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Norwegian Research and Special Libraries

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1. National Organization

1.1. General

One glance at a map of Norway reveals that it is a rugged country with many fjords and mountains making it a difficult and expensive task to provide a modern infrastructure. The distance from one end of the country to the other, about 1800 kilometres, is longer than for any other European country except Russia. The geographical centre of Norway is situated a little south of the Arctic circle. The distances between the main populated areas are vast, and the scenic landscape is from an economic point of view a physical obstacle that makes Norway an expensive country to run. Four million inhabitants must provide the infrastructure of nearly 387.000 km^2 - an area about equal to Great Britain and Ireland together, or the state of New Mexico.

With 11 inhabitants in each square kilometre few foreign visitors will expect a sophisticated system of research and special libraries in one most northerly parts of the world. An estimate from 1988 suggests that approximately 800 million NOK was spent on research and special libraries that year. On an average every Norwegian pays approximately 200-250 NOK each year for their services.

The research and special libraries have expanded significantly from the middle of the century. New universities and regional tertiary education have given us new resources, but also an increased demand for library services from the more established libraries with larger stocks in addition to a need for central services from a new national library. The Rana Branch of the new national library started its first activities in 1989 as a supplement to the services provided by the University of Oslo Library, still functioning as our national library until the formal structure of this library will be changed during the 1990's.

363 research and special libraries at universities and university colleges, regional colleges, colleges of education, colleges of engineering, colleges of social work, military colleges and other educational establishments, in government ministries, other public institutions, archives, museums, hospitals and many companies, private institutions and organisations contributed to the national statistics for this sector of the Norwegian library system in 1991. These libraries owned 15 million volumes of books and periodicals, 4 million microforms, 750.047 items of audiovisual materials and 151.584 current titles of periodicals.

They provided 2,3 million loans, spent 129,6 million NOK on acquisitions and were staffed by 1.392 persons engaged providing 1.130 man-labour years.

These libraries cover most of the areas of knowledge where there is any form of organized, specialized activity in Norwegian society. The majority of these libraries are small and none of the Norwegian libraries have been planned to serve as components in a national library system. But given the fact that they are integrating parts of the organizations that have funded them, most of these libraries can provide useful services to the rest of the Norwegian library system. They have avoided the Scylla of centralized planning and the Charybdis of an uncoordinated chaos. The Norwegian government and Riksbibliotektjenesten (the National Office for Research and Special Libraries) have contributed to this situation, and they provide a good point of departure for this description of the Norwegian research and special library system.

1.2. The government's role in library policy

In recent years it has been a governmental policy to increase the autonomy of the public organizations, and the ministries give these organizations more responsibility for managing their economic resources. This policy demands, however, more active participation from government bodies to achieve improvement of service from the national library network when resources are not allocated directly from the government to the libraries.

Changes in the structure of the ministries have also affected the library network. Until autumn 1989 both public libraries and research and special libraries were the responsibility of the same cabinet minister. In 1988 the minister asked for a report to point out the main directions for developing a general library policy for Norway. When the report was printed in 1991, the ministerial scene had changed with two cabinet ministers responsible for different parts of the Norwegian library system. The Ministry of Education, Research and Church Affairs is responsible for most of the research and special libraries, whereas the Ministry of Cultural Affairs is responsible for the national library and the public libraries.

The governmental Committee pointed out a drastic reduction in the acquisition of new material at the end of the 1980's. This reduction in quality in the research and special libraries, both in physical terms and regarding their collections, is a development in this decade that gives cause for concern, and the Committee pointed out that, in relation to the need for the systematic development of collections for the whole library system, the existing arrangement might be regarded as a systematic dereliction of responsibility. There is no individual body that has direct administrative and economic responsibility for allocating the necessary resources for maintaining library collections that

represent a total, optimum solution of the need for specialized material in libraries.

The productivity in the research and special libraries increased during the 1980's. Loans from research and special libraries increased by 40 per cent from 1979 to 1989, while the number of man-years remained the same. This increase in productivity is due to rationalisation and the increased use of electronic library systems. Studies show that nearly half the students do not use libraries at all in connection with their studies, and this is a serious problem for the research and special libraries.

