

Er. M. Gopalakrishnan
Ex-Secretary General,
International Commission on Irrigation and Drainage (ICID)



Er. Gopalakrishnan is a Gold Medalist of University of Roorkee with a Master's Degree in Water Resources Development. Engr. Gopalakrishnan has over 56 years of experience and had handled many aspects of Water Resources planning, development and management. He is well-known to the global community on water with his rich past links with World Water Council (2004-06) (Governor), UN-Water, ICOLD, IWRA, IWRS, Institution of Engineers (India) etc.

Er. Gopalakrishnan was a member of the Technical Advisory Committee helping World Water Development Reports. He is a recipient of the 'Life Time Achievement award' from the American Academy of Water Resources Engineers with the conferment of the 'Honorary Diplomat' Status in the Academy in 2010. He was inducted as a Fellow of

Indian National Academy of Engineering (FNAE) in 2011, a prestigious India's elite multi-disciplinary Engineers' association that is looked upon by the Government to advise on cross cutting engineering issues.

Er. M. Gopalakrishnan was the Secretary General of the International Commission on Irrigation and Drainage for nearly 8 years, plus – between December 2003 till end of December 2011. He was responsible to enhance ICID's partner roles with other global organizations like IWMI, ICOLD, FAO, WWAP and Global Water Partnership in a significant manner. He facilitated ICID's contributions in the previous World Water Fora meetings and planted seeds for World Irrigation Forum meets during his tenure. His immense contributions are well known in UN Water systems and he is one of the members of the Technical Advisory Committee since 2006 that helps the formulation of World Water Development Reports.

Mr. Gopalakrishnan was the INCOLD Chairman on the Committee on Seismicity and Dam Designs for well over a decade till 2016. He was also the member of ICOLD Committee on the same representing India. He had been participating in ICOLD events consistently between 2008 onwards until recent times.

He has served as a member of PAC (Project Advisory Committee) of IUCN that addressed Ecosystem for Life issues in a Project mode with bilateral cooperation between Bangladesh and India which was meant to sharing Ganga and Brahmaputra waters for the co-benefit of the two countries.

In India, Er. M. Gopalakrishnan is well known as an ace expert in Dams technology. Water resources planning and hydrological aspects. Mr. Gopalakrishnan was/is associated in many Panels of Experts of various Power Utilities / Corporations dealing with Hydro & Dams in India and Nepal. These include, inter-alia,

1. Chairman of PRP (Project Review Panel) of World Bank aided VishnugarhPipalkoti HEP of THDCIL
2. Chairman of Kabeli 'A' HEP of Bhutel Power Corporation in Nepal
3. Chairman of Panel of Experts of Hydro Projects of HPSEB
4. Member of Panel of Experts of Sainj HEP of HPPCL
5. Chairman of Technical Advisory Committee of Tehri Dam & HEP of THDCIL
6. Chairman of Technical Advisory Committee of Koteshwar HEP of THDCIL
7. Chairman of Technical Advisory Committee Pumped Storage Plant of Tehri HEP (Stage II)
8. Chairman of Panel of Experts for HPSEP (Uhl Stage III etc)
9. Panel of Expert Member of NTPC's Koldam HEP as well as other HEPs (Sikkim & Uttarakhand)
10. Chairman of PoE on Uhl Stage III HEP Himachal Pradesh etc.

Besides Er. M. Gopalakrishnan had served and continue to serve and contribute in quite a few GoI Committees constituted by the Ministry of Water Resources, Government of India from time to time like Interlinking of Rivers (SC ILR and its various TF and Sub Committees that get into technical aspects of the River link Projects).

He was involved in restructuring proposals of MoWR organisations (like Review of CWC in 2011, Review of CSMRS in 2013, Review of NWDA Restructuring 2015) etc. He had chaired recently a review of NIH Achievements as the Chairman of Apex Review Committee.

The Hon'ble Supreme Court of India assigned to Er. M. Gopalakrishnan as a technical reviewer (Single Man Committee as well as the Chairman of a Committee with CWC Members' team) in 2011 with the responsibility of looking into the Polavaram Dam issues when an inter-state dispute arose in respect of the interpretation of the Godavari Tribunal award that covered in its ambit the implementation of this Project.

For detailed Bio Data, kindly see additional pages attached...

Bio Data of Mr. M.Gopalakrishnan,
Independent Water Resources, Dams and Hydro Expert

Honorary Secretary General,
International Commission on Irrigation & Drainage and Retired Member
Central Water Commission & E Officio Additional Secretary to Government
of India in Ministry of Water Resources (now Jal Shakti)

| Sl.No | Particulars | Details |
|-------|----------------------------------|---|
| 1. | Name | MukuteswaraGopalakrishnan |
| 2. | Date of Birth | 28 th January 1943 |
| 3. | Residential Address | <p>Current address: Flat No. 001 B ZED Collective Apartments Off Doddabellapur Road (Near Presidency School) Yelahanka North Bengaluru 560064 Tel:080 29725043, 9540127395</p> <p>Permanent Residence: DI/12, Janakpuri, New Delhi 110058 Tel: + 91-11-28524495; mobile ☺ + 91 9811301279 email: mgopalakrishnan@hotmail.com , mgopalakrishnan_in@yahoo.com,</p> |
| 4. | Educational Qualification | <ol style="list-style-type: none"> 1. Master of Engineering (Honours) in Water Resources Development) of University of Roorkee (UoR), (now IIT ,Roorkee), India, and a Gold Medalist; Stood University first and obtained highest marks in the Centre's history ; the prestigious Khosla Gold Medal was awarded for this performance in 1976 by UoR; 2. Post Graduate Diploma in Water Resources Development with Honours (University Gold Medalist) of UoR, now IIT, Roorkee in 1975 3. Fellow of Institution of Engineers {F.I.E (Ind) (1982)}; a Chartered Engineer of I E (India) 4. Indian UPSC Engineering Services Examinations- IRSE etc 1966 batch officer Stood allotted to Central Water Engineering Services of the Government of India (The nomination is based on an All India Examination and selection to assess meritorious candidates followed by a <i>viva voce</i> process conducted by Indian Union Public Service Commission for recruiting higher level officers for Engineering Services: They are direct recruits as officers of Class I (now Group A) with a assurance to move to top Managerial positions heading the respective Departments |

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| | | over a period in their all India service tenure) |
| 4. (a) | Knowledge of Languages | Read write and speak both English and French; Diploma Holder of Alliance Francaise de Paris (1965) after finishing a French course - 4 years (part time in Delhi Centre of AllainceFrancaise de Delhi); Obtained the GoI First Prize for French Language Proficiency (Defense Ministry's Exam) in French in 1975. |
| 4. | Experience starting with present Service / Occupation (in reverse chronological order) | <ul style="list-style-type: none"> • Advisory Rolls in Water Resources planning and management, Dams and related Safety aspects, Hydroetc • As Secretary General, International Commission on Irrigation and Drainage (ICID) (12/2003-12/2011)(ICID is a nonprofitInternational NGO with a membership of 109 countries- when I was SG ICID). I wasprimarily responsible to the conduct of business in accordance with the Constitution, Bye Laws and other broad positions taken by ICID based on the International Executive Council IEC decisions, Management Broad decisions etc. I was to coordinate the Committee of Office Bearers (comprising of an elected President and nine Vice Presidents besides Secretary general); As SG , I represented in about 31 work bodies for decisions besides coordinating the Apex 3 Permanent Committees on Technical Affairs, Policy Planning and Finance. • Coordinator in the Government of India's Task Force on Interlinking of Rivers set up by a Government's Resolution; between Feb 5th 2003 to 30th November 2003; immediately after super-annuation on 31st January,2003 in Government of India (Class A Services in CWES) .I was tasked with the overall responsibility of handling business of the GoI Task Force and prepare Action Plans for the Scheme of India's Riverlinking Programme. • Member (River Management)(&Ex-Officio Additional Secretary to Government of India), Ministry of Water Resources. <p>This was preceded by nearly 36 years of service in the superior services of Government of India (Class I/ later renamed as Group A) based on an All India Competitive Engineering Services Examination in the year 1966. I was number one position holder of my 1966 batch of CES Exam., of UPSC.</p> <ul style="list-style-type: none"> • Prior to Member's rank, I had served in various capacities of Central Water Engineering Services of Government of India as • Chief Engineer, (experience- 8 years ; 3 years in Nigeria on a FAS deputation as Chief Irrigation Engineer in Upper Benue River Basin Development Authority) • Director / Superintending |

