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## **Pressurised Heavy Water Reactors : Trend of R&D publications**

Vijai Kumar, V.L. Kalyane, E.R. Prakasan, Anil Kumar, Anil Sagar  
and Lalit Mohan

Scientific Information Resource Division,  
Knowledge Management Group,  
Bhabha Atomic Research Centre,  
Trombay, Mumbai – 400 085, India

e-mail : [vijai@magnum.barc.ernet.in](mailto:vijai@magnum.barc.ernet.in)

## DATA from:

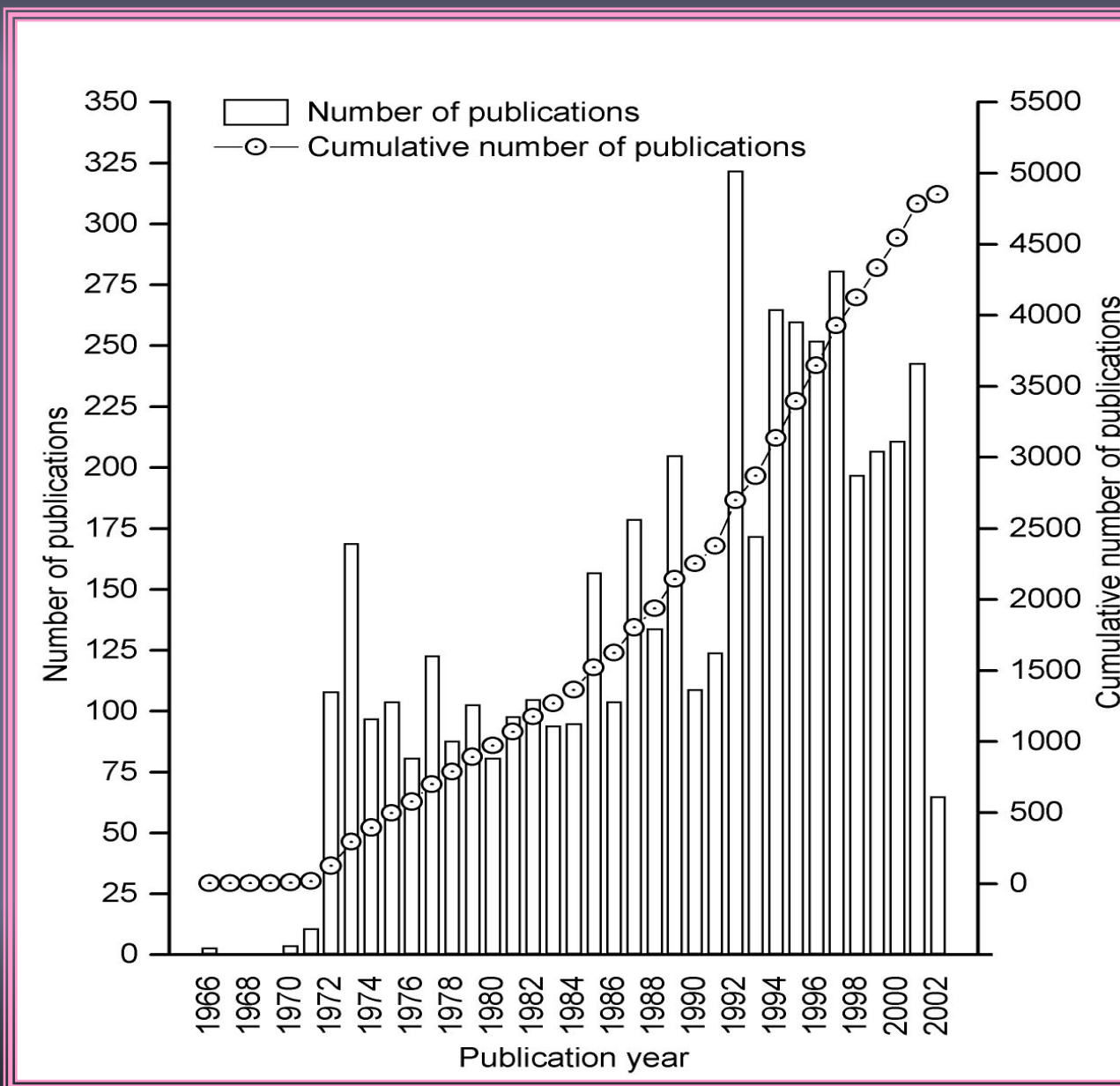
Database	Number of records
INIS (1970 - 2002)	4655
INSPEC (1969 - 2002)	117
ISMEC (1973 - June 2002)	9
Chemistry Citation Index (1991 - 1999)	0
BIOSIS (1982 - 2002)	0
MEDLINE (1966 - 2002)	0
Science Citation Index (1982 - 2002)	2
Web of Sciences (1974 - 2002)	5
Chemical Abstracts (1977 - 2002)	63
Analytical Abstracts (1980 - 2002)	0
Total	4851

