

No. 16/27/2008-PA (N)/ 549-75

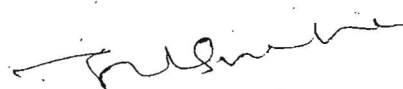
**GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
PROJECT APPRAISAL ORGANIZATION
407, SEWA BHAWAN, R. K. PURAM, NEW DELHI-110 066**

Date: 13th April, 2009

Sub: 97th meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals held on 27.03.2009.

Enclosed please find herewith a copy of the summary record of discussions of the above meeting held at New Delhi on 27th March, 2009 at Sewa Bhawan, R. K. Puram, New Delhi for information and necessary action.

Encl.: As above.


(S. K. Sinha)
Chief Engineer (PAO)

To

Members of Committee:

1. Chairman, CWC, Sewa Bhawan, R. K. Puram, New Delhi.
2. Secretary (Expenditure), Ministry of Finance, (1st Floor) North Block, New Delhi.
3. Secretary, Department of Power, S.S. Bhawan, IInd Floor, New Delhi.
4. Secretary, Ministry of Environment & Forests, 4th Floor, Room No- 404/05 Paryavaran Bhawan, CGO Complex, New Delhi.
5. Secretary, Ministry of Tribal Affairs, Room No. 738, A-Wing, Shastri Bhawan, New Delhi.
6. Secretary, Department of Agriculture & Cooperation, Room No 126, Krishi Bhawan, New Delhi.
7. Director General, ICAR, Room No-108, Krishi Bhawan, New Delhi.
8. Chairman, CEA, Sewa Bhawan, R. K. Puram, New Delhi.
9. Chairman, Central Ground Water Board, Jam Nagar House, Man Singh Road, New Delhi.
10. Principal Adviser (WR), Planning Commission, Room No-255, Yojana Bhawan, New Delhi.
11. Principal Adviser (Power), Planning Commission, Room No-107 Yojana Bhawan, New Delhi.
12. Financial Adviser, Ministry of Water Resources, Room No-401 S.S. Bhawan, New Delhi.

Special Invitees:

13. Member (WP&P), CWC, New Delhi.
14. Member (D&R), CWC, New Delhi.
15. Member (RM), CWC, New Delhi.
16. Commissioner (Projects), Room No-411, S.S. Bhawan, MoWR, New Delhi.

17. Commissioner (Ganga), Ministry of Water Resources, CGO Complex New Delhi.
18. Chairman, GFCC, 3rd Floor, Sinchai Bhawan, Patna-800015
19. Engineer-in-Chief, U.P. Irrigation, Govt. of U.P., Lucknow (U.P.).
20. Secretary (Irrigation), Government of Kerala Secretariat, Thiruvananthapuram-695 001.
21. Secretary, Water Resources Deptt, Govt of Maharashtra, Mantralaya, Mumbai, 400032.
22. Secretary, Water Resources Deptt, Govt of Bihar, Sinchai Bhawan, Patna - 800015.
23. Principal Secretary, Irrigation & CAD Department, Government of Andhra Pradesh, Room No. 716, 7th floor, J-Block, Secretariat Building, Hyderabad-500 022.
24. Secretary (I&CAD), Irrigation Department, Government of Haryana, Civil Secretariat, Chandigarh-160 017.
25. Chief Engineer (PMO), CWC, New Delhi.

Copy for information to -

26. Sr. PPS to Secretary, Ministry of Water Resources, Room No-407 New Delhi.

SUMMARY RECORD OF DISCUSSIONS OF THE 97TH MEETING OF THE ADVISORY COMMITTEE ON IRRIGATION, FLOOD CONTROL AND MULTI-PURPOSE PROJECTS HELD ON 27TH MARCH, 2009 FOR CONSIDERATION OF TECHNO-ECONOMIC VIABILITY OF PROJECT PROPOSALS.

The 97th meeting of the Advisory Committee for consideration of Techno-Economic viability of Irrigation, Flood Control and Multi-purpose Project proposals was held on 27.03.2009 at 1100 Hrs. in the Committee Room of Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi under the Chairmanship of Secretary (WR). List of participants is enclosed at Annexure-I.

Chairman welcomed the Members of the Committee and other Officers present and thereafter requested the Member-Secretary to take up the agenda for discussion. The items discussed and decisions taken are as follows:

A) CONFIRMATION OF THE MINUTES OF THE 96TH MEETING:

The Summary Record of Discussions of the 96th Advisory Committee meeting was circulated vide Lr. No.16/27/2008-PA (N)/435-477, dated 26th February, 2009. Member-Secretary informed the Committee that no comment on the same has since been received. The Committee confirmed the Summary Record of Discussions of the 96th Advisory Committee meeting.

B) PROJECT PROPOSALS PUT UP FOR CONSIDERATION OF THE ADVISORY COMMITTEE:

1) Flood protection works along river Yamuna in the state of Haryana:

CE (PAO) introduced the project proposal which envisages:

- i) Raising and strengthening of river embankment totalling 193.13 km including earthen ramps and one VB bridge.
- ii) Construction of new embankment of 16 km length in district Palwal.
- iii) Construction of WBM road on existing as well as new embankments for a length of 175.04 km.
- iv) Stone pitching of river side slope of embankment for a length of 126.07 km.
- v) Construction of stone revetment along river bank between existing studs for a length of 10.48 km.
- vi) Construction of 250 stone studs along with 143 earthen ramps.

The project was cleared in the 37th meeting of state Technical Advisory Committee held on 29.01.2008 at Chandigarh. The project was also accorded approval by the Haryana State Flood Control Board in its 39th meeting held on 29.01.2008.

State Govt. officials informed that these embankments were constructed during 1979-80 and over the years have degraded due to wear and tear and it is proposed to restore them up to formation level after accounting for free board above the design HFL.

Dr. Pal of ICAR expressed his apprehension whether this would lead to flooding and suggested to increase the capacity of existing channel by dredging. Member (RM) expressed his reservations about efficacy of dredging in the long run. He also opined that construction of new embankment (16 km) be taken up only after assessing the actual effect of Jewar-Tappel embankment under construction on the left bank by Government of UP.

After discussion, the Committee accepted the proposal with the observation that construction of new embankment (16 km) in Palwal district will be taken up, if necessary, only after the effect of Jewar-Tappel embankment which is under construction on the left bank by Government of UP is assessed by GFCC.

2) Punad Irrigation Project, Maharashtra (Revised Estimate):

CE (PAO) introduced the project proposal which envisages the following works:

- i) 706.50 m long composite Earth and Masonary dam with 56.25 m long spillway on the left flank for a design flood 1985 cumec.
- ii) 8.5 km long right bank canal and 9.4 km long left bank canal from the dam itself.
- iii) 120 m long pick –up weir 6 km downstream of the dam with 34 km long left bank canal and 19 km long right bank canal.
- iv) 37.10 km long right bank canal from the existing Chanakapur storage.
- v) Total CCA of the project as 17,841 ha with annual irrigation of 10,846 ha.

This project was earlier accorded investment clearance by the Planning Commission in Dec. 2005 for Rs. 157.78 cr (PL 2004-05). The present proposal is a Revised Estimate without any change in scope of the works and the cost has been finalized as Rs. 340.56 cr (PL 2008-09) with B.C ratio as 1.63.

Chairman desired to know the reasons for such a high increase in cost which has gone up by more than 100% in a short span of 4 years.

The state representative explained that earlier the estimate was based on preliminary survey only. The present revised estimate has been based on actual detailed survey works. In the process the numbers of cross-drainage works have gone up from 1000 to about 3000, resulting in cost escalation by about Rs. 80 cr. The cost has further gone up by about Rs. 50 cr due to price escalation and there has been increase on establishment cost by about Rs. 20 cr.

Commissioner (PR) observed that the project works had been going on since last 25 years and yet the project could not be completed.

The state representative explained that due to paucity of funds, the project works could not be completed as per the schedule. However, the project works could now be completed by March 2010 for which adequate funds would be provided.

The state representative informed that command area development works have been taken up in the Command simultaneously.

The representative of ICAR observed that the water rates should be adopted on the rational basis.

The state representative explained that the State Water Regulatory Authority already constituted in the state of Maharashtra has been looking into the issue of rationalizing the water rates.

After detailed discussions, the Committee accepted the proposal.

3. Rajiv Bhima Lift Irrigation Scheme, AP (Revised Estimate):

CE (PAO) briefly introduced the project proposal which envisages the following works:

- i) 6 pump houses for two lifts with each lift having 3 pump houses. There are 48 pumps (40x850 HP + 8x1000 HP) for lift-I and 36 pumps (36x850 HP) for lift-II.
- ii) Approach channels with head regulator and pumping mains (Total length 20.4 km).
- iii) About 35 km of deep cut canal between various pumping stages of head capacity 30.40 cumec in Lift-I and 21.67 cumec Lift-II.
- iv) 370 km long main canals.
- v) Construction of 2 new balancing reservoirs and modifications of 3 existing balancing reservoirs involving construction of 19.86 km earthen embankment with surplussing arrangement and canals.

- vi) Improvement of Jurala left main canal with additional discharge capacity.

The original proposal was accepted by the Advisory Committee in its 64th meeting held on 03.04.1996 for Rs. 744.00 cr (PL 1993-94) subjected to certain conditions. Subsequently, the proposal was accorded investment clearance by the Planning Commission in Dec. 2007 for Rs. 744.00 cr for CCA of 96,647 ha with annual irrigation of 82,151 ha.

The present proposal is a revised cost estimate without change in the scope of the works and the cost has been finalized for Rs. 1969.00 cr (PL 2004-05) with BC ratio 1.12:1. The proposal has been included under Prime Minister's Rehabilitation package.

The representative of Planning Commission enquired as to why the price level of revised estimate has been taken as 2004-05.

The state representative informed that the complete work was awarded in packages on turnkey basis in the year 2005 itself except for variation due to change in prices of cement, steel, POL, etc. The state representative further intimated that 70% of the works have already been completed. Therefore, variation in cost of steel, cement, POL, etc, would not affect the project cost significantly.

The state representative also intimated that due to the high running cost of the lift irrigation schemes, the BC ratio has worked out to be on lower side.

The state representative further intimated that the project would be completed in financial year 2009-10 and by 2009 a potential of 1 lakh ha would be created.

The representative from the Planning Commission enquired to know about the power availability for the project as well as arrangement for O&M works.

The state representative intimated that power would be made available by the State Govt. itself and all the O&M works of the project and power needs would be looked after by Andhra Pradesh Water Resources Corporation which will be supported by the State Government.

After detailed discussion, the Committee accepted the proposal.

4. Western Kosi Canal Project (Indian Portion)-(Revised Estimate), Bihar:

CE (PAO) briefly introduced the project proposal which envisages the following works:

- i) 112.6 km long main canal including 35.13 km in Nepal with distribution network.
- ii) One No. silt ejector.

The original project proposal was approved by the Planning Commission in 1961 at an estimated cost of Rs. 13.49 cr for a CCA of 1.903 lakh ha to provide annual irrigation to an area of 2.196 lakh ha in Bihar, besides, annual irrigation of 15,300 ha in Nepal. Subsequently, the CCA in Bihar has been increased from 1.903 lakh ha to 2.033 lakh ha by making some area flood free while irrigation intensity has remained unchanged to 115.5%. The cost estimate has undergone several revisions since then. The first revised estimate was approved by the Planning Commission in July 1980 for Rs. 161.80 cr. The second revised estimate was accepted by the Advisory Committee in its meeting held on 25.10.1988 for Rs. 326.61 cr subject to clearance from the Department of Environment. The present revised cost estimate has been finalized for Rs. 1307.21 cr (PL Nov. 2007) with a B.C. ratio 1.56:1. So far an expenditure of Rs. 1010.71 cr has already been incurred up to March 2008.

The State Government has obtained a No Objection Certificate from MoEF with regard to environmental clearance vide Lr. No. J-12011/14/09-1A-1, dated 26.3.09.

The state Principal Secretary, WRD informed that there had been land acquisition problems, especially in the Kamla siphon works. However, these issues have been resolved now and the project could be completed by March 2010.

The representative from ICAR suggested increase in Rabi crops.

Member (RM) opined that currently irrigation is provided from a pondage in Kosi Barrage which cannot store monsoon waters for Rabi crops and only after construction of Kosi high dam assured water would be available for Rabi crops.

After deliberations, the Committee accepted the proposal.

5. Malampuzha Irrigation Project, (ERM), Kerala:

CE (PAO) briefly introduced the project proposal which envisages the following works:

- i) Re-sectioning and rectification of the damaged canal reaches.
- ii) Providing better water regulating arrangement and repairs of head regulators.
- iii) Repair of measuring sections at the off take points of branch canals.
- iv) Repair of C.D. works and structures to prevent wastage.
- v) Widening of Pallavur Branch Canal.
- vi) Excavating 150 m long diversion canal to connect Pallavur Branch to Cheramangalam anicut.

Malampuzha Irrigation Project was taken up in 1949 and commissioned during 1955. Total CCA of the project is 22,554 ha with annual irrigation of 45,108 ha. The present scheme is for stabilization of 1926 ha through renovation and restoration works. The estimated cost of the project has been finalized for Rs. 11.08 cr with a BC ratio 1.60:1.

The state representative stated that proper fund would be provided by the State Government for maintenance works and a decision on increasing water rates will be taken by the State Government.

The representative from the Planning Commission enquired to know whether Water User's Associations (WUA) had been formed in the state or not.

The state representative intimated that WUAs have been formed only in CADA area, not for the main or branch canals.

After discussions, the Committee accepted the proposal.

6. Chitturpuzha Irrigation Project, (ERM), Kerala:

CE (PAO) briefly introduced the project proposal which envisages following works:

- i) Restoring the canal section to the original design standards.
- ii) Repairing or modifying existing structures and outlets.
- iii) Providing new regulators.
- iv) Providing essential measuring devices.
- v) Improving canal roads.
- vi) Improving communication systems.

The Chitturpuzha Irrigation Project was implemented in two stages. Stage-I was completed in 1972 while the Stage-II was completed in 1991. The CCA of the project is 16,940 ha with annual irrigation of 33,880 ha. The present ERM scheme is for stabilization of 4,964 ha through renovation and restoration works. The estimated cost of the scheme has been finalized for Rs. 34.57 cr with BC ratio of 1.35:1.

The state representative informed that the portion of the command to be stabilised for which repair, renovation works being proposed falls in the drought prone areas and the scheme has been taken under Prime Minister's Rehabilitation Package. Therefore, the BC ratio is within the allowable limit.

The state representative further informed that adequate funds would be provided by the Government for the maintenance of the project and measures would be taken for enhancing water rates.

After discussions, the Committee accepted the proposal.

7. Restoring capacity of Sharada Sahayak System, U.P:

CE (PAO) briefly introduced the project proposal which envisages following works:

- i) Restoring capacities of link channel, feeder channel and other branches.
- ii) Repair/Restoration of launching apron and guide bunds of two barrages.
- iii) Construction of studs for protection of guide bunds.
- iv) Repair of service roads, afflux bunds.
- v) Restoring capacity of seepage drains, escape channels, etc.
- vi) Construction of one new silt ejector and restoration of the old silt ejector.

The works of original Sharada Sahayak System was started in 1968 and the project was fully commissioned in 2001. The CCA of the canal system is 15.22 lakh ha with an annual irrigation of 17.50 lakh ha. The present ERM scheme is for stabilization of 7.90 lakh ha of the command area. The estimated cost of the scheme has been finalized for Rs. 319.23 cr (PL 2007) with a BC ratio as 2.19:1.

The state representative informed that a new silt excluder has been proposed in the scheme in order to reduce excessive silt load. Besides, Water User's Associations have been formed to take care of the maintenance works up to the minor level. The main and branch canals would be maintained by the state department itself. In addition, the Water Regulatory Authority has been set up to look into the water policy matters and revision of water rates.

After discussions, the Committee accepted the proposal.