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| | | <p>Engineer, (experience –9 yrs)</p> <ul style="list-style-type: none"> • Deputy Director (10 years) and • Assistant Director (9 years). <p>The important point that is of significance is my foreign service assignment – I was deputed to serve in Africa in a River Basin Development Authority for 6 years and 3 months in different capacities such as</p> <ul style="list-style-type: none"> • Senior Irrigation Engineer (1977 to 1979) • Principal Irrigation Engineer (1979 to 1980) • Assistant Chief Irrigation Engineer (1980) • Chief Irrigation Engineer (1981 – 1983). <p>My experience encompasses all aspects of WRD sector viz; investigation, planning, design, implementation and monitoring of WDR Projects and Programmes, administer and participate in inter departmental dialogues, international discussions with neighboring countries like Pakistan, Nepal, Bhutan and Bangladesh, interact with International Consultants for the studies related to River Basin Development etc A fuller description is attached in detail as an Annex.1</p> |
| 6. | Nature of work and level of Affiliation | As above; covered in detail in Annex .1. |
| 7. | Prizes and Honours conferred | <ul style="list-style-type: none"> • Life Time Achievement Award by Indian Water Resources Society 2017 • Life Time Achievement Award of American Water Resources 2011 (Hon Dip WRE (USA) • Fellow of Indian National Academy of Engineering (2011) <p>Earlier significant Achievements: I was conferred the Khosla Gold Medal (1976) by the University of Roorkee (now IIT, Roorkee) for the record best performance with highest score (M.E with distinction – 86%); my score in dissertation was 97% . This was on a topic <i>on “Multi-Objective Analysis of Water Resources Development Project using systems approach”</i>; The publication was one of the pioneer works when it was admitted in University for acceptance in 1976 (as systems approach was in its infancy) in 70’s. In my service in GoI, University of Roorkee Gold Medalist for Post Graduate Diploma in Water Resources Engineering (1975) for distinction and first placement in academic record</p> <p>I have been conferred certificates of Merit for best performance, citations for publications twice in annual Water Resources Day In-house Celebrations of CWC.</p> |
| 8 | Main Achievements | <ol style="list-style-type: none"> 1. Planning and Design of WED Projects for HEP, Irrigation and Flood control (over 100 projects in India and abroad). These include Tehri Dam (262 m high – fill dam 1000 MW); Karnali HEP 260 m high Dam and ancillaries 10800 MW - Review of Consultants designs for Government of India; Sankosh 260 m high dam |

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| | | <p>and PH 4000 MW Investigation, Planning and Design) and a few others</p> <ol style="list-style-type: none"> 2. Defending Water Resources Development with Dams as an effective tool before the World Commission on Dams as India's officially nominated Forum member; took the onus of arguing the imperative compulsions for countries like India in the Developing World to stand by the Storage Dams to protect their needs for agriculture, energy and urban and industrial uses 3. Guiding ICID as its Secretary General for over 6 years 4. Governorship of World Water Council between 2004-06 (3 years) 5. President of New Delhi Chapter of World Water Council 2005-till date 6. President Indian Water Resources Society for 4 years (2005-09) 7. TAC member of World Water Development Report 3 8. Guiding HEP Development in India in various manner like Chairman, Technical Advisory Committee of Projects handled by Tehri Hydro Corporation (Tehri Dam and associate Hydro, (1000 MW), Koteshwar Dam (440MW), new projects like Tehri PSP (1000 MW) , VishnugadPipalkoti HEP, SankoshHEP and Bunakha HEP Bhutan 9. Chairman of PoE for WB aided Nepal Hydro-Kabeli' A' HEP (Bhutel Power Corporation) 10. Chairman POE of HPSEB Project 11. Member HP PCL (Sainjetc) 12. Adviser to Projects like Etalin HEP Jindal PC 13. Adviser to Tilaiya Dam related Issues for Thermal PP (Super) of Reliance Power 14. Rendered advice to GVK's Shrinagar HEP, L&T's SingoliBhatwari HEP on Mandakini River in inception stage as Chairman POE 15. NTPC Hydro Projects (Kol Dam, Rammam, TapovanVishnugarhetc) 16. Himachal SEB Uhl Project Stage III Problem shooting Panel of Experts as its Chairman 17. Review of Sorang Penstock Failure by Independent PoE as Chairman (2015=16) |
| 9. | Publications | Published nearly 160 papers /articles or presentations on different aspects of Water Resources Development in International and National Seminars and numerous Conferences, workshops, programmes, dialogue process etc. |
| 10. | Association with International Organisations | ICID Secretary General (12/ 2003 31/12/2011); WWC (Governor 2003-06) Partner Organisation's nominee member in UN-Water ICOLD (Member- Seismic Committee on Dams) till 2013 |

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| | | <p>IWALC Secretary (between 2004-11) As a Chairman of the Indian Committee on Seismic Design Aspects of INCOLD, I am a member representing India in the ICOLD committee on Seismic Design.</p> <p>I was country's nominated representative in matters pertaining to WCD's review on Dams and Development in 1998-2000 and subsequently handled post issues;</p> <p>I had presented Country's position paper after working on the document in Cape Town, South Africa in WCD Forum meeting in 2000, ICOLD annual session in Dresden, Germany in 2001 besides in the Stakeholders meetings in Chennai and Delhi in 2000. I was retained to review the WCD document by Independent Assessors from Wash D.C later; also sent views to ADB</p> |
| 11. | Association with Professional Societies | <ul style="list-style-type: none"> • Member TAC World Water Assessment Programme (WWDRs of UNESCO), since 2007 till 2017 • Member of PM's Committee on Climate Change – Committee constituted by Ministry of Water Resources on Water • Member of DST Committee on WAR (Winning, Augmentation and Restoration of Water Resources) – Committee constituted by Ministry of Science & Technology on Water to look into the role of R&D to solve rural drinking water problems • Fellow of Institution of Engineers (India) F.I.E (India) since 1982 and Co Chairman of the Committee constituted by LE (Ind) on Interlinking of Rivers • Fellow of Indian Water Resources Association and was President IWRS between January 2005- July 09 • Member New Delhi Chapter of World Water Council (current President) and is the current President of NDC WWC (since January 2006) (earlier was its Vice President (2004 -06) • Besides, I am also a Life Member of several Societies such as <ul style="list-style-type: none"> • Association of Indian Hydrologists; • Indian Society of Earthquake Technology; • Indian Geo-technical Society, • Indian Society of Rock Mechanics & Tunneling Technology • Indian Society of Construction Materials & Structures |
| 12 | Honours and noteworthy distinctions | <ul style="list-style-type: none"> • NoWR Nominee as Chairman or Member in various Technical Committees like Interlinking of Rivers, High Level Restructuring Review of MoWR Technical Organisations etc., including Bhima DSRP of DRIP as its Chairman (TAC/PoE) • Chairman of Achievement Review Committee that went into details of NIH Performance between 2010-17. • World Bank supported MoWR Project on |