- Total number of records retrieved = 5863
- 1012 duplicate records were removed
- Among the 4851 considered records, 3 % can be the percentage of records which are not directly related to PHWR research
- Out of the 4851 records, 196 distinct records (~ 4%) could not be found in INIS but in other databases ( mainly in INSPEC)

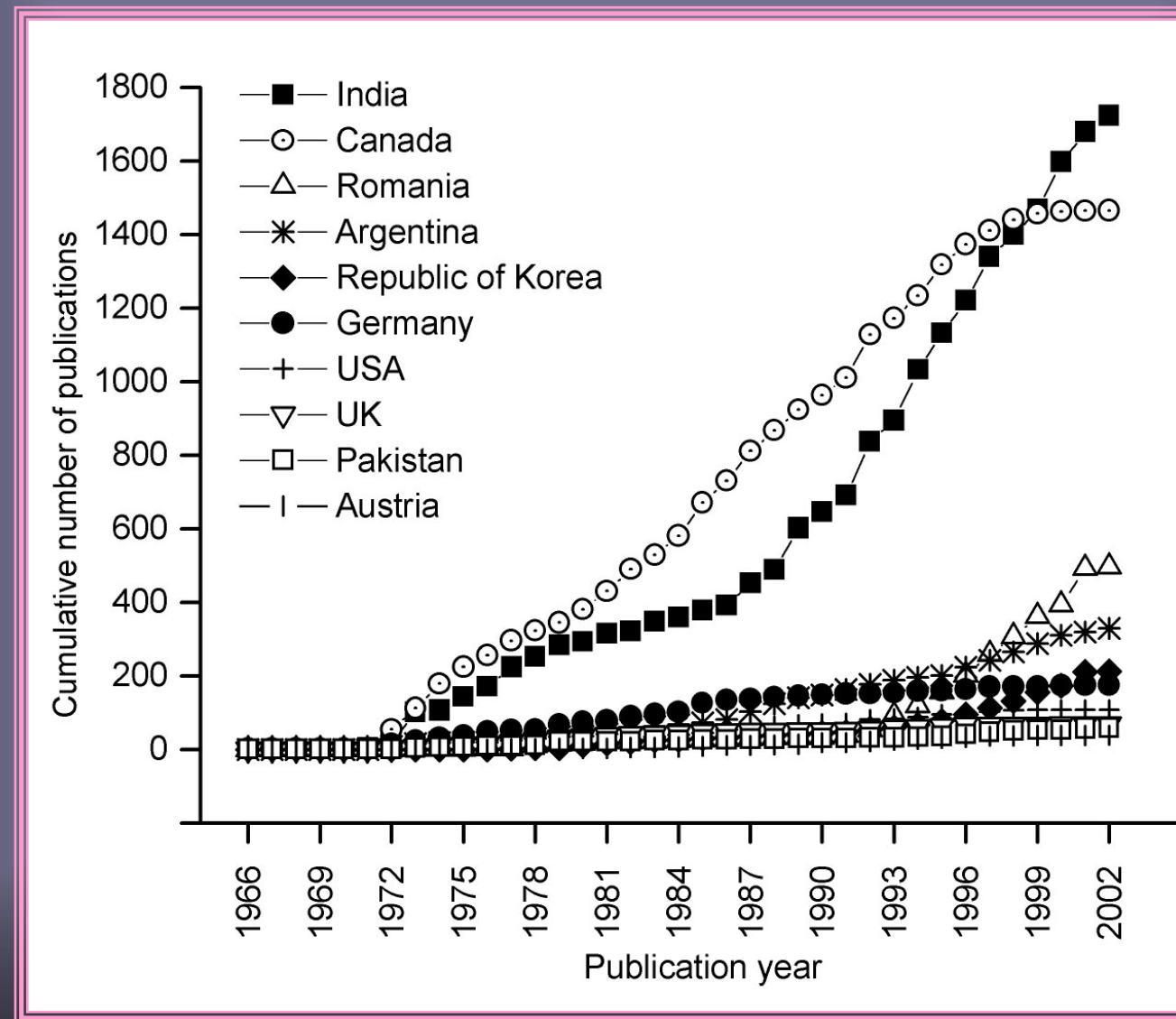
# Objectives

- Growth of literature related to PHWR type reactors
- Country-wise Productivity and Collaboration
- Most Productive Authors
- Content Analysis through the INIS Classification
- Publication Types
- Journal-wise Productivity

