CHAPTER VII

BIBLIOGRAPHICAL CONTROL OF GREY LITERATURE: AN OVERVIEW
CHAPTER VII

BIBLIOGRAPHICAL CONTROL OF GREY LITERATURE:

AN OVERVIEW

There have been worldwide efforts to capture, process and disseminate information which is available through various sources and in several disciplines. Libraries attached to organisations, information centres, information systems – all over the world are active in the pursuit of knowledge. There are changing patterns in the forms of presentation and forms like grey literature are emerging for rapid dissemination of information. This chapter presents an overview and a brief description of efforts done at national and international level to capture and disseminate grey literature. The information for this purpose is collected from brochures, leaflets, pamphlets, handouts, websites which is presented below.

1. International Scenario

1.1 SIGLE

One of the significant developments in the area of grey literature is the establishment of the System for Information on Grey Literature in Europe (SIGLE) by European Economic Community in 1980. The main aim of SIGLE is to provide better access and document delivery to non-formally published documents from Europe, through a bibliographical database of grey literature. Initially, eight European countries participated in SIGLE and the funding was provided by the Commission of the European Communities (CEC) to encourage participation from more countries. The CEC’s financial support
was withdrawn in 1985 and the representatives from the national centres participating in SIGLE formed European Association for Grey Literature Exploitation (EAGLE) to continue SIGLE. At present, 15 European countries participate in EAGLE, which manages SIGLE through a General Assembly, with a technical committee made up of representatives from the participating centres. An Executive Board with an Executive Director is responsible for day to day management. Each SIGLE centre is responsible for collecting grey literature produced in its country and provides details of it to the SIGLE database. The centres are also responsible for ensuring that all listed documents are available from the place which is mentioned in each record, information about which is, is provided to the SIGLE database. The main office of the EAGLE Secretariat is in the Netherlands.

The national centres of following European countries make bibliographical input to SIGLE. Belgium, Zech Republic, Denmark, France, Germany, Hungary, Italy, Luxembourg, Latvia, Netherlands, Portugal, Russia, Slovakia, Spain and United Kingdom. At the end of 1998, SIGLE contained 5,65,400 bibliographical records from the national centres. It is multidisciplinary in contents. Initially it covered only science and technology, but from 1983, humanities and social sciences were also included. The break up of input to SIGLE is, technology (31%), natural sciences (26%), biology and medicine (14%), economics, other social sciences and humanities (29%).

The records in SIGLE can be searched by subject category codes, keywords from titles, authors, corporate authors, countries, dates of publication, languages or report numbers. If a document is written in a
language other than English, both the original title and English translation of the title are given. All the documents listed in the SIGLE database are available through the respective national centres which make the input. The records contain availability statement of documents along with bibliographical details. The request for a copy can directly be made to the source. Some documents are available on loan only.

Categories of grey documents covered by SIGLE include technical and research reports, doctoral dissertations, conference papers, official publications, preprints, numerical data, and discussion / policy papers. Translations are not covered by SIGLE.

SIGLE records are classified as per the Subject Category List, the 4th edition of which is published in 1999. There are 22 primary subject categories, which are further divided into 246 sub categories. Records can be indexed with one or more subject categories. Each of the 22 primary subject categories is designated a number and the 246 subcategories are designated a letter. Following are the 22 primary subject categories used at SIGLE.

01 Aeronautics
02 Agriculture, plant and veterinary science
03 Environmental pollution, protection and control
04 Atmospheric sciences
05 Humanities, psychology and social sciences
06 Biological and medical sciences
07 Chemistry
08 Earth and atmospheric sciences
The SIGLE database is accessible via the online host BLAISE (within European community) and via STN International, worldwide. It is also available free of charge from SIGLE national centres and the EAGLE Secretariat. A CD-ROM of SIGLE database is available from Silver Platter Information Ltd. – U.K.

1.2 Centre for Research Libraries – (CRL) U.S.A.

The Centre for Research Libraries (CRL) is situated at the University of Chicago. The centre is an international non-profit consortium of colleges, universities and libraries which make scholarly research material available to
users in North America. It was founded in 1949 and currently over 165 universities, colleges and research libraries are members of the centre. The centre functions as a co-operative research library dedicated to acquiring, storing, preserving, providing bibliographic access and lending scholarly research material that complements and supplements the collection of major research libraries in North America. The centre’s collection was originally developed from member libraries' deposits of infrequently used research materials.

The current acquisition program of CRL focuses on archival material in microforms, dissertations, newspapers, serials and materials from Eastern Europe, East Asia, South Asia and South East Asia. The archival materials in microforms have records of national archives, papers from Public Record Office of Great Britain, personal papers and archives of organisations. There is a comprehensive collection of doctoral dissertations collected from outside U.S.A. and Canada and submitted to institutions. The current collection size is 640,000 + titles. There are continuous on-going deposits to this collection. There is a global newspapers collection wherein around 6,000 newspapers from all over the world are received. More than 13,000 currently received serial titles and over 3,46,000 retrospective serial titles are available at CRL. Its special collection includes foreign bank reports, railroad company reports, monographs supporting historical research, area studies research on Africa, and South East Asia and course descriptions from over 2,000 universities and colleges in U.S.A. and other countries. The U.S. state documents collection includes publications issued by agencies of all U.S. states and territories that cover administrative, economic and cultural activities. Inter library loan service
is provided by the centre to member libraries and article photocopy service to researchers.