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| | | <p>Strengthening CSMRS – Review of International Consultants’ Recommendation as Chairman of the Committee (2012)</p> <ul style="list-style-type: none"> • Expert Member to examine Polavaram Dam Issues appointed by Supreme Court of India (2011) • Consultant to Indian Ministry of Water Resources to look into Re-structuring Central Water Commission (2011) (2017) • Governor of the World Water Council (2004-06) • Technical Advisory Committee Member of World water Assessment Programme (UNESCO) • Member of the Government of India’s Water Mission, in a Committee constituted by Ministry of Water Resources in response to Prime Ministers High Level Committee on Climate Change • Member of the Government of India’s Department of Science and Technology Technical Experts Committee on Winning, Augmentation and Restoration of Water Resources (WAR for Water) • Panelist in UN Water in Stockholm WWW 2011 on Water and Food Security • Panelist in GWP’s Stockholm workshop on Water Security & Food Security (2011) • Delivered several distinguished Lectures on invitation like <ul style="list-style-type: none"> (i) Sir M. Visweswarayya Memorial Lecture in Chennai (2006), (ii) 2nd Y.S Parmar Lecture in Shimla, Himachal Pradesh in November 2005 (iii) Delivered an invited talk / Lecture on interlinking of Rivers in UNESCO-IHE Holland on invitation in March 2005 • Delivered Invited Talks in INAE, and other lead bodies • Over 150 invited talks in several fora, national and international (China, Canada, OECD, Australia, ICOLD Germany, USA, Istanbul, Tanzania and other countries) • Jury in FICCI Water Award Committee since its inception in 2010 • Coordinator Interlinking of Rivers Committee chaired by Shri Suresh Prabhu (2003) to submit two Reports on Necessary Action Plans to GoI- this as per a Supreme Court Directive; done in 2003 • Chairman of Panel of Experts THDC on Pipalkoti HEP, L&T Project in Mandakini river, Bunakha HEP Bhutan (THDC) • Chairman of POE for Kabeli ‘A’ HEP in Nepal (World Bank aided) • Chairman POE HPSEB Projects • Member of POE of Himachal Pradesh Power Corporation for HEP Projects (Sainjetc) • Chairman Dam Safety Panel on CWC’s DRIP initiative for Maharashtra Bhima Dam (2017 onwards) |
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| | | <ul style="list-style-type: none">• Formerly, during 1990s and 2000-03, a member of TACs of several Projects like, Rajasthan Dam safety Panel, World Bank aided Subarnareha Projects (Chandil, Icha Dam etc) in Bihar (1990s), to quote a few. |
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Bengaluru, 560064
October,3., 2019

(Er. M.Gopalakrishnan)

Record of Publications of M. Gopalakrishnan

| | | Details as in the number indicated below– kindly see Reference list in Annex 1 | |
|--------|---|--|------------|
| (i) | Number of Papers published (referred Journals only) | 7,8,9 | 3 |
| (ii) | Number of Papers published during the last 10 years in referred Journals | 7,8,9 | 3 |
| (iii) | List of ten most significant referred Journal papers and corresponding citation index | 8 and 9 | 2 |
| (iv) | Number of single author publications over the last ten years | 1, 3,4,5,11, | 5 |
| (v) | H index | | 0 |
| (vi) | Number of Publications ¹ in conference Proceedings | Listed between 14 to 172 | Nearly 160 |
| (vii) | Number of Classified Technical Reports (if any) | These are also numerous. These essentially pertain to planning and design reports of water resources projects in CWC for nearly 36 years and run over 200. | |
| (viii) | Number of books / monographs authored | 1,2,3,4,5,6,10,11,12 | 9 |

(b) Technology / Products / Patents

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| (i) | Number of innovative technologies / products developed | Numerous if one could consider the uniqueness of each WRD Project planning and Design. These are not easy to be patented and claimed as an individual contribution but the individual matters so much to conceive and have a shared achievement with the entire team; Several (nearly 50) projects conceived as Investigation Chief in the North East while holding the position of Chief Engineer (North Eastern Regional Office) of CWC fall under this category | |
| (ii) | Number of technology Transfer Agreements concluded | Perhaps the Joint Project Report on Pancheshwar Dam, concluded with HM Government of Nepal in 1995 can fall in this category. Similar could be the case in guiding the Joint Karnali Report 10800 MW in Nepal in 1990 | |
| (iii) | Number of National Patents granted | All the contributions enhanced not my personal welfare but that of the organisation I served. The credit goes to Central water Commission as an Ace Design organisation in India in Water Resources Planning, Development and Management. | |
| (iv) | Number of International Patents granted | Similar to (iv) above, the credit was shared with others and under this category fall Comprehensive Assessment (CA) (on water); all contributions to World water Forum on thematic document preparations , shared vision as one of the members of the Technical Advisory Committee to guide the World Water Development Reports (WWDRs series)(triennial) under World Water Assessment Programme (WWAP) of UNESCO | |

Number of Sponsored / Consultancy Projects completed:

¹ These include written papers, power point presentations, key note speech etc., during the conferences.

As a public Servant under Government of India in my service till 2003 (serving under the Central water Commission (earlier CW&PC) as a direct recruit CWES officer of 1966 batch), my involvement in Consultancy was total and linked directly to almost all the projects in India and neighbouring countries with which Gol and CWC were involved. In sixties and till eighties, many of the WRD major projects were designed in CWC as major Design Consultants.

Later in respect of States with which a strong inbuilt investigation and planning WRD or Irrigation Department was not in full shape CWC was involved {North Eastern States (7) plus Sikkim, J&K etc}J&K fall under this class}.

In addition, nearly 26 projects in Nigeria, (foreign Assignments as Chief Irrigation Engineer in Upper Benue River Basin Development Authority between 1977-84), projects in Bhutan (Chukha, Tala, Sankosh), projects in Nepal (Pancheshwar and downstream re regulation) , Oman Dam etc., are just a few to list additionally.

Some of the key projects with which there was deep involvement with CWC playing the main role of the Consultants associating Gopalakrishnan's expert inputs at different phases at different stages in various project locations or features were²:

| Sl. No | Name of the Project s in India and their location (State) | |
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| 1 | Tehri Hydro Development (Uttarakhand) | |
| 2 | Koteshwar Dam and Hydro (Uttarakhand) | |
| 3 | Hathnikund Barrage (Haryana) | |
| 4 | Subarnarekha Projects - Chandil Dam (Bihar) | |
| 5 | Subarnarekha Projects – Icha Dam (Bihar) | |
| 6 | Subarnarekha Projects – Galudih Barrage (Bihar/ Orissa) | |
| 7 | Bisalpur Dam (Rajasthan) | |
| 8 | Gosunda Dam ((Rajasthan) | |
| 9 | Sawn Bhadon Dam (Rajasthan) | |
| 10 | Somkamalamba Dam (Rajasthan) | |
| 11 | Wakal Mansi Dam (Rajasthan) | |
| 12 | Jhamri Dam(Rajasthan) | |
| 13 | Jhakam Dam (Rajasthan) | |
| 14 | Kota Barrage (Dam Safety aspects) (Rajasthan) | |
| 15 | Gandhisagar (MP) | |
| 16 | Tenught Dam (DVC) | |
| 17 | Tail Pool Dam (below Maithon (DVC) | |
| 18 | Durgawati Dam (Bihar) | |
| 19 | Tailings Dams at Masbani | |
| 20 | Tailings Dams at Rakha | |
| 21 | Tailings Dams at Anpara | |
| 22 | Sardar Sarovar Dam and Hydro | |
| 23 | Sardar Sarovar Saddle Dam Designs | |
| 24 | Dam Safety Issues :Lonavala Dam Maharashtra | |
| 25 | Dam Safety Issues :Talkalale Dam Karnataka | |
| 26 | Dam Safety Issues :Lonavala Dam Rihand (UP) | |
| 27 | Dam Safety Issues :Lonavala Dam Tenughat and Bokaro Water supply | |
| 28 | Dam Safety Issues :Wazirabad Barrage (Delhi NCR) | |
| 29 | Dam Safety Issues : Bezwada Barrage (Andhra Pradesh) | |

² In many cases, the technical contributions of Mr. Gopalakrishnan continue as the Chairman or Membermember of Panel of Experts or Technical Advisory Committee as it stands nomeclatured.

