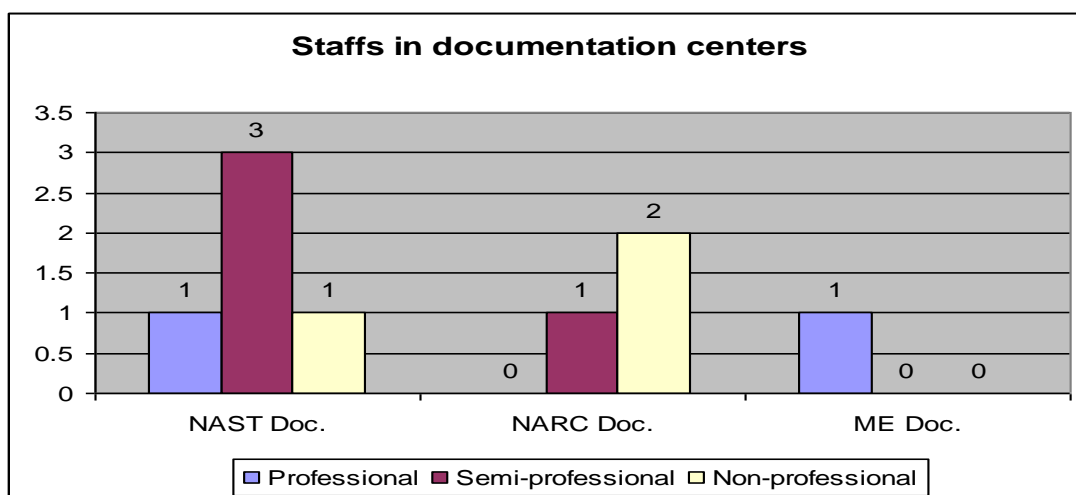


Figure 16: Staffs in documentation centers

Professionals working in the field reply that the people working in these documentation centers are not adequate. This is also reflected in the library management and library running. They say that owing to lack of manpower, the documentation centers have not properly managed. This is also expressed in the users' responses to library management.

### 5.8.2 Collection

Table 30 shows the main documentation collection such as total size and books. The collection is also shown in Figure 17.

Table 30: Size of collection

	NAST Doc.	NARC Doc.	ME Doc.
Total size	13,000	13,500	7900
Books	5,000	7,000	3900

Source: Field survey 2067

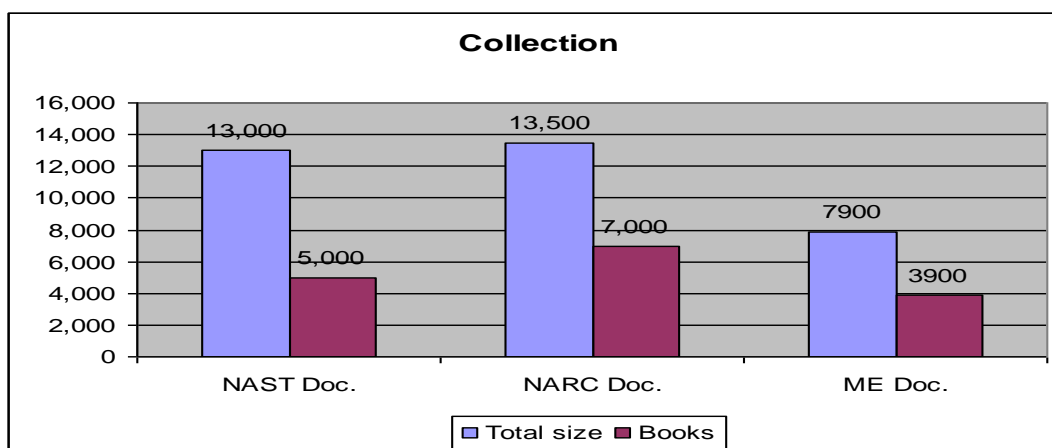


Figure 17: Library collection

### 5.8.3 Technical processing

Table 31 shows the technical processing found in these documentation centers. All of them follow DDC classification scheme.

