ABOUT THE DIRECTORY

1.0   Introduction

A good number of awards in Science and Technology have been instituted in the country since independence, but there is no system in place that holds well compiled, organized and updated data about the S&T Awards of the country.

Motivation is one of the most important factors in the progress of any human activities. The best motivation is the recognition of one's achievements through awards and rewards. A large number of awards have been instituted in the country during the last 50 years. However, prior to directory of S & T awards in India there was no single source to provide all relevant information about these awards. This Directory was brought out for the first time in 1994 by erstwhile INSDOC now NISCAIR and the project was sponsored by National Science and Technology Management Information System (NSTMIS), Department of Science and Technology, Govt. of India. However, since 1994 many new awards were instituted and the Directory as a result became outdated and there arose a need to update the Directory. NSTMIS - DST was approached for sponsoring the updation and making it web enabled directory database for wider accessibility.

The basic purpose of this database is:

1. To provide all necessary information about the available S&T awards in one compilation
2. To generate interest among S & T workers of the country for the awards in their field.
3. To create awareness about the awards and their sponsors, with a view to encourage and innovate R & D workers to deliver their best.

Thus, the current S&T Awards Directory is an attempt to build and manage the information about science and technology awards that have been instituted in the country in the past 50 years. It provides necessary information about S & T Awards bestowed on S & T workers of India. The directory is immensely useful for R & D workers to know about the awards, sponsors of the awards, previous awardees and a host of other details. The directory is in the database form and is searchable with sponsor's name, award's name, foundation year, city, subject, awardee etc.

2.0   Objectives

- To update the database (DSTAI) and keep it current.
- To widen the coverage of the database.
- To put the database on the web for world-wide accessibility.
- To disseminate the information about the S&T awards.

3.0   Methodology

Along with the updation of earlier edition of Directory, efforts have been made to make it comprehensive by covering all S & T areas. A multi-pronged approach as follows was adopted to collect additional data/information about the sponsors, awards and awardees.

- In-house publications and other reference sources were scanned.
- Data was collected, by post, fax, e-mail personal visits, telephone and scanning literature through a questionnaire as an Annexure –'A '.
- Data / information was also searched & downloaded from websites of different organizations, Institutes, associations, foundations etc.
- Letters were sent to various S & T bodies for data about awards, sponsors awardees etc.
- Printed brochures highlighting the significance of directory were distributed in science congress and conferences for publicity and to collect more data / information on awards, sponsors, awardees etc.

Even though, the above methods were adopted to make data error free, there are limitations such as non availability, incomplete and, inaccurate data etc. received from the sponsors. Also, the directory is based on data up to 2003 received by NISCAIR for updating purpose. Some of the sponsors listed in 1994 version of the Directory, did not respond in spite of several efforts, therefore such records could not be updated.

