

INDIAN PERIODICALS IN THE SCIENCE CITATION INDEX

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The coverage of Indian S&T periodicals in *SCI* has been studied covering the period 1975-88. The study shows that coverage is rather poor due to a variety of reasons. Many of the Indian periodicals do not fulfil the criteria for getting covered in *SCI*. About 500 periodicals have been identified which are covered by at least one major indexing or abstracting service of the world. Total number of such periodicals is likely to be over 600. Slight improvement in the standard of these periodicals is likely to make many of them worthy of coverage by *SCI*.

The year 1988 was the bicentenary year of the first research periodical publication in India. *Asiatick Researches* started in 1788 under the stewardship of Sir William Jones by the Asiatick Society was from the very beginning a learned periodical devoted to almost all fields of knowledge including science and technology. During the last two hundred years, India has given birth to periodicals, diverse in form, variegated in quality, all-embracing in subject coverage, national and international in scope, and thousands in number.

In the field of science and technology alone, India at present produces around 1500 periodicals in English and regional languages. Studies undertaken at INSDOC and elsewhere on Indian periodicals reveal many interesting facts. All the international abstracting and indexing services devoted to science and technology cover about 500 Indian S&T periodicals (Table 1). Table 1 lists some 450-odd S&T periodicals, being covered by at least one international abstracting/indexing service. It is very likely that there are another 40 or 50 periodicals of this category, about whose coverage in international secondary services, we do not have the correct information because of the rather slack bibliometric control in India, as well as inadequate coverage in international periodical directories. When the coverage of *Indian Science Abstracts* is added to this number, the total number of Indian periodicals covered by national and international secondary services goes beyond 650.

Table 1
Coverage of Indian S&T journals in international indexing and abstracting services

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Science & Technology		
Agra University Journal of Research	1952+, 3/12	11
Current Science	1932+, 24/12	27
Defence Science Journal	1950+, 4/12	12
Indian Journal of History of Science	1966+, 4/12	3
Journal of the Assam Science Society	1958+, 4/12	3
Journal of the Indian Institute of Science	1914+, 4/12	20
Journal of Maharaja Sayajirao University of Baroda	1952+, 3/12	5
Journal of Mathematical and Physical Sciences	1967+, 6/12	6
Journal of Scientific & Industrial Research	1963+, 12/12	21
Journal of Scientific Research	1978+, 4/12	5
Journal of the University of Bombay: Science	1932+, 2/12	3
National Academy Science Letters	1978+, 12/12	5
North Bengal University Review - Science & Technology	1980+, 2/12	1
Research & Industry	1956+, 4/12	4
Science and Culture	1935+, 12/12	15
Science and Engineering	1948+, 12/12	4
Science and Environment	1979+, 2/12	3
Transactions Bose Research Institute	1918+, 4/12	6
Vidya B Sciences	1958+, 2/12	1
Vignana Bharati	1975+, 2/12	3
Vikram	1937+, 4/12	4
Natural History		
Journal Bombay Natural History Society	1866+, 3/12	15
Mathematical Sciences		
Acta Ciencia Indica - Mathematics	1975+, 4/12	5
Bulletin Calcutta Mathematical Society	1909+, 6/12	3
Bulletin Calcutta Statistical Association	1947+, 4/12	3
Ganita	1950+, 2/12	1
Indian Journal of Mathematics	1938+, 3/12	2
Indian Journal Pure & Applied Mathematics	1970+, 12/12	7
International Journal of Mathematics & Mathematical Science	1978+, 4/12	1
Journal Indian Academy of Mathematics	1979+, 2/12	2
Journal Indian Mathematical Society	1909+, 1/12	1
Journal Indian Society of Statistics & Operations Research	1980+, 1/12	2

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Journal of Combinatorics, Information & System Science	1976+, 4/12	1
Mathematics Education	1967+, 4/12	1
Mathematics Student	1933+, 4/12	1
Opsearch	1964+, 4/12	4
Proceedings Indian Academy of Science Mathematical Sci	1980+, 3/12	9
Ranchi University Mathematical Journal	1970+, 1/12	1
Sankhya Ser A	1961+, 3/12	6
Sankhya Ser B	1961+, 3/12	5
Astronomy		
Bulletin of Astronomical Society of India	1973+, 4/12	5
Journal of Astrophysics & Astronomy	1980+, 4/12	8
Surveying & Geodesy		
Indian Surveyor	1952+, 2/12	1
Physical Sciences		
Proceedings Indian National Science Academy A Phys Sci	1935+, 6/12	3
Proceedings National Academy of Sciences A Phys Sci	1931+, 4/12	8
Physics		
Acta Ciencia Indica - Physics	1975+, 4/12	4
Indian Journal of Physics Pt. A	1977+, 8/12	12
Indian Journal of Physics Pt. B	1977+, 8/12	12
Indian Journal of Pure & Applied Physics	1963+, 12/12	18
Indian Journal of Radio & Space Physics	1972+, 4/12	5
Indian Journal of Theoretical Physics	1953+, 4/12	6
Physics News	1970+, 4/12	1
Pramana	1973+, 12/12	10
Acoustics		
Journal Acoustical Society of India	1973+, 4/12	2
Journal of Pure & Applied Ultrasonics	1979+, 4/12	1
Optics		
Journal of Optics	1972+, 4/12	6
Nuclear Science		
Nuclear India	1962+, 12/12	3

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Chemistry		
Acta Ciencia India - Chemistry	1975+, 4/12	5
Chemical Age of India	1950+, 12/12	4
Chemical Era	1964+, 12/12	2
Chemical Weekly	1956+, 52/12	1
Indian Journal of Chemistry. Sec A	1976+, 12/12	18
Indian Journal of Chemistry. Sec B	1976+, 12/12	9
Journal of Indian Chemical Society	1924+, 12/12	16
Journal of the Institution of Chemists, India	1929+, 6/12	3
Journal of Surface Science and Technology	1985+, 2/12	1
Proceedings Indian Academy of Sciences - Chemical Sciences	1988+, 6/12	14
Proceedings of the Institution of Chemists, India	, 4/12	1
Electrochemistry		
Bulletin of Electrochemistry	1985+, 12/12	5
Journal of Electrochemical Society of India	1985+, 6/12	5
Transactions of SAEST	1966+, 4/12	4
Mineralogy		
Bulletin of Oil & Natural Gas Commission	1964+, 2/12	1
Clay Research	1982+, 2/12	1
Indian Mineralogist	1960+, 1/12	1
Indian Minerals	1947+, 4/12	3
Metals & Mineral Review	1961+, 12/12	2
Mineral Research	1969+, 2/12	1
Mineral Wealth	1965+, 2/12	2
Earth Sciences		
Geoviews	1975+, 4/12	2
Himalayan Geology	1971+, Irr	2
Indian Journal of Earth Sciences	1974+, 4/12	7
Indian Journal of Geology	1987+, 4/12	2
Journal Geological Society of India	1959+, 12/12	6
Memoirs Geological Society of India	1963+, Irr	5
Memoirs Geological Survey of India	1867+, Irr	2
Proceedings, Indian Academy of Sciences - Earth & Planet. Sci	1980+, 3/12	2

