

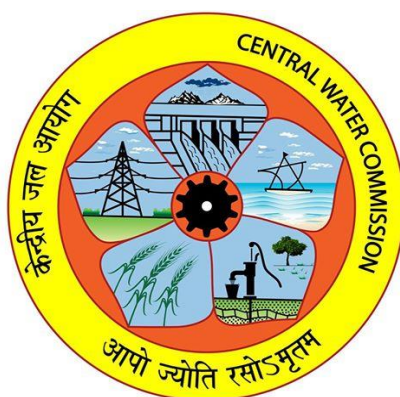
FOR OFFICIAL USE ONLY

# **LEGAL INSTRUMENTS ON RIVERS IN INDIA**

(VOL – III)

**AGREEMENTS ON INTER STATE RIVERS**

**PART ONE**



**CENTRAL WATER COMMISSION  
INTER STATE MATTERS DIRECTORATE  
NEW DELHI**

October, 2015

## FOREWORD

Central Water Commission during 1995-97 brought out publications titled “Legal Instruments on Rivers in India” in four volumes. These publications cover Constitutional Provisions, important notifications under Central laws, international agreements and treaties and awards of the Water Disputes Tribunals.

The volume III of aforesaid publication “Agreements on Inter-State Rivers” was brought out in 1995 in which agreements signed/reached up to 1994 were included. Subsequently, new agreements / MOUs on water sharing and projects implementation have been signed/reached between different states/UTs.

Water Resources Development using surface water of rivers is guided by the legal framework both in its generalities and specifics. The knowledge of legal and constitutional provisions is therefore, an essential pre-requisite for Planning, Operation and Management of Water Resources of the rivers. Inter-State river agreements on water sharing and project implementation are basic legal instruments in this regard.

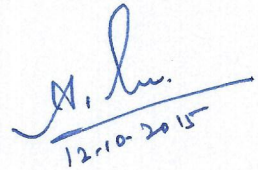
Keeping above in view, “The Legal Instruments on Rivers in India - Vol III”, 1995 is being updated and revised after including new agreements/MoUs on water sharing and project implementation which have been made available by States/UTs. Agreements signed/reached before 1994 but not included in the existing publication due to various reasons are being included in the revised volume.

The updated version has been split in two parts. Part I contains Inter-State river agreements on water sharing and project implementation in respect of Indus, Ganga and Brahmaputra basins. Part II contains Inter-State river agreements on water sharing and project implementation in respect of Peninsular rivers. As many of the agreements in the updated version are very old signed/reached more than 30 years ago, additional information related to and about the status of the agreements has been included in the updated version in the form of Footnotes.

I sincerely hope that updated version will serve as ready reference to all users in Water Resources Planning, Development and Management within the framework of various provisions in Indian Constitution.

I wish to put on record my appreciation for the initiative of Irrigation Management Organisation in updating this compilation.

New Delhi,  
October, 2015.

  
(A.B. Pandya)  
Chairman, CWC



## PREFACE

India has been endowed with considerable water resources through numerous small and large rivers. Some of the larger Indian Rivers like the Indus or the Ganga- Brahmaputra- Meghna are international rivers. These, and most of the other rivers are the interstate rivers. Of the total geographical area of India, approximately 95% of the area is under international or interstate rivers. The water Resources development of these rivers takes place within the legal framework of development of the interstate rivers. A sufficient familiarity with this legal framework that is both its generalities and the specifics of a particular problem, is therefore, an essential pre-requisite for anyone interested in Planning, Development, Operation and Management of Water Resources of these rivers.

The basic legal instruments which need to be referred to in this context can be classified as:-

1. The Constitutional provisions relevant to interstate rivers.
2. Treaties or agreements between India and other countries in regard to development of international rivers/ basins.
3. The Laws enacted by the Parliament in connection with the development, use and regulation of interstate rivers.
4. The awards and the proceedings of the inter-state water disputes tribunals set up by the Central Government.
5. Notifications, Resolutions, Orders etc. issued by the Central Government in pursuance of the Laws or Tribunal awards, setting up agencies, machineries or procedures to deal with interstate rivers, from time to time.
6. The various agreements, contract etc. reached by the State Govts., amongst or between themselves, in regard to interstate rivers. This includes the various agreements amongst or between the princely states and Indian Provinces. Similarly, minutes of important interstate meetings about the interstate water problems, signed by the concerned parties which reflect agreed decisions.
7. Notifications, Resolutions, Orders etc. passed by Central Govt. or State Govts., in pursuance of interstate agreements setting up agencies, machineries or procedures etc. to deal with interstate rivers.

Of the above various types of documents, some would be of more general interest to a large group of persons dealing with similar problems; others may be of rather limited interest.

The Central Water Commission as the National Apex Body while appraising Water Resources Development projects has also to deal with the various aspects of interstate water issues. The CWC therefore, with a view to make these documents more general and readily


available to all users, during 1995-1997, brought series of publications titled "Legal instruments about interstate rivers" in the following form:

Vol I :	Constitutional provisions, Central Laws. Important notifications under Central Laws
Vol II :	Awards of Interstate Water Dispute Tribunal. Important notifications under these Laws
Vol III :	Agreements on Interstate rivers, Important notifications under these agreements.
Vol IV :	International agreements and treaties, Important notifications under these agreements and treaties.