4.0   Data Collection

Data has been collected by scanning S&T journals, technical reports, newspapers, magazines, annual reports and other reference sources. A structured questionnaire was prepared and used for data collection. Also, structured questionnaire was put on NISCAIR website for collection of data.
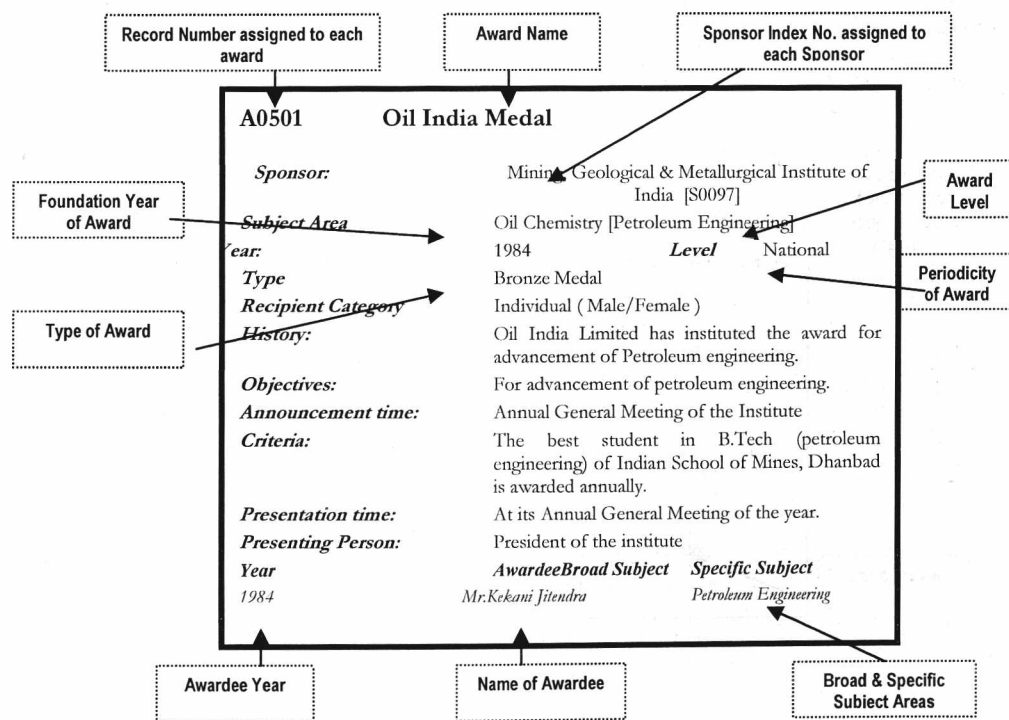
The questionnaire was sent to prospective sponsors, organizations etc. to get more information. About 2000 questionnaire were sent to various organisations, R&D institutes, professional societies, etc., for seeking information on their award(s), if any, instituted by them. About 100 organisations have responded with information on their awards. Some of the information about sponsors and awards were obtained from newspapers. Three attempts have been made for getting the response from prospective organisations. Some of the data were collected from the websites of various organisations.

5.0   Organisation of Data

The collected data has been organised into three parts viz: (1) Main part, consists of Awards; (2) Sponsor Index: and (3) Subject Index. The record number / entry number prefix with A, S are for award and sponsor respectively. The subject index entry carry a class number as prefix based on Universal Decimal Classification (UDC) scheme.
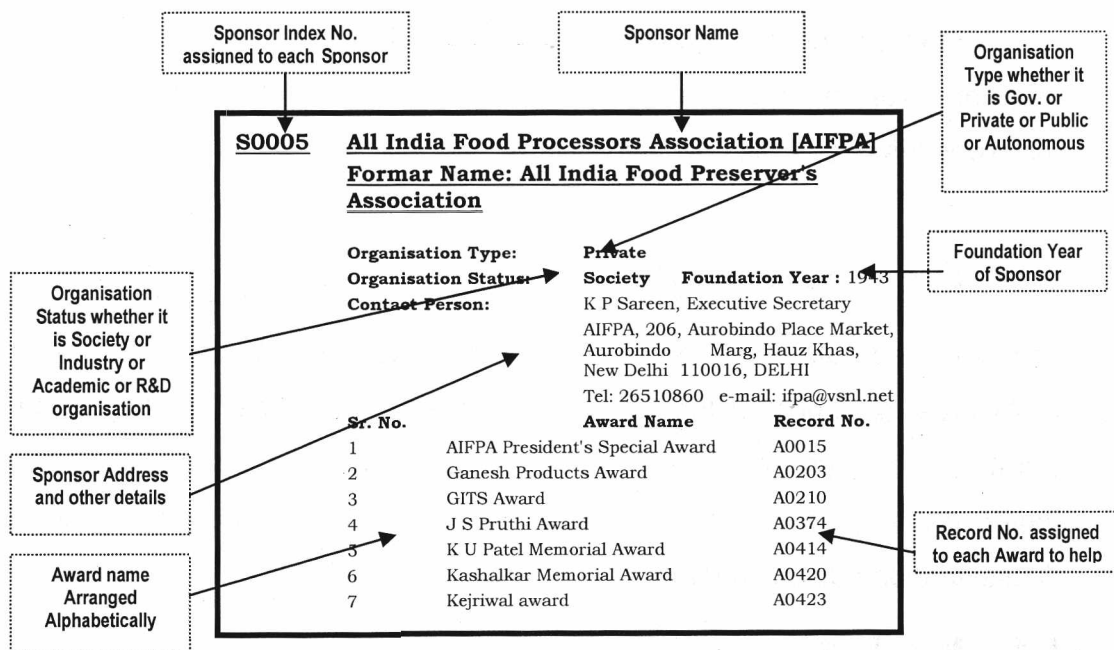
5.1   Main Part