The meeting ended with a vote of thanks to the Chair.

LIST OF PARTICIPANTS**Members of the Committee:**

S/Shri

- | | |
|---|--------------|
| 1. U.N. Panjiar, Secretary (WR), MoWR | In the Chair |
| 2. A.K. Bajaj, Chairman, CWC, New Delhi | Member |
| 3. Avinash Mishra, Dy. Adviser-WR, Planning Commission, New Delhi (Representing Adviser-WR) | Member |
| 4. S. K. Thakur, Director (Finance), MoWR, New Delhi (Representing Financial Adviser-MoWR) | Member |
| 5. Dr. D. K. Paul, Principal Scientist (IWM), NRM Div, ICAR | Member |
| 6. J S Bawa, Director, CEA, New Delhi (Representing Chairman, CEA) | Member |
| 7. U. K. Ghosh, Chief Engineer, PAO, CWC, New Delhi | Member-Secy. |

Special Invitees:**(a) Ministry of Water Resources**

S/Shri

1. Indra Raj, Commissioner (PR), MoWR
2. Ravi Shankar, Sr. Joint Commissioner, MoWR, New Delhi

(b) Central Water Commission:

S/Shri

1. R. C. Jha, Member (RM), CWC, New Delhi
2. A.K. Ganju, Member (WP&P), CWC, New Delhi.
3. S.K. Sinha, Chief Engineer(PMO), CWC, New Delhi
4. G. S. Purba, Chief Engineer, FM, CWC, New Delhi
5. B.G. Kaushik, Director CA(I), CWC, New Delhi
6. C. P. Singh, Director FM-I, CWC, New Delhi
7. G. Thakur, Director(PA-North), CWC, New Delhi
8. M. W. Paunikar, Dy. Director (PA-N), CWC, New Delhi.
9. T.D.Sharma, Dy. Director (PA-Central), New Delhi
10. Basishit Rai, Dy. Director (PA-Central), New Delhi
11. R.K. Upadhyay, Dy. Director (CA-I), CWC, New Delhi
12. S. S. Bonal, Dy. Director (PA-South), CWC, New Delhi

13. Sudhir Kumar, Dy. Director (CA-I), CWC, New Delhi
14. B. Srinivasu, Assistant Director, (PA-Central), New Delhi
15. V. K. Bhakal, Assistant Director, (CA-I), New Delhi
16. Hradesh Kumar, Assistant Director(PA-South), New Delhi
17. S. Jagdeeshan, EAD(PA-N) CWC, New Delhi

(c) State Government Officers

Andhra Pradesh

S/Shri

1. A. N. Das, Secretary (Irrigation), Govt of A.P
2. R. Prabhakar Reddy, CE, I&CAD, Govt of A.P

Bihar

S/Shri

1. Ajay Nayak, Principal Secretary, WRD
2. Nawal Kishore, SE (Planning & Monitoring), WRD
3. P. K. Jha, Resident Engineer, WRD, New Delhi
4. Bipin Kumar, AE, WRD
5. Sanjay Kumar Singh, AE, WRD

Haryana

S/Shri

1. S. L. Agrawal, CE, Irrigation
2. Pawan Verma, EE, Indri WS Div, Karnal

Kerala

S/Shri

1. K. K. Ramesan, CE, Cavary Cell, Kazhikode
2. C. A. Jamaludheen, AEE, WRD, Malampuzha
3. K. H. Shanu, AEE, WRD
4. K. Sreekumar, AE, WRD

Maharashtra

S/Shri

1. S. W. Deshpande, Exec. Director, TIDC, Jalgaon
2. P. R. Bhamare, CE, TIDC, Jalgaon
3. N. L. Salve, SE, Irrigation Circle, Dhule

4. G. M. Sanghani, EE, Godawari Project Division. Nasik

Uttar Pradesh

S/Shri

1. G. D. Singhal, Nodal & Sr. Staff Officer. UP Irrigation
2. Shankar Ram, SE, UP Irrigation Circle
3. Rakesh Kumar, EE, UP Irrigation
4. Y. K. Rawal, EE, Irrigation Division, Sharda Nagar

No. 16/77/2008-PA (N)/1363-1602
GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
PROJECT APPRAISAL ORGANIZATION
407, SEWA BHAWAN, R. K. PURAM, NEW DELHI-110 066

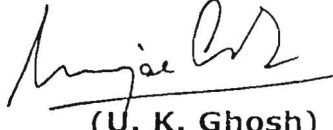
Date: 27th July, 2009

28

Sub: 98th meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals held on 09.07.2009.

Enclosed please find herewith a copy of the summary record of discussions of the above meeting held at New Delhi on 09th July, 2009 at Sewa Bhawan, R. K. Puram, New Delhi for information and necessary action.

Encl.: As above.


(U. K. Ghosh)
Chief Engineer (PAO)

To

Members of Committee:

1. Chairman, CWC, Sewa Bhawan, R. K. Puram, New Delhi.
2. Secretary (Expenditure), Ministry of Finance, (1st Floor) North Block, New Delhi.
3. Secretary, Department of Power, S.S. Bhawan, IIInd Floor, New Delhi.
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5. Secretary, Ministry of Tribal Affairs, Room No. 738, A-Wing, Shastri Bhawan, New Delhi.
6. Secretary, Department of Agriculture & Cooperation, Room No 126, Krishi Bhawan, New Delhi.
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8. Chairman, CEA, Sewa Bhawan, R. K. Puram, New Delhi.
9. Chairman, Central Ground Water Board, Jam Nagar House, ManSingh Road, New Delhi.
10. Principal Adviser (WR), Planning Commission, Room No-255, Yojana Bhawan, New Delhi.
11. Principal Adviser (Power), Planning Commission, Room No-107 Yojana Bhawan, New Delhi.
12. Financial Adviser, Ministry of Water Resources, Room No-401 S.S. Bhawan, New Delhi.

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14. Member (D&R), CWC, New Delhi.
15. Member (RM), CWC, New Delhi.
16. Chairman, GFCC, 3rd Floor, Sinchai Bhawan, Patna-800015
17. Commissioner (Projects), Room No-411, S.S. Bhawan, MoWR, New Delhi.
18. Commissioner (Ganga), Ministry of Water Resources, CGO Complex, New Delhi.
19. Commissioner (Indus), Ministry of Water Resources, CGO Complex, New Delhi.
20. Principal Secretary, Irrigation Department, Government of Uttar Pradesh, Sachivalaya Annexe, Lucknow-226 001 (U.P.).
21. Engineer-in-Chief, U.P. Irrigation, Govt. of U.P., Lucknow (U.P.).
22. Secretary, Water Resources Deptt, Govt of Maharashtra, Mantralaya, Mumbai, 400032.
23. Secretary, Irrigation Department, Government of Karnataka, M.S. Building, 6th Floor, Karnataka Government Secretariat, Dr. Ambedkar Veedhi, Bangalore-560 001.
24. Engineer-in-Chief, WRD, Govt. of Karnataka, Bangalore.
25. Principal Secretary, Narmada Valley Development Authority, Arera Hills, Bhopal

25. Secretary (Water Resources), Government of Chhattisgarh, D.K. Bhawan, Sachivalaya, Raipur-492 010 (Chhattisgarh).
27. Engineer-in-Chief, WRD, Sehawa Bhawan, Civil Lines, Raipur (Chhattisgarh)
28. Secretary (Water Resources), Government of Orissa, Secretariat, Bhubaneswar-751 001 (Orissa).
29. Engineer-in-Chief, WRD, Secha Sadan, Bhubaneswar, Orissa-571 001
30. Principal Secretary, Irrigation Department, Government of Punjab, Secretariat, Chandigarh-160 001.
31. Chief Engineer (PMO), CWC, New Delhi.
32. Chief Engineer (YBO), Yamuna Basin, CWC, B-5, Tara Crescent Rd, Qutab Institution Area, New Delhi- 110016.
33. Chief Engineer, Monitoring-South, CWC, Jalasudha, Near HMT Precision Machinery Division, H.M.T. Post, Bangalore-560031
34. Chief Engineer (NBO),CWC, Paryawas Bhawan, Mother Teresa Marg, Arera Hills, Bhopal-462011
35. Chief Engineer, Monitoring-Central, CWC,CGO Complex, Block-C, III Floor, Seminary Hills, Nagpur- 440 006.
36. Chief Engineer (IBO),CWC, Block-4, 6th Floor, Kendriya Sadan, Sector - 9A, Chandigarh-106 071
37. Chief Engineer (UGBO),CWC, Jahnvi Sadan, 21/496, Indira Nagar, Lacknow-226 016 (UP)
38. Chief Engineer (M&ERO),CWC, Plot No. 13&14, Mahanadi Bhawan, Bhoi Nagar, Bhubaneswar-751 002, Orissa.

Copy for information to:-

39. Sr. PPS to Secretary, Ministry of Water Resources, Room No-407 New Delhi.

SUMMARY RECORD OF DISCUSSIONS OF THE 98TH MEETING OF THE ADVISORY COMMITTEE ON IRRIGATION, FLOOD CONTROL AND MULTI PURPOSE PROJECTS, HELD ON 9TH JULY, 2009 FOR CONSIDERATION OF TECHNO-ECONOMIC VIABILITY OF PROJECT PROPOSALS.

The 98th meeting of the Advisory Committee for consideration of Techno-Economic viability of Irrigation, Flood Control and Multi-purpose Project proposals was held on 09.07.2009 at 1500 Hrs. in the Conference Room of Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi under the Chairmanship of Secretary (WR). List of participants is enclosed at Annexure-I.

At the outset, Chairman welcomed the Members of the Committee and other Officers present and thereafter requested the Member-Secretary to take up the agenda for discussion. The items discussed and decisions taken are as follows:

A) CONFIRMATION OF THE MINUTES OF THE 97TH MEETING:

The Summary Record of Discussions of the 97th Advisory Committee meeting was circulated vide Lr. No.16/27/2008-PA (N)/649-75, dated 13th April, 2009. Member-Secretary informed the Committee that no comment on the same has since been received. The Committee confirmed the Summary Record of Discussions of the 97th Advisory Committee meeting.

B) PROJECT PROPOSALS PUT UP FOR CONSIDERATION OF THE ADVISORY COMMITTEE:

1) Flood Protection works along the Right Bank of River Gandak in Distt - Kushinagar, UP:

CE (PAO), CWC briefly introduced the project proposal which envisages altogether 16 components. The main works include:

- i) Restoration of Chitauni Bund from 0.0 to 2.75 km.
- ii) Raising, widening and pitching of Amwa Khas Bund from 0.0 to 10.065 km.
- iii) Construction of new spurs 9 Nos.
- iv) Constructions of studs – 21 Nos.
- v) Restoration and strengthening of miscellaneous structural components.

All the 16 components of the project proposals have got approval of the state TAC as well as state Flood Control Steering Committee. Particulars of all the 16 components are enclosed at Annexure-II.

The project proposal has been appraised in Ganga Flood Control Commission (GFCC) and the estimated cost finalized for Rs. 6370.22 lakhs with B.C. ratio as 3.47:1. The proposed area to be protected is 1.45 lakh ha with the break-up as under;

Chhitauni Bund & Katai Bharpurwa	: 109816 ha
Amwa Khas Bund	: 8050 ha

No. 16/27/2000
Narwajot Bund & Ahiraulidan Pipraghat Bund : 27498.04 ha

Chairman enquired about the reason for high value of the B.C. ratio.

Chairman, GFCC, explained in brief the methodology of B.C. ratio calculation for flood control projects which was further elaborated by Member (RM), CWC.

After a brief discussion, the Committee accepted the proposal.

2) Flood Protection Works along Left & Right bank of River Ghaghra in district - Bahraich, Barabanki, Gonda, Basti, Faizabad & Mau, UP:

CE (PAO), CWC briefly introduced the project proposal which envisages 25 components of works. The main works of the project proposals include:

- i) Construction of 10.05 km long marginal embankment along right bank of river Ghaghra.
- ii) Raising and strengthening of 48.575 km long marginal embankment along both left and right banks of river Ghaghra.
- iii) Construction of 41 Nos. spurs 2 Nos. studs and 5 Nos. dampners.
- iv) Construction of 4 Nos. regulators on marginal embankment along right bank of river Ghaghra.

The scheme has been cleared by the state TAC and Steering Committee of state Flood Control Board. The details of components of works are enclosed at Annexure-III.

The project proposal has been appraised in GFCC and the estimated cost has been finalized for Rs. 110.00 cr. with B.C. ratio 4.08:1. The area to be protected from the project is 48,612 ha against affected area of 91,719 ha.

Chairman queried about the basis of various component of works included in the project proposal.

The project authorities informed that a team of technical experts as well as officers of GFCC visited the project sites and recommended the flood protection works which have been incorporated in the project proposal.

After a brief discussion, the Committee accepted the proposal.

3) Minimata (Hasdeo) Bango Multipurpose Project (revised), Chhattisgarh:

CE (PAO), CWC briefly introduced the project proposal. He mentioned that the project is being implemented in 4 phases and the present proposal is phase-IV of the project which is for completion of the balance works of phase-III. Earlier, the phase-IV of the project was approved by the Planning Commission for Rs. 1312.32 cr. (SOR-

2002-03). The present cost estimate is a revised one for Rs. 1660.88 cr (SOR-2008-09) without change in scope, with B.C. ratio as 3.10:1.

Member (WP&P), CWC enquired about the provision of water kept for the industries in the project proposal. The project authorities informed that water requirement of Korba Thermal Power Station and other industrial requirements are being met from this project for which 441 MCM of water has been provided for.

Chairman pointed out that the state finance concurrence (SFC) for the estimated cost has not yet been obtained.

The project authorities intimated that the same would be made available within a day or two. They further intimated that the project would be completed by June 2010 without further increase in the cost.

The SFC from the state government has been received.

After a brief discussion, the Committee accepted the proposal.

4. Restoration and Renovation of Bheemasamudra Tank and its canals, Karnataka:

CE (PAO), CWC briefly introduced the project proposal. It is an old irrigation tank presently under medium irrigation sector. The original command of the tank was 2050 ha which has now reduced to 1250 ha. The project proposal is for restoration of the command to its original size of 2050 ha envisaging the following works:

1. Three Nos. feeder canals for augmentation of flow into the Bheemasamudra Tank.
2. Renovation of canal system.
3. Various repair works, pipe crossings in the canal system.
4. Catchment Area Treatment.

The project has been examined in Central Water Commission and the cost of the project has been finalized for Rs. 9.375 cr with B.C. ratio as 1.029:1. The project has been taken under Prime Minister's package for mitigating distress of farmers of identified drought prone districts of Karnataka. The project benefits Chitradurga district of Karnataka.

Commissioner (PR) pointed out that design flood for the project has not been worked out for the proposal.

The project authorities informed that they have estimated design flood, based on Dicken's formula which has already been submitted to CWC. It has been noted that the existing capacity of the spillway is 200 cumec against the design flood value of 146

cumec. The project authorities further intimated that the original Bheemasamudra Tank project was about 500 years old and so far withstood all the floods passed over it.

State Finance Concurrence has been obtained for the project.

After a brief discussion, the Committee accepted the proposal.

5. Punasa L.I.S. (Major Revised), Madhya Pradesh:

CE (PAO), CWC briefly introduced the project proposal. The project proposal envisages for direct lifting of water from Indira Sagar Project reservoir to irrigate command area of 35,008 ha in drought prone areas of East Nimar district of Madhya Pradesh and providing drinking water supply of 4.216 MCM annually to the villages in the command area. The original project proposal was approved by Planning Commission for Rs. 185.03 cr (PL 2003). The present revised estimate has been finalized in CWC for Rs. 488.06 cr (PL 2008) with B.C. ratio of 1.29:1.

State Finance Concurrence for the proposal has been obtained.

Chairman pointed out that B.C. ratio of the project is on lower side.