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| 30 | Dam Safety Issues : Periyar Dam (Kerala / Tamilnadu) | |
| 31 | Dam Safety Issues : Parvati Dam (Rajasthan) | |
| 32 | Dam Safety Issues :Kopili Dam (Assam / Meghalaya) | |
| 33 | Ranganadhi Dam and Hydro - Arunachal Pradesh | |
| 34 | Srisaillam Dam & Hydro – Andhra Pradesh | |
| 35 | Mylavaram Dam – Andhra Pradesh | |
| 36 | Balimela Dam - Orissa | |
| 37 | Mahi Dam - Rajasthan | |
| 38 | Ranapratap Sagar Rajasthan | |
| 39 | Koyna Dam Repairs following the Earthquake | |
| 40 | Nigeria : Dadinkowa Multipurpose Project | |
| 41 | Nigeria : Kiri Dam & Irrigation Project for Savannah Sugar factory | |
| 42 | Nigeria : Mambila Plateaeu Development Pre feasibilty | |
| 43 | Nigeria : Dasin Hausa Dam & Hydro Development Pre Feasibility | |
| 44 | Nigeria : Bagel Irrigation Project Bauchi State | |
| 45 | Nigeria : Gassol Irrigation Project Gongola State | |
| 46 | Nigeria : Mayo Ine Irrigation Project Gongola State | |
| 47 | Nigeria : Suntai Irrigation Project Gongola State | |
| 48 | Nigeria : Donga Irrigation Project Gongola State | |
| 49 | India Dam Safety Issues Polavaram Supreme Court Committee | |
| 50 | India – Dam Safety Issues Bhima Dam Maharashtra Chairman of the Committee | |
| 51 | India Dam Safety Issues of failed dams in Rajasthan Chairman of the Committee | |
| 52 | Hydro – Penstock failure in Himachal Pradesh PoE Chairman for Sorang HEP | |
| 53 | Hydro Uhl Stage III HEP – Chairman of Experts Committee | |
| 54 | NTPC Projects (Hydro) Kol Dam Safety Issues | |
| 55 | Do Rammam HEPWB/Sikkim | |
| 56 | NTPC TapovanVishnugarh HEP PoE member | |
| 57 | HPSEB Projects / HP PCCL Sainj etc TAC Chairman | |
| | Many other Dams and Hydro Development, including Barrages and related issues in Nepal and India as TAC / PoE Chairman or Member | |

List of Chapters for Books / Papers for Journals & other Publications/ Key Note Addresses or Power Point Presentations in technical seminars and meetings

Er. M. Gopalakrishnan, M.E (Hons) (Roorkee), FIE (India)
Hon. Diplomate American Academy of Water Resources Engineers

| Sl. No | Details of the Paper / Presentation / Key Note Lectures, Official Guidelines / Manuals (CWC, BIS etc), Articles for Journal etc | Seminar or Publication Other details of events, official Manuals or Bureau of Indian Standards Codes | Year |
|----------------------|---|---|------|
| Book Chapters | | | |
| 1 | An Overview of India's Water Management Scenario for Ensuring Food Security | Book Chapter Global Food Security Conference McGill Canada | 2011 |
| 2 | Innovations in Irrigation for Food Production in Asia | Book Chapter Water Management in Global Food Security McGill Canada <i>(Joint Authorship with Prof. Dr. Chandra Madramootoo, Canada)</i> | 2011 |
| 3 | Resettlement and Rehabilitation : Lessons from India | Book Chapter Impacts of Large Dams M/s Springer-Verlag (Germany) Editors: A.K. Biswas & Cecilia Tortajoda | 2011 |
| 4 | India's Concept on Large Scale Inter basin Water Transfer | Book Chapter (6) Sustainable Management of Water Resources Emerging Science and Technology Issues in South Asia Published by Indian National Science Academy (INSA) | 2009 |
| 5 | <i>(invited)</i> Response Paper on Institutional Mechanism for Water Sector | Book Chapter Pages 132-139 on Role of Water Sector in India ; Seminar of Water Resources Management Indian National Academy of Engineering INAE) | 2008 |
| 6 | An Integrated Water Assessment Model for Future Scenario Studies of Sabarmati River Basin in India | Publications of abstracts of the World Water Week Stockholm Sweden, | 2005 |
| 7 | International Commission on Irrigation and Drainage: Its objectives, achievements and plans | Irrigation and Drainage (John Wiley & Sons) Vol 58, Issue S1, Pages S22-S31 | 2009 |
| 8 | Advances in Micro Irrigation | Irrigation and Drainage (John Wiley & Sons) Vol 56, Issue 2-3, Pages 363-365 | 2007 |
| 9 | An Integrated Water Assessment Model for supporting India Water Policy | Irrigation and Drainage (John Wiley & Sons) Volume 55 Issue 1 Feb 2006 | 2006 |

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| 10 | An Integrated Water Assessment Model for Future Scenario Studies of Sabarmati River Basin in India | Proceedings on the Conference East African River Basin Management (EARBM) | Morogoro, Tanzania, March 7-9, 2005 |
| | | http://www.iwmi.co.za/Africa/files/RIPARWIN/05/EARBM.htm | |
| 11 | Challenges of Water for Food, People and Environment – ICID's initiative on 'Country Policy Support Programme' (CPSP) | Chapter 11 of the book of OECD – Water and Agriculture Sustainability, Markets & Policies (pages 221-242) | 2006 |
| 12 | In each issue on Irrigation and Drainage, authored on specific subjects summary findings emerging as ICID declarations and or recommendations | | |
| Post Graduate Thesis / Dissertation with accreditation | | | |
| 13 | Multi Objective Analysis of Water Resources Project through Systems Approach | Research thesis for M.E. (Honours) <i>Assessed as the best Dissertation for the year (292/300) in WRDTC, University of Roorkee (now IITR)</i> | 1976 |
| Conference Papers and Presentations, Key Note Speech and Invited Talk including interventions as Panelist | | | |
| 14 | Innovative Approaches in Water Management | Water For Inclusive Growth World Water Day Celebrations (Swarnim Gujarat), Gujarat | Ahmadabad, India March 22, 2011 |
| 15 | Water Resources in India: Issues and Challenges IWRDM for National Growth | H2O 2011- EPC World Media Group – Invited Talk | New Delhi 11 March 2011 |
| 16 | ICID Response to Water for Food Security and Climate Change Challenges | GWP Regional Workshop on Climate Change, Food and Water Security | Colombo Sri Lanka 24-25 February 2011 |
| 17 | Opportunities for Harnessing Energy Potentials in Difficult Himalayan Environ utilizing Underground Space Technologies | International Conference on Underground Space Technology & 8 th Asian Regional Conference and ISET | Bangalore Jan 17-19, 2011 |
| 18 | India's Dam Safety Programme | Key Note invited talk at Omkareshwar Dam: National Hydro Development Corporation | 6 January 2011 |
| 19 | Aseismic Aspects of Dam Designs | NHDC - Indrasagar Hydro Development Special Technical Session | January 2011 |
| 20 | Water Resources Management with "Better Water Efficiencies" | Centre for Environment Protection, Research and Development Indore | Indore 8 January 2011 |

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| 21 | Analysis of Sustainable Water Resources Use : Focus – Asia Introducing ICID and its contributions for Water Management & Food Security | FAO Regional Workshop | Bangkok Dec., 21-22, 2010 |
| 22 | Trans Boundary Environmental Problems of Middle Asia: Application of | Key Note Talk in the Inaugural Plenary of the Special Meet in | Tashkent, Uzbekistan, |