The governmental Committee pointed out the need for suitable means to improve the library policy in its report (Official Norwegian Reports 1991: 14 - Libraries in Norway): "The coordination of matters affecting libraries within a system where administrative control is at present exercised by many different bodies will require formal legislation. A *General Libraries Act* should lay down the principles for the administration of common national library resources and authorise necessary or desirable coordinating measures that must be initiated by a central, professional body for the Norwegian library services. The Committee suggests that the preparation of a Libraries Act and amendments to the relevant provisions in the Acts relating to schools and universities should be initiated as soon as possible."

The Ministry of Cultural Affairs, which from autumn is responsible for the public libraries and the national library, saw, however, no need in 1992 for a general libraries act to improve the standards of public library services, and some other proposals from the Committee will be assessed by the ministry in future documents.

Almost all the research and special libraries are funded by the Ministry of Education, Research and Church Affairs. All research libraries are administratively a part of organizations for tertiary education, most of whom are managed by this ministry.[1] The funding of nearly all libraries for tertiary education comes from this ministry as a share of the organizations' general grant, and it is the responsibility of a university or a college to allocate funds for its library. This ministry has also the administrative responsibility for Riksbibliotektjenesten (see 1.3) and library education (see 3.2). Some special libraries are funded by other ministries.

The Ministry of Cultural Affairs is responsible for the development of a new national library as well as the public libraries run by municipalities and counties. The report on a general library policy from the governmental Committee was delivered to this ministry. Following the opinion of the Committee that the

1 The libraries of the Agricultural University of Norway and the Norwegian College of Veterinary Medicine are funded by the Ministry of Agriculture.

establishment of a Norwegian *National Library* with branches in Oslo and Rana and a separate management was the task that must receive the highest priority on the Norwegian library service, the Ministry of Cultural Affairs brought before the Storting a proposition in 1991 (St.prp. nr. 1. Tillegg nr. 9 [1991-92]) asking for parliamentary consent to establish five new positions to manage a project that shall prepare the separation of a library institution from the university of Oslo Library. A working group that should evaluate alternatives and consequences for allocation of funds, submitted its report to the ministry on April 30th, 1992. It is expected that a project group will start its work establishing a new Norwegian national library in 1993.

1.3 Riksbibliotektjenesten

Riksbibliotektjenesten, the National Office for Research and Special Libraries, was founded by a resolution of the Storting in 1969 as an independent government agency to develop and coordinate the functions of academic and special libraries as well as advising the relevant ministries in the same matters. The Norwegian prefix riks- indicates a national function, and it is necessary to point out that Riksbibliotektjenesten executes some of the policy functions that will be executed by ministries in some countries or by the national libraries in other countries.

Riksbibliotektjenesten is headed by a riksbibliotekar. In English riksbibliotekar will be translated national librarian, a term that may indicate slightly different tasks depending in national organization. The Norwegian riksbibliotekar has the responsibility for a national policy for the research and special libraries, and in recent years the main task of Riksbibliotektjenesten has been the development of a separate national library (see 1.4.1).

The historical reason for an independent government agency was the problem of combining national policy functions with the administrative responsibility for a specific library when this function from 1958 to 1969 was a part-time job ex officio for the director of the University of Oslo Library, functioning as a national library. In the proposition to the Storting in 1991 the head of the national library was called nasjonalbibliotekar. English has normally a vast variety of terms that make it easier to give a precise description of various functions in this language than in Norwegian with fewer words to choose between. An unexpected terminological plenitude of the Norwegian language, however, may be accepted as the exception that proves this rule. In this case English has only the term national librarian to describe both the responsibility of riksbibliotekar, coordinating the Norwegian library system and developing a national library policy, and the responsibility of a future nasjonalbibliotekar, managing all branches of our national library. A precise description of the Norwegian library system must refer to the exact terms in the vernacular.

Riksbibliotektjenesten has for more than two decades initiated much of the development of librarianship in Norway and emphasized the need for cooperation between all libraries. The agency has a budget in 1993 of 13,5 million NOK, which includes purchases of hardware for BIBSYS and financial support for Bibliothèque Nordique in Paris. The agency has 17 whole-time positions. Three employees work in the University of Oslo Library, producing the national bibliography. One is working at the Technical University Library of Norway, the Norwegian DIANE Centre, promoting the use of electronic information databases. The rest is working with the general policy development and coordination, which means a combination of strategic issues as well as giving advice on all the different problems ministries, administrations, libraries and the public report to Riksbibliotektjenesten. As an adviser and a competent authority on library issues Riksbibliotektjenesten is able to participate in much of the development of library services without a formal command line to the research and social libraries.