The project authorities informed that the project is benefiting the drought prone areas of Madhya Pradesh wherein, the value of B.C. ratio of 1.29:1 is acceptable as per the guidelines. They further explained that the cost of power generation (15 MW) has also been included in the cost of the project which has somewhat affected the B.C. ratio value.

Chairman enquired about the completion target of the project.

The project authorities informed that the project would be completed by 2010-11.

After a brief discussion, the Committee accepted the proposal.

6. Dongargaon Tank Project (Medium Revised Estimate), Maharashtra:

CE (PAO), CWC briefly introduced the project mentioning that earlier the original proposal was approved by Planning Commission in 1981 for Rs. 2.15 cr (PL-1980-81) to benefit CCA of 3630 ha and annual irrigation of 3737 ha in drought prone area in Chandrapur district of Maharashtra. The present proposal is a revised estimate with change in scope in CCA from 3630 ha to 2845 ha with annual irrigation of 3942 ha. The project proposal includes:

- i) an earthen dam, 474 m. long, across Dongargaon nallah in Chandrapur district of Maharashtra and
- ii) 6.845 km long right bank canal with command of 2845 ha.

The revised estimate has been examined in Central Water Commission and finalized for Rs. 67.03 cr (PL 2007-08) with B.C. ratio of 1.813:1.

State Finance Concurrence for the project has been obtained.

Chairman enquired about the physical progress of the project.

The project authorities intimated that the project is in advance stages of construction and main works have already been completed. It was also clarified by the project authorities that tenders for remaining works have already been awarded as per 2007-08 schedule of rates.

After a brief discussion, the Committee accepted the proposal.

7. Krishna Koyna L.I.S (New Major), Maharashtra:

CE (PAO), CWC briefly introduced the project. The project proposal envisages lifting of a total of 26.78 TMC of water from river Krishna at two locations to benefit a total CCA of 1.72 lakh ha with annual irrigation of 1.21 lakh ha. The proposed water use is within the KWDT award.

The project was considered in the 42nd TAC meeting held in Jan. 1989 and was accepted for Rs. 259.10 cr subject to conditions. However, investment clearance by Planning Commission for the project was not accorded for want of compliance by the project authorities. Subsequently, the project was again considered in the 90th meeting of Advisory Committee, but the same was deferred for want of environmental clearance.

The project authorities have now obtained the requisite environmental clearance of MoEF as well as formal approval of MoEF for diversion of 19.75 ha of forest land. The project proposal has been scrutinized in CWC and the estimated cost of project has been finalized for Rs. 2224.76 cr at (PL-2006-07) with B.C. ratio of the project as 1.73:1.

Chairman pointed out that the estimated cost of the project has been based on SOR 2006-07 whereas the same could have been finalized based on the latest SOR of the state government.

The project authorities informed that since the environmental clearance was received only on 1st July, 2009, there was hardly any time left for updation of the cost at current price level. They also intimated that more than 50% of the works involving major components has already been completed and the remaining expenditure would be incurred mainly for distribution network.

Member (WP&P), CWC, enquired about the reason for not making provision for drinking water in the project proposal.

The project authorities explained that as per the policy of the state government, no provision for drinking water would need to be made under lift irrigation schemes. They have also intimated that the drinking water supply in the command area of Krishna-Koyna L.I.S has already been planned from a number of medium, minor and percolation tanks existing in the command of the project.

Director, Finance (MoWR), pointed out that as the completion date of the project has been indicated by the project authorities as 2013-14, whether it would be possible to complete the project within the present estimated cost.

The project authorities assured that there would not be any further increase in the project cost which they have subsequently confirmed through official communication before issue of the minutes (copy enclosed as Annex-IV).

State Finance Concurrence for the project proposal has been obtained.

After a brief discussion, the Committee accepted the proposal.

3. Kanupur Irrigation Project (Major – revised), Orissa:

CE (PAO), CWC briefly introduced the project proposal and mentioned that the original Kanupur Irrigation Project was accorded investment clearance by the Planning Commission in Sept. 2002 for estimated cost of Rs. 428.32 cr (PL 1998) to benefit CCA of 29,578 ha with annual irrigation 47,709 ha. The project mainly envisages construction of a 3460 m long earthen dam across river Baitarani and an unlined right bank canal system with distribution network up to 5.0 ha block.

The present estimate is a revised cost estimate without any change in scope. The cost estimate has been finalized by CWC for Rs. 1067.51 cr (PL 2008) with B.C. ratio as 2.368:1. SFC for the revised cost estimate has already been obtained.

Chairman observed that the cost of development of irrigation in this project as Rs. 3.60 lakh/ha is on higher side while the B.C. ratio for the project has been worked out as 2.368:1 which is also on higher side.

The project authorities explained that the cost of the project has substantially increased mainly due to the revised R&R policy of 2006 of the state government. As regards B.C. ratio, the figure has gone up mainly due to much higher yield value (11.5 T/ha) taken against HYV paddy, by mistake.

The project authorities submitted corrected data for revised B.C. ratio calculation which has been worked out to be 1.68:1.

After a brief discussion, the Committee accepted the proposal.

9. Upper Indravati Extension Project – left ayacut beyond river Tel and right ayacut beyond river Sagada, (Major Revised), Orissa:

CE (PAO), CWC briefly introduced the project proposal. The Upper Indravati Extension Project is basically continuation of old Upper Indravati project located in KBK region of Orissa. The extension proposal is for additional CCA of 25,484 ha with annual irrigation of 41,794 ha. The original extension proposal was approved by the Planning Commission in March 2003 for Rs. 136.67 cr at (PL-1998). The present revised cost estimate is without change in scope. The revised cost has now been finalized for Rs. 564.77 cr with B.C. ratio as 2.65:1. The State Finance Concurrence for the revised estimate has been obtained.

After a brief discussion, the Committee accepted the proposal.

10. Lower Indra Irrigation Project (Major Revised), Orissa:

CE (PAO), CWC briefly introduced the project proposal. The original proposal of Lower Indra Irrigation Project was accorded investment clearance by the Planning Commission in Feb. 1999 for Rs. 211.70 cr (PL-1997).

The project proposal envisages an earthen dam, 3780 m long, on river Indra with right bank canal system and left bank canal system for a CCA of 29,900 ha with annual irrigation of 38,870 ha. The first revised cost estimate without change in scope was accorded investment clearance by Planning Commission in Jan. 2009 for Rs. 521.13 cr (PL-2004). The present revised cost estimate without any change in scope has been finalized for Rs. 1182.23 cr (PL-2008) with B.C. ratio as 1.16:1. The project being in KBK region of Orissa, the value of B.C. ratio is acceptable.

SFC for the revised estimated has been obtained.

After a brief discussion, the Committee accepted the proposal.

11. Subarnarekha Irrigation Project (Major-revised), Orissa:

CE (PAO), CWC briefly introduced the project proposal. This is an inter-state project with Jharkhand and West Bengal. The original project was accorded investment clearance by the Planning Commission in Dec. 1995 for Rs. 790.32 cr for the work components in Orissa only, to benefit a CCA of 1.09 lakh ha with annual irrigation of 1.87 lakh ha. The present revised cost estimate without change in scope has been finalized for Rs. 4049.93 cr. including share cost of Rs. 817.52 cr to be borne by Orissa for the works in Jharkhand. The B.C. ratio of the revised cost estimate has been worked out to be 2.14:1.

State Finance Concurrence for the revised estimated has been obtained.

Chairman enquired about the reason for not including share cost of Orissa for the works in Jharkhand in the earlier sanctioned estimate.

Member (WP&P), CWC explained that although the Subemarekha project in Orissa portion had the investment clearance by the Planning Commission earlier, the Subemarekha project in Jharkhand did not have the approval due to pending issues regarding forest and wild life clearances from MoEF. He further intimated that the Govt. of Jharkhand has recently obtained the requisite clearance from MoEF and their proposal would be reconsidered on submission of the revised proposal after revision of the cost as per current SOR. He further added that there was no issue related to environment and forest clearances in the stretches where the carrier main canal for Orissa from Galudi Barrage to Orissa state border being constructed.

After a brief discussion, the Committee accepted the proposal.

12. Relining of Rajasthan Feeder from RD 179000 to 496000, Punjab, Major New - ERM, Rajasthan:

CE (PAO), CWC briefly introduced the project proposal. Rajasthan Feeder has its off-take in the upstream of Harike head works across just downstream of the confluence of the Sutlej and the Beas rivers in Punjab. The Rajasthan Feeder has its entire command in the state of Rajasthan.

The canal was constructed as lined during late 50s to mid 60s. However, due to seepage from the canal as well as damages in the canal lining, irrigation in Rajasthan has been affected as well as about 84800 ha of land in Punjab has been facing water logging problem.

The present proposal is for relining of Rajasthan Feeder from RD 179000 to 496000 in order to stabilize irrigation in Rajasthan as well as for reclamation of waterlogged area in Punjab. The proposal has been scrutinized in Central Water Commission and the estimated cost finalized as Rs. 952.10 cr with BC ratio 2.12:1.

The State Finance Concurrence for the project proposal has been obtained.

Member (WP&P), CWC pointed out that Govt. of Rajasthan communicated that period of canal closure should not be more than 21 days. He enquired to know from the project authorities about the alternate ways of maintaining uninterrupted water supply to Rajasthan while the relining works would be undertaken. The project authorities informed that they are exploring the technology for concrete lining under running water so that supply of water to Rajasthan will not be affected. Member (WP&P) emphasized that closure of canal should be done with consent of Rajasthan government.

After a brief discussion, the Committee accepted the proposal with observation that a joint committee comprising of representatives from both Punjab and Rajasthan

may be set up to decide upon cost sharing as well as to look into the concern of Rajasthan regarding canal closure during implementation of the project.

13. Relining of Sirhind Feeder from RD 119700 to 447927, (Major-New – ERM), Punjab:

CE (PAO), CWC briefly introduced the project proposal. The Sirhind Feeder has its off-take in the upstream of Harike head works constructed across just downstream of the confluence of the Sutlej and Beas rivers. The Sirhind was constructed simultaneously with Rajasthan Feeder during late 50s to mid 60s. The Sirhind Feeder has its command in Punjab as well as in Rajasthan.

The Sirhind Feeder was constructed as lined canal similar to Rajasthan Feeder. However, due to seepage loss, as well as, damages in the canal lining, the adjoining areas to the canal have been affected by the water logging, thereby reducing irrigation capacity of the canal. The present project proposal is for relining of canal from RD 119700 to 447927 in order to stabilize irrigation as well as to check water logging. The estimated cost of the project has been finalized for Rs. 489.165 cr (PL-2008) with B.C. ratio as 2.67:1 which will benefit an area of 34,548 ha in Punjab.

State Finance Concurrence for the project proposal has been obtained.

After a brief discussion, the Committee accepted the proposal with observation that a joint committee comprising of representatives from both Punjab and Rajasthan may be set up to decide upon cost sharing as well as to look into the concern of Rajasthan regarding canal closure during implementation of the project.

14. Eastern Ganga Canal Project (Revised Major), UP

The Eastern Ganga Canal project located in Haridwar district of Uttarakhand and Bijnour and Jyotiba Phule Nagar districts of UP envisages utilization of the surplus monsoon flow of river Ganga for development of kharif cultivation.

CCA of the project: 2.32 lakh ha.
Annual Irrigation 1.05 lakh ha.

The project was originally approved by the Planning Commission for Rs. 48.46 cr (PL-1979) in March 1980. Subsequently, the cost estimate was revised which was accepted by the Advisory Committee of MoWR for Rs. 258.48 cr in its 56th meeting held in Nov. 1993 with conditions. However, the same did not have investment clearance by Planning Commission later on.

The present proposal is the revised cost estimate (PL-2008) which has been examined and the cost finalized for Rs. 892.44 cr (PL-2008) with B.C ratio of 1.51:1.

Approval of the Expenditure Finance Committee for the project proposal has been obtained.

After a brief discussion, the Committee accepted the proposal.

15. Modernisation of Lachura Dam

The Lachura Dam was constructed during 1906-1910 across river Dhasan, a tributary of Betwa River. The original proposal of 'Modernisation of Lachura Dam' was accorded investment clearance by the Planning Commission for Rs. 8.53 cr. in April, 1980. Subsequently, a revised proposal was also accorded investment clearance by Planning Commission for Rs. 88.30 cr in May, 2005.

The present revised cost estimate, without change in scope, has been finalized for Rs. 299.36 cr (SOR-2008) with B.C. ratio as 1.29:1. The B.C. ratio is acceptable as the benefited area falls under DPA in Jhansi district.

Approval of the Expenditure Finance Committee for the project proposal was obtained earlier in Oct. 08 for Rs. 257.01 cr which is less than the currently appraised estimated cost of Rs. 299.36 (SOR-2008).

After brief discussion, the Committee advised the project authorities to obtain revised approval of Expenditure Finance Committee for the currently appraised estimated cost of Rs. 299.36 cr for considering the proposal in the next meeting of the Advisory Committee.

LIST OF PARTICIPANTS**Members of the Committee:**

S/Shri

- | | |
|--|--------------|
| 1. U.N. Panjiar, Secretary (WR), MoWR | In the Chair |
| 2. A.K. Bajaj, Chairman, CWC, New Delhi | Member |
| 3. S. K. Thakur, Director (Finance), MoWR, New Delhi
(Representing Financial Adviser-MoWR) | Member |
| 4. Dr. Man Singh, ASCO (NRM), New Delhi
(Representing Secretary, Department of Agriculture & Cooperation
-Ministry of Agriculture) | Member |
| 5. Alok Shrivastava, Scientist CGWB (Representing Chairman,
Central Ground Water Board) | Member |
| 6. Tanmay Das, Chief Engineer, CEA | Member |
| 7. U. K. Ghosh, Chief Engineer, PAO, CWC, New Delhi | Member-Sec |

Special Invitees:**(a) Ministry of Water Resources**

S/Shri

1. A. B. Pandya, Commissioner (PR), MoWR

(b) Central Water Commission:

S/Shri

1. R. C. Jha, Member (RM), CWC, New Delhi
2. Indra Raj, Member (WP&P), CWC, New Delhi.
3. S.K. G. Pandit, Chief Engineer(NBO), CWC, Bhopal
4. H. K. Verma, Chief Engineer (IBO), CWC, Chandigarh
5. K R Joshi, Chief Engineer Mon-South, CWC, Bangalore
6. R. S. Goel, Chief Engineer (MERO), CWC, Bhubaneshwar
7. B.G. Kaushik, Director CA(I), CWC, New Delhi
8. M.S. Gupta, Director Mon (C), CWC, New Delhi
9. G. Thakur, Director(PA-North), CWC, New Delhi
10. S. K. Haldar, Director(M&A), CWC, Bhopal
11. V. N. Wakpunjar, Director(Appraisal), CWC, Nagpur
12. J Jai Raju, Director, CWC, Bangalore
13. A. C. Goel, Director(M&A), CWC, Bhubaneshwar
14. M. W. Paunikar, Dy. Director (PA-N), CWC, New Delhi.
15. T.D.Sharma, Dy. Director (PA-Central), New Delhi

16. Basishit Rai, Dy. Director (PA-Central), New Delhi
17. R.K. Upadhyay, Dy. Director (PA-C), CWC, New Delhi
18. S. S. Bonal, Dy. Director (PA-South), CWC, New Delhi
19. Sudhir Kumar, Dy. Director (CA-I), CWC, New Delhi
20. Punit Kumar, Dy. Director (PA-South), CWC, New Delhi
21. B. Srinivasu, Assistant Director, (PA-Central), New Delhi
22. Anil Kumar Singh, Assistant Director (PA-N), New Delhi
23. Hradesh Kumar, Assistant Director (PA-South), New Delhi
24. S. Jagdeeshan, EAD (PA-N) CWC, New Delhi