Of these series, the Vol. II has already been updated and published and Vol III is now being updated keeping in view of the fact that many new agreements/MoUs on water sharing and project implementation have been signed /reached among States/UTs. The updated version has been split in two parts. Part I contains Inter-State river agreements on water sharing and project implementation in respect of Indus, Ganga and Brahmaputra basins. Part II contains Inter-State river agreements on water sharing and project implementation in respect of Peninsular rivers. As many of the agreements in the updated version are very old signed/reached more than 30 years ago, additional information related to and about the status of the Agreements has been included in the updated version in the form of Footnotes.

I compliment the staff of Irrigation Management Organisation of CWC in particular Shri Navin Kumar, Chief Engineer, Shri B.P. Pandey, Director, and Shri Chaitanya K.S., Asst. Director for making concerted efforts in bringing out this revised compilation.

New Delhi,  
October, 2015.

  
(Narendra Kumar)  
Member (WP&P), CWC

S. No	CONTENTS	Page
	<b>INDUS BASIN</b>	1-114
1	Draft agreement between the British Government and the Bikaner State regarding the Northern and Southern Ghaggar canals as adopted at a conference held at Simla on 27 <sup>th</sup> May, 1897	1-7
2	Terms of agreement subject to the confirmation of the Secretary of State in Council between the British Government and the Government of His Highness the Nawab of Bahawalpur and His Highness the Maharaja of Bikaner regarding the irrigation of the tracts commanded and economically irrigable from the Gharra reach of the Sutlej river and from the Panjnad reach of the Chenab river	8-13
3	Agreement between the Secretary of State for India in Council and Lieutenant His Highness Raja Joginder Sen Bahadur, Raja of Mandi.	14-18
4	First Supplemental Agreement regarding supply of energy in Mandi town	19-20
5	Agreement between East Punjab Government and the Government of Patiala and East Punjab States Union (PEPSU) regarding Sirhind canal and distribution of supplies	21-30
6	Agreement on Constitution of the Bhakra Control Board and Bhakra Advisory Board	31-34
7	Record of the decisions arrived at the inter-state conference on the development and utilisation of the waters of the rivers Ravi and Beas held in room no. 12 North Block, New Delhi on the 29 <sup>th</sup> January, 1955.	35
8	Record of the decisions taken at the inter-state meeting of the Chief Engineers on the development and utilisation of the waters of the rivers Ravi and Beas held in room no. 12, North Block, New Delhi on the 1 <sup>st</sup> March, 1955.	36-38
9	Record of discussion held at Chandigarh between the Chief Engineers of Punjab, PEPSU and Rajasthan, on 9-9-1956 regarding the apportionment of cost of construction of the common projects.	39
10	Agreement on setting up the Rajasthan Canal Board- Resolution of Government of India dated 19 <sup>th</sup> December, 1958.	40-43
11	Agreement on construction of Bhakra Nangal project between Punjab and Rajasthan in January, 1959	44-68
12	Summary record of the decision taken in the meeting held on 15.2.1965 in room no.12,North Block, New Delhi on certain matters relating to the Government of Punjab and Rajasthan.	69-70
13	Second supplemental agreement dated 9 <sup>th</sup> April, 1965 between the Punjab State Electricity Board and the President of India as Govt. Of Himachal Pradesh regarding Uhl river hydro-electric project.	71-73
14	Agreement between Rajasthan and Haryana on the utilisation of Ghaggar water in Nohar project by Rajasthan and surplus waters at Harike through Rajasthan feeder to Haryana dated 17 <sup>th</sup> September,1973.	74
15	Government of India notification of 24 <sup>th</sup> March, 1976 on sharing of	75-76

	Ravi Beas waters between Punjab and Haryana arising out of re-organisation of State of Punjab	
16	Minutes of the meeting with the Chief Ministers regarding implementation of the Thein dam project held on 3 <sup>rd</sup> October, 1977.	77-79
17	Agreement dated 19 <sup>th</sup> January, 1979 between the Governments of Himachal Pradesh and Punjab regarding Thein dam and power plant scheme.	80-83
18	Agreement regarding Thein dam and power plant scheme between Punjab and Jammu & Kashmir.	84-87
19	Govt of India decision dated 15 <sup>th</sup> September, 1981 regarding replacement/contribution into Sirsa Branch from Western Jamuna Canal.	88-90
20	Agreement of 31 <sup>st</sup> December, 1981 on allocation of surplus Ravi Beas waters and implementation of Sutlej Yamuna link canal project between Punjab, Haryana and Rajasthan.	91-94
21	Award of Government of India 15 <sup>th</sup> January, 1982, on Rajasthan's claim to convey 0.57 MAF of waters through SYL / Bhakra system.	95-98
22	Minutes of the meeting of Augmentation Water Supply Scheme, Chandigarh held on 6.7.1983 at 3.30 P.M in Home Minister Room, North Block, New Delhi.	99-100
23	Memorandum of Understanding between Chief Minister of Himachal and Chief Minister of Punjab at the discussions held on 15.7.1983 regarding acquisition of land in Himachal Pradesh for the Anandpur Sahib hydel channel project of Punjab.	101
24	Memorandum of Understanding between the Chief Minister of Himachal Pradesh and the Chief Minister of Punjab at the discussions held on 15.7.1983 regarding construction of Shah Nehar Barrage and Mukerian hydel channel projects by Punjab.	102-104
25	Agreement dated 4 <sup>th</sup> August, 1983 between the Governments of Punjab and Himachal Pradesh relating to the construction of Shah Nehar Barrage and the Mukerian hydel channel project by Punjab.	105-108
26	Agreement reached 10.05.1984 between the Chief Ministers of Rajasthan and Haryana and the Governor of Punjab and Government of India regarding the supply of cooling water for Ropar thermal power station and commissioning of the Anandpur sahib hydel project.	109-110
27	Extracts from Punjab Settlement (regarding sharing of river water) reached between Prime Minister of India and Sant Harchand Singh Longowal on 24 <sup>th</sup> July, 1985.	111
28	Termination of agreements related to Ravi- Beas waters in respect of Haryana and Rajasthan by Punjab.	112-114