Table 31: Technical processing in the documentation centers

	NAST Doc.	NARC Doc.	ME Doc.
Classification Schemes	DDC	DDC	DDC
Cataloguing	-	WINSIS	
Codes	-	-	AACR
Bibliography	Database	-	
Forms	-	-	Microsoft word
Other techniques	-	-	Searching by computer software
Computerized database	√	√	√
Do the users use these resources	√	√	√

Source: Field survey 2067

Table 31 shows that all the documentation centers use DDC for the classification of the documents. Additionally, WINNIS has also been used in NAST

documentation center. On the other hand, the documentation staff gave no information except DDC classification in NARC documentation center. This might be because of the lack of professional manpower currently working in this documentation center. The staff does not have any knowledge related to the classification. Regarding ME documentation center, we find that the same scheme has been used for the classification purpose.

#### 5.8.4 Service provided

Information related to the services provided in these documentation centers have been obtained during the period of data collection. Services provided in three documentation centers are summarized in Table 32.

Table 32: Services provided in the documentation centers

	NAST Doc.	NARC Doc.	ME Doc.
Document load provided	√	√	√
Documentation center automated	√	X	√
Does it provide a list of new arrivals ?	√	√	√
Can everyone use the documentation center ?	√	√	ME staff only
Are the borrowing allowed ? To whom ?	NAST staff	NARC staff	ME staff
How long is the load period for bound journal ?	-	2 weeks	Unlimited
How long is the load period for book ?	-	2 weeks	Unlimited

Source: Field survey 2067

#### 5.8.5 Resource sharing with other documentation centers

Resource sharing refers to the activities that result from an agreement, formal or informal, among a group of libraries (usually a consortium or network) to share collections, data, facilities, personnel, etc., for the benefit of their users and to reduce the expense of collection development. Retrieved December 12, 2010, from ([http://lu.com/odlis/odlis\\_r.cfm](http://lu.com/odlis/odlis_r.cfm)).

Kent, Lancour and Daily (1981, p.256) note:

Resource sharing refers to the sharing of library functions in common by several libraries. The basic functions are acquisitions processing, storage, and delivery of service. Resource sharing offers an alternative to local



performance. It may result in access to more materials or services and/or lower cost for a given level of service.

The documentation centers share its items (resources) with other documentation centers. The library staffs reply that they share the documents such as books and journals. The documentation center also gives as well as receives the gifts to and from other documentation centers. They give the gifts such as books, journals and research reports with other documentation centers. Thus, it is sharing the documents with other documentation centers.

### 5.8.6 Physical facilities

This study compares two physical facilities, users' space and the other physical facilities.

#### Documentation centers' space

Among the documentation centers, NARC documentation center has the largest spaces provided for the library space. NARC documentation center has 3000 square meter It is to be noticed that ME documentation center has least number of users compared to NAST documentation center and NARC documentation centers. Therefore, NARC documentation center has enough space compared to other two.

As given in Table 33, NARC documentation center has the larger area (600 sq. meter) compared to NAST documentation center and ME documentation centers. NAST documentation center has the smaller user area (only 200 sq. meter) which is only one third of NARC documentation center. Although the users' space in NARC documentation center is larger than NAST documentation center, it is smaller compared to ME documentation center.

Table 33: Users' area

<b>Documentation centers</b>	<b>Area (Sq. meter)</b>	<b>Users area (Sq. meter)</b>	<b>No of seats</b>
NAST Doc.	1000	200	10
NARC Doc.	3000	600	25-30
ME Doc.	2000	500	20

*Source: Field survey 2067*

### Other physical facilities

In terms of other physical facilities, NARC documentation center has greater number of equipment compared to other documentation centers. They are listed in Table 34.