(c) GFCC

S/Shri

1. S. K. Sinha, Chairman, GFCC, Patna

(d) State Government Officers

Chattisgarh

S/Shri

1. O P Mishra, Chief Engineer, Hasdeo Bango Project, Govt of Chattisgarh

Karnataka

S/Shri

1. R. Rushtraish, Chief Engineer, WRD, Govt of Karnatakka
2. Charndrashckhar, EE, Govt of Karnatakka

Madhya Pradesh

S/Shri

1. R. S. Julaniya, Vice Chairman, NVDA, Govt of Madhya Pradsh.
2. V. K. Bhatia, Member (Engg), NVDA
3. J. R. Ingle, Chief Engineer, Indira Sagar Project, NVDA

Maharashtra

S/Shri

1. V. V. Gaikwad, Secretary (WR), Govt of Maharashtra
2. S. N. Huddar, Advisor to Govt of Maharashtra
3. D. P. Shirke, Executive Director, VIDC
4. H Y Kolawale, Executive Director, MKVDC
5. N. B. Ghuge, Chief Engineer, Gosikhurd Project
6. S. M. Upase, Chief Engineer, WRD

Orissa

S/Shri

1. S. C. Mahapatra, Secretary, WR, Govt of Orissa
2. H Ch. Behera, Engineer in Chief, WRD, Govt of Orissa

Punjab

S/Shri

1. Vinod Choudhary, Chief Engineer Canals, Govt of Punjab
2. P. S. Bhogal, SE, Ferozpur Canals, Govt of Punjab

Uttar Pradesh

S/Shri

1. Attar Singh, Engineer in Chief, UP Irrigation
2. G. D. Singhal, Nodal & Sr. Staff Officer, UP Irrigation

Annexure-II

Flood protection works along the Right bank of River Gandak in Dist- Kushinagar, UP

S. No	Name of Project	Reference of Approved TAC	Ref. of U.P. State Flood Control Steering Committee
1.	Project Estimate for Restoration of Chhitauni Bund from Km. 0.00 to 2.400 & Protection of D/S Toe of Bund	152 nd Dt. 18.1.08	30 th Dt. 8.3.08
2.	Project Estimate for Restoration of Chhitauni Bund from Km. 2,400 to 3.750 & Protection of Toe against Genhi Nala in District Kushinagar	154 th Dt. 24.3.08	31 st Dt. 29.3.08
3.	Project Estimate for Raising & Strengthening of Chhitauni Bund from Km. 6.800 to 14.400	154 th Dt. 24.3.08	31 st Dt. 29.3.08
4.	Project Estimate for Const. of Spur at Km. 7,830, 8.330, 8.650 on Chhitauni Bund	154 th Dt. 24.3.08	31 st Dt. 29.3.08
5.	Project Estimate for Restoration of spur at Km. 10.037, 10.132, 10.450, 10.685, 10.821, 10.90 and 11.200 & Apron of U/S Shank of spur at Km. 8.148 of Chhitauni Bund	154 th Dt. 24.3.08	31 st Dt. 29.3.08
6.	Project Estimate for Const. of Revetment, Percupine and stud (6x12) in U/S from Spur 'C' at Km. 6,800 of Chhitauni Bund	160 th Dt. 20.4.09	35 th Dt. 15.5.09
7.	Project Estimate for Const. of Stud at Km. 23,300 at Katai Bharpurwa Bund	160 th Dt. 20.4.09	35 th Dt. 15.5.09
8.	Project Estimate for Extension Nose Apron of Spur at Km. 23.820 and Pitching of Spur at Km. 23,490 on Katai Bharpurwa Bund.	160 th Dt. 20.4.09	35 th Dt. 15.5.09
9.	Project Estimate for Const. of Spur at Km. 3,700 and 4.500 on Amwa Khas Bund	154 th Dt. 24.3.08	31 st Dt. 29.3.08
10.	Project Estimate for Raising, Widening and Painting on Amwa Khas Bund from Km. 0.00 to 10.065	152 nd Dt. 18.1.08	30 th Dt. 8.3.08
11.	Project Estimate for Const. 8 Nos. Studs in between Km. 4.500 to 4.900 on Amwa Khas Bund.	160 th Dt. 20.4.09	35 th Dt. 15.5.09
12.	Project Estimate for Const. Revetment in between Km. 8,600 to 9.00 on Amwa Khas Bund	160 th Dt. 20.4.09	35 th Dt. 15.5.09
13.	Project Estimate for Const. of 2 Nos. spur at Km. 1.00 and 1.500 on Narwajot Bund	160 th Dt. 20.4.09	35 th Dt. 15.5.09
14.	Project Estimate for Const. of 2 No. Spur at Km. 5,900 and 6,400 on Ahiraulidan Pipraghat Bund	154 th Dt. 24.3.08	31 st Dt. 29.3.08
15.	Project Estimate for E/W in filling Depression in cut end-2 and spur No. 4 on Ahiraulidan Pipraghat Bund.	160 th Dt. 20.4.09	35 th Dt. 15.5.09
16.	Project Estimate for Const. of 12 Nos. Stud in between Km. 7.431 to 8.529 on Ahiraulidan Pipraghat Bund	160 th Dt. 20.4.09	35 th Dt. 15.5.09

Flood Protection works along left & right bank of river Ghaghra in district-Bahraich, Barabanki, Gonda, Basti, Faizabad & Mau (UP)

LIST OF THE PROJECT COMPONENTS

Sl. No.	Item of Work
1.	1.1-Project for Protection of Ayodhya Bilvhari Ghat from km. 8.650 to 9.150 on right bank of Ghaghra river.
2.	1.2-Project for strengthening and raising of Ayodhya Bilvhari Ghat Bund on right bank of river Ghaghra in Distt-Faizabad.
3.	2.1-Project for Protection of Raunahi Bund from km 3800 to 5,400 on right bank of Ghaghra river in Faizabad.
4.	2.2-Project for the construction of spur at km 7.050 and strengthening of studs from km 7.300 to 7.950 for the protection of Raunahi Bund on right bank of river Ghaghra in Distt-Faizabad.
5.	3.1-Revised project for construction of marginal embankment between Harishchandra Ghat to Udaya Ghat on right bank of river Ghaghra (Saryu in dist. Faizabad).
6.	3.2-Project for construction of retired embankment between km. 3.400 to km 3.900 & flood protection works from km. 3.00 to km. 3.900 of Harishchandra Ghat to Udaya Ghat marginal embankment at Faizabad.
7.	4-Project for protection of Alinagar Ranimau Bund from km. 19.800 to 20.800 on right bank of Ghaghra river in distt. Barabanki.
8.	5-Project for anti erosion work from km. 35.00 to 36.350 of Elgin Bridge Charsari embankment at left bank of Ghaghra in dist. Barabanki.
9.	6.1-Project for protection of Rewaly Adampur bund from km. 9.00 to 10.700 left bank of river Ghaghra in dist. Bahraich.
10.	6.2-Project for protection of Rewaly Adampur bund from km. 10.700 to 11.235 left bank of river Ghaghra in dist. Bahraich.
11.	6.3 – Project for protection of Rewaly Adampur bund from km. 11.325 to 12.00 left bank of river Ghaghra in dist. Bahraich.
12.	7- Project estimate for recruitment of spur no. 2 at km. 58.00 & stud no. 4 at km. 57.500 and two proposed studs no. 5 & 6 on B.B. Bundhof left bank of river Ghaghra in distt. Bahraich.
13.	8- Project for extension Bibipur Belauli bund on right bank of Ghaghra in dist. Mau.
14.	9-Project for protection of town Rasulpur – Imamuddinpur on right bank of Ghaghra in distt. Mau.
15.	10.1-Project estimate for protection of Gaura-Saifabad embankment between km. 12.600 to 13.200.
16.	10.2-Project estimate for raising & strengthening of Gaura-Saifabad embankment between km. 0.00 to 13.400.
17.	11.1-Project estimate for protection of Saifabad-Kalwari embankment between km. 0.200 to 0.700
18.	11.2 – Project estimate for protection of Saifabad-Kalwari embankment between km. 0.700 to 1.000
19.	11.3-Project estimate for raising & strengthening of Saifabad-Kalwari embankment between km. 0.00 to 2.750.
20.	12-Project estimate for raising & strengthening of Kashipur-Dubauliya embankment between km. 0.00 to 11.500.
21.	13-Project estimate for raising & strengthening of Katariya-Chandpur embankment between km. 0.00 to 5.400.
22.	14-Project estimate for raising & strengthening of Chandpur-Gaura embankment between km. 0.00 to 1.800.
23.	15.1-Project estimate for protection of Vikramjot Dhuswa embankment between km. 7.500 to 8.600 on left bank of river Ghaghra in Tehsil Harriya, Dist. Basti.
24.	15.2-Project estimate for protection of Vikramjot Dhuswa embankment between km. 9.500 to 10.00 on left bank of river Ghaghra in Tehsil Harraiya, Dist. Basti.
25.	15.3-Project estimate for protection of Vikramjot Dhuswa embankment between km. 10.925 to 11.300 on left bank of river Ghaghra in Tehsil Harraiya, Dist. Basti.

No. 16/27/2008-PA (N)/ 1653-89
GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
PROJECT APPRAISAL ORGANIZATION
407, SEWA BHAWAN, R. K. PURAM, NEW DELHI-110 066

Date: 4th Sept, 2009

Sub: 99th meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals held on 24.08.2009.

Enclosed please find herewith a copy of the summary record of discussions of the above meeting held at New Delhi on 24th August, 2009 at Sewa Bhawan, R. K. Puram, New Delhi for information and necessary action.

Encl.: As above.


(U.K. Ghosh)
Chief Engineer (PAO)

To

Members of Committee:

1. Chairman, CWC, Sewa Bhawan, R. K. Puram, New Delhi.
2. Secretary (Expenditure), Ministry of Finance, (1st Floor) North Block, New Delhi.
3. Secretary, Department of Power, S.S. Bhawan, IInd Floor, New Delhi.
4. Secretary, Ministry of Environment & Forests, 4th Floor, Room No- 404/05 Paryavaran Bhawan, CGO Complex, New Delhi.
5. Secretary, Ministry of Tribal Affairs, Room No. 738, A-Wing, Shastri Bhawan, New Delhi.
6. Secretary, Department of Agriculture & Cooperation, Room No 126, Krishi Bhawan, New Delhi.
7. Director General, ICAR, Room No-108, Krishi Bhawan, New Delhi.
8. Chairman, CEA, Sewa Bhawan, R. K. Puram, New Delhi.
9. Chairman, Central Ground Water Board, Jam Nagar House, ManSingh Road, New Delhi.
10. Principal Adviser (WR), Planning Commission, Room No-255, Yojana Bhawan, New Delhi.
11. Principal Adviser (Power), Planning Commission, Room No-107 Yojana Bhawan, New Delhi.
12. Financial Adviser, Ministry of Water Resources, Room No-401 S.S. Bhawan, New Delhi.

Special Invitees:

13. Member (WP&P), CWC, New Delhi.
14. Member (D&R), CWC, New Delhi.
15. Member (RM), CWC, New Delhi.
16. Commissioner (Projects), Room No-411, S.S. Bhawan, MoWR, New Delhi.
17. Commissioner (Ganga), Ministry of Water Resources, CGO Complex, New Delhi.
18. Commissioner (Indus), Ministry of Water Resources, CGO Complex, New Delhi.

SUMMARY RECORD OF DISCUSSIONS OF THE 99TH MEETING OF THE ADVISORY COMMITTEE ON IRRIGATION, FLOOD CONTROL AND MULTI PURPOSE PROJECTS, HELD ON 24TH AUGUST, 2009 FOR CONSIDERATION OF TECHNO-ECONOMIC VIABILITY OF PROJECT PROPOSALS.

The 99th meeting of the Advisory Committee for consideration of Techno-Economic viability of Irrigation, Flood Control and Multi-purpose Project proposals was held on 24.08.2009 at 1500 Hrs. in the Conference Room of Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi under the Chairmanship of Secretary (WR). List of participants is enclosed at Annexure-I.

At the outset, Chairman welcomed the Members of the Committee and other Officers present and thereafter requested the Member-Secretary to take up the agenda for discussion. The items discussed and decisions taken are as follows:

A) CONFIRMATION OF THE MINUTES OF THE 98TH MEETING:

The Summary Record of Discussions of the 98th Advisory Committee meeting was circulated vide Letter No.16/27/2008-PA (N)/1363-1402, dated 27th July, 2009. Member-Secretary informed the Committee that no comment on the same has since been received. The Committee confirmed the Summary Record of Discussions of the 98th Advisory Committee meeting.

B) PROJECT PROPOSALS PUT UP FOR CONSIDERATION OF THE ADVISORY COMMITTEE:

1) Krishna Delta Modernization including Pulichintala Dam Project – Major, Andhra Pradesh:

CE (PAO), CWC briefly introduced both the project proposals which were accepted as a composite project in the 64th meeting of Advisory Committee held on 3.4.1996 subject to conditions including mandatory clearances from MoEF and MoTA as well as compliance to few specific technical observations by CWC. CCA of the composite project is 4.22 lakh ha with annual irrigation of 5.75 ha. The project proposals envisages as follows:

Pulichintala project:

- i) A composite earth and concrete dam of length 355 M and 934 M including 560.25 M long spillway with 24 radial gates (size 18.5 M x 17 M).
- ii) 4 Nos. Irrigation sluices (size 2.1 M x 4.0 M).

Krishna Delta Modernisation:

- i) Reconstruction of one 22 Nos. of head regulators and construction of one 21 Nos. of cross-regulators.
- ii) Reconstruction of 55 Nos. of C.D. works.
- iii) Reconstruction of 155 bridges (VRB).

- iv) Repairs to canal system forming 797 kms of banks to standards, desilting, lining in selective reaches of about 1.54 kms length.
- v) Reconstruction of 23 escapes and construction of 14 new escapes.
- vi) Desilting and improvement of 1160 km of drains.
- vii) Improvement of communication system on canal banks.
- viii) Introduction of VHF communication system for water management and operation of canal system.

Earlier, the composite project was appraised for Rs. 1165.36 cr at PL-1995-96. The project proposal has now been freshly appraised and the estimated cost has been finalized as Rs. 3684.50 cr at PL-2008-09 with B.C. ratio as 1.93:1.

Chairman enquired to know about utility of the project.

Engineer-in-Chief, Water Resources Department, Andhra Pradesh explained that the Pulichintala Dam between Nagarjuna Sagar Dam and Prakasam barrage was for the purpose of tapping uncontrolled flows from the intervening catchment which were otherwise going waste into the sea without any utilization. He further explained that the coastal Andhra Pradesh being cyclone prone in the month of November, early sowing of crops using the storage of Pulichintala dam would minimize the adverse cyclonic effects on crops.

Chairman further enquired to know the reason for taking long completion period for the project.

Engineer-in-Chief explained that the canal lining would be taken up in phases by stopping the supply of water for rabi crops due to which completion time of the project would be prolonged.

After a brief discussion, the Committee accepted the proposal.

2) Eastern Kosi Canal System – ERM Project, Bihar:

Chief Engineer (PAO) briefly introduced the project proposal. The Eastern Kosi Canal System which takes off from the Kosi barrage on the left bank was immensely damaged due to the breach in the afflux bund in Nepal portion during the devastating flood of August, 2008. As a measure of restoration and rehabilitation of the project, the proposed renovation works envisage the following:

Main Canal:

- (i) Restoration of both banks of Eastern Kosi Canal as well as branch canal distributaries, minors, etc.
- (ii) Disilting of the main canal as well as branch canal and distributaries system to restore design capacity.
- iii) Restoration of damaged structures such as siphons, aqua ducts, bridges, head regulators, branch regulators, etc.

- iv) Construction of new structures for heavily damaged or washed out canal structures.
- v) Restoration of boulder lining in slopes of canal wherever required.
- vi) Provision and construction of stilling machine to facilitate silt free water in hydel power house.
- vii) Repair of service roads along the canals.