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Geography		
Deccan Geographer	1962+, 3/12	3
Geographical Observer	1965+, 1/12	2
National Geographer	1966+, 2/12	2
Geophysics		
Journal of Association of Exploration Geophysicists	1980+, 4/12	4
Oceanography		
Indian Journal of Marine Sciences	1972+, 4/12	11
Mahasagar	1968+, 4/12	7
Meteorology		
Mausam	1979+, 4/12	6
Palaeontology		
Geophytology	1971+, 2/12	2
Journal Palaeontological Society of India	1956+, 1/12	1
Palaeobotanist	1952+, 1/12	3
Biological Sciences		
Annals of Biology	1985+, 2/12	4
Biological Memoirs	1977+, 2/12	1
Bionature	1981+, 2/12	1
Current Trends in Life Sciences	Irr	2
Geobios	1974+, 6/12	5
Geobios New Reports	1982+, 6/12	3
Indian Biologist	1968+, 2/12	4
Indian Journal of Applied & Pure Biology	1986+, Irr	4
Indian Journal of Experimental Biology	1963+, 12/12	9
Indian Review of Life Sciences	1981+, 1/12	5
Journal Marine Biological Association of India	1959+, 2/12	5
Journal of Biological Sciences	1958+, 2/12	3
Journal of Biosciences	1979+, 4/12	7
Journal of Hydrobiology	2/12	2
Journal of Kerala Academy of Biology	2/12	1
Journal of Scientific Research in Plants & Medicines	1981+, 4/12	1
Proceedings, National Academy of Sciences of India - B Biol Sci	1931+, 4/12	6

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Anthropology		
Anthropologist	1954+, 2/12	1
Eastern Anthropologist	1947+, 4/12	8
Human Science	1983+, 4/12	1
Indian Anthropologist	1971+, 2/12	1
Indian Journal of Physical Anthropology & Human Genetics	1975+, 3/12	3
Journal of Indian Anthropological Society	1966+, 3/12	4
Man in India	1921+, 4/12	9
Genetics		
Indian Journal of Genetics and Plant Breeding	1941+, 3/12	10
Indian Journal of Heredity	1969+, 4/12	6
Journal of Genetics	1910+, 3/12	11
Cytology		
Cell & Chromosome Research	1978+, 3/12	2
Journal of Cytology & Genetics	1966+, 2/12	4
Nucleus	1958+, 3/12	6
Microbiology		
Indian Journal of Microbiology	1961+, 4/12	12
Parasitology		
Indian Journal of Parasitology	1977+, 2/12	7
Biochemistry		
Biochemical Reviews	1930+, 1/12	2
Indian Journal of Biochemistry & Biophysics	1971+, 6/12	21
Ecology & Environment		
Comparative Physiology & Ecology	1976+, 4/12	10
Environment and Ecology	1983+, 4/12	1
Indian Journal of Ecology	1974+, 2/12	11
Indian Journal of Environmental Protection	1981+, 12/12	6
International Journal of Ecology & Environmental Sciences	1974+, 3/12	7
Journal of Environmental Biology	1980+, 4/12	6
Tropical Ecology	1960+, 2/12	14

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Botany		
Acta Botanica Indica	1973+, 2/12	12
Aspects of Plant Sciences	1976+, 1/12	1
Botanica	1950+, 4/12	3
Bulletin, Botanical Society of Bengal	1947+, 2/12	5
Bulletin, Botanical Survey of India	1959+, 4/12	6
Bulletin of Pure & Applied Sciences - Plant Sciences	1982+, 2/12	1
Indian Journal of Botany	1978+, 2/12	5
Journal of Economic & Taxonomic Botany	1980+, Irr	3
Journal of the Indian Botanical Society	1959+, 4/12	11
New Botanist	1974+, 4/12	2
Proceedings Indian Academy of Sciences - Plant Sciences	1980+, 6/12	7
Plant Biology		
Advances in Pollen Spore Research	1975+, 1/12	2
Indian Journal of Plant Physiology	1958+, 4/12	9
Journal of Palynology	1965+, 2/12	4
Journal of Plant Anatomy and Morphology	1980+, 2/12	5
Phytomorphology	1951+, 4/12	13
Mycology		
Indian Journal of Mycology & Plant Pathology	1971+, 3/12	9
Phycology		
Phykos	1962+, 2/12	4
Fern		
Indian Fern Journal	1984+, 2/12	2
Zoology		
Annals of Zoology	1958+, 4/12	3
Bulletin Zoological Survey of India	1978+, 3/12	2
Indian Journal of Zoology	1974+, 6/12	4
Journal of Advanced Zoology	1980+, 2/12	4
Journal of Zoological Society of India	1949+, 2/12	3
Journal of Zoological Research	1977+, 2/12	2
Proceedings Indian Academy of Sciences - Animal Sciences	1934+, 12/12	12
Proceedings Zoological Society	1953+, 2/12	3
Uttar Pradesh Journal of Zoology	1981+, 2/12	1

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Animal Physiology		
Journal of Animal Morphology & Physiology	1954+, 2/12	6
Helminthology		
Indian Journal of Helminthology	1948+, 2/12	4
Indian Journal of Nematology	1971+, 2/12	6
Acarology		
Indian Journal of Acarology	1976+, 2/12	2
Entomology		
Annals of Entomology	1983+, 2/12	4
Bulletin of Entomology	1960+, 4/12	5
Cecidologia Internationale	1966+, 3/12	2
Entomon	1976+, 4/12	14
Indian Journal of Entomology	1939+, 4/12	8
Journal of Entomological Research	1977+, 2/12	4
Oriental Insects	1967+, 4/12	11
Ornithology		
Hornbill	1976+, 4/12	2
Pavo	1963+, 2/12	4
Medical Sciences		
Antiseptic	1904+, 12/12	3
Arogya	1975+, 6/12	2
Bombay Hospital Journal	1959+, 4/12	2
Bulletin Postgraduate Institute of Medical Education & Research	1967+, 4/12	5
Calcutta Medical Journal	1906+, 6/12	6
Clinician	1936+, 12/12	4
Current Medical Practice	1957+, 12/12	2
Health & Population: Perspectives & Issues	1972+, 4/12	3
Indian Journal of Industrial Medicine	1949+, 4/12	2
Indian Journal of Medical Research	1913+, 12/12	20
Indian Journal of Medical Sciences	1947+, 12/12	10
Indian Medical Gazette	1961+, 12/12	3
Indian Medical Journal	1907+, 12/12	2
Indian Practitioner	1948+, 12/12	4
Journal of Applied Medicine	1975+, 12/12	1