Riksbibliotektjenesten is also a connecting link between the Norwegian library system and Nordic and international library cooperation and standardization.

1.4. Research and special libraries

1.4.1 The national library and the Rana Branch

Norway is in the process of establishing an independent national library. A director for the national library will probably be appointed in 1993, and much remains to be decided before it is possible to give a full description of the organization of this new national library. There will also be a branch of the national library in Oslo, executing many of the present functions of the University of Oslo Library.

Nasjonalbibliotekavdelinga i Rana, the Rana Branch of the Norwegian National Library, was established in October 1989 as the first part of our new national library, and it employs about 150 people. Its main functions are connected with the act of June 9th, 1989 relating to legal deposit of generally available documents, which entered into force on July 1st, 1990. Shortly after deposit documents have been received in Rana a provisional bibliographic record is available on-line in the BIBSYS electronic network.

According to this act all documents containing generally available information must be submitted to the Rana Branch (except some sound recordings, films and videograms that shall be submitted to other national archives) to be preserved in national collections, so that these records of Norwegian cultural and social life can be safeguarded and made available as source material for purposes of

research and documentation. A document is made available to the public when copies of the document, irrespective of its medium for storing information, are offered for sale, hire, or loan, or when the document is distributed in other ways beyond the private domain, or when the information contained in the document is made available outside the private domain by means of presentation, showing, broadcasting, on-line transmission, and the like. Documents that have been made available to the public shall be deposited as follows:

- documents of paper or a paperlike medium, microforms, and photographs in seven copies,
- sound recordings, films, videograms, EDP documents, and combinations of these types of documents in two copies,
- documentary recordings of broadcast material in one copy.

Documents made abroad shall only be deposited if they are made for a Norwegian publisher or specially adapted to a Norwegian market. The documents are deposited without reimbursement to the publisher, producer or importer of a document. The provisions of the act from May 25th, 1990 give more detailed instructions for the deposit. Normally all documents shall be deposited without requisition, but some documents such as on-line EDP documents and recordings by any person who is entitled by licence to carry on broadcasting shall be deposited only by requisition from the Rana Branch.

Copies of legal deposit documents are distributed to the university libraries in Oslo, Bergen, Trondheim and Tromsø. One copy will be kept in long term security stacks. The idea of using cold storage as a preservation strategy was suggested in 1988 before the Rana branch of the National library started its operations, and the planning of a new storage building started in 1990. In June 1992 new security stacks were taken into service. A concrete building of 5.200 m^2 inside a mountain hall provides 42.000 metres of shelving, and an additional mountain hall has been blasted out to give space for another building in the future without endangering national records by blasting operations in the vicinity of the security stacks.

We wanted to make the security stacks as economic and reliable as possible. Most of the material will be stored at a temperature that is in equilibrium with the surrounding mountain, which we suppose will have a stable temperature of approximately 8^{o} Centigrade. A higher or lower storage temperature would require more energy.

By reducing the storage temperature to 8^{o} Centigrade and the relative humidity to 35 per cent one will achieve a significant delay of degradation. It is difficult to estimate precisely what effect this climate will have for the life expectancy of these documents, but it may be conservatively estimated that paper that will last for a couple of centuries in a normal storage climate, may last for a millennium or longer in this climate.

In these Norwegian security stacks we have tried to preserve the national archive of books and other materials at the lowest possible cost. It may be possible to preserve paper for even longer periods at a lower temperature, but such an installation will consume more energy and require more of other resources as well.

The development of the new national library will attach an increased importance to all aspects of preservation. One copy of all deposit documents will always be preserved in the security stacks as an archival copy that will never be lent or used for reference purposes. Two young paper conservators have already been trained to fill positions in the Rana Branch, and special departments for the preservation of all kinds of photographic and audiovisual material is developing in the media laboratory. The microfilm department processes Norwegian newspapers and a great variety of other material with exacting quality control.

Among other functions of the Rana Branch is the conversion of old library catalogues to electronic media.