## GANGA BASIN 115-211

29	Amended terms of agreement dated 10 <sup>th</sup> August, 1892 between the British Government and the State of Jind for regulating the supply of water for irrigation from the Western Jumna canal	115-117
30	Agreement between Rulers of Bharatpur State and Government of United Province in August, 1905 regarding Nandgaon Dig Escape and further rules dated 9 <sup>th</sup> March, 1909 for running the Dig Escape.	118-119

31	Agreement between the Punjab and United Provinces Governments regarding supplies to the Eastern Jumna canal.	120-121
32	Working agreement between the Government of East Punjab and the Jind Government for kharif supply for areas in Jind territory from the Sundar sub-branch of the Western Jumna canal extension scheme.	122-126
33	Agreement between Rajasthan and Madhya Bharat Union held on 30 <sup>th</sup> June, 1948 at 8 am in the Manikbagh Annexe, Indore.	127-128
34	Draft agreement between the Punjab and Uttar Pradesh Govts. regarding distribution of supplies of river Yamuna at Tajewala, between Western Jumna canal and Eastern Jumna canal and apportionment of expenditure on Tajewala headworks and related works.	129-131
35	Summary Record of decisions arrived at in the meeting held in the Planning Commission on 25 <sup>th</sup> March, 1955 regarding the Chambal Project.	132-136
36	Draft proceedings of the inter-state meeting between the Chief Engineers of the Punjab, Uttar Pradesh and Rajasthan regarding the distribution of waters of Jumna river held on June 8, 1955 in the Chairman, Central Water & Power Commission's room.	137-139
37	Proceedings of the Meeting held on the 4 <sup>th</sup> September, 1960 to discuss the question of allocation of cost of common works of the Chambal Project between the States of Madhya Pradesh and Rajasthan.	140-143
38	Decision dated 16 <sup>th</sup> March, 1961 of Government of MP on allocation of cost of common works on Chambal Project.	144-146
39	Decision dated 15 <sup>th</sup> March, 1963 of Chambal Control Board on allocation of cost of common works on Chambal Project along with note on item No.21 of the Second Supplementary Agenda.	147-149
40	Summary record of the decision taken at the inter-state meeting held on 7 <sup>th</sup> November, 1963 among the governments of Himachal Pradesh, Uttar Pradesh, Punjab, Delhi and Rajasthan regarding Yamuna water development.	150-153
41	Draft agreement for supply of 300 cusecs of water to Rajasthan state through Bharatpur feeder channel off taking from mile 1 <sup>st</sup> right bank of Aring distributary off taking from Agra Canal at mile 69 right bank.	154-155
42	Agreements between the Governments of Madhya Pradesh and Uttar Pradesh for irrigation projects in Bundelkhand.	156-162
43	Agreement dated 18 <sup>th</sup> October, 1965 between Uttar Pradesh and Madhya Pradesh regarding Bhandar canal system.	163
44	Extract from the summary record of the decision taken by the Chambal Control Board at its sixty-sixth meeting held at New Delhi on 6 <sup>th</sup> May, 1966.	164
45	Agreement dated 1 <sup>st</sup> August, 1972 between UP and MP on some irrigation projects in Bundelkhand.	165-166
46	Agreement dated the 16 <sup>th</sup> September, 1973 on Bansagar project.	167-168
47	Agreement dated 16 <sup>th</sup> September, 1973 between the Governments of Bihar and Uttar Pradesh on Rihand Reservoir.	169
48	Summary record of discussions of the meeting held on 8 <sup>th</sup>	170