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Journal Association of Physicians of India	1953+, 12/12	5
Journal of Christian Medical Association of India	1926+, 12/12	1
Journal of Indian Medical Association	1931+, 12/12	8
Journal of Postgraduate Medicine	1955+, 4/12	5
Journal of Research and Education in Indian Medicine	1982+, 4/12	2
Journal of Research in Ayurveda & Siddha	1980+, 4/12	2
Karnataka Medical Journal	1939+, 4/12	1
Medical Journal Armed Forces India	1975+, 4/12	3
Medicine & Surgery	1961+, 12/12	2
National Medical Journal of India	1988+, 4/12	
Patna Journal of Medicine	1925+, 12/12	1
Punjab Medical Journal	1951+, 12/12	4
Rajasthan Medical Journal	1973+, 4/12	2
Anatomy		
Journal Anatomical Society of India	1952+, 3/12	7
Physiology		
Indian Journal of Physiology & Pharmacology	1975+, 4/12	7
Health		
Indian Journal of Environmental Health	1959+, 4/12	10
Indian Journal of Nutrition & Dietetics	1953+, 4/12	6
Indian Journal of Public Health	1957+, 4/12	6
Reproductive Biology		
Journal of Family Welfare	1954+, 4/12	2
Pharmacy & Therapeutics		
Eastern Pharmacist	1958+, 12/12	3
Hindustan Antibiotics Bulletin	1958+, 4/12	6
Indian Drugs	1963+, 12/12	3
Indian Journal of Hospital Pharmacy	1965+, 6/12	4
Indian Journal of Pharmaceutical Education	1969+, 4/12	3
Indian Journal of Pharmaceutical Sciences	1939+, 6/12	9
Indian Journal of Pharmacology	1969+, 4/12	4
Indian Journal of Radiology & Imaging	1976+, 4/12	2
Nursing		
Nursing Journal of India	1910+, 12/12	3

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Cancer		
Indian Journal of Cancer	1963+, 4/12	7
Pediatrics		
Archives of Child Health	1959+, 6/12	4
Child Psychiatry Quarterly	1967+, 4/12	5
Indian Journal of Pediatrics	1933+, 6/12	8
Indian Pediatrics	1964+, 12/12	9
Pediatrics Clinics of India	1966+, 4/12	1
Anaesthesia		
Asian Archives of Anaesthesiology & Resuscitation	1971+, 2/12	2
Medical Microbiology		
Indian Journal of Pathology & Microbiology	1958+, 4/12	9
Heart Diseases		
Indian Heart Journal	1949+, 6/12	5
Otorhinolaryngology		
Indian Journal of Otolaryngology	1948+, 4/12	2
Respiratory Diseases		
Indian Journal of Tuberculosis	1953+, 4/12	5
Dentistry		
Dental Dialogue	1975+, 4/12	1
Journal Indian Dental Association	1925+, 12/12	3
Dermatology		
Indian Journal of Dermatology, Venereology & Leprology	1976+, 6/12	5
Urology		
Indian Journal of Urology	1984+, 2/12	2
Journal of Diabetic Association of India	1960+, 4/12	2
Neurology & Brain Diseases		
Neurology India	1953+, 4/12	5

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Indian Journal of Mental Retardation	1968+, 2/12	1
NIMHANS Journal	1968+, 2/12	1
Psychiatry		
Indian Journal of Behaviour	1976+, 4/12	3
Indian Journal of Clinical Psychology	1974+, 2/12	5
Indian Journal of Psychiatry	1959+, 4/12	3
Indian Journal of Psychological Medicine	1978+, 2/12	2
Communicable Diseases		
Bulletin of Haffkine Institute	1973+, 3/12	3
Indian Journal of Leprosy	1930+, 4/12	5
Indian Journal of Malariology	1981+, 4/12	5
Journal of Communicable Diseases	1969+, 4/12	10
Ophthalmology		
Afro Asian Journal of Ophthalmology	1982+, 4/12	2
Indian Journal of Ophthalmology	1953+, 4/12	3
Optometry Today	1970+, 4/12	1
Surgery		
Indian Journal of Orthopaedics	1967+, 2/12	2
Indian Journal of Surgery	1939+, 12/12	3
Journal of Foot Surgery	1986+, 1/12	4
Quarterly Journal of Surgical Sciences	1965+, 4/12	2
Gynecology & Obstetrics		
Journal of Obstetrics & Gynecology of India	1951+, 6/12	2
Engineering & Technology		
Bulletin Institution of Engineers (India)	1951+, 12/12	5
Indian Journal of Technology	1963+, 12/12	27
Indian & Eastern Engineer	1858+, 12/12	4
Journal Institution of Engineers India - Interdisciplin. Panel	1985+, 3/12	3
Journal of Technology	1956+, 2/12	4
Sadhana	1984+, 4/12	6
Materials Science		
Bulletin of Materials Science	1979+, 12/12	8

