“9 Decades of Glorious Service to the Nation”

Role of CBIP in the Development of Water resources, Power and Renewable Energy Sectors

V.K. Kanjlia
Secretary
Central Board of Irrigation and Power (CBIP)
&
Secretary, Indian Chapter of International Organisations
1st January 1927 was an important day in the history of Indian Irrigation when the Government of India had set up Central Board of Irrigation.

The Central Bureau of information for Irrigation was set-up by GoI in 1929 and attached with the Board.

On the occasion of the Golden Jubilee Celebrations of the Board, Dr. N. Tata Rao, president of the board observed that:

“The Board has established a unique library. This library is perhaps the best library on the subject in the entire world. Even the USA and USSR do not have such a library with the facility of bringing out a regular quarterly bulletin giving summaries of the subject dealt in the latest publications”.

In 1949, with the inclusion of Hydro Power engineers as members of the Board, the Board was renamed as Central Board of Irrigation and Power (CBIP).
Central Bureau of Information:

Main functions:

• To establish and maintain a comprehensive library of irrigation publications (both India and Foreign) which were consulted by irrigation engineers and acted as a clearing house of information needed by provincial officers.

• To reach wide public and to keep agricultural officers and the public generally in touch with irrigation development in India and abroad.

• The bureau was able to collect more than 2,21,000 publications (India and Foreign) by the date of independence.
Irrigation has been practiced in India from Pre-historic times.

Frequent references are found to well, tanks, dams and canals etc. in vedas and ancient Indian literature.

People during Indus Valley civilization were mainly agriculturists who settled on the banks of rivers and practiced irrigation to water their fields.

Ruins of large scale irrigation systems implemented during Indus valley civilization have been discovered.

Rishi Narada once came to the court of emperor Yudhishthra and enquired “Are your dams full of water and big enough and distributed in different parts of the kingdom and does agriculture not depend on rains only”.
• In the British regime in India right upto 1854, the construction and management of all public works and the railways were entrusted to army engineers.

• Though the Public Works Department of Govt. of India was organized in 1854 but on account of dearth of civil engineers in the country, the military engineers had to shoulder the burden of executing civil engineering works.

• In 1866, the public works department was divided into two branches viz. the civil works branch including irrigation and roads etc. and the military works branch.

• By 1895 the military works branch grew to such a size that it was organized into a separate Military Works Department so that Civil Works branch became an independent entity.
Under the direction and control of the Public Works Department of Govt. of India, there were Public Works Departments in each of the provinces.

For implementation of Irrigation Works, two private companies namely East India Irrigation and Canal Company and the Madras Irrigation Company were floated by Government of India but they did not succeed.

The miserable failure of these two private companies led in 1866 to important and radical changes in the principles and policies governing the execution and functioning of irrigation projects. Accordingly following three major policy decisions were taken:

- Irrigation projects would in future be constructed by state through its own agency.
- Irrigation projects would be financed from public loans raised specially for the purpose.
- Political boundaries would not be allowed to come in the way of execution of Irrigation projects when the best possible utilization of water of a river for irrigation purpose was being considered.
Until 1921 the GoI and secretary of state in London exercised powers of superintendence, direction and control on all irrigation activities of the state PWDs whether technical or administrative through an Inspector General of Irrigation and a Public Works Secretariat of GoI with engineers of experience as its Secretary.

In 1921 i.e. after the introduction of the first installment of constituent reforms, irrigation became a provincial but reserved subject. Under the arrangements it was necessary for a provincial Govt. to obtain prior approval of the secretary of state in Council through the Government of India before the provincial government could sanction any irrigation project costing more than 5 million rupees or wherever the project affected the interest of more than one province.

Government of India ceased to have any direct responsibility for Irrigation Works after 1921 and accordingly the Public Works Secretariat of the Government of India was abolished in 1923 and the post of Inspector General of Irrigation was converted into that of Consulting Engineer. The government of India when dealing with new irrigation projects for submission to the Secretary of state or with matters of dispute between different political units, generally took the advice of the Consulting Engineer.
• The Government of India was dependent entirely on the advice of a single officer, who, however able he might be, might have spent all his service in one province and would not therefore, be competent to deal with all the types of projects submitted for examination.

• It was suggested that a better procedure would be the establishment of an Irrigation Board before which all schemes submitted to the Government of India would be laid.

• After consulting all the provincial governments, Govt. of India established Central Board of Irrigation with the consulting engineer as secretary and chief engineers of all provincial states as members.

• Thus the Central Board of Irrigation and Power came into existence with effect from 1st January 1927.

• From April’1937, i.e. with the inauguration of provincial autonomy, irrigation became a “transferred” subject and the provincial Govts. got full powers over irrigations works and development.
Main function of the Board

- To act as Technical Adviser to Government of India
- All Irrigation Schemes to be funded by the Govt. of India to be placed before the Board
- Acting as arbitrator for settlement of disputes between provincial states or between provincial states and princely states.
- To promote research in Irrigation, Power and allied subjects.
- To bring out technical publications, guidelines and reports etc.
- To organize national and international conferences, workshops and tutorials etc.
- To organize training and skill development.
- To provide consultancy in water, power and renewable energy sectors.
Board Meeting in 1930 —sitting (L to R) Mr. C.S.C Harrison C.I.E (Sukkur Barrage and canals), Mr. R.P. Hadow, C.I.E (Punjab), Mr C.Addams Williams, C.I.E (Bengal), Sir Bernard Darley Kt, C.I.E, President (United Provinces), Mr. D.G. Harris, C.I.E. (Government of India), Col. H. del Pollard – Lowsley, C.M.G, C.I.E, D.S.O. (Central Provinces), Mr. D.R. Satarawala (Sind).