	December, 1973 at 10.30 a.m. in CWPC Committee Room, Bikaner House, New Delhi, regarding supplies to Bhandar canal-Rabi season of 1973-74.	
49	Agreement dated 9 <sup>th</sup> December, 1973 between the Govts. Of Uttar Pradesh and Madhya Pradesh about Rajghat project.	171
50	Agreement dated 21 <sup>st</sup> July, 1974 between the Govts. Of Haryana and Uttar Pradesh regarding Tajewala and Okhla barrage.	172
51	Minutes of the meeting of the Chief Ministers of Madhya Pradesh and Uttar Pradesh held at Madhya Pradesh Bhawan, New Delhi on 13.1.1977 regarding following projects(i) Rajghat project (ii) Paisuni project (iii)Ken Canal (iv) Kanhar (v) Urmil (vi) Bansagar project and (vii) Bhandar canal	173-175
52	Agreement on utilisation of the water resources of the Damodar Barakar, Ajoy, Mayurakshi, Sidheshwari, Noon Beel and Mahananda river basins, reached by the Chief Ministers of West Bengal and Bihar at Patna on the 19 <sup>th</sup> July, 1978 and side letter dated 29 <sup>th</sup> July, 1978 regarding implementation of agreement dated 19 <sup>th</sup> July 1978.	176-182
53	Agreement on sharing of Kanhar waters.	183-184
54	Agreement between Bihar and UP. regarding construction of Musakhand dam and irrigation therefrom.	185
55	Memorandum of Understanding between Haryana and National Capital Territory of Delhi regarding construction of additional parallel water carrier system from Munak head exclusively for carrying water for Delhi.	186-187
56	Memorandum of Understanding between Uttar Pradesh, Haryana, Rajasthan, Himachal Pradesh and National Capital Territory of Delhi regarding allocation of surface flow of Yamuna signed by Chief Ministers of basin states on 12 <sup>th</sup> May, 1994.	188-189
57	Agreement between Uttar Pradesh, Haryana, Rajasthan, National Capital Territory of Delhi regarding construction of Hathnikund barrage on river Yamuna.	190-191
58	MOU among the States of Madhya Pradesh, Uttar Pradesh and the Union Government on Ken-Betwa Link Project.	192-195
59	Memorandum of Understanding between the Government of Bihar and the Government of Jharkhand on 26 <sup>th</sup> day of June, 2006 regarding Management, Construction, Operation & Maintenance and Sharing of Costs and Benefits from (i) North Koel Reservoir Project, (ii) Batane Reservoir Project and (iii) Bateswarasthan Pump Canal Project.	196-204
60	Minutes of second inter-state meeting on request of Bihar for constitution of a tribunal for adjudication of Sone river water dispute held by Chairman, CWC on 07.04.2015 at New Delhi.	205-209
61	Minutes of inter-state meeting between officials of Governments of UP and Bihar on Western Gandak canal system of Bihar	210-211

### **BRAHMAPUTRA AND BARAK BASIN**

62	Agreement between the states of Manipur and Assam on the execution, operation and maintenance of the Jiri irrigation project	212-214
----	--	---------





**<sup>1</sup>DRAFT AGREEMENT BETWEEN THE BRITISH GOVERNMENT AND THE BIKANER  
STATE REGARDING THE NORTHERN AND SOUTHERN GHAGGAR CANALS AS  
ADOPTED AT A CONFERENCE HELD AT SIMLA ON 27<sup>TH</sup> MAY, 1897**

Present

C.M. Rivaz, Esq., C.S.I., C.S.  
Financial Commissioner, Punjab.

Lt. Colonel H.A. Vincent, S.C.  
Political Agent, Bikaner.

R. Clarke, Esq., C.S.,  
Commissioner, Delhi Division

J.S. Beresford, Esq., M.E.M.I.C.E.,  
Secretary to Govt., Punjab  
P.W.D. Irrigation Branch.

Colonel S.L. Jacob., R.E.  
Superintending Engineer, Western Jumna Canal Circle.

1. The whole project to entirely carried out under the exclusive control of the British Government. The scheme to consist of Head works across the Ghaggar river at the downstream end of the Dhanur lake in the village of Ootu, Sirsa Tehsil, Hissar District.

Connected with these Head Works, there will be one Canal regulator on the Northern side and one Canal regulator on the Southern side of the deep-stream. These regulators form the heads of the Northern and Southern canals respectively. These canals are each for part of their length in British territory and part in the Bikaner State and they have been designed on the principle of utilizing the water of the Ghaggar river in the most advantageous manner.

2. In accordance with the proceedings of the Conference held at Delhi on the 7<sup>th</sup> April, 1896, at which were present:-

Mr. T. Higham, Chief Engineer and Secretary to the Govt. of Punjab Irrigation Branch, Public Works Department.

Mr. D Joscelyne, Secretary to the Agents to the Govt. General in the Public Works Department, Rajputana and Central India.

Colonel S.L. Jacob, R.E. Superintending Engineer, Western Jumna Canal Circle.

---

<sup>1</sup> The Agreement is no longer valid and in use and is superseded by Clause 16 of "Agreement on construction of Bhakra Nangal project between Punjab and Rajasthan in January, 1959".

It is agreed that the Bikaner State shall be considered entitled to 50 percent of the water entering the heads of the two canals through the two regulators above mentioned. Whenever the aggregate supply may be not less than 550 cusecs, but that for the reasons given in paragraph 25 of Mr. Higham's Note, dated 4<sup>th</sup> July, 1895, the supply to be delivered at the Bikaner border should be taken as 45 percent of that entering the heads of the Canals, the difference (five percent) being regarded as the State share of the inevitable loss by absorption in the passage of the supply from the heads of the Canals to the Bikaner border.