The project proposal has been framed in order to stabilize a CCA of 6.12 lakh ha. The proposal has been examined in Central Water Commission and the estimated cost has been finalized for Rs. 750.75 cr at PL-2008 with B.C. ratio as 6.00.

Chairman enquired to know the reason for not proposing any lining works or provision of silt excluder in the renovation work although Kosi command suffers from both seepage losses as well as the canal water contains high silt load.

Principal Secretary, Water Resources Department, Bihar intimated that there was no lining works done in any of the old canal systems in Northern Bihar while canals in the Southern Bihar were provided with lining.

Member (RM) intimated that there was water logging problem only in the initial reaches mainly on account of seepage through canal embankments, besides, there were few tracts of sandy soil where seepage losses would be more. He suggested selective lining could be considered where necessary.

The representative from State government intimated that a stilling basin had been proposed in the hydel power channel which would reduce silt load into the canal system.

Chairman advised that the issue of selective lining and desilting of canal water could be taken up by the project authorities in consultation with Central Water Commission and CWPRS, if necessary.

After a brief discussion, the Committee accepted the proposal.

3. Duragawati Reservoir Project (Revised Estimate – Major), Bihar:

Chief Engineer (PAO) briefly introduced the project which envisages the following:

- (i) Construction of Earthen dam, 1830 m long across the river Durgawati.
- (ii) Left Bank canal (32 km long) with discharge capacity of 8.50 cumecs.
- (iii) Right Bank canal (22.6 km long) with the maximum discharge of 17 cumecs.
- (iv) Distribution system for CCA of 33,467 ha.

The original project was approved by the Planning Commission in May 1975 for Rs. 25.30 cr at PL-1975. Subsequently, the revised estimate of the project proposal was considered in the 72nd meeting of the Advisory Committee of MoWR in Jan. 2000 which was accepted for Rs. 234.41 cr at PL-1998 subject to environmental and forest clearances from MoEF. The present revised estimate is based on PL-2007 and the estimated cost has been finalized for Rs. 968.47 cr with B.C. ratio as 1.58.

Chairman enquired about the status of forest clearance in respect of this project.

Principal Secretary, Water Resources Department, Bihar intimated that although requisite fund had been put under disposal of Forest Department, the formal clearance from MoEF yet awaited.

The Committee advised to re-submit the proposal for consideration on receipt of formal clearance from the MoEF.

4. Kosarteda Irrigation Project (Revised Medium), Chhattisgarh:

Chief Engineer (PAO) briefly introduced the project which envisages the following:

- i) A 1305 M long earthen dam with maximum height of 25.60 M.
- ii) A 155 M long spillway on a saddle on left flank with maximum discharging capacity of 1100 cumec.
- iii) A right bank canal system to irrigate a CCA of 9271 ha.

The project was earlier accorded investment clearance by Planning Commission in Feb. 1981 for Rs. 6.01 cr (PL-1980). The present revised cost estimate without any change in scope has been appraised in CWC and the finalized cost as Rs. 154.64 cr (PL-2009) with the B.C. ratio as 1.55.

Chairman enquired to know about the reason for increase in the cost of the project by about 25 times.

The representative from the State Government informed that due to R&R compensation, the project cost had increased.

After a brief discussion, the Committee accepted the proposal.

5. Gandorinala Irrigation Project (Medium-Revised), Karnataka:

Chief Engineer (PAO) briefly introduced the project which envisages the following:

- i) 1800 M long earthen dam across Gondorinala in Krishna basin.
- ii) Spillway with discharging capacity of 2223 cumec.

- iii) Right bank canal system with CCA of 567 ha.
- iv) Left bank canal system with CCA of 7527 ha.

The original project proposal was accorded investment clearance by Planning Commission in April 1978 for Rs. 7.70 cr (PL-1977-78). The present revised estimate has been finalized in Central Water Commission for Rs. 240.00 cr (PL-2008-09) with B.C. ratio of 1.31:1. The project benefits drought prone area on Gulbarga district of Karnataka.

During discussion on the project proposal the representative from the state government of Karnataka intimated that only Rs. 34.69 cr of balance cost would be required to complete the project.

Chairman enquired to know when the project would be completed. The state representative assured that the project would be completed during the present financial year of 2009-10.

After a brief discussion, the Committee accepted the proposal.

6. Indira Sagar Multipurpose Project – (Revised Major), Madhya Pradesh:

Chief Engineer (PAO) briefly introduced the project which envisages the following:

- i) A 654 M long and 91.4 M high concrete gravity dam across river Narmada near village Punasa in Khandwa district of MP.
- ii) Central spillway, 495 M long, to pass PMF of 1.15 cumec through 20 Nos. of radial gates of size 20 M x 17 M.
- iii) A surface power house on right bank with installed capacity of 8 x 125 MW.
- iv) A left bank canal system, 249 km long main canal for a command of .99 lakh ha.
- v) A lift canal branching from the left bank canal system for a command area of .24 lakh ha.
- vi) Distribution system up to 40 ha blocks.

The project was earlier accorded investment clearance by Planning Commission in Sept. 1989 for Rs. 1993.67 cr (PL-1988), out of which the estimated cost of Unit-II, which is presently under consideration, was Rs. 541.98 cr. The present revised estimate of Unit-II without any change in the scope of works has been appraised and finalized for Rs. 3182.77 cr (PL-2009). B.C. ratio of the project works out to 1.30 which is acceptable as the project command lies in drought prone districts of Khandwa, Khargone and Barwani of MP).

Chairman enquired about the States Command Area Development works involved in the project.

State representative informed that such works were being done simultaneously through NREGA.

Chairman further desired to know the reasons for slow progress of the project.

State representative explained that the land acquisition took several years leading to slow pace. He also added that the construction of Unit-II had been taken up in 4 phases and the expenditure incurred up to March 2009 was Rs.1162 cr.

After a brief discussion, the Committee accepted the proposal.

7. Omkareshwar Multipurpose Project– (Revised Estimate), Madhya Pradesh:

Chief Engineer (PAO) briefly introduced the project which envisages the following:

- i) A 949 M long concrete gravity dam across river Narmada in Khandwa district of Madhya Pradesh.
- ii) A central spillway, 570 M long, to pass design flood of 88, 315 cumec.
- iii) A surface power house on the right flank with installed capacity 8x65 MW.
- iv) A common carrier canal of length 12.39 km.
- v) A left bank flow canal of length 64.11 km.
- vi) A right bank flow canal of length 162.95 km.
- vii) A right bank lift canal of length 154 km of-taking from the common carrier canal.

The project was earlier accorded investment clearance by Planning Commission in May 2001 for Rs. 1784.29 cr (PL-1993) out of which the estimated cost of Unit-II was Rs. 708 cr. Presently the revised estimate of Unit-II without any change in the scope of works has been appraised and finalized for Rs. 2504.80 cr at PL-2009. B.C. ratio of the project works out to 2.51. The project authorities informed that the works of Unit-I and Unit-III were completed and presently under operation.

Chairman enquired about the physical and financial progress of the project.

The representative from State Government informed that construction of Unit-II had been taken up in 4 phases and the expenditure incurred up to March, 2009 was Rs. 544.59 cr. They further informed that out of 4 phases, only Phase-I was almost completed, while the Phase-II & Phase-III completed up to 20%. The Phase-IV is yet to be started.

In response to the query related to land acquisition and the status of forest clearance, the project authorities informed that land acquisition had almost been completed and the requisite forest clearance had also been obtained.

After a brief discussion, the Committee accepted the proposal.

8. Upper Beda Irrigation Project (Revised-Medium), Madhya Pradesh:

Chief Engineer (PAO) briefly introduced the project which envisages the following:

- i) A 2223 M long earthen dam on the left flank and a 208 M long masonry dam on the right flank with 105 M long central spillway.
- ii) The spillway is with 7 Nos. radial gates to pass design flood of 9043 cumec
- iii) Left bank canal system with about 122 km long distribution network up to minor level.
- iv) To irrigate a CCA of 9917 ha with annual irrigation of 13388 ha.

The project was earlier accorded investment clearance by Planning Commission in Sept. 1998 for Rs. 89.51 cr (PL-1997-98). The present estimate is a revised one without any change in scope. The revised estimate has been appraised in CWC and the cost finalized as Rs. 224.41 cr (PL-2009). The B.C. ratio of the project is 1.44 which is acceptable as the project benefits drought prone area in Khargaon district of MP.

Representative from the State Government informed that works of distributaries, minors had already been awarded and very small portion of Unit-II (canals) yet to be completed. They also informed that there would be no further cost revision.

After a brief discussion, the Committee accepted the proposal.

9. Mahi Irrigation Project (Revised Major), Madhya Pradesh:

Chief Engineer (PAO) briefly introduced the project which envisages the following:

- i) An earthen dam, 890 M long, across the river Mahi in Dhar district with earthen dyke of length 2095 M and a 141 M long masonry spillway (gross capacity; 199 MCM)
- ii) A subsidiary earthen dam, 1020 M long across Ramkheda nala (a right bank tributary) near village Kalikarai in Dhar district with a provision of chute spillway. (gross capacity: 55 M).
- iii) A left bank canal system from Mahi dam.
- iv) A right bank canal system from subsidiary dam.

The project was earlier accorded investment clearance by Planning Commission in Jan. 1985 for Rs. 61.52 cr (PL-1983-84). The present estimate is a revised one without any change in scope. The revised estimate has been appraised in CWC and the cost has been finalized as Rs. 490.39 cr (PL-2009). The B.C. ratio of the project is 1.1 which is acceptable as the project benefits drought prone area in Dhar and Jhabua districts of MP.

Chairman enquired about the physical and financial progress of the project.

The state representative informed that the project would be completed by 2011-12. He further added that the requisite land had already been acquired and works for remaining portion have already been awarded. Expenditure incurred till March, 2009 have been Rs. 315.62 cr.

It was submitted by the state representative that there would be no further revision in the cost and the project would be completed within the finalized cost of Rs. 490.39 cr.

After a brief discussion, the Committee accepted the proposal.

10. Gul River Medium Irrigation Project (Revised), Maharashtra:

Chief Engineer (PAO) briefly introduced the project which envisages the following:

- i) Construction of a 1359 M long earthen dam long including spillway across river Gul, in Jalgaon district of Maharashtra (a major right bank tributary of Tapi river).
- ii) Left bank and Right bank canal systems for a command of 3708 ha with annual irrigation 3025 ha.

Earlier the project was accorded investment clearance by Planning Commission in Nov. 2005 for Rs. 65.73 cr (PL-2001-02). The present estimate is a revised one without any change in scope and has been appraised in CWC. The finalized cost is Rs. 96.61 cr (PL-2007-08). The B.C. ratio of the project is 1.735.

Member (RM), CWC pointed out that as per earlier circular the revised cost estimates of medium irrigation projects without any change in the scope might not be considered for discussion in the meeting of the Advisory Committee. Deputy Advisor, Planning Commission mentioned that the revised estimates which would be posed for funding under AIBP might be discussed in the meeting of the Advisory Committee.

Chairman agreed to the view expressed by Deputy Advisor, Planning Commission. Regarding the physical and financial progress of the project, the project authorities informed that dam was almost completed, whereas work for main canal and distributaries yet to be completed. The work for land acquisition had also been completed.

The expenditure incurred up to March, 2009 had been Rs. 58.41 cr. It was submitted by the state representative that there would be no further revision in the cost and the project would be completed within the finalized cost of Rs. 96.61 cr.

After a brief discussion, the Committee accepted the proposal.

11. Shahpurkandi Dam Project (Revised Estimate), Punjab:

Chief Engineer (PAO) briefly introduced the project which envisages the following:

- i) 55.5 m high concrete dam comprising of 22 bays of 12 m each clear span (spillway).
- ii) 7.70 km long hydel channel designed for a discharge of 385 cumecs (13600 cusecs) along the left bank of river.
- iii) 2 nos. power plants of total 168 MW capacities.
- iv) 7 nos. cross-drainage works/bridges on the hydel channel
- v) 2 nos. of head regulators one to feed Shahpurkandi Hydel Channel-(Left side) in Punjab and other to feed the Ravi Canal (right side) in J&K.

The revised cost estimate of the project was approved by the Planning Commission in Nov. 2001 for Rs. 1324.81 cr at June 2000 Price Level. The present revised cost estimate has been finalized in CWC/CEA for Rs. 2285.81 cr at April 2008 Price Level. The irrigation component works out to Rs. 653.97 cr (28.61%) of total cost with B.C. ratio for irrigation component as 1.745. The levelised tariff for power component has been worked out as Rs. 4.05 per KWH.

Commissioner (Indus), MoWR enquired about commitment of the state government for supply of water for irrigation as well as other requirements of J&K and other States.

Representative from the State Government assured that necessary safeguards as stipulated in the Planning Commission letter dt. 5.11.2001, while according investment clearance to Ravi Project-Unit-I, would be adhered to. Deputy Advisor, Planning Commission desired to know about the quantum of water to be used in J&K and status of completion of Ravi canal.

The state representative informed that 0.65 MAF of water was earmarked for J&K. He further added that Ravi canal was complete by about 90% and water being lifted to Ravi canal in J&K presently.

Representative from CEA pointed out that power tariff was on higher side. He further desired to know about the status of financing the power component.

State representative informed that Power Finance Corporation had agreed to finance 80% of power component and balance 20% would be borne by Punjab State Electricity Board. He added that the loan repayment period would be 15 years.

Chairman enquired about time frame for completion of the project.

State representative informed that project was proposed to be completed in next five years i.e., during 2014-15.

After a brief discussion, the Committee accepted the proposal subject to fulfilling the safeguards mentioned in Planning Commission approval in Nov. 2001.

C) Modernisation of Lahchura Dam (Revised Major), U.P:

This project proposal was considered in the 98th meeting of the Advisory Committee held on 9.7.09. Acceptance of the project was deferred as Financial Concurrence received from the State Government was for lesser amount than the finalized cost of Rs. 299.36 cr (PL-2008).

Later on, the State Government furnished the Financial Concurrence vide Letter No. 3931/09-27-irrigation-4-08 (W)/90, dt. 21.08.2009 for Rs. 299.36 cr requesting CWC to place the [project proposal before the Advisory Committee of MoWR on 24.08.2009.

Chief Engineer (PAO) placed the revised Financial Concurrence for consideration of the Committee.

After a brief discussion, the Committee accepted the proposal.

The meeting ended with Vote of Thanks to the Chair.

