

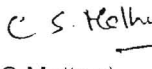
No. 16/27/2006-PA (N)/3020-43
GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
PROJECT APPRAISAL ORGANIZATION
407, SEWA BHAWAN, R. K. PURAM, NEW DELHI-110 066

Date: 6th December, 2007

Sub: 91st meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals held on 07.11.2007.

Enclosed please find a copy of the summary record of discussions of the above meeting held at New Delhi on 7th November 2007 for information and necessary action.

Encl.: As above.


(C.S. Mathur)
Chief Engineer (PAO) &
Member Secretary - Advisory Committee

COPY 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, New Delhi.
4. Secretary, Ministry of Environment & Forests, 4th Floor, Room No- 404/05 Paryavaran Bhawan, CWC 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. Adviser (WR), Planning Commission, Room No-228 Yojana Bhawan, New Delhi.
11. Adviser (Power), Planning Commission, Room No-263 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, Sinchai Bhawan, Patna, Bihar. 800015
17. Commissioner (Projects), Room No-411 Ministry of Water Resources, New Delhi.
18. Commissioner (Ganga), MOWR, CGO Complex, Block-11, 8th floor, Lodhi Road, New Delhi.
19. Secretary, Water Resources Deptt. Govt of Bihar, Sinchai Bhawan, Patna.
20. Secretary, Water Resources Deptt. Govt of Jharkhand, Ranchi., Sinchai Bhawan, Patna.
21. Secretary, Irrigation Deptt. Govt of Maharashtra, Mantralaya, Mumbai-400032.
22. Chief Engineer, Mon. (C), CWC, Nagpur.
23. Director, Project Appraisal (C), CWC, New Delhi.

Copy for information to -

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

**SUMMARY RECORD OF DISCUSSIONS OF THE 91ST MEETING OF
THE ADVISORY COMMITTEE FOR CONSIDERATION OF TECHNO-
ECONOMIC VIABILITY OF IRRIGATION, FLOOD CONTROL AND MULTI-
PURPOSE PROJECT PROPOSALS HELD ON 7TH NOVEMBER, 2007.**

The 91st meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals was held on 7th November, 2007 at 1530 hrs. in the Ministry of Water Resources , S.S. Bhawan , New Delhi under the Chairmanship of Secretary(WR). A list of participants is enclosed at Annexure-I.

The Chairman welcomed the members of the Committee and other officers present and requested the Member-Secretary to take up the agenda for discussion. The Member-Secretary mentioned that techno-economic viability of six projects including five projects appraised by GFCC were proposed to be discussed in the meeting. Thereafter, the agenda items were taken up for discussion.

1. Confirmation of the minutes of the 90th TAC meeting:

The minutes of the 90th meeting held on 26.09.2007 in the Ministry of Water Resources, Shram Shakti Bhawan, were confirmed.

2. Projects under Consideration:

2.1. Revised Flood Control Component of Bagmati Multi-purpose Project

Chief Engineer, PAO briefly introduced the project. Earlier Bagmati multi-purpose Project costing Rs. 185.70 crore with Rs 125.22 crore as Irrigation Component including drainage and Rs 60.48 crore as Flood Component was accorded investment clearance by Planning Commission on 9.5.1983. Under this project, 24 Km long left afflux bund and about 54 Km long flood embankment along Bagmati River from Dheng bridge to Runisadpur were constructed in Indian territory.

As Bagmati river originates from Nepal and as the embankments were not tied to high land, this leads to inundation problems in Nepal. The issue was discussed in the meeting between the Hon'ble Prime Ministers of India and Nepal in 1985. Further, an understanding between the two countries was reached in the meeting of the two Prime Ministers in 1991 that the embankments should not be constructed parallel to the border & that they should be tied to high ground in Nepal.

Since then the project is under execution in two parts as under:

- a) Extension of embankments along the river in Nepal (To be executed by Govt. of Nepal with MEA funding and with India-Nepal Sub-Committee on Embankment Construction as the technical arm)
- b) Raising/strengthening/Extension of embankments along the river in North Bihar. (To be executed by Govt. of Bihar with MoWR funding with GFCC as the technical arm)

The proposals have accordingly been revised by GFCC. The present proposal is for works in Indian Territory. The works proposed are as per the comprehensive plan for the river basin prepared by GFCC and as per the report of Bagmati Technical Committee under Member (RM), CWC.

The scope of the project includes raising and strengthening of embankments in a length of about 334 Km, construction of new embankments in about 245.87 Km, river training works, sluices, etc.

GFCC has worked out total cost of Rs 792 Crore and a BC Ratio of 1.20. However, they have firmed up an estimate of Rs. 135.16 crores only for a length of 54 Km based on Mathematical model studies.

During discussions, Dy. Advisor, Planning Commission mentioned that construction of high dams would provide a long lasting solution. However, in absence of agreement with Govt. of Nepal, flood embankments are proposed. He suggested to provide for measures for desilting of the river. GFCC clarified that desilting in the entire river would not only be very un-economical but also unsustainable. Desilting could, however, be considered in local reaches/areas only.

After detailed discussions, the Committee accorded in principle acceptance to the project for the estimate of Rs. 792 crore and recommended for investment clearance by Planning Commission for first phase of work upto 54 Km at an estimated cost of Rs. 135.16 crore. . It was decided that GFCC would approach the Advisory Committee from time to time for the balance works.

2.2 Raising & Strengthening of Embankments along Kamala River in Bihar

CE, PAO briefly introduced the project. It was informed that embankments along Kamala River have been constructed since the devastating floods of 1954 inside Indian Territory. However, these embankments could not provide the anticipated benefits as the river spills over its bank in the terai area of Nepal leading to inundation in North Bihar.

Subsequently, an understanding was reached in 1991 in a meeting of the Hon'ble Prime Ministers of India & Nepal for extension of the embankments to tie them with high ground in Nepal. Since then the project is under execution in two parts as under:-

- a) Extension of embankments along the river in Nepal(To be executed by Govt. of Nepal with MEA funding and with India-Nepal Sub-Committee on Embankment Construction as the technical arm).
- b) Raising/strengthening/Extension of embankments along the river in North Bihar. (To be executed by Govt. of Bihar with MoWR funding with GFCC as the technical arm).

The Govt. of Bihar submitted revised proposals for raising and strengthening of embankment along Kamala river after the flood of 2004. The works have been carried out in some reaches.

The present proposal is in respect of the balance works viz raising/strengthening of about 93.44 km length of left embankment & 91.50 Km length of right embankment, protection works at vulnerable locations, brick soling on top of left embankment (Ch.22 km to 88 km) & 83 no. ramps on both the embankments.

GFCC has worked out a cost of Rs. 52.0926 Crore and a BC ratio of 1.28.

After discussions, the Committee accepted the project.

2.3 Flood Control Embankments in Mahananda Basin / Sub-Basin in Bihar

Chief Engineer (PAO) briefly introduced the project. It was informed that flooding is experienced along both the banks of Mahananda and its tributaries all

along its course upto its outfall in Ganga. The Scheme is proposed to benefit four districts of Purnea, Katihar, Araria and Kishanganj in North Bihar.

The proposal envisaged construction of 1195.871 Km. of new embankments, 206 no. raised platforms every 5 km apart, 963 no. turning platforms, 1195 no. ramps, Strengthening of 95.2 Km. of existing embankments, Brick-pitched road on top of embankments (1291.071 Km. length).

It was also informed that mathematical model studies for firming up the formation levels of the embankments will be carried out by CWPRS, Pune.

GFCC has worked out a total cost of Rs. 603.88 crore and BC Ratio of 1.45.

Dy. Adviser, Planning Commission mentioned that the Project benefits from communication (road) were much more than the flood control benefits. The Secretary, MoWR observed that the loss of human lives and trauma are not accounted for while working out B C Ratio. Further, the Project will help in development of infrastructure in this backward area of Bihar.

After discussion, the Committee accorded in principle acceptance to the project for the entire cost of Rs. 603.88 crore but decided to recommend this year's estimate of Rs. 5 crore for investment clearance by Planning Commission. It was decided that GFCC would approach the Advisory Committee from time to time for the balance works.

2.4. Raising, Strengthening & Extension of Existing Left & Right Bank Embankments in Chandan River System in the Bhagalpur & Banka Districts of Bihar :

CE, PAO introduced the project. The scheme envisages raising and strengthening of existing embankments on both banks of Chandan river and its tributaries in a length of 83.19 km, construction of new embankments in a length of 92.65 km, de-silting of river Andheri in a length of 2.5 km, flexible road in a length of 147 km over embankments, renovation of existing 38 no. inlets and 59 no. outlets in the existing embankments, plantation on country side of embankments, etc.

The cost of the project has been finalized by GFCC as Rs. 147.6868 crore with BC Ratio of 1.45. GFCC has requested Govt. of Bihar to carry out model studies before taking of construction.

After discussion, the Committee accepted the project.

2.5.Raising, Strengthening and Extension of existing Right Embankment along Gerua River of Jharkhand.

Chief Engineer,PAO introduced the above project. It was informed that river Gerua forms the boundary between the States of Bihar and Jharkhand. The proposal is in respect of the right flood embankment in the Jharkhand State. The project envisages closure of breaches in embankment at 35 locations, raising and strengthening of existing embankment (from ch. 0.00 to 820.00), extension of embankment from ch. 820.00 to 855.00, repair of 16 No. anti-flood sluices, construction of road ramps at 10 locations, construction of 27 No. turning platforms, construction of mooram road on the embankment from ch.0.00 to 855.00 etc.

The cost of the project has been finalized by GFCC as Rs. 20.122 crore with BC Ratio of 2.12.

After discussion Advisory Committee accepted the project.

2.6 Purna Medium Irrigation Project (Maharashtra) – Revised Estimate

Chief Engineer, PAO briefly introduced the project. The project was earlier accorded investment clearance by the Planning Commission in May, 2003 for Rs. 12378.733 lakh (2000-01 Price Level). The present proposal which is a revised estimate has been finalized at an estimated cost of Rs. 21309.096 lakh (2004-05 Price Level). The project authorities have certified that the project would be completed within the above cost by 2008-09 and the same was confirmed by the representative of the Govt. of Maharashtra in the meeting. This project envisages utilization of 1.872 TMC of water. It is included in the Master Plan of Tapi Basin of Maharashtra. The total utilization in Maharashtra inclusive of this project is well within 191.4 TMC which is Maharashtra's share.

After discussion, the Committee accepted the project.

The meeting ended with the vote of thanks to the Chair

LIST OF PARTICIPANTS

Member of the Committee:

S/Shri/Smt.

- | | |
|---|--------------|
| 1. Gauri Chatterji, Secretary (WR), MoWR | In the Chair |
| 2. B.S. Ahuja, Chairman, CWC, New Delhi | Member |
| 3. Avinash Mishra, Dy. Adviser-WR, Planning Commission, New Delhi (Representing Adviser-WR) | Member |
| 4. Ananya Ray, Joint Secretary & F.A., MoWR | Member |
| 5. B.M. Jha, chairman, CGWB, New Delhi. | Member |
| 6. Tanmoy Das, Director (H.P. & I Div.), CEA, New Delhi (Representing Chairman, CEA) | Member |
| 7. Dr. P.S. Minhas, ADG (IWM), ICAR, KAB-II | Member |
| 8. C.S. Mathur, Chief Engineer, PAO, CWC, New Delhi | Member-Secy. |

Special Invitees:

(a) Central Water Commission:

1. R.P. Saxena, Chief Engineer(MCO), Nagpur
2. Ramesh Grover, Director (Mon.), Nagpur
3. G. Thakur, Director(PA-North), New Delhi
4. T.D.Sharma, Dy. Director (PA-Central), New Delhi
5. Jacob Cherian C., EAD, PA(North), New Delhi
6. A.K. Guha, EAD, PA(North), New Delhi.

(b) Ministry of Water Resources

1. Indra Raj, Commissioner (Projects), New Delhi.
2. S.P. Kakran, Commissioner (Ganga), CGO Complex, New Delhi
3. Joginder Singh, Dy. Director(Projects), New Delhi.

(c) Ganga Flood Control Commission, Patna

1. A.K. Bajaj, Member (Planning), GFCC, Patna
2. L.P. Singh, Director (Planning),GFCC, Patna

(d) State Government Officers

Bihar

1. Ashok Kumar Sinha, Principal Secy., WRD, Bihar
2. Devi Rajak, Engineer-in-Chief (N), WRD, Bihar
3. Jawahar Lal, Ex. Engineer, Inv. & PP Divn., Purnia
4. P.K. Jha, Residential Engineer, WRD, Bihar, New Delhi

Jharkhand

1. Jaldhar Mandal , SE, Planning & Mon.Circle-I, Ranchi
2. Santosh Kumar, Ex. Engineer, Irr. Divn, Mahagana

Maharashtra

1. N.V. Patil, Chief Engineer(WR), Amaravati
2. Shiv Kumar Giri, SE, WRD, Amaravati
3. J.D. Borkar, Ex. Engineer, WRD, Punna Med. Irr. Divn, Achalpur

No. 16/27/2008-PA (N)/ 364 - 95
GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
PROJECT APPRAISAL ORGANIZATION
SEWA BHAWAN, R.K. PURAM, NEW DELHI.

Date : 12th March, 2008.

Sub: 92nd meeting of the Advisory Committee on Irrigation,
Flood Control and Multipurpose Projects proposals held on
27.02.2008

Enclosed please find a copy of the summary record of discussions of the above meeting held at New Delhi on 27th Feb., 2008 for information and necessary action.

Encl: as above

C. S. Mathur

(C.S. MATHUR)
CHIEF ENGINEER (PAO)
& MEMBER-SECRETARY
Tele-Fax No. 26103571

COPY 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, 11th 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. Senior Adviser (WR), Planning Commission, Room No-449, Yojana Bhawan, New Delhi.
11. Sr. Adviser (Power), Planning Commission, Room No-263 Yojana Bhawan, New Delhi.
12. Financial Adviser, Ministry of Water Resources, Room No-401 S.S. Bhawan, New Delhi.

Special Invitees:

1. Member (WP&P), CWC, New Delhi.
2. Member (D&R), CWC, New Delhi.
3. Member (RM), CWC, New Delhi.
4. Commissioner (Projects), Room No-411 Ministry of Water Resources, New Delhi.
5. Secretary, Water Resources Deptt, Govt of Maharashtra, Mantralaya, Mumbai – 400 032.
6. Secretary, Water Resources Deptt. , Govt. of Karnataka, M.S. Building, 6th Floor, Karnataka Govt. Secretariat, Dr. Ambedkar Veedi, Bangalore – 560001
7. Secretary, Irrigation, Govt. of Kerala, Secretariat, Thiruvananthapuram, Kerala - 695001
8. Engineer-in-Chief, Water Resources, Govt. of Orissa, Sechasadan, Keshari Nagar, Unit-V, Bhubaneshwar.
9. Chief Engineer, Irrigation & Flood Control Deptt., Govt. of Manipur, Imphal – 795001.
10. Chief Engineer (Mon-C), CWC, CGO Complex, Block-C, 3rd Floor, Seminary Hill, Nagpur – 440 006 (Maharashtra).
11. Chief Engineer (Mon-S), CWC, JALASUDHA near HMT Precision Machinery Division, HMT Post, Bangalore – 560013
12. Chief Engineer (C&SR), CWC, Sangamam, GandhiManeger, Peelamedu, Coimbatore – 641004 (Tamilnadu)
13. Chief Engineer (M&ER), CWC, Plot No. 13-14, Mahanadi Bhavan, Bhai Nagar, Bhubneshwar-751002 (Orissa)
14. Chief Engineer (PMO), CWC, New Delhi.
15. Director, Project Appraisal (South), CWC, New Delhi.
16. Director, Project Appraisal (Central), CWC, New Delhi.
17. Director, PP (N&S), CWC, New Delhi.
18. Director, PP (C), CWC, New Delhi.