Arranged alphabetically under awards name with full details and its each entry (record) bears a unique number of five digits. A sample record is as illustrated below:

Record Number assigned to each award	Award Name	Sponsor Index No. assigned to each Sponsor

A0501   Oil India Medal

Sponsor:	Mining Geological & Metallurgical Institute of India [S0097]
Subject Area	Oil Chemistry [Petroleum Engineering]
Year:	1984 *Level* National
Type	Bronze Medal
Recipient Category	Individual (Male/Female)
History:	Oil India Limited has instituted the award for advancement of Petroleum engineering.
Objectives:	For advancement of petroleum engineering.
Announcement time:	Annual General Meeting of the Institute
Criteria:	The best student in B.Tech (petroleum engineering) of Indian School of Mines, Dhanbad is awarded annually.
Presentation time:	At its Annual General Meeting of the year.
Presenting Person:	President of the institute

Year	*AwardeeBroad Subject*	*Specific Subject*
1984	*Mr.Kekani Jitendra*	*Petroleum Engineering*

Foundation Year of Award

Type of Award

Award Level

Periodicity of Award

Awardee Year

Name of Awardee
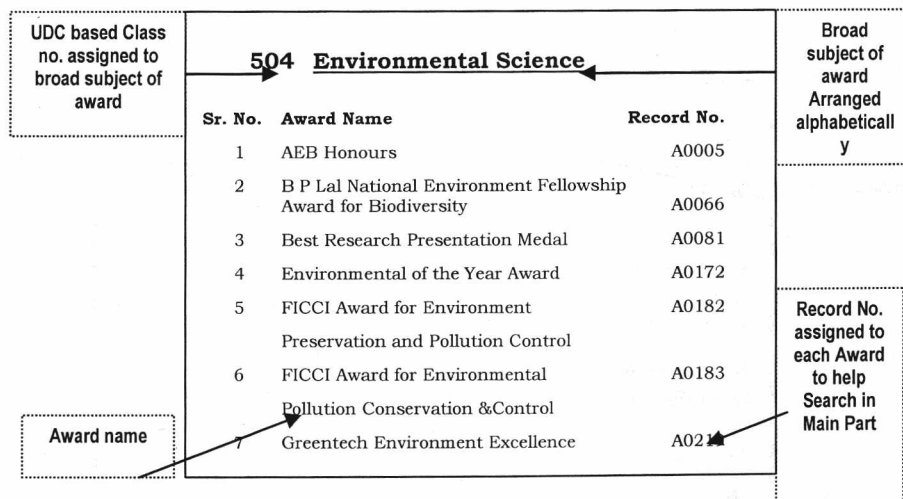
Broad & Specific Subject Areas

5.2   Sponsor Index

Arranged alphabetically under sponsor's name with its full details and correspondingly each entry gives record number of main part to see more details of awards. A sample record is illustrated below:

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┌─────────────────────┐      ┌──────────────────┐           ┌──────────────────┐
│  Sponsor Index No.  │      │   Sponsor Name   │           │   Organisation   │
│ assigned to each    │      │                  │           │ Type whether it  │
│     Sponsor         │      │                  │           │   is Gov. or     │
└─────────────────────┘      └──────────────────┘           │ Private or Public│
                                                            │  or Autonomous   │
                                                            └──────────────────┘
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S0005   **All India Food Processors Association [AIFPA]**
Formar Name: All India Food Preserver's
Association

Organisation Type: Private
Organisation Status: Society   Foundation Year : 1943
Contact Person: K P Sareen, Executive Secretary
                          AIFPA, 206, Aurobindo Place Market,
                          Aurobindo   Marg, Hauz Khas,
                          New Delhi 110016, DELHI
                          Tel: 26510860   e-mail: ifpa@vsnl.net