Table 34: Other physical facilities

<b>Facilities</b>	<b>NAST Doc.</b>	<b>NARC Doc.</b>	<b>ME Doc.</b>
Photocopy	√	√	X
Microfiche reader	X	X	X
Computer	√	√	X
Online journals	√	√	X
Camera	√	√	X
Tape recorder	X	√	X

*Source: Field survey 2067*

Among the physical facilities listed in Table 34, NARC documentation center does not have microfiche reader. All other facilities are available in NARC documentation center. NAST documentation center also possesses all the facilities as they are found in NARC documentation center except one, i.e. tape recorder. Thus, these two documentation centers have almost similar physical facilities. On the other hand, ME documentation center lacks all of these facilities.

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## CHAPTER 6

### SUMMARY, FINDINGS AND RECOMMENDATIONS

#### 6.1 Summary

This thesis has been designed for the partial fulfillment of Master's Degree of Library and Information Science. The main objective of this research to identify the status and services of the science and technology documentation centers in the Kathmandu valley.

The specific objectives of this study are to:

- (a) find out the current status and services provided by these documentation centers,
- (b) compare the services provided by the documentation centers and
- (c) find out the users' satisfaction from these documentation services.

In order to find out the status and services of these documentation centers, two sets of questionnaires have been prepared. The first set of questionnaire has been distributed to the library users whereas the second set of questionnaire has been distributed to the library staffs. A comprehensive questionnaire consisting of 20 question items has been developed and pre-tested. The question consists of 7 sections. They are as follows:

**Section A** contains questions related to personal background of the respondent.

**Section B** contains 2 questions related to users' needs.

**Section C** consists of 3 questions about the information needs of the respondents.

**Section D** contains 5 questions about library services.

**Section E** consists of 2 questions about library rules.

**Section F** consists of 7 questions about users' satisfaction about the library services.

**Section G** is an open-ended question about the general suggestions of the users.

After the preparation of the questionnaire, the first set of questionnaire has been distributed to sixty five respondents to the three documentation centers. Respondents have been chosen randomly from different documentation centers. The number of questionnaire distributed is 59 and 51 questions have been returned which is 86% of the distributed questionnaires.

This survey has been conducted at NAST, NARC and ME documentation centers during December 2010 to January 2011. The responses have been tabulated, percentages

have been calculated, the rank order of some items have been determined and finally all of them have been analyzed. The results are presented in the following headings, which match exactly the different sections of the questionnaire.

The discussion in previous chapters shows that these documentation centers are intended to provide the library services to the researchers in the respective fields. These three documentation centers are the leading organizations in science and technology as well as in agricultural sectors in Nepal.

## **6.2 Findings**

On the basis of the information collected from the library users and the library staffs, the findings of the study are as follows:

### **6.2.1 User needs**

1. Only 32% of the users have that their purpose of going to these documentation centers are to fulfill their specific work, i.e. to obtain information for their research works. And, 26% of respondents' purpose of visiting them is to get information about the current information of the world. Thus, differences among different groups are found regarding their purpose of visiting the documentation centers. The group of users who go to the documentation centers for the purpose of research is also the group who visit the library more often than others. No users visit these documentation centers for the purpose of teaching and only 8 % of visitors go there to borrow books.
2. Nearly one third of the users or 32 % of the users 'often' go to the documentation centers. Most of the users who go to these documentation centers 'daily' are the researchers.

### **6.2.2 Collection**

3. The most frequently used collections are the journals/ periodicals followed by magazines/newsletters. This is also true in NAST and NARC documentation centers individually. However, the latter gets priority over the former in ME documentation center, i.e. magazines/newsletters is the most frequently source followed by journals/periodicals.
4. About one third of the respondents or 33% respondents reported that the collection in these documentation centers are 'fairly adequate'. Only 4% of the respondents said that the materials are very adequate. However, 33% respondents said that the collection is not

'inadequate'. This shows that the respondents get only part of the materials they need from the available sources of information. This is further proven by the fact that library collection is inadequate.

The respondents have provided some suggestions for the improvement of these documentation centers. Some suggestions are to update the library collections, subscription of the international journals, access to e-library and electronic database, and purchase of new edition books.

### **6.2.3 Services**

5. The two methods of the responses used to locate the information are 'consulting catalogue' and 'with the help of staff'. Among the respondents 45% of respondents have reported that they consulted the catalogue for getting the materials from the documentation center. The next medium of getting the materials in the documentation centers is with the help of staffs.