The Deposit Library of the Rana Branch provides interesting possibilities for developing a central library for inter-library loans to Norwegian libraries. This library receives one copy of most legal deposit documents for inter-library loans. In addition the deposit library receives the whole or parts of library collections that will be used for inter-library loans, and it is expected that in the future this deposit library will improve Norwegian inter-library services for public libraries as well as the research and special libraries. It shall not become only a passive receptor of little-used material, but will be developed to become an active participant in the Norwegian library network. It has an important responsibility for ensuring coordinated discard policy by Norwegian libraries, which will gradually contribute towards improved combined services for the public and rationalise the use of space in the libraries. It will also supplement the inter-library loan services run by larger, special libraries and subject-specialized libraries with inter-library loans of Norwegian and foreign material. It may also be developed as a centre for distribution of information from electronically stored documents.

1.4.2 The university libraries

The largest part of Norwegian research library resources is found in the five university libraries in Oslo, Bergen, Trondheim (two libraries) and Tromsø. 53 per cent of all the 15 million books in the research and special libraries are owned by these five libraries. They provide 45 per cent of all loans and use 47 per cent of all man-labour years. The University of Oslo Library, functioning as the Norwegian national library, has a predominat position based on its collections in Norway's oldest university. All other university libraries were founded in the post-war period based on collections from regional scholarly institutions.

The University of Oslo Library was founded in 1811 and has the largest collection of Norwegian literature, manuscripts, and maps. Collections of mainly Greek papyri and literature from East Asia, including collections from Tibet and Mongolia, will be known by specialists in these fields.

The Bergen University Library originates from about 1825, but was founded as a university library in 1948. The University Library of Trondheim originated from 1760, and it was integrated in the university from 1974. Both these libraries have received deposit documents by request from 1939 to 1990. The request policy of the Bergen University Library was, however, more selective than the one that was pursued in the University Library of Trondheim, and as a result none of the collections of Norwegian deposit material are identical. The Technical University Library of Norway is also a part of the University of Trondheim, founded in 1912, specializing in engineering and architecture and related topics. The youngest university library in Norway - and the northernmost in the world - is the University Library of Tromsø, founded in 1969. In 1975 the older collections of Tromsø Museum was integrated in the university library. This library has also a collection of Norwegian deposit documents from 1992.

1.2.3 Other research and special libraries

The average library of the 363 research and special libraries in Norway has less than 4 employees, and they comprise a wide variety of specialized subjects. Only the libraries of the Agricultural University of Norway, the Norwegian School of Economics and Business Administration, Stiftelsen Bedriftsøkonomisk Institutt, the Storting, the Norwegian Patent Office, Norsk Hydro Ltd., the Norwegian Broadcasting Corporation and the Rogaland Research Library, have more than 10 whole-time positions.

2. Library Cooperation

2.1. General

The National Office for Research and Special Libraries has always encouraged library cooperation between the Norwegian research and special libraries as well as cooperation with the rest of the Norwegian library system and Nordic and international libraries. In its advice the office has always insisted that the libraries must be units in a national library system, and that they all must contribute with their services as integrating elements of the Norwegian library system.

The governmental Committee supported this policy. The goals of the libraries are to communicate knowledge and facilitate life-long learning, increase the level

of skills in Norway, store and make available all forms of documents to which the public has access, provide services with emphasis on quality, comprehensiveness and relevance for children and adults, and they shall also contribute information services ranging from simple questions to advanced research. If we are to realize these goals of the library service within the optimum resource framework of the research and special libraries, it will be necessary to build up a network of cooperating libraries that will ensure the country the best possible supply of literature and library services. The economic effect of reduced access to information is a factor that must be taken into consideration in evaluating the libraries' input and use of resources in a cost-benefit perspective at the macro-economic level. Most of the smaller libraries have problems in providing good enough services and in organising borrowing from other collections. These problems arise both from poor collections and from weaknesses in the services that are provided by the larger libraries.

Library material that is used frequently costs very little per loan and gives a relatively high effect, and these kinds of library loan services are extremely cheap. In practice, however, no library can limit its services to frequently used material if it is to realise the goal of communicating the knowledge that the Norwegian society needs. It is therefore necessary to provide material that is used less often and to organise the libraries in such a way that this material is collected in fewer libraries, which probably can ensure that more expensive loan services are utilised in the most efficient way possible for Norway as a whole.