Standing (L to R): Mr. F.A. Betterton (Bihar and Orrisa), Brigadier W.H. Evans, C.I.E .D.S.O (Baluchistan), Mr C.M. Lane (Bomaby), Mr W.L. Stampe (United Provinces), Mr. J.M.B. Stuart (Burma)
CBIP Headquarter & CBIP-Centre of Excellence

Board office at Shimla (1927-1952)

American Barracks at Curzon Road, New Delhi (1952-1980)

CBIP office at Malcha Marg, Chanakyapuri, New Delhi (1980 onwards)

CBIP Centre of Excellence at Gurgaon (2013 onwards)
Presidents of the Board
Presidents of the Board
Presidents of the Board

Shri S.D. Dubey
Chairperson, CEA

Shri P.A. Raj
Addl Chief Secretary, Narmada Dev Deptt., Govt. of Gujarat
Jan.-Dec. 1985

Dr. M.R. Srivatsan
Chairman, Atomic Energy Commission
1989

Maj. Gen. (Retd.) R.R. Oberoi
Chairman, BBMB 2001

Shri S.R. Sikdar
Chairman, WBSEB 1997-March 98

Shri C.G. Desai
Advisor Planning Commission
1987-88

Shri V.P. Shrimpi
Secretary, Irrigation, Maharashtra
Oct. 1994-96

Shri V.B. Patel
Secy, Irrigation, Gujarat
1990

Shri B.S. Kochhar
CMD, NHPC
July 1983-Nov. 1983

Shri N.S. Vasant
Chairman, PSEB
1986-87

Shri R.C. Dave
Chairman, RSEB
June 1991-94

Shri J.K. Bhasin
Chairman, CEA
Jan.-May 1991

Shri C.G. J. Varma
Chairman, AP Power Gen. Corp.
2000-01

Shri J. Parthasarathy
CMD, AP Power Gen. Corp.
2000-01

Shri T.K. Srinivasan
Chairman, MPSEB
Jan.-April 1966

Shri A.K. Sah
CMD, NTPC
Dec. 1985-July 84

Shri A.K. Gangopadhyay
CMD, NHPC

Shri A.S. Bakshi
Chairperson, CEA
July 2011-March 2014

Shri Rakesh Nath
Chairperson, CEA
May 2010-June 2011

Shri A.B. Pandya
Chairman CWC
April 2014 - Dec 2015

Shri S.D. Dubey
Chairperson, CEA

Shri Major Singh
Chairperson, CEA
January 2016

Shri S.K. Garg
CMD, NHPC
May - September 2005

Shri B.K. Sen
Chairman, WBSEB
April 1998-1999

Shri Yogendra Prasad
CMD, NHPC
2002 April-2005

Shri Y.B. Patel
Secy, Irrigation, Gujarat
1990

Shri Manohar Lal
Secretary, Irrigation, Rajasthan, 1982-85

Shri Pritam Singh
Chairman, CWC

Shri T.K. Srinivasan
Chairman, MPSEB
Jan.-April 1966

Shri N.S. Vasant
Chairman, PSEB
1986-87

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Chairman, BBMB 2001

Shri S.D. Dubey
Chairperson, CEA
Secretaries of the Board

- Mr. A.M.R. Montagu (1930-31 to 1934-35)
- Mr. M.T. Gibling (1935-36 to 1938-39)
- Mr. A.R.B. Edgecombe (1939-41)
- Mr. A.R. Thomas (1941-45)
- Shri N.D. Gulhati (1945-46 to 1948-49)
- Shri S.L. Mahotra (1949-50 to 1951-52)
- Shri M.L. Aggarwal (1952 to 1955)
- Shri C.V.J. Varma (1973 – 1999)
- Shri R.H. Vaidyanathan (May 1960 to July 1962)
- Shri K.L. Bhatla (Nov. 1962 – 1966)
- Shri S.N. Gupta (1967 – 1970)
- Shri S.L. Narasimhan (upto 31-10-2002)
- Shri V.K. Kanjlia (01-11-2007 till date)
- Shri G.N. Mathur (1-11-2002-31-10-2007)
Present Office Bearers of CBIP

President
Shri R.K. Verma
Chairperson, CEA

Vice Presidents
- Shri S. Masood Husain
  Member - WP&P, CWC
- Shri K.S. Popli
  CMD, IREDA
- Shri Ashok Sethi
  COO & ED, Tata Power

Secretary
Shri V.K. Kanjila

Directors
- Shri P.P. Wahi
- Dr. G.P. Patel
- Shri C.S. Malik
• CBIP had been coordinating and monitoring R&D activities, assisting in specific case studies/problems, documentation and dissemination of the results/findings of Research Projects to the practicing engineers under the Research Scheme on Power (RSOP), Research Scheme on River Valley Projects (RSRVP), Research Scheme on Flood Control (RSFC) and Research Scheme on Plasticulture Development (RSPD).
• Funds for Research Schemes under RSRVP and RSFC were provided by Ministry of Water Resources, RSPD by Ministry of Agriculture and RSOP by Ministry of Power.
• The results of the research conducted at the various Water Resources and Power Research Stations in the country were discussed in CBIP Annual research Sessions held regularly.
• The research studies under water resources were not only being done under schemes sponsored by the CBIP at various research stations selected by it, but also at some Research Stations of the state Governments as well as Academic Institutions like IITs Universities etc.
• In order to have an overview of the research projects under study in the country so as to avoid duplication of the studies and to fill gaps, CBIP was asked by the Scientific Advisory Committee and National Advisory Committee on Education and Training in Water Resources, to prepare review reports covering all such scheme in Water Resources in 1987.
## R&D ACTIVITIES IN WATER SECTOR

