

An Overview of CSIR Libraries as Knowledge Resource Centres: Issues and Trends

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ABSTRACT

A survey of CSIR libraries attached to the 38 laboratories and 3 CSIR units has been made with the main objective of reviewing the current status of the same. For this purpose, the data on infrastructure, resources, and the services provided by the libraries were collected using questionnaire in e-form. It is observed that the libraries are at varying levels and status in terms of infrastructural facilities vis-a-vis status of library staff. Keeping in view the manual guidelines issued by the CSIR during 2008, which renamed libraries as Knowledge Resource Centres, a few emerging issues like website and content development, knowledge management initiatives, institutional repositories have been discussed. A description of some possible future trends, e.g., implementation of knowledge management concepts, use of mobile devices, and changing user behaviours and expectations have also been touched upon. An overview of status, issues and possible trends for CSIR libraries ultimately points out the major responsibility of the librarians which covers the challenge of how to survive and sustain their position as one of the important and crucial stakeholders in the process of S&T information dissemination. It is concluded that the librarians have come out with more and more knowledge products in this competitive information society by making continuous efforts to develop their skills. This may include implementing the various techniques, and methods related to KM aspects including evaluation of websites for streamlining information organisation and content development. By adopting this strategy only libraries would be recognised as knowledge resource centres in true sense.

Keywords: CSIR libraries, knowledge resources, knowledge centre

1. INTRODUCTION

Council of Scientific and Industrial Research (CSIR) is premier national R&D institution as a world's largest publically-funded organisation under the Ministry of Science & Technology, Govt. of India. There are 38 national laboratories, 39 outreach centres, 3 innovation complexes and 5 units under its network. CSIR's R&D expertise and experience is represented by more than 4600 scientists supported by about 8000 S&T staff. It covers a wide spectrum of ranging from radio and space physics to environment engineering and information technology. CSIR is basically a learning organisation which puts much emphasis and focus on its R&D in the broad area of S&T. Traditionally speaking, libraries have always been a store house of information representing and providing valuable guidance to convert the same in to useful knowledge for the benefit of mankind. With the evolution of computer and communication technologies, libraries are getting transformed in to knowledge centres going beyond the traditional

printed matter in the form of books, journals, etc. Libraries can support networking of knowledge and people to the maximum extent if the desired content and the requirements of users are available with them in machine readable form. This ensures best use of resources of knowledge available with CSIR. The information and knowledge combined with technology not only helps in matching user's needs with knowledge resources, but also helps in taking decisions in the wide perspectives of global importance.

Keeping this in view, CSIR renamed the libraries as Knowledge Resource Centres in 2008, for providing information support to the scientific/technical staff of the CSIR laboratories using both archival and contemporary digital resources for libraries. In this context, CSIR brought out a Manual¹ of Procedures and Practices with the main objective of helping library professionals of CSIR in matters of standardisation and harmonising the prevailing procedures and practices w.r.t. financial, purchase, and management aspects.

2. OBJECTIVE

The main objective of this explorative and descriptive study is to review the current status of 41 CSIR libraries (including 2 units and 1 CSIR HQrs) along with the emerging issues and future trends. For convenience sake CSIR libraries will simply be termed as normal 'libraries' throughout the text.

3. METHODOLOGY

With a view to solicit up-to-date information and useful input from libraries, a questionnaire was prepared which was divided in to various headings as major components, viz., basic information, infrastructure, budget, staff, membership and collection details, users services/facilities and projects. Besides these components, the views of librarians/HODs regarding knowledge management (KM) initiatives taken, problems/issues faced by them, and the perceived future challenges were also sought. The questionnaire was sent as an attachment file at e-mail addresses to librarians/HODs working in their respective CSIR labs. A complete list of such labs is available at http://csir.res.in/external/heads/aboutcsir/lab_directory.htm. Out of 41 respondents the filled in questionnaires were received from 21 libraries. For remaining libraries the respective websites were visited to collect required data/information wherever available.