The availability of information is a decisive precondition for economic growth and competitive ability in Norwegian society. Access to information services and access to the material that should have been available in Norwegian libraries to a far greater extent than today is a precondition for the development of skills. None of the units within the Norwegian library system can provide services to their users entirely independently of other units in Norwegian and foreign library services, but most of the demand for library services in Norway must be covered by domestic resources. The use of foreign collections that, in terms of practical cooperation, are not available for an unlimited number of loans from Norway, must, for economic reasons, be limited to material that it is more or less impossible to keep in any Norwegian collection.

The governmental Committee suggested specific goals for the smaller special libraries. They should have their own collection, which should be sufficient to cover the ordinary needs of their users. They should also have the possibility of providing information about relevant material from library catalogues and data bases, and facilitate loans of documents from other collection when they do not exist in their own collections. It is reasonable to demand that smaller special libraries shall be able to cover between 80 and 90 per cent of all requests with loans or copies from their own collections.

2.2 Inter-library Loans

No library can give satisfactory service solely on the basis of its own collections. The numbers of request for inter-library loans from the research and special libraries have increased from 240.310 in 1982 to 341.229 in 1991. For two decades there has been a standardized form for these requests, but electronic networks offer now more efficient communication for the libraries. An instruction on inter-library loans for research and special libraries is printed in Norwegian in the handbook published by the National Office for Research and Special Libraries (see 3.2.2).

2.3 Subject-specialized libraries

Inter-library loans are particularly costly. A group of seven research and special libraries have taken upon themselves the responsibility for building up collections in their own specialized area that may be used for inter-library loans. The areas and libraries are:

- Agriculture: The Library of the Agricultural University of Norway, Ås.
- Architecture, engineering and technology: The Technical University Library of Norway, Trondheim.
- Economics: The Library of the Norwegian School of Economics and Business Administration, Bergen.
- Medicine: The University of Oslo Library / Faculty of Medicine Library, Oslo.
- Science: The University of Oslo Library / Faculty of Mathematics and Natural Sciences Library, Oslo.
- Sports: The Library of the Norwegian University of Sport and Physical Education, Oslo.
- Veterinary medicine: The Library of the Norwegian College of Veterinary Medicine, Oslo.

These subject-specialized libraries have normally received between 40 and 50 per cent of all inter-library loan requests to research and special libraries. Up to now they have received no economic compensation for the extra work involved, and the question of whether this arrangement has led to a more rational use of resources has not been clarified.

The National Office for Research and Special Libraries have worked for a governmental compensation for the extra work of the subject-specialized libraries, and the governmental Committee supported this claim for compensation. An arrangement for paying compensation to these libraries is a far better and administratively more efficient solution than charges for each individual transaction: Another alternative to compensation for common responsibilities would be to tie compensation arrangements to net inter-library loans above a certain level and leave it to the library agencies to distribute

allocated government funds to ensure that the library network functions as well as possible. Compensation for inter-library loans should be limited to libraries with relatively comprehensive loans to other libraries. Inter-library loans up to a reasonable minimum level should be provided without special compensation by all libraries. In the opinion of the Committee, this kind of compensation tied to the actual use of library services will be an arrangement that will have the best effect for the library service as a whole.

2.4 Electronic networks, BIBSYS

BIBSYS is a cooperative library automation system, serving the Rana Branch of the Norwegian National Library, all the university libraries and an increasing number of college libraries. The development of BIBSYS started in 1972 as a shared project. The original members were the Computing Centre at the University of Trondheim (RUNIT), the National Office for Research and Special Libraries, the Technical University Library of Norway, and the University Library of Trondheim. Functional requirements for the system were written by the project group in cooperation with the librarians. The first releases from the acquisition and search modules were implemented in 1975 for testing. They were accepted for operational use by the libraries in 1976. Further modules followed: Cataloguing in 1980, circulation control in 1982 and subject searching in 1983. As the system was completed, new libraries joined. By 1987 all the four Norwegian universities were using the BIBSYS system. In 1983 it was decided to develop an entirely new system, built on more modern software and run on a dedicated computer. The BIBSYS II development project was completed in June 1989. The new system is based on the ADABAS software and is run on an IBM 4381 computer situated in Trondheim. The database included 1 million bibliographic records in 1989. The next generation, the BIBSYS III, will be a distributed system (based on client server technology).

