REENGINEERING PUBLIC LIBRARIES IN INDIA: CHANGING WITH TIMES

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In the past, books could stink, In the present, books can link, In the future books will think. -E.J. Valauskas

ABSTRACT:

Reengineering of public libraries is need of the hour. Public libraries are asset of the nation. With changes and application of technology the public libraries have to compete with challenges and face the search engines. Many suggestions and ideas have explored here to make Public Libraries more vibrant intuition of information dissemination

Keywords: *Reengineering, Public Libraries, 4c's, Model Public Library, Khoj,Digital Library, Webpages, Project Grantha Bharat and PL-NET*

1. Introduction

Today Libraries are in the 21st century. Change is universal, the change has to happen as and when the new trends crop in. Technology is vital in the lives of people. Technology and Culture have both influenced each other equally. Technology has been directed as an improvement in our lives, but on the other hand, Culture has been present in every invention, noticeable or not, and advancement in our evolving society. Particularly the IT applications have changed the life of the people and made life fast and easy. The trends in technology have changed the working of today's libraries and have become interactive in nature. Today the very essence of library is gradually changing with Information,Communication and Technology (ICT) applications. In simple words "earlier people were going to library, but now libraries are going to people". The issue of public library in India and its role in today's world, particularly in context of application of Information Technology has taken back seat though there are considerable changes seen in other countries as these libraries are accessible any where any time. This is where the Public library in India has to change along with technology to a level of "Virtual Public Library".

Public Library is a "library for the masses", it has a tremendous role in disseminating information to public. It is funded from Public sources in the form of "Cess" which is operated by the Department of the Public Libraries. In fact it is an excellent model of information service provider, freely to public at its best. The advances in technology particularly in the networked world -i.e. "Internet World" or "World Wide Web" have to be utilized to their best as it has become more interactive in nature. According to Newman, public libraries offer three essential ingredients needed to ensure benefits for all in the digital era (Oliver, 2007):

- Infrastructure,
- Content, and
- Access"

So the role of Public Library in Information Literacy through convergence of technology enhances its effective mechanisms for reducing these disparities and to develop strategies that will overcome the digital divide.

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The American Library Association (ALA), addresses this role of libraries as part of:

- Access to information;
- Equity of access;
- The profession's ethical commitment that "no one should be denied information because he or she cannot afford the cost of a book or periodical, have access to the internet or information in any of its various formats.
- In addition to access, many public libraries offer training and support to computer users. Once access has been achieved, there still remains a large gap in people's online abilities and skills.
- Public libraries serve their communities by fulfilling seven basic roles, including knowledge archival, the preservation and maintenance of culture, knowledge dissemination, knowledge sharing, information retrieval, education, and social interaction (Das, 1999).

Public Libraries are the assets of the nation. They act as "Information Depository Centers" and have greater role in serving the people. Hence the Public library in India has to look into areas of ICT application which they have failed in this process of "Changing with times" and have been left far behind. To begin with they have to change fast and start integrating technologies into system. Today looking at Public Libraries in other countries one can virtually access these libraries any where anytime. They have changed with times and have implemented technology to reach people. Virtual Public Libraries will be generation next libraries which will transform the operation of libraries. Technology application is one aspect of the Public Libraries in India which have to:

- Build necessary infrastructure for digitization;
- Give Accessibility to Information and
- Networking of public libraries in India.

Google V/s Wiki's v/s Public Library

Google and Wiki's have changed the world of information and access to the content. The search options have also changed with users of internet, we call them as "browsing" or "surfing" the web.

With this transformation the searching behavior of library users are also changing and the challenges for public library also have to change. Access to information has become fast with Internet and Search Engine's innovations, particularly with Google, Yahoo and Wiki's and challenging the Libraries in general. The searching techniques which were used in libraries have been utilized in more developed manner with programming and web applications with most advanced Information Retrieval Systems. Many software's and communication systems are interwoven to make searches easy and accessible. Internet Technology offers a full range of the most popular Internet browser plug-ins for searching the Internet, displaying files, and viewing multimedia content. Through Google you can read a book online, including multimedia information, Audios (Mp3) and Videos (with mega pixels) supported by numbers of web.2 or web.3 technologies which are helping world connecting individual to individual, what we call as "Power of Internet".