1.3 Japan Documentation Centre (JDC) – U.S.A.

The Japan Documentation Centre is a national resource which provides access to Japanese documents covering a broad array of public policy issues. It was established in the Library of Congress in 1992, with an objective of collecting, organising and disseminating Japanese public policy information to researchers in government, academia, the business and industrial sector and the general public. The centre's mission is to acquire and disseminate the current and 'difficult-to-obtain' Japanese literature by employing bibliographic control, making bibliographic information available on the Internet and supplying full text documents to users. The source documents include draft legislation, policy studies, white papers from government, think tank reports, public opinion polls and conference proceedings. Majority of the documents are in Japanese language. The collection also includes English language material from Japan. The acquisitions office is in Tokyo and JDC obtains the material to make it quickly accessible to researchers in the United States.

Activities of the centre are carried out in close co-ordination with major Japanese government agencies, professional associations corporations, non-governmental organisations and the database promotion centres. The center maintains a database of key public policy source materials and prepares English abstract for each document. It offers instructions to American researchers through seminars, workshops,
conferences, announcements and newsletter. JDC regularly receives inquiries and requests from researchers in universities and research centres in the United States as well as from other countries such as Austria, France, Germany and Norway. The Staff of JDC helps researchers to identify and obtain relevant information on specific topics. If necessary, assistance from Tokyo office is sought to get the desired information.

Researchers can search the index file on JDC'S website and identify the documents which they wish to obtain, by the document number. They can even call up the documents from the optical disk system on to the screen for viewing. Printed copies can also be obtained. The centre regularly scrutinises the nature of topics requested, so as to prepare the collection guidelines to serve the users' needs.

As majority of the documents are in Japanese language, the English abstract of each document in the index file is very useful to the users. Since translation is costly, efforts are made to search for English versions, or users are directed to other web sites of Japanese government publications.

Inquiries to and responses from the JDC are through e–mail, fax, telephone, postal service or personal visits. The center provides a list of journals that are subscribed by the JDC, on its home page.

1.4 British Library Document Supply Centre ( BLDSC )

The BLDSC is the British Library's premier document supply centre. BLDSC exhibits one of the widest range of activities through its technologically up to date means and it is an important source for obtaining information. The British Library has a collection in practically every field of
enquiry, which has been built up over two centuries. The information is made available to the users through advanced access and retrieval technology, wherein BLDSC plays a major role.

1.4.1 Grey Literature at BLDSC

The BLDSC has a special Acquisitions Section which is a depository of its grey literature and on input centre to SIGLE database. This section holds reports literature, technical notes, working papers, dissertations, translations (some), official publications (some of them), conference papers, proceedings and supplementary publications. It collects this literature in all subject areas.

1.4.1.1 Reports literature

BLDSC has a comprehensive collection of reports available for public use anywhere in the world. The collection runs to over 4 million reports. The reports are collected from NTIS (National Technical Information Service – U.S.A.), NASA (National Aeronautics and Space Administration – U.S.A.), USDoE (U.S. Department of Energy), ERIC (Educational Resources Information Centre – U.S.A.), INIS (International Nuclear Information System – Austria), ESA (European Space Agency), Commission of the European Communities and its institutions and several other international and overseas bodies. There is a separate National Reports Collection maintained, which covers large number of reports, papers and technical notes produced in U.K. by private and public sector organisations, charities, action groups, pressure groups, research organisations and universities. The collection is made available to the general public but it is not primarily meant for commercial sale. A detailed listing of National Reports Collection is given in the
publication, "British Reports, Translations and Theses" (BRRT) and it is also included in the SIGLE database.

1.4.1.2 Conference proceedings

BLDSC has collection of over 3,500,000 conference proceedings, growing at an average rate of 15,000 – 18,000 new items every year. The collection covers conferences, symposia, workshops, meetings, in all fields. The oldest conference proceedings known to be in the collection, is the one held in 1787.

1.4.1.3 Dissertations

Over 1,00,000 British doctoral dissertations and over 4,00,000 U.S. doctoral dissertations are held by BLDSC. They are acquired in response to demand within two weeks of being requested, unless they are already held. They are available on loan or on purchase as bound photocopies or in microform. They are included in BRRT.

1.4.1.4 Supplementary publications and data.

Sometimes, publishers of journals decide not to publish lengthy articles fully. They are either revised or do not find their way into formal publications. They remain as unpublished documents or even as synopsis. Some scientists write minute details of research project's methodology, in which only a small community of researchers is interested. Such material is made fit into the supplementary publications category. BLDSC operates a scheme for the storage and supply of such type of data, in consultation with editors of journals and reports series. Such collection in the centre amounts to over 16,000 items.
1.4.1.5 Translations

BLDSC's translation collection includes translations from all languages into English from 1966, majority of which are in science and technology area. Over half a million ad hoc translations are held in addition to about 240 cover to cover fully translated journals and some selective translation journals.

1.4.2 Publications

In order to provide bibliographical details of the above mentioned GL collection, BLDSC brings out different publications in printed as well as in CD-ROM format. They are –

1.4.2.1 Alphanumeric Reports Publications Index.

This index provides access by the alphanumeric designator to the centre's collection of over 4 million reports held in some 1200 series.