Copy for information to –

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

**SUMMARY RECORD OF DISCUSSIONS OF THE 92nd MEETING
OF THE ADVISORY COMMITTEE FOR CONSIDERATION OF TECHNO-
ECONOMIC VIABILITY OF IRRIGATION, FLOOD CONTROL AND
MULTI-PURPOSE PROJECT PROPOSALS HELD ON 27.02.2008**

The 92nd meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals was held on 27.02.2008 at 1000 hrs. in the Central Water Commission Conference Room No. 523(N) , Sewa Bhavan, New Delhi under the Chairmanship of Secretary(WR). A list of participants is enclosed at Annexure-I.

The Chairman welcomed the members of the Committee and other officers present and requested the Member-Secretary to take up the agenda for discussion. The Member-Secretary mentioned that techno-economic viability of nine projects were proposed to be discussed in the meeting. Thereafter, the agenda items were taken up for discussion.

1. Confirmation of the minutes of the 91st TAC meeting:

The minutes of the 91st meeting held on 07.11.2007 in the Ministry of Water Resources, Shram Shakti Bhawan, were confirmed.

2. Projects under Consideration:

2.1 Gosikhurd Irrigation Project, Maharashtra - Revised

Chief Engineer briefly introduced the project. The project was earlier accepted by the Advisory Committee of MoWR in its 39th meeting held on 1988 and subsequently accorded investment clearance by the Planning commission in Nov., 1995 at an estimated cost of Rs. 461.19 crore (PL 1985-86) .

The State Govt. has now submitted an updated cost estimate which has been finalized for Rs. 7777.85 crore (P.L. 2007-08). The project authorities have informed that there is no change in scope of the project. Further, they have clarified that there is no change in the earlier CCA of 2,00,000 ha., ICA of 1,90,000 ha and annual irrigation of 2,50,800 ha. Environmental and forest clearance were earlier

accorded by MoEF in Feb. 1988. In view of some changes in the design features of the project, MoEF had sought some clarifications in 2001. Necessary clarifications have since been provided to them by the project authorities. MoEF has now intimated that they do not have any further comments.

The B.C. Ratio has been worked out as 1.60 and the State Govt. has submitted the State Finance concurrence for the revised cost.

Secretary (WR) observed that the cost per ha. of annual irrigation of Rs. 3,10,122 was high and desired to know the reasons for the increase in cost. It was clarified by the State Govt. officers as under:-

- The shape of command area is elongated and narrow & is generally along the river course. This results in a higher cost per ha. of annual irrigation on account of larger length of canal /distribution system required. Further lifting is also involved at various points.
- The cost of materials in 2007-08 had gone up by about 15 times and that of labour by about 13 times vis-à-vis rates in 1985-86.
- Water is being provided to ordinance factory and also for drinking. This has not been separately accounted for.

Member (D&R) impressed upon the need to provide for silt management for increasing the project life which was agreed to by the State Government. Planning Commission desired that the time frame for construction should be frozen. The project authorities informed that they proposed to complete the project in 6 years time by 2012-13.

After discussion, the Committee accepted the project.

2.2 Dudhganga Irrigation Project, Maharashtra – New Major:

Chief Engineer, PAO briefly introduced the project. This is a joint venture of the Governments of Maharashtra & Karnataka. The Karnataka's part is included in the Prime Minister's package. The project envisages construction of an Earthen dam across river Dudhganga, a tributary of Krishna river in district Kolhapur,

Maharashtra. It envisages to irrigate an ICA of 59,933 ha annually (46,937 ha in Maharashtra and 12,996 ha. in Karnataka) and benefits districts Kolhapur in Maharashtra and district Belgaum in Karnataka.

The project was considered by the Advisory Committee of MoWR in its 40th meeting held on 17.08.1988 and deferred for want of clearance from Deptt. of Environment & Forests. Whereas environmental clearance was granted earlier in January, 1984, the forest clearance to the project was granted by MoEF on 16.11.1994. Subsequently on the basis of observations of the Planning Commission, the State Govt. of Maharashtra was requested to submit updated cost estimate.

The same was received from the Govt. of Maharashtra in August, 2007. It has been certified by the project authorities that there is no change in scope.

There is an Inter-State Agreement for the project between Governments of Karnataka & Maharashtra dated 18.08.2001. Government of Karnataka had conveyed their no objection to the project to Govt. of Maharashtra.

The annual water utilization for Maharashtra including evaporation losses is 23.05 TMC whereas that of Karnataka is 4.00 TMC. With this utilization, it was seen that both the States are within their allocated shares as per KWDT award.

The cost of the project has been finalized as Rs. 1460.57 crore at 2007-08 PL and the B.C. Ratio has been worked out as 1.73. The State Finance concurrence from Govt. of Maharashtra has been received.

It was intimated by State Govt. officers of Maharashtra that rehabilitation and resettlement of the project affected persons had been made as per State act. The canal works in both the States were under progress. The project is planned to be completed by 2011-12.

After discussion, the Committee accepted the project.

2.3 Kanhirapuzha Irrigation Project, Kerala – New Medium (ERM)

Chief Engineer, PAO briefly introduced the project. The project consists of a 2128 metre long composite dam with canals on both banks. The total CCA is 9712 ha. out

of which it is reported that 8467 ha only could be achieved due to poor efficiency of distribution system. Now the State Government wishes to undertake ERM works under PM package for improving irrigation efficiency and to realize the balance CCA of 1245 ha.

The cost has been finalized as Rs. 30 crore (2007 PL) and the BC ratio is 1.081.

During discussions, Govt. of Kerala was requested to intimate Status of commissioning of the original project. The State Govt. has given a letter stating that the project has been declared as completed since more than 95% of the works are over. Further the State Govt. was requested to provide the break up of cost and irrigated areas in respect of the remaining works & ERM works. They intimated through a letter that the remaining works are only in respect of the tail end portion of Varoda distributary having a CCA of 111 ha and costing Rs. 37.54 lakhs. The balance cost in respect of ERM component was Rs. 2962.44 lakhs catering to a CCA of $(9712-111 = 9601 \text{ ha.})$. The State Govt. officers during the meeting also clarified that there no rehabilitation issues were involved. They also furnished State Finance concurrence for the finalized cost.

After discussion, the Committee accepted the project.

2.4 Bellary Nala Irrigation Project, Karnataka – New Medium

Chief Engineer, PAO briefly introduced the project. The project envisages construction of a 440.6 m long and 36.75 m high composite dam with an irrigation canal of 3.70 cumecs discharge capacity on the left bank. The CCA and annual irrigation are both 8200 ha.

The cost has been finalized as Rs. 143.55 crore (PL 2003-04). B.C. Ratio has been worked out as 1.27. The project is included in the Prime Minister's package.

However, the State Govt. is required to obtain forest clearance from MoEF and the clearance from the Ministry of Tribal Affairs in respect of ST population affected.

After discussion, it was decided to defer the project and the State Govt. was requested to expedite clearance from MoEF & MoTA.

2.5 Modernization of canal system of Bhadra Reservoir Project, Karnataka – New Major (ERM):

Chief Engineer, PAO briefly introduced the project. Bhadra Reservoir project is an existing pre-plan project with a CCA of 1,21,500 ha and annual irrigation of 1,77,37 ha.

The proposed envisages re-sectioning and lining the canal system, repair of distressed structures, construction of new causeways, bridges, measuring devices across canals etc. Presently, the water utilization as reported by the State Govt. of Karnataka is 72.13 TMC which is more than 61.70 TMC allocated utilization as per KWDT award.

The State Govt. by modernization / savings of water propose to bring down the utilization to 61.70 TMC and at the same time increase annual irrigation from 1,55,23 ha to 1,77,337 ha.

The cost of the modernization project has been finalized as Rs. 951.00 crore (PL 2007-08) and the BC ratio has been worked out as Rs. 1.73. The project is under Prime Minister's package.

The State Govt. has submitted the State Finance concurrence for the finalized cost and also an undertaking that they will restrict utilization to 61.70 TMC as per KWDT award.

After discussion the Committee accepted the project subject to Govt. of Karnataka restricting the utilization to 61.70 TMC which is their allocated share for the project as per KWDT award.

2.6 Hippargi Irrigation Project, Karnataka – New Major

Chief Engineer, PAO briefly introduced the project. The project envisages construction of head works across Krishna river, lifting the water from reservoir at the points viz. Halyal and Ainapur on left bank and again from the points on Halyal

East Canal to irrigate drought prone areas of Belgaum and Bagalkot districts. The project is included in Prime Minister's package.

The project was earlier accepted by the TAC of the Planning Commission in the year 1986 for Rs. 186.70 crore (PL 1985-86) subject to certain conditions. Govt. of Karnataka has since submitted compliance. Back water studies reveal that no territory of Maharashtra will be affected. (As regards environmental clearance, the same is not required as the project started in 1973 before the EIA notification in 1994. As regards forest clearance in principle, clearance for diversion of 9.48 ha. of forest land has been taken from MoEF.) Govt. of Karnataka clarified that they have fulfilled all the conditions of MoEF and that the 2nd stage clearance was in an advanced stage. Also the designs for the spillway were checked for PMF by the State Govt. and hydraulic model studies have been carried out.

The CCA has now been increased from the earlier planned 50,587 ha to 74,742 ha. The construction of the head works has been completed and the canal works are under construction.

The total water utilization proposed is 12.35 TMC out of which 12.10 TMC is from surface water and 0.25 TMC is from ground water.

In the earlier TAC of Planning Commission held in 1986 the total utilization proposed was 11.21 TMC out of which 10.01 TMC was from surface water and 2.09 TMC from ground water.

The additional utilization proposed now from surface water of river Krishna is $12.10 - 10.01 = 2.09$ TMC. With this increase the utilization of the State of Karnataka remains will within their allocated share of 734 TMC as per KWDT award.

The cost of the project has been finalized as Rs. 1521.78 crores (PL 2007-08) and B.C. Ratio is 1.25. The project is under Prime Minister's package.

The State Govt. officers clarified that no MoTA clearance is required for the project as no ST population is affected.

After discussion the Committee accepted the project subject to final clearance from MoEF.

2.7 Rengali Sub-Project – Right Bank Canal, Orissa – Major-Revised

Chief Engineer, PAO briefly introduced the project. The project was earlier accorded investment clearance by Planning Commission in Nov., 1998 for Rs. 738.27 crore (PL 1997). There is no change in scope of the project. As a result of actual survey, the CCA has got reduced from 1,00,500 ha to 84,406 ha and annual irrigation from 1,70,850 ha to 1,43,490 ha. Earlier a provision for industrial water supply of 10 cusec has been retained.

The revised cost has been finalized as Rs. 1290.93 crore (PL 2006). The BC ratio has been worked out as 2.80. The State Govt. has conveyed the State Finance concurrence for the finalized cost.

During discussion, it was brought out that as regards R&R clearance from MoTA/ Ministry of Welfare, the earlier clearance letter enclosed by the Planning Commission approval was for LBC-II and not for RBC.

The State Govt. of Orissa clarified that the earlier clearance of Ministry of Welfare (Now MoTA) was based on the State Government letter containing their proposal for entire Rengali Irrigation Project including both Left and Right bank canal. Further they have indicated that the Right Bank Canal and its systems will not displace any tribal families.

The State Govt. was also requested to provide a time frame for completion of the project. They indicated their firm commitment to complete the first phase by 2008-09 and the second phase in 4 years time after receiving funding.

After discussions the Committee accepted the project.

2.8 Chhelligada Dam Project, Orissa – Revised Medium:

Chief Engineer, PAO briefly introduced the project. The project envisages construction of a 36 metre high Masonry dam across river Badjore in Bansadhara basin. Further, it involves inter-basin transfer to Rushikulya basin.

The project was earlier accorded investment clearance for an estimated cost of Rs. 52.96 crore (1996 PL) in September, 2003.

Now the CCA has been proposed to be increased from 3000 to 3800 ha. There is provision of 1 cumec of drinking water supply to Berhampur town. The total water utilization proposed to 1.82 TMC. Further the project also envisages 3 mini hydel schemes on drops in Ghodahada river to generate 35 MW.

As per an Inter-State agreement between Andhra Pradesh and Orissa the allocated shares for both the States are 55 TMC each in Bansadhara basin. With the proposed project, it is seen that Orissa is well within its allocated share.

The revised cost has been finalized as Rs. 201.01 crore (PL 2006) and B.C. ratio has been worked out as 2.77. State Finance concurrence for the finalized cost has been furnished by the State Government.

As regards Forest clearance, it was seen that the State Govt. have taken in principle clearance for diversion of 159.895 ha. of forest land. They have made payment of Rs. 9.26 crore to MoEF.

During the meeting the State Govt. officers clarified that the agitation by the PAP's has since been settled.

After discussion the Committee accepted the project subject to final forest clearance from MoEF.

2.9 Khuga Multipurpose Project, Manipur – Revised :

Chief Engineer, PAO briefly introduced the project. The project was earlier accorded investment clearance by Planning Commission in 1980 for an estimated cost of Rs. 15 crore. It envisages irrigation to a CCA of 9575 ha. with an annual

irrigation of 14,775 ha., power benefits of 1.5 MW (3 of 0.5 MW installed capacity) and 5 mgd water supply to Churachandpur town and surrounding areas.

The project authorities have clarified that there is no change in scope. More than 90% of the works have been completed. It has been further intimated by them that the head works have been completed and now only some canal works are required to be carried out.

The appraisal has, therefore, been done on proforma basis as per guidelines. The revised cost has been finalized for Rs.335.15 crore (PL 2006) The BC ratio has been worked out as 1.18

During discussions the State Govt. officers were requested to submit the following:

- Financial commitment of the State Govt. for the revised cost.
- Clarification regarding R&R issues involved
- Clarification regarding forest clearance from MoEF.

The project authorities have vide letter No. SE/KPC/IFC/3-1/2008, dated 27.02.08 submitted:

- Copy of approval of the State Govt. for the revised estimate amounting to Rs.335.15 crore.
- That there is no R&R problems in respect of remaining works of canal and that no tribal population will be affected.
- That no forest land is coming in the canals system which is to be completed. The construction of head works has been completed.
- Undertaking to complete the project at the revised estimated cost of Rs. 335.15 crore.

After discussion, the Committee accepted the project.

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

LIST OF PARTICIPANTS

Members of the Committee:

S/Shri/Smt.