For supply of less than 550 cusecs it is agreed that for the reasons stated in paragraph 21 of Mr. Higham's Note aforementioned the State shall be entitled to a smaller share of the total supply, as shown in the appended tabular statement; that for a combined supply in both canals of less than 300 cusecs the State share shall be nil, for a supply of 300 cusecs it shall be 20 percent delivered at the border, and that for higher supplies the percentage shall gradually increase to 45 for a supply of 550 cusecs and over.

A total showing the supplies that will be due to the State on the border for head supplies ranging from 300 to 1,000 cusecs is appended to this Agreement.

3. It is agreed that for effecting this distribution in practice the officer in charge of the British Section shall be made responsible for passing on into Bikaner territory the proportion of the supply entering the Canals at their heads to which the State may be entitled at the Border, the supplies both at the heads and on the Bikaner border being determined by means of the gauges erected at the most suitable sites, the discharges corresponding to particular gauges readings being ascertained when necessary by discharge observations in the usual way.

All cases of dispute in connection with the gauging of supplies shall be referred to the Superintending Engineer of the Circle to which the British Section of the Canals pertains, and his decision in such matters shall be accepted as final.

4. It will, however, be optional for the officer in charge of the British Section, with the previous approval of the Superintending Engineer, to give the Bikaner State at one time less and at another time more than the percentage required by the table mentioned in Article 2, when by so doing the working of the Canals will be facilitated; provided that the time of the actual daily supplies passed into Bikaner territory during any one month shall be less than the sum of the daily supplies due to the Bikaner State for that month under Article 2.

A monthly statement of gauges and supplies both at the head of each canal and at the Bikaner border will be submitted by the officer in charge of the British Section to the Superintending Engineer, and to the officer in charge of the Bikaner Section of Canals.

This return must be dispatched not later than the 5<sup>th</sup> of the month following that to which it relates.

Full explanation shall be given in this statement of any discrepancies, real or apparent, and if for any reason the Bikaner State has been deprived of its just share it should be stated for the approval of the Superintending Engineer, how compensation will be given in the following month.

5. If, however, by reason of sufficient rainfall or other cause the officer in charge of either the British or the Bikaner portion should eject, in the case of either canal, to forego for any given number of days the water to which he is entitled, the right to that water shall be entirely lost, and no compensation shall be claimed at a later period on this account. In such cases the percentages for the two canals (or for the particular canal in question) will be calculated only for those days when the full amount of water due to either party was indented for, and a note will be made accordingly in the monthly statement.

6. If owing to a breach in the Bikaner portions of the canals or for other reasons it is desired to suddenly shut off the water passing on to Bikaner, the officer in charge of the British Section will take action as soon as possible but he shall not be required to reduce the supply at the border until he has had time to make the requisite reduction at the head of the canal.

7. The officer in charge of the Bikaner Section will submit for every 10 days, that is, from 1<sup>st</sup> to 10<sup>th</sup>, 11<sup>th</sup> to 20<sup>th</sup>, 21<sup>st</sup> to end of month, an indent showing the gauge required on each canal.

This indent should reach the officer in charge of the British Section at least 3 days before the period to which it relates.

The officer in charge of the British Section will then give these gauges or such less gauges as the Bikaner State may be entitled to. He should not, however, let these gauges be exceeded. The officers in charge of the Bikaner Section may send in an emergent indent whenever necessary, and the officer in charge of the British Section will comply with it as soon as and as far as possible.

8. The Bikaner Darbar agrees to contribute 40 percent of the cost of the preliminary survey and of the head works, and in accordance with the rules at present in force, the charges to the State on account of Establishment, tools and plant and leave and pension allowances will be made at the rate of 27.72 percent on the outlay of works (after excluding land charges) as shown below:

a) Establishment	23.00
b) Tools & Plant	1.50
c) Leave & Pension allowances @ 14% on (a)	<u>3.22</u>
	<u>27.72</u>

9. The Darbar also agrees to contribute 30 percent of the cost of constructing the British portions of the Main channels, i.e. from their heads to the Bikaner border, plus 27.72 percent as before on the works charges, less cost of land, to cover cost of establishment, tools and plant, and leave and pension allowances.

10. It is agreed that for sanitary reasons so much of the old Amritsar bund as obstructs the flow of the river shall be removed, but that the bund known as the new Amritsar bund shall continue to be maintained in compliance with an order of the Chief Court of the Punjab contained in their Judgement dated 8<sup>th</sup> February, 1889 in Civil case No1109 of 1886.

It is further agreed that in future no bunds shall be erected within the Ghaggar valley in British territory for the purpose of obstructing the flow of the Ghaggar River below Dhanpur, but that petty temporary Zamindari bunds such as have always been thrown up to catch the small



supplies may, in special cases, be erected with the previous sanction and under the control of the officers of the Punjab Irrigation Department.

11. The Bikaner Darbar shall contribute annually 40 percent of the cost of maintaining the Head Works and 20 percent of the cost of maintaining the British Sections of the Main Canals, these charges being subject as usual to an addition of 27.72 percent on account of establishment, tools and plant and leave and pension allowances.

12. The Bikaner Sections of the Main Canals will be aligned and constructed by the British Officers, the State paying in addition to the cost of the works of these Sections 27.72 percent on their cost, less land charges on account of Establishment, tools and plant, and leave and pension allowances. As, however, part of the work of the Bikaner Sections is being done as a famine work under the supervision of British Officers, the labour payments being made by the Bikaner State, it is agreed that for the portion of the work done by famine labour the charges to the State for establishment, etc. shall be 27.72 percent of the normal cost of such portion of the work plus the actual expenditure (work charges) incurred on it.