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| | International Legal Mechanism for their Solution | Tashkent organized by the Ecological Movement of Uzbekistan | November 2010 |
| 23 | Innovative Technologies and Strategies for Agric. Water Management : <i>“Efficient Use of Water in Irrigated Agriculture”</i> | Indo EU Workshop on Water Technology Research and Innovative Collaboration: DST WTRIC Programme | IISc Bangalore 9-10 Nov 2010 |
| 24 | Invited Guest Speaker Special talk: Water Management Scenarios for Securing the Food Supply : India | McGill Global Food Security Conference | Montreal, Canada October 20, 2010 |
| 25 | Invited Chief Guest Speaker to talk on: India : Coping with the future formidable Water Challenges | Botanical Society of India's Deshbandhu College, Delhi University | New Delhi September 15, 2010 |
| 26 | Brain Storming Session: Invited Talk on <i>“Aseismic Design of Dams”</i> | Himachal Pradesh Power Corporation Limited | Sundernagar, Mandi Himachal Pradesh, July 7, 2010 |
| 27 | Seismic Aspects of Dam Designs – Issues and Challenges | Central Board of Irrigation and Power, IIT Kanpur organized Workshop on Seismic Aspects of Dams Designs | New Delhi July 2010 |
| 28 | INCOLD Chairman's (Sub Committee on Seismicity Aspects in Dam Designs) Presentation on Overview of Some Recent Revisions of Bulletins | Central Board of Irrigation and Power Workshop on Seismic Aspects of Dams Designs | New Delhi July 2, 2010 |
| 29 | India's Water Future : Coping with the Formidable Challenges | National Conference on Water by Jal Satyagrah (Dainik Jagaran Group) | Bhopal, Madhya Pradesh, India June 25, 2010 |
| 30 | Water Resources Development and Management for Food and Energy - | Plenary Session and Special Key Note Lecture- Session 16 Hydropower & Dams - Annual Conference: Asia 2010 | Kuching, Malaysia 31 March 2010 |
| 31 | Food Security through Water Security | 2-day National Conf. on Water for Food and Sustainable Agricultural Water Use | Saket, Ahmedabad 26 March 2010 |
| 32 | Water & Land Productivity Enhancement for Sustainable Irrigation Agriculture <i>Invited Speech as “Guest of Honour”</i> | ANGRAU – National Workshop on Water & Land Productivity Enhancement for Sustainable Irrigation Agriculture – | Hyderabad 9 March 2010 |
| 33 | Irrigation Water Efficiencies | 3 rd Indo German- Conference on Research for Sustainability | IIT- Delhi 18 February 2010 |
| 34 | Water Harvesting, Storage and Conservation keynote lecture | Intl. Conf. on Rainwater Harvesting – IIT Kanpur | Uttar Pradesh 23 November 2009 |
| 35 | Challenges in Meeting MDG 1 Eradicating Extreme Poverty & Huger The role of Water Management | Water India VI Council of Power Utilities <i>et al</i> & India Power Awards 2009 | New Delhi November 2009 |

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| 36 | Water, Livelihood and Adaptation to Climate Change in South Asia | India Water Partnership An Invited Guest Lecture Institute for Studies in Industrial Development (ISID) Delhi | New Delhi 5 November 2009 |
| 37 | Food Security in a Challenging Economic Environment : India Case Study | McGill Conference on Global Food Security – <i>Impacts of Global Financial Turmoil on Food Security</i> | 5-7 October 2009 Montreal, Canada |
| 38 | The global role of ICID in Agricultural | 2009 International Forum on | Wuhan, China |

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| | Water Resources Management – Inaugural address | Water Resources and Sustainable Development | 22 September 2009 |
| 39 | Invited Inaugural Speech on Water Management as IWRS President | Intl. Conf. on Environmental Flows (21-22 July) | 21 July 2009 Lucknow |
| 40 | Focus on Water Management in the National Water Mission Document (with the Perspective of the Challenges posed by Climate Change) | Seminar on Water Management by the Centre for Consumer Protection, Research and Awareness | Indore Madhya Pradesh India 31 May 2009 |
| 41 | Closing Plenary Address before the European Regional Congress of ICID | 23 rd European Regional Conf. | Lviv, Ukraine 17-24 May 2009 |
| 42 | Water, Livelihood and Climate Change | IWP Workshop | New Delhi May 2009 |
| 43 | Water for Sustainable Development India's Inter Basin Water Transfers | XII World Water Congress India Water Session Panelist / Moderator of Session I | IWRA, New Delhi May 2009 |
| 44 | Panelist's observation / Session Chair's moderation comments | National Workshop – Strategic Analyses of National River Linking Project of India | India Habitat Centre, Lodhi Road 7-8 April 2009 |
| 45 | Bridging the Divides: Bridging the Challenges of Water for Food, People and Environment | World Water Forum 5 Istanbul Turkey Session 2.3 Key Presentations | Istanbul Turkey March 2009 |
| 46 | "Drops for Crops" The Future Challenges | 7 th Intl. R&D Conf. Development & Management of Water and Energy Resources– Central Board of Irrigation & Power | Bhubaneswar, Orissa 4-6 February 2009 |
| 47 | Interventions (Round Table) on the approach paper on Asia's future trends in Irrigation | IWMI-FAO Workshop on Trends and transitions in Asian Irrigation: Prospects for the future ? | FAO-RAP Office, Bangkok January 19-21, 2009 |
| 48 | Relevance of Irrigation Reforms: A compulsion? Key Note Address | Central Board of Irrigation and Power India Intl. Seminar " <i>Reforms in Irrigation Management for effective IWRM</i> " | Bangalore December 18-20, 2008 |
| 49 | Institutional Partnering by ICID, AgWA and FAO for Agricultural Water management in Africa and ICID's contributions | FAO's High-Level Conf. " <i>Water for Agriculture and Energy in Africa: the challenges of Climate Change</i> " | 15-17 December 2008 Sirte, Libya |
| 50 | Invited Guest Speaker to Farmers on the role of irrigation for food production | 5 th National Farmers Conclave | 11-12 December 2008 Mavalankar Hall, Rafi Marg |

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| 51 | India: Water Resources Development and Management | International Conclave on Leadership and Management (ICLM) | India Institute of Management, Ghaziabad 7 December 2008 |
| 52 | President IWRS address | Indian Water Resources Society National Workshop on Global Climate Change | Roorkee, India 6 December 2008 |
| 53 | Water for Food Security | Water India-V Intl. Conf. on the theme Sustainable Water | Hyatt Regency, New Delhi 3 November 2008 |

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| | | Development for Freedom & Power Council of Power Utilities <i>et al</i> | |
| 54 | Session on Managing Water for Sustainable Agriculture – ICID's Role for Global AWM | McGill Conference on Global Food Security | Montreal, Canada 24 September 2008 |
| 55 | Partnering the Knowledge Forum following 'Abu Dhabi' Dialogue initiative (GCC and Himalayan Rivers) | World Bank | Singapore |
| 56 | International Responses on Getting Food to the People – The Success story of India | McGill Conference on Global Food Security | 24 September 2008 Montreal, Canada |
| 57 | Global position in respect of Cost Recovery in Irrigation and subsidies assessment of WRD Projects – Comment on the base paper | Workshop Global Subsidy in irrigation by Global Subsidy Initiative, Germany | 26-27 March 2008, Addis Ababa, Ethiopia |
| 58 | Waste Water Recycling & Reuse Some Aspects and Prospects Key Note Address as Guest Speaker | International Conference on "Water Crisis – Challenges & Opportunities" 59 India's National Environmental Engineering Research Institute | Nagpur 29 February 2008 |
| 59 | Efficient Use of Water | Indo-Canadian Workshop on Conservation and Management of Water Resources | IIT, Roorkee 27 February 2008 |
| 60 | Institutional Mechanism in Indian Water Sector – Panelist's Response | Indian National Academy of Engineer (INAE) Seminar on Water Resources Management | Seminar Hall, IIT, Delhi 21 February 2008 |
| 61 | Group Statement for Major Groups-S&T Community Perceptions – The Reflections of ICSU, WFEO and ICID | UN ESCAP: Asia Pacific RIM 16 th Session of the CSD on Asia and the Pacific | 26-27 Nov., 2007 Jakarta, Indonesia |
| 62 | Interventions as the Session Chair on Interlinking of Rivers Programme | 12 th National Water Convention | Puducherry, India 1-3 Nov. 2007 |
| 63 | Thematic Session on Water for Development & Ecosystems – The ICID approach and support | 1 st Asia Pacific Water Summit | Beppu, Japan December 2007 |
| 64 | Seepage Control by Jet Grouting in Cofferdam for 330 MW Srinagar HEP, India | India Geotechnical Society Annual Session 2007 Delhi Chapter | New Delhi 23 November 2007 |