LIST OF PARTICIPANTS

Members of the Committee:

S/Shri

- | | |
|---|--------------|
| 1. U.N. Panjiar, Secretary (WR), MoWR | In the Chair |
| 2. A.K. Bajaj, Chairman, CWC, New Delhi | Member |
| 3. Dr. Man Singh, ASCO (NRM), New Delhi
(Representing Secretary, Department of Agriculture & Cooperation –
Ministry of Agriculture) | Member |
| 4. Alok Shrivastava, Scientist CGWB (Representing Chairman, Central
Ground Water Board) | Member |
| 5. Tanmay Das, Chief Engineer, CEA | Member |
| 6. Avinash Mishra, Dy. Advisor (WR), Planning Commission, New Delhi | Member |
| 7. U. K. Ghosh, Chief Engineer, PAO, CWC, New Delhi | Member- Secy |

Special Invitees:

(a) Ministry of Water Resources

S/Shri

1. A. B. Pandya, Commissioner (PR), MoWR
2. S. P. Kakran, Commissioner (Ganga), MoWR
3. G. Aranganathan, Commissioner (Indus), MoWR

(b) Central Water Commission:

S/Shri

1. R. C. Jha, Member (RM), CWC, New Delhi
2. Indra Raj, Member (WP&P), CWC, New Delhi
3. S.K. G. Pandit, Chief Engineer(NBO), CWC, Bhopal
4. H. K. Verma, Chief Engineer (IBO), CWC, Chandigarh
5. K.N. Keshri, Chief Engineer, LGBO, CWC, Patna
6. B.G. Kaushik, Chief Engineer, (PPO & PMO), CWC, New Delhi
7. Ramesh Grover, Director Mon (App.), CWC, Nagpur
8. M.S. Gupta, Director Mon (C), CWC, New Delhi
9. G. Thakur, Director(PA-North), CWC, New Delhi
10. S. K. Haldar, Director(M&A), CWC, Bhopal
12. D. Ranga Reddy, Director, (Mon - South), CWC, Bangalore
14. M. W. Paunikar, Dy. Director (PA-N), CWC, New Delhi
15. T.D.Sharma, Dy. Director (PA-Central), New Delhi
16. Basishit Rai, Dy. Director (PA-Central), New Delhi
17. R.K. Upadhyay, Dy. Director (PA-C), CWC, New Delhi
18. S. S. Bonal, Dy. Director (PA-South), CWC, New Delhi
19. Sudhir Kumar, Dy. Director (CA-I), CWC, New Delhi
20. Pankaj Kumar, Dy. Director (PA-South), CWC, New Delhi
21. R. Azhagesan, Dy. Director, (App. - South), CWC, Bangalore
21. B. Srinivasu, Assistant Director, (PA-Central), New Delhi

22. Anil Kumar Singh, Assistant Director(PA-N), New Delhi
23. Hradesh Kumar, Assistant Director(PA-South), New Delhi
24. Jacob Cherian C, Assistant Director –II (PA-N) CWC, New Delhi.
25. S. Jagdeesan, Assistant Director –II (PA-N) CWC, New Delhi

(c) State Government Officers

Andhra Pradesh

S/Shri

1. B.S.N. Reddy, Engineer-in-Chief, Irrigation Deptt., Govt. of Andhra Pradesh.
2. V. Peravadhan, Chief Engineer, Irrigation Deptt., Govt. of Andhra Pradesh.

Bihar

S/Shri

1. Ajay Nayak, Principal Secretary, WRD, Govt of Bihar.
2. Nawal Kishore, SE, Planning & Monitoring Circle, WRD, Govt of Bihar
3. Mahesh Kumar Das, SE, Durgavati Project, WRD, Govt of Bihar

Chattisgarh

S/Shri

1. C.K.Khaitan, Secretary, WRD, Govt of Chattisgarh
2. S. Srivastava, Chief Engineer, WRD, Govt of Chattisgarh.

Karnataka

S/Shri

1. D Satya Murty, Managing, Director, KNNL, Bangalore.
2. V.P.Uddithal, Chief Engineer, WRD, Govt of Karnataka
3. Anil Kumar, Superintending Engineer, KWNL, Govt of Karnataka

Madhya Pradesh

S/Shri

1. B.K.Chourasia, Chief Engineer, ISP(C), NVDA, Sanawad.
2. K.C.Chouhan, Chief Engineer, OSP, Indore, NVDA
3. D.K. Sharma, S.E, OSP, NDVA, Sanawad.
4. B.S. Bhabar, S.E, Mahi Project, Dhar, Govt of Madhya Pradesh

Maharashtra

S/Shri

1. M.S. Mundbe, Executive Director, TAPJ Irrigation Development Corpn.
2. H.K.Tonpe, Chief Engineer, TIDC, Jalgaon, Govt of Maharashtra
3. V.R.Bhure, Superintending Engineer, TIDC, Jalgaon, Govt of Maharashtra

Punjab

S/Shri

1. Jagdish Singh, General Manager, Shahpurkandi Dam project, Govt of Punjab
2. V.K. Singal, Chief Engineer, Hydel project, PSEB, Govt of Punjab

Uttar Pradesh

S/Shri

1. S. C. Agrawal, Chief Engineer, Lahchura Dam Project
2. R. R. Dohre, Executive Engineer, Lahchura Dam Project
3. K. K. Agrawal, Assistant Engineer, Lahchura Dam Project

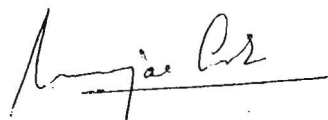
No. 16/27/2009-PA (N)/ 1994 - 2033
GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
PROJECT APPRAISAL ORGANIZATION
407, SEWA BHAWAN, R. K. PURAM, NEW DELHI-110 066

Date: 26th Oct., 2009

Sub: 100th meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals held on 09.10.2009.

Enclosed please find herewith a copy of the summary record of discussions of the above meeting held at New Delhi on 9th October, 2009 at Sewa Bhawan, R. K. Puram, New Delhi for information and necessary action.

Encl.: As above.


(U. K. Ghosh)
Chief Engineer (PAO)

To

Members of Committee:

1. Chairman, CWC, Sewa Bhawan, R. K. Puram, New Delhi.
2. Secretary (Expenditure), Ministry of Finance, (1st Floor) North Block, New Delhi.
3. Secretary, Department of Power, S.S. Bhawan, IInd Floor, New Delhi.
4. Secretary, Ministry of Environment & Forests, 4th Floor, Room No- 404/05 Paryavaran Bhawan, CGO Complex, New Delhi.
5. Secretary, Ministry of Tribal Affairs, Room No. 738, A-Wing, Shastri Bhawan, New Delhi.
6. Secretary, Department of Agriculture & Cooperation, Room No 126, Krishi Bhawan, New Delhi.
7. Director General, ICAR, Room No-108, Krishi Bhawan, New Delhi.
8. Chairman, CEA, Sewa Bhawan, R. K. Puram, New Delhi.
9. Chairman, Central Ground Water Board, Jam Nagar House, Man Singh Road, New Delhi.
10. Principal Adviser (WR), Planning Commission, Room No-255, Yojana Bhawan, New Delhi.
11. Principal Adviser (Power), Planning Commission, Room No-107 Yojana Bhawan, New Delhi.
12. Financial Adviser, Ministry of Water Resources, Room No-401 S.S. Bhawan, New Delhi.

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15. Member (RM), CWC, New Delhi.
16. Chairman, GFCC, 3rd Floor, Sinchai Bhawan, Patna-800015
17. Commissioner (Projects), Room No-411, S.S. Bhawan, MoWR, New Delhi.
18. Commissioner (Ganga), Ministry of Water Resources, CGO Complex, New Delhi.
19. Commissioner (Indus), Ministry of Water Resources, CGO Complex, New Delhi.
20. Secretary, Water Resources Deptt, Govt of Maharashtra, Mantralaya, Mumbai, 400032.
21. Principal Secretary, Irrigation Department, Government of Uttar Pradesh, Sachivalaya Annexe, Lucknow-226 001 (U.P.).
22. Secretary, Irrigation & F.C. Department, Government of Manipur, Manipur Secretariat, Imphal-795001
23. Principal Secretary, Water Resources, Govt of Madhya Pradesh, Sachivalaya, Arera Hill Bhopal

24. Secretary, Irrigation Department, Government of Karnataka, M.S. Building, 6th F
Karnataka Government Secretariat, Dr. Ambedkar Veedhi, Bangalore-560 001
25. Managing Director, Karnataka Neeravesi Nigam Limited, 4th floor, coffee Board, Bangal
26. Managing Director, Krishna Bhagya Jal Nigam Limited, PWD Annexe Building, KR Ci
Bangalore
27. Principal Secretary, Narmada Valley Development Authority, Arera Hills, Bhopal
28. Secretary, Irrigation Directorate, Government of Tripura, Secretariat Complex,
Agartala-799 001
29. Secretary, Department of Irrigation & Flood Control, Government of Assam,
Secretariat, Guwahati-781 006.
30. Secretary, (PWD/Irrigation & PHE), Government of Jammu & Kashmir, Civil
Secretariat, Srinagar -190 001.
31. Chief Engineer (PMO), CWC, New Delhi.
32. Chief Engineer, Monitoring-South, CWC, Jalasudha, Near HMT Precision Machinery
Division, H.M.T. Post, Bangalore-560031
33. Secretary, Water Resources & Energy Department, Government of Jharkhand, Nepal
House, Ranchi-834 001 (Jharkhand)
34. Chief Engineer (NBO),CWC, Paryawas Bhawan, Mother Teresa Marg, Arera Hills,
Bhopal-462011
35. Chief Engineer (IBO),CWC, Block-4, 6th Floor, Kendriya Sadan, Sector - 9A,
Chandigarh-106 071
36. Chief Engineer (UGBO),CWC, Jahnvi Sadan, 21/496, Indira Nagar, Lucknow-226 016
(UP)
37. Chief Engineer, Monitoring- Central, CWC, CGO complex, Seminary Hills, Nagpur
38. Chief Engineer (B&BB), Brahmaputra & Bank Basin, CWC, "Maranatha" Pohkseh P.O.
Rynjah, Shillong 793006
39. Chief Engineer, Monitoring-South, CWC, Jalasudha, Near HMT Precision Machinery
Division, H.M.T. Post Bangalore-560031

Copy for information to:-

40. Sr. PPS to Secretary, Ministry of Water Resources, Room No-407, New Delhi.

SUMMARY RECORD OF DISCUSSIONS OF THE 100TH MEETING OF THE ADVISORY COMMITTEE ON IRRIGATION, FLOOD CONTROL AND MULTI PURPOSE PROJECTS, HELD ON 9TH OCTOBER, 2009 FOR CONSIDERATION OF TECHNO-ECONOMIC VIABILITY OF PROJECT PROPOSALS.

The 100th meeting of the Advisory Committee for consideration of Techno-Economic viability of Irrigation, Flood Control and Multi-purpose Project proposals was held on 09.10.2009 at 1500 Hrs. in the Conference Room of Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi under the Chairmanship of Secretary (WR). List of participants is enclosed at Annexure-I.

At the outset, Chairman welcomed the Members of the Committee and other Officers present and thereafter requested the Member-Secretary to take up the agenda for discussion. The items discussed and decisions taken are as follows:

A) CONFIRMATION OF THE MINUTES OF THE 99TH MEETING:

The Summary Record of Discussions of the 99th Advisory Committee meeting was circulated vide Letter No.16/27/2008-PA (N)/1653-89, dated 4th September, 2009. Member-Secretary informed the Committee that no comment on the same has since been received. The Committee confirmed the Summary Record of Discussions of the 99th Advisory Committee meeting.

B) PROJECT PROPOSALS PUT UP FOR CONSIDERATION OF THE ADVISORY COMMITTEE:

1) Borolia Irrigation Project (Medium-Revised), Assam:

CE (PAO), CWC briefly introduced the project. The original proposal was accorded investment clearance by the Planning Commission in Feb. 1980 for Rs. 6.775 cr (PL-1978) for a command area of 9717 ha and an annual irrigation of 15,000 ha. The project envisages a 92 m long barrage with a right bank canal system.

The present revised estimate without change in scope has been finalized for Rs. 135.93 cr (PL-2008) with B.C. ratio 1.27:1 (N.E. state).

Chairman enquired to know the reason for so much delay in completion of the project.

The project authorities explained that paucity of fund, as well as, land acquisition problem had caused the delay. They further intimated that till March 2009, the barrage, the main canal and nearly 50% of the canal structures were completed. The remaining works including branch canal, minors and sub-minors would be completed by March, 2011.

Consideration of the project proposal was deferred due to non-submission of State Finance Concurrence.

2) Modernisation of Lar Canal (Medium-ERM), Jammu & Kashmir:

CE (PAO), CWC briefly introduced the project proposal which is a very old canal system providing irrigation facility to 44 villages in Budgam district of J&K. The project has deteriorated considerably due to lack of maintenance works. The main components of the ERM proposal are as follows:

- i) Construction of plain concrete lining on either side of canal.
- ii) Construction of 7 Nos. off takes/Regulation works on various minors.
- iii) Construction of 36 Nos. automatic spillways on main canal and branches to take care of breaches in canal system.
- iv) Construction of 13 Nos. canal gates on main canal and on minors.
- v) Construction of 50 Nos. outlets on main canal and distributaries.
- vi) Construction of 72 Nos. falls.
- vii) Construction of 55 Nos. cross drainage works.
- viii) Construction of 135 Nos. foot bridges and tractor crossings on main canal and distributaries.
- ix) Construction of escapes/check crates on distributaries for checking of landslide.
- x) Improvement to approach road 1.00 km length.
- xi) Construction of staff quarter, gang huts total 3 Nos.

The present modernization proposal is aimed at providing assured irrigation to a command area of 2231 ha and additional irrigation to 617 ha of land. The proposal has been finalized in Central Water Commission at an estimated cost of Rs. 47.72 cr (PL-2009) with a B.C. ratio of 1.37:1 (special category state).

Chairman observed that the cost of annual irrigation/ha to the tune of Rs. 1.67 lakh appeared to be much on higher side for an ERM project. He advised the cost aspect to be re-examined in greater depth and re-submit the proposal in the next meeting.

The Committee decided to defer the project proposal for the next meeting.

3) Tral Lift Irrigation Scheme (Medium-Revised), Jammu & Kashmir:

CE (PAO), CWC briefly introduced the project proposal. The original project proposal was approved by the Planning Commission in the year 1979 for Rs. 6.13 cr (PL-1979). The project envisages lifting of 4.25 cumec of water from Jhelum river in 3 stages to provide irrigation to a command area of 4000 ha with annual irrigation of 6000 ha.

The present revised cost estimate is without change in scope and the cost has been finalized in Central Water Commission for Rs. 140.76 cr (PL-2009) with B.C. ratio 1.57:1.

Consideration of the project proposal was deferred due to non-submission of State Finance Concurrence.

4) Rajpora Lift Irrigation Scheme (Medium- Revised), Jammu & Kashmir:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in Jan. 1979 for Rs. 2.413 cr (PL-1979).

The project envisages 2 stages lifting of 3.40 cumec of water from Jhelum river along with 2 canal systems for a command area of 2025 ha with annual irrigation of 2429 ha.

The present revised estimate is without any change in scope which has been finalized for Rs. 70.20 cr (PL-2009) with B.C. ratio as 1.15:1 (benefiting special category state).

Consideration of the project proposal was deferred due to non-submission of State Finance Concurrence.

5) Surangi Reservoir Scheme (Medium-Revised), Jharkhand:

CE (PAO), CWC briefly introduced the project. The original project was approved by the Planning Commission in March 1982 for Rs. 2.15 cr (PL-1980-81). The project envisages construction of a 217.5 M long earthen dam across Surangi Nala in Subernarekha basin with two canal systems on either bank to irrigate a command area of 2105 ha with annual irrigation of 2601 ha.

The present revised estimate is without change in scope which has been examined in CWC and finalized for Rs.; 41.17 cr (PL-2001) with B.C. ratio 1.16:1 (benefiting tribal areas).

Chairman enquired whether with the revised cost estimate being based on PL-2001, it would be possible to complete the project within the finalized cost as per revised estimate.

The representative from Jharkhand Govt. intimated that the major portion of the works had already been completed including dam, main and branch canals and more than 50% of distributaries. He assured that the remaining works would be completed within the present finalized cost of the revised estimate.

After brief discussion, the Committee accepted the proposal.

6) Upper Sankh Reservoir Scheme (Medium-Revised), Jharkhand:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in Oct. 1981 at an estimated cost of Rs. 9.19 cr at (PL-1980-81).

The project envisages construction of a 1068 m long earthen dam across river Sankh, a tributary of river South koel in Brahmani-Baitharani river basin with both left

and right bank canal systems to irrigate a command area of 7069 ha with 100% irrigation intensity.

The present revised estimate is without any change in scope which has been finalized for Rs. 141.19 cr (PL-2006) with B.C. ratio as 1.33:1 (benefiting tribal areas).

On query from Chairman, whether the project would be completed within the finalized cost at PL-2006, the representative from the State Govt. intimated that the work components of the project were in advanced stage of completion and partial irrigation being provided at places. He further stated that the present finalized cost would be completion cost of the project.

After brief discussion, the Committee accepted the proposal.

7) Panchkhero Reservoir Scheme (Medium-Revised), Jharkhand:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in March 1992 for Rs. 9.55 cr at (PL-1987).