13. The land required for the Canal and works in connection with it shall be made over the Bikaner Government according to its own usage, all payments for compensation being made by the British Government in accordance with the regulations in force in the Bikaner State and the amount being dealt with as a part of the expenditure on the Canal works.

14. The Bikaner State shall supply annually, to meet the cost of construction while the works are in progress such sums as may be estimated by the British Government as approximately equivalent to the share of the outlay of the year which will be ultimately chargeable to the state under the terms of Article No.8, 9 and 12 of this treaty.

15. On completion of the works an account will be drawn by the British Government of the actual expenditure incurred on the different portions of the project and a final statement will be prepared of the exact sum due from the Bikaner State, which will then pay or receive back any difference between its actual payments year by year, and its ultimate share of the cost.

16. Copies of such part of the British accounts of the expenditure on construction will be furnished periodically to the Bikaner State as may be desired by it.

17. The British Government shall have at all times the sole right of determining and controlling the supply to be passed into the Ghaggar Canals. In case of any dispute between the officers in charge of the British and Bikaner Sections as to the supplies to be admitted into the Canals the decision of the Superintending Engineer of the Circle to which the British Section of the canals pertains shall be final.

18. If after the closure of the construction estimate it should at any time be found necessary to undertake further works chargeable under the regulations of the Public Works Code against the Open Capital Account of these Canals, the contributions due from the State for such works will be governed by the rules which regulate the original capital expenditure against the project.

19. The contribution towards the annual charges for maintenance of the British Sections will be as laid down in Article 11 of this treaty and will be paid annually by the Bikaner Darbar in the same manner as stated in Article 14.

The maintenance charges will commence in the year during which water is first admitted into the Canals.

20. The positions, alignments and dimensions of the main village water courses in Bikaner territory shall be determined by the British Officers who will also supervise their construction, and the Bikaner Sections of the Canals shall remain under the sole control of the British Government for a period of four years dating from the commencement of the first irrigation effected from these canals in Bikaner territory.

After the expiry of this period of 4 years the Bikaner State shall receive charge of the Bikaner Sections which will thereafter be worked under the control and administration of the Bikaner State.

21. During the period that the Bikaner Sections shall remain under the control and administration of the British Government, the Bikaner State shall pay all charges incurred in respect of the maintenance and administration of such Sections including a proportionate share of Establishment as in Article 12.

22. The British Government shall arrange for the assessment of Canal rates in Bikaner villages during the period that the Bikaner Sections remain under its control and administration but will forward the assessment papers to the Bikaner State for realization of the amounts assessed.

The rates of assessment during such period shall be equal to the highest rates that may be prescribed for villages irrigating from the British portions of these canals; provided that lower rates shall be charged in any cases in which the Bikaner Darbar may consider the highest rates to be excessive.

23. In case the water supply be too scanty to mature the crops irrigated in Bikaner, no compensation can be claimed by the Bikaner State.

24. The Bikaner State shall (after taking over the Bikaner Sections) furnish the British Government with half-yearly statements giving for each harvest such information regarding the area irrigated by the income derived from and the working expenses of the Bikaner Section as may be required by the British Government.

The Bikaner State will after taking over the irrigation also furnish a monthly report of the initial measurements of irrigation in a form prescribed by the Superintending Engineer.

25. Offences against Canal regulations shall be dealt with as follows:-

If a native British subject commits an offence in the Bikaner territory and is apprehended in that territory, he will be tried by the officers or the Bikaner State, but if he is not apprehended in their territory, the officers of the Bikaner State may report the matter to the British Canal

Officer, and that Officer will then proceed as if the offence had been committed in British territory.

The same procedure will be followed, *mutatis mutandis*, in the case of offence committed in British territory by subjects of the Bikaner State.

26. The Bikaner State shall not alter, enlarge or extend the canals in their territory without the previous approval of the British Government, but the British Government will be willing at any time to consider the wishes of the State in this matter.

27. So long as the original construction of the Bikaner Section and Distributaries shall be in progress, it shall be the duty of the officers in charge to pay due attention to any representations of His Highness the Maharaja of Bikaner or his representatives and to carry out their wishes as far as may be practicable or advisable.

28. In case of any difference of opinion arising between the officers of the Bikaner State and British Canal Officers on any matter relating to the management of the Ghaggar Canals other than of the distribution of supply in which case the Superintending Engineer's decision shall be final it shall be referred to the Lieutenant Governor of the Punjab whose decision shall be final. If any difference of opinion shall arise between the Bikaner State and the Lieutenant Governor of the Punjab as to construction of this Agreement, a reference may be made to the Governor General in Council, whose decision shall be final.

29. It shall at any time be competent for the British Government to resume the entire management of the canal works of irrigation in Bikaner territory, if it shall consider that State has not properly fulfilled the obligations which attach to the duties devolving on it under the arrangement detailed above.

30. These obligations may be summed up as follows:-

1<sup>st</sup> – Complete regularity in the payment of the salaries of all persons employed on the canals, and in the provisions of the funds necessary for carrying out the works which will be needed for their maintenance.