1.4.2.2 Index to Conference Proceedings

This index lists about 17,000 new conferences annually. A separate Index to Conference Proceedings 1964 – 1988 is available on microfiche and yet another publication called, "Boston spa conferences on CD – ROM" is a record of over 3,50,000 published proceedings.

1.4.2.3 British Reports, Translations and Theses (BRTT)

This is an important publication to trace information from reports – including market research reports produced by industries and all other types of reports issued by government bodies, universities, learned institutions and research organisations. They are included in the catalogue of National Reports Collection. BRTT also covers translations and doctoral theses, which are held at BLDSC.
1.4.2.4 Current Research in Britain (CRIB)

CRIB is a comprehensive source of current research projects in U.K. It covers up-to-date details of over 60,000 projects taking place at universities, colleges and other institutions. It is a set of 4 volumes in the subjects of

- Physical Sciences
- Biological Sciences
- Social Sciences and
- Humanities

It is also available on CD-ROM.

1.4.2.5 British Library Research and Innovation Centre Publications (BLR&T)

The reports of this centre (formerly known as Research and Development Department) are available for purchase as microfiche copies and print copies.

All the above mentioned publications of BLDSC are priced publications. They bear an ISSN or ISBN. Essentially, they provide information about BLDSC's grey literature collection.

1.5 Grey Literature Network Service

The Grey Literature Network Service (Grey Net) was established in Amsterdam – The Netherlands, in the year 1992. It is a division of Trans Atlantic – which is an information consultancy firm and translation bureau serving clients in public and private sectors, academic institutions, business houses and government departments. The principle objective of Grey Net is to
promote and support the work of authors, researchers and intermediaries on
the topic of Grey Literature. This is achieved through organising international
conferences, training programmes, by establishing a worldwide information
referral base and through publication activity. In its endeavour to enhance
international co-operation, the Grey Net compiles information on persons,
organisations, their products and services in the area of grey literature.

**Grey Net offers following services** –

- Organisation of international conferences
- Organisation of seminars and workshops
- Translation and abstracting services
- Information and referral services

**Publishing, marketing and sale of grey literature.**

The publication activity of Grey Net has produced following well-known
publications –

- Conference proceedings of the four international conferences on Grey
- International directory of persons and organisations in GL.
- Annotated bibliography of GL.
- Seminar notebook on GL.
- A quarterly Newsletter, “News Brief News”
- A quarterly “International Journal on Grey Literature” (IJGL).
- GL compendium – a net based directory of GL collections.

In 1998, Grey Net has entered into an agreement with MCB University
press – U.K. for the merger and integration of their publication activity. Grey
Net will continue its operations from Amsterdam as facilitator with MCB as
publishing body. It is expected that new information resources, including the IJGL will be made available in print and electronic format – which will widely benefit the producers and users of GL.

1.6 Development Science Information System (DEVSIS)

DEVSIS is a global, co-operative, mission oriented information system to provide access to the world’s socio-economic development literature. Stephen[ 1 ], while elaborating DEVSIS activities states that “almost sixty percent of the total volume of development literature is made up of unpublished working papers, feasibility and pre-investment studies, theses, research reports and documents of government and international organisations which are not widely disseminated. This system aims to meet the diverse information needs of policy makers, planners, teachers, researchers and financiers”. It is based on the grounds of international equity that will permit the sharing of information on socio-economic fields in a way that will permit a more equitable distribution of organised human knowledge.

1.6.1 Genesis of DEVSIS

A proposal for the system was made in a paper titled, “DEVSIS : A Development Science Information system” by John E. Woolston, Director of International Development Research Centre (IDRC), Canada in January 1974. Later, a meeting was sponsored jointly by IDRC, Organisation for Economic Co-operation and Development(OECD) and UNESCO, to discuss the need for a system. It made general recommendations about formation of a steering committee and a feasibility study team. The members of the study team were from six international organisations, namely ILO, IDRC, OECD,
UNDP, UNESCO and UN Department of Economic and Social Affairs. The study team worked under the guidance of the steering committee. The steering committee in its first meeting held in Paris, during 16-18 October, 1974, adopted general purpose and objectives of DEVSIS.

1.6.2 Objectives

Neelameghan [2] has stated the objectives of DEVSIS as adopted by the steering committee. They are as under -

1. a) To improve access to economic and social development information to individuals and institutions, particularly in developing countries, and especially to those involved in the formulation and implementation of development activities in governments and intergovernmental organisations.
   b) To foster the building and utilisation of national and international resources needed to meet this goal.
   C) To improve co-ordination between the existing development information, including library facilities.

2 Within the overall concept of evolving a future oriented programme for economic and social development information of broad scope, International Development Information system DEVSIS should be prepared, which would:
   a) Provide information services to users working in the development field at the national and international governmental and non-governmental levels (including the academic community) in developing and developed countries;
   b) Be respective to the expressed needs of its users, and, following reviews and evaluation, to adjust to effective needs within a constantly evolving word context;
   c) Be responsive to appropriate technological advances in communications and to inter-connection with other related systems, and thus contribute to meeting the priority of information needs for the establishment of a new international economic and social order.

3 DEVSIS should cover both published literature and unpublished documents and data. The system should be based on the concept of decentralised input, centralised output services; it should thereby help contribute to the development of adequate information infrastructure and resources at the national level.

4 DEVSIS should be managed within the United Nation’s system.

5 DEVSIS should be open to the participation of interested member states, as well as of inter-governmental and non-governmental bodies concerned with problems of development.