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Energy		
Energy Managment	1977+, 4/12	1
Urja	1977+, 12/12	1
Mechanical Engineering		
Indian Foundry Journal	1955+, 12/12	7
Indian Journal of Cryogenics	1976+, 4/12	5
Indian Welding Journal	1968+, 4/12	3
Journal Institution of Engineers India - Mechanical Engineering	1961+, 6/12	7
Machine Tool Engineer	1959+, 4/12	1
Mechanical Engineering Bulletin	1970+, 4/12	7
Electrical Engineering		
BHEL Journal	1981+, 4/12	3
Electrical India	1961+, 24/12	1
Journal Institution of Engineers India - Electrical Engng Div	1920+, 6/12	7
Electronics & Telecommunications		
Electro Technology	1957+, 4/12	5
Electronics Information & Planning	1973+, 12/12	5
IETE Technical Review	1984+, 6/12	1
Journal Electronics Engineering	1975+, 3/12	1
Journal Instn. of Electronics & Telecommn. Engineers India	1955+, 6/12	4
Journal Instn. of Engineers (India) Electronics & Telecommn. Div	1961+, 4/12	1
Students Journal - Instn. of Electronics & Telecommn. Engrs India	1959+, 4/12	3
Telecommunications	1951+, 6/12	1
Mining		
Indian Mining & Engineering Journal	1962+, 12/12	7
Journal Institution of Engineers (India) - Mining Engineering	1985+, 2/12	5
Journal of Mines Metals & Fuels	1953+, 12/12	3
Civil Engineering		
Bulletin of Indian Society of Earthquake Technology	1950+, 4/12	3
Indian Geotechnical Journal	1971+, 4/12	3
Indian Highways	1973+, 12/12	2

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Indian Journal of Power & River Valley Development	1950+, 12/12	18
Indian Railway Technical Bulletin	1944+, 4/12	1
International Journal of Structures	1981+, 4/12	3
Irrigation & Power	1943+, 4/12	9
Journal Institution of Engineers India Civil Engineering	1961+, 6/12	4
Journal Structural Engineering	1973+, 4/12	7
Environmental Engineering		
Journal Institution of Engineers India Environmental Engng.	1976+, 3/12	2
Aeronautical Engineering		
Journal Aeronautical Society of India	1949+, 4/12	3
Agriculture		
Agricultural Research Journal of Kerala	1961+, 2/12	15
Agricultural Reviews	1980+, 2/12	3
Agricultural Science Digest	1981+, 4/12	6
Agricultural Situation in India	1945+, 12/12	2
Agriculture & Agroindustries Journal	1968+, 12/12	2
Andhra Agricultural Journal	1959+, 6/12	3
Food Farming and Agriculture	1968+, 12/12	4
Gujarat Agricultural University Research Journal	1975+, 2/12	7
Haryana Agricultural University Journal of Research	1971+, 4/12	7
Himachal Journal of Agricultural Research	1971+, 2/12	1
Indian Agriculturist	1957+, 4/12	10
Indian Farming	1940+, 12/12	9
Indian Journal of Agricultural Economics	1946+, 4/12	10
Indian Journal of Agricultural Research	1967+, 4/12	17
Indian Journal of Agricultural Sciences	1931+, 12/12	20
Indian Journal of Agronomy	1956+, 4/12	11
International Journal of Tropical Agriculture	1983+, 4/12	10
JNKVV Research Journal	1967+, 4/12	13
Journal Indian Society of Agricultural Statistics	1948+, 3/12	2
Journal of Maharashtra Agricultural Universities	1976+, 3/12	4
Journal of Research Punjab Agricultural University	1964+, 4/12	19
Madras Agricultural Journal	1912+, 12/12	13
Mysore Journal of Agricultural Sciences	1967+, 4/12	22
PKV Research Journal	1972+, 2/12	4
Rajasthan Journal of Agricultural Sciences	1970+, 2/12	1
Nuclear Agriculture		
Journal of Agriculture & Biology	1972+, 4/12	12

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Agricultural Chemistry		
Indian Journal of Agricultural Chemistry	1968+, 3/12	9
Arid Zone Agriculture		
Scientific Reviews on Arid Zone Research	1982+, 1/12	1
Annals of Arid Zone	1962+, 4/12	5
Transactions Indian Society of Desert Technology	1976+, 2/12	5
Agricultural Engineering		
Journal Agricultural Engineering	1963+, 4/12	2
Journal Institution of Engineers India - Agricultural Engng	1987+, 2/12	1
Soil Science		
Indian Journal of Soil Conservation	1973+, 2/12	2
Journal Indian Society of Soil Science	1953+, 4/12	10
Journal of Soil Biology & Ecology	1981+, 2/12	1
Journal of Soil & Water Conservation in India	1952+, 4/12	3
Seed Research		
Journal of Oilseed Research	1984+, 2/12	3
Seed Research	1973+, 2/12	4
Telhan Patrika/Oilseed Research	1969+, 4/12	3
Fertilizers		
Fertilizer News	1956+, 12/12	5
Fertilizer Technology	1964+, 4/12	12
Plant Pathology		
Indian Journal of Plant Protection	1973+, 2/12	6
Indian Phytopathology	1948+, 4/12	9
International Journal of Tropical Plant Diseases	1983+, 2/12	1
Pesticides	1967+, 12/12	11
Review of Tropical Plant Pathology	1984+, Irr	1
Field Crops		
Cotton Development	1971+, 2/12	3
Indian Tobacco Journal	1978+, 4/12	5
Journal Indian Potato Association	1974+, 4/12	5
Journal of Plantation Crops	1972+, 2/12	15

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Journal of Root Crops	1975+, 2/12	8
Jute Development Journal	1981+, 4/12	1
Legume Research	1977/78+, 2/12	7
Rubber Board Bulletin	1951+, 2/12	10
Rubber News	1962+, 12/12	2
Tobacco Research	1975+, 2/12	1
Tea & Coffee		
Indian Coffee	1937+, 12/12	4
Journal of Coffee Research	1971+, 4/12	11
Two & A Bud	1954+, 2/12	13
Forestry		
Evergreen	1987+, 2/12	1
Indian Forester	1975+, 12/12	8
Indian Journal of Forestry	1978+, 4/12	8
Journal of Tropical Forestry	1985+, 4/12	2
Horticulture		
Haryana Journal of Horticultural Sciences	1972+, 4/12	5
Indian Cashew Journal	1964+, 4/12	1
Indian Cocoa, Arecanut & Spices Journal	1969+, 4/12	2
Indian Coconut Journal	1970+, 12/12	4
Indian Horticulture	1956+, 4/12	10
Indian Journal of Horticulture	1943+, 4/12	5
Indian Journal of Mushrooms	1975+, 2/12	1
Lal-Baugh	1956+, 4/12	2
Progressive Horticulture	1969+, 4/12	5
Punjab Horticultural Journal	1961+, 4/12	3
South Indian Horticulture	1953+, 6/12	4
Animal Husbandry & Veterinary Science		
Avian Research	1913+, 4/12	3
Cheiron	1972+, 6/12	11
Haryana Vet	1961+, 2/12	1
Indian Journal of Animal Health	1959+, 2/12	8
Indian Journal of Animal Nutrition	1984+, 4/12	2
Indian Journal of Animal Production & Management	1985+, 4/12	24
Indian Journal of Animal Research	1967+, 2/12	9
Indian Journal of Animal Sciences	1969+, 12/12	24
Indian Journal of Veterinary Surgery	1980+, 12/12	4
Indian Veterinary Journal	1924+, 12/12	18