- | | |
|---|--------------|
| 1. U.N. Panjair, Secretary (WR), MoWR | In the Chair |
| 2. B.S. Ahuja, Chairman, CWC, New Delhi | Member |
| 3. Avinash Mishra, Dy. Adviser-WR, Planning Commission,
New Delhi (Representing Adviser-WR) | Member |
| 4. Ananya Ray, Joint Secretary & F.A., MoWR | Member |
| 5. Dr. Poonam Sharma, Scientist- D, CGWB, New Delhi.
(Representing Chairman, CGWB) | Member |
| 6. Tanmoy Das, Director (H.P. & I Div.), CEA,
New Delhi (Representing Chairman, CEA) | Member |
| 7. C.M. Sharma, Dy. Secretary, D/o. Agri &
Coop. (Representing Secretary, Min. of Agriculture) | Member |
| 8. S. Ramamurthy, Under Secy., MOTA
(Representing Secretary, MOTA) | Member |
| 9. C.S. Mathur, Chief Engineer, PAO, CWC, New Delhi | Member-Secy. |

Special Invitees:

(a) Central Water Commission:

1. Dr. D.V. Thareja, Member (D&R)CWC, New Delhi
2. R. C. Jha, Member (RM), CWC, New Delhi
3. S.K. Sinha, Chief Engineer(PPO), CWC, New Delhi
4. S. Mahto, Chief Engineer (M&ERO), CWC, Bhubneswar
5. A. Mahendran, Superintending Engineer(Mon-S), CWC, Bangalore
6. U.K. Ghosh, Director (PA-C), CWC, New Delhi.
7. B.G. Kaushik, Director (CA-I), CWC, New Delhi
8. K.S. Jacob, Director(PP-N&S), CWC, New Delhi.
9. N.M. Saha, Director (PA-S), CWC, New Delhi.
10. G. Thakur, Director(PA-North), CWC, New Delhi
11. M.S. Dhillon, Director (PP-C), CWC, New Delhi.
12. T.K. Sivarajan, Director (Beach Erosion), CWC, Koimbatore
13. R.N. Ray, Dy. Director (PA-N), CWC, New Delhi.
14. T.D.Sharma, Dy. Director (PA-Central), New Delhi
15. A.K. Singh, Asstt. Director(PA-N), CWC, New Delhi
16. Jacob Cherian C., EAD, PA(North), New Delhi
17. A.K. Guha, EAD, PA(North), New Delhi.
18. S. Jagdeeshan, EAD, PA(North), New Delhi.

(b) Ministry of Water Resources

1. Indra Raj, Commissioner (Projects), New Delhi.

(c) State Government Officers

Maharashtra

1. H.Y. Kolawale, Ex. Director, K.V.D.C., Pune
2. Devendra Shirke, Ex. Director, Vidarbha I.D.C., Nagpur
3. S.N. Hudder, Adviser & Former Secretary, WRD, Pune

Manipur

1. N. Karunacharia Singh, Superintending Engineer, Khuga Project Circle, PWD Complex, Imphal

Karnataka:

1. M.R. Kamble, Secretary (WR), Bangalore
2. D. Satya Murty, M.D., Karnataka Necravani Nagam, Bangalore
3. S.S. Khanagori, Chief Engineer, KNNL, Irrigation North, Bangalore
4. S.B. Sidda Gangappa, CE, UTP Shivaneogga, Karnataka
5. Anil Kumar, Superintending Engineer, KNNL, Bangalore

Kerala

1. K. Jaya Kumar, Addl. Chief Secretary, WRD, Tiruannatpuram
2. K.K. Ramanuj, Chief Engineer (Project-I), Kazikhod
3. V.K. Mahanudeva, Superintending Engineer (Project Circle), Palakkad.
4. Suresh C., Ex. Engineer, Chittur

Orissa

1. Haarish Chandra Behera, engineer-in-Chief (WR), Bhubaneswar
2. N.C. Mohanty, Superintending Engineer, DOWR, Dhenkanal
3. N.K. Mohapatra, Director, Hyd. & WR-I, Sedrasadan
4. K.R. Acharya, Dy. Director, WRD, Bhubaneswar
5. R.N. Swan, EE (WRD), Athagarh

No. 16/27/2008-PA (N)/ 828-60
GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
PROJECT APPRAISAL ORGANIZATION
SEWA BHAWAN, R.K. PURAM, NEW DELHI.

Date : 16th JUNE, 2008.

Sub: **93rd meeting of the Advisory Committee on Irrigation, Flood Control and Multipurpose Projects proposals held on 22.05.2008**

Enclosed please find a copy of the summary record of discussions of the above meeting held at New Delhi on 22nd May., 2008 for information and necessary action.

Encl: as above

C. S. Mathur
(C.S. MATHUR)
CHIEF ENGINEER (PAO)
& MEMBER-SECRETARY
Tele-Fax No. 26103571

COPY 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, 11nd 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 a. 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. Senior Adviser (WR), Planning Commission, Room No-449, Yojana Bhawan, New Delhi.
11. Sr. Adviser (Power), Planning Commission, Room No-263 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, Sinchai Bhawan, Patna- 800015
17. Commissioner (Projects), Room No-411 Ministry of Water Resources, 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 – 400 032 with a request to get the outstanding requirements attended as indicated.
21. Commissioner & Secretary, Irrigation Deptt. , Govt. of Orissa , Bhubneshwar – 751001 with a request to get the outstanding requirements attended as indicated.
22. Secretary, Water Resources Deptt, Govt of Bihar, Sinchai Bhawan, Patna – 800015
23. Secretary, Irrigation & Flood Control Deptt, Govt of Jammu & Kashmir, Civil Secretariat, Srinagar - 190001
24. Chief Engineer (Mon-C), CWC, CGO Complex, Block-C, 3rd Floor, Seminary Hill, Nagpur – 440 006 (Maharashtra).
25. Chief Engineer(NB), CWC, Block-3, Ground Floor, Prayavas Bhavan, Mother Teresa Marg, Areta Hills, Bhopal – 462011
26. Chief Engineer (M&ER), CWC, Plot No. 13 & 14, Mahanadi Bhawan, Bhai Nagar, Bhubneshwar – 751002
27. Chief Engineer (PMO), CWC, New Delhi.
28. Chief Engineer, Indus Basin, CWC, Block-4, 6th Floor, Kendriya Sadan, Sector-9A, Chandigarh - 160017
29. Director (M&A), CWC, Gool House, Timber Road, Indira Colony, Janipur, Jammu – 180007
30. Director, Project Appraisal (North), CWC, New Delhi.
- 31.** Director, Project Appraisal (Central), CWC, New Delhi.
32. Director (PP-N&S) , CWC, New Delhi.

Copy for information to –

33. Sr. PPS to Secretary, Ministry of Water Resources, Room No. 407, S.S. Bhavan, New Delhi.

SUMMARY RECORD OF DISCUSSIONS OF THE 93rd MEETING OF THE ADVISORY COMMITTEE FOR CONSIDERATION OF TECHNO-ECONOMIC VIABILITY OF IRRIGATION, FLOOD CONTROL AND MULTI-PURPOSE PROJECT PROPOSALS HELD ON 22.05.2008.

The 93rd meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals was held on 22.05.2008 at 1000 Hrs in Central Water Commission Conference Room No. 523 (N), Sewa Bhawan, R.K. Puram, New Delhi under the chairmanship of Secretary (WR). List of participants is enclosed at Annexure-I.

The Chairman welcomed the members of the Committee and other officers present and requested the Member-Secretary to take up the agenda for discussion. The items discussed and decisions taken are given below:

I Orissa Integrated Irrigated Agriculture & Water Management Investment Programme (OIIAWMIP) – Tranch-1:

Chief Engineer (PAO) intimated that the OIIAWMIP is proposed to be executed by Govt. of Orissa with the assistance of Asian Development Bank (ADB) at an estimated cost of Rs 1092.37 crore in a period of 8 years in 4 tranches.

It envisages:-

i)	Improvement/Extension/Completion of 6 major & 9 medium irrigation projects	-	Rs. 716.10 crore
ii)	Revival of minor lift irrigation schemes (1400no.)	-	Rs. 60.90 crore.
iii)	Revival of creek irrigation (4 No. projects)	-	Rs. 6.51 crore
iv)	Pilot drainage scheme	-	Rs. 14.30 crore
v)	CAD works & conjunctive use	-	Rs. 78.67 crore
vi)	Institutional strengthening of PIM, IWRM, WALMI etc.	-	Rs. 66.57 crore
vii)	Agricultural & Livelihood Support	-	Rs. 27.34 crore.
viii)	Project Management with Environment study measures.	-	Rs. 74.03 crore
ix)	Planning & WUA development	-	Rs. 22.45 crore
x)	O&M Cost (construction stage)	-	Rs. 25.50 crore

Under Tranch-1 Govt. of Orissa proposes to carry out:

i)	Improvement/Extension/Completion of 2 major and 3 medium irrigation projects	
	- Improvement of Taladana Canal system (Major)	- Rs. 101.31 crore
	- Completion of balance works of Mahanadi Chitropala Island Project (Major)	- Rs. 395.46crore

- Improvement of Gohira Irrigation Project (Medium) - Rs. 23.11 crore
- Improvement to Remal Irrigation Project (Medium) - Rs. 12.57 crore
- Improvement to Sunei Irrigation Project (Medium) - Rs. 25.93 crore

Rs. 558.38 crore

ii) Other Works

- Revival of 300 lift Irrigation Minor schemes and associated infrastructure activities - Rs. 69.12 crore

Grand Total of Tranch-I. - Rs 627.50 crore

Estimates for Rs 558.38 crore for Major/Medium projects have been examined in CWC.

The estimates for other works i.e Rs 69.12 crores have been cleared by the State Govt. while according State Finance Concurrence for the entire project.

While the Govt. of Orissa have submitted broad details of the project as a whole, they have submitted DPRs for the project covered in Tranch I only. The Principal Secretary, Govt. of Orissa intimated that DPR for projects under Tranch II, III and IV are under preparation and they would be submitted shortly. He requested for total acceptance of the proposal as a whole and TAC / Investment clearance of the Tranch I proposal to facilitate commencement of the project in time.

After discussions the Committee accorded in principle acceptance for the project concept as a whole and emphasized early submission of project reports (DPRs) for the Tranch II,III & IV to CWC for techno-economic examination and clearance by TAC.

Thereafter the Advisory Committee discussed the five Major/Medium projects under Tranch- I for which details are given below.

.1. Mahanadi Chitropola Island Irrigation Project (Revised-Major)

Chief Engineer (PAO) briefly introduced the project proposal. The project was earlier approved by Planning Commission in May 1989 for a cost of Rs 39.937 crore to irrigate a CCA of 19542 ha. However the project could not be constructed due to paucity of funds. Subsequently due to water logging problem a CCA of 4200 ha near the tail end was reduced & the CCA of the project was curtailed to 15342 ha. The project with an estimated cost of Rs 124.72 crore was included as a component

of World Bank aided Orissa Water Resources Consolidation Project (OWRCP) in 1995. The OWRCP was approved by Planning Commission on 27.9.95. The present proposal is to complete the left over works of the project proposed at that time under OWRCS.

The left over works are:-

- i) Construction of Chitropala Right Branch Canal from RD 15.13 km to tail.
- ii) Construction of Paika Left Branch Canal from RD 15.00 km to tail.
- iii) Construction of minors & sub-minors of the above branch canal systems etc.

The Annual irrigation planned is 25160 ha with an intensity of irrigation of 164%. It is also planned to use ground water during Rabi season with a view to control water logging problems.

The revised estimated cost of the entire project is Rs 395.45 crore (at 2007-08 PL) out of which Rs 246.79 crore has already been spent under OWRCP. The BC ratio has been worked out is 1.554 and IRR is 17.27%.

During discussions the representatives of the Govt. of Orissa were requested to intimate the physical & financial progress achieved so far & the time frame by when it is proposed to complete the balance works. The State Govt. Officers clarified as under:-

- i) Out of CCA of 15342 ha an area of 7287 ha has been covered so far.
- ii) Out of total estimated cost of Rs. 395.45 crore an amount of Rs. 246.79 crore has been spent so far, leaving a balance estimated expenditure of Rs. 148.67 crore which is proposed for ADB assistance.
- iii) State Govt. proposes to complete balance works in 5 years time.

The State Govt. officers were requested to complete the balance works with no further cost overrun and in a compressed time frame.

After discussions the Committee accepted the project proposal.

2. Improvement of Taladanda Main Canal Project (New Major – ERM):

While introducing the project proposal Chief Engineer (PAO) intimated that the Taladana Canal system has been functioning since 1889, this canal (83.24 km long) off takes from Mahandi Anicut in the right bank, its designed capacity is 88.42 cumec out of which 7.50 cumec is for industrial use. Most of the structures of the canal system are reported to be in a dilapidated condition. There is siltation in the canal & heavy damages have been observed in various structures. In view of the above improvements in the canal system such as renovation & construction of cross drainage works, regulators, gates, outlets in distribution system, re-sectioning of

canals, slope protection measures, lining of canals/distributaries at selected locations etc. have been contemplated in the project proposal. A CCA of 32684 ha is planned to be benefited by this project. Annual Irrigation envisaged is 53601 ha with 164% intensity of irrigation.

The cost has been estimated as Rs 101.32 crore (2007-08 PL). BC ratio worked out is 3.74 & IRR is 27.1%. The additional annual irrigation after modernization would be 7740 ha. Thus the cost of additional annual irrigation works out to Rs. 1,30,904 per ha.

To a query regarding lack of maintenance of the canal system it was clarified by Govt. of Orissa officers that the canal was constructed way back in 1889 & that it has withstood many calamities including super cyclone. & being very old structure it now requires ERM works. Govt. of Orissa officers further informed that they propose to carry out O&M works in future for minors & sub-minors through WUA's (Pani Panchayats) already formed.

Govt. of Orissa was requested to complete the works without any cost overrun on a compressed time schedule of 4 yrs.

After discussions, the committee accepted the project proposal.

3. Improvement (ERM) of Gohira Irrigation project (Medium)

Chief Engineer (PAO) briefly introduced the Project proposal. Gohira Irrigation Project in Deogarh distt. of Orissa was completed in 1981. It consists of an earthen dam with canals on both banks to irrigate a CCA of 8100 ha. Later the Revenue Deptt. of Govt. of Orissa verified the CCA on ground as 8165ha. Subsequently an additional 139 ha of CCA was added. Thus the present CCA is 8304 ha. It is reported that on account of siltation, the capacities of the canals have reduced & most of the canal structures viz. Head regulator gates, Syphons, Canal falls, etc. have got damaged. The Head regulators & outlets are therefore not functioning properly. Heavy seepage is also reported in some reaches especially where the canal is in filling.

To overcome these difficulties the State Government has proposed to undertake the following works:

- i) Repair of Head works, spillway & Gates
- ii) Canal lining
- iii) Re-sectioning of distributaries
- iv) Strengthening of banks
- v) Renovation of structures
- vi) Provision of additional structures.