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of Project</th>
<th>CBIP</th>
<th>Other than CBIP</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Management of Floods</td>
<td>36</td>
<td>39</td>
<td>75</td>
</tr>
<tr>
<td>2.</td>
<td>Hydraulic Structures</td>
<td>17</td>
<td>121</td>
<td>138</td>
</tr>
<tr>
<td>3.</td>
<td>River and Estuarine Structures</td>
<td>29</td>
<td>20</td>
<td>49</td>
</tr>
<tr>
<td>4.</td>
<td>Ground Water</td>
<td>10</td>
<td>47</td>
<td>57</td>
</tr>
<tr>
<td>5.</td>
<td>Hydrology and Draught Management</td>
<td>10</td>
<td>49</td>
<td>59</td>
</tr>
<tr>
<td>6.</td>
<td>Irrigation and Drainage System</td>
<td>10</td>
<td>54</td>
<td>64</td>
</tr>
<tr>
<td>7.</td>
<td>Environmental &amp; Socio-economic Impact</td>
<td>20</td>
<td>36</td>
<td>56</td>
</tr>
<tr>
<td>8.</td>
<td>Soil and Materials</td>
<td>18</td>
<td>68</td>
<td>86</td>
</tr>
<tr>
<td>9.</td>
<td>Rock Mechanics</td>
<td>9</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>10.</td>
<td>Application of High Technology</td>
<td>9</td>
<td>63</td>
<td>72</td>
</tr>
<tr>
<td>11.</td>
<td>Construction Methods</td>
<td>9</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>12.</td>
<td>Evaporation Control</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>13.</td>
<td>Plasticulture Development</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>14.</td>
<td>Education and Training</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td><strong>Grand Total</strong>:</td>
<td></td>
<td></td>
<td><strong>691</strong></td>
</tr>
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</table>
# R&D Activities in Power Sector

<table>
<thead>
<tr>
<th>S.NO</th>
<th>SECTORS</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Generation (Thermal)</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Generation (Hydro)</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Transmission</td>
<td>28</td>
</tr>
<tr>
<td>4</td>
<td>Sub-Station</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>Distribution</td>
<td>28</td>
</tr>
<tr>
<td>6</td>
<td>Power System Planning, Operation and Control</td>
<td>13</td>
</tr>
<tr>
<td>7</td>
<td>Protection and General</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>Others</td>
<td>255</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>385</strong></td>
</tr>
</tbody>
</table>
Board’s Contribution to Establishment of Important Irrigation and Power Institutions in India

Central Water Commission, New Delhi

International Commission on Irrigation & Drainage (ICID), New Delhi

National Institute of Hydrology (NIH), Roorkee

Central Water & Power Research Station (CWPRS), Pune
Interlinking of Rivers

- Interlinking of Rivers to form Water Grid both for irrigation and navigation facilities was proposed by CBIP in 1962-63.
- This Idea was also advocated by Shri V.V.Giri, Vice-President of India while inaugurating the Forty-First Annual Session of the Board held in November 1968.
- In 1972 Board organized a National Water Grid Seminar in December wherein it was recommended to study Inter Basin Water transfer proposals in more detail.
- Subsequently GoI set up National Water Development Agency (NWDA) in 1982 to carry out water balance and other studies on a scientific and realistic basis for optimum utilization of water resources.
To recognize the merit, talent and encourage the engineering professionals for their contributions in enhancing the development of water resources and power sectors and for their contributions in the research activities, the Board has been awarding medals and certificates of merit for best contributions in water resources, power and allied fields.

Since last 3 years CBIP awards are being bestowed on CBIP day by high dignitaries.

Sushri Uma Bharti, Hon’ble Union Minister for Water Resources, River Development and Ganga Rejuvenation, on the occasion of CBIP Day and CBIP Award function during 2014 and 2015

Dr. Sanjeev Kumar Balyan Hon’ble Union Minister of State for Water Resources, River Development and Ganga Rejuvenation, on the occasion of CBIP Day and CBIP Award function during 2016
### Awardees of CBIP Award from Andhra Pradesh