6 DEVSIS should be developed within the conceptual framework of the UNISIST programme; its design should take into account the experience
of other operational and experimental information, including library systems.

7 All countries should be encouraged to give consideration to development information as an important component in the formulation of both their national development policies and their national information policies.

1.6.3 Activities and services by DEVSIS

The areas of knowledge covered by DEVSIS are in all sectors of human endeavour such as agriculture, industry, transport, education, social welfare and public health education.

The major categories of information covered for the purpose are –

A – Facts, trends and analysis
B – Prescriptions for decision making
C – Official policies, plans and programmes
D – Development action and operational experience
E – Consequences and evaluation
F – Resources and tools for development

The central unit of DEVSIS is located at IDRC, Ottawa, Canada. National participating centres are expected to identify, collect and transmit information on nationally produced publications, conventional and non – conventional reports and documents, which fall within the scope of DEVSIS, to the central unit. The central unit is expected to send back a printed output to be made available to national users by the participating centre.

The sponsoring organisations of DEVSIS have collaboratively prepared the Macro thesaurus, to cover the socio-economic development terminology. An index called DEVINDEX is created, wherein records are sequenced by category and geographic code and
permanent record numbers are assigned. Each record contains full bibliographic description, an abstract, descriptors denoting subject index, and a country code. There are four indexes created, namely, subject index, geographic index, corporate body index and personal author index. The DEVSIS central unit produces a machine readable file which contains new records added to the database, copies of which are sent to participating centres. On request, cumulative versions of the DEVSIS files are also sent. Majority of records indexed under DEVSIS belong to non-conventional literature. The Centre for Development of Instructional Technology [CENDIT] is the only organisation in India expected to contribute to DEVSIS. [refer to section 2.3, p. 1].

1.7 Other worldwide efforts

In addition to the above stated institutions, which are actively involved in dissemination of grey literature, international bodies like the World Bank, International Monetary Fund, agencies of the United Nations make their GL documents available as priced publications. Rand Corporation publishes large number of technical reports and papers. NASA brings out series of publications under headings like technical reports, technical notes, technical memoranda and Special Publications Series which consists of publications including programme summaries, conference proceedings, monographs, historical accounts etc. Besides, there are NASA Tech Briefs, which are short descriptions of new techniques, concepts and innovations. Technology Utilisation Reports and Technology Utilisation Surveys are brought out which are state-of-the art of new technological contributions by NASA. These
publications are available on subscription basis. Information about large number of reports, preprints, working papers, pamphlets, policy analysis papers, unpublished papers, monographs, newsletters etc. is available from the websites of different organisations around the world. Some of these GL documents give only bibliographical information, while some are available full text and can be downloaded either free of cost or on payment basis.

Bibliographical details of the U.S. Government publications available in the libraries of some American Universities can be obtained from the Internet (e.g. Michigan State University). Organisations provide information about their publications, databases, conferences, training programmes, workshops and such related activities which lead to generation of GL documents. Links are also provided to other Internet sites. (e.g. the vast collection of pamphlet literature in the New York Public Library). University Microfilms International (UMI) regularly publishes Dissertations Abstracts International – giving information about doctoral dissertations submitted and approved by American and Canadian universities. The University of Warwick library in U.K. is managing its working papers project in economics and management for the last twenty five years. This feature is observed for American universities also (e.g. University of Washington at St. Louis).

The Stanford Linear Accelerator Centre in U.S.A., through collaborative efforts with librarians and physicists, has developed a model for making the preprints in High Energy Physics, available through a virtual library. International Information Systems like INIS, AGRIS have a regular input of non-conventional literature in their database and it is available full text on microfiche. Tyagi [3] has discussed the issue of provision of information in
development studies at national and international level and has provided a list of web addresses of institutions in the Asia – Pacific region. The web addresses of select institutions, which are active in generating and disseminating information about GL documents is given in appendix VII.

2. Indian Scenario

Support of National Information System

There have been organised efforts in the past few years to create a strong science and technology infrastructure in India. This covers a chain of National Laboratories, Regional Research Laboratories, various R&D and training centres. Government is taking several measures to establish linkages between the national laboratory system and the industry. Special attention is being given to the promotion and support of industrial research. A scheme for granting recognition to in – house research and development units in the industrial sector was being operated by the Department of Science and Technology – Government of India, New Delhi from 1973. This activity is now being handled by the Department of Scientific & Industrial Research, Ministry of Science & Technology. In order to augment the national information base, University – industry – Research institution interaction is also being mooted. Information available through grey literature is also handled under this activity. A brief outline (pertaining to the present work), about the activities and services offered by select institutions in the country is given below.

2.1 National Information System for Science and Technology (NISSAT)

The phenomenal explosion of information, as a result of increased scientific and technological activity has created a need for an effective system
for information transfer to an ever increasing user population. In order to provide effective information support to Science, Technology and Industrial R&D community, it became essential to provide access to national and international Science & Technology information. With this view point, the National Information System for Science & Technology (NISSAT) was established in 1977. It envisages promotion and support to the development of a compatible set of information system on science and technology and interlinking of these into a network. Since 1985, the responsibility of implementing the NISSAT Programme is with the Department of Scientific and Industrial Research – Ministry of Science and Technology.

2.1.1 NISSAT’S objectives

1. Provision of national information services to meet the present needs of generating, processing and disseminating the information.