The database is shared by all the libraries. Each bibliographic entity is entered into the database as one record only. This record is used by all libraries and all subsystems. All terminal input results in an immediate update of the database, including all index files.

Records belonging to one series or to one multi volume monograph are linked together in the database. These links are used for easy navigation in the search programs, and to avoid redundant storage of data common to several records. The bibliographic contents of the records are guided by the AACR2 set of rules. The use of subject descriptors is not coordinated. The user may move freely between the subsystems (modules) by the help of a common set of commands, and without having to re-enter search statements or record IDs.

BIBSYS offers subsystems for acquisition, cataloguing, circulation control and searching. Users may choose to search the whole database or the logical part that

belongs to one library. External MARC records from the Library of Congress and the Norwegian national bibliography are also accessible. The users can send their requests for loan of books or photocopies from journals from the search programs. The external users may access the database through the INTERNET, DATAPARK or a dial-up connection. All the system dialogue as well as extensive user manuals are written in Norwegian only. The search program PUBSøK, however, offers in an easy-to-use menu-driven program for a limited number of searchable fields (access points) the choice of English dialogue. GENSøK is a command-driven program with access to all index fields, with a search language based on ISO 8777 (Common Command Language).

The BIBSYS group is responsible for the development, maintenance and operation of the BIBSYS software system. The main division of this group is situated in Trondheim, while there are local groups in Bergen, Rana and Oslo. Most of the people in this group are employed by a participating library, with some consultants from outside. The members of the board are appointed by the Norwegian Council of Universities, the National Office for Research and Special Libraries, the Ministry of Cultural Affairs, and the trade unions. The National Office for Research and Special libraries appoints the chairman.

Some of the minor libraries use other library systems with software adapted for Norwegian libraries.

3. Library Services

3.1 Some useful publications

Much of the information that is published on a regular basis about Norwegian research and special libraries and their collections, is mainly in Norwegian. Trained librarians will, however, be able to use most of these reference tools through bilinguial text in English and Norwegian or by reading English summaries.

3.1.1 The national bibliography

The Norwegian national bibliography *Norsk bokfortegnelse* is published by the University of Oslo Library in monthly preliminary editions and cumulated annual and quinquennial editions. The records of the national bibliography from 1971 (periodical literature from 1980) to the present is available on-line through BIBSYS and other networks serving the Norwegian community. A CD-ROM with electronic records from the national bibliography (including 10.000 records from 1962-70) is available from the University of Oslo Library.

The Norwegian national bibliography 1814-1920 was printed in divergent formats by the University of Oslo Library, booksellers and Den norske bokhandlerforening. From 1921 the University of Oslo Library has published quinquennial editions. Records of Norwegian and Danish publications before 1814, when there was a political union, will be found in the Danish national bibliography.

3.1.2 *Norske vitenskapelige og faglige biblioteker. En håndbok*

The National Office for Research and Special Libraries publishes a handbook in Norwegian with information about all Norwegian research and special libraries. The 7th edition (editor: Libena Vokac) was published in 1991, and it is sold by Biblioteksentralen A/L, Malerhaugvn. 20, N-0661 Oslo (t. +47 22 67 34 80, fax +47 22 19 64 43).

The handbook publishes concise information about addresses, subject fields, special collections, catalogues and services in the university, research and special libraries, including county libraries and some major public libraries. A geographic library index and a subject index in Norwegian and English makes much of this information useful also for foreigners with little knowledge of the Norwegian language.

3.1.3 *Synopsis*

Synopsis is a journal for Norwegian research and special libraries published with six numbers each year by the National Office for Research and Special Libraries (editor: Kjellaug Scheie). Most of the articles are in Norwegian, and English summaries make much of the information available for an international audience. *Synopsis* may be ordered from the National Office.

3.1.4 Library statistics

On the basis of data collected each year by the National Office for Research and Special Libraries from the research and special libraries the Central Bureau of Statistics (Statistik sentralbyrå) publishes the annual statistics in its publication *Statistisk ukehefte* (Weekly Bulletin of Statistics, containing summary presentations of all statistics released during the past week). This publication embodies total figures and information about all major research and special libraries. These data include number of libraries, volumes of books and periodicals, acquisition in volumes, microforms, audiovisual material, current titles of periodicals, executed lending orders, expenditure on acquisitions, persons engaged in these libraries and man-years.