Content, Community, Culture and Connectivity (4C's)

Public Libraries have major role in building national Information base which is the content of the community and culture of the region its serves and acts as a connecting hub for information needy people. Public library is

of the people, for the people and by the people. Reviewing the future of public libraries and it is the time to gradually harp to catch up to the technologies marooning into many of its needs to compete with major search engines and to answer and attract masses or public with a punch line, "Why Libraries are different ?". The gravity of technology invading into the systems of library arena, has become a "Challenge Imminent" for the Libraries to cope up this "technological dearth" and keep alive their presence felt to reach to the users of libraries and more alike a Library search engine. Public libraries have major role to play as they can be different than any major search engines with application of these technologies into their systems, which is a boon, to fasten their services to reach the common man as they become interactive in nature. Exploring and integrating such technologies useful for providing effective services will be a challenging task for the Public Library system. Only Public libraries can be good competitor to Google and other search engines as they are the hub of local information which represents content, community and culture of the region in a more authentic manner.

Integrating technology into the Public Library system: Need of the Hour.

Adopt technology to compete, communicate and survive. Public Library is for the masses. Accessibility is the key issue for Public Libraries. It cannot be possible without technology. Libraries have always involved in storage media while looking into the history of storage and preservations of information is being traced since ancient times, from clay tablets to printed books, Museums toLibraries and Digital to Virtual Libraries. The libraries are in a way are involved with their experience and testing various aspects of preserving the "recorded thoughts" or "Knowledge" in a systematic way to reuse with tools and techniques like classification and cataloguing.

The technology with invention of Computers and development in communication systems has transformed the way the old technologies which were used time and again testing and experimenting many of them which were used for storage of records from books to CD-ROMS, to today's high end servers with gigabytes of memory and high speed retrieval systems accessible online anywhere anytime (24 x7). It is seen that the Public Libraries in India are in Hare -Tortoise race or the morale of story slow and steady wins the race. It is not advised for public libraries to go slow, as it's a people's library and people have lot of expectations. The responsive role of public library has to be enhanced with technology integration from automation to digital library systems with networking applications and "Web Based Model Public Library".

Overview of Public Libraries in India.

Public library in India has to change and services have to be provided in many parts of the country. It still has to establish more library infrastructure in rural areas. Table one shows number of Public Libraries available in India as per the census 1991. Another 5, 62,043 libraries in India are required to be established. With this statistics there are deficiencies at all levels. At least all districts should have libraries. Taluka libraries have to facilitate rural libraries with advanced technologies so that the services should be made available. Even the latest report according to Press Information Bureau, Government of India, Ministry of Culture 2011(see annexure 1) there are 51762 libraries in India .

TABLE 1 .Public Libraries in India (Source: Census of India 1991 & Ghosh, 2005)

Sl.No	Type of Libraries	Numbers Present Required	%age
1	State Central Libraries (35)	25 (10)	80%
2	District Libraries (592)	451 (141)	76%
3	Taluka Libraries (3,987)	501 (3486)	12.5%
4	Rural Libraries (587,226)	28,820 (558406)	4.9%
	Total Libraries Reqd	29,807 5,62,043	---------

Extension Libraries: Reaching rural masses

The services of public libraries are required in rural areas. As the numbers are more here initially rural libraries should have "extension libraries" which can be operated from taluka libraries. These libraries should have minimum basic facility to help the rural mass. It highly impossible to establish facility in a given time. Hence Public private participation with integration of technology can be thought of, which can have following facilities:

- Browsing centre:
- Space for reading:
- Minimum collection books;
- Newspaper facility.

Browsing centers will help the rural masses to search the Public Library through WebPages and will have to coordinate with Taluka Library for any request like books and a delivery mechanism to reach the readers has to be planned.

Automation of Public Libraries: Out sourcing is the best choice

The Public Libraries have to involve in developing its libraries at all levels and should be visible from the WebPages with accessibility to content, services and technology used in information delivery must be way ahead which is still not seen. To begin with automation is the first step of library digitization operations and an important process of bringing "Information Online" to the public as well as digitizing all library operations. Online Public Access (OPAC) is one application which acts a search engine of any library which browses all its collections.