3.1 Limitations of Study

- (a) In some cases of the libraries, the data pertaining to infrastructure, collection and equipment, and budget with breakups, could not be traced since the same were not readily available even in Annual reports, though the total budget figures of the labs have been provided with few exceptions.
- (b) In almost all the libraries, the latest annual reports were not available either in print or e-form on the websites, so the figures for infrastructure may not be up to date particularly those pertaining to budget data.
- (c) In the text at many places, names of certain labs have been indicated as examples only. It is possible that there may exist more number of labs falling under the respective category in a particular context, so the same may be taken as representative and not the exhaustive list.

4. ANALYSIS

4.1 Infrastructure

Almost all the libraries provide the basic details like URL/website presence, e-mail address, facebook address (if any), other social media presence, memberships, and whether any branch/regional

centre of the same exists. These libraries have their own separate website with links on the homepage of the lab except a few, e.g., NISTADS, IGIB, etc., which are described along with the home page of the lab itself with the help of some links. Regarding facebook or social media presence only a few libraries, e.g., CSMCRI, NBRI, and NISCAIR have included the same in their areas of activities. Regarding membership all the libraries are members of National Knowledge Resource Centre (NKRC) included as the one of the projects of NISCAIR and a few libraries like NISTADS and CSIR HQrs are members of DELNET and CLRI for MALIBNET (Madras Library Network) also. Almost all the libraries have their own buildings though the area varies from 528 to 25,000 sq.m. Seating capacity in the libraries range from 4 to 200 users maximum. Regarding library membership, there are 4 categories of membership, viz., faculty, researchers, students, and staff. Total library members vary from 9 to 1700 with maximum percentage share of staff category. Regarding IT infrastructure, almost every library has computers, printers, and scanners with either wi-fi or LAN facilities and internet connections. The total numbers of such equipments vary from 5 to 41 depending on the budget of the respective library.

4.2 Library Budget

Due to non availability of clear cut figures for library books, journals and other print and digital material, a total budget for books and journals were collected. This figure varies from Rs. 32 to 169 lakh. It is observed that in many cases this is clubbed with total budget for other staff also. Similar is the case with figures for IT infrastructure's budget.

4.3 Staff

The staff strength of libraries varies from 3 to 17 while most of the libraries have less than 10 staff members. There is also a practice of nominating senior scientist as the HOD or coordinator for the respective library. Also for the rush work and routine jobs hiring of temporary staff as outsource is not uncommon.

4.4 Collection

There are variety of library material in print as well as digital/audiovisual form. However, the print material dominates. The print collection of books varies from 1620 to 87000. The latest breakup figures for other types of material, i.e., journals, reports, conference proceedings and digital media could not be made available.

5. SERVICES AND FACILITIES

There are wide range of services being made available by libraries. The most common services in large number libraries are: Online searches, readers

services; opac; reading room; photocopy service; reference/referral service; book reservation, book renewal; links of open access resources in library website; and databases. Some of the services like, union catalogue, document delivery services, and translation share the facilities of NISCAIR. Education and training services are common to all the labs as part of AcSIR (Academy for Scientific and Innovative Research) programme for which libraries mainly the support function, besides in-house, attachment, and short term training programme of certain libraries like NISCAIR, and URDIP, etc. Besides this brief sketch of common services, some of services and facilities deserve more attention and elaboration which are as follows:

5.1 Circulation

This, being a most basic service, would continue till the print literature is available. Regarding the current status for automated circulation system the bar code-based circulation is mostly in practice. For example, CFTRI, IHBT, IIM, IMTECH, NAL, NIEST, NPL, CSIR HQ, and CSIR-Madras complex are using this type of circulation. However, a few libraries like CGCRI, CIMFR, and NCL have also adopted RFID technology.

5.2 Online Public Access Catalogue (OPAC)

Almost all the libraries have created their databases using one or the other of the integrated library automation systems. This facility is used mostly on intranet and for walk-in users to the respective libraries. Among the libraries adopting Web OPAC, CBRI, CCMB, CDRI, CECRI, CFTRI, CIMAP, CLRI, IIP, NIEST, and NPL are worth mentioning.