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| 65 | Opportunities in Water Resources Sector | People to People Ambassadors' Programme India –USA (Public Works Delegation –US) (organized by CBIP representing India) | New Delhi October 24, 2007 |
| 66 | Reservoir Inundation related Issues | ICID Pre Council Meetings 2007 in the Working Group on Environment | Sacramento USA Oct 2, 2007 |
| 67 | Interlinking of River Systems in India for Inter Basin water Transfer | Presentation before the Indian Union's Special Parliamentary Standing Committee on Water Resources on behalf of Institution of Engineers (India) | New Delhi September 13, 2007 |
| 68 | Some Perceptions on UP Water Reforms in relation to others like | Consultation Workshop on Proposed UP Water | Lucknow, India 23 June 2007 |

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| | Maharashtra and Gujarat | Management & Regulatory Bill | |
| 69 | Water Transfer Projects – Panacea for Poverty Alleviation- Some Perceptions and Way Forward | Key Note Speech for All India Seminar in the Indian Water Resources Society | Lucknow 26 May 2007 |
| 70 | Clean Development Mechanism: Where does India stand? | Workshop on Clean Development Mechanism Central Board of Irrigation and Power | India Habitat Centre 25 May 2007 |
| 71 | India's Interlinking of Rivers Programme : Some Perceptions (An invited Response to Lok Sabha Members) | Lok Sabha Secretariat : Standing Committee on Water Resources | Lok Sabha Sectt : Delhi, India May 2007 |
| 72 | Relevance of the Basin Approach to the Management and Conservation of Surface and Ground Water in India | International Conference on Water Resources Management WWF5 Kick off meet & follow on workshop by Turkey Forum | Antalya, Turkey March 2007 |
| 73 | The outcome from 1 st Asia Pacific Water Summit Beppu and UN ESCAP CSD 16 meeting in Jakarta (interventions from the Major S&T Group) | New Delhi Centre World Water Council 58 th Brainstorming Session: Report on the Progress of Water Sector Policies | NDC WWC CBIP Auditorium Delhi 25 Feb 2007 |
| 74 | Lessons learnt from Rehabilitation and Resettlement of Project Affected People from Large Dams in India | Workshop on the Impacts of Large Dams Third World Centre for Water Management, MoWI in the Govt of Egypt, Arab Water Council, ICID | Cairo , Egypt February 12, 2007 |
| 75 | Urban Storm Water Drainage Systems: Challenges & Solutions | All India Seminar – Institution of India Delhi Centre | IEI, Delhi Centre 20 Jan 2007 |
| 76 | Some Talking Points for Panel Discussions | India 2006 – An International Perspective on Environment and Water Issues. International Conference, ASCE- EWRI & IIT Kanpur | New Delhi, India Hotel LeMeridien December 19, 2006 |

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| 77 | India's Water Future : Interventions | <i>Joint Orientation Workshop, GWP-SAS, IWP -7-8 Intl. Conf. On Adaptation to Climate</i> | 5 December 2006 Taj Mahal Hotel New Delhi |
| 78 | Scenario Development for Basin Management – ICID's Country Policy Support Programme | A special CPSP concluding Workshop on completion of the Project funded by Government of The Netherlands | CBIP 27 November 2006 |
| 79 | India's Vision Project: Inter Basin Water Transfers "The Pros & Cons' | IAS Management Training Programme Amity University | NOIDA UP 6 November 2006 |
| 80 | A New Approach to Planning of Water Resources Projects | IWRS Session Bangalore Chapter | Bangalore Karnataka Niravari Nigam Conference Hall October 21, 2006 |
| 81 | Relevance of New Technologies like RAP MASSCOTE in planning the revamping of Irrigation systems | FAO – UK Niravari Nigam Workshop for training following RAP of UK RB irrigation | Hidkal Dam site Belgaum 17 October 2006 |
| 82 | Potable Water for All: Challenges & | IEI Seminar on Water | Institution of |

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| | Solutions | | Engineers India 13 October 2006 |
| 83 | Sustainability of Planned Measures with Better Management and conservation of Surface & Ground Water | Water Resources : India's Future Options Central Board of Irrigation & Power | Jaipur September 28, 2006 |
| 84 | Presentation on RCC | | 28 August 2006 CSMRS |
| 85 | Importance of the Agricultural Drainage: Inaugural Talk | Intl. Workshop on Social – economic and ecological issues of drainage systems | 21 June 2006 St. Petersburg, Russia |
| 86 | Scope for the future Designs of RCC Dams in weak foundation sites with Use of High Performance Silica Fume Concrete in combination | Seminar on Roller Compacted Concrete Dams Central Board of Irrigation and Power, India | Pune, India May 11, 2006 |
| 87 | Keynote address – High performance microsilica ; Application in Dams and Hydropower projects | National Council for Cement and Building Materials | Ballabagarh April 28, 2006 |
| 88 | President's Appraisal of the outcome on the WWF 4 Mexico | New Delhi Centre of World Water Council | Delhi March 31, 2006 |
| 89 | Flood Management – some crucial issues and way forward | National Workshop on Community Approach to Flood Management in India | IIC, Lodhi Estate November 28, 2005 |
| 90 | Keynote address : Role of inter basin water transfer in hydropower development and irrigation | India Water Resources Society | Roorkee 23-25 November 2005 |
| 91 | Session on Inter Basin Transfer – Panelist' s contribution Sustainable Development of Water – Towards Innovative Solutions | 12 th World Water Congress organized by the International Water Resources Association | Delhi November 22, 2005 |

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| 92 | Challenges of Water for Food, People and Environment – ICID's initiative on 'Country Policy Support Programme' | OECD Workshop on Agriculture and Water, Sustainability, Markets & Policies | 16 November 2005, Australia |
| 93 | | Seminar on Challenging problems in Water Resources Management & Development | 12 & 13 November 2005 Nagpur |
| 94 | | All India Seminar on Emerging trends in energy conservation & management | 11-12 November 2005 Roorkee |
| 95 | Potential of Himalayan Links to contribute to Hydropower – Interlinking of Rivers in India | Hydro Power Producers' Meet on Hydro Development in India | Shimla November 5, 2005 |
| 96 | Water & Food Security – Issues & Way Forward | 23 rd Dr. M. Visvevaraya Memorial Lecture | Anna University Chennai October 14, 2005 |
| 97 | Interventions and discussions on India's Turbulent Water Future Draft document presented by John Briscoe | Workshop World Bank | World Bank Offices, Lodhi Road, Delhi 5 October 2005 |
| 98 | Session 3 Part 2 Panelist presentation on Social Issues related to Agriculture's Use and Impact on Water Resources | OECD Workshop on Agriculture & Water: Sustainability Markets & Policies | Adelaide, Australia November 14, 2005 |
| 99 | Brain Storming Session: Talk on Thematic Contents of World Water | New Delhi Associate Centre World Water Council | New Delhi August 26, 2005 |

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| | Forum 4 and Cross cutting Issues | | |
| 100 | User Groups' perceptions on HEPEX – Representing WMO in the interactive international Research Programme initiatives | International Workshop on Hydro-meteorological and Hydrologic Ensemble Prediction (sponsored by Group on "Hydrologic Ensemble Prediction Experiment" (HEPEX)) | Boulder, California USA July 19 2005 |
| 102 | Interventions and personal Perceptions as one of the Members of the Technical Advisory Committee under Dr. M. S. Swaminathan to guide IWMI's Project | Inception workshop of the Strategic Analysis of the India's River Linking Project | IWMI South Asia Liaison Office, NASC Complex, New Delhi 25 April 2005 |
| 103 | ICID CPSP Project : The capabilities of BHIWA Model in addressing issues related to food security and environmental sustainability | 3 rd Intl. Conf. On Irrigation & Drainage US National Committee on Irrigation and Drainage | San Diego, California March 30, 2005 |
| 104 | ICID's initiative to focus on Water for People, Food & Nature (<i>typical case study on Partnership for Sustainable Development in WR Planning</i>) | UN DESA – 2 nd International Forum on Partnership for Sustainable Development - <i>Meeting & Networking to further cement Partnerships</i> | Marrakesh Palace, Morocco March 23, 2005 |
| 105 | An Integrated Water Assessment Model for Future Scenario Studies of Sabarmati River Basin in India | The East African Integrated River Basin Management Conference University of Morogoro and IWMI | Morogoro, Tanzania 7-9 March 2005 |