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Indian Veterinary Medical Journal	1977+, 12/12	6
Kerala Journal of Veterinary Science	1970+, 2/12	11
Poultry Guide	1964+, 12/12	1
Dairying		
Asian Journal of Dairy Research	1982+, 4/12	7
Indian Dairyman	1949+, 12/12	6
Indian Journal of Dairy Science	1948+, 4/12	5
Apiculture		
Indian Bee Journal	1939+, 4/12	4
Sericulture		
Indian Journal of Sericulture	1962+, 2/12	2
Fisheries		
Bulletin Central Inland Fisheries Research Institute	1963+, Irr	3
Fishery Technology	1964+, 12/12	5
Indian Journal of Fisheries	1954+, 4/12	8
Journal Inland Fisheries Society of India	1969+, 2/12	1
Matsya	1975+, 1/12	1
Chemical Technology		
Chemical Age of India	1949+, 12/12	4
Chemical Engineering World	1966+, 12/12	6
Chemical Era	1964+, 12/12	2
Chemical Weekly	1956+, 52/12	2
Indian Chemical Engineer	1959+, 4/12	2
Journal Institution of Engineers India Chem. Engng. Div.	1961+, 3/12	4
Fuel		
Fuel Science & Technology	1982+, 4/12	4
Biotechnology		
Journal of Microbial Biotechnology	1986+, 2/12	5
Food Technology		
Bulletin of Grain Technology	1963+, 3/12	9
Indian Food Industry	1982+, 4/12	2
Indian Food Packer	1946+, 6/12	4

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Journal of Food Science & Technology	1964+, 6/12	15
Seafood Export Journal	1969+, 1/12	1
Sugar Technology		
Indian Sugar	1970+, 12/12	6
Sharkara	1958+, 4/12	1
Oils		
Journal Oils Technologists Association of India	1969+, 4/12	1
Perfumery		
Indian Perfumer	1957+, 4/12	3
Pafai Journal		
Soaps, Detergents & Toiletries Review	1971+, 12/12	1
Glass & Ceramics		
Bulletin Central Glass & Ceramic Research Institute	1954+, 4/12	4
Indian Ceramics	1954+, 12/12	4
Transactions Indian Ceramic Society	1941+, 6/12	5
Cement & Concrete		
Indian Concrete Journal	1927+, 12/12	9
Colours, Dyes, Paints		
Colourage	1954+, 24/12	7
Journal Colour Society	1962+, 4/12	4
Paintindia	1951+, 12/12	4
Metallurgy		
Metallurgical Engineer	1969/70+, 12/12	7
NML Technical Journal	1959+, 4/12	6
Transactions Indian Institute of Metals	1948+, 6/12	8
Transactions Powder Metallurgy Association of India	1974+, 2/12	3
TISCO	1954+, 4/12	4
Tool & Alloy Steels	1967+, 12/12	3
Timber & Wood Industry		
IPIRI Journal	1971+, 2/12	1
Journal Indian Academy of Wood Science	1970+, 2/12	3
Journal Timber Development Association of India	1955+, 4/12	4

Table 1 (cont.)

Indian S&T journals	Year of start & frequency	Coverage in I&A services
Leather Industry		
Journal Indian Leather Technologist's Association	1958+, 12/12	1
Leather Science	1954+, 12/12	1
Tanner	1946+, 12/12	1
Pulp & Paper Industry		
Indian Pulp & Paper	1946+, 6/12	4
Textiles		
ATIRA Technical Digest	1983+, 4/12	3
Indian Journal of Textile Research	1976+, 4/12	5
Indian Silk	1962+, 12/12	1
Indian Textile Journal	1890+, 12/12	3
Journal of Textile Association	1940+, 4/12	3
Man-Made Textiles in India	1958+, 12/12	4
Textile Dyer & Printer	1967+, 24/12	4
Textile Industry & Trade Journal	1962+, 6/12	2
Textile Magazine	1959+, 12/12	5
Wool & Woollens of India	1964+, 4/12	
Rubber & Plastics		
Journal of Polymer Materials	1984+, 4/12	2
Popular Plastics	1956+, 12/12	1
Rubber India		
Instrumentation		
CSIO Communications	1974+, 4/12	6
Instruments India	1925+, 2/12	6
Computers		
Computers & Communications	1957+, 4/12	6
Building & Architecture		
Design	1957+, 4/12	2
Indian Architect	1959+, 12/12	1
Journal Institute of Town Planners	1955+, 4/12	1

The coverage of about 500 Indian S&T periodicals by international abstracting and indexing services bears testimony to the fact that these periodicals are publishing worthwhile contributions.¹⁻⁶ Considering the fact that the new Indian S&T periodicals come to the notice of the foreign secondary services quite late, sometimes even a

decade after their publication, it may safely be presumed that the total number of Indian S&T periodicals worthy of coverage by international secondary services will be well above 600. Judging from the point of view of impact factors, it may be presumed that the periodicals emanating from India are mostly mediocre barring a few exceptions. It is also equally true that many of our periodicals are faring slightly better, when compared to their counterparts emanating from other developing countries or countries like China, Poland, Rumania and South Korea (Table 2).

Table 2
Impact factors of journals from developing and a few other countries

Country	Journal	Impact factor (1987)
Bangladesh	Bangladesh J Bot	0.000
China	Acta Chim Sinica	0.150
	Acta Geol Sinica	0.060
	Acta Geophys Sinica	0.007
	Acta Pharmacol Sinica	0.103
	Chinese Annals Maths Ser B	0.063
	Chinese Phys	0.092
	Commun Theor Phys	0.308
Czechoslovakia	Bull Astronomical Instt	0.534
Pakistan	J Chem Soc Pakistan	0.207
Poland	Acta Biochim Polonica	0.281
	Polish J Chem	0.109
Rumania	Revue Roumaine de Chimie	0.016
South Korea	Bull Korean Chem Soc	0.308

With this perspective in mind, we shall now examine the periodicals that have been or are being covered by *Science Citation Index (SCI)*. The *SCI* started publishing in 1963, (in fact volumes of 1961 were issued in 1963). In the very first year of its publication, it covered 7 Indian periodicals. It may be noted that along with the regular annual publications, *SCI* also started retrospective publication. As such *SCI* is now available from 1945 onwards.