6. The display of new books followed by current awareness services and abstracting and indexing are the two conventional services used by the largest number of respondents in that order. Similarly, the modern services which the largest numbers of the respondents have got are the Internet and Databases in interrelated subject. Similarly, 33% of users have reported that these documentation centers provide Internet.

7. Among the physical facilities of the documentation centers, 32% respondents have reported that furniture is the physical facility available in all these documentation centers. On the contrary, air conditioning is not found in any of these documentation centers.

8. Only 45% respondents have replied that the current services are good. On the other hand, 26% respondents have replied that the services are not satisfactory.

9. Displaying the latest arrivals, reference services and circulations of books are three most useful services for the users in that order.

10. A great majority of the respondents or 88% respondents have responded that the library hours are suitable for them.

11. The documentation centers' staffs are helpful as reported by 86% respondents.

12. 37% respondents have replied that newsletter and notes are available whereas 27% respondents have stated that subject books are available.

13. A majority of respondents or 69% of the users have reported that the reference materials are not available at these documentation centers.

14. 63% respondents are not satisfied with the documentation center services.

15. 43% respondents have reported that these documentation centers do not have sufficient number of library staffs. In addition, 47% respondents are not satisfied with these documentation centers as they did not have adequate library tools.

#### **6.2.4 Library rules**

16. 88% of the respondents, which is more than one fourth of the total respondents, have replied that the opening hours of the documentation centers are suitable to them. Similarly, 86% of the respondents have replied that the library staffs are sufficiently helpful to them.

#### **6.2.4 Users' satisfaction**

17. Only 37% respondents have replied that they got the sufficient reading materials in these documentation centers. On the other hand, 69% respondents have replied that there are not adequate reading materials.

18. The current information sources to which the largest number of the respondents ranked high are bibliographies, indexes and abstracts and book reviews in newspaper and periodicals.

19. 85% respondents are found happy with the library services.

20. The largest number of the respondents' needs with reference to the collections such as periodicals, books and dissertations, are not met by the collection in all documentation centers.

#### **6.2.5 General suggestions**

21. Finally, some suggestions are obtained for the improvement of these documentation centers. Majority of the suggestions are related to the subscription of online journals and electronic database, training the library staffs, and proper management of the documentation center for effective delivery of documentation services.

#### **6.2.6 Status and services of documentation centers**

On the basis of the information collected from the library professionals the following conclusions are drawn.

1. NAST documentation center has the best collections among these documentation centers. This is followed by NARC documentation center and ME documentation center in that order. This is also further proven by the responses of the users (see Table 9).

2. All documentation centers use DDC for classification. NARC documentation center additionally employs WINNIS.

3. 53 % of respondents are satisfied with the services rendered by NAST documentation center. Similarly 40% respondents are satisfied with the services rendered by NARC documentation center and 9% respondents are satisfied by the services rendered by ME documentation center.

Taking into consideration several factors such as budgeting, manpower, users' satisfaction, NAST documentation is the best among these documentation centers. Similarly, physical facilities are better in NARC documentation center than in NAST documentation center and ME documentation center. The status of collection is nearly the same in NARC documentation center and NAST documentation center.

### **6.3 Recommendations**

On the basis of the discussion on earlier chapters some recommendations are made in order to help these documentation services.

1. The reading materials are not sufficient for the readers in these documentation centers. The existing collection should therefore be improved and expanded to meet the needs of the users. Since most of the users are also the researchers, their needs should be met by library collection. These documentation centers should make the policy to guide material selection and planning for new collections or collection areas.

2. Since the most frequently used collections are the journals/periodicals in these documentation centers, subscription of international journals related to agriculture and science as well as electronic database should be subscribed and increased.