5.3 Document Delivery

This is one of the oldest services of libraries. With the spurt of institutions websites, this manual service has been replaced with the electronic documents which are stored on the server and providing link to the requester to pick it up. Alternatively the same can be sent as mail attachment, which seems to be simpler. Almost all the libraries are delivering documents to their clientele which includes Inter-library-loan (ILL) also. NISCAIR is using this service on a large scale not only its own resources from National Science Library (NSL), but also utilising other national and international resources, e.g., BLLD.

5.4 Reference to Referral Services

There has been a long practice of offering this type of service using the print reference tools which may still continue for some time. However, with the availability of access to the internet resources to every user, the user prefers to seek information for his/her needs over internet. But the popular search engines may not cater to the specific users/customised

requirements. So, the links to various reference tools for specific subjects/areas of knowledge available on internet are provided from library/lab server to cater to the specialist's requirements.

5.5 Database and Bibliographic Search

Despite the trend for directly accessing full-text journals, the importance of bibliographical searches will continue, since they are more comprehensive and cover various publishers, document types, etc. Both commercial and non-commercial bibliographic databases exist today. Though these databases are available in various forms-CDs, online, besides print but can be searched with standard techniques only to retrieve desired information.

For convenient search, some vendors have come to rescue by harvesting bibliographic information from different resources, making it available for the benefit of their users. The retrieved information then provides researchers the facility for opening the full-text document who have obtained the rights for the concerned publisher. In this context, many publishers are providing a search interfaces of their databases-bibliographic or full-text through cross-referencing mechanisms.

5.6 News Clipping Services

Recently, many libraries have started web-based News Clipping service. The better option would be to assign one of the libraries the responsibility of collecting such information from different sources including web resources. Then the same could be shared with rest of the libraries thus facilitating their access through website. However, establishing such service in its own niche domain to cater to select clientele is not uncommon. As an example, CECRI, CGCRI, CSMCRI, IHBT, IIM, IRTC, NAL, NBRI, and NPL have been following this practice.

5.7 Translation Services

NISCAIR is the unique institution to provide and maintain this service out of all the libraries. It covers translation of S&T documents from 20 foreign languages into English. The languages include Chinese, French, German, and Japanese etc. The clients include R&D labs, S&T institutes, universities, research scholars, etc. NISCAIR also provides reverse translation (English into foreign language) though up to a maximum one page. Translation of full English documents into Japanese and also the interpretation and consultancy assignments in Japanese language is a unique service.

All libraries rely on NISCAIR for any specific requirement of translations pertaining to their subject areas. Some of the libraries like CDRI, CIMAP, and SERC (Chennai) also outsource or depend on NISCAIR sometimes for rush work.

5.8 Library/KRC-related Projects

5.8.1 National Knowledge Resource Centre

The National Knowledge Resource Centre (NKRC) is a network of libraries and information centres of 39 CSIR and 24 DST institutes. It facilitates access to more than 5,000 e-journals of leading publishers along with patents, standards, and bibliographic databases. Apart from licensed resources, it is also a single point entity that provides a large variety of open access resources. NISCAIR's NKRC project is shared with all the libraries as nodal points.

5.8.2 Digital Information Resource Facility

With a view to overcoming the unorganised way of hosting data and services on the servers and to ensure uninterrupted backup service, NISCAIR has proposed to set up a project on Digital Information Resource Facility (DIRF) as an integrated facility. The resources include NISCAIR online journals, subscribed CSIR E-Journal consortium under NKRC and many other digital resources databases. The project aims to provide an integrated state-of-art facility for managing and sharing digital information resources of CSIR.

5.8.3 CSIR KNOWGATE Project

It is an open source private cloud infrastructure (KNOWGATE) network project under information sciences cluster. The main objectives are to: Enhance the capacity and capability of CSIR computing power and provide CSIR KRCs an integrated library management solution using OSS. Other services include catalogue sharing, ILL, and referral service for document supply services. Currently, it contains more than 4 lakh records, 12 CSIR labs have made their OPAC public, data of 14 CSIR KRCs have been migrated to Koha. There is also a provision of training on Linux, MySQL, CSIRCat (KOHA, CSIR Virtual Union Catalogue) including demonstration on CSIR Cloud & CSIRTrend modules. For further details are available at NISCAIR website⁶.