If for any want of proper attention on the part of the Bikaner State, the British Government is at any time forced to advance money for the due performance of works, or payment of salaries, etc., which will properly fall on that State under these arrangements, then the British Government must be understood to have the right to take complete charge of the whole administration of the canals, channel and irrigation connected with the Ghaggar Canals which pertain to the State, and to retain them under its own officers until the evil complained of be corrected and matters be placed on a sound footing. But in such a case out of the income from canals after deducting working expenses, any surplus which may accrue shall be made over to the State.

2<sup>nd</sup> – Ready and friendly compliance on the part of the Bikaner State with those requested of the Punjab Govt. and its superior officer who have charge of the Irrigation Department in the Punjab which shall be declared by them to be essential for the proper maintenance and satisfactory working of the Ghaggar Canals as a whole.

The Governor General in Council will at all times be ready to receive any representation from the Government of the Bikaner State if that Government considers that the spirit of the present proposals is from any cause not fully acted upto by the officers of the Punjab Govt. on whom the immediate duty of carrying them out will devolve.

**TABLE SHOWING PROPOSED PROPORTION OF THE SUPPLY ENTERING THE GHAGGAR CANALS TO BE PASSED INTO BIKANER AND DEETERMINED BY GAUGES AT THE BORDER**

Supply entering the Canals	Bikaner	Supply to be passed into Bikaner	Supply entering the Canals	Bikaner	Supply to be passed into Bikaner
Cusecs	Percentage	Cusecs	Cusecs	Percentage	Cusecs
Below 300	Nil	Nil	640	45	288
300	20	60	660	45	297
320	22	70	680	45	306
340	24	82	700	45	315
360	26	94	720	45	324
380	28	106	740	45	333
400	30	120	760	45	342
420	32	134	780	45	351
440	34	150	800	45	360
460	36	166	820	45	369
480	38	182	840	45	378
500	40	200	860	45	387
520	42	218	880	45	396
540	44	238	900	45	405
550	45	248	920	45	414
560	45	252	940	45	423
580	45	261	960	45	432
600	45	270	980	45	441
620	45	279	1000	45	450



## TRIPARTITE AGREEMENT

### **<sup>2</sup>TERMS OF AGREEMENT SUBJECT TO THE CONFIRMATION OF THE SECRETARY OF STATE IN COUNCIL BETWEEN THE BRITISH GOVERNMENT AND THE GOVERNMENT OF HIS HIGHNESS THE NAWAB OF BAHAWALPUR AND HIS HIGHNESS THE MAHARAJA OF BIKANER REGARDING THE IRRIGATION OF THE TRACTS COMMANDED AND ECONOMICALLY IRRIGABLE FROM THE GHARRA REACH OF THE SUTLEJ RIVER AND FROM THE PANJNAD REACH OF THE CHENAB RIVER**

1. The project to be drawn out under the exclusive control of the British Government on the general basis of taking the waters specified in paragraph 4(A) below, to the areas hereinafter specified.
2. The original designs for the canal works will be drawn out under the sole direction of the British Govt. every possible attention being given to the wishes of the two States concerned as to the precise direction and position of the canals, provided that they are consistent with sound engineering principles.
3. The tracts for the irrigation of which provision is made consist of the following:-

#### British

- a) On the Right Bank – The whole area commanded by this scheme from the site of the uppermost weir down to the Chenab River and lying between the Gharra River and the old bed of the Beas or the limit of existing irrigation of the Bari Doab Canals.
- b) On the Left Bank – The whole Khadir area commanded by this scheme from the site of the uppermost weir down to the Bahawalpur State boundary.

#### Bahawalpur

The whole of the khadit area of this State to the south of the river as far as the Sind boundary and the irrigable area in the high lands and such detached areas of Bahawalpur territory which in Sind for which irrigation can be arranged in consultation with the Sind Authorities.

#### Bikaner

The area commanded by a canal taking off from the uppermost weir and entering the north-west corner of the State from British territory.

4. The water shall be distributed between the parties concerned as laid down in the following clauses:-
  - A. The area irrigated from the Gharra Reach if the Sutlej is to be entitled to claim up to the limit of the canal head capacities herein authorized in cusecs, the supply entering the Gharra Reach

---

<sup>2</sup> The agreement is no longer valid and in use due to extensive territorial changes after 1947 and subsequent signing of Indus Treaty, 1960 with Pakistan.

from the Beas together with any supplies that flow into the Gharra Reach from the Sutlej after the irrigation requirements on the Sutlej above the junction of the Beas have been satisfied.

B. For the Kharif crop from 1<sup>st</sup> April to 15<sup>th</sup> of October the full supply capacity sanctioned in cusecs at canal head for perennial and non-perennial channels will have equal claim to the supply available.