Sr. No.	Award Name	Record No.
1	AIFPA President's Special Award	A0015
2	Ganesh Products Award	A0203
3	GITS Award	A0210
4	J S Pruthi Award	A0374
5	K U Patel Memorial Award	A0414
6	Kashalkar Memorial Award	A0420
7	Kejriwal award	A0423

Organisation Status whether it is Society or Industry or Academic or R&D organisation

Sponsor Address and other details

Award name Arranged Alphabetically

Foundation Year of Sponsor

Record No. assigned to each Award to help

5.3   Subject Index

Arranged alphabetically under broad subject categories and each entry carries record number of main part which helps user to refer main part for knowing the other required details of awards and sponsors. A sample record is as illustrated below:

UDC based Class no. assigned to broad subject of award

504   Environmental Science

Sr. No.	Award Name	Record No.
1	AEB Honours	A0005
2	B P Lal National Environment Fellowship Award for Biodiversity	A0066
3	Best Research Presentation Medal	A0081
4	Environmental of the Year Award	A0172
5	FICCI Award for Environment Preservation and Pollution Control	A0182
6	FICCI Award for Environmental Pollution Conservation &Control	A0183
7	Greentech Environment Excellence	A02**

Broad subject of award Arranged alphabetically

Record No. assigned to each Award to help Search in Main Part

Award name

6.0   Analysis of Data

The collected data has been analysed from different angles as per below given aspects:

a) Award's Subject
b) Periodicity of award
c) Category of award
d) Award's level
e) Foundation Year of the award
f) State wise distribution of sponsors

6.1   Subject wise

The data collected for awards provided in various subject fields are distributed in 30 major disciplines. Such as Concept of Science and Knowledge [001], Information Technology [007], etc,. Sub-fields like optics and mechanics etc. of physics have been kept in physics. Chemistry covers analytical chemistry, physical chemistry, inorganic chemistry, organic chemistry etc., have been kept in Chemistry and Chemical Technology represents Food Industry, Oil Chemistry, Glass and Ceramic Industry, Colour Industry, Metallurgy.

The analysis shows that maximum awards are distributed in the Medical Science field (147 No.); followed by the engineering (111); Agriculture & Forestry (88); Chemical technology (83); Natural and Applied Science (78). But the subjects like Zoology, Botany, Domestic Sciences, Paleontology and Computer & Information Technology are not well represented; therefore, there is a need of more attention to motivate the researchers of these subjects' areas. The number of awards / sponsors is less in these subjects relative to applied sciences. The analysis reveals that applied sciences have better number of sponsors and awards relative to bio-sciences and newly emerged areas like computer and information technology.

Based on above subject wise analysis we find the gaps wherein plugging and more attention are required for proper incentive and recognition based motivation in such areas. The subject wise distribution of awards is as shown in Table 1 and Fig. 1

Subject wise break-up of awards

Sr. No.	Subject code	Subject	No. of awards
1.	61	Medical Science	147
2.	62	Engineering	111
3.	63	Agriculture and Forestry	88
4.	66	Chemical Technology	83
5.	5\6	Natural and Applied Science	78
6.	55	Earth Sciences	40
7.	57	Biology	35
8.	54	Chemistry	30
9.	502	Nature Study	19
10.	52	Astronautics	18
11.	53	Physics	17
12.	3	Social Sciences	16
13.	67	Industry, Trades & Crafts	14
14.	65	Management	11
15.	51	Mathematics	10
16.	56	Paleontology	8
17.	58	Botany	7
18.	007	Computers Information Technology	5
19.	64	Domestic Science	5
20.	59	Zoology	1
		Total	**743**