The project envisages construction of a 2087 m long earthen dam across river Panchkhero, a sub-tributary of Barakar river in Damodar river basin and two canal systems on both the banks of the river to irrigate a command area of 3238 ha in drought prone areas with 69% irrigation intensity and B.C. ratio of 1.43:1 (benefiting drought prone areas).

On query from Chairman, whether the project would be completed within the finalized cost at PL-2007, the representative from the State Govt. intimated that the work components of the project were in advanced stage of completion and the present finalized cost would be completion cost of the project.

After brief discussion, the Committee accepted the proposal.

8) Upper Krishna Stage-I Project (Major-Revised), Karnataka:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in Nov. 1963 for Rs. 58.20 cr. The first revised estimate was approved by the Planning Commission for Rs. 283.65 cr at PL-1976-77. Second revised estimate was accorded investment clearance by the Planning Commission for Rs. 1214.97 cr at PL-1986-87. The project envisages:

- i) Construction of Narayanpur dam with gross storage of 1071.50 mcm
- ii) Construction of canal system of Narayanpur dam to irrigate 4.08 lakh ha.
- iii) Construction of Almatti dam with gross storage of 1193.84 mcm.
- iv) Construction of Almatti left bank canal system to irrigate a CCA of 0.17 lakh ha.
- v) Headworks of 5 Nos. foreshores lift irrigation schemes.

CCA of the project is 4.35 lakh ha with annual irrigation of 4.59 ha.

Present revised cost estimate is without any change in scope and has been finalized for Rs. 6891.59 cr at PL-2008-09 with B.C. ratio as 2.13:1. Expenditure of about 91% of the present revised estimated cost has already been incurred till March 2009. The project is nearing completion stage and is scheduled to be completed by 2010-11.

After brief discussion, the Committee accepted the proposal.

9) Upper Krishna Stage-II Multipurpose Project (Irrigation Portion), (Major-Revised), Karnataka:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in Oct. 2000 for Rs.2358.86 cr at PL-1998-99. The main component of the project envisages:

- i) Construction of Narayanpur right bank canal system for a CCA of 84,000 ha.
- ii) 3 Nos. foreshore lift schemes from Narayanpur reservoir.
- iii) Indi lift irrigation scheme from Narayanpur Left Bank canal for a CCA of 41,900 ha.
- iv) Raising the height of Almatti dam up to RL 528.757 m and for earthen section up to 529.250 m.
- v) Installation of radial gates so as to achieve an FRL of 519.6 m.

CCA of the project is 1.97 lakh ha with annual irrigation of 2.27 lakh ha.

Present revised cost estimate is without any change in scope and the cost has been finalized for Rs. 3959.80 cr at PL-2008-09 with B.C. ratio as 2.02:1. Expenditure of about 90% of the estimated cost has already been incurred till March 2009. The project is nearing completion stage and is scheduled to be completed by 2010-11.

After brief discussion, the Committee accepted the proposal.

10) Guddada Mallapura Lift Irrigation Scheme, (Medium-New), Karnataka:

CE (PAO), CWC briefly introduced the project. The proposed project is under medium irrigation sector which envisages lifting of 28.32 MCM of water from Barada river in Krishna basin for irrigating a command area of 5261 ha with 100% irrigation intensity, in the drought prone areas of Haberi district of Karnataka. The estimated cost of the project proposal has been finalized for Rs. 115.40 cr with B.C. ratio as 1.18:1 (benefiting drought prone areas).

After brief discussion, the Committee accepted the proposal.

11) Bhima Lift Irrigation Scheme, Sonna Site, Afzalpur, Dist-Gulbarga (Major-New), Karnataka:

CE (PAO), CWC briefly introduced the project. The project envisages construction of a 2250 m long barrage across Bhima river in Krishna basin in Afzalpur Taluka of Gulbarga district in Karnataka to impound 89.65 mcm of water and two foreshore lift irrigation schemes, namely, Balundagi LIS and Allagi LIS, on either banks of the Bori river which joins the Bhima river just upstream of the proposed barrage.

The project proposes to irrigate a command area of 24,292 ha with 100% irrigation intensity. The estimated cost of the project proposal has been finalized for Rs. 551.93 cr at PL-2008-09 with B.C. ratio as 1.24:1 (benefiting drought prone areas).

The Deputy Advisor, Planning Commission opined that the completion of the project should be done within the time frame as proposed in the project.

After brief discussion, the Committee accepted the proposal.

12) Ghataprabha Project Stage-III (Major-Revised), Karnataka:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in June 1976 for Rs. 90.54 cr at PL-1975-76. The project envisages the following main components:

- i) raising of the existing dam height by 3.70 m in masonry section and 4.3 m in earthen portion.
- ii) Construction of right bank canal and Chikkodi branch canal to irrigate 1.55 lakh ha.
- iii) Lining of left bank canal system up to discharge level of 0.56 cumec to irrigate additional area of 22,257 ha.

CCA of the project is 1.778 lakh ha which has been marginally reduced from originally approved CCA of 1.969 lakh ha.

The present revised cost estimate has been examined in Central Water Commission and the cost has been finalized for Rs. 1210.51 cr at PL-2007-08 with B.C. ratio as 1.19:1 (benefiting drought prone areas).

An expenditure of about 91% of the finalized cost has already been incurred till March 2009 and the project is in the advanced stages of completion. The project is scheduled to be completed by 2010-11.

After brief discussion, the Committee accepted the proposal.

13) Karanja Irrigation Project (Major-Revised), Karnataka:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in Aug. 1992 for Rs. 98 cr at PL-1987-88. The project proposal envisages the following main components:

- i) A 3480 m long earthen with gross storage of 217.66 mcm.
- ii) Left and right bank canal systems.
- iii) One foreshore lift irrigation system on the right side of the river.

CCA of the project as originally approved was 35, 614 ha with annual irrigation as 48,968 ha. In the revised estimate, the CCA has been reduced to 29,227 ha with annual irrigation of 44,574 ha thereby, marginally changing the extent of annual irrigation.

The present revised estimate has been examined in Central Water Commission and the cost has been finalized at an estimated cost of Rs. 532.00 cr at PL-2008-09 with B.C. ratio as 1.94:1.

An expenditure of more than 90% of the finalized cost has already been incurred till March 2009 and the project is in the advanced stages of completion. The project is scheduled to be completed by 2010-11.

After brief discussion, the Committee accepted the proposal.

14) Malaprabha Project (Major-Revised), Karnataka:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in Aug. 1963 for Rs. 19.91cr to irrigate a command area of 1,21,408 ha with 100% irrigation intensity. The main components of the project comprises of:

- i) a 134.45 M long masonry dam across Malaprabha river in Krishna basin and
- ii) Two canal systems on either banks of the river.

In the present revised estimate the CCA has been upwardly revised to 1, 96,132 ha with irrigation intensity as 100%. After examination in Central Water Commission the revised cost has been finalized as Rs. 1383.48 cr at PL-2008-09 with B.C. ratio as 1.52:1. The financial progress in the project has been 1005.42 cr upto June 2009. The project is scheduled to be completed by 2010-11.

After brief discussion, the Committee accepted the proposal.

15) Sagar Irrigation Project (Medium-Revised), Madhya Pradesh:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in May 1980 for Rs. 10.63 cr at PL-1979 to irrigate a command area of 9,478 ha with annual irrigation of 9,712 ha.

The project envisages construction of an earthen storage dam, 2758 m long, across the river Sagar, a tributary of Betwa river of Yamuna basin and a left bank canal system with head discharge of 11.00 cumecs.

In the present revised estimate the annual irrigation has been further enhanced to 17,061 ha. The revised estimate has been examined in Central Water Commission and the estimated cost has been finalized at Rs. 239.99 cr at PL-2009 with B.C. ratio as 1.70:1. Expenditure incurred so far on the project has been Rs. 30.89 cr till March 2009.

Chairman enquired to know the reason for so much delay in taking up execution of the project.

Director (M&A), CWC, Bhopal intimated that the project was given clearance by MoEF during Aug. 2008 only. As a result, the project could not be taken up by the project authorities for execution earlier.

After brief discussion, the Committee accepted the proposal.

16) Bargi Diversion Project (Major-Revised), Madhya Pradesh:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in July 1998 for Rs. 1101.23 cr at PL-1990.

The project envisages diversion of Narmada water through a 197 m long right bank canal taking off from Bargi reservoir to irrigate a command area of 2.45 lakh ha with annual irrigation of 3.76 lakh ha.

The present revised estimate is without any change in scope and the same has been finalized in Central Water Commission at an estimated cost of Rs. 5127.22 cr. at PL-2009 with B.C. ratio as 1.52:1.

Chairman enquired to know about the status of main dam (Bargi dam). The project authorities intimated that the Bargi dam (renamed as Rani Avanthi Bai Sagar dam) taken as a separate project had already been completed in 1998. Regarding progress of Bargi diversion project, the project authorities intimated that out of 5 phases of the project all the main works up to 4 phases had already been awarded, while, awarding of works for the 5th phase being under process. The project authorities also assured that the project would be completed during 2012-13.

After brief discussion, the Committee accepted the proposal.

17) Khadakpurna River Project (Major- Revised), Maharashtra:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in March 2007 for Rs. 578.56 cr at PL-2005-06.

The project proposal envisages construction of a 2400 m long earthen dam across river Khadakpurna, a tributary of river Godavari along with two main canal systems on either banks and two lift irrigation systems on either flanks in order to irrigate a command area of 25,900 ha with annual irrigation of 24,864 ha.

The present revised estimate is without any change in scope and the same has been finalized in Central Water Commission for Rs 917.95 cr. at PL-2008 with B.C. ratio as 1.89:1.

An expenditure of 525.99 cr has already been incurred on the project till March 2009. The project is scheduled to be completed by 2011-12.

Consideration of the project proposal was deferred due to non-submission of State Finance Concurrence.

18) Tarali Irrigation Project (Major-Revised), Maharashtra:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in March 2007 at an estimated cost of Rs. 504.96 cr at PL-2000-01.

The project proposal envisages construction of a 1096 m long masonry dam across river Tarali, a right bank tributary of river Krishna in Satara district of Maharashtra and construction of 10 Nos. K.T. weirs downstream of the dam along with lift irrigation systems in order to irrigate a command area of 18,131 ha with annual irrigation of 19,498 ha.

The present revised estimate is without any change in scope and the same has been finalized in Central Water Commission for Rs 870.90 cr. at PL-2008-09 with B.C. ratio as 1.37 (benefiting drought prone areas).

Chairman observed that expenditure incurred on the project had been only Rs. 358.19 cr till March 2009 as against the revised estimated cost of Rs. 870.90 cr. He enquired to know the reason for such less expenditure incurred so far as against the present estimated cost of the project.

The project authorities intimated that due to the problems related to project affected people (PAPs), progress could not be made earlier, which had now been resolved.

Consideration of the project proposal was deferred due to non-submission of State Finance Concurrence.

19) Khuga Multipurpose Project (Major-Revised), Manipur:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in July 1980 for Rs. 15 cr (PL-1977).

The project proposal envisages construction of a 230 m long earthen dam with gross storage of 86.08 mcm on river Khuga, a tributary of river Imphal along with both left and right bank systems for a command area of 9,575 ha with annual irrigation of 14,755 ha.

The present revised estimate is without any change in scope and the same has been finalized in Central Water Commission for Rs 381.28 cr. at PL-2009 with B.C. ratio as 1.58:1. The project also provides for hydro power generation of 1.5 MW installed capacity.

Chairman observed that the project had been lingering on for a long time. The project authorities intimated that some works had already been awarded to NPCC and some works being carried out locally. They further explained that the delay in execution of works is due to prevailing law & order problem. At present, the state government is making arrangement to deploy large number of security personnel to the project site to deal with the situation for Khuga and Delaithabi projects. The project authorities assured that the project being in advanced stages of completion would be completed by the end of 2009-10.

After brief discussion, the Committee accepted the proposal.

20) Dolaithabi Barrage Project (Medium-Revised), Manipur:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in June 1992 for Rs. 18.86 cr. at PL-1985. First revised estimate was accorded investment clearance by the Planning Commission in May 2007 for Rs. 98.37 cr. at PL-2004.

The project proposal comprises of 78.75 m long barrage across the river Iril and a left bank canal system to provide irrigation for a command area of 5,500 ha with total annual irrigation of 7,545 ha.

The present revised estimate is without any change in scope and the same has been finalized in Central Water Commission for Rs 215.52 cr. at PL-2008 with B.C. ratio as 1.23:1 (benefiting special category state).

Expenditure incurred on the project till March 2009 has been Rs. 88.37 cr which is about 41% of the present revised cost of the project. The project is scheduled to be completed by March 2011.

Chairman observed that pace of work had so far been rather slow which should be expedited and the works completed within the scheduled target.

After brief discussion, the Committee accepted the proposal.

21) Gumti Irrigation Project (Medium-Revised), Tripura:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in Jan. 1979 for Rs. 5.88 cr. at PL-1978.

The project envisages construction of a 96 M long barrage across river Gumti in the South Tripura district with right and left bank canal systems to irrigate a CCA of 4,486 ha with annual irrigation of 9800 ha.

Present revised cost estimate is without change in scope and the same has been finalized for Rs. 83.01 cr (PL-2008) with B.C. ratio as 1.95:1.

An expenditure amounting to Rs. 53.29 cr has been incurred up to the end of March 2009 which is about 64% of the present estimated revised cost.

Chairman observed that the project had been lingering on for a long period of time.

The project authorities intimated that the main reason for delay was due to land acquisition problem which had now been resolved. The other factors, he explained, contributed in delaying the project were i) short working period available in a year and (ii) technical problems encountered due to tunneling works and construction of embankments upon marshy lands.

Chairman advised to award all the remaining works at the earliest so that the project could be completed within the targeted scheduled time.

After brief discussion, the Committee accepted the proposal.

22) Khowai Irrigation Project (Medium-Revised), Tripura:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in March 1980 for Rs. 7.10 cr (PL-1978).

The project envisages construction of a 96 M long barrage across river Khowai in the West Tripura district with right and left bank canal systems to irrigate a command area of 4,515 ha with annual irrigation of 9,320 ha.

The present revised cost estimate is without change in scope and the same has been finalized for Rs. 83.01 cr (PL-2008) with B.C. ratio as 1.95:1.

After brief discussion, the Committee accepted the proposal.

23) Manu Irrigation Project (Medium-Revised), Tripura:

CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in Feb. 1981 for Rs. 8.18 cr at PL-1979.

The project envisages construction of an 82 M long barrage across river Manu in district Dhalai in Tripura with a left bank canal system to irrigate a command area of 4,198 ha with annual irrigation of 7,600 ha.

The present revised cost estimate is without change in scope and the same has been finalized for Rs. 98.71 cr (PL-2008) with B.C. ratio as 1.18:1 (benefiting special category state).

An expenditure amounting to Rs. 54.79 cr has already been incurred up to the end of March 2009 which is about 55.50% of the present revised estimated cost.

Chairman enquired to know when the project would be completed.

The project authorities intimated that the project would likely to be completed by March 2011.

After brief discussion, the Committee accepted the proposal.

24) Arjun Sahayak Pariyojna (Major-New), Uttar Pradesh:

CE (PAO), CWC briefly introduced the project. The proposed project envisages diversion of surplus water available at Lahchura dam to Arjun dam through feeder canal and, then from Arjun dam to Kabarai dam and Chandrawal dam to augment inflows into these three reservoirs. Besides, height of the Kabarai dam will be raised by 9.23 M in order to increase its capacity from 1,240 ham to 13,025 ham, and new canal distribution system of total length of 165.40 km.

The project is aimed to benefit a command area of 1,49,764 ha with annual irrigation of 59,485 ha (about 40% irrigation intensity).

The project proposal has been examined in Central Water Commission and the the estimated cost has been finalized for Rs. 4,806.50 cr with B.C. ratio as 1.21:1 (benefiting drought prone districts of Bundel khand region).