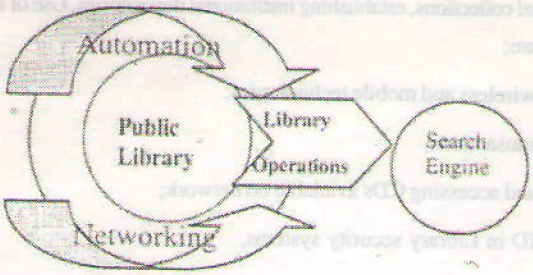


Fig.No:1 Overview of Public Library Automated systems

State Central Libraries should be first automated then to be followed by District Libraries, taluka libraries etc,. Out sourcing is the best way to automate public libraries as it has huge data and a huge amount data entry has to be done to build the database at all levels. Then other application technology can be integrated.

Advantages of automation in Public Libraries

The very nature technology is "Instructiveness" to people; hence the Libraries have to integrate technology into the system to promote it use and give access to resources. The automation will help libraries reach people

1. Libraries are able reach its customers and provide services timely.
2. Library 2.0 is for a modernized form of library service that reflects atransition within the library world in the way that services are delivered to users.
3. The focus is on user-centered change and participation in the creation of content and community Software's for Public Libraries.

Develop a "Model Public Library":

Since technology has engulfed the world more particularly the Indian brains are at fore front of the I C T applications. Bangalore, today it is "Bangaluru" the city which has contributed to the world in Sciences, Information technology and Bio technology and also in the field of Library science by the father of library Science in India Dr S R Rangathan, he has given new dimensions to the system of Information.

His efforts in developing public libraries in India are foundation to the system. Since years the Public library system are not in the frame of changing moods. The activities of Public library, their role and responsibilities to the public could be seen through web pages of other countries. As there is technology and people around this place involve them into the system and a "Model Public Library" can be designed with latest technology (from automation to virtual access) which can be tested and implemented all our the country.

Library software's: Commercial and Open sources.

There are many, readymade software for libraries which have changed the Library operations and accessibility to its collections. There are many software's available. Many open source software's like., Koha, Evergreen, Newgenlib to name a few have been used by many libraries in the world and many advanced commercial software like Libsys, Easylib, Librarian, Library suit, SLIM,AFW, VTLS are available in India which help in:

a) Digitization and creation of digital libraries.

b) Digitization of special collections, establishing institutional depositories, Use of automated electronic collection management software;

c) Implementation of wireless and mobile technologies;

d) Bar-coded library transactions,

e) CD mirror servers and accessing CDs available on network;

f) Application of RFID in Library security systems,

g) Web site development, web-programming and management of the same, integration of web OPAC and integration of multi language on single platform,

h) Production and Use of e-books and e-journals,

i) Services for distance learning students, disabled/handicapped;

j) Technology education, training and instructional/education technology to support teaching and learning, and

k) Development of technology centers and promotion of information literacy.

l) RFID Integration etc,.

m) Choosing right software by the public library is essential. Always open sources will not suffice the need of public libraries. It needs a consistency, constant changes and customization. In such cases commercial softwares are more meaningful. Any way there are advantage and disadvantages associated with software's.

Public Library Search Engine: "KHOJ": India's largest catalogue

It will act as an electronic catalogue, and as a search engine of all Public library collections or an online database of the library collection of individual or group of libraries. Basically browsing this search guides to locate books in the library or gives access to all materials available in library or libraries in print and non- print. Public libraries in India should have common search engine, a popularize it with Hindi word "KHOJ" (WHICH MEANS SEARCH) which searches entire collections of public libraries in multi languages in India like Google searches. It can also be searched in mobile phones.

Web pages are the face of Public libraries: An Enterprise

What are WebPages? A sort of business or to undertake; to begin and attempt to perform; to venture; acts as an enterprise and manage to give service through Web Pages (4) :

a) 24x 7 access: The Library Websites can be accessible always for customer to access all information requirements any time anywhere;

b) Enriching Information which gives access to all resources available in the Library;

c) Content Management: Librarians have to involve in the development of the content, or the creation of content and involved in developing content management systems, institutional repositories, digitizing projects, blogs and similar other resources.

Customer Driven: They find cost-effective ways to connect web sites which are relevant to it user and give link to resources.