The water availability, design flood & sedimentation studies have been reviewed. From 19 years of monthly working table it has been observed that irrigation is achieved with 84 % success rate. Design flood has been assessed as 3772 cumec (original design flood was 2550 cumec). Loss of live capacity due to sedimentation since 1981 has been assessed as 5% (over 25 year's time frame). Annual Irrigation proposed is 12456 ha with an intensity of irrigation of 150%

The cost has been estimated as Rs 23.11 crore at 2007-08 P.L. BC ratio worked out is 2.155 & IRR is 22%. Additional annual irrigation after modernization would be 2092 ha. Thus the cost of additional annual irrigation works out to Rs. 1, 10,420 per ha.

During discussions the State Govt. Officers were requested to compress the construction period from 3 to 2 yrs. As regards revised design flood, the State Govt. officers intimated that they have carried out flood routing studies and 2 m freeboard is still available above maximum water level. Moreover, 1 m high parapet wall is also provided over the dam & strengthening/modifications in stilling basin have been carried out for the revised flood.

After discussions the Committee accepted the project proposal.

4. Improvement (ERM) of Remal Irrigation Project (Medium Irrigation Project)

Chief Engineer (PAO) briefly introduced the Project proposal. Remal Irrigation Project is located in Keonjhar distt. of Orissa. It was completed in 1988. It consists of an earthen dam on river Remal with a canal taking off from the left bank to irrigate a CCA of 3643 ha in semi arid region of Keonjhar distt. During construction stage the CCA was increased to 4705 ha. However, at present due to diversion of cultivable land to homestead land, the CCA available is 4313 ha. Presently due to siltation the carrying capacity of canals has been reduced. Most of the structures viz., Head regulators, outlets, canal falls, etc., have got damaged & head regulators, outlets etc., are not functioning properly. Further, heavy seepage losses are noticed due to damaged lining & damaged canal banks, etc.

To overcome these problems the Govt. of Orissa has proposed to undertake the following works:-

- i) Repair of head works, spillway & Gates
- ii) Canal lining
- iii) Re-sectioning of distributaries
- iv) Strengthening of banks
- v) Renovation of structures
- vi) Provision of additional structures

Water availability, Design flood & sedimentation studies have been reviewed. From 18 yrs. of monthly working table it is seen that irrigation is achieved with 83%

of success rate. Design flood has been re-assessed as 1037 cumec (The project was designed for a flood of 963 cumec earlier). Loss of live capacity over a period of 25 yrs. is seen to be 5%. Annual Irrigation planned is 5607 ha with an intensity of irrigation of 130%.

The estimated cost has been worked out as Rs. 12.57 crore at year 2007-08 PL. BC ratio is 2.105 & IRR worked out is 21.9%. After modernization, additional annual irrigation would be 864.9 ha. Thus the cost of additional annual irrigation works out to Rs. 1,45,334 per ha.

The State Govt. officers were requested to compress the construction schedule from 3 to 2 years. FE&SA MoWR advised the project authorities to keep adequate budget provisions so that the works can be completed in the compressed time frame.

After discussions the Committee accepted the project proposal.

5. Improvement in Sunei Irrigation Project (Medium-ERM):

Chief Engineer (PAO) briefly introduced the Project proposal. Sunei Irrigation Project is located in Mayurbhanj district of Orissa. It was completed in 1987. It envisages an earthen dam with a live storage of 6250 ha -m. Two canals off-take, one each from the two banks for irrigation to a CCA of 7200 ha in Mayurbhanj distt. The CCA has now been assessed as 9765 ha. It is reported that due to siltation the carrying capacity of the canals has got reduced. Most of the structures viz., head regulators, outlets, canal falls CD works, etc., have got damaged & the head regulators & outlets are not functioning properly. Further, heavy seepage losses are noticed especially in filling reaches.

To overcome these problems the Govt. of Orissa proposes to undertake the following works:-

- i) Repairs of head works, spillway & Gates
- ii) Canal lining,
- iii) Re-sectioning of distributaries
- iv) Strengthening of banks
- v) Renovation of structures.
- vi) Provision of additional structures.

Water availability, Design flood & Sedimentation studies have been reviewed. From 18 yrs. of monthly working table it is seen that the project shows 94% success rate of irrigation. Design flood has been re-assessed as 2874 cumec (Design flood adopted during construction earlier was 1440 cumec). Loss of live capacity due to

sedimentation over a period of 25 yrs. is 5%. The Annual Irrigation planned is 14159 ha with an intensity of irrigation of 145%. After modernization additional annual irrigation would be 720 ha (presently rain fed) apart from stabilizing irrigation in some partially irrigated areas.

The estimated cost has been worked out as Rs. 25.93 crore at 2007-08 PL. BC ratio is 1.94 and IRR worked out is 20.78%.

The State Govt. officers were requested to compress construction period from 3 to 2 years. As regards revised design flood, the State Govt. officers intimated that they have carried out flood routing studies & that sufficient freeboard is still available. Moreover 1 m high parapet wall is also provided over the dam and strengthening/modifications in stilling basin have been carried out for the revised flood.

After discussions the Committee accepted the project proposal.

Summary:- From the two major projects namely Mahanadi Chitropola Island Irrigation Project (Revised-Major) & Improvement of Taladanda Main Canal Project (New Major – ERM) and three medium projects namely Improvement (ERM) of Gohira Irrigation project (Medium-ERM), Improvement of Remal Irrigation Project (Medium-ERM) and Improvement of Sunei Irrigation Project (Medium-ERM) costing Rs 558.38 crore have been accepted by the Committee and the remaining component costing Rs. 69.12 crore has already been accepted by the State Govt, the complete proposal under Tranch I of OIIAWMIP is recommended for investment clearance of the Planning Commission.

II. Kudali Medium Irrigation Project (New), Maharashtra:

Chief Engineer (PAO) intimated that the project was earlier considered in the 90th meeting of Advisory Committee held on 26.9.2007 and deferred for want of clearance of forest land. MoEF has now accorded 'in principle' clearance in February, 2008 for diversion of 1.757 ha of forest land subject to certain conditions. The project authorities have informed that non forest land for compensatory afforestation has been already transferred to the Forest Department and that they would be complying with all the conditions of MoEF required for final clearance.

Dy. Advisor, Planning Commission raised the issue of water availability, use of the data of nearby Dhom Balkawadi project instead of site-specific data for the purpose and using non monsoon yield as 4.48% of the monsoon yield for the project. State Govt. officers informed that Dhom Balkawadi project is in Krishna Basin and catchment areas of the two reservoirs of Kudali project are adjoining to this project. Non monsoon yield considered @ 4.48% of the monsoon yield is based on the observed data in respect of Dhom Balkawadi project. The project is close to Western Ghats and average annual rainfall is high (about 2000 mm). Further, the

Chief Engineer, CWC, Nagpur informed that they have examined the hydrology of the project in detail and have found that the same was in order.

Secretary (WR) desired to know the reasons for high cost of the project (Rs. 3, 20,500 per ha of annual irrigation). The State Govt. authorities informed that the project was at the foothill of Western Ghats involving construction of two dams, a tunnel to join the reservoirs and canal system. Topographical constraints were also there (requiring higher dams for creation of necessary storage). Further they clarified that the B.C. Ratio of 1.5 does not consider the benefits of water supplied to Dhoni Balkawadi project and those due to generation of hydro power from the project. The project is beneficial for horticulture development.

It was confirmed by the State Govt. authorities that the project would be completed by 2010-11 at the estimated cost of Rs. 271.79 crore without any time and cost overrun.

After deliberations the project proposal was considered acceptable subject to final forest clearance from MoEF.

III. Modernisation of New Partap Canal, J&K – ERM (New – Medium)

Chief Engineer (PAO) briefly introduced the project. Old Partap canal was constructed around 1906. It consisted of an unlined main canal 33.695 km long fed directly from river Chenab near Akhnoor in Jammu distt. for irrigation purposes. With passage of time the canal became defunct. Subsequently, during the period 1958-69 remodelling of the canal under the name "New Partap canal project" was taken up at an estimated cost of Rs. 148.00 lakhs to provide irrigation benefits to 8016 ha of CCA.

Again, after another 20 yrs time or so the canal system became defunct at number of places and the main canal & distributaries needed lining, strengthening of banks etc.

A modernization proposal was framed which was earlier accepted by the Advisory Committee of MoWR in the 77th meeting held in 2001 for Rs. 2168 lakhs (2000 PL) for increased CCA of 9028 ha & increased Annual Irrigation of 12042 ha. However, investment clearance of Planning Commission was not received.

Now the present proposal envisages modernization of 33.695 km of main canal, 15 Nos. distributaries, 37 Nos. outlets & improvements/construction of various canal structures/works to provide annual irrigation of 13309 ha.

The cost estimate has been finalized for Rs. 47.60 crore at 2007 PL. The BC ratio & IRR have been worked out as 2.54 & 33% respectively. After modernization additional annual irrigation would be 2617 ha. The cost of additional irrigation works out to Rs. 1,81,887 per ha.

During discussions the State Govt. officers were advised to attempt formulating additional proposals to maximize drawal of water up to the limits prescribed in Indus Waters Treaty.

After discussions the Committee accepted the project proposal

IV. Anti Erosion Scheme for protection of Khairpur, Raghapur, Akidatpur villages from river Ganga in Naughachia Sub Division under Bhagalpur district of Bihar.

Chief Engineer (PAO) intimated that the Erosion problem in U/s & D/s of Vikramshila bridge on left bank of river Ganga in Naughachia block of Bhagalpur district of Bihar had been engaging attention since 2004. However, not much work could be carried out by the Govt. of Bihar. The present scheme is in respect of anti erosion works U/s of Vikramshila bridge.

From the data reported it is seen that by 2007 a length of about 24.625km. on the left bank of Ganga had been affected & the maximum width of erosion was 3.210 km with reference to the position in year 2000.

The works proposed are:

- i) Revetment of the side slopes from low water level upto HFL.
- ii) Horizontal apron on bank at about Low Water Level.
- iii) Construction of embankment on the affected side.
- iv) Bed bars construction over Horizontal Apron.

The scheme has been examined by GFCC. The estimated cost has been finalized as Rs 2355.81 lakh with a BC ratio of 1.46.

GFCC has intimated that the project has been recommended by the Bihar State Flood Control Board & that the State Finance Concurrence of the State Government has been obtained. The bed bars provided last year had got washed away. The works now proposed are in a length of 6 km only. The remaining reach, as per GFCC, was expected to get stabilized by silting and that further erosion may not occur thereafter.

The State Govt. engineers informed that 40% of the works had been completed so far. They plan to complete the balance works by 30th June, 2008. The State Govt. was requested to ensure that the works are completed well in time so that they are not washed away. They were also requested to ensure effectiveness of the proposed measure so that no further anti-erosion proposals for the reach u/s of Vikramshila bridge is required in future.

After discussions, the Committee accepted the project.

Proposal for Raising & Strengthening of Tirhut Embankment from 29.61 km to 83.40 km on the left bank of river Gandak in the State of Bihar.

Chief Engineer (PAO) intimated that the Tirhut embankment (83.40 km long) on river Gandak, constructed in the earlier part of the 20th century and reported to have served its purpose successfully, has got badly eroded in many reaches & requires anti-erosion measures. It is reported to be presently not capable to withstand even 25 year frequency floods in river Gandak during monsoon.

A scheme for Raising & Strengthening of the Tirhut embankment in the critical reaches from 0 km & 26.91 km in the districts of Muzzaffarpur & Vaishali in Bihar was approved at an estimated cost of Rs.713.83 lakh in May 2006 as per recommendations of the task force. An amount of Rs 535.365 lakh has been released by Govt.of India as Central Assistance. The work in this reach is in progress.

The present scheme envisages raising & strengthening of the balance length of Tirhut embankment on left bank from RD 29.61 km to 83.40 km. & up gradation of 25 nos. of Anti flood sluices. The estimated cost has been finalized by GFCC as Rs.2627.65 lakh with a BC ratio of 2.16.

As per GFCC the proposal has been recommended by the State Flood Control Board & that the concurrence of State Finance Deptt. has been obtained.

The State Govt. engineers clarified that with the implementation of this proposal, no further proposals would be required for the embankments in the said reaches both for the left & right banks. The works are proposed to be completed in 4 years. The State Govt. Engineers were requested to ensure proper quality of works by way of compaction as per specifications etc.

After discussions, the Committee approved the project.

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

LIST OF PARTICIPANTS

Members of the Committee:

S/Shri/Smt.

- | | |
|---|--------------|
| 1. U.N. Panjair, 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. Ananya Ray, Joint Secretary & F.A., MoWR | Member |
| 5. D. Chakraborty, Scientist, CGWB, New Delhi. (Representing Chairman, CGWB) | Member |
| 6. Janki Prasad, Director (H.P. & I Div.), CEA, New Delhi (Representing Chairman, CEA) | Member |
| 7. A.K. Gogoi, Asstt. Director-Genl.(Agro), D/o. Agri & Coop. (Representing Secretary, Min. of Agriculture) | Member |
| 8.. C.S. Mathur, Chief Engineer, PAO, CWC, New Delhi | Member-Secy. |

Special Invitees:

(a) Central Water Commission:

1. R. C. Jha, Member (RM), CWC, New Delhi
2. S.K. Sinha, Chief Engineer(PPO), CWC, New Delhi
3. Jhujhar Singh, Chief Engineer (IBO), CWC, Chandigarh
4. R.P. Saxena, Chief Engineer (MCO), Nagpur
5. R.S. Goyal, Chief Engineer (MERO), CWC, Bhubaneswar
6. U.K. Ghosh, Director (PA-S), CWC, New Delhi.
7. B.G. Kaushik, Director (CA-I), CWC, New Delhi
8. V.N. Wakpanjar, Director (Appraisal), CWC, Nagpur.
9. K.S. Jacob, Director (PP-N&S), CWC, New Delhi.
10. G. Thakur, Director(PA-North), CWC, New Delhi
11. A.S. Goyal, Director (M&A), CWC, Bhubaneswar
12. Dr. Samir Chatterjee, Director (M&A), CWC, Jammu
13. R.N. Ray, Dy. Director (PA-N), CWC, New Delhi.
14. T.D.Sharma, Dy. Director (PA-Central), New Delhi
15. Basishit Rai, Dy. Director (PA-Central), New Delhi
16. S.M. Shad, Dy. Director (PA-N), CWC, New Delhi.
17. R.K. Upadhyay, Dy. Director (CA-I), CWC, New Delhi
18. A.K. Singh, Asstt. Director(PA-N), CWC, New Delhi
19. Srinivashu Bayri, Asstt. Director(PA-C), CWC, New Delhi
20. A.K. Guha, EAD, PA (North), CWC, New Delhi.
21. R.K. Saxena, EAD, PP-C, CWC, New Delhi.