2. Promotion of existing information systems and services and development of new ones.

3. Promotion of national and international co-operation for exchange of information.

4. Support and promotion of research, development and innovation in Information Science and Technology.

5. Development of indigenous products and services.


7. Introduction of new information handling tools and techniques.

2.1.2 Sectoral Information Centres (SIC)

The major instrument for information resources development and
dissemination is an information centre. Following Sectoral Information Centres (SIC) were established by NISSAT with objectives to create information awareness and to meet the information needs of academicians, scientists, technologists, entrepreneurs, management executives and decision makers.

<table>
<thead>
<tr>
<th>Subject Areas</th>
<th>Acronym</th>
<th>Host Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Leather Technology</td>
<td>NICLAI</td>
<td>Central Leather Institute, Chennai</td>
</tr>
<tr>
<td>2. Food Technology</td>
<td>NICFOS</td>
<td>Central Food Technological Research Institute, Mysore</td>
</tr>
<tr>
<td>3. Machine Tools</td>
<td>NICMAP</td>
<td>Central Manufacturing Technology Institute, Bangalore</td>
</tr>
<tr>
<td>Production and Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Drugs and Pharmaceuticals</td>
<td>NICDAP</td>
<td>Central Drug Research Institute, Lucknow.</td>
</tr>
<tr>
<td>6. Chemicals &amp; Allied Industries</td>
<td>NICHEM</td>
<td>National Chemical Laboratory, Pune</td>
</tr>
<tr>
<td>7. Management Sciences</td>
<td>NICMAN</td>
<td>Indian Institute of Management, Ahmedabad</td>
</tr>
<tr>
<td>8. Marine and Aquatic Sciences</td>
<td>NICMAS</td>
<td>National Institute of Oceanography, Goa</td>
</tr>
</tbody>
</table>

254
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Crystallography*</td>
<td>NICRYS</td>
<td>University of Madras, Chennai</td>
</tr>
<tr>
<td>12. CD-ROM*</td>
<td>NICDROM</td>
<td>National Aerospace Laboratory, Bangalore.</td>
</tr>
</tbody>
</table>

(* NISSAT support to the centres at serial no. 9 to 12 has since been withdrawn).

The Sectoral Information Centres (SICS') are built around the existing information resources and facilities. They are also provided with a wide range of documents, sophisticated equipments and manpower, so that they can provide information services on a national scale. They maintain an extensive collection of published and unpublished documents in the form of books, periodicals, research reports, development and trade reports, monographs, conference proceedings, standards, patents etc., pertaining to the relevant subject areas.

The Sectoral Information Centres maintain several databases to cater to the information requirements of their clientele. For example, NICDAP maintains databases on Natural Products, Folklore database, Letters of Intent & Industrial Database, Research Projects database and Union Catalogue of Periodicals in Lucknow city. NICLAI maintains database on Leather Science and Technology and Allied areas, holdings of periodicals, thesaurus of

Some of these NISSAT SIC’s have additional responsibilities. For example, NICDAP is a collaborating unit for WHO in India, the user centre for Biotechnology Information System and also runs information activities for National Institute of Oceanography (NIO) on marine drugs. NICFOS collaborates with Technology Information Forecasting and Assessment Council’s TIFACLINE for the development of a database on Food technology and also provides inputs to the global Food Science and Technology Abstracts (FSTA) database. NICHEM interacts with the Chemical Information Network (ChIN) of UNESCO towards developing a Chemical Reactions database.
Information Services provided by these centres include document supply, preparation of special bibliographies, patent search, reprography and micrography, industrial inquiry and translation services. As a part of creating awareness among library and information professionals and user community in the use of modern information technologies, the centres conduct seminars, conferences, workshops and training programmes.

In addition to Sectoral Information Centres which provide mainly bibliographic support, Information Analysis Centres and Data Centres (NCB, NICRYS and NICODEM) have been established under NISSAT scheme for undertaking the task of acquiring, evaluating, integrating, consolidating and analysing factual and numeric information.

2.1.3 On line and SDI Services

NISSAT has provided on line information search facilities to some information centres in the country, to have an access to international databases. They are called as NISSAT Access Centres to International Database Services (NACIDS). They are shown in table 19 below.

<table>
<thead>
<tr>
<th>City</th>
<th>Host Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahmedabad</td>
<td>Ahmedabad Textiles Industry's Research Association</td>
</tr>
<tr>
<td>Bangalore</td>
<td>National Aerospace Laboratory</td>
</tr>
<tr>
<td>Bombay</td>
<td>Victoria Jubilee Technical Institute</td>
</tr>
<tr>
<td>Calcutta</td>
<td>Indian Association for Cultivation of Science</td>
</tr>
<tr>
<td>Hyderabad</td>
<td>Centre for Cellular and Molecular Biology</td>
</tr>
<tr>
<td>Madras</td>
<td>Central Leather Research Institute</td>
</tr>
</tbody>
</table>
The NACID centres operate through the Videsh Sanchar Nigam Limited ( VSNL ) via the Gateway Packet Switching Services ( GPSS ). Selective Dissemination of Information ( SDI ) is provided to users by NICMAP / CMTI, Banagalore using the COMPENDEX database and by NICDROM / NAL, using the NTIS database.