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| 106 | Sustainable Irrigated and Drained Agriculture | Seminar on Melioration technologies for intensification and sustainable development of agricultural productions | 23 February 2005 of Russian Center Science & Culture |
| | Development Effectiveness of Dam Projects - " <i>Future Issues before Us</i> " <i>New models for basin relook – Relevance of BHIWA model developed in ICID's CPSP?</i> | Technical Session on "Hi-Tech. Applications" | 15 February 2005 Bangalore |
| 107 | The Current Challenge of Water for Food, People and Nature : Issues and Way Forward | 5 th International R&D Conference of CBIP | Bangalore 12 February 2005 |
| 108 | Aseismic Design of Dams : A Review of the Indian Standards including recent Bhuj Earthquake and sufficiency of Tehri Dam design | -do- -do- Special Session on Seismic Aspects of Dam Designs | Bangalore 14 February 2005 |
| 109 | Large Scale Inter Basin Water Transfer in India | Scientific Committee on the Problems of the Environment (SCOPE) Symposium on Water | New Delhi February 9 2005 |
| 110 | ICID – Country Policy Support Programme : <i>What it aims and attempts?</i> | Wrap up workshop of the Grant Project of the Government of the Netherlands | New Delhi 27 January 2005 |
| 111 | Potential of Himalayan Links to contribute for Hydropower – Interlinking of Rivers in India <i>Honoured Guest Lecture(Annual)</i> | 2 nd Dr. Y.S. Parmar Memorial Lecture | Hotel Holiday Home, Shimla, Himachal Pradesh India 20 December 2004 |

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| 112 | Role of Irrigation on Global Food Security Issues and Way Forward | India National Institute of Hydrology – Invited Lecture for the Silver Jubilee Celebrations | NIH –Roorkee, India 7 December 2004 |
| 113 | India's Interlinking of Rivers Programme and Global Scenario | National Seminar on India's Inter linking of Rivers organized by Sathyabhama Deemed University, Chennai | New Delhi December 1, 2004 |
| 114 | Balancing the Water Uses in River Basins How do we address the Challenge? | International Conservation Union IUCN : World Conservation Congress 2004 Topic on 'Ecosystem management - River Basin Management' | Bangkok November 19, 2004 |
| 115 | Resettlement and Rehabilitation : Lessons from India | International Workshop on Economic, Social & Environmental Impacts of Large Dams organized by 3 rd World Centre for Water Management, IHA, Nippon Foundation, IWRA, ICID & other global organisations | 25 October 2004 Istanbul, Turkey |

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| 116 | Perceptions on Integrated Water Resources Management and Development (IWRDM) in a River Basin Perspective": Institutional and Policy Issues in India | National Institute of Rural Development Consultation Workshop on IWRM and RBM : | Hyderabad 22 September 2004 |
| 117 | Future Role of Water Management in Food Production and Sustainable Rural Development -Lessons from for the exercise relating to Comprehensive Assessment by Dialogue Partner organizations | Dialogue on Water and Environment GWP IWMI ICID IUCN WWF and other global water organizations etc. Workshop during SIWI Water Week, Sweden | Stockholm, Sweden August 14, 2004 |
| 118 | India's Interlinking of Rivers Programme | International Science & Technology Forum , China Dujiangyan's 2260 th Anniversary | Chengdu, China 8 & 9 August 2004 |
| 119 | An Overview on the ICID's Country Policy Support Programme : Genesis, Scope, Anticipated outputs and BHIWA Model application for select basins in India and China | Inception/Preparatory Workshop International Commission on Irrigation and Drainage & ENCID CPSP Preparatory Workshop, | Cairo, Egypt August 3, 2004 |
| 120 | Integrated Approach to 'on farm' / 'countryside' water conservation possibilities | Impact of Water Policies on water Security Nuclear Research Laboratory | New Delhi August 2004 |
| 121 | Food and Water Security as a Soft threat for Global Security | UN- Institute of Peace & Conflict Studies | New Delhi India., Hotel Taj Palace 3 & 4 July 2004 |
| 122 | | Conference on Large Dams and Hydropower Development | Delhi 26 May 2004 |
| 123 | Water and Large Scale Infra Structure Projects: India's vision / Mission on ILR / Interbasin Water Transfer | ADB's Workshop on Water Issues | Delhi February 28, 2004 |
| 124 | National Consultation (CNC) under the | Chinese National Committee | Beijing. China |
| | aegis of Country Policy Support Programme (CPSP): Inaugural talk on Overview of ICID's "Country Policy Support Programme" : introducing BHIWA Model application for basins | (CNCID) and International Commission on Irrigation and Drainage (ICID) | February, 17, 2004 |
| 125 | Reservoir sedimentation and Design of hydro plants | Seminar on Silting of rivers – problems and solutions | India International Centre, New Delhi February 12, 2004 |
| 126 | Seismic Design Parameters for Dams Aspects of linking Seismic risks and designs of dams | Workshop on Capacity Building for Seismic Risk Mitigation and Management in Delhi | Delhi January 31, 2004 |
| 127 | Overview on the India's Interlinking of Rivers Programme | Stakeholder Consultation meetings Satyabhama University, Chennai | Chennai 27 January 2004 |
| 128 | Inter-basin Water Transfer | National Water Academy, Pune | January 24, 2004 |
| | Aseismic Design of Tehri dam | 21 st Congress on Large Dams, ICOLD, Montreal, Canada | Montreal, Canada, June 2003 |

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| 129 | Earthquakes and Fail Safe Dam Designs –Lecture to Professionals in NTPC | National Thermal Power Corporation's Training Programme | Delhi Feb 2003 |
| 130 | Tehri Dam Project- Silica Fume in High Performance Concrete for Ensuring Abrasion Resistance | Workshop on Use of Silica Fume Based High Performance Concrete in Hydraulic Structures Organised by ISCMS, CSMRS and CWC | 13 th February 2003 |
| 131 | Fencing Floods in South Asia : Disaster Preparedness through Risk communication – Flood Problem and Flood Forecasting & Warning Network in India A country paper | Regional Media and Policy Workshop, held in Islamabad ; Pakistan | Islamabad Pakistan December 2002 |
| 132 | Comprehensive Forecasting and Warning Systems for Effective Disaster Preparedness and Response | UNDP sponsored with joint participation of Gol&CII International Seminar on Disaster Preparedness and Mitigation Summit | November 21-23, 2002. New Delhi |
| 133 | Water Vision and Future Scenario – Country Perspective- An Overview – Key Note Speech | International Conference on Developments in Hydrology & A Colloquium on Water Resource Management organised by Indian Journal of Power & River Valley Development | Kolkata October , 2002 |
| 134 | A Dialogue on National Water Policy- (Adopted by NWRC on 1 st April, 2002- Action Plan | World Water Council – New Delhi Chapter – held in Institution of Engineers premises – | September 2002 |
| 135 | Chapter on Seismic Aspects and Dam Design – An Indian Scenario | Publication no.272 Typical Dams in India issued by C.B.I & P for ICOLD Annual Session New Delhi | September 2002 |