(b) Ministry of Water Resources

1. Indra Raj, Commissioner (Projects), New Delhi.
2. A.S.P. Sinha, Sr. Joint Commissioner (Ganga)

(c) Ganga Flood Control Commission, Patna

1. Dr. D.V. Thareja, Chairman
2. M.U. Ghani, Member (Planning)

(d) State Government Officers

Bihar:

1. A. Rai, S.E. (Flood), WR Department, Patna

Maharashtra

1. V.V. Gaikwad, Secretary (WR), Mumbai
2. H.Y. Kolawale, Ex. Director, K.V.D.C., Pune
3. S.M. Upase, Chief Engineer(SIO), WRD, Pune
4. P.C. Gholap, SE, SKP, WRD, Satara
5. N.N. Supekar, Ex. Engineer, Dhoni Canal Division No.2, Satara
6. S.N. Huddar, Former Secretary & Advisor, WRD,Pune

Orissa

1. Aurobindo Behera, Principal Secretary, WRD, Bhubaneswar
2. Sridhar Behera, Engineer-in-Chief, WRD, Bhubaneswar
3. N.K. Mohapatra, Director, Hyd. & WR-I, Sedrasadan
4. K.R. Acharya, Dy. Director, WRD, Bhubaneswar
5. Rajesh Prasad, Liaison Officer, WRD, New Delhi

No. 16/27/2008-PA (N)/1082-1106
GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
PROJECT APPRAISAL ORGANIZATION
SEWA BHAWAN, R.K. PURAM, NEW DELHI.

Date : 28th July, 2008.

Sub: 94th meeting of the Advisory Committee on Irrigation, Flood Control and Multipurpose Projects proposals held on 09.07.2008

Enclosed please find a copy of the summary record of discussions of the above meeting held at New Delhi on 9th July., 2008 for information and necessary action.

Encl: as above

C. S. Mathur

(C.S. MATHUR)
CHIEF ENGINEER (PAO)
& MEMBER-SECRETARY
Tele-Fax No. 26103571

COPY 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. Senior Adviser (WR), Planning Commission, Room No-449, Yojana Bhawan, New Delhi.
11. Sr. Adviser (Power), Planning Commission, Room No-263 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 Ministry of Water Resources, New Delhi.
17. Secretary, Water Resources Deptt, Govt of Maharashtra, Mantralaya, Mumbai – 400 032 with a request to get the outstanding requirements attended as indicated.
18. Addl. Chief Secretary, Narmada Valley Dev. Deptt., Govt. of MP, Mantralaya, Vallabh Bhawan, Bhopal – 62003 with a request to get the outstanding requirements attended as indicated.
19. Chief Engineer (Mon-C), CWC, CGO Complex, Block-C, 3rd Floor, Seminary Hill, Nagpur – 440 006 (Maharashtra).
20. Chief Engineer(NB), CWC, Block-3, Ground Floor, Prayavas Bhavan, Mother Teresa Marg, Areta Hills, Bhopal – 462011
21. Chief Engineer (PMO), CWC, New Delhi.
22. Director, Project Appraisal (North), CWC, New Delhi.
23. Director, Project Appraisal (Central), CWC, New Delhi.
24. Director, Project Appraisal (South), CWC, New Delhi.

Copy for information to –

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

SUMMARY RECORD OF DISCUSSIONS OF THE 94th MEETING OF THE ADVISORY COMMITTEE FOR CONSIDERATION OF TECHNO-ECONOMIC VIABILITY OF IRRIGATION, FLOOD CONTROL AND MULTI-PURPOSE PROJECT PROPOSALS HELD ON 09.07.2008.

The 94th meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals was held on 09.07.2008 at 1530 Hrs. in Central Water Commission Conference Room No. 523 (N), Sewa Bhawan, R.K. Puram, and New Delhi under the chairmanship of Secretary (WR). List of participants is enclosed at Annexure-I.

The 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 given below:

Item A:

The following project proposals were considered by the Committee: –

1. Lower Goi Irrigation Project (New Major) – M.P

The Chief Engineer (PAO) introduced the project which envisages construction of a 44.20 m high and 2400 m long earthen dam across the river Goi. The Project shall provide irrigation benefits & water for industrial use & drinking. The CCA and annual Irrigation are 13760 ha. & 15686 ha. respectively with an intensity of irrigation of 114%. The project was earlier considered in the 84th meeting of Advisory Committee held on 12.5.2005 and was deferred for want of clearance of R&R plan from the MoTA, conjunctive use planning from the CGWB, Environment & forest clearance from the MoEF, concurrence of State finance department and review of yield series after collection of site specific data. The State Govt. has now complied with the observations. The updated cost estimate of project has been finalised as Rs. 360.37 crore (July 2007 PL). The B.C. ratio and IRR have been worked out as 1.02 and 9.86% respectively. The project benefits the drought prone area of Barwani Distt. in M.P. The Narmada Valley Development Authority (NVDA), Govt. of M.P. has given concurrence for the finalized updated cost of Rs. 360.37 Cr. The Narmada Valley Development Department, Govt. of M.P. has submitted an undertaking that the State would restrict total utilization in Narmada basin within 18.25 MAF as per the NWDT award, which includes the utilization of 139.26 million cubic metre for the Lower Goi Irrigation Project.

During discussions, the representative of Govt. of M.P informed that the State has utilized only 4.5 MAF so far out of its share of 18.25 MAF of Narmada waters and sufficient water is available for the proposed project. It was pointed out that the cost of the project was high and the B.C ratio was low. The representative of Govt. of M.P clarified that as per earlier proposal there was provision of side spillway but in the modified proposal a central spillway has been envisaged from engineering considerations. This has resulted in increase in cost by about Rs.90 Cr. Further, the earlier cost estimate of Rs.189.56 Cr. was at 2003 price level which has been updated to July 2007 price level after incorporating the changes in the layout etc. He also informed that there has been a considerable increase in the cost of materials and labour over these years. As regards low B.C ratio, it was intimated that indirect benefits like drinking water and industrial water benefits have not been accounted for in the B.C ratio. He further added that the project benefits drought prone areas.

The representative of ICAR opined that as salinity may go up in the area due to irrigation, conjunctive use of ground water with surface water may be adopted. The representative of Govt. of M.P. informed that ground water is proposed to be used in the command area by constructing open wells under NREG programme. With regard to hydrological aspects, he informed that collection of Gauge & Discharge data will be continued. The Dy. Advisor, Planning Commission was of the view that, as the B.C ratio is very low (1.02), therefore, the project needs to be completed within the stipulated time to avoid cost over-run. Secretary (WR) advised that cash crops and efficient irrigation practices like sprinkler and drip irrigation be considered for adoption. The representative of Govt. of M.P informed that the project would be executed as a turn key project through a single contractor so that cost does not increase. The 5 year construction period (i.e. upto 2012-13) is also proposed to be compressed to 4 years. The suggestions regarding promotion of cash crops & adoption of efficient irrigation practices would be duly considered by NVDA.

After discussions, the Committee accepted the project proposal.

2. Lower Pedhi Project (New Major), Maharashtra

The Chief Engineer (PAO) introduced the Project proposal which envisages construction of a 19.65 m high & 8610 m long earthen dam across the river Pedhi in the Tapi basin. The CCA of the project is 12230 ha & annual irrigation is 17023 ha. with an intensity of irrigation of 139%. MoEF have accorded environmental clearance to the project. No forest land is coming under submergence due to construction of this project and no ST population is affected by this project as reported by the revenue authorities of Govt. of Maharashtra. The cost of the project has been finalized as Rs. 283.10Cr. (July 2007 price level).

It has been proposed to complete the project by 2010-11. The B.C.Ratio and IRR for the project have been worked out as 1.52 & 17.33 % respectively. The Financial concurrence has been accorded by the State Govt. to the project. The total annual utilization from the project is 104.587 million cubic metre (3.694 TMC). The Govt. of Maharashtra have certified that they would restrict utilization from completed, on going and the proposed projects in the Tapi basin to 191.40TMC which was the allocated share to the Maharashtra State.

During the discussions, the representative of Govt. of Maharashtra informed that this project had got delayed for want of Environmental clearance which has since been accorded by MoEF in Feb. 2008.

The representative of ICAR opined that as the project command covers saline areas of Amarawati District, conjunctive use of ground water needs to be adopted to avoid salination/water-logging. He suggested adoption of water intensive crops in the command and to look into the drainage aspects. It further suggested to grow fruits like mangoes which have deep roots in the area. The representative of Govt. of Maharashtra informed that monitoring of ground water is planned and if required, the conjunctive use will be adopted by extraction of ground water in the region/ command. He also informed that drainage aspects have been studied by an expert committee and that it had been found that the drainability of the soil is good. Further, adequate provision for drainage has been kept in the cost estimate. Regarding cropping pattern it was clarified that the State Agriculture department has recommended the cropping pattern & that it is proposed to provide irrigation facilities to more areas so that large population is benefited.

The Deputy Advisor, Planning Commission sought clarifications on the water availability for the project. It was clarified by the representative of Govt. of Maharashtra that the studies have been finalized based on observed data of nearby Lakhpuri G & D site of CWC, as no G & D site was existing at the project site.

After discussions, the Committee accepted the project proposal. The project is included in the PM's package.

3. UPPER KUNDLIKA PROJECT (New Medium), MAHARASHTRA

The Chief Engineer, PAO introduced the project proposal which envisages construction of a 24.28 m high and 967 m long earthen dam with a central masonry spillway across the river Kundlika. The CCA of the project is 3738 ha. and the annual irrigation is 2800 ha. with an intensity of irrigation of about 74.91%. The project would provide irrigation benefits to drought prone areas in Beed Distt. of

level). The B.C. ratio and IRR have been worked out as 1.328 and 14.07% respectively. The Govt. of Maharashtra have clarified that the gross utilization from this project is 0.628 TMC and the net utilization is 0.577TMC. The Govt. of Maharashtra have also certified that with the above utilization in Upper Kundlika project, the net utilization by Maharashtra state is 59.689 TMC which is within their allocation of 60 TMC which was the limit fixed by GWDT.

During discussions the representative of Govt. of Maharashtra informed that the project provides benefits to drought prone areas and that the project would be completed without any time and cost over-run. The Secretary (WR) mentioned that the cost of the project is on a higher side. The representative of Govt. of Maharashtra clarified that provision of central gated spillway has substantially increased the cost of the Project. Also the area proposed to be irrigated is less than CCA. Certain areas of the command are rainfed & it has not been proposed to provide irrigation facilities to them. The representative of ICAR suggested that modern irrigation practices like Sprinkler and Drip irrigation may be tried in the command so as to cover more area under irrigation. The representative of Govt. of Maharashtra agreed with the above suggestion.

After discussions, the Committee accepted the project proposal.

Item B:

To decide whether Indira Sagar (Polavaram) project, Andhra Pradesh could be considered in the next TAC meeting subject to forest and wild life clearance by MoEF.

The Chief Engineer, PAO briefly introduced the agenda item. It was intimated that the technical examination of Polavaram multi-purpose project, Andhra Pradesh had been completed by CWC in December, 2007. Environmental clearance was accorded by MoEF in 25.10.05 & MoTA accorded clearance on 17.4.05. However, forest & wild life clearances from MoEF are awaited.

The Govt. of A.P. had requested for clearance to the Project subject to the State Govt. obtaining the forest & wild life clearance from MoEF. It was brought out that as per the practice presently being followed, conditional clearance is not accorded by the Advisory Committee & only a single window clearance/acceptance is given. Also some cases pertaining to the project are pending with the Hon'ble Supreme Court, High Court of A.P. etc.

During discussions, it was brought out by the representative of Planning Commission that conditional clearance were being accorded by the Advisory Committee till 2002. Subsequently, single window clearance is done. It was felt that these days TAC meetings are held quite frequently and that project authorities should first expedite forest & wild life clearances from MoEF and thereafter put up the proposal for consideration of the TAC.

It was decided to consider the project proposal only after forest & wild life clearances are accorded by MoEF.

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

LIST OF PARTICIPANTS

Members of the Committee:

S/Shri/Smt.

- | | |
|--|--------------|
| 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. Smt. Ananya Ray, Joint Secretary & F.A., MoWR | Member |
| 5. Dr. D.K. Paul, Principal-Scientist (IWM), ICAR, New Delhi . (Representing Director-General, ICAR) | Member |
| 6. Tanmoy Das, Director (H.P. & I Div.), CEA, New Delhi (Representing Chairman, CEA) | Member |
| 7. C.S. Mathur, Chief Engineer, PAO, CWC, New Delhi | Member-Secy. |

Special Invitees:

(a) Central Water Commission:

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. R.P. Saxena, Chief Engineer (MCO), Nagpur
5. U.K. Ghosh, Director (PA-S), CWC, New Delhi.
6. B.G. Kaushik, Director (PA-C), CWC, New Delhi
7. V.N. Wakpanjar, Director (Appraisal), CWC, Nagpur.
8. G. Thakur, Director(PA-North), CWC, New Delhi
9. R.N. Ray, Dy. Director (PA-N), CWC, New Delhi.
10. T.D.Sharma, Dy. Director (PA-Central), New Delhi
11. Basishit Rai, Dy. Director (PA-Central), New Delhi
12. R.K. Upadhyay, Dy. Director (CA-I), CWC, New Delhi
13. Puneet Kumar Mittal, Dy. Director (PA-S), CWC, New Delhi.
14. S.S. Bonal, Dy. Director (PA-S), CWC, New Delhi.
15. Srinivashu Bayri, Asstt. Director(PA-C), CWC, New Delhi
16. B. Ramesh, EAD(PA-N) CWC, New Delhi.
17. A.K. Guha, EAD, CA (I), CWC, New Delhi.
18. Jacob Cheria C., EAD(PA-N) CWC, New Delhi.
19. S. Jagdeeshan, EAD(PA-N) CWC, New Delhi.

(b) Ministry of Water Resources

1. Indra Raj, Commissioner (Projects), New Delhi.

(c) State Government Officers

Maharashtra

1. V.V. Gaikwad, Secretary (WR), Mumbai
2. D.P. Shirke, Ex. Director, Vidarbha Irrigation Dev. Corp., Nagpur
3. B.N. Kandarphale, CE (WR), Airamganad
4. D.R. Kande, Chief Engineer (S.P.), Amarwati
5. S.D. Kulkarni, SE, A.I.C., Akola
6. B.M. Silre, SE, BIPC (M.S.), Beed Irr. Project Circle, BEED
7. B.D. Jatalc, Ex.Engineer(BID) , Beed
8. N.J. Bambal, Ex. Engineer, WRR.
9. S.N. Huddar, Adviser to Govt. of Maharashtra

Madhya Pradesh

1. Pradeep Bhargava, Addl. Chief Secretary, Bhopal
2. H.R. Rathore, Chief Engineer, Lower Goi, Sanawad
3. H.C. Verma, SE, Lower Goi Project, Sanawad
4. M.S. Tomar, SE, N.D. Circle No. 1, Sanawad
5. M.K. Bung, SE, N.D. Div. No. 12, Rajpur
6. H.S. Katana, SE, NVDA, Bhopal
7. A.K. Choudhary, Ex. Engineer, N.D. Div. No. 12, Rajpur


No. 16/27/2008-PA (N)/ 275-309
GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
PROJECT APPRAISAL ORGANIZATION
407, SEWA BHAWAN, R. K. PURAM, NEW DELHI-110 066

Date: 23rd January, 2009

Sub: 95th meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals held on 20.01.2009.