The information products created and services rendered by NISSAT centres are fee based. NISSAT has also undertaken the responsibility to strengthen the library movement in the country by introducing modern information technology, tools, techniques, manpower development programmes and library networks. In collaboration with DESIDOC, NISSAT has developed a package called SANJAY to help libraries and information centres in India to improve their services through automation. It conducts several continuing education programmes for manpower development in information field. NISSAT offers the Internet based activities by establishing websites, servers.

2.2 Technology Information, Forecasting and Assessment Council ( TIFAC )

The Technology Information, Forecasting and Assessment Council ( TIFAC ) is a registered society, established by the Department of Science
and Technology – Government of India in 1988. Its major thrust area is
development of technology in the country and dissemination of advanced
technological information, its assessment and forecasting.

2.2.1 Objectives of TIFAC

To undertake studies in technology assessment, forecasting in key
areas of interest.

- To promote key technologies in the country
- To observe global technology trends and evolve a suitable mechanism
  for the country.
- To enable technology transfer from developed countries to India.
- To develop nationally accessible technology information system.

Towards fulfilment of these objectives, TIFAC is involved in conducting
several studies on critical technological issues, much relevant to country’s
needs. Since its inception, it has worked on wide ranging technologies, for
their assessment of suitability in Indian socio-economic conditions. It has
brought out several research study reports and techno-market survey
studies. Some of the topics on which, study reports are generated at TIFAC
are as under –

- Bio – technology
- Technology planning
- Bio – medicine
- Energy
- Human habitat
- Manufacturing industries
- Instrumentation
- Information technology
- Sugar technology
- Environmental protection
- Steel and material
- Transportation
- Aviation.

These studies are under different heads such as Technology Forecasting (TF), Technology Assessment (TA), Techno–market surveys (TMS), Technology vision 2020 (TIFAC : V) reports and reports on comprehensive picture of Science and Technology in India. (For example, Status of Science and Technology in India : Report on Health Care P : 040)

More than 150, such studies have been undertaken by TIFAC. The studies have resulted into advisory documents and as important source for technology guidance. These reports review world status as well as trends in India, identify technology gaps and evolve strategies for technology development. They have been used by the financial institutions for risk evaluation in investments. Several national and international agencies, Government departments have found these reports useful in planning the technology development efforts. These reports are available on payment from TIFAC.

2.2.2 Technology Information System

TIFAC has initiated Technology Information System : TIFACLINE for data generation in specific technology areas. It provides customised information support by bringing out technology position papers and documents. TIFAC has entered into a collaborative agreement with Computer
Maintenance Corporation (CMC Ltd.) for promoting IT based services and for creating technology databases. Database on Composites, Food Processing, Non-ferrous materials, Environmental technologies and Energy are available for access to the users. Few other databases like database on Standards (Indian and international), Expert base, an on-line roster of around 2,000 Indian and NRI technology specialists, and a database on technology sourcing worldwide have been created for providing information on licensing, joint ventures etc. In order to cater to the customised information needs, specialised technology-cum-business opportunity reports were compiled by CMC. The TIFACLINE services are available for on line access from major cities like Bangalore, Delhi, Chennai, Hyderabad, Mumbai and Calcutta through CMC'S INDONET.

2.2.3 Patent Facilitating Cell (PFC)

TIFAC has set up a Patent Facilitating Cell with an objective of creating awareness about issues related to Intellectual Property Rights (IPR) and to safeguard innovative work of Indian scientists. Some of the activities of PFC are –

- To keep a watch on the global developments in the area of IPR and facilitate use of patent information.
- Provide patenting facilities and legal advice to scientists and technologists in the country.
- Undertake studies on policy related issues and other operational matters arising out of agreement under World Trade Organisation.
The PFC publishers a monthly bulletin called "IPR Bulletin" to cover all the aspects of IPR. Besides, workshops are held in different parts of the country regularly. Based on all such activities, priced and unpriced documents are prepared for wider dissemination.

A library at TIFAC, which maintains a collection of books, journals and several specialised reports provides a support for enhanced information requirements of users.

A homepage has been designed and hosted on the Internet, highlighting various activities of TIFAC and its publications. The technology database is available on floppies along with the retrieval package.

2.3 Centre for Development of Instructional Technology (CENDIT)

The Centre for Development of Instructional Technology (CENDIT) – New Delhi is the organisation contributing to DEVSIS database from India. The information sent to DEVSIS is usually in the form of reports, documents, dossiers and readings in specific subjects collated from a number of sources. The CENDIT library includes, number of unpublished material dealing with studies, policies, plans of actions, implemented development projects, evaluative reports and such material. Its aim is to reach out to vast quantity of unpublished material generated in the country. However, it also includes conventional kind of material like books and journal articles.

SAGE publications from New Delhi, on behalf of CENDIT has published, annual publications called "Indian Social and Economic Development – an index to the literature" from 1987 to 1994. It appears that this publication is now suspended.
2.4 Indian Council of Social Science Research (ICSSR)

The ICSSR was established in 1970 with an objective of promoting research in social sciences in the country. In the same year, it set up the Social Science Documentation Centre (SSDC), which was renamed as National Social Science Documentation Centre (NASSDOC) in 1986. The ICSSR carries out its research activities mainly by –

1) Conducting surveys of research in social sciences to identify priority areas of research, thereby keeping a track of literature in Social Sciences.

2) Inviting new research proposals from individuals and institutions to undertake specialised research programmes.

3) By granting various research fellowships, study grants to scholars.

4) By conducting seminars, training programmes workshops on different research themes.