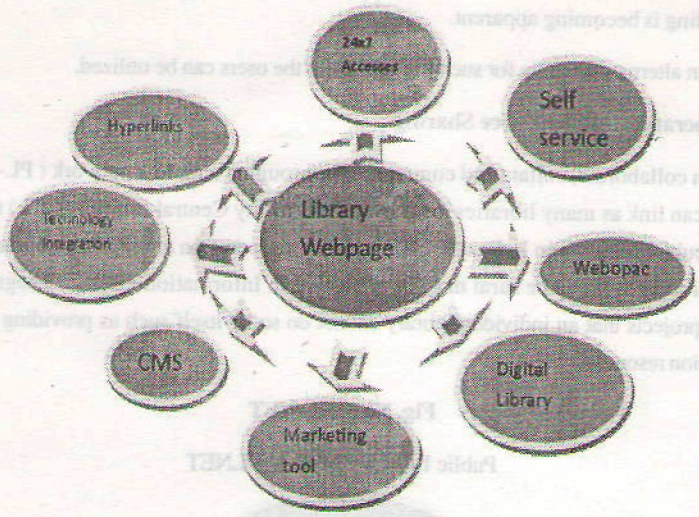


Fig No.2 Library Web pages

WebPages as marketing tool for Public Libraries

Believing in the marketing concept "Customer is King"; the marketing approach through Public library WebPages will indeed enhance "image" and "Public Care" with interactive roles to reach masses.

- Promotes productivity by quickly and efficiently finding the right information at the right time, and adds value to an organization;
- Melvil Dewey, S R Ranganathan and others were market oriented;
- Websites of the Public Libraries are vital which disseminates and give relevant information through its WebPages.
- The Websites have to be managed looking into issues like:
  - ✓ Customers' requirements,
  - ✓ Access to resources, relevance;
  - ✓ Visibility,
  - ✓ Rising expectations &
  - ✓ Library image.
  - ✓ Self service:
- The enormous pressures on libraries of all types, arising from a combination of heavy demand and limited resources, have meant that there is great interest in a shift towards the concepts of self-service for users. Not only is open access becoming the norm, but a move towards:
  - ✓ self issue,
  - ✓ self return, and

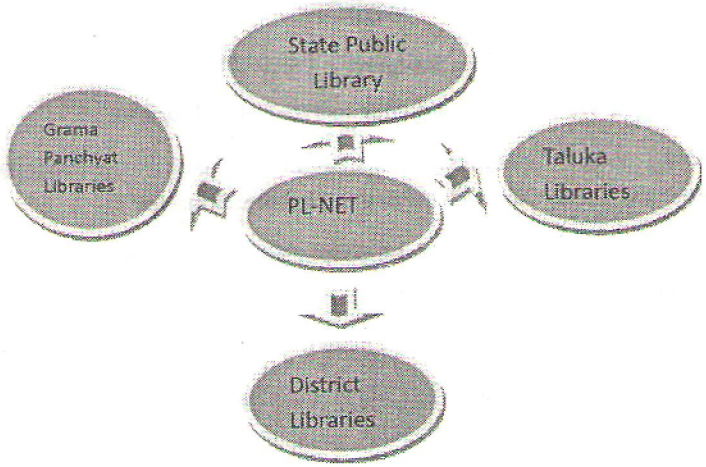
- ✓ Self guiding is becoming apparent.
- ✓ Web as an alternative media for such self service to the users can be utilized.

PL-NET for Cooperation and Resource Sharing

Public library can collaborate, collate and communicate through a common network (PL-NET) The network of Public Library can link as many libraries in the state. From City Central Library (CCL) to rural Library and interlink all state public libraries in India to PLNET. Hence cooperation amongst the library is very important aspect of Public Library as it can be rural masses as involve in Information Literacy Programs. Cooperation aims to carry out projects that an individual library cannot do so by itself such as providing consortial access to electronic information resources.

Fig. No 3: PL-NET

Public Library Network; PLNET



Resource Sharing in Public Libraries:

Technology is changing the way public libraries have to do the business. A term that gained popularity after 1990 is "Virtual Library". Recently some writers have used the phrases in ways that negate the original meaning, which was a system by which a user may connect transparently to remote libraries and database using the local library's online catalogue or a network gateway. Eventually, a user will be able to enter a query, get a cup of coffee, and let the computer check all the database on the network to receive an answer.(2)

The Focus on resource sharing in libraries, which, due to many factors, has become an economic and information provision necessity. It was found not only that the current resourcesharing activities are at a minimal level, but also that all libraries do not actively participate in this. However, librarians consider resource-sharing very important for their libraries, are aware of its benefits, and know the hurdles in developing a resource-sharing network. They are willing to participate in such a network. It is urged that the Knowledge Commission should create a National Task Force to develop a detailed plan for a national "Resource-sharing Network of Public Libraries".