The coverage of Indian S&T periodicals is *SCI* has been presented in Table 3.

Table 3
 Indian journals covered in SCI (Figures drawn from the Source Index of the
 respective year)

Year	No of journals (India) a	No of journals from (all countries) b	% of Indian journals (i.e. $a \times 100/b$)
1961	7	613	1.142
1962	6	605	0.992
1963	8	610	1.311
1964	12	700	1.714
1965	15	1146	1.309
1966	21	1573	1.335
1967	22	1711	1.286
1968	26	1968	1.321
1969	28	2180	1.284
1970	26	2192	1.186
1971	26	2277	1.142
1972	26	2425	1.072
1973	25	2364	1.058
1974	26	2443	1.064
1975	26	2540	1.023
1976	27	2717	0.994
1977	29	2655	1.092
1978	30	2572	1.166
1979	40	2993	1.336
1980	36	3067	1.174
1981	34	3068	1.108
1982	24	3246	0.739
1983	22	3327	0.661
1984	23	3281	0.701
1985	18	3367	0.536
1986	18	3322	0.542
1987	11	3167	0.347

Table 3 shows that:

- i) The coverage of Indian periodicals were more or less proportionally increasing from 1963 to 1968 and the percentage of coverage remained around 1.3.
- ii) The trend reversed from 1969, and the aforesaid percentage started declining and continued till 1976, when it became 0.957.
- iii) From 1978 the trend again reversed for the better, and in 1979, the percentage of Indian journals covered reached its peak i.e. 1.336, and thereafter it is a saga of continuous decline, reaching its nadir in 1987.
- iv) The coverage of Indian periodicals is inadequate.

The *Journal Citation Reports (JCR)* being published annually from 1975 onwards has been providing large number of indicators about S&T periodicals. Of the indicators provided, impact factor is probably the most important one as it shows the standing of the periodical in the world as well as among the periodicals of its own subject.

Coverage

During the period 1975 to 1988, 60-odd Indian periodicals have been covered by SCI (Table 4), the yearly coverage varying between 11 and 40. From 1980 onwards more periodicals have been dropped rather than added. The notable deletions are *Indian Journal of Nutrition and Dietetics*, *Indian Journal of Physics Sections A&B*, *Indian Journal of Theoretical Physics*, *Journal of the Indian Institute of Science Sections A,B,C*, *Phytomorphology*, etc. It is to be noted that the deletion of these periodicals were not probably because they had registered any fall in their quality, but because of several other factors, might be lack of timely publication, reduction in internationality, and so on.⁸

It needs to be mentioned here that there is practically no reduction in the number of Indian periodicals figuring in Section 1 of *JCR* (Journals in alphabetical order). Rather the reverse is true (Table 5). Probably this is due to the coverage of more Indian periodicals in *Current Contents*.

Subjectwise, larger number of Indian periodicals have been covered from life sciences, i.e. biology - 10, botany - 4, zoology - 7, medical sciences - 2, agriculture and animal husbandry - 3. Of the natural sciences periodicals, 9 have been covered from physics followed by chemistry - 7, mathematics - 4, earth sciences - 4, and astronomy - 1. Only 3 periodicals from engineering and technology have been included so far.

Table 4
List of periodicals covered in SCI 1975-88

Periodical	75	76	77	78	79	80	81	82	83	84	85	86	87	88
Act Bot India					*	*	*	*						
Adv Inv Res			*	*	*	*	*	*						
Adv Transport Process							*							
Bull CGCRI			*	*	*									
Cheiron					*	*								
Comp Physiol Ecol					*	*	*	*	*	*				
Curr Sci	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Curr Trends Geol							*							

Table 4 (cont.)

Periodical	75	76	77	78	79	80	81	82	83	84	85	86	87	88
Entomon					*	*	*	*	*	*				
Indian J Agri Sci	*	*	*		*									
Indian J Anim Sci				*	*									
Indian J Bioch Biophys	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Indian J Chem	*													
Indian J Chem - A		*	*	*	*	*	*	*	*	*	*	*	*	*
Indian J Chem - B		*	*	*	*	*	*	*	*	*	*	*	*	*
Indian J Expl Biol	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Indian J Genet Pl Br	*	*	*	*	*	*	*							
Indian J Med Res	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Indian J Nutr Diet	*	*	*	*	*	*								
Indian J Phys	*	*												
Indian J Phys - A			*	*	*	*								
Indian J Phys - B			*	*	*	*								
Indian J Psychol	*	*												
Indian J Pure Appl Maths						*	*	*	*	*	*	*	*	*
Indian J Pure Appl Phys	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Indian J Rad Sp Phys						*	*	*	*	*	*	*	*	*
Indian J Technol	*	*	*	*										
Indian J Theor Phys	*	*	*	*	*	*								
Indian J Zool				*	*	*								
Indian Vet J					*	*	*	*	*	*	*	*	*	*
J Astrophys Astron										*	*	*	*	*
J Biosci							*	*	*	*	*	*	*	*
J Fd Sci Technol					*									
J Genet	*	*	*	*										
J Geol Soc India	*	*	*	*	*	*	*	*	*	*	*	*	*	*
J Indian Chem Soc	*	*	*	*	*	*	*	*	*	*	*	*	*	*
J Indian Inst Sci	*	*												
J Indian Inst Sci - A			*	*	*	*	*							
J Indina Inst Sci - B			*	*	*	*	*							
J Indian Inst Sci - C			*	*	*	*	*							
J Sci Ind Res	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Kavaka					*									
Nat Acad Sci Lett					*	*	*	*						
Nucleus	*	*	*	*	*									
Phytomorphology	*	*	*	*	*									
Pramana	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Proc Indian Acad Sci - A	*	*	*	*										
Proc Indian Acad Sci - A1					*									
Proc Indian Acad Sci - A2					*									
Proc Indian Acad Sci - A3					*									
Proc Indian Acad Sci - Anim Sci						*	*	*	*	*				
Proc Indian Acad Sci - B	*	*	*	*										
Proc Indian Acad Sci - B1					*									

Table 4 (cont.)

Periodical	75	76	77	78	79	80	81	82	83	84	85	86	87	88
Proc Indian Acad Sci - B2					*									
Proc Indian Acad Sci - Chem Sci						*	*	*	*	*	*	*	*	*
Proc Indian Acad Sci - Earth Sci						*	*	*	*	*	*	*	*	*
Proc Indian Acad Sci - Math Sci						*	*	*	*	*				
Proc Indian Acad Sci - Pl Sci						*	*	*						
Proc Natnl Acad Sci - A	*	*												
Proc Natnl Acad Sci - B	*	*												
Prog Math P			*	*	*	*	*							
Psychol Stud	*	*	*	*										
TOTAL	26	27	29	30	40	36	34	24	22	23	18	18	11	11

* = Covered during the year.