2.4.1 Publications

The ICSSR, through its various publications and through NASSDOC activities, is trying to bring in some bibliographic control on GL, published in Social Sciences. Both, priced and non–priced publications are published by ICSSR and NASSDOC. A catalogue (booklet) called ‘ICSSR Publications’ gives a list of all ICSSR’S publications. The non–priced publications of ICSSR include –

- ICSSR General information
- ICSSR Doctoral fellowships
- ICSSR Post-doctoral fellowships
- ICSSR Research grants
- ICSSR publications grants
- ICSSR Memorandum of Association and rules
- ICSSR – priorities of research in Anthropology – draft note
- A Report on Social Science in India – Retrospective and Perspective
- ICSSR occasional monographs like
  - Educational and cultural rights of the minorities (ICSSR occasional monographs second series no.2), 1982.
  - Socio–legal research in India: A Programme shift. (ICSSR occasional monograph no. 12)
- ICSSR Newsletter: This quarterly newsletter gives information of ICSSR’S all on going activities.
- Data Archives: Programmes and Activities (A booklet)

2.4.2 Data Archives and National Register

Data Archives of ICSSR; acquires, organises and preserves data generated by the ICSSR funded research projects and disseminates them among interested researchers for secondary analysis. Large quantum of useful data collected on various social issues – by government organisations and research institutions remains unnoticed by potential users, mainly because it is not publicised. To exploit the data so collected; for wider utility, Data, Archives has two programmes –

1) To prepare an inventory of what kind of data exists, where and in what form and

2) To help researchers have access to government data.
At Data Archives; those data sets which are available in the machine readable form; have potential for re-use and are backed by appropriate documentation, are acquired. After checking the completeness of the data, the data sets are preserved on computer tapes. The booklet on Data Archives provides a list of data sets available at ICSSR. The compilation of National Register of Social Scientists is another on going programme of Data Archives.

2.4.3 National Social Science Documentation Centre (NASSDOC)

The NASSDOC provides a range of documentation and information services by way of offering literature search services, bibliographical services, document delivery and photocopying service and by providing consultancy services to organisations which wish to set up new library and information services. NASSDOC regularly brings out publications such as –

- **Acquisition Update:** It contains bibliographical entries pertaining to the documents added to NASSDOC library holdings in the past six months.

- **Bibliographies on different Social Science related themes,** such as Public Finance, Labour and Labouring classes,....

- **Bibliographic reprints:** Short bibliographies on demand are compiled by NASSDOC. This contains cummulations of these bibliographies.

- **APINESS Newsletter:** This newsletter reports significant developments in the field of social sciences in general.

- **Conference Alert:** This quarterly publication gives information on forthcoming conferences, seminars, training courses in
social sciences. Entries include national and international conferences with their title, date, venue address of contact person and name of the sponsoring body.

- Current Index to Indian Social Science journals: Subject, title and author index to journal articles is given in this publication.

- NASSDOC 'How it works': This is a part of NASSDOC'S research information series. It gives collection of write ups on various activities and services of the centre, outcome of weekly staff meetings – where problems of general and specific nature are discussed as well as ideas are shared.

- Area study bibliographies: They are state-wise, selective listing of publications (in English language), available in major libraries in the state. These bibliographies include monographs, government publications, research reports, theses. The bibliographic entries are accompanied by annotations. They are a part of NASSDOC's Research Information series.

2.4.3.1 Collection of CD-ROM databases

Some of the CD-ROM databases related to grey literature area available at NASSDOC are as under –

  A comprehensive document and project databases of United Agency for International Development (USAID). It contains full text of selected 8,000 USAID project reports initiated since 1974 and 70,000 associated project and technical reports. It also includes USAID's electronic Directory.
Dissertation Abstracts on Disc: Humanities and Social Sciences (1861-)

It is a comprehensive source of dissertation information dating from 1861 to the present. The database covers more than 12,00,000 doctoral and masters dissertations. It represents work from over 1,000 universities throughout the world, including most North American graduate schools and many European universities. The database includes abstracts from 1980 forward for doctoral dissertations, and from 1988 forward for masters theses.

EconLit (1969-)

EconLit is a comprehensive indexed bibliography with selected abstracts of the world's economic literature compiled from journal of Economic Literature. It includes coverage of over 400 major journals as well as articles in collective volumes (essays, proceedings, etc.) books, book reviews, dissertations, and working papers.

ERIC Database (1966-)

ERIC is the world's largest collection of records on educational materials. The entry database contains over 8,95,000 citations and abstracts of education related journal articles, research papers, dissertations, conference proceedings, literature reviews, reports, syllabi and curricula.

POPLINE: Population Information Online (1827-)

It contains almost 2,20,000 citations with abstracts representing journal articles, monographs, technical reports and unpublished literature on family planning, population and related health issues.
• Unpublished Research Project Reports available in NASSDOC
  It is a database containing full bibliographical details with subject and
  geographical details with subject and geographical coverage, name of
  the project director(s) and his/her parent organisations and year of
  approximately 2,500 projects majority of which are funded by ICSSR.

• Unpublished Theses Available in NASSDOC
  This database contains approximately 3,000 Ph.D. and D.Lit.
  dissertations. It provides full bibliographical details with name of the
  guide(s), name of the university, year of award, subject and
  geographical approach.