5.8.4 Special Services

Some special services also exist with few libraries. These are: Security surveillance system of CCMB; Digitisation (by NIO), DTP, Impact factor and Citation analysis (by CCMB and IHBT), Institutional repository (by CCMB, CECRI, IMMT, NEERI, and NPL), Marketing of information products and services (by CFTRI, IIIM, IMTECH, and NISCAIR, URDIP) and other labs which are in the process of the same.

A typical service by IMMT pertains to internet service by providing 'Daily alert about site of interest'. RFID is also being practiced only in a few libraries e.g., CBRI, CGCRI, CIMFR, and CSIR HQ, and NCL where readers can use self-operated RFID kiosk installed for issue/return of documents.

6. ISSUES

6.1 Document Copy Supply and Copyright

An important issue while rendering this service is related to pricing mechanism and copyright aspect. The CSIR guidelines say that "The CSIR libraries including NISCAIR should not charge if the requests are received from other CSIR libraries for their own use and if the material is supplied from their own resources. Secondly, the charges for the supply of the document to other institutes other than CSIR depend on the policies of the concerned KRC. However, it may be ensured that this is done under the 'fair use' clause of copyright act." It implies that while supplying the required document to the researchers, an undertaking to the effect that the same will be used purely for the research purpose and not used for commercial purpose, should be taken.

6.2 Knowledge Management Initiatives

Though CSIR itself renamed libraries as KRCs during 2008, the same have yet to demonstrate as truly KRC. There are instances of taking up ambitious projects like KNOWGATE, DIRF, and CSIR-Harvester, most of the libraries are yet to take initiatives to organise and share information to make it knowledge product. In this direction, the librarians can at least record, digitise, organise and make available this knowledge for future use. It can be in explicit or even in tacit form held with the scientists, who accumulate a lot of knowledge based on their long experience. A typical example of CBRI library which has mentioned in the questionnaire under 'KM initiative' as 'Database management of entire collection plus full-text database of CBRI IR' is cited here for information"

6.3 Library Staff

The various levels and categories of libraries, with collections of different sizes, performing different functions of varying dimensions, offering services starting from traditional to electronic require an effective change in all facets of its operations, and the key to that shift is the staff. Within this type of structure, it may not be justified to propose a single solution for all the CSIR libraries/KRCs. However, there should be adequate qualified/competent manpower to effectively manage the libraries. Some factors which can be taken in to account may be the size of library collection with annual additions; S&T staff strength, the library and lab budget, working hours, services offered, number of projects, extent of computerisation, reprographic/translation unit (inhouse or outsourcing), and number of research students/fellows, etc. In this context an attempt has been made to present an overview of library staff vs. the infrastructural facilities (Table 1) for CSIR