Table 5
Coverage of Indian journals in SCI from 1975-88 and their impact factors

Journal	Impact factors													
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Acta Bot Indica				0.024	0.049	0.043	0.000	0.032	0.007	0.000				
Ann Arid Zone									0.025	0.010		0.028	0.000	0.000
Bull CGCRI					0.025									
Bull Mater Sci														0.265
Cheiron				0.013	0.000	0.022	0.014	0.013	0.013					
Colourage									0.006	0.027		0.007	0.012	0.006
Comp Physiol Ecol				0.049	0.248	0.211	0.215	0.244	0.131	0.132	0.047	0.065	0.051	0.060
Current Sci	0.263	0.334	0.258	0.221	0.268	0.268	0.228	0.189	0.170	0.180	0.160	0.117	0.150	0.164
Entomon					0.123	0.146	0.155	0.110	0.070	0.077	0.091	0.053	0.021	0.025
Indian J Agric Sci	0.027	0.032		0.066	0.097	0.024	0.041	0.016	0.024	0.021	0.040	0.015	0.024	0.011
Indian J Amin Sci					0.139	0.108	0.091	0.077	0.102	0.095	0.095	0.019	0.013	0.014
Indian J Biochem Biophys	0.276	0.347	0.327	0.477	0.498	0.407	0.338	0.291	0.400	0.332	0.381		0.242	0.214
Indian J Chem	0.400	0.335	0.559											
Indian J Chem A			0.192	0.322	0.382	0.328	0.343	0.375	0.320	0.339	0.412	0.301	0.245	0.314
Indian J Chem B			0.282	0.357	0.341	0.262	0.282	0.268	0.246	0.432	0.330	0.371	0.222	0.281
Indian J Exptl Biol	0.230	0.243	0.261	0.318	0.320	0.297	0.293	0.269	0.346	0.270	0.256		0.187	0.151
Indian J Genet Pl Breed	0.198	0.191	0.058	0.027	0.060	0.052	0.061							
Indian J Med Res	0.276	0.252	0.304	0.308	0.277	0.290	0.349	0.318	0.310	0.249	0.376	0.287	0.265	0.204
Indian J Nutr														

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Table 5 (cont.)

Journal	Impact factors													
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Dietetics	0.068	0.137	0.216	0.103	0.165	0.069								
Indian J Phys	0.297	0.296	0.301	0.392										
Indian J Phys A				0.068	0.058	0.146								
Indian J Phys B				0.036	0.071	0.128								
Indian J Psychol	0.027	0.055												
Indian J Pure Appl Maths								0.069	0.061	0.090	0.073	0.082	0.069	0.064
Indian J Pure Appl Phys	0.220	0.326	0.248	0.333	0.382	0.315	0.234	0.243	0.184	0.182			0.124	0.116
Indian J Radio Space Phys								0.148	0.226	0.131	0.204		0.056	0.047
Indian J Technol	0.084	0.096	0.062	0.075	0.071	0.093	0.085	0.070	0.103	0.070	0.088	0.084	0.084	0.130
Indian J Theor Phys	0.094	0.281	0.135	0.125	0.129									
Indian J Zool				0.063	0.023	0.000	0.000							
Indian Veterinary J				0.019	0.051	0.043	0.063	0.133	0.055	0.071	0.061	0.022	0.010	0.017
Int J Trop Agric													0.047	0.023
J Astrophys														
Astronomy												1.311	0.453	0.585
J Adv Zool												0.000	0.037	0.017
J Biosci								0.314	0.405	0.538	0.429	0.347	0.387	0.282
J Envir Biol												0.150	0.026	0.259
J Fd Sci Technol					0.140	0.046	0.095	0.113	0.059	0.085	0.115	0.071	0.098	0.044
J Genet			0.500	0.214										0.588
J Geol Soc India	0.096	0.131	0.188	0.255	0.208	0.236	0.257	0.272	0.295	0.191	0.228		0.130	0.144
J Indian Chem Soc	0.264	0.304	0.261	0.281	0.263	0.246	0.269	0.274	0.273	0.226	0.142		0.097	0.108
J Indian Instt Sci	0.143	0.100												
J Indian Instt Sci A					0.068	0.022	0.027							
J Indian Instt Sci B					0.128	0.089	0.071							
J Indian Instt Sci C					0.043	0.059								
J Optics										0.313		0.635	0.313	0.138
J Sci Ind Res	0.178	0.245	0.133	0.139	0.127	0.135	0.220	0.238	0.223	0.191	0.333	0.194	0.188	0.248
Kavaka				0.032										
Nat Acad Sci Lett					0.067	0.052	0.035	0.043	0.010	0.012	0.033	0.029	0.013	0.033
Nucleus	0.157	0.272	0.173	0.193										
Phytomorphology	0.212	0.203	0.189	0.165	0.125									
Pramana			0.677	0.547	0.506	0.456	0.481	0.333	0.246	0.402	0.403	0.428	0.339	0.521
Proc Indian Acad Sci A	0.186	0.139	0.241	0.144		0.590	0.667							
Proc Indian Acad Sci Anim Sci						0.052	0.314	0.013	0.046	0.178	0.173	0.028	0.071	0.048
Proc Indian Acad Sci B	0.087	0.198	0.119	0.093										
Proc Indian Acad Sci Chem Sci									0.137	0.241	0.262	0.399	0.328	0.300
Proc Indian Acad Sci														

Table 5 (cont.)