3. Grey literature in the networked environment
New generation of grey literature is arising specific to networked environment.
Government organisations, academic institutions, business houses, industry
have come to view themselves as publishers of grey literature. Their reports,
working papers, preprints, policy statements, information on current research,
geographic information systems, manuals, raw data on statistics and
indicators — are available in networked environment for unlimited retrieval.
There will be an increasing evidence of transfer of mediums for grey literature
where full texts will be available on the Internet and/or will be stored on CD-
ROM. The exploitation of these resources has greatly contributed to the
dissemination of knowledge in many disciplines. This new type of grey
literature, for example, E-prints provide a new pattern of communication. They
combine the features of electronic publishing with specific forms of
documents. The distribution function performed by E-print archives and non-
commercial web-sites developed by universities and other organisations are improving the accessibility of grey literature. Authors, researchers and information managers will rely more upon the techniques available through electronic means. Individuals and organisations who have never considered themselves before as publishers, will be publishing and distributing information through the net. Authors using the Internet will be able to avoid official publishers and will have direct access to future end user environment. The traditional concept of an information chain consisting of authors, publishers and users is no longer valid in the Internet environment. This phenomenon is more likely to be observed for GL documents than established full length documents like books. The Internet and the World Wide Web will be suitable tools for marketing and advertising grey literature. The preemptive concern of the Internet users is more with access than permanent retention of information and they are also aware about its unstable nature. The non-static, dynamic nature of grey literature fits into this paradigm shift from traditional to networked environment. As more publications become non-traditional and their channels of dissemination become increasingly electronic, libraries have an obligation to support the users and scholars in their pursuit of this material.

4. Discussion:

The foregoing description, points to the fact that today, the problem is not of the non existence of information, but it lies in identification of proper source material, knowledge about its existence, availability, accessibility and its utilisation. Sources from which information is derived, range from all types of conventional sources to single unpublished document - whose very
existence is known to a small, limited group. It is unpredictable to say, what kind of information will be needed at what time and which source would be able to satisfy the needs. Grey literature is not limited to specific subject area, as it extends equally to social sciences, pure science and technology. Libraries cannot equip themselves with all varieties of grey literature (even within one subject area), because it leads to the problem of capacity utilisation, duplication of resources and economic viability. At the same time, exploring the flow of information through grey literature, for innovation is equally crucial for industry, academics, research and for all type of scholarly communication. Offering an adequate support for this purpose, is a major challenge for libraries. Meeting this challenge, requires an understanding and agreement among organisations with common interests concerning management of information. The field of grey literature is evolving into a universe of its own. It should now be a matter of primary concern to all involved in the knowledge transfer, that adequate resources are allocated and appropriate infrastructure is created to support the concept of having an independent system of 'Grey Literature' generated in each country.

It may be stated here that there exists an infrastructure for collecting, organising and distributing grey literature in British and American libraries. Offices of SIGLE and BLDSC have created a formal structure for dissemination of grey literature and thereby have attained reasonably good bibliographical control over the same. But there is a need for developing proper infrastructure for identification, retrieval and dissemination of grey literature in this country.
There have been efforts in the country to widen the information base, by way of establishment of INSDOC, NISSAT, TIFAC, ICSSR, management institutions, technological universities, development research institutes and national level institutes in different disciplines such as Fishery Survey of India, National Institute of Oceanography, National Council for Applied Economic Research, Development Science Information System (DEVSIS) and their libraries. Their efforts are mainly concentrated around collection development in specific field of knowledge, development of databases (printed or CD ROM), developing national information resources, preparing information consolidation products, on line services, translation services, document delivery, software development, education and training. They give services in their own subject field from the resources generated and acquired in their respective areas.

Advancements in communication technology have opened up new avenues for search strategies. But there is no central nodal agency which can give basic information about the GL documents. For example, NISSAT, INSDOC or TIFAC do not have the information about all the doctoral theses submitted and granted by Indian universities, in the fields of science and technology. The official bibliographies and publications – which are expected to give this information are having publication time lag This information has mostly remained confined to individual universities (though INFLIBNET is progressing in this direction). Large number of study reports, research reports, working papers and such other grey literature is not known to potential users. Libraries like Parliament Library, Central Secretariat Library, Vidhan Bhavan
libraries at state capitals have an excellent collection of government
documents, but their access is limited to selective users.

The great diversity and heterogeneous nature of grey literature
documents, makes the search for information through forms, a formidable
task. Anyone whose task is to collect, compile and review the literature for
research purpose is faced with a multitude of publications. In the absence of
data on availability and accessibility of sources, one is obliged to consult as
many documents as possible, in order to reduce the risk of missing the key
references. It leads to spending excessive time, money and efforts for search
for relevant information. Whatever efforts have so far been made in the
country, are falling short to provide information about and from grey literature
documents generated in the country. Individual institutions may be
disseminating the information about their grey literature documents through
annual reports or list of publications – but there is no cohesive action in this
direction. There is a need for clear government policy on grey literature which
would require consideration on matters like –

a) Funding

b) Establishment of a national centre

c) Creation of infrastructure

d) Manpower planning

e) Legal deposit law

Therefore, it is suggested here that there is a case for setting up an
"Information system for Grey Literature" in India. It can have its central office
at one place with bibliographical function as its core function. The SIGLE
system discussed earlier; can be thought of, as a model for this purpose. The
proposal for a model of the Information system for Grey Literature is discussed in the next chapter.

References