A Proposal of setting up a "Resource sharing network of Public Libraries" may be set up and should be designated as the coordinating agency for this network and suggests the establishment of a permanent committee, with

representation from other Public Libraries. The entire participanting Libraries in the network would be motivated and encouraged to provide efficient services to the users. It will be basically a consortium of libraries.

The "Resource-sharing Network of Public Libraries" may be a model and have the following features:

- ✓ Access to resources of participating public libraries;
- ✓ Building value to the participating public libraries;
- ✓ Avoiding duplication of materials;
- ✓ Exploring public Libraries Special collections (Rare Collections);
- ✓ Helping Libraries to enhance skills, technology in sharing resources;
- ✓ Such model will help the society at large
- ✓ Linking all major Library networks available in the world.
- ✓ Developing a common search engine called KHOJ

Some prominent Library Networks available in India are as follows:

- ✓ CALIBNET (Kolkota Library Network)
- ✓ DELNET (Developing Library Network)
- ✓ INFLIBNET (Information and Library Network)
- ✓ ADINET (Ahmedabad Library Network)
- ✓ PUNENET (Pune Library Network)
- ✓ BONET (Bombay Library Network)
- ✓ MALIBNET (Madras Libraries Network
- ✓ HUDALNET(Hubli-Dharwar Library Network)
- ✓ A Network of Public Library of India PL-NET/PALNET

Skill Development for Public Library Staff

The Library staffs have to be trained to use technology for information dissemination and counselling activities. Public library staffs have to be trained when the libraries are automated and whenever any new technologies are added. They also have to train the user who come to public library, particularly when they search OPAC and e-resources.

Cyber Cafes:

Access to Internet and World Wide Web has completely changed the information seeking behaviour of library users. The Public libraries has a very important role to educate and facilitate with an infrastructure to browse information needed by the large number of people particularly in rural areas. Many people in India can not afford to have computer and internet facility and many do not know the advantage of the internet facility and access to information. Hence the role of public libraries is to give this facility in rural areas up to the level of Village or gram panchayat libraries to browse internet also provide training to use this facility. With reference to the Table 1 in India there are 28,820 rural libraries required are 587,226 hence so many browsing centres have to be established. They will also be trained to use library information through library pages and can also be taught to

use library blogs to make them interactive in nature. The cybercafés will become a very important centre of attraction for people of rural areas also which also help to know how of technology to search for information access.

Mobile Access: Palm Information

Reviewing the future of Mobile phones, it is still going a step further.

Popularize the Public library search engine like "KHOJ". The KHOJ search applications can be access even in the mobile phones with help of aneroid browsers. As many as 10000 mobile phones are sold in India every hour. Your can browse internet, get alerts from public libraries, check mails, access all social networks also browse e-books with book reader.

Library Blogs: Interactive Media

Blogs is a social media usually it is part of web log. Everyone is trying to utilize the online space to help their businesses so is the library has to get benefits. Blogs are usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. As far as library is concerned it is tool which will help to give information about library services, new additions, programs or any sort of content useful to library users. In general they are more of interactive medium to reach the library users, so that they will know what is happing in library. Library blogs can be used for Feedback, notice board and other important message to be posted to reach the users.

Digital Public Libraries for Children's: Go ICDL Way

The purpose public libraries to implement high quality children's services.By providing a wide range of materials and activities, public libraries provide an opportunity for children to experience the enjoyment of reading and the excitement of discovering knowledge and works of the imagination. Children and their parents should be taught how to make the best use of a library and how to develop skills in the use of printed and electronic media. Public libraries have a special responsibility to support the process of learning to read, and to promote books and other media for children. The library must provide special events for children, such as storytelling and activities related to the library's services and resources Children should be encouraged to use the library from an early age, as this will make them more likely to remain users in future years. The Technology will help the children to browse the story books online. The public library in India should develop Children's digital library which should available online in multiple Indian languages so that children's can read them online. The Public library should take this on priority as important task as work building all local children's stories.

Public library Information Stations (kiosks): Information stations

It is a computer terminal featuring specialized hardware and software designed within a public exhibit that provides access to information and applications for communication, commerce, entertainment, and education. Using the technology the Public Library still have to go a way further to have Public library Information Stations (kiosks) at the prominent places like Bustands/ Gardens/ Railway stations/Public Places so that people of India can browse Public library Information Station.