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name</th>
<th>Org. Name</th>
<th>Awards Name</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shri R.V. Seshadri</td>
<td>A.PERL, Hyderabad</td>
<td>CBIP Gold Medals</td>
<td>1968</td>
</tr>
<tr>
<td>2</td>
<td>Shri G. Ramachandran</td>
<td>A.G. Office, Hyderabad</td>
<td>CBIP Gold Medals</td>
<td>1976</td>
</tr>
<tr>
<td>3</td>
<td>Shri K.V. Rangaiah; Shri P. Seshachalapati Rao; Shri Mufallib and Shri S.A.T.V. Mohan Rao</td>
<td>APSEB, Hyderabad</td>
<td>CBIP Gold Medals</td>
<td>1977</td>
</tr>
<tr>
<td>4</td>
<td>Shri T. Hanumantha Rao</td>
<td>WALMI, Hyderabad</td>
<td>Shanti Yadav Mohan Award</td>
<td>1989</td>
</tr>
<tr>
<td>5</td>
<td>Shri K.Balrama Reddy, Member (Tech.)</td>
<td>APSEB, Hyderabad</td>
<td>P.M. Ahluwalia Award</td>
<td>1991</td>
</tr>
<tr>
<td>6</td>
<td>Shri K.V. Venugopala Rao, Chief Engineer (Trans) Shri A. Narayana Rao, Chief Engineer Shri M.V. Krishna Rao, Dy. Chief Engineer Shri S.M. Zafarullah, Asstt. Divisional Engineer; Shri M.V.S. Birinchi, Consultant Shri T. Krishna Rao, Chief Engineer</td>
<td>A.PSEB, Hyderabad</td>
<td>Jawahar Lal Nehru Birth Centenary Research Award</td>
<td>1992</td>
</tr>
<tr>
<td>7</td>
<td>Shri Akbar Aziz</td>
<td></td>
<td>Cash Your Ideas Award</td>
<td>1976</td>
</tr>
<tr>
<td>8</td>
<td>Shri R.K. Saxena; Shri N. Nagaraja Shri A.S. Ramanuja Swamy Shri N.K.V. Narasimhan Shri Bahadur Ali; Shri M.L.N. Reddy; Shri S. Bahadur Ali; Shri G. Ramakrishna; Shri M. Osman Ahmed; Shri S.H.R. Naqui</td>
<td>APERL, Hyderabad</td>
<td>Certificate of Merit</td>
<td>1955, 1961, 1967, 1970, 1968</td>
</tr>
<tr>
<td>9</td>
<td>Shri K.V. Rangaiah; Shri A. Gururaja Rao Shri D.B. Ghare; Shri A. Veeraraghavan Shri S.A. Mutallib; Shri T.V. Mohan Rao</td>
<td>A.PSEB, Hyderabad</td>
<td>Certificate of Merit</td>
<td>1977</td>
</tr>
<tr>
<td>10</td>
<td>Shri M. Rama Rao, Chief Engineer Shri K. Viswanath, Chief Engineer Shri V. Koteswara, Chief Engineer</td>
<td>A.PSEB, Hyderabad</td>
<td>Certificate of Merit</td>
<td>1992</td>
</tr>
</tbody>
</table>

Water Resources Department, Govt. of Andhra Pradesh has been conferred with CBIP Award for Optimum and Efficient Utilization of water resources during 2016.
CBIP Golden Jubilee Award to Dr. N Tata Rao

Presentation of CBIP Golden Jubilee Award in 1978 to Dr. N. Tata Rao by Shri A.B.A. Gani Khan Choudhary, Hon’ble Union Minister for Energy
CBIP Award 2017 to Water Resources Department Govt. of Andhra Pradesh

Government of Andhra Pradesh

Shri M.V. Ravi Kumar, Engineer-in-Chief (IW), Water Resources Department, Andhra Pradesh, receiving CBIP Award for Optimum and Efficient Utilization of water resources from Dr. Sanjeev Kumar Balyan Hon’ble Union Minister of State for Water Resources, River Development and Ganga Rejuvenation
About CBIP

“When I read the name of your Board, the word Irrigation and Power’ excite my mind and all kinds of ideas come to my mind – ideas of history, long prospective of human progress and the rest.”

Pt. Jawaharlal Nehru
Silver Jubilee Celebrations of CBIP, 17-22 November, 1952
There are number of International Organizations whose Indian Chapters and their Secretariat are housed in Central Board of Irrigation and Power. These technical organizations promote international collaborations and co-operation and the Board plays a pivotal role in disseminating the information supplied by them to the Indian professionals as well as professionals of neighboring countries.

As on date Indian Chapters/ National Committees of many international organizations are housed in CBIP and activities within India are performed by CBIP.
Water Resources Sector

1. Indian Committee on Large Dams (INCOLD)
2. Tunnelling Association of India (TAI)
3. International Society for Rock Mechanics (ISRM) - India
4. International Geosynthetics Society (IGS) - India
5. New Delhi Centre for World Water Council (NDC-WWC)
6. Indian Chapter of IWRA
Power Sector

1. International Council on Large Electric System (CIGRE)
2. International Council for Electricity Distribution (CIRED)
3. Indian National Hydropower Association (INHA)
4. International Association for Small Hydro (IASH)
5. International Association on Electricity Generation, Transmission and Distribution (AARO)
6. Society of Power Engineers (India) (SPE)
India has been chosen by ICOLD to host the prestigious International Event “88th ICOLD Annual Meeting” in 2020 at New Delhi.

ICOLD comprises of 10,000 members from 95 countries.
Major Events of the Board
Annual Meeting of the Board

His Excellency the Viceroy of India Lord Linlithgow opened the proceedings of the 7th (1936) Annual Meeting of the Board held in Delhi from 31st October to 5th November 1936 at Viceroy's House (now named Rashtrapati Bhawan). Mr. T.B. Tata, President of the Board also addressed the meeting.

In his inaugural speech the Viceroy, inter alia, said:

"The Board and the Bureau have done work of the utmost value in the brief six years since their establishment in November 1930. The Board has provided several sub-committees to investigate important technical problems, not the least important of which has been the Committee on distribution of waters of the Indus and its Tributaries..."

The 11th (1940) Annual Meeting of the Board which was held in Delhi was also opened by His Excellency.