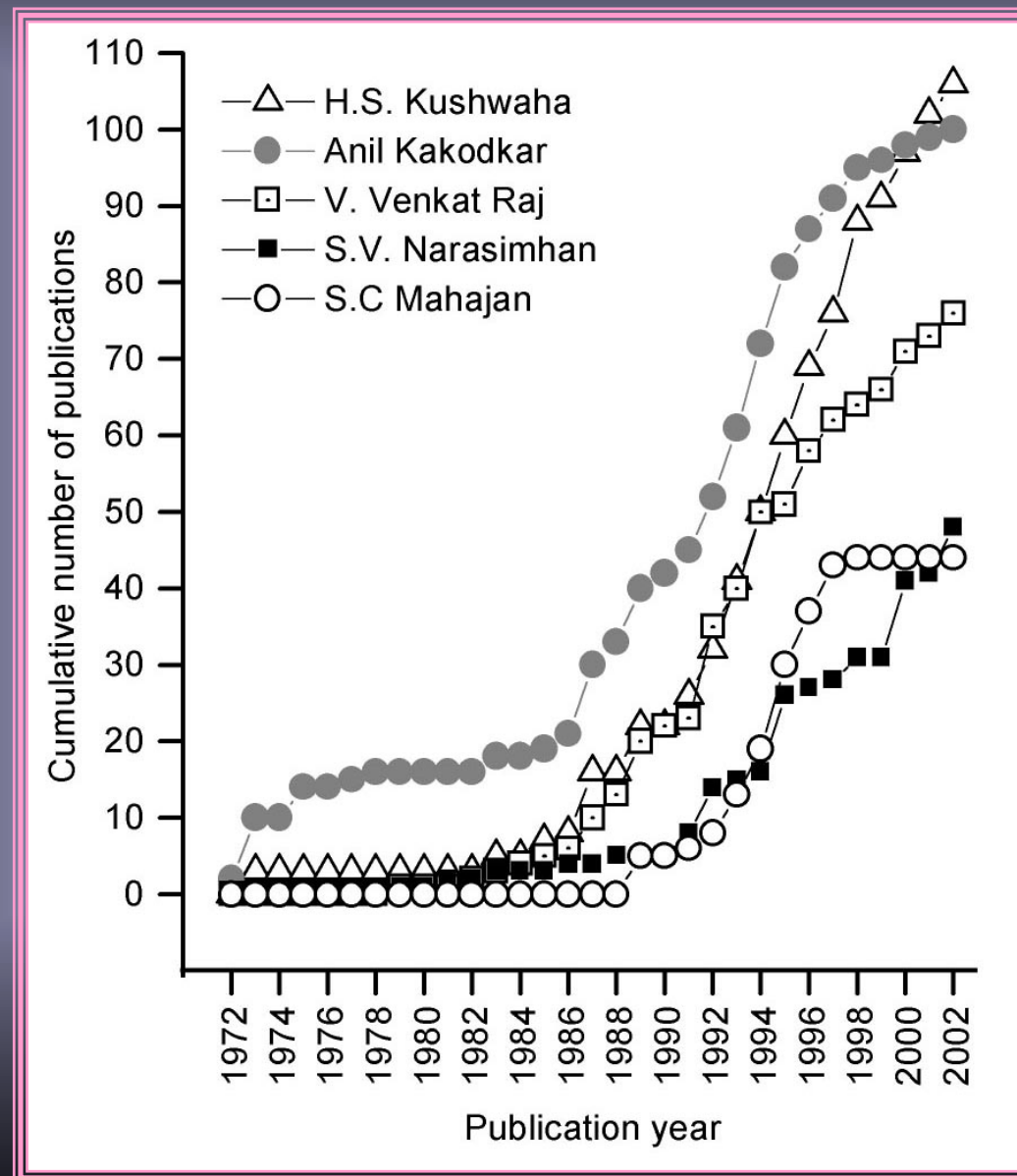
# PHWR related R&D publications



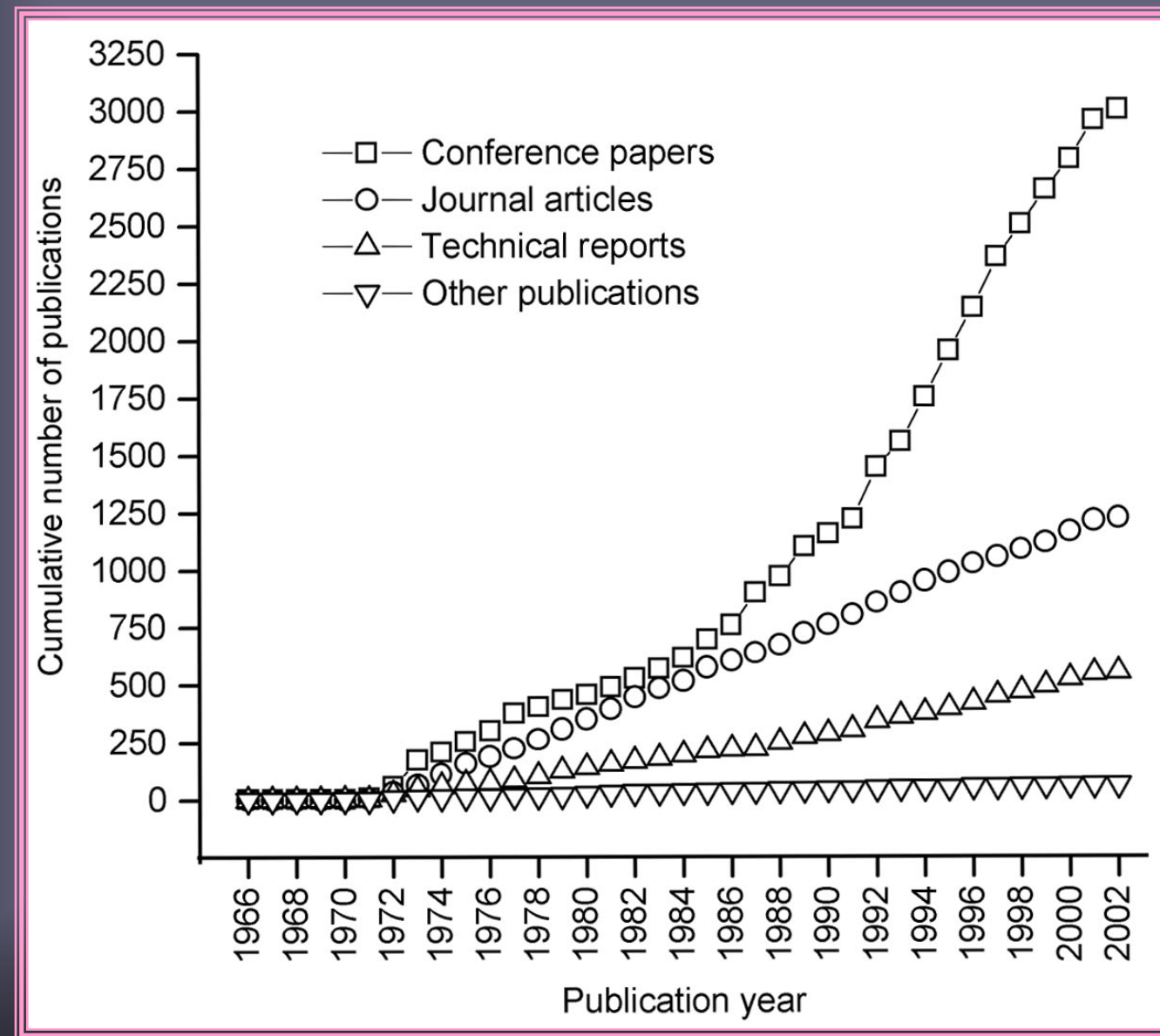
## Year-wise cumulative number of publications by top 10 countries in PHWR related research