Table - 1

Discipline of Awards
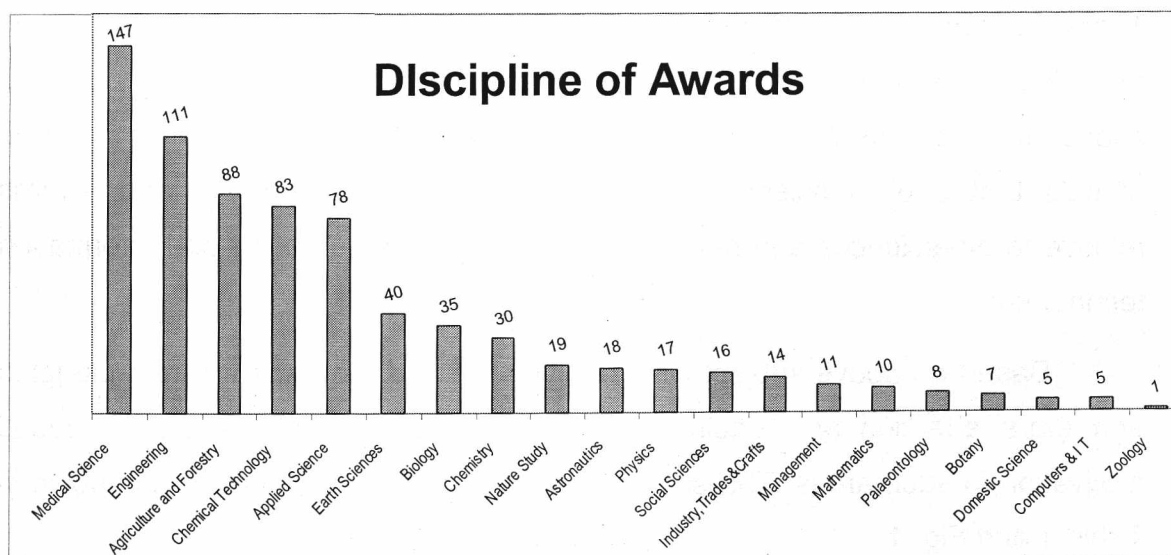
Fig. - 1

6.2   Periodicity of Awards

The 743 awards belong to 8 categories based on periodicity as shown below in Table -2. The awards for which data is not available have been put in category of other's. By this analysis, we find that maximum awards are awarded on annual basis followed by Bi-Annual; Biennial; Triennial; Once in four years; Once in five years. This needs further improvement to motivate S&T researchers more frequently for their work. In general the annual awards get more recognition and awareness than other periodicity of awards.

Periodicity of Awards

Sr. No.	Periodicity	Awards
1	Annual	519
2	Biennial	69
3	Bi-Annual	60
4	Triennial	45
5	Once in four years	12
6	Once in five years	5
7	Other's	33
	Total	743

Table - 2

Fig. - 2

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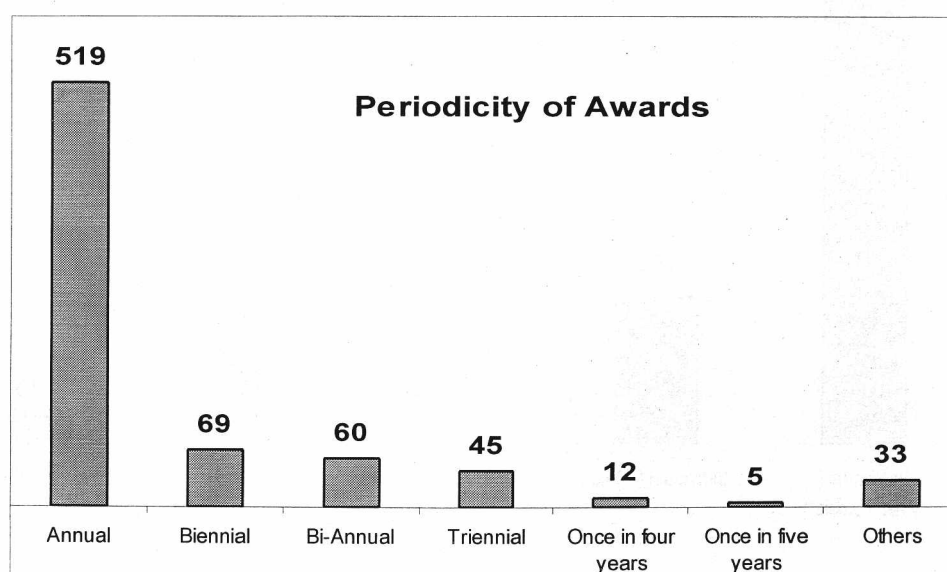
6.3 Category of Awards

The awards distribution for female, male, both, organisation, institute, industry or society, has been analysed and is shown in Table – 3, Fig. – 3. The analysis reveals a major difference between male-female category and the institute category. Also, figures show that the researchers are getting more awards in the name of individual person than in the name of their institute(s), organisation(s) or industry(ies). Thus, the maximum awards have been given for both male, female in individual category.