3. Physical facilities of the documentation centers should be enhanced.

4. As majority of the respondents did not find the services 'good', the services should be improved.

5. These documentation centers should practically remain open from 10AM to 5PM for the effective delivery of services.

6. The documentation should employ trained and skilled library professional for the proper delivery of library services.

7. Since most of the users' needs are not met by these documentation centers, this situation should be improved.



8. Interlibrary loan should be provided to users for usefulness of information.
9. Budget for these documentation centers should be increased in order to expand the collection and overall management of these documentation centers.

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**APPENDIX I**  
**(Questionnaire Set (I) for library users)**

You are kindly requested to answer the following questions with your opinions and suggestions for further improvements with tick marks. [√]

**A. Personal Information**

1. Name: .....
2. Sex: Male  Female
3. Position: .....
4. Qualifications: .....
5. Department/office you belong to: .....  
.....
6. Documentation center of your attachment:  
(a) NAST (a) NARC (b) Ministry of Science and Technology

**B. User needs**

1. Please mention your purpose of visiting this documentation center. (Please tick whichever is appropriate.)
  - (a) For current and updating approach
  - (b) For teaching purpose (every day approach)
  - (c) For research purpose (exhaustive approach)
  - (d) For study of own related subject (catching up approach)
  - (e) To borrow books
  - (f) For all purposes
2. How often do you visit the documentation center?
  - (a) Daily  (b) Twice a week
  - (c) Weekly  (d) Twice a month
  - (e) Often

**C. Collections**

3. Which of the following materials do you use in this documentation center?
  - (a) Text and monographs  (b) Dictionaries
  - (c) Encyclopedias  (d) Handbooks

- |                                     |                          |                           |                          |
|-------------------------------------|--------------------------|---------------------------|--------------------------|
| (e) Journals/Periodicals            | <input type="checkbox"/> | (f) Magazines/newsletters | <input type="checkbox"/> |
| (g) Patents                         | <input type="checkbox"/> | (h) Progress reports      | <input type="checkbox"/> |
| (i) Government official publication | <input type="checkbox"/> | (j) Scientific reports    | <input type="checkbox"/> |
| (k) Standards                       | <input type="checkbox"/> | (l) Treaties              | <input type="checkbox"/> |
| (m) Database information            | <input type="checkbox"/> |                           |                          |

4. How would you rate the collection?

- |                   |                          |                     |                          |
|-------------------|--------------------------|---------------------|--------------------------|
| (a) Very adequate | <input type="checkbox"/> | (b) Fairly adequate | <input type="checkbox"/> |
| (c) Adequate      | <input type="checkbox"/> | (d) Inadequate      | <input type="checkbox"/> |

5. Please give your valuable opinion for the additions of reference collection if any.

- (a) .....
- (b) .....
- (c) .....

#### D. Services

6. How do you get the materials from this documentation center ?

- |                          |                          |                            |                          |
|--------------------------|--------------------------|----------------------------|--------------------------|
| (a) Consulting catalogue | <input type="checkbox"/> | (b) Using computers        | <input type="checkbox"/> |
| (c) Self search          | <input type="checkbox"/> | (d) With the help of staff | <input type="checkbox"/> |

7. Are you getting the following services from this documentation center ? Please tick them.

##### CONVENTIONAL

- |                                |                          |  |                          |
|--------------------------------|--------------------------|--|--------------------------|
| (a) Abstracting and indexing   | <input type="checkbox"/> | (b) Translations and Reprography                 | <input type="checkbox"/> |
| (c) Subject bibliographies     | <input type="checkbox"/> | (d) Reviews, Digests, State of the art Reports   | <input type="checkbox"/> |
| (e) Current awareness services | <input type="checkbox"/> | (f) Display of new books                         | <input type="checkbox"/> |
| (g) Exhibitions                | <input type="checkbox"/> | (h) Selective dissemination of information (SDI) | <input type="checkbox"/> |
| (i) Union catalogue            | <input type="checkbox"/> | (j) Users orientation                            | <input type="checkbox"/> |
| (k) Inter library loan         | <input type="checkbox"/> |  |                          |