Enclosed please find herewith a copy of the summary record of discussions of the above meeting held at New Delhi on 20th January 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 with the request to accord investment clearance to the project proposals accepted by the Advisory Committee at an early date.
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. Chairman, Brahmaputra Board, Basistha, Guwahati-781029
21. Principal Secretary, Irrigation Deptt, Govt of Punjab Secretariat, Chandigarh, 160001.
22. Secretary (Water Resources), Government of Chhattisgarh, D.K. Bhawan, Sachivalaya, Raipur-492 010 (Chhattisgarh).
23. Secretary, Water Resources Deptt, Govt of Maharashtra, Mantralaya, Mumbai, 400032.
24. Secretary, Irrigation & Waterways Deptt, Govt. of West Bengal, Jalasampad Bhawan, Salt Lake, Kolkata - 700091.
25. Secretary, Water Resources Deptt, Govt of Bihar, Sinchai Bhawan, Patna - 800015.
26. Principal Secretary, Irrigation & CAD Department, Government of Andhra Pradesh, Room No. 716, 7th floor, J-Block, Secretariat Building, Hyderabad-500 022.
27. Principal Secretary, Irrigation Deptt, Govt of Punjab Secretariat, Chandigarh, 160001
28. Secretary, Irrigation & Waterways Deptt, Govt. of West Bengal, Jalasampad Bhawan, Salt Lake, Kolkata - 700091.
29. Secretary, Water Resources Deptt, Govt of Bihar, Sinchai Bhawan, Patna - 800015
30. Secretary, Irrigation & Public Health, Government of Himachal Pradesh, Sachivalaya, Simla-171 002
31. Chief Engineer (Mon-C), CWC, CGO Complex, Block-C, 3rd Floor, Seminary Hill, Nagpur - 440 006 (Maharashtra).
32. Chief Engineer (PMQ), CWC, New Delhi.

Copy for information to -

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

SUMMARY RECORD OF DISCUSSIONS OF THE 95TH MEETING OF THE ADVISORY COMMITTEE ON IRRIGATION, FLOOD CONTROL AND MULTIPURPOSE PROJECTS HELD ON 20TH JANUARY, 2009 FOR CONSIDERATION OF TECHNO-ECONOMIC VIABILITY OF PROJECT PROPOSALS.

The 95th meeting of the Advisory Committee for consideration of Techno-economic viability of Irrigation, Flood Control and Multi purpose Projects proposals was held on 20.01.2009 at 1430 Hrs. in the Central Water Commission Conference Room No. 523 (N), Sewa Bhawan, R.K. Puram, New Delhi under the chairmanship of Secretary (MoWR). List of participants is enclosed at Annexure-I.

The 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 94TH MEETING:

The Summary Record of Discussions of the 94th Advisory Committee meeting was circulated vide Lr. No.16/27/2008-PA (N)/1082-1106 dated 28th July, 2008. 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 94th Advisory Committee meeting.

B) FOLLOWING PROJECT PROPOSALS WERE PUT UP FOR CONSIDERATION OF THE 95TH ADVISORY COMMITTEE:

1) Protection of Sialmari Area from the erosion of river Brahmaputra (construction of land spurs and tie bund), Morigaon District, Assam;

CE (PAO) introduced the project proposal which envisages

- (i) Construction of three nos. land spurs with submerged nose and connected to embankment above HFL (L =750 m, 650 m & 670 m),
- (ii) Tie bund (6.8 km) and
- (iii) RCC Porcupines (2508 Nos at 1 location).

The original scheme was accorded investment clearance by the Planning Commission for Rs. 14.29 crore at PL 2002-03 vide No. 12 (I)/3/05-WR, dt. 17.01.08. Subsequently, in the 2nd meeting of empowered committee on Flood Management Program held at New Delhi on 06.08.2008 under the chairmanship of Secretary (Expenditure), Ministry of Finance, Govt. of India, it was suggested to revise the cost estimate at current price level. Accordingly, the estimate was revised by project authorities and submitted to CWC for examination. CWC has finalized the revised estimate for Rs. 25.73 crore (PL-2008) with BC ratio 2.92:1.

Chairman advised to take up the project in the current financial year itself so that completion of works could be ensured before the ensuing flood season.

After discussion, the Committee accepted the proposal.

2) Protection of Bhojaikhati, Doloigaon and Ulubari area from the erosion of river Brahmaputra (construction of land spurs and tie bund), Morigaon District, Assam;

CE (PAO) introduced the project proposal which envisages

- (i) Construction of three nos. land spurs with submerged nose and connected to embankment above HFL (L =450 m, 550 m & 760 m),

- (ii) Tie bund (4.7 km) and
- (iii) RCC Porcupines (1132 Nos at 3 location).

The original scheme was accorded investment clearance by the Planning Commission for Rs. 14.52 crore at PL 2002-03 vide No. 12 (I)/3/05-WR, dt. 17.01.08. Subsequently, in the 2nd meeting of empowered committee on Flood Management Programme held at New Delhi on 06.08.2008 under the chairmanship of Secretary (Expenditure), Ministry of Finance, Govt. of India, it was suggested to revise the cost estimate at current price level. Accordingly, estimate was revised by the project authorities and submitted to CWC for examination. CWC has finalized the revised estimate for Rs. 27.92 crore (PL-2008) with BC ratio as 2.46:1.

Chairman advised to take up the project in the current financial year itself so that completion of works could be ensured before the flood season.

After discussion, the Committee accepted the proposal.

3) Protection of Majuli Island from Flood and erosion, Phase-II & III, Assam;

CE (PAO) introduced the project proposal which envisages

- (i) 21 Nos. of permeable spurs, each 20 m long.
- (ii) Model Study finalization
- (iii) Construction of 10 Nos. of spurs with bank revetment in a stretch of 1.5 km.

The scheme is being implemented by the Brahmaputra Board. The estimated cost of the project proposal has been finalized for Rs. 116.02 crore (PL-2005-06) with B.C. ratio 1.26:1.

Chairman observed that the scheme should have been based on current price level.

The Committee deferred the project with the suggestion to prepare the cost estimate based on current price level.

4) Raising & Strengthening to Brahmaputra Dyke from Sissikalghar to Tekeliphuta including closing of breach by retirement and anti-erosion measures (to protect Majuli and Dhakuakahana areas against flood devastation by the Brahmaputra, Lakhimpur District, Assam;

CE (PAO) introduced the project proposal which envisages

- (i) Raising and strengthening of embankment for a length of 13.9 km,
- (ii) Construction of retirement bund with geo-textile tubes of length 5000 m,
- (iii) Construction of 2700 m long pilot channel and
- (iv) RCC Porcupines (26116 Nos). The estimated cost of the scheme has been finalized as Rs. 142.42 crore with BC ratio of 7.02:1.

Chairman observed that Brahmaputra Board should supervise the work intensively and the project should be taken up if the works can be completed before the flood season.

After discussion, the project was accepted by the Committee.

5) Raising, Strengthening and Construction of Bituminous Road over Eastern and Western Kosi Embankments, Bihar:

CE (PAO) introduced the project proposal which envisages

- (i) Raising, Strengthening and Construction of Bituminous Road over a length of 245.41 km,
- (ii) Construction/Restoration of 11 Nos Anti-flood sluices,
- (iii) Construction/Restoration of 4 Nos. bridges
- (iv) Construction of 70 Nos. of approach roads (ramp)
- (v) 48 Nos. of Turning platforms,
- (vi) Construction of 4 Nos of rest sheds and (vii) Provision for construction of transverse drains in both side slopes of both the embankments.

The project proposal has been appraised in GFCC and cost finalized as Rs. 339.39 crore with BC ratio as 2.024:1.

In regard to the State Finance Concurrence, Member (C), GFCC intimated the Committee that the necessary budgetary provision for this scheme has been kept by the Govt. of Bihar in the budget of 2008-09.

After discussion, the Committee accepted the project proposal.

6) Raising, Strengthening and Extension of existing embankments along Bhutahi Balan river Madhubani District, Bihar;

CE (PAO) introduced the project proposal which envisages

- (i) Raising and Strengthening of both the existing left and right embankments of the length of 53.08 km
- (ii) Extension of existing left embankment from 23.28 km to 25.00 km
- (iii) Protection of vulnerable reaches
- (iv) 8 inch thick brick soling on top of both the embankments and
- (v) Ramps on both the embankments.

The project has been appraised in GFCC and the cost has been finalized as Rs. 37.14 crore with BC ratio 1.3:1. Necessary provision has been kept in the State budget of 2008-09.

After discussion, the Committee accepted the proposal.

7) Breach Closure of Eastern Afflux Bund in Nepal;

CE (PAO) introduced the project proposal which envisages

- (i) Construction of pilot channels to carry a discharge of 10000 cusec;
- (ii) 1.70 km long breach closure,
- (iii) Construction of 5 new spurs,
- (iv) Restoration of 2 damaged spurs and
- (v) Other connected miscellaneous works.

The project has been appraised in GFCC and the cost has been finalized as Rs. 143.42 crore with BC ratio 6.67:1. As regards completion schedule, the representative from the Govt. of Bihar informed the Committee that the work components would be completed by March 2009.

After discussion, the Committee accepted the proposal.

8) Proposal for Kosi Barrage Restoration work Birpur, Bihar;

CE (PAO) introduced the project proposal which envisages

- (i) Construction of pilot channels in the u/s and d/s of Kosi Barrage,
- (ii) Restoration of flexible aprons in the u/s and d/s of Kosi Barrage
- (iii) Restoration of flexible aprons of right guide bund and left guide bund in the u/s of Kosi Barrage

- (iv) Vent clearance in silt excluder and
- (v) Restoration of Kosi Barrage Gates.

The proposal has been appraised in CWC and the estimated cost of the scheme has been finalized for Rs. 86.65 crore with a BC ratio of 1.78:1. Necessary budgetary provision has been kept by the State Government for the scheme.

Chairman observed that the all the under water works should be completed before onset of the flood season.

After discussion, the Committee accepted the proposal.

9) Kelo Irrigation Project, Chhattisgarh;

CE (PAO) introduced the project proposal which envisages

- (i) 1343 m long main earthen dam
- (ii) Saddle dam (earthen) 910 m long
- (iii) 142 m long spillway with total 8 no. of gates of size 10 m x 14.25 m and
- (iv) Main canal on right flank 28.31 m long with discharge capacity of 284.58 cum.

CCA of the project is 24,396 ha with annual irrigation of 22, 810 ha. Other benefits include provision of drinking water of 4.44 MCM to Raigarh town and 4.44 MCM for industrial use.

About 5% of the catchment of the reservoir lies in the state of Orissa. The water availability for the project has been worked out on proportionate basis for Chhattisgarh area alone which has been estimated as 389.21 mcm. At present there is no inter-state agreement existing among co-basin states for sharing of waters of kelo basin. MoEF has accorded environmental as well as forest clearance. MoTA has also accorded clearance for R&R plan as necessary. The cost estimate of the project has been finalized for Rs. 606.91 crore (PL-2008) with BC ratio 1.70:1. Necessary State Finance concurrence to the project has been accorded by the Govt. of Chhattisgarh.

After discussion, the Committee accepted the proposal.

10) Channelisation of Bata River from RD 10230 to 19700 Mtr. In Tehsil Paonta Sahib, District Sirmour, Himachal Pradesh;

CE (PAO) introduced the project proposal which envisages

- (i) Construction of embankments on both banks from RD 10230 m to 19700 m. and
- (ii) Anti-erosion works in the form of wire crated apron works on river side and stone pitching of embankments over geo-textile filter.

The project has been appraised in GFCC and the cost has been finalized as Rs. 34.67 crore with BC ratio 1.32:1. The project benefits a total area of 1537.81 ha.

After discussion, the Committee accepted the proposal.

11) Revised Project Estimate for widening, strengthening and providing 10 M wide roadway on Alipur Bund on left bank of river Yamuna in District Baghpat/Ghaziabad, UP;

CE (PAO) introduced the project proposal which envisages

- (i) Widening of the existing Alipur Bund on the left bank of river Yamuna from 6.0 m to 12.0 m for a stretch of 15 km.

- (ii) Providing 45 cm thick pitching and 8.25 m wide launching apron including toe key on river side of bund in a total length of 5.86 km at vulnerable reaches.
- (iii) Providing 8.25 m wide launching apron including toe key for a length of 2.66 km.
- (iv) Constructing 10 m wide road on the top of Alipur bund in three layers and black top, etc., for a stretch of 15.5 km and
- (v) 10 m wide black top only from RD 15.5 km to RD 18.16 km.

The original scheme was approved by the Planning Commission vide Lr. No. 12 (1)/24/2006-WR. dt. 22.12.2006 for Rs. 42.20 crore. The present revised estimate has been finalized in CWC as per current price level and the cost has been finalized as Rs. 46.17 crore with BC ratio as 3.94:1.

After discussion, the Committee accepted the proposal.

12) Indirasagar (Polavaram) Project, Andhra Pradesh;

CE (PAO) introduced the project proposal which envisages

- (i) 2310 m long earth and rock fill dam with 897.50 m long gated spillway across the river Godavari near Polavaram village with a gross storage of 5.511 BCM (194.60TMC) at FRL of +150 ft
- (ii) 181.50 km long left main canal system with discharge capacity of 230 cum
- (iii) 174 km long right main canal system with discharge capacity of 397.10 cum and
- (iv) Power House and appurtenant works with installed capacity of 960 MW.

The CCA of the project is 2.91 lakh ha. with annual irrigation of 4.36 lakh ha. There is a provision of 23.44 TMC of water supply for Visakapatnam township and Steel plant. Besides, provision for diversion of 80 TMC of water to Krishna basin has also been kept. The project comes under purview of final award of Godavari Water Tribunal, 1980. The project proposal has been appraised in CWC and the estimated cost has been finalized as Rs. 10,151.04 crore at PL-2005-06 with BC ratio 1.73.

The clearances from MoTA and MoEF were accorded with few specific mentions as under:

- (i) Environment clearance was accorded by MoEF with stipulation to adhere to the direction of Hon'ble High Court of Orissa dated 22.3.2006 on a petition WP (C) No. 3669 (2006) filed by Shri Laxman Munda, which states "It is open to the state of Andhra Pradesh to proceed with the construction of Indira Sagar (Polavaram) Multipurpose Project after complying with the requirements of all laws applicable in this regard, in such manner that no land/village/area situated within the territory of the state of Orissa is submerged.

- ii) R&R clearance by MoTA was accorded with specific stipulation as under:

(a) "This clearance is subject to the final orders to be passed by the Hon'ble Supreme Court in IA No. 1572, 1578 in 1572 in Writ Petition (Civil) No. 202 of 1995.

and

(b)" The Government of Andhra Pradesh, under the technical guidance of the Central Water Commission, shall ensure that no submergence and displacement of people including Scheduled Tribes (STs) takes place in the territories of States of Orissa and Chhattisgarh and the population of these two States including STs does not get adversely

affected in any manner, either by changes in drainage regime or by any kind of primary/secondary displacements."