Table 1. Overview of CSIR libraries infrastructure

Name of laboratory	Abbrev. of lab	Total library staff	Seating capacity	Total member	Total library budget (in Lakhs)	Total print collection	Equipments-computers, printers, scanners for staff (users)	Special services/ remarks
Advanced Materials and Processes Research Institute, Bhopal	AMPRI	-	-	-	-	-	-	-
Central Building Research Institute, Roorkee	CBRI	6	70	307	35	43792	20 (5)	RFID
Centre for Cellular Molecular Biology, Hyderabad	CCMB	2		-		42431	-	Security surveillance system. Resources clubbed with ICT
Central Drug Research Institute, Lucknow	CDRI	8	75		175	22228	NA	Translation
Central Electrochemical Research Institute, Karaikudi	CECRI	9	-	-	-	-	-	Portal/gateway, digitization
Central Electronics Engineering Research Institute, Pilani	CEERI	-	-	-	-	40000	-	-
Central Food Technological Research Institute, Mysore	CFTRI	9	15	620	11.2	26208	28(11)	Marketing
Central Glass Ceramic Research Institute, Kolkata	CGCRI	8	50	575	114	53100	31(11)	RFID, KM Initiative
Central Institute of Medicinal Aromatic Plants, Lucknow	CIMAP	-	-	-	-	50000	-	Translation
Central Leather Research Institute, Chennai	CLRI	8	200	1091	100	13700	14(2)	-
Central Mechanical Engineering Research Institute, Durgapur	CMERI	3	-	-	-	65107	-	Audiovisuals
Central Institute of Mining and Fuel Research, Dhanbad	CIMFR	6	200	440	70	39517	41(13)	RFID
Central Road Research Institute, New Delhi	CRRRI	6	-	-	-	90150	-	Information on forthcoming conf.
Central Scientific Instruments Organisation, Chandigarh	CSIO	3	-	430	50	50090	-	-
Central Salt Marine Chemicals Research Institute, Bhavnagar	CSMCRI	-	-	-	-	-	-	Facebook
CSIR Fourth Paradigm Institute, Bengaluru	CSIR 4TH PARADIGM	-	NA	-	-	-	-	No library-related data available on website
Council of Scientific and Industrial Research Head Quarters, New Delhi	CSIR HQ	4	24	300	32	35684	18(6)	RFID
Institute of Genomics and Integrative Biology, Delhi	IGIB	2	25	-	55	2935	6	-
Institute of Himalayan Bioresource Technology, Palampur	IHBT	4	60	185	85	7377	25(6)	Scientometric studies
Indian Institute of Chemical Biology, Kolkata	IICB	7	-	-	-	18802	-	-
Indian Institute of Chemical Technology, Hyderabad	IICT	-	-	-	-	-	-	Resources clubbed with CCMB
Indian Institute of Integrative Medicine, Jammu	IIIM	4	60	90	190	27000	18(7)	Marketing
Indian Institute of Petroleum, Dehradun	IIP	6	80	235	155	17153	9(4)	-

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Indian Institute of Toxicology Research, Lucknow	IITR	10	50	9	50	13051	5	-
Institute of Minerals and Materials Technology, Bhubaneswar	IMMT	1	-	-	-	14183	-	Daily alert internet service
Institute of Microbial Technology, Chandigarh	IMTECH	4	100	400	115	9983	23(8)	-
National Aerospace Laboratories, Bangalore	NAL	17	100	1700	170	387000	43(600)	Portal
National Botanical Research Institute, Lucknow	NBRI	3	-	-	-	29428	-	-
National Chemical Laboratory, Pune	NCL	-	100	160	200	60700	-	-
National Environmental Engineering Research Institute, Nagpur	NEERI	3	-	-	-	44900	-	-
North-East Institute of Science and Technology, Jorhat	NEIST	5	-	-	-	-	-	-
National Geophysical Research Institute, Hyderabad	NGRI	-	-	-	-	20181	-	-
National Institute for Interdisciplinary Science and Technology, Thiruvananthapuram	NIIST	5	30	435	169	24409	27(11)	-
National Institute of Oceanography, Goa	NIO	5	-	-	-	-	-	Website development by HOD
National Institute of Science Communication and Information Resources, New Delhi	NISCAIR	15	100	400	100	84792	-	Marketing, NKRC, DIRF, NUCSSI
National Institute of Science, Technology and Development Studies, New Delhi	NISTADS	5	-	-	27	27011	15(1)	-
National Metallurgical Laboratory, Jamshedpur	NML	1	-	-	-	-	-	-
National Physical Laboratory, New Delhi	NPL	5	50	600	100	45015	23(8)	-
Structural Engineering Research Centre, Chennai	SERC	8	-	-	-	30607	-	Translation
Council of Scientific and Industrial Research Complex, Chennai	CSIR complex-Chennai	3	20	-	-	15440	25(6)	-
CSIR Unit for Research and Development of Information Products, Pune	URDIP	1	4	29	2	1620	2	-

*Wherever information is not available the same is indicated as "-"

libraries at a glance. It is observed that there is no definite set of pattern or trend in allocation of budget. It would be interesting to study the pattern for overall budget of the labs and the percentage share of libraries vis-a-vis the pre-defined performance indicators for the library or KRC besides revenue generation part. This is, however, beyond the scope of the present review study

6.4 Institutional Repositories

Institutional repositories (IRs) as type of open access initiatives provide visibility for the research outputs of the institutes. While some labs have already developed, some are in process of developing IRs, some have already given the links to the full-texts of their publications as html links. The facility of CSIR harvester-a network project of URDIP

would go a long way in implementation of IRs of the respective labs provided that all the libraries take initiatives to develop their own IR to make it more effective.