##### MODERN

- |                      |                          |  |                          |
|----------------------|--------------------------|--|--------------------------|
| (a) Current contents | <input type="checkbox"/> | (b) Online                                 | <input type="checkbox"/> |
| (c) Internet         | <input type="checkbox"/> | (d) Databases in your interrelated subject | <input type="checkbox"/> |

8. Are the physical facilities satisfactory in your documentation center?

- |  |                          |                                     |                          |
|--|--------------------------|-------------------------------------|--------------------------|
| (a) Comfortable tables and chairs            | <input type="checkbox"/> | (b) Lights (natural and artificial) | <input type="checkbox"/> |
| (c) Drinking water and sanitation facilities | <input type="checkbox"/> | (d) Air conditioning                | <input type="checkbox"/> |
| (e) Telephone                                | <input type="checkbox"/> | (f) Internet                        | <input type="checkbox"/> |

9. How do you rank the current services rendered by this documentation center ?

- (a) Excellent  (b) Good   
(c) Poor  (d) Unsatisfactory   
(e) Others.....

10. What library and documentation services you consider most useful to you ? Please rank them by 1,2,3.

Types of services

- (a) Circulation of books   
(b) Reference services   
(c) Current awareness services (CAS)   
(d) Routing of abstracts and journal   
(e) Selective dissemination of information (SDI)   
(f) Reprographic services (xerox copies, microforms)   
(g) Displaying latest arrivals

11. Besides the above services what other information services you want to add urgently ? Please name those services (See No. 10 for help).

- (a) Yes  (b) No

**E. Library rules**

12. Are the present opening hours of documentation center suitable to you ?

- (a) Yes  (b) No

If no, please mention comfortable time for your group.....

13. Do you think library staffs are sufficiently helpful to serve your information needs and literature searches?

- (a) Yes  (b) No

If no, please mention your comments.....

**F. Users' satisfaction**

14. Do you find plenty of reading materials you need in your documentation center?

- (a) Subject books  (b) Scientific journals   
(c) News letters, notes   
(d) Reports of conference, project, seminar, workshop

15. Are the sufficient tools of reference materials available in your documentation center as the following types ?

- (a) Yes  (b) No

If No, please tick which is not available.

- (a) Dictionaries  (b) Encyclopedias  (c) Year books   
 (d) Almanacs  (e) Directories  (f) Manuals   
 (g) Serials  (h) Patent literature  (i) Standards   
 (j) Audiovisuals  (k) Geographical references

16. How do you assess the current information on literature in your preferred field? Please rank by numbers 1,2,3.

- (a) Trade book catalogues and announcement bulletins   
 (b) Bibliographies, indexes and abstracts   
 (c) Addition list issued by library   
 (d) Book reviews in newspaper and periodicals  
 (e) Any others.....

17. Are you satisfied with the services of your documentation center?

- (a) Yes  (b) No

18. To what extent your research needs are met by the collection in your documentation center ?

	<u>ADEQUATE</u>	<u>PARTIALLY ADEQUATE</u>	<u>INADEQUATE</u>
(a) Periodicals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Books	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Dissertation/Thesis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Indexing/Abstracting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Reviewing periodicals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) Non-book masteries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g) Microfilm, microfiche etc	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Are you satisfied with your present available methods for obtaining information ?

- (a) Yes  (b) No

If dissatisfied, please indicate the major reason (More than one information may be ticked.)

- (a) Insufficient/inadequate librarians   
 (b) Inadequate library tools (indexes, catalogues, bibliographies, etc.)   
 (c) Other reasons (please state).....

.....



.....  
.....

**G. General suggestion**

20. Please give your comments you would like to make to make for the improvement of NAST/NARC/MOST library.

.....  
.....  
.....  
.....  
.....

Respondent's signature

\_\_\_\_\_

Researcher's signature

\_\_\_\_\_

Thank you.

**APPENDIX II**

**(Questionnaire (II) For documentation center staff)**

Please put tick mark [√] wherever box is available  and write your opinion whether necessary.

Date: \_\_\_\_\_

**A. Documentation center details**

Name of Documentation center: .....

Location:.....

Phone:.....