Chairman observed that the irrigation intensity of the project was much on lower side. He enquired to know the reason for the same.

The project authorities explained that low water availability and unfavorable terrain as the main reasons for keeping the irrigation intensity on lower side.

Ganga Wing, MoWR raised a point whether the project would satisfy the provisions kept in the India-Bangladesh Water Accord.

Shri G. Thakur, Director, CWC explained that the proposed project would utilize only surplus monsoon spill from Lachura dam during the months of June-September which was finalized by CWC while appraising the modernization Lachura dam project proposal from hydrological angle. The modernization of Lachura dam project was accepted by the Advisory Committee of MoWR in its 99th meeting held on 24.08.2009.

Deputy Advisor, Planning Commission observed that in absence of any inter-state agreement on Betwa sub-basin, the present proposal had been considered and found acceptable subject to condition that consumptive use for Arjun Sahayak Pariyojana would be accounted for against the share of Uttar Pradesh, whenever an inter-state agreement made for sharing of water of Dhasan river under Betwa river basin.

After brief discussion, the Committee accepted the proposal.

III. Other Items:

With the permission of Chair, Member (Planning), GFCC submitted two proposals on bank protection works in West Bengal as under:

1) **Scheme for Bank Protection works along the right bank of river Ganga- Padma at Ichalipara, Moya, Galadarya, Paschim Beechpara (Bamnabad) in district Murshidabad & Bausmari in district Nadia, West Bengal:**

The project proposes the following bank protection works:

- a) 45 cm thick boulder pitching in two layers over a layer of 10 cm thick sand cushion and geo-textile filter on the slope of the bank.
- b) A continuous boulder sausage toe wall of size 1.2 m x 1.8 m to be laid at LWL.
- c) Boulder sausage middle and top wall of size .6 m x .9 m.
- d) The apron consisting of crated boulder sausage having size 1 m x 1 m x 2.6 m to be provided on the basis of effective scower depth.

Area to be benefited is 300.30 ha to benefit a population of 58,000.

Estimated cost of the project is Rs. 28.13 cr with B.C. ratio as 3.01:1.

The project was earlier submitted to GFCC on piecemeal basis and the same has now been consolidated and presented to the Advisory Committee for consideration.

After brief discussion, the Committee accepted the proposal.

- 2) Project for Bank protection works along both banks of the river Bhagirathi at Sundarpur & Basantpur, Kazipara to Nabagram & Saharbari to Uttarasan Outfall in the district Murshidabad and at Sanyalchar in the district Nadia, West Bengal:

The proposed project envisages the following works:

- a) 0.225 m (average) thick boulder pitching over 10 cm thick sand cushioning in between boulder pitching and geo-synthetic filter.
- b) Toe sausage wall of size 1.2 m x 0.9 m and 0.9 m x 0.6 m sausage for separator in slope and for top band.
- c) Sand /local earth filled new polythene bags of size 1 m x 1 m x 1m to be dumped in position from LWL to the specified slope up to horizontal bed level.
- d) Provision of 7 Nos. bathing ghats.
- e) Geo-synthetic bags filled with fine sand dumped in position from below LWL one layer at deepest bed level at Sanyalchar.
- f) Provision of permeable groynes of porcupines at the rate of 30 m c/c at Sanyalchar.

Area to be benefited is 529.42 ha which will benefit in turn a population of 2.6 lakhs.

The estimated cost of the project is Rs. 23.66 cr with B.C. ratio as 2.65:1.

The project was earlier submitted on piecemeal basis which were examined in GFCC and the same has now been consolidated and presented to the Advisory Committee for consideration.

After brief discussion, the Committee accepted the proposal.

The meeting ended with Vote of Thanks to the Chair.

LIST OF PARTICIPANTS**Members of the Committee:**

S/Shri

1. U.N. Panjiar, Secretary (WR), MoWR
2. A.K. Bajaj, Chairman, CWC, New Delhi
3. Ananya Ray, Joint Secretary (FA), Ministry of Water Resources
4. Dr. Man Singh, ASCO (NRM), New Delhi
(Representing Secretary, Department of Agriculture & Cooperation –Ministry of Agriculture)
5. Tanmay Das, Chief Engineer, CEA (Representing Chairman, CEA)
6. Avinash Mishra, Dy. Advisor (WR), Planning Commission, New Delhi
(Representing Principal Advisor (WR), Planning Commission)
7. Kalyani Mishra, Deputy Secretary, Ministry of Power (Representing Secretary, Ministry of Power)
8. U. K. Ghosh, Chief Engineer, PAO, CWC, New Delhi

Special Invitees**a) Ministry of Water Resources**

S/ Shri

1. A. B. Pandya, Commissioner (PR), MoWR
2. G. Aranganathan, Commissioner (Indus), MoWR
3. Darpan Talwar, Dy. Commissioner (Indus), MoWR

b) Central Water Commission

S/ Shri

1. R. C. Jha, Member (RM), CWC, New Delhi, Holding additional charge as Chairman, GFCC, Patna.
2. Indra Raj, Member (WP&P), CWC, New Delhi.
3. S.K. G. Pandit, Chief Engineer(NBO), CWC, Bhopal
4. H. K. Verma, Chief Engineer (IBO), CWC, Chandigarh
5. Narendra Kumar, Chief Engineer (B&BBO), CWC, Shillong
6. B.G. Kaushik, Chief Engineer, (PMO), CWC, New Delhi
7. S K. Halder, Director M&A, CWC, Bhopal
8. M.S. Gupta, Director Mon (C), CWC, New Delhi
9. R K Gupta, Director M&A, CWC, Jammu
10. Ravi Shanker, Director M&A, Guwahati
11. D Ranga Reddy, Director Appraisal, Bangalore
12. Rajesh Kumar, DD, M&A, CWC, Ranchi
13. T D Sharma, DD: (Punasa), CWC, Bhopal
14. M W Paunikar, DD, PA-N, CWC, New Delhi
15. Sudhir Kumar, DD, Cost(I), CWC, New Delhi
16. B Rai, DD, PA-C, CWC, New Delhi
17. Punit Mittal, DD, PA-S, CWC, New Delhi
18. S S Bonal, DD, PA-S, CWC, New Delhi

c) GFCC

M U Ghani, Member, GFCC, Patna

d) State Government officers

Assam

S/ Shri

A H Khan, Chief Engineer ,Irrigation Dept

Jammu & Kashmir

S/ Shri

1. M P Singh, Assistant Engineer ,Irrigation Dept

2. Farrok Ahmad Parsa, Assistant Engineer ,Irrigation Dept

Jharkhand

S/ Shri

1. Umesh Kumar Sinha, Chief Engineer, WRD, Ranchi

2. A. K. Sinha, Resident Engineer, Jharkhand Bhawan, New Delhi

Karnataka

S/ Shri

1. M R Kamble, secretary, WRD, Govt of karnataka

2. Basaraaju, Managing Director, KBJNL, Bangalore

3. Janekaran, Chief Engineer, Irrigation North, Belgaum

4. V P Uddihal, Cief Engineer, Malaprabha Project, Dharwar

5. S. Natraj, Chief Engineer, KNNL, Bangalore

6. R S Pashupathy, Executive Director (Finance), KBJN Ltd, Bangalore

7. Sadashivaaddy B Patil, Chierf Engineer, Irrigation Dept, Gulbarga

8. Anil Kumar, SE, KNNL, Bangalore

Madhya Pradesh

S/ Shri

1. A. Joshi, Principal Secretary, WRD, Govt of MP

2. R S Bhadoria, Chief Engineer, Chambal Betwa Basin, WRD, Bhopal

Maharashtra

S/ Shri

1. H. Y. Kolawale, Executive Director, MKVDC, Pune

2. D P Shirke, Executive Director, VIDC, Nagpur

3. S M Upase, Chief Engineer, Irrigation Dept

4. D R Kandi, Chief Engineer, Irrigation Dept, Amravati

5. Rajendra Pawar, SE, Irrigation Dept, Buldhana

Manipur

S/ Shri

1. S D Gagte, Chief Engineer, Irrigation Dept, Imphal

2. N Karunacharja Singh, SE, Irrigation Dept, Imphal

3. Th. Indramani Singh, ACE, Irrigation Dept, Imphal

Tripura

S/ Shri

1. Tapan Lodh, Chief Engineer, PWD, Tripura

2. Nirad sarma, EE (WR), Tripura

Uttar Pradesh

S/ Shri

1. Harpal Singh, Chief Engineer, Projects- Betwa, Jhansi

2. K K Agrawal, Executive Engineer, Irrigation, Mahoba

No. 16/27/2009-PA (N)/ 2068-2108
Government of India
Central Water Commission
Project Appraisal (North) Directorate

407(S), Sewa Bhawan
R. K. Puram, New Delhi-110 066
Dated: 30.10.2009

Sub: Summary record of discussions of the 100th meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals held on 09.10.2009

Ref: T.O Letter No. 16/27/2009-PA (N)/1994-2033 Date 26.10.2009

CORRIGENDUM

- i) **Item B-4 (Rajpora Lift irrigation project, J&K): Para 1 which reads as**
"CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in Jan. 1979 for Rs. 2.413 cr (PL - 1979)."
may be read as
"CE (PAO), CWC briefly introduced the project. The original project proposal was approved by the Planning Commission in Jan. 1979 for Rs. 2.13 cr (PL - 1979)."
- ii) **Item B-7 (Panchkhero Reservoir Scheme, Jharkhand): The 2nd Para which reads as**
"The project envisages construction of a 2087 m long earthen dam across river Panchkhero, a Sub-tributary of Barakar river in Damodar river basin and two canal systems on both the banks of the river to irrigate a command area of 3238 ha in drought prone areas with 69% irrigation intensity and B.C. ratio of 1.43:1(benefiting drought prone areas)."
may be read as
"The project envisages construction of a 2087 m long earthen dam across river Panchkhero, a Sub-tributary of Barakar river in Damodar river basin and two canal systems on both the banks of the river to irrigate a command area of 3238 ha in drought prone areas with 69% irrigation intensity. The present revised estimate without any change in scope has been finalized for Rs. 75.69 cr (PL 2007) with B.C. ratio of 1.43:1(benefiting drought prone areas)."
- iii) **Item B-22 (Khowai Irrigation Project , Tripura): The Para 3 which reads as**
"The present revised cost estimate is without change in scope and the same has been finalized for Rs. 83.01 cr (PL - 2008) with B.C. ratio as 1.95:1."

may be read as

"The present revised cost estimate is without change in scope and the same has been finalized for Rs. 91.64 cr (PL – 2008) with B.C. ratio as 1.71:1."

iv) Item B-23 (Manu Irrigation Project, Tripura): The 3rd Para which reads as

"The present revised cost estimate is without change in scope and the same has been finalized for Rs. 98.71 cr (PL – 2008) with B.C. ratio as 1.18:1 (benefiting special category state)."

may be read as

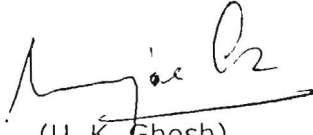
"The present revised cost estimate is without change in scope and the same as been finalized for Rs. 98.71cr (PL – 2008) with B.C. ratio as 1.12:1 (benefiting special category state)."

v) Item B-24 (Arjun Sahayak Pariyojana, Uttar Pradesh) : The 3rd Para which reads as

"The project proposal has been examined in Central Water Commission and the estimated cost has been finalized for Rs. 4,806.50 cr with B.C. ratio as 1.21:1 (benefiting drought prone districts of Bundel Khand region)."

may be read as

"The project proposal has been examined in Central Water Commission and the estimated cost has been finalized for Rs. 806.50 cr (PL – 2008) with B.C. ratio as 1.21:1 (benefiting drought prone districts of Bundel Khand region)."


(U. K. Ghosh)
Chief Engineer (PAO) &
Member-Secretary
Tele Fax No. 2610636

To

Members of Committee:

1. Chairman, CWC, Sewa Bhawan, R. K. Puram, New Delhi.
2. Secretary (Expenditure), Ministry of Finance, (1st Floor) North Block, New Delhi.
3. Secretary, Department of Power, S.S. Bhawan, IInd Floor, New Delhi.
4. Secretary, Ministry of Environment & Forests, 4th Floor, Room No- 404/05 Paryavaran Bhawan, CGO Complex, New Delhi.
5. Secretary, Ministry of Tribal Affairs, Room No. 738, A-Wing, Shastri Bhawan, New Delhi.
6. Secretary, Department of Agriculture & Cooperation, Room No 126, Krishi Bhawan, New Delhi.
7. Director General, ICAR, Room No-108, Krishi Bhawan, New Delhi.
8. Chairman, CEA, Sewa Bhawan, R. K. Puram, New Delhi.
9. Chairman, Central Ground Water Board, Jam Nagar House, Man Singh Road, New Delhi.
10. Principal Adviser (WR), Planning Commission, Room No-255, Yojana Bhawan, New Delhi.

11. Principal Adviser (Power), Planning Commission, Room No-107 Yojana Bhawan, New Delhi.
12. Financial Adviser, Ministry of Water Resources, Room No-401 S.S. Bhawan, New Delhi.
- Special Invitees:
13. Member (WP&P), CWC, New Delhi.
14. Member (D&R), CWC, New Delhi.
15. Member (RM), CWC, New Delhi.
16. Chairman, GFCC, 3rd Floor, Sinchai Bhawan, Patna-800015
17. Commissioner (Projects), Room No-411, S.S. Bhawan, MoWR, New Delhi.
18. Commissioner (Ganga), Ministry of Water Resources, CGO Complex, New Delhi.
19. Commissioner (Indus), Ministry of Water Resources, CGO Complex, New Delhi.
20. Secretary, Water Resources Deptt, Govt of Maharashtra, Mantralaya, Mumbai, 400032.
21. Principal Secretary, Irrigation Department, Government of Uttar Pradesh, Sachivalaya Annexe, Lucknow-226 001 (U.P.).
22. Secretary, Irrigation & F.C. Department, Government of Manipur, Manipur Secretariat, Imphal-795001
23. Principal Secretary, Water Resources, Govt of Madhya Pradesh, Sachivalaya, Arera Hill Bhopal
24. Secretary, Irrigation Department, Government of Karnataka, M.S. Building, 6th F Karnataka Government Secretariat, Dr. Ambedkar Veedhi, Bangalore-560 001
25. Managing Director, Karnataka Neeravasi Nigam Limited, 4th floor, coffee Board, Bangalore
26. Managing Director, Krishna Bhagya Jal Nigam Limited, PWD Annexe Building, KR Circle Bangalore
27. Principal Secretary, Narmada Valley Development Authority, Arera Hills, Bhopal
28. Secretary, Irrigation Directorate, Government of Tripura, Secretariat Complex, Agartala-799 001
29. Secretary, Department of Irrigation & Flood Control, Government of Assam, Secretariat, Guwahati-781 006.
30. Secretary, (PWD/Irrigation & PHE), Government of Jammu & Kashmir, Civil Secretariat, Srinagar -190 001.
31. Chief Engineer (PMO), CWC, New Delhi.
32. Chief Engineer, Monitoring-South, CWC, Jalasudha, Near HMT Precision Machinery Division, H.M.T. Post, Bangalore-560031
33. Secretary, Water Resources & Energy Department, Government of Jharkhand, Nepal House, Ranchi-834 001 (Jharkhand)
34. Chief Engineer (NBO), CWC, Paryawas Bhawan, Mother Teresa Marg, Arera Hills, Bhopal-462011
35. Chief Engineer (IBO), CWC, Block-4, 6th Floor, Kendriya Sadan, Sector - 9A, Chandigarh-106 071
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38. Chief Engineer (B&BB), Brahmaputra & Bank Basin, CWC, "Maranatha" Pohkseh P.O. Rynjah, Shillong 793006
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Copy for information to:-

40. Sr. PPS to Secretary, Ministry of Water Resources, Room No-407, New Delhi.