Category of Awards

Sr. No.	Category	Awards
1	Individual (Male/Female)	511
2	Individual (Male)	163
3	Individual (Female)	104
4	Institute	105
5	Society	25
	Total	743

Table - 3

Fig. - 3

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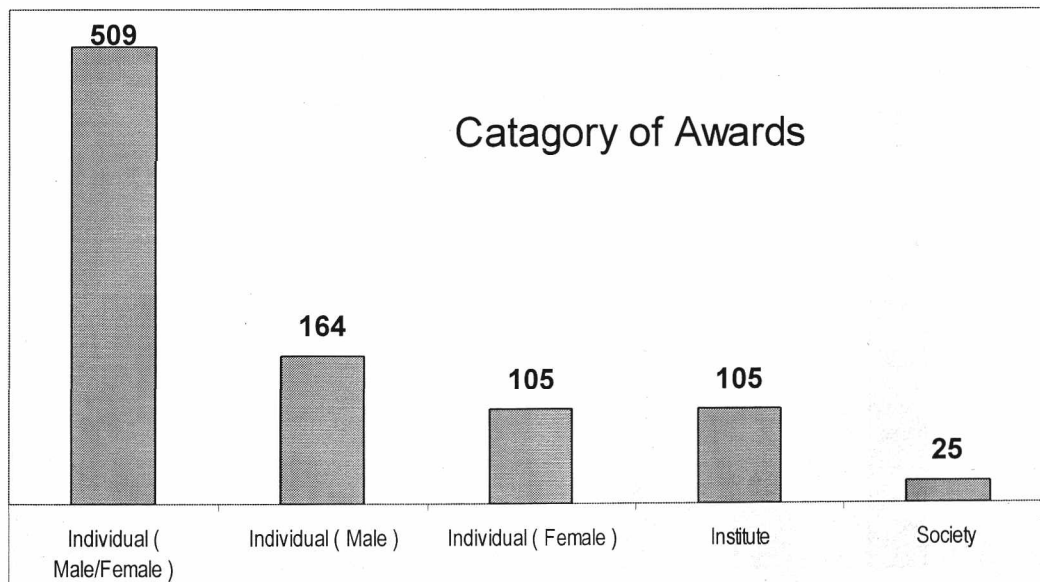
6.4 Award's Level

The data shows that the maximum number of awards is given in the category of national level followed by international and state levels. The "others" category of awards is where data identification could not be possible due to non availability of correct information. The details of awards provided to awardees at National, international, state levels etc. by various sponsors are as shown in Table - 4 and Fig. – 4:

Award Level

Sr. No.	Award level	Awards
1	National	607
2	International	51
3	State	44
4	National & International	14
5	Others	27
	Total	**743**