Most of these figures are also published in the bilingual publication (English and Norwegian) *Cultural Statistics* (ISSN 0800-2959). A synopsis is available in the *Statistical yearbook of Norway* published by Statistisk sentralbyrå in a bilingual edition (English and Norwegian) (ISSN 0377-8908). Some unpublished data may also be made available from the National Office for Research and Special Libraries.

3.2 Library education

The Norwegian School of Library and Information Science in Oslo was founded in 1940. It accomodates 430 students in a three year course for librarians. Students may achieve graduate status by combining this course with courses in a university or a university college. The school offers also a program for higher education and many short courses for extended vocational training.

Some of the research and libraries give library training to graduates. The Norwegian School of Library and Information Science was responsible for a training program for librarians in Rana for students who wanted to qualify for work at the Rana Branch when it was founded in 1989.

The University of Tromsø is planning an alternative education program for librarians.

Appendix 1

Some important Norwegian research and special libraries

Bergen University Library, Haakon Sheteligs plass 1, N-5007 Bergen, t. +47 5 21 25 00, fax +47 5 32 06 66 (Administration), +47 5 32 84 52 (Issuing department) (from September 9th, 1993, 4 PM: t. +47 55 21 25 00, fax +47 55 32 05 66 and +47 55 32 84 52)

Deposit Library, Rana Branch of the Norwegian National Library, POB. 278, N-8601 Mo, t. +47 87 21 111, fax +47 87 57 506 (from October 28th, 1993, 4 PM: t. +47 75 12 11 11, fax +47 75 15 75 06)

Library of Norwegian University of Sport and Physical Education, POB 40 Kringsjå, N-0807 Oslo, t. +47 22 23 46 85, fax +47 22 23 42 20

Library of the Agricultural University of Norway, POB 12, N-1432 Ås, t. +47 64 94 75 00, fax +47 64 94 76 70

Norwegian College of Veterinary Medicine. The Library, POB 8146 Dep, N-0033 Oslo, t. +47 22 96 45 56, fax +47 22 56 57 04

Norwegian School of Economics and Business Administration. The Library, Hellevn. 30. N-5035 Bergen-Sandviken, t. +47 5 95 94 11, fax +47 5 25 81 00 (from September 9th, 1993, 4 PM: t. +47 55 95 94 11, fax + 47 55 25 81 00)

Rana Branch of the Norwegian National Library, POB. 278, N-8601 Mo, t. +47 87 21 111, fax +47 87 55 460 (from October 28th, 1993, 4 PM: t. +47 72 12 11 11, fax + 47 75 15 54 60)

Riksbibliotektjenesten (National Office for Research and Special Libraries, POB 2439 Solli, N-0201 Oslo, t. +47 22 43 08 80, fax +47 22 56 09 81

Technical University Library of Norway, Hogskøleringen 1, N7034 Trondheim, t. +47 7 59 51 20 (Administration), +47 7 59 51 00 (Inter-library loans), fax +47 7 59 51 03 (from October 28th, 1993,, 4 PM: t. +47 73 59 51 20, +47 73 59 51 00, fax +47 73 59 51 03)

University Library of Tromsø, Breivika, N-9000 Tromsø, t. +47 83 44 000,. fax +47 83 44 590 (from October 28th, 1993, 4 PM: t. +47 77 64 40 00, fax +47 77 64 45 90)

University Library of Trondheim, Erling Skakkes gt. 47 C, N-7004 Trondheim, t. +47 7 59 21 29 (Administration) +47 7 59 22 05 (Issuing department), fax +47 7 59 22 02 (from October 28th, 1993, 4 PM: t. +47 73 59 21 29, t. 47 73 59 22 05, fax. +47 73 59 22 02)

University of Oslo Library, Drammensvn. 42, N-0242 Oslo, t. +47 22 85 50 50, fax +47 22 85 92 00

University of Oslo Library. Faculty of Mathematics and Natural Sciences Library, POB 1063 Blindern, N-0316 Oslo, t. +47 22 85 64 93 or +47 22 85 54 00, fax +47 22 85 74 47

University of Oslo Library. Faculty of Medicine Library, POB 1113 Blindern, N-0317 Oslo, t. +47 22 85 40 33, fax +47 22 85 41 31

Appendix 2

A short bibliography

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