- (iii) Forest clearance for diversion of 3731.07 ha (3473.00 ha notified forest area plus 258.07 ha deemed forest area as per Hon'ble Supreme Court's definition) of forest land was accorded with the specific stipulation as under;

(a) "This approval shall be subject to the orders to be passed by the Hon'ble Supreme Court in I.A.s No. 1572, 1578 and any other IA on this project in WP(C) No. 202 of 1995 as per the order of Hon'ble Supreme Court dated 19.09.2008 as below:-

"Needless to say that the other recommendations of the CEC may also be complied with by the applicants. The matter shall be heard for final permission. No equity shall be claimed because of present clearance."

(b) The plan approved by Ministry of Tribal Affairs and their conditionalities may be followed as mentioned above under para (ii) (b).

Following the forest clearance given by MoEF, the Principal Secretary to Government (Projects), Irrigation & CAD Department, Andhra Pradesh has communicated to Chairman, CWC vide Lr. No. 42137/Maj Irrigation 1 (1)/2008 dated 10.1.2009 that the state of Andhra Pradesh agrees to provide funds for protective embankments along the rivers Sabari and Sileru with adequate drainage arrangements at the project cost under technical guidance of CWC to ensure that no submergence of forest land or habitations takes place on account of construction of Polavaram project. This is without prejudice to the rights and privileges the state is entitled under the provisions of inter-state agreements and GWDAT award.

A communication from MoEF dated 20.1.09 has been received in connection with the 95th Advisory Committee meeting, copy of which is enclosed at Annex-II. The para-3, para-4 and para-5 relevant in the present case is extracted below:

Para-3: Regarding Indira Sagar (Polavaram) Multipurpose project it may be noted that environmental clearance was accorded to this project on 25th October, 2005 based on the information submitted in the EIA/EMP report which was examined by the Expert Appraisal Committee (EAC) for River Valley and Hydroelectric Projects.

Para-4: The TAC note circulated for this project, states on page 15 that the State Government of Andhra Pradesh has reassured vide letter No. 42137/Maj.Irrgn.I(1)/2008 dated 10.01.2009 (Appendix XVII) that by undertaking adequate measures through bunds/embankments, drainage sluices and pumping arrangement no land will be submerged in Orissa and Chhattisgarh and there will be no displacement of any population.

Para-5: In this regard it may be noted that construction of bund on the river was not considered by the then EAC neither details were given in the EIA/EMP report. As such, if bunds are proposed on the river to stop submergence in Orissa & Chhattisgarh, it will be treated as change of scope of the project and as per condition No. 6 of environmental clearance letter dated 25.10.2005 the proposal needs fresh appraisal."

Dr. S. Bhowmik, Additional Director representing MoEF (Environment) told that as protective bunds are proposed subsequent to environmental clearance, project proponent shall give to MoEF the details of this change and obtain approval of MoEF to the construction of the bund.

Shri S.K. Joshi, Principal Secretary, I&CAD Department, Government of Andhra Pradesh, explained that there is no change in the scope of the project. The benefits contemplated under the project, the FRL, the height of the dam and other project parameters remain same. He further added that about 97% of the total submergence area of the project lies in Andhra Pradesh and the remaining 3% only falls in Orissa and Chhattisgarh. Protecting a small extent of 3% of area falling in the territories of Orissa and Chhattisgarh by construction of Protective embankments along the tributaries of Sabari and Sileru as per the directions of Hon'ble High Court of Orissa and

conditions of MoTA and MoEF which is in accordance with Interstate Agreement dated 2.4.1980 cannot be treated as change in the scope of the Project.

Commissioner (PR) observed that the proposed bunds are equivalent to flood protection bunds. As such they may not require environment clearance.

Member (WP&P) observed that protection of small area by providing protective bunds not only prevents submergence in the territories of Orissa and Chhattisgarh but also provides protection to the areas which otherwise are used to be submerged in the normal floods without dam.

The Principal Secretary, I&CAD Department, Andhra Pradesh agreed to send a report about the protection bunds for information to MoEF.

Mrs. R. Pant, Joint Secretary from MoTA pointed out that the number of ST families and ST population affected under the project reported while granting R&R clearance by MoTA and the figures reported in the TAC note are at variance while the number of affected villages remained to be same. Chief Engineer, Indira Sagar (Polavaram) project of Andhra Pradesh clarified that although Rehabilitation and Resettlement (R&R) of PAFs is dynamic process but there is no change in the figures reported in respect of affected Tribal families and tribal population. The salient features of the project, annexed to the TAC note found to have certain erroneous figures and hence corrected copy of salient features of the project has been circulated to the members before the meeting itself. As per the corrected copy there is no discrepancy. He further assured the committee that there is no change in the figures of tribal families and tribal population affected under the project.

The representative of MoTA queried about who would undertake construction of the embankments in Orissa and Chhattisgarh. The Secretary, I&CAD Department, Andhra Pradesh stated that adequate provision has been made in the cost estimate of the project and the fund would be placed at the disposal of respective state governments. However, the project authorities could undertake the construction works themselves if the concerned state governments desire so.

The Committee discussed the proposals in detail and finally accepted the project proposal with the following observations:

1. The project authorities shall give to the MoEF the details of the proposed protection bunds along Sabari and Sileru to prevent submergence in Orissa and Chhattisgarh in accordance with orders of Hon'ble High Court of Orissa and condition imposed by MoTA and MoEF and takes their concurrence before construction of these protection embankments.
2. The project authorities shall furnish a confirmation report to MoTA that there is no change in the number of project affected ST families and ST population from what was reported at the time of clearance of R&R plan by MoTA.
3. The state of Andhra Pradesh shall ensure that there is no submergence of any habitations or forest area in Orissa and Chhattisgarh as assured by them by constructing protective embankments with adequate drainage arrangements.
4. The project authorities shall fulfill the stipulated conditions of MoEF and MoTA as laid down in their respective clearances

13) Utawali Medium Irrigation Project, (Revised Estimate) Maharashtra:

CE (PAO) introduced the project proposal which envisages

- (i) 2067 m long earthen dam with spillway across Utawali river in Tapi basin
- (ii) Saddle dam across its tributary Landi Nalla with a ridge cut and
- (iii) 17.51 km long right bank canal with discharge capacity of 5.014 cumec.

CE (PAO) further informed that the original proposal was approved by the Planning Commission in Dec. 2004 and the present revised cost estimate has been finalized for Rs. 109.64 crore at PL-2007-08 with BC ratio of 1.293. The project benefits CCA of 4650 ha with annual irrigation of 5394 ha. The scheme is benefiting the drought prone area of Maharashtra and included under Prime Minister's package. Commissioner (PR) pointed out that it has been about 10 years the project has been under construction. The Project Authorities explained that the project is in the advanced stage of construction and due to inadequate supply of funds, the project could not be completed earlier as per the schedule.

Chairman enquired about the purpose of ridge cut, it was explained by the Project Authorities that the cut in the ridge has been provided in order to enhance water supply from the adjacent valley.

After discussion, the Committee accepted the proposal.

14) Lower Panzara Medium Irrigation Project, Maharashtra;

CE (PAO) introduced the project proposal which envisages

- (i) Construction of a 3226 m long earth dam on river Panzara, a tributary of river Tapi
- (ii) 295 m long spillway with 17 no. of radial gates, each of size 12.0 m x 8.0 m
- (iii) Non overflow section of 120 m long and
- (iv) 32.85 km long left bank canal and 14.13 km long right bank canal with distribution network.

The project benefits CCA of 9980 ha with annual irrigation of 7585 ha. in the drought prone area of Dhule district of Maharashtra. The project proposal has been appraised in CWC and the estimated cost has been finalized as Rs. 34.73 crore with BC ratio as 1.02:1. There is a provision of 7.990 MCM of water for domestic water supply in Dhule town and 2.970 MCM for rural villages. Besides, 8.50 MCM of water has been kept for industrial water use. Chairman queried to know the reason for such high cost per ha. for annual irrigation in comparison to other projects. The Project Authorities explained that the project includes the cost of city water supply as well as provision for industrial uses for which the benefits have not been accounted for in the BC ratio calculation. Commissioner (PR) pointed out that in case the project is to be posed for AIBP funding the apportionment of the cost will need to be done.

After discussion, the Committee accepted the proposal.

15) Nandur Madhameshwar Project (Revised Estimate); Maharashtra;

CE (PAO) briefly introduced the project proposal and informed that the original Nandur Madhameshwar was a pre-planned project for irrigating 26,103 ha of area. Subsequently, the proposal for modifying the existing old Nandur Madhameshwar project with additional components was approved by the Planning Commission in May 1991 for Rs. 72.66 crore (PL-1980-81) for annual irrigation of 45,124 ha. (CCA of 5443 ha). Presently, the revised cost estimate without any change in scope has been appraised in CWC and the cost finalized at Rs. 941.33 crore (PL 2008-09) with BC ratio 1.11. The project is presently under AIBP funding. Commissioner (PR) enquired why paddy was introduced in the pre-project condition since the project command is located in drought prone areas. The Project Authorities explained that the paddy was grown only in the Eigatpuri tehsil of the pre-project area and the cropping pattern for the rest of the area has been proposed as per the suggestion of the State Agriculture Department. The State Finance Concurrence to the project has been accorded by the State Government.

After discussion, the Committee accepted the proposal.

16) **Kamani Tanda Medium Irrigation Project, Maharashtra;**

CE (PAO) introduced the project proposal which envisages

- (i) Ungated masonry pick up weir.
- (ii) Head regulators with two gates of size 1.60 m x 1.60 m to divert 14.16 cum of water
- (iii) Feeder canal of 20 km length taking off from the right bank of pick up weir and
- (iv) 7 no. of storage tanks and 2 nos. of percolation tanks.

The project is located in Tapi basin. No forest land is involved and no village is affected due to construction of the project. The project is in advanced stage of construction. The project proposal has been appraised in CWC and the cost has been finalized as Rs. 78.49 crore (PL-2002-03) with BC ratio 1.67:1. The scheme benefits the drought prone area of Jalgaon district. On a query from Chairman regarding price level of cost estimate the project authorities explained that the project cost would not require any further revision since the project was almost in completion stage. It would be possible to complete the work with the presently finalized cost estimate by next year. The works got delayed due to construction of rail crossings and a gorge filling in between.

After discussion, the Committee accepted the proposal.

17) **Kandi Canal Extension from Hoshiarpur to Balachaur (Revised Major), Punjab;**

CE (PAO) introduced the project proposal which envisages

- (i) Construction of 70.50 km main canal,
- (ii) Construction of 6 no. head regulators, 3 nos. cross regulators, 2 nos. cross regulators cum escape
- (iii) Construction of 84 nos. of cross drainage works of varying discharges from 1.62 cum to 225 cum.
- (iv) 102 nos. structures including railway bridges, DR bridges, VR bridges, foot bridges and
- (v) Construction of distributaries for flow and lift irrigation and providing lined water courses.

It was further mentioned that the original proposal was given investment clearance by the Planning Commission on 05.04.2002 for Rs. 147.12 crore (PL-1997). The present proposal is the revised cost estimate only without any change in scope. The revised estimate has been appraised in CWC and the cost has been finalized as Rs. 346.62 crore (PL-2008) with BC ratio 1.58:1. An expenditure of Rs. 156.35 crore has already been incurred till March 2008.

Commissioner (PR) pointed out that all the distributaries are proposed to be lined which would prevent recharging to ground water. He therefore suggested that selected lining should be done. In response the project authorities explained that since the sub-soil condition is very permeable with fractured rocky layers, ground water storage will not hold. It was enquired whether ground water is being extracted or not? The project authorities intimated that no ground water extraction is being done in the command area while only surface water lifting is in practice.

Chairman wanted to know when the project would be completed. The project authorities intimated that the project works would be completed by March 2011.

After discussion, the Committee accepted the proposal.

18) **Teesta Barrage Project 1st Sub-stage of Stage-I of Phase-I (Revised Estimate), West Bengal;**

CE (PAO) introduced the project proposal which envisages

- (i) A barrage across Teesta at Gazoldoba, Jalpaiguri District
- (ii) 2 nos. of pick up barrages, one across the Mahananda river at fulbari in Jalpaiguri District and other across river dauk at Chopra in Uttar Dinajpur district
- (iii) Construction of 5 main canals of total length of 211 kms approx. and
- (iv) Distribution network covering 4200 km approx.

The original proposal was approved by Planning Commission in May 1975 for Rs. 69.72 crore for a CCA of 3.04 ha. In the revised estimate the CCA has been modified as 3.42 lakh ha for which crop water requirement has been examined in CWC. After appraisal, the revised cost estimate has been finalized at a cost of Rs. 2988.61 crore (PL-June 2008) with BC ratio 2.55:1. The project is under progress and an expenditure of Rs. 1179.85 crore has already been incurred.

Commissioner (PR) pointed out that the pace of progress of work has been found to be very slow. He wanted to know when the project is likely to be completed. The project authorities explained that earlier there was a problem of land acquisition which has been almost settled besides lack of technical personnel has been a major bottleneck in implementing the technical work.

Chairman observed that Teesta Barrage project has been declared as a National Project and implementation of the project should be expedited and advised that the State Government should take extra measures for early completion of the project. Secretary, Irrigation and Waterways, Govt. of West Bengal assured that the project would be completed by 2014-15.

After discussion, 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/Smt.

1. U.N. Panjari, 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. Smt. Ananya Ray, Joint Secretary & F.A., MoWR	Member
5. Smt Ruchira Pant, Joint Secretary, Ministry of Tribal Affairs (Representing Secretary MoTA)	Member
6. Dr. S. Bhowmik, Additional Director, Ministry of Env & Forests (Representing Secretary MoEF)	Member
7. MM Rawal, Chief Engineer, CEA, New Delhi (Representing Chairman, CEA)	Member
8. S. Haq, Hydrologist, CGWB, New Delhi (Representing Director General CGWB)	Member
9. U. K. Ghosh, Chief Engineer, PAO, CWC, New Delhi	Member-Secy.

Special Invitees:

(a) Central Water Commission:

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. T. M. Venugopalan, Chief Engineer, IMO, CWC, New Delhi
5. G. S. Purba, Chief Engineer, FM, CWC, New Delhi
6. R.P. Saxena, Chief Engineer (BPMO), CWC, New Delhi
7. T. S. Patil, Chief Engineer (MCO), CWC, Nagpur
8. B.G. Kaushik, Director CA(I), CWC, New Delhi
9. C. P. Singh, Director FM-I, CWC, New Delhi
10. V.N. Wakpanjar, Director (Appraisal), CWC, Nagpur.
11. Y. K. Sharma, Director IP-S, CWC, New Delhi
12. G. Thakur, Director (PA-North), CWC, New Delhi
13. M. W. Paunikar, Dy. Director (PA-N), CWC, New Delhi.
14. T.D.Sharma, Dy. Director (PA-Central), New Delhi
15. Basishit Rai, Dy. Director (PA-Central), New Delhi
16. R.K. Upadhyay, Dy. Director (CA-I), CWC, New Delhi
17. Puneet Kumar Mittal, Dy. Director (PA-S), CWC, New Delhi.
18. Piysh Kumar, Dy. Director (FM-II), CWC, New Delhi.
19. A. K. Singh, AD (PA-N) CWC, New Delhi.
20. Jacob Cheria C., EAD (PA-N) CWC, New Delhi.
21. S. Jagdeeshan, EAD (PA-N) CWC, New Delhi.