Open Access Electronic resources: Open Access to knowledge

Open Access, Open Standards, resources and Open Source Software's have been receiving great attention in libraries. Open access is a publication model wherein neither a reader nor the reader's institutions are charged for access to articles or other resources. Users are free to read, download, copy, distribute, print, search, or link to the full texts of these articles. Open access resources have no financial or legal barriers to access for members of user

community. National Registration Management Center for OA resources has to be created in Public library systems. There are lots of open resources available in the form of e-books, e-journals, almost in all formats For example Project Gutenberg, J gate and DOAJ etc, Public libraries has to give link to useful open resources available in the WebPages.

Project Gutenberg.

Project Gutenberg offers over 36000 free e-books to download to your PC and Mobile the android operating system (Android browers) is found on many phones and tablets. Android devices include Web browsers that can be used to read Project Gutenberg's texts and HTML e-Books.

"Project Grantha Bharat"

Like Project Guttenberg, on similar lines a concept of open e-books "Grantha Bharat" Project can be thought of by Public libraries where books published in India which is out of print, rare copies and copies permitted for open access rights, available in different languages at different regions can be made available through this project.

Involving Technologist in to Public Library System:

As mentioned earlier in the article the public library is a "People's Library" and also a national asset of "Information Repositories". It is lagging behind in utilizing technology in the system. The Public Libraries or at least the state authorities have to appoint technologists from industries as Chairperson of the Public Library system for some time so that the nation will see "sea of change" in its operations. For example people like Mr.Narayan Murthy/ Mrs.Sudha Murthy may be made as the chairmen of Public Library system in India. Similarly other even in state Public Library system should choose persons from industry and entrust the responsibility for developing the Virtual Public library system.

Conclusion

We know Public Library is people's Library and a national asset of the nation. The public library "Virtual Library". Today there are technology available (even open sources) to take care of automation, digitization, networking and web based service applications which further used in mobile applications also. The Public Libraries have to adopt these technologies and come with wider accessibility to information to people with newer methods of reaching them. For initializing the speed of the technology integration in Public Libraries should have Industry interaction by involving technologist in it. Developing new tools like "KHOJ" and a project like "Granth Bharat" will change Public Libraries and will become more vibrant.

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AC Nielsen ORG-MARG, Report 2011.

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Annexure 1 :

Number of Public Libraries in the Country as per AC Nielsen ORG-MARG, Report 2011

STATE / UNION TERRITORY	STATE CENTRAL	REGIONAL DIVISIONAL	DISTRICT	CITY AND TOWN	VILLAGE	TOTAL
ANDAMAN&NICOBAR ISLAND	1	0	0	0	5	6
ANDHRA PRADESH	1	6	23	217	2517	2764
ARUNACHAL PRADESH	1	0	9	0	36	46
ASSAM	1	0	10	30	0	41
BIHAR & JHARKHAND	1	5	26	69	4000	4101
CHANDIGARH	1	0	0	1	0	2
DADRA & NAGAR HAVELI	1	0	1	1	0	3
DAMAN	0	0	0	1	0	1
DELHI	1	0	0	114	104	219
DIU	0	0	0	1	0	1
GOA	1	0	0	9	0	10
GUARAT	1	2	18	202	6491	6714
HARYANA	1	0	6	43	0	50
HIMACHAL PRADESH	1	0	11	2	207	221
JAMMU & KASHMIR	1	1	14	44	0	60
KARNATAKA	1	11	19	299	1966	2296
KERALA	1	0	11	180	1127	1319
LAKSHADWEEP	1	0	0	0	0	1
MADHYA PRADESH & CHATTISHGARH	1	4	24	109	15800	15938
MAHARASHTRA	1	5	34	286	3562	3888
MANIPUR	1	0	5	1	0	7
MEGHALAYA	1	0	4	1	1	7
MIZORAM	1	0	2	1	0	4
NAGALAND	1	0	1	0	0	2
ORISSA	1	0	13	15	3500	3529
PONDICHERRY	1	0	2	52	0	55
PUNJAB	1	0	11	68	500	580
RAJASTHAN	1	5	24	40	2500	2570
SIKKIM	1	0	3	0	0	4
TAMIL NADU	1	0	15	1448	1083	2547
TRIPURA	1	0	2	7	500	510
UTTAR PRADESH & UTTARANCHAL	1	0	54	69	1500	1624
WEST BENGAL	1	0	21	334	2286	2642
TOTAL	31	39	363	3644	47685	51762