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| 136 | Roller Compacted Concrete in Dams • Key Note Address | INCOLD & CBI&P Seminar on Roller Compacted Concrete in Dams | May 2002 |
| 137 | Large Dams and its Impacts (India - country Scenario Presentation) | International Conference and Business meet on Non-Fossil Fuel Generation, CII-NHPC Seminar | February 2002, New Delhi |
| 138 | Rehabilitation of Parvati Dam – Rajasthan, India under 'World Bank Aided Dam Safety Rehabilitation Project' - | National Seminar on 'Dam Safety Evaluation' organised by INCOLD and Central Board of Irrigation & Power | Goa, December, 2001 |
| 139 | Design & Construction Aspects of Hathnikund Barrage across River Jamuna | Water & Energy International – Journal | December 2001 |
| 140 | Dams and Development – The Final Report of the World Commission of Dams Impressions & Comments (Reprint of ICOLD Seminar)'s (India) | Quarterly Journal Council of Power Utilities , New Delhi India | October - December 2001 |

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| 141 | Role of Central Water Commission in Hydropower | The Economic Times - Power India 2001 Conference- Theme Focus on Speedy Development of Quality & Economic Power in India | Mumbai, India, November, 2001 |
| 142 | A Water Shed in Global Governance? An Independent Review of the World Commission on Dams- A Critique Paper on an invitation to be Peer Reviewer from WRI, Washington. | World Resources Institute , Wash D.C, 'Lokayan' and Lawyers' Environmental Action Team | November, 2001 |
| 143 | Dams & Development – The Final Report of the World Commission of Dams – Impressions & Comments (Country Paper) | Symposium on “Benefits & Concerns about Dams”- International Commission on Large Dams (ICOLD) – 69 th Annual Session Meeting | Dresden, Germany September 2001 |
| 144 | Gujarat Earthquake- A presentation on the effect of the Major Earthquake at Bhuj on Dams in Saurashtra Region, Gujarat, India A country presentation | ICOLD Committee on Seismicity & Dam Design, Annual Meeting: As Chairman of INCOLD Committee on the subject and Member of ICOLD Committee | Dresden, Germany September 2001 |
| 145 | Role of Large Dams in Hydropower Sector A Key Note Speech | World Water Council – New Delhi Chapter – held in Institution of Engineers premises – | 27 th July 2001 |
| 146 | Roller Compacted Dams (Part I) Key Note Paper on Various Types & Properties of R.C.C dams | 'National Seminar on Utilisation of Fly Ash in Water Resources Sector' Organised by C.S.M.R.S., CWC and DST of Govt. of India | New Delhi April 2001 |
| 147 | Roller Compacted Dams (Part II) – Key Note Paper on Design Parameters, Analysis and Construction | National Seminar on Utilisation of Fly Ash in Water Resources Sector Organised by C.S.M.R.S., CWC and DST of Govt. of India | C.S.M.R.S New Delhi April 2001 |
| 148 | Dams & Development – The Final Report of the World Commission of dams – Impressions & Comments | ICID, ICOLD and IHA sponsored Conference on Water Resources Development – Irrigation & Hydropower | New Delhi, India February, 2001 |
| 149 | The Need for Large Dams in Indian Context – Indian Stand on WCD Report | Conference on Water Resources Development – Irrigation & Hydro Sector IHA, CPU, NHPC and SSNNL | February, 2001 |
| 150 | Need for Large Dams – Reactions to WCD Report on Dams & Development – as a response paper on Theme 8 on “Indian experience of Development and management of water resources”. | International Conference on 'Sustainable Development of Water Resources' organised by IRMED, Delhi | Nov 2000 |
| 151 | The Need for Large Dams in Indian Context – Indian Stand on WCD Report | Hydropower, India , A National Conference by Industry & Ministry of Power | New Delhi. October, 2000 |

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| 152 | Geological Surprises in Hydropower Projects – A Critical Review | A Position Paper prepared for the Ministry of Power by Central Electricity Authority, Gol for COS | 2001 |
| 153 | Dam Safety – Foundation and Seepage Problems in Existing Structures – Kotah Barrage – A case Study | INCOLD Symposium coinciding with ICOLD Annual Session on Rehabilitation of Dams | New Delhi November 1998 |
| 154 | Seismic Design of Dams in India | International Journal on Hydropower & Dams | Issue no.5, 1998 |
| 155 | Tunnel Construction in India - Current Status and Future Tasks. | An Indo-Austrian Workshop by CBIP on Austrian Hydropower Technology | MoP, NHPC & CWC, New Delhi, May, 1999 |
| 156 | Ranganadhi Hydro-Electric Project – Distress encountered in the lower Reaches of Head Race Tunnel & Inclined Pressure Shaft | An Indo-Austrian Workshop by CBIP on Austrian Hydropower Technology | MoP, NHPC & CWC, New Delhi, May, 1999 |
| 157 | Hydro-Power Development in India – (An Overall Indian Scenario and Role of Central Water Commission in Hydropower planning & Design) | International Conference on Hydropower Development in Himalayas | Shimla , India April, 1988 |
| 158 | Private Sector Participation in Irrigation Sector – Optimisation of Project Benefits by Enhancement of Storage by Gated Control in Existing Water Resources Projects | ICOLD workshop on Financing & Private Sector Participation in Water Resources Projects- Annual Session of ICOLD 1998 | New Delhi 1998 |
| 159 | Aseismic Design of Dams – An Overview of Current Design Practices | CWC Publication released on Water Resources Day 1997 – <i>Commendation Certificate to self for drafting and bringing out the manual</i> | New Delhi April 1997 |
| 160 | Hydraulic Structures & Reservoirs (Aseismic Design aspects) | Symposium on Earthquake Effects on Structures, Plant & Machinery, Indian Society on Earthquake Technology (Delhi Chapter) | New Delhi, November, 1996 |
| 161 | Control of Seepage in Existing Embankment Dams using Upstream Clay Blanket | International Seminar on Civil Engineering Practices in 21 st Century, Roorkee | Roorkee, India February, 1996 |
| 162 | Seismicity & Sardar Sarovar Project | Narmada Control Authority Publication <i>Author of the Document for which CWC gave a special citation & a commendation Certificate to self</i> | April, 1994 |
| 163 | Theme discussions on Concrete Dams and Embankment Dams, Software availability & Development (Self functioned as also the Organising Secretary of the Meet) | Current Design Practices & Issues in Water Resources Sector – A country wide Design Group Meet - Organising Secretary | August 1992 CWC D&R wing |

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| 164 | Building Dams to withstand Action of Earthquakes | World Congress on Natural Hazard Reduction ; Sponsors 'World Federation of Engineering Organisations' & Institution of Engineers (India) | January 1992 |
| 165 | Load Testing of Large Well Foundations – A Case History of SYL – Sirsa Aqueduct Pier Foundation | International Seminar on Bridge Sub-Structure & Foundations organised by Indian Institution of Bridge Engineers | January, 1992 |
| 166 | Waterstops for Concrete and Masonry Dams | CWC's in-house publication namely 'Jal Samsadhan Patrika' Vol 4 No.3 | September 1990 |
| 167 | Construction by Col-grouting for R&D Projects | CWC's in-house publication namely 'Jal Samsadhan Patrika' Vol 4 No.3 | June 1990 |
| 168 | Draft Guidelines for the Determination for Design Seismic Parameters | Prepared & introduced before <i>National Committee for the Determination of Seismic Design Parameters</i> and later sent to BIS for Standardisation | Feb 1990 |
| 169 | Design of Spillway with particular reference to Energy Dissipators – A case Study of Jhakam Dam (Rajasthan) | Workshop on 'Designing Dams for Hydrologic Safety', Central Board of Irrigation & Power , Nagpur | October 1988 |
| 170 | Inflow Design floods for Energy Dissipation - A theme Paper | Workshop on Designing Dams for Hydrologic Safety, Central Board of Irrigation & Power , Nagpur | October 1988 |
| 171 | On farm water management with particular reference to Gerio Pilot Farm | National Irrigation Seminar | 1982 |
| 172 | Nomographic Solution of Manning's Formula | CWC's in-house Metric News Bulletin | 1979 |