Technical isolation can never be anything but costly and dangerous. – Sir Joseph Bhave, Member of the Governor General's Executive Council 1930
Board Meeting in Council Room of Viceroy’s House

- It was 26th November 1945: the Rashtrapati Bhavan was still called Viceroy’s House and the Cabinet Room was known as Council Room, where the Governor General and Members of his council used to meet.
- The Board was invited to have its meeting in the council room. The Chief Engineer Irrigation, United Provinces was the president of the Board for the year and, in that capacity had been invited to stay in Government House during the Board’s meeting.
- Field Marshal Viscount Wavell, the Viceroy inaugurated the meeting at 11 am in the council room where Dr. BR Ambedkar, the then Labour Member was also present as invitee. He advised that after his address, the board should continue to use the Council Room for their discussion for the rest of the morning. This was obviously to enable members of the Board to spend the whole morning usefully.
- In the evening the Viceroy and Lady Wavell gave an “At Home” to meet the members of the Board and officers accompanying them.
Annual Meetings of the Board

His Excellency the Viceroy of India Lord Wavell inaugurating the 16th (1945) Annual Session of the Board held at New Delhi from 26th November - 1st December, 1945.
International Conferences held at New Delhi from 11<sup>th</sup> to 16<sup>th</sup> January 1951

- In 1951 three International Conferences, namely, '4th Congress on Large Dams', '1st Congress on Irrigation and Drainage' and 'Water Power Congress were simultaneously held at New Delhi from 11th to 16th January 1951.
- The then Hon'ble Prime Minister of India, Pandit Jawaharlal Nehru invited all the nations of the world to participate in these conferences.
- The response to the invitation was very encouraging and about 800 delegates joined the Conferences, out of which the foreign delegates numbered 310 from 34 countries of the world.
- The conferences were organized in the Historic Parliament House and inaugurated by Shri C. Rajagopalachari, Hon'ble Home Minister of India in the absence of the Prime Minister who had to attend the Commonwealth Prime Ministers' Conference in London during these very days.
As an aid to promoting the objectives of these three International Conferences, Central Board of Irrigation and Power arranged an International Engineering Exhibition at New Delhi from 10th January to 18th March, 1951.

The Exhibition was opened by Shri N. V. Gadgil, Hon'ble Minister for Works, Mines and Power.

The Exhibition opened on 10th January and closed on 18th March, 1951. The Exhibition was visited by over 12,00,000 persons from various parts of India and other countries of the world.

Pandit Jawaharlal Nehru, Prime Minister of India recorded the following impressions: "The International Engineering Exhibition was visited by me on several occasions. I must have spent seven or eight hours there altogether. I wish I could have gone there oftener and spent more time."
As an adjunct to the conferences, the Board organized study tours after the technical conferences at Delhi. The tours afforded them insight into our ancient culture, and civilization which is the oldest in the world.

Two special trains, equipped with everything that would be needed by the delegates for their fortnight stay in the trains, left Delhi on 16th January 1951 with 145 and 133 delegates.

The study tours included visit to manufacturing and industrial centres, hydraulic research laboratories, river valley projects, old monuments, temples and places of scenic beauty.

The delegates were taken to Pathankot, Amritsar, Bhakra Nangal Project, Hardwar, Banaras, D.V.C., Calcutta, Tatanagar, Hirakud, Khaperkheda Power Station at Nagpur, Ajanta, Poona Research Station, Tungabhadra Dam, Mettur Dam, Bangalore and Mysore.

Delegates from both trains assembled in Mysore after which a concluding session was held.
CBIP completed 25 years of dedicated services to the nation in 1952. The silver Jubilee celebrations of the Board were inaugurated on 17th November, 1952 by honorable Prime Minister of India Shri Jawaharlal Nehru.
Major Events of the Board

Shri Neelam Sanjeeva Reddy, the then Hon’ble Chief Minister of Andhra Pradesh inaugurated the 29th (1959) annual Research Session of the Board held at Jubilee Hall, Hyderabad from 8th - 11th July 1959.
Hon'ble President of India Dr. Rajendra Prasad inaugurated the 30th (1959) Annual Session of the Board held at Vigyan Bhavan, New Delhi from 23rd - 24th November, 1959. Dr. K. L. Rao, Member, Central Water and Power Commission also graced the occasion.
Major Events of the Board

Shri Lal Bahadur Shastri, the then Hon’ble Union Minister for Home Affairs Inaugurated the 33rd (1961) Annual Session of the Board held at Vigyan Bhavan, New Delhi from 13th-15th November, 1961. Shri H.R. Bhatia, Chairman, Punjab State Electricity Board, and Dr. K.L. Rao, Member, Central Water and Power Commission also graced the occasion.

The effective utilisation of our water resources may mean the difference between poverty and plenty in India. We have done quite a bit in this field since Independence but still much remains to be done, specially for drainage and flood control.

Hon’ble Prime Minister of India
New Delhi, 11th September, 1965
Major Events of the Board

Dr. K.L. Rao, Hon'ble Union Minister for Irrigation and Power inaugurated the 38th (1965) Annual Session of the Board held at Vigyan Bhawan, New Delhi from 6th-8th November, 1965. Shri C. Subramaniam, Hon'ble Union Minister for Food and Agriculture also graced the occasion.

Dr. K.L. Rao was president of the Board during 1959-60.

"This is an assembly, a very great one, a unique one in the world, as it consists of the Chief Engineers of the entire country whether employed in irrigation or power projects and the Directors of various Research Stations. We always feel proud of this organisation."