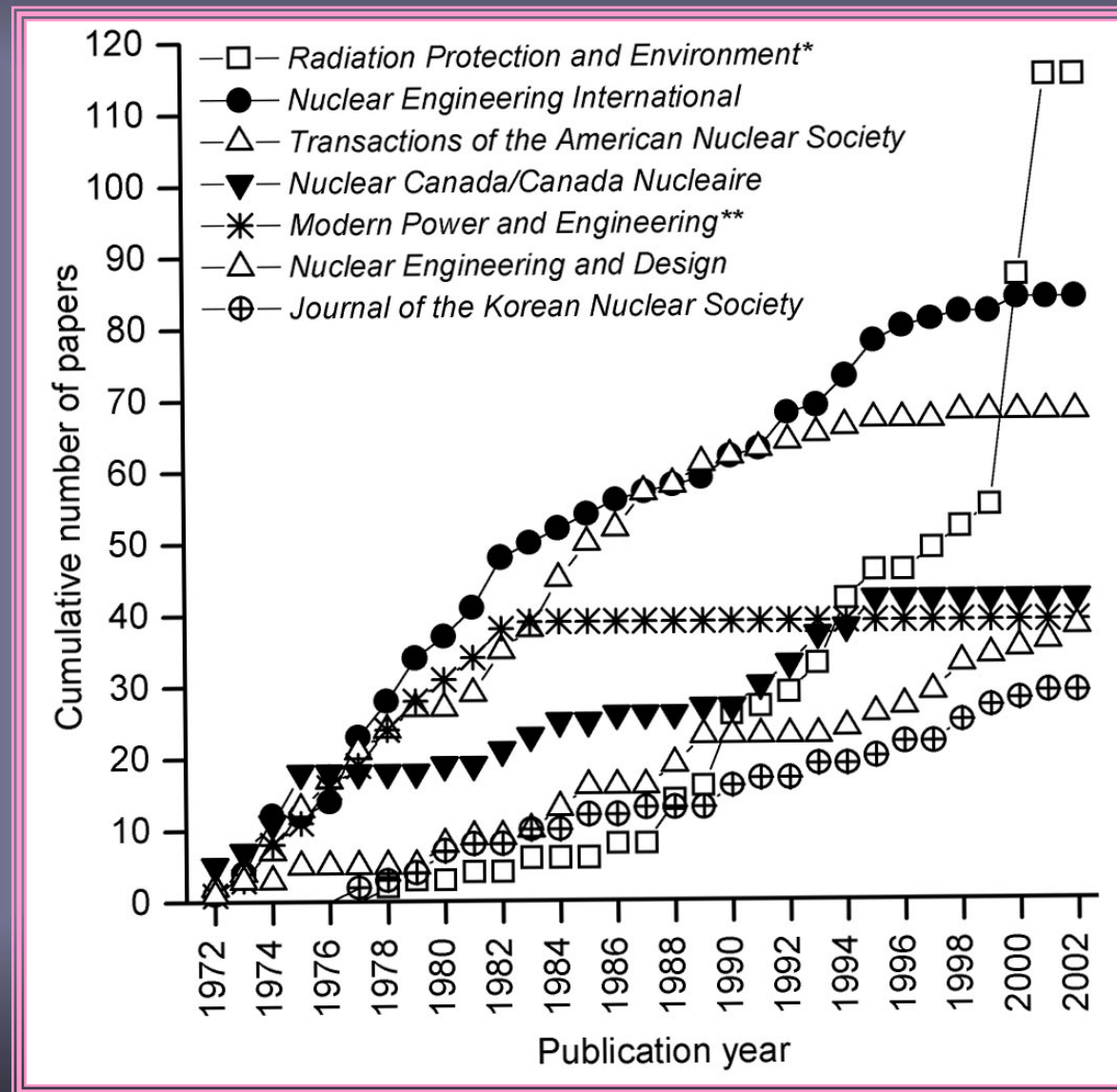
## Year-wise cumulative publications of top five authors in PHWR related research