(b) Ministry of Water Resources

1. Indra Raj, Commissioner (Projects), New Delhi.
2. Narendra Kumar, Commissioner (B&B), MoWR, New Delhi
3. Ravi Shankar, Sr. Joint Commissioner, MoWR, New Delhi

(c) GFCC

1. M. U Ghani, Member GFCC, Patna

(d) State Government Officers

Andhra Pradesh

1. S K Joshi Principal Secretary, I&CAD
2. M V Rao, CE, I&CAD

Bihar

1. Naval Kishore, Superintending Engineer, WRD, Patna

Chattisgarh

1. J. K. Kukkal, Engineer-in- Chief, WRD, Raipur

Himachal Pradesh

1. A. K. Waha, Superintending Engineer, WRD

Maharashtra

1. V.V. Gaikwad, Secretary (WR), Mumbai
2. D.P. Shirke, Ex. Director, Vidarbha Irrigation Dev. Corp., Nagpur
3. V. Patil, CE (WR), Amravati
4. S.G. Gawale, CE (WR), Nasik
5. S.N. Huddar, Adviser to Govt. of Maharashtra

Punjab

3. Ajoy Sharma, Special Secretary, Irrigation, Punjab
4. A. K. Batta, Chief Engineer, Kandi Irrigation, Chandigarh

ANNEX - II
BY SPEED POST

No. J-12011/CWC/TAC/09-IA.I
Government of India
Ministry of Environment and Forests

Paryavaran Bhawan
CGO Complex, Lodhi Road
New Delhi -110 003

Telefax: 2436 2827

Dated: 20.1.2009

To

Shri U.K. Ghosh
Chief Engineer (PAO)
Central Water Commission
Sewa Bhawan, R.K. Puram
New Delhi -110 066

Subject: 95th meeting of the Advisory Committee on Irrigation, Flood Control and Multipurpose Projects.

Sir,

This has reference to your communication No.16/27/2008-PA(N)/47-78 dated 15th January, 2009 on the above mentioned subject. Out of the 6 projects, medium irrigation project at Sl. No.4 and flood control projects at Sl. No.5&6 do not require environmental clearance under the provisions of EIA Notification, 2006.

2. Environmental clearance has already accorded to Teesta Barrage project in West Bengal in 1994. In respect of restoration of Kosi Barrage in Bihar it may be noted that we have not received any proposal in this regard.

3. Regarding Indira Sagar (Polavaram) Multipurpose project it may be noted that environmental clearance was accorded to this project on 25th October, 2005 based on the information submitted in the EIA/ EMP report which was examined by the Expert Appraisal Committee (EAC) for River Valley and Hydroelectric Projects.

4. The TAC note circulated for this project, states on page 15 that the State Government of Andhra Pradesh has reassured vide letter No.42137/Maj.irrgn.I(1)/2008 dated 10.01.2009 (Appendix XVII) that by undertaking adequate measures through bunds/ embankments, drainage sluices, and pumping arrangement no land will be submerged in Orissa and Chhattisgarh and there will be no displacement of any population.

5. In this regard it may be noted that construction of bund on the river was not considered by the then EAC, neither details were given in the EIA/ EMP report. As such, if bunds are proposed on the river to stop submergence in Orissa & Chhattisgarh, it will be treated as change of scope of the project and as per condition

No 6 of environmental clearance letter dated 25.10.2005 the proposal needs fresh appraisal.

6. Further, it may be noted that a Transfer Petition (Civil) No.1159 of 2008 has been filed in the Hon'ble Supreme Court for the transfer of the Writ Petition No.27767 of 2007 pending before the High Court Judicature of Andhra Pradesh at Hyderabad.

Yours faithfully,



(Dr. S. Bhowmik)
Additional Director

No. 16/27/2008-PA (N)/ 455-77
Government of India
Central Water Commission
Project Appraisal Organisation

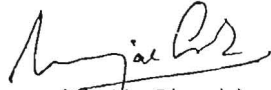
407(S), Sewa Bhawan R. K.
Puram, New Delhi-110 066

Dated: 26.02.2009

Sub: **96th meeting of the Advisory Committee for consideration of techno-economic viability of Irrigation, Flood Control and Multipurpose Project proposals held on 16.02.2009**

Enclosed please find herewith a copy of the summary record of discussions of the above meeting held at New Delhi on 16th February 2009 at Conference hall, MoWR, Rafi Marg, New Delhi for information and necessary action.

Encl: As above


(U. K. Ghosh)
Chief Engineer (PAO)
Tele Fax No. 26106369

To

Members of The Committee:

1. Chairman, CWC, Sewa Bhawan, R. K. Puram, New Delhi.
2. Secretary (Expenditure), Ministry of Finance, North Block, New Delhi.
3. Secretary, Department of Power, S. S. Bhawan, New Delhi.
4. Secretary, Ministry of Environment & Forests, Paryavaran Bhawan, CGO Complex, New Delhi.
5. Secretary, Ministry of Tribal Affairs, R. No. 603, A-Wing, Shastri Bhawan, New Delhi.
6. Secretary, Department of Agriculture & Cooperation, Krishi Bhawan, New Delhi.
7. Director General, ICAR, 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-110011.
10. Adviser (W.R.), Planning Commission, Yojana Bhawan, New Delhi.
11. Adviser (Power), Planning Commission, Yojana Bhawan, New Delhi.
12. Financial Adviser, Ministry of Water Resources, S. S. Bhawan, New Delhi.

Special Invitees

1. Member (WP&P), CWC, New Delhi.
2. Member (D&R), CWC, New Delhi.
3. Member (RM), CWC, New Delhi.
4. Chairman, GFCC, 3rd Floor, Sinchai Bhawan, Patna-800015
5. Commissioner (Projects), Room No-411, S.S.Bhawan, MoWR, New Delhi.
6. Commissioner (Ganga), Ministry of Water Resources, CGO Complex, New Delhi.
7. Commissioner (B&B), Ministry of Water Resources, CGO Complex, New Delhi.
8. Chairman, Brahmaputra Board, Basistha, Guwahati
9. Chief Engineer (PMO), CWC, New Delhi.

Copy for information to:

1. Sr. PPS to Secretary, Ministry of Water Resources, New Delhi.

SUMMARY RECORD OF DISCUSSIONS OF THE 96TH MEETING OF THE ADVISORY COMMITTEE ON IRRIGATION, FLOOD CONTROL AND MULTI-PURPOSE PROJECTS HELD ON 16TH FEBRUARY, 2009 FOR CONSIDERATION OF TECHNO-ECONOMIC VIABILITY OF PROJECT PROPOSALS.

The 96th meeting of the Advisory Committee for consideration of Techno-economic viability of Irrigation, Flood Control and Multi-purpose Project proposals was held on 16.02.2009 at 1130 Hrs. in the Conference Room of Ministry of Water Resources, Shram Shakti Bhawan, Rafi Marg, 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 95TH MEETING:

The Summary Record of Discussions of the 95th Advisory Committee meeting was circulated vide Lr. No.16/27/2008-PA (N)/275-309, dated 23rd January, 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 95th Advisory Committee meeting.

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

1) Protection of Majuli Island from Flood and Erosion Phase-II & III, Jorhat Distt, Assam (prepared by Brahmaputra Board):

CE (PAO) introduced the project proposal which envisages:

- (i) Construction of 10 spurs with boulder nose.
- (ii) RCC porcupine spurs, screens and dampners.
- (iii) Revetment for a length of 500 m.
- (iv) Construction of one sluice at Malua Malapindha dyke and one raised platform.

The scheme was earlier put up in the 95th meeting of the Advisory Committee of MoWR held on 20.01.2009 and was deferred for updating of cost, based on current price level. Accordingly, Brahmaputra Board resubmitted the scheme with the updated cost estimate as per the current price level. CWC has finalized the revised cost of the

○
scheme as Rs. 115.03 crore at price level of 2007-08. The BC ratio worked out is 1.26:1. The scheme benefits the Majuli island, Jorhat District.

Thereafter, the scheme was discussed in detail.

Chairman enquired about the performance of the proposal under Phase-I of the scheme.

Chief Engineer, Brahmaputra Board intimated that some improvement has taken place following implementation of Phase-I. He further intimated that works of the Phase-II and III have now been combined.

Commissioner (Ganga) informed that the estimated cost of the scheme is within the amount approved by the EFC.

JS & FA (MoWR) observed that the head wise allocation should not be interchanged.

After discussions, the Committee accepted the proposal.

2) Restoration of Dibang and Lohit rivers to their original courses at Dholla Hatighuli (old name of scheme: Avulsion of Brahmaputra at Dholla Hatighuli, Assam, phase-IV) (prepared by Brahmaputra Board):

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

- (i) Construction of 3650 m long coffer dam cum embankment with 0.6 m thick sand filled geo bag aprons – 3650 m.
- (ii) Construction of pilot channel – 4600 m long
- (iii) Bank stabilization of left bank of river Lohit (at four locations).
- (iv) Construction and extension of tie bund at left bank of river Dibang (total length: 2345 m)
- (v) RCC porcupine screens and spurs at 12 locations.

The proposal was first submitted in CWC for a cost of Rs. 23.32 crore in December, 2007. After compliance of the comments of CWC, the proposal was re-submitted with additional work components. The scheme has been finalized at an estimated cost of Rs. 53.11 crore and B.C ratio worked out is 7.59:1. Tinsukia and Dibrugarh districts of Assam are to be benefited by this project.

Commissioner (Ganga) pointed out that this proposal was approved by the EFC for Rs. 23.32 crore only and suggested to restrict the expenditure accordingly. He also enquired about the reason for such abrupt increase in the cost of the proposal.

Member (RM) intimated that after appraisal of the proposal in CWC, coffer dam cum embankment has been incorporated as one of the components of the scheme which alone would cost around Rs. 35.00 crore.

Chairman was of the view that the expenditure on the scheme has to be contained within the cost which was approved by the EFC.

Member (WP&P), CWC suggested that in view of only few months left before the onset of monsoon of 2009 only those works which could be completed before the monsoon may only be taken up by the Brahmaputra Board at this stage.

Chairman advised Brahmaputra Board to identify the specific works in consultation with CWC which could be executed as first phase of the present proposal.

CE, Brahmaputra Board informed that the works pertaining to the portion of the Dibang River and the RCC porcupine screen in the upstream to prevent formation of another channel could be taken up.

With regard to the other proposed components of the scheme, Chairman advised that the proposal of provision of coffer dam, pilot channel, etc., may be put up to the "Standing Committee of Experts to review and suggest suitable measures for protection of Majuli Island in Assam" for their expert opinion in the matter.

JS &FA observed that the requirement of additional fund may be considered at the time of mid-term review.

After discussions, the Committee made the following recommendation:

- The specific works which can be completed before onset of the monsoon of 2009 may only be taken up in consultation with CWC (List of works as identified by Brahmaputra Board is enclosed as Annexure-II).
- The expenditure on the works to be completed may be contained within the cost approved by the EFC.
- The proposal of coffer dam, pilot channel, etc., may be put up to the Standing Committee for their expert opinion in the matter.

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

LIST OF PARTICIPANTS

Members of the Committee:

S/Shri/Smt.

1. U.N. Panjiar, Secretary (WR), MoWR
2. Smt. Ananya Ray, Joint Secretary & F.A., MoWR
3. S. Haq, Hydrologist, CGWB, New Delhi
(Representing Director General CGWB)
4. U. K. Ghosh, Chief Engineer, PAO, CWC, New Delhi

In the Chair
Member

Member
Member-Secy.

Special Invitees:

(a) Central Water Commission:

1. R. C. Jha, Member (RM), CWC, New Delhi
2. A.K. Ganju, Member (WP&P), CWC, New Delhi.
3. G. S. Purba, Chief Engineer, FM, CWC, New Delhi
4. B.G. Kaushik, Director CA(I), CWC, New Delhi
5. G. Thakur, Director(PA-North), CWC, New Delhi
6. M. W. Paunikar, Dy. Director (PA-N), CWC, New Delhi.
7. S.M. Shad, Dy. Director (PA-N), CWC, New Delhi.
8. Piysh Kumar, Dy. Director (FM-II), CWC, New Delhi.
9. A. K. Singh, AD (PA-N) CWC, New Delhi.
10. S. Jagdeeshan, EAD (PA-N) CWC, New Delhi.
11. S.P. Jindal, EAD (PA-S) CWC, New Delhi.

(b) Ministry of Water Resources

1. Indra Raj, Commissioner (Projects), New Delhi.
2. S.P.Kakran, Commissioner (Ganga), New Delhi.
3. Narendra Kumar, Commissioner (B&B), MoWR, New Delhi

(c) Brahamaputra Board

1. D.J. Borgohain, Chief Engineer, Brahamaputra Board Basistha, Guwahati.
2. C.M. Das, Superintending Engineer, Brahamaputra Board, Basistha, Guwahati

The following works as per technically checked estimate of ' Restoration of Rivers Debang and Lohit to Their Original Courses at Dhola-Hatighuli ' by CWC are required to be cleared for execution immediately.

Sl. No.	Name of the work	Nos. of percupines	Amount (Rs.in Cr.)	Reference of the work
1	Extension and Strengtening of Tie Bund along the river Debang at Bahbari and construction of Tie Bund across the spill channel		1.72	Sub-Estimate C-5
2	RCC Procupine spurs of 30 m length at Bahbari along the existng and new extension Tie Bund for a reach length 2000m @50m C/C	1968	0.54	Sl. -7 of Statement -3-C(a)
3	RCC Procupine spurs at Aloghat - U/S of Bandarnala. (Single layer)	1472	0.40	Sl. -2 of Statement -3-C(a)
4	RCC Procupine spurs at Forest plantation near Dholaghat (Single layer)	1072	0.29	Sl. -3 of Statement -3-C(a)
5	RCC Procupine spurs at Sisini (Bhajani)- vertivcal spurs of variable length 50m apart (Single Layer)	1372	0.37	Sl. -4 of Statement -3-C(a)
6	RCC Procupine spurs of length 30m at U/S of Noa-Dehing confluence at Lohit. Spurs for a reach length of 850m @50 m C/C	864	0.24	Sl. -5 of Statement -3-C(a)
7	RCC Procupine screens across the mouth of spill channel near Dholaghat U/S.	3500	0.96	Statement -3-C(a)
8	RCC Procupine screens across the mouth of spill channel near Dholaghat D/S.	3500	0.96	Statement -3-C(a)
9	RCC Procupine screens across the spill channel of Sisini	700	0.19	Statement -3-C(a)
10	Bank stabilisation by earth/ sand filled cement bag pitching at 4 locations		0.49	Sub Estimate C-4
	Total		6.15	
	W/C and contingency @ 5%		0.31	
	Total including WC and contingency		6.46	
	Other charges such as A-preliminary, K-building, M-Plantation, O-misc., P-maintenance etc as provided in the technically cleared estimate on % basis		0.21	
	Grand Total		6.67	

Say Rs 7.00 crore

[Signature]
16/2/07
C E (Jhr)
Brahmaputra Bar