Dr. K. L. Rao
Hon'ble Union Minister for Irrigation and Power
41st Annual Session of CBIP in 1968
Smt. Indira Gandhi, Hon'ble Prime Minister of India, inaugurated Second World Congress of IWRA on "Water for Human Needs" organized by CBIP and IWRA from 12th-16th December, 1975 in Vigyan Bhavan. Dr. Jagjivan Ram, Hon'ble Union Minister for Agriculture and Irrigation and Shri K.C. Pant, Hon'ble Union Minister for Energy also addressed the inaugural session. Dr. Ven Te Chow, President, IWRA welcomed the participants.
Golden Jubilee Celebrations

On Completion of 50 years of its glorious service to the nation, the golden jubilee celebrations of the Board were inaugurated by the hon’ble president of India. Shri B.D. Jatti on 2nd March 1977 in presence of Dr. N. Tata Rao president of the Board.
His Excellency Shri N. Sanjiva Reddy, Hon'ble President of India inaugurated the XIX Congress of IAHR hosted by the Central Board of Irrigation and Power in New Delhi from 1st to 7th February, 1981. The Congress was attended by 342 participants from 33 countries including 171 from India. The theme of the Congress was "Hydraulic Research for Improved Water Resources Utilisation".

Shri Rao Birendra Singh, Hon'ble Union Minister for Agriculture, Rural Construction and Irrigation, Shri Z.R. Ansari, Hon'ble Union Minister of State for Irrigation and Mr. John F. Kennedy, President, IAHR participated in the function.
1987 was another momentous year when the Board completed 60 years of its service to the nation. The Diamond jubilee celebration were inaugurated by Hon’ble Prime Minister of India Shri Rajiv Gandhi on 28th January 1987 in presence of Shri B. Shankranand, Union Minister of Water Resources and Shri Vasant Sathe, Union Energy Minister.
International Workshop on Geo-textile, November 1989

Shri Venkatasubbaiah Pendekant, H.E. Governor of Karnataka, inaugurated an International Workshop on Geotextiles organised on 22nd - 29th November, 1989 at Bangalore which was attended by 250 delegates from India and abroad. The special publication on "Use of Geosynthetics in India, Experience and Potential - A State-of-Art Report" was released by H.E. Governor of State of Karnataka.
Symposium on Quality Assurance, Quality Management and Quality Control in Water Resources and Power Engineering held at Vigyan Bhavan, New Delhi from 25th - 26th April, 1989

Hon'ble Dr. Shankar Dayal Sharma, Vice President of India inaugurated the Symposium on Quality Assurance, Quality Management and Quality Control in Water Resources and Power Engineering held at Vigyan Bhavan, New Delhi from 25th - 26th April, 1989. Shri B. Shankaranand, Hon'ble Union Minister of Law and Justice & Water Resources also graced the occasion.
Smt. Vasundhara Raje, Hon'ble Chief Minister, Government of Rajasthan inaugurated a Seminar on “Water Resources - Future Options” jointly organized by Central Board of Irrigation and Power and Water Resources Department, Government of Rajasthan, from 28th-29th September, 2006 in Hotel Clarks Amer at Jaipur, Rajasthan. The inaugural session presided over by Prof. Sanwar Lal, Hon'ble Minister of Water Resources Department, Government of Rajasthan
Smt. Pratibha Devisingh Patil, H.E. President of India, through her recorded message addressed the participants during the inaugural session of the World Tunnel Congress and 34th General Assembly of ITA-AITES, organized for the first time in India in Hotel Jaypee Palace, Agra to deliberate on the important topic of “Underground Facilities for Better Environment and Safety”.

Shri Sushilkumar Shinde, Hon'ble Union Minister of Power, inaugurated the WTC 2008 on 22nd September, 2008. A total of 900 professionals including about 500 international experts from 43 countries participated in the deliberations of the Congress. During the inaugural session, special publications released including Directory of Tunnels, History of Tunnels in India and Safe Working in Tunnelling. An exhibition was also organised. A field visit to Delhi Metro construction site was arranged on 25th September 2008.
Dr. Manmohan Singh, Hon'ble Prime Minister of India, inaugurated 5th Asian Regional Conference in presence of Hon'ble Union Minister of Water Resources, Mr. Pawan Kumar Bansal, Hon'ble Minister of State for Water Resources, Mr. Vincent H. Pala, Dr. Chandra A. Madramootoo, President, ICID, Shri M. Gopalakrishnan, Secretary General, ICID and others in the Diamond Jubilee Year of ICID, the 60th International Executive Council (IEC) Meeting and 5th Asian Regional Conference (ARC) of the International Commission on Irrigation and Drainage (ICID) were held during 6th-11th December 2009 at Vigyan Bhawan in New Delhi. The event was organized by MOWR, CWC, INCID and managed by Central Board of Irrigation and Power.
Hon'ble Minister of State for Communication & IT, Shri Sachin Pilot, Hon'ble Union Minister of Water Resources, Shri Pawan Kumar Bansal, Hon'ble Finance Minister, Shri Pranab Mukherjee, releasing the Special Postal Cover
International Conference on "Accelerated Development of Hydro Power in Bhutan - Opportunities and Challenges“ November 2010, Bhutan