Journal	Impact factors													
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Earth Sci								0.026	0.048	0.218	0.388	0.386	0.125	0.106
Proc Indian Acad Sci														
Math Sci								0.027	0.000	0.000	0.114	0.000	0.034	0.019
Proc Indian Acad Sci														
Plant Sci							0.000	0.008	0.065	0.116	0.155	0.096	0.098	0.036
Proc Nat Acad														
Sci India A	0.000													
Psychol Stud	0.020	0.149	0.175	0.081										
Indian J Agric Res				0.000	0.016	0.000	0.000	0.010			0.023	0.008	0.004	0.000
Indian J Agron				0.007	0.000	0.014	0.004		0.000	0.000	0.023	0.008	0.004	0.000
Indian J Mar Sci									0.109	0.137	0.144	0.069	0.115	0.072
Indian J Chest Dis			0.056	0.057										
Indian J Pl Physiol				0.132	0.068	0.074	0.021		0.019	0.025	0.019			
Indian J Dermatol			0.000											
Indian Pediatrics			0.026	0.029	0.046	0.027								
Res Ind				0.051	0.012	0.038	0.045	0.019	0.063	0.054	0.045	0.032	0.044	0.019
Sadhana												0.027		0.055
Sankhya Ser A													0.143	0.205
Sankhya Ser B													0.086	0.159
Trans Indian Inst														
Met									0.058	0.016	0.045	0.017	0.084	0.020

The coverage of Indian periodicals as such is poor. However, it is very poor in the case of medicine and agriculture. Only two Indian medical periodicals have been covered out of some 160, and three Indian agricultural periodicals out of some 150. On the other hand, most of the Indian periodicals on physics have been covered by the service at one time or the other.

It would be wrong to say that inadequate coverage of Indian periodicals is because of their poor quality. Using the formula,

$$I_{f(J)} = (x_1 + x_2)/(y_1 + y_2)$$

where

- $I_{f(J)}$ - the impact factor of the journal J in Y year,
- y_1 - the number of source items published in the journal J during y-1 year,
- y_2 - the number of source items published in the journal J during y-2 year,
- x_1 - the number of times the aforesaid source items, i.e. ($y_1 + y_2$) are cited in journals covered by SCI,
- x_2 - the number of times the aforesaid source items are cited in journal J itself,

evolved by the Bibliometrics Group of INSDOC,⁷ the impact factor of some of our medical periodicals have been determined, and it has been found that several medical periodicals are having impact factors greater than the ones covered by *SCI*, for example the 1986 impact factor of *Indian J. Malariology* is 0.527 and that of *Indian J. Leprosy* is 0.245. Similar may be the case in other fields as well. It can be said with certainty that many of our good journals are not getting covered by *SCI*, maybe because of their nonfulfilment of one or more of the conditions set for the coverage of the journals by *SCI* like citation data, timeliness of publication, and internationality.⁸

It can be seen from Table 6 that when larger number of our periodicals were being covered by *SCI*, many of our periodicals were having higher impact factors. It may be noted that all the four periodicals figuring in the table registered higher impact factors, when the coverage of Indian periodicals by *SCI* was also higher.

The reasons for this can be explained as follows.⁹ The impact factor of the journal can be mathematically represented as:

$$I_{f(J)} = (C_r + C_f)/C$$

where

- $I_{f(J)}$ - impact factor of journal J,
- C_r - number of citations received from the journals of the country of origin of J,
- C_f - number of citations received from foreign journals,
- C - number of citable items.

The value of C_r is dependent on the citations appearing in journal J itself and also the cross citations, amongst the journals of the same country. The number of cross citations is likely to rise with the addition of more journals from the country in the database, and vice versa. Even now if about 50 selected Indian journals are covered, the impact factor of many of our journals would increase and some may even go beyond 0.500.

Conclusions

As can be seen from Table 1, India produces a large number of periodicals covering a very wide area of science spectrum. About 500 of these are being covered by international secondary services. Qualitywise also, Indian periodicals are faring quite well, compared to several developing and other countries. Considering all these

we feel that more Indian periodicals deserve coverage by SCI, and the continuous reduction in the coverage of Indian periodicals is a matter of concern for us, since the poor coverage of Indian periodicals brings down their impact factor, which in turn may bring down the coverage of Indian periodicals by international indexing and abstracting services, causing thereby a shadowing of Indian literature from international visibility.

Table 6
Fall of impact factor with reduction in the coverage of Indian periodicals

Year	No of Indian journals covered	Curr Sci	Indian J Agric Sci	Indian J Biochem Biophys	Indian J Pure Appl Phys
1975	26	0.263	0.027	0.276	0.220
1976	26	0.334	0.032	0.347	0.326
1977	29	0.258		0.327	0.248
1978	30	0.221	0.066	0.477	0.333
1979	40	0.268	0.097	0.498	0.382
1980	36	0.268	0.024	0.407	0.315
1981	34	0.228	0.041	0.338	0.234
1982	24	0.189	0.016	0.291	0.243
1983	22	0.170	0.024	0.400	0.184
1984	23	0.180	0.021	0.332	0.182
1985	18	0.160	0.040	0.381	
1986	18	0.117	0.015		
1987	11	0.150	0.024	0.242	0.124
1988	11	0.164	0.011	0.214	0.116

It may be true that the non-inclusion of Indian periodicals or the deletion of the included ones from the *SCI* is definitely due to the non-fulfilment of all the criteria for inclusion in the *SCI* database. Most of the periodicals emanating from developing countries as well as from non-English countries might not fulfil all the criteria. Hence in order to provide a fair representation of periodicals from all scientifically active second and third world countries the criteria need to be relaxed slightly to make the *SCI* database really universal.

References

1. S. ARUNACHALAM, Scientific journals in India; their relevance to international science, *Science Today*, (March, 1979) 45-50.

2. S. ARUNACHALAM, S. MARKANDAY, Science in the middle level countries - a bibliometric analysis of scientific journals of Australia, Canada, India and Israel, *Journal of Information Sciences*, 3 (1), (1981) 13-26.
3. C.N. KRISHNAN, B. VISVANATHAN, Performance of modern science and technology in India: the case of scientific and technological journals, *PPST Bulletin*, 11 (1987) 1.
4. K. MANORAMA, A. BHUTANI, Strengthening the coverage of Indian scientific journals, *Journal of Scientific Industrial Research*, 47 (1988) 23.
5. S. ARUNACHALAM, K. MANORAMA, Status of scientific journals of India as seen through Science Citation Index, *Journal of Scientific and Industrial Research*, 47 (1988) 359
6. Seminar on learned periodical publications in India, New Delhi, Feb 16-17, 1989.
7. B.K. SEN, A. KARANJAI, U.M.MUNSHI, A method for determining the impact factor of a non-SCI journal, *Journal of Documentation*, 45 (1989) 139.
8. E. GARFIELD, How ISI selects journals for coverage: qualitative and quantitative considerations, *Current Contents*, No. 22 (May 28, 1990) 5-13.
9. B.K. SEN, T.A. PANDALAI, Indian scientific periodicals, past and present. Paper presented at the brainstorming session on Indian S&T periodicals, held at IIT, Madras, 17/18 March, 1989.