## Publication media-wise cumulative number of publications of PHWR related research



## Year-wise cumulative number of papers published in the core journals



## Productivity-wise list of countries contributing to the PHWR related research (1966-2002)

Country	Number of publications and country-wise affiliations										Total	% of total	CC (in %)
	Single country	International collaborations											
		Two Countries		Three Countries			Four Countries						
	I	II	I	II	III	I	II	III	IV				
India	1724	7	4		1		1				1737	34.84	0.75
Canada	1417	39	29	4	2	1					1492	29.92	5.03
Romania	482	11	10	2		3					508	10.19	5.12
Argentina	320	5	6	1	2						334	6.70	4.19
Republic of Korea	201	10	6			1			1		219	4.39	8.22
Germany	164	8	16	1							189	3.79	13.23
USA	97	9	16	1	1	1					125	2.51	22.40
UK	67	1	2								70	1.40	4.29
Pakistan	54	3	2	1							60	1.20	10.00
Austria	36	3	2		4	3					48	0.96	25.00
USSR	27										27	0.54	0.00

truncated

(CC = Collaboration Coefficient, I = First author(s) country, II = Second author(s) country, III = Third author(s) country, and IV = Fourth author(s) country)

## Conclusions

Pressurised Heavy Water Reactor related R&D publications at global level during 1966-2002 were 4851. India has emerged as leader in PHWR followed by Canada, Romania, Argentina, and Republic of Korea. Expertise of H.S. Kushwaha, Anil Kakodkar, V. Venkat Raj, S.V. Narasimhan, and S.C. Mahajan in the area of PHWR is evident from the number of publications to their credits. The scientists working in the field have preferred to publish their research papers as conference/symposia papers followed by journal articles and technical reports. Highly used channels of communication were *Radiation Protection and Environment*, *Nuclear Engineering International*, *Transactions of the American Nuclear Society*, *Nuclear Canada/Canada Nucleaire*, *Modern Power and Engineering Canada* (Ceased from 1984), *Nuclear Engineering and Design*, and *Journal of the Korean Nuclear Society*.