Table - 4
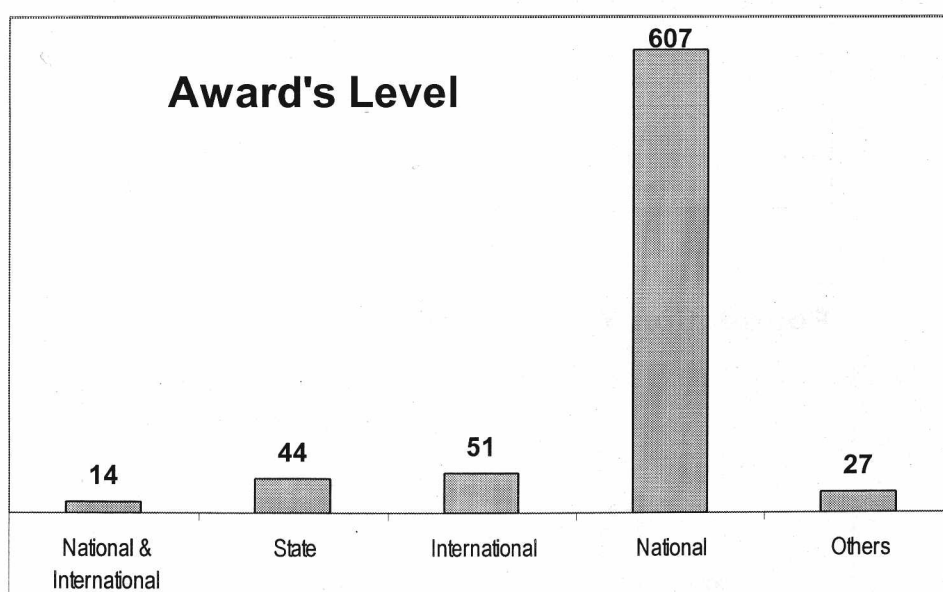
Fig. – 4

6.5 Chronology of Awards Foundation

The chronological analysis of awards shows that maximum number of awards are instituted during 1981 – 1990 (195), followed by 1970's (167) and 1990's (165). It shows that after independence government / private institutes and other organisations felt the need to promote S & T research and as a sequel, many sponsors came forward, worked actively and instituted good number of awards. But during 1950 to 1970, the growth has been relatively low, probable reasons there of may be as usually in initial years the growth remains relatively low, in every case of activity.

Data from 2001+ is not available in full; therefore, it does not represent the true picture of this period. The details of chronology of awards are as shown below in Table – 5 and Fig. – 5.

Chronology of Awards

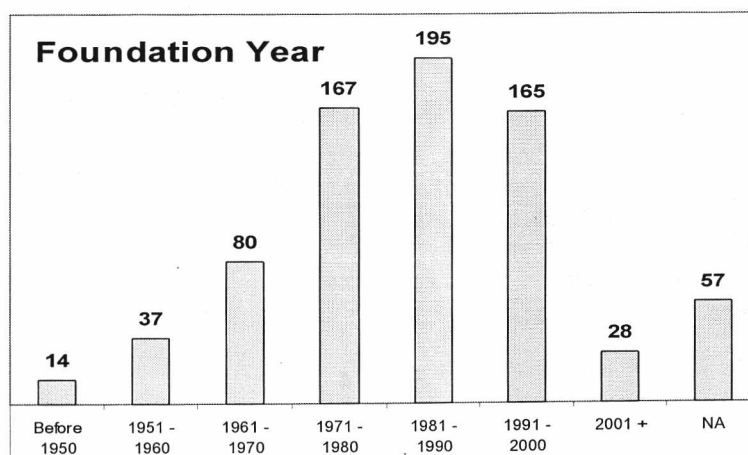| Sr. No.	Foundation year	Awards
1	Upto 1950	14
2	1951 - 1960	37
3	1961 - 1970	80
4	1971 - 1980	167
5	1981 - 1990	195
6	1991 - 2000	165
7	2001 +	28
8	NA	57
	Total	743

Table – 5

Fig. – 5

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6.6 Sponsors and Awards - State wise

The state wise distribution of sponsors and awards reveals that Delhi has largest number of sponsors (40) and awards (358), followed by other states as shown below in Table – 6. The reason of Delhi being on top is due to the presence of headquarters of almost all S & T apex bodies in Delhi which normally sponsor awards.

State wise distribution of sponsors & awards

Sr. No.	State	Sponsors	Awards
1.	DELHI	40	358
2.	WEST BENGAL	16	138
3.	MAHARASHTRA	21	70
4.	KARNATAKA	10	33
5.	UTTARANCHAL	6	29
6.	UTTAR PRADESH	10	27
7.	GUJRAT	8	20
8.	ANDHRA PRADESH	3	13
9.	PUNJAB	2	10
10.	ORISA	1	10
11.	HARYANA	3	9
12.	TAMILNADU	3	7
13.	ASSAM	2	7
14.	MADHYA PRADESH	2	4
15.	KERALA	2	3
16.	JHARKHAND	1	2
17.	JAMMU & KASHMIR	1	1
18.	LAKSHADEEP	1	1
19.	MANIPUR	1	1
	Total	133	743

Table - 6

It is also pertinent to mention that the states which generally yield higher S & T productivity in terms of research papers etc., correspondingly showing larger number of sponsors and awards. It means the states showing less number of