H.E. Lyonchhoen Jigmi Y. Thinley, Hon'ble Prime Minister of Bhutan, inaugurated an International Conference on "Accelerated Development of Hydro Power in Bhutan - Opportunities and Challenges" from 16th-18th November, 2010 at Convention Center, Royal Banquet Hall, Thimpu, Bhutan organized by the Central Board of Irrigation & Power, Department of Energy, Ministry of Economic Affairs, and Punatsangchhu Hydro Power Project Authority in association with International Association on Electricity Generation, Transmission and Distribution (Afro-Asian Region), - AARO. Hon'ble Minister for Economic Affairs, RGoB and Chairman PHPA. Mr. Lyonpo Khandu Wangchuk and Shri R.N. Khazanchi, MD Punatsangchhu also graced the occasion.
Hon'ble President of Nepal, Dr. Ram Baran Yadav is being welcomed by Shri P.P. Wahi, Director, CBIP during inauguration of 7th Afro-Asian International Conference on "Speedy Development of Hydropower in Developing Countries - Issues and Challenges" at Hotel Soaltee Crowne Plaza, Kathmandu from 3rd-5th March, 2011. This event was organised by International Association on Electricity Generation, Transmission and Distribution (Afro-Asian Region) - AARO in association with Nepal Electricity Authority had organized this event to mark the 100th year of HYDROPOWER GENERATION in Nepal.
Shri Narendra Modi, Hon'ble Chief Minister of Gujarat, inaugurated Swarnim Seminar on "Water for Inclusive Growth" on 22nd March, 2011 - World Water Day at Gandhinagar, Gujarat. Sardar Sarovar Narmada Nigam Limited, in association with Central Board of Irrigation and Power (CBIP) organized this event.
Training Activities

• CBIP has been organizing a number of National and International Training programmes to help the Indian Engineers/Professionals to update their knowledge and help them to gain practical know-how in power, water resources and renewable energy sectors. CBIP has number of experienced personnel in these sectors to impact training besides its member who are utilized as Guest Faculty.

• CBIP has ventured in a big way to provide training in the field of Hydro and Thermal Power Sector and trained more than 600 engineers in 13 batches of NTPC, TVNL through long term program. It has been organized about 100 specialized programs during last three years on various thrust areas of these sectors. CBIP organizes customized, long term, medium term and short term training programs for in service/fresh engineers, diploma engineers and non technical staff as per the requirements of any organization.

• **CBIP has been recognized as category-1 training institute for providing training in the field of Hydro, Thermal, Transmission and Distribution and Power Management etc. by Ministry of Power, Govt. of India. The long term course offered by CBIP are recognized career linked courses.**
CBIP organized the "Training Programme for Engineering Assistants" of DSWRP Project of Ministry of Irrigation and Water Resources Management, Govt. of Sri Lanka, on the topic "Quality Control/ Assessment, Grouting techniques and Machinery and Tests and Analysis to be done in Dams and Irrigation Canals/Sluices" from 5th-10th August 2013 at, New Delhi.

Indian Committee on Large Dams (INCOLD) and Central Board of Irrigation and Power (CBIP) in association with WAPCOS Ltd. organized 2 Days Training Programme for Ghana Engineers on "Dam Safety Aspects of Embankment and Concrete Dams" on 3rd and 4th October 2013 in CBIP office at New Delhi.

Training Program for Engineers from Nigeria : Training Program on Transmission System for Sr. Engineers from TCN, Nigeria was conducted from 10th - 18th September 2012 and the feedback was quite encouraging
Training Activities

Door Step Trainings

Realizing the constraints being faced by the professional in leaving their stations / headquarters for attending various training programme organized by CBIP at New Delhi and other places, CBIP has now decided to organize Door Step / Onsite Training with the aim to provide training and develop skills of various professionals of the organizations dealing in Water, Power as well as Renewable Sector including centre and state PSUs.

Solar Power

In view of the pressing demand CBIP has recently started training on Solar Power Development at their institute. (Gurgaon).
Consultancy Services

Consultancy is one of the thrust areas of CBIP and it under takes consultancy jobs in various areas related to Power, Water Resources and Renewable Energy Sectors. It has provided consultancy services to TATs, KPCL, APSEB, TNEB, IREDA, India Canada Environment Facility (ICEF), CPRI, US Hydro Power Council for International Development, PTC India Ltd. Indraprastha Power Generation Company Limited (IPGCL)/ Pragati Power Company Ltd. TVNL, SECI, NHPC, POSOCO etc. some of the areas where CBIP provides consultancy are indicated below:

- **Manpower Planning**
- **Recruitment of Technical and Non-technical staff on turnkey basis**
- **Preparation of Technical manuals, Power Atlas of States**
- **Maintenance Audit of Power stations and substations**
CBIP Publications

- Brought out more than 1500 Manuals, Technical Reports and Guidelines 1600 Journals since the year 1927
- Held more than 1700 conferences attended by more than 4.00 lacs delegates
- Providing free access to CBIP publications to about 30000 officers of more than 200 Members organizations including Govt. Departments, PSUs, Central and State Power utilities, Engineering colleges, Research Institutes and leading Private Sector Organizations
CBIP - Publications

• Research project reports;
• Journals;
• Design, construction and management publications;
• Specifications/manuals/guidelines;
• Conference/symposium Proceedings
• Specific Case Studies
• Power, hydro, Coal Linkage, Transmission & Water maps
Journals of the Board
Some of the Important Activities During Last 3 Years – Water Sector