**B. Documentation center management**

1. Please give the total budget allocated for the following fiscal years.

In thousands

(a) 2065-66 .....

(b) 2066-67 .....

2. The allocated budget of the documentation center is

(a) Fairly adequate  (b) Adequate

(c) Inadequate

3. Number of staff in the documentation center

(a) Professional .....

(b) Semi-professional .....

(c) Non-professional .....

**C. Collection**

4. Total size ..... volumes

5. Monographs (books)..... volumes

..... Subscription .....Paid

..... Received .....gift

6. Documents..... volumes

..... Subscription .....Paid

..... Received .....gift

7. Newspapers subscription (including free)

Local/National, Specify.....

Foreign newspapers, Specify.....

8. In what major areas does your documentation center specialize? Please list the areas.

(a) ..... (b) .....

(c) ..... (d) .....

9. Do you provide any computerized database ?

(a) Yes,  (b) No

10. Have you or your users actually utilized the resources of these documentation centers?

(a) Yes,  (b) No

#### D. Technical processing

11. Classification.....Schemes.....

12. Cataloging.....Codes.....

13. Bibliography.....Forms.....

14. Other techniques please specify.....

#### E. Service provided

15. Document loan provided

(a) Yes  (b) No

(c) Only to departmental staff

16. Is the documentation center automated

(a) Yes  (b) No

If yes, what is the computer used for ? .....

17. Does the documentation center provide a list of new arrivals ?

(a) Yes  (b) No

18. Can everyone use the documentation center ? ..... If limited, to whom.....

19. Borrowing allowed ? ..... If limited, to whom.....

**All materials** (a) Yes  (b) No

**Limited materials** (a) Yes  (b) No

If limited, to whom ?

20. What is the loan period for: Unbound journal ? .....

Bound journal ? .....

Books ? .....

**F. Resource sharing with other documentation centers:**

21. Do you share items from any documentation centers ?  
(a) Yes  (b) No
22. Do you give gifts to any other documentation centers ?  
(a) Yes  (b) No
23. Do you receive gifts from these documentation centers ?  
(a) Yes  (b) No
24. If yes, what kind of materials ?  
(a) Books  (b) Journals   
(c) Others, specify.....
25. Does the documentation center participate at present in any activities of cooperation and resource sharing ?  
(a) Yes,  (b) No

**G. Physical facilities**

26. What is the total area of your documentation center ? \_\_\_\_\_ sq. m.
27. Users area (reading rooms and stacks) \_\_\_\_\_ sq. m.
28. What is the seating capacity of the reading room ? \_\_\_\_\_ seats
29. What special equipment/facilities are available in your documentation center ? (Please check).
- |  |  |
|--|--|
| <input type="checkbox"/> Photocopy               | <input type="checkbox"/> Microfiche reader |
| <input type="checkbox"/> Computer                | <input type="checkbox"/> Online journals   |
| <input type="checkbox"/> Camera                  | <input type="checkbox"/> Tape recorder     |
| <input type="checkbox"/> Others (please specify) |  |

**H. General suggestion**

30. Please give your comments you would like to make to make for the improvement of NAST/NARC/MOST documentation center.

.....

.....

.....

Respondent's signature

Researcher's signature

\_\_\_\_\_

\_\_\_\_\_

Thank you.

## APPENDIX III

### BIO-DATA OF RESEARCHER

**Name:** Sita Devi  
**Date of birth:** 2033-11-04  
**Address**  
**Permanent:** Chhisti Village Development Committee  
Baglung, Dhaulagiri, Nepal  
**Temporary:** Kirtipur Municipality-, Kathmandu.  
**Cell no.** 9841527366 / 9841575511

#### *Educational Qualification*

2011 M. Lib. Sc. Tribhuvan University Library and Information Science (Viva waiting)  
2004 Bachelor's of Arts, Tribhuvan Univeristy  
1998 Proficiency Certificate Level, Tribhuvan Univeristy  
1995 School Leaving Certificate, S.L.C Board, Nepal

#### *Training:*

Basic Computer Course (MS Dos, Windows application, MS Excel)