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sponsors and awards need more focused approach of sponsors to institute good number of awards to promote R & D activities in the state. The motivation for sound R & D activities in S & T areas also would be helpful in ameliorating the socioeconomic condition of the state, utilizing developed S & T knowledge base.
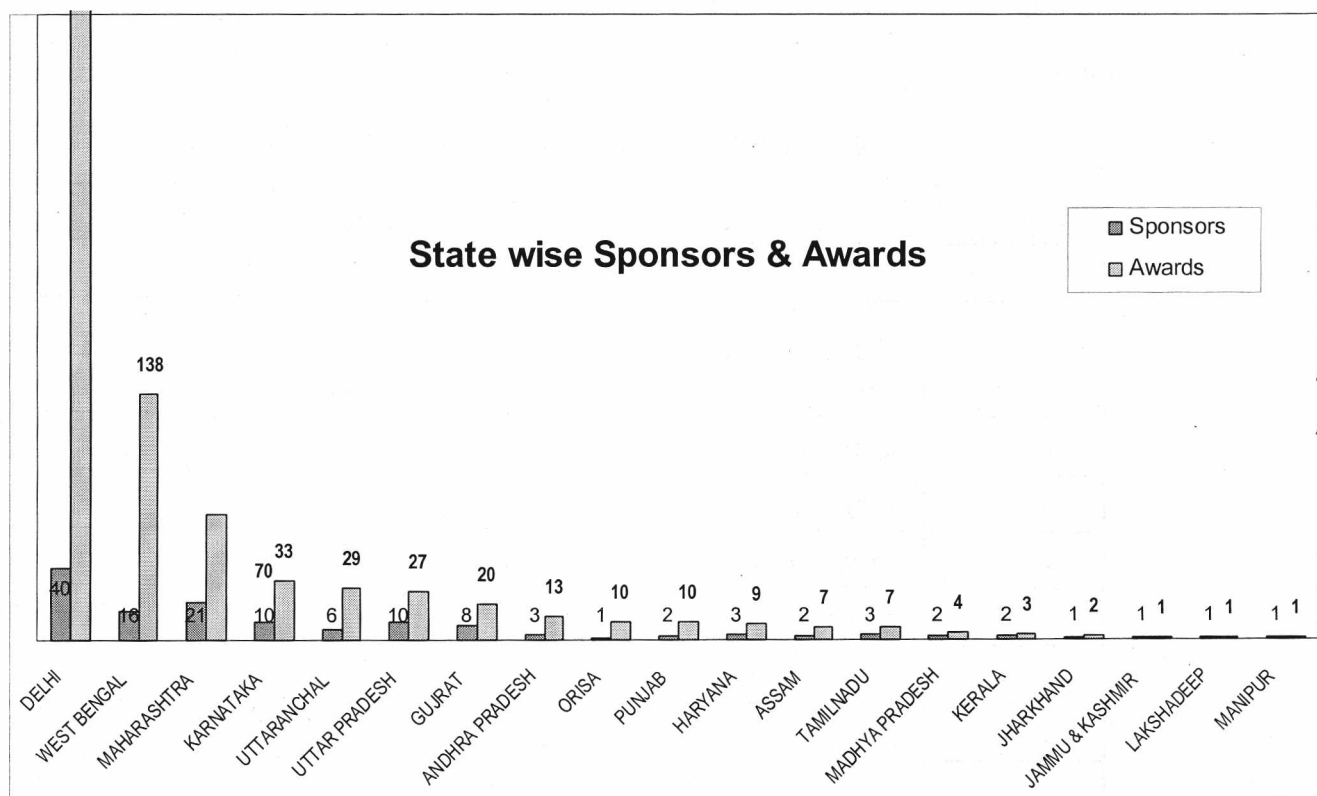

Fig. - 6

7.0 Benefits

The expected benefits from the S&T Awards Directory are:

- Provide up-to-date information in a single compilation
- Augment interest and enhance competitive zeal among R&D personnel in the country
- Create awareness and increase the visibility of about the awards and their sponsors and the awardees
- Strengthen R&D efforts of researchers and scientists
- Encourage other sponsors to provide inputs for inclusion in the Directory.