6.5 Website and Content Development

Traditionally, all librarians have been trained in collecting, organising and archiving information and therefore they can efficiently undertake this activity. This may include various aspects of information like projects, manpower, FAQs on functions, facilities, services, news and events, data/literature published by the CSIR laboratories, etc. They can contribute substantially in webpage creation and development and coordinate with webmaster and IT experts in technical matters. While collecting data by visiting the respective websites it has been observed that

there is large inconsistency in organising information on the web pages. For example, in some cases a description about library is found under the link 'About us' or 'Management' and for others in the 'Services' or 'Resources' or even under 'Right to Information Act' link. There are instances of websites which merely provide a paragraph giving very brief information about the library. It is also very common to separate the information/documentation/publication and e-resources/services under the heading KRC in a particular link. Besides this the figures for library budget with breakups and equipments (computers, printers, and scanners, etc.) are not readily available. There are, however, some exceptions to libraries designated as national resource centres in their subject domains, e.g., CDRI (for drugs), NIO (for marine sciences), NAL (for aerospace technologies), CFTRI (for food science), NISCAIR, and URDIP for information sciences, etc.

7. TRENDS

7.1 Implementing Knowledge Management Concepts

There are many techniques to adopt KM concepts, e.g., maintain information on knowledge repositories, providing integrated access to information, creating expert and inventory databases. It would be desirable to develop links with resources both physical such as institutions and individuals, and, electronic such as e-resources available through the internet; capturing knowledge from projects, assignments, gray literature, case studies, experts, etc., on given subjects and make them accessible in database form. This must be supplemented with training component for users in accessing information and guiding the users to appropriate resource. Eventually, a full-text KRC on topics in digital form will get developed with links and in-house resources all ready for use of the users 24 hours throughout the year. So the libraries have to deliver and prove the values. As Anderson² has pointed out, "unless we give our funding bodies better and more compelling reasons to support libraries, they will be forced by economic reality to stop doing so."

7.2 Digitisation

The institute's reports and other grey literature can be digitised and made available over the network. Major initiatives like institutional repositories, e-prints archives, multimedia databases, etc., form part of the digital libraries. As digital collections grow in number and variety, concerns grow about the general lack of long-term planning for their preservation. So, a time bound strategic planning and implementation of establishing standards for creating, accessing, and preserving digital content should be prepared so that an effective utilisation of ever expanding information resource is ensured.

7.3 Use of Mobile Devices

Mobile devices are changing the way information is delivered and accessed. An increasing number of libraries provide services and content delivery to mobile devices. In this context a reference is here made of the 2011 Pew Internet Project which finds that 25 % of US adults with smart phones use them as their primary information source³.

7.4 Changing User Behaviours and Expectations

Convenience affects all aspects of information seeking-the selection, accessibility, and use of sources. Libraries usually are not the first source for finding information. When queried, respondents describe the library as 'hard to use,' 'the last resort,' and 'inconvenient.' Convenience is a significant factor in both academic and everyday-life information-seeking situations⁴. With the widespread use of the internet and search engines such as Google, individuals have little or no problem finding sources. Since libraries are now competing for user attention, the current challenge is to provide immediate, seamless access to sources and information to remain in the game. Smith & Pickett⁵ stated, "The new library should be based on the just-in-time model, where access is more important than vast quantities of nearby inventory"⁵.