Publications

- Guidelines for Fibre Reinforced Shotcrete
- Three Decades of Geosynthetics in India
- Coir Geotextiles (Coir Bhoovastra) for Sustainable Infrastructure
- History of Geosynthetics in India – Case Studies
- Proceedings of 6th Asian Regional Conference on Geosynthetics 8-11 November 2016, New Delhi
- Proc of Tunnelling in Himalayan Geology, Jammu
- Water and Energy International Journal (Monthly)
- INCOLD Journal (Half yearly)
- TAI Journal (Half yearly)
- NDC-WWC journal (Half Yearly)
- IGS India Journal (Half yearly)
- ISRM India Journal (Half yearly)
- IWRA India Journal (Half Yearly)
Trainings, Workshops and Conferences - 2015

- Training Programme on “Roller Compacted Concrete Dams”, 18-19 June 2015, Kullu, Himachal Pradesh
- Symposium on “Advances in Instrumentation, Geo-Monitoring and Validation”, 23-24 July 2015, New Delhi
- Training Programme on “Roller Compacted Concrete Dams”, 6-7 August 2015, Bhopal
- Workshop on “Waterlogging and Soil Salinity in Irrigated Agriculture”, 3-4 September 2015, Chandigarh
- Workshop on “Innovation in Tunnelling Technology – A Report”, 15 October 2015, Shimla, Himachal Pradesh
- Three Decades of Geosynthetics in India – International Symposium on “Gosynthetics – The Road Ahead”, 5-6 November 2015, New Delhi
- Conclave on “Tunnelling in Infrastructure Development : Issues and Challenges”, 29-30 October 2015, Mumbai
Some of the Important Activities During Last 3 Years – Water Sector

Trainings, Workshops and Conferences - 2016

- One-day Workshop on “Innovation in Tunnelling Technology”, 10 February 2016, Tehri PSP, Uttarakhand
- Workshop on “Seismic Aspects of Dam Design – Issues and Challenges”, 28 April 2016, New Delhi
- North Eastern Regional Seminar on “Applications of Geosynthetics in Infrastructure Projects”, 22-23 June 2016, Guwahati (Assam)
- Workshop on “Applications of Geosynthetics in Infrastructure Projects”, 28 June 2016, Thiruvananthapuram (Kerala)
- Training Course on applications of Geosynthetics, 07 November 2016, New Delhi
- Training course on Applications of Geosynthetics in Coastal Protection, 07 November 2016, New Delhi
- 6th Asian Regional Conference on `Geosynthetics’, 8-11 November 2016, New Delhi
Some of the Important Activities During Last 3 Years – Water Sector

**Trainings, Workshops and Conferences - 2017**

- **Workshop on “Latest Technologies in Geological & Geotechnical Investigations and Problems Faced & Mitigation Measures & Adopted during Execution of HE Projects”, 04 August 2017, New Delhi**
- **Workshop on “Tunnel Design”, 10 October 2017, Jammu (J&K)**
- **Conference on “Tunnelling in Himalayan Geology”, 11-13 October 2017, Jammu (J&K)**
Some of the Important Activities During Last 3 Years – Power Sector

Publications

• Manual on Power System Protection
• Manual on Renovation Modernization, Uprating and Life Extension of Hydropower Plants
• Manual on Power Distribution System
• Indian Power Market
• 6th International Conference on Large Power Transformers – Modern Trends in Application, Installation, Operation & Maintenance, 22-23 February 2017, New Delhi
• Manual on Earthing of AC Power Systems
• Proc of International Colloquium on HV Insulated Cables, New Delhi
• Water and Energy International Journal (Monthly)
• IASH Journal (Half yearly)
• CIGRE India Journal (Half yearly)
• SPE Journal (Half yearly)
• AARO Journal (Half yearly)
• INHA Journal (half Yearly)
Some of the Important Activities During Last 2 Years – Power Sector

Trainings, Workshops and Conferences: 2016 - 2017

- Conference on “Gas Insulated Substations (GIS) and Asset Monitoring of Power Equipments”, 19-20 January 2016, New Delhi
- CIGRE Tutorials 15-16 February 2016 Bangalore
- International Conference on “Global Trends in the Development of Power Transmission & Distribution Systems Including Smart Grid” 24-26 February 2016 New Delhi
- WORKSHOP ON FAULT CURRENT LIMITATION TECHNIQUES 18th March 2016 New Delhi
- 4th Conference on ‘Advances & Innovation in Substations’ 26th -27th May 2016 New Delhi
- Conference on "Global Trends and Innovations in Development of Power Sector 28-29 July 2016, New Delhi
- National Conference on “Crisis & Disaster Management in Power Sector and Associated Environment” 11-12 August 2016 New Delhi
- Seminar on Transformers for Skipper Electricals 26th August 2016 Gurgaon
Some of the Important Activities During Last 2 Years – Power Sector

- CONFERENCE ON Condition Based Monitoring of Electrical Assets 6th December 2016 Ahmedabad
- Indian Transformers Engineering Conclave 2017 (ITEC 2017) 13 -14 July 2017 New Delhi
- 3rd Conference on ‘Operation & Maintenance and Renovation, Modernization, Uprating and Life Extension of Hydro Power Plants 22-23 August 2017, New Delhi
- 10th National Conference on Earthing Systems 21-22 September 2017, New Delhi
Expert Committee on Research Scheme on Power (ECRSOP) of Ministry of Power has approved a Research Proposal of CBIP on “Compilation of Data on Latest Technologies in Geological & Geotechnical Investigations and Problems Faced & Mitigation Measures adopted during Execution of Hydroelectric Projects”

On completion of the research work, immensely useful publication for the engineering fraternity would be brought out. This would be a useful guide book to the working engineers as well as to new engineers starting their carrier in the related field.
THANK YOU FOR YOUR ATTENTION