8. DISCUSSIONS

Libraries have always been considered as an integral part of their parent institutions. However, some of the CSIR libraries which fall under Information Science Group like National Science Library of NISCAIR, and information unit of URDIP, have to play an extra role for providing information services to whole CSIR labs through the respective networked projects and also to cater to their own labs. The libraries in other labs, however, mainly cater to the needs of their respective labs, besides providing input to NISCAIR and URDIP for their networked projects from time to time. NISCAIR has not only been serving S&T community but also is aimed at helping all CSIR libraries in ensuring optimum utilisation of resources through its various projects e.g., the KNOWGATE project. A glimpse of this prestigious project is shown in a screenshot (Fig.1) which depicts various services areas of cooperative venture for CSIR libraries.

The CSIR also has a specialised service Unit for Research and Development of Information Products (URDIP) which is involved in the pre-research and pre-development phase of the research projects by providing intellectual property and techno-commercial information services (www.urdip.res.in). It provides value-added information services to wide array of clients. The URDIP also is a national centre for

hosting and providing service entitled 'CSIR-CENTRAL' which is a centralised institutional repositories hosting service for CSIR labs and a harvester service for CSIR institutional repositories. Some of the labs have developed a complete information system in their knowledge domain which have been formally designated as national centres in their respective areas, e.g., NAL for aerospace information known as Information Centre for Aerospace Technology (ICAST); CFTRI for food science and technology, namely, Food Science and Technology Information system (FOSTIS), NIO as centre for marine sciences called National Information Centre for Marine Sciences (NICMAS), etc. These information centres rely heavily on their respective libraries for continued support. Figure. 2 reflects the NAL's ICAST services.

The current status of CSIR libraries w.r.t resources and infrastructure reminds us that there should be some objective criteria of allocation for optimum utilisation of the same from CSIR administration point of view. However, from librarians point of view, their focus should be on providing effective

dissemination of information services be it related to networking projects or routine jobs demanding initiatives from their side. Libraries have generally been criticized for overspending in terms of cost effectiveness of its services. However, the other important component, i.e., cost benefit analysis now requires more attention to prove their worth particularly in the global IT based services.

From the various issues mentioned above, it is observed that some of the services related to the areas such as translation, newspaper clippings, and KM initiatives have not been adopted in large scale and there exists lack of concerted efforts in coordination of the same at one-CSIR level compared to other networked projects. So it implies that here has to be a proper balance between resources, and services offered much like a symbiotic relationship.

9. CONCLUSIONS

An overview of status, issues and possible trends for CSIR libraries as reflected in the main text ultimately points out the major responsibility towards the librarians. There are many challenges before them, out of which the main concern is how to survive and sustain their position as one of the important and crucial stakeholders in the process of S&T information dissemination.

There are of course various constraints and limitations directed by administration and finance. For example, one of the main characteristics of CSIR libraries is how to support and ensure their respective labs in minimum 30% revenue generation out of the sanctioned budget. Unless they come out with more and more knowledge products in this competitive information society their supporting and intermediary role will be diminished. So, there has to be a constant effort to develop their skills by not only attending seminars, workshops and short term training courses, but also practically implement the various techniques, and methods and at least evaluate websites for streamlining information organisation and content development to the maximum possible extent. In this way the libraries will be recognised as true knowledge resource centres.

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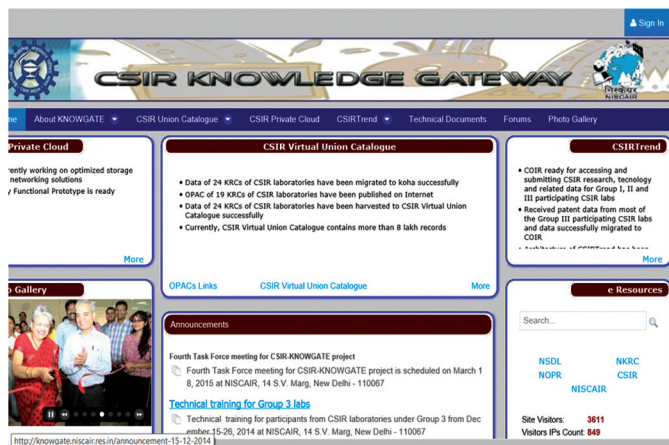


Figure 1. CSIR Knowledge gateway.



Figure 2. NAL's ICAST service.

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