C. The areas to be adopted for the allocation of Rabi water and the corresponding shares in that season between October 15<sup>th</sup> and 1<sup>st</sup> April, will be as below:

From the Gharra:-

British	900,000 acres gross 26.5 per cent
Bahawalpur	1,730,000 acres gross 57.0 per cent
Bikaner	<u>500,000</u> acres gross 16.5 per cent
Total	<u>3,130,000</u>

From the Panjnad

Bahawalpur 270,000 acres gross

The area to be adopted for the capacity of non-perennial channels shall be –

From the Gharra:-

British	2,880,846 acres gross
Bahawalpur	1,272,216 acres gross

From the Panjnad

Bahawalpur 1,594,485\* acres gross

---

D-1. - The authorized full supply capacity in cusecs at canal head for perennial canals will be based on the Kharif area to be irrigated following intensities on the area given above in that crop with a full supply factor of 70 at distributary heads and an allowance of 20 per cent for absorption upto canal head:-

British	...	...	...	22.3 per cent
Bikaner	...	...	...	25 per cent
Bahawalpur from Gharra	...	...	...	25 per cent
Bahawalpur from Panjnad	...	...	...	22.3 per cent

---

\*This area on the Panjnad includes the area across the Ghuddu Dhand which, if excluded later, will correspondingly reduce this figure.

D-2. For the perennial and non-perennial canals for Bahawalpur from Panjnad the mean draw off in each crop shall be maintained at the same fraction of their authorized maximum capacity in cusecs at that of the British Canals from the Gharra.

E. The authorized full supply capacity in cusecs of the non-perennial channels will be based on the Kharif area to be irrigated assuming an intensity of 20 per cent on the area given above with a full supply factor of 60 at distributary heads and an allowance of 20 per cent for absorption upto canal head.

The above is the data for the share capacity that is the capacity on which the channels will share the water equally in the non-perennial period. When, however, the supply of the river is an excess of the requirements of the perennial and non-perennial share capacities, the non-perennial channels may draw-off up to a maximum capacity 50 per cent in excess of the share capacity obtained as above and based on a design of 25 per cent Kharif intensity for channels from the Panjnad with a Full Supply Factor.

F. In the Kharif period between 1<sup>st</sup> April and 15<sup>th</sup> October, the shares of the various parties will be as per statement given below:-

	Perennial Capacity		Non-perennial share capacity		Total		Non-perennial		Total per-cent
	Cusecs	Per-cent	Cusecs	Per-cent	Cusecs	Per-cent	Additional capacity Cusecs	Total Max. capacity Cusecs	
From Gharra									
British	3,440	26.5	11,523	69.4	14,963	50.5	5,761	17,284	69.4
Bikaner	2,144	14.7	-	-	2,144	7.3	-	-	-
Bahawalpur	7,416	58.4	5,088	30.6	12,504	42.2	2,545	7,633	30.6
Total	13,000	-	16,611	-	29,611	-	8,306	24,917	-
From Panjnad									
Bahawalpur	1,032	-	6,378	-	7,410	-	3,189	9,567	

Note:- The average perennial supply available will be allotted entirely to perennial channels from the 15<sup>th</sup> October up to 31<sup>st</sup> March, and the non-perennial channels will be shut down on the 15<sup>th</sup> October.

5. The land required for the canals and works in connection with them shall be made over by the Government of each State traversed according to its own usage, all payments being made, in the case of land required for another party, by the British Government in accordance with the regulations in force in the territory in which the land is required, the amount being dealt with as a part of the expenditure on the work concerned.

6. Compensation will be paid for any building or house injured by the works.

7. The entire cost of the headworks and connected works, inclusive of the cost subsequent to 1<sup>st</sup> January, 1920 of any further surveys and of the preparation of the project, shall be borne by the British Government and the two States concerned in proportion to the equivalent perennial authorized canal capacity allocated to the parties concerned at the respective headworks. For the purpose of evaluating the equivalent authorized capacity one cusec of non-perennial capacity shall be deemed to be equivalent to 75 of a cusec of perennial capacity.

Note:- Surveys do not include rectangulation for distribution purposes.

8. Each party will defray the entire expenditure on the own canals.

9. The States concerned shall supply annually to meet the cost of construction. While the works are in progress a proportion of the estimated annual outlay on the various headworks and river training works according to their share of the total equivalent authorized canal capacity at those works as well as the whole of the funds required for the canals constructed on their behalf.

10. On the completion of the works an account will be drawn out by the British Government of the actual expenditure and a final statement will be prepared of the exact sum due from the several States concerned when each State will pay or receive back any difference between its actual payments year by year and its ultimate share of the cost.

11. The above account of total cost will include the proper charges for surveys, establishment, etc., whether incurred by the British or either of the other Governments concerned, and credit will be given to each State for payments made by it directly.

12. Copies of such parts of the British accounts of the expenditure on construction will be furnished periodically to the Government of the States concerned, so far as may be desired by them, and the States themselves will similarly furnish periodically accounts of any expenditure incurred by them directly.

13. The seigniorage to be paid by the Bikaner State to the British Government on the water supplied will be at a rate not exceeding one-tenth of the average water rate on the British Perennial Canal from the Gharra taken at Rs.6/8/- in the Project of the commencement of irrigation.

14. The sum to be paid for each crop will be calculated on the area obtained by multiplying the mean discharge at the head of the Bikaner Canal during the crop and duties of 83.3 and 175 acres per cusec for Kharif and Rabi, respectively.

15. No seigniorage will be demanded until the eleventh year after the admission of water into the Bikaner Canal and as long as the profits from the British Perennial Canal from the Gharra shall be so small as would render the seigniorage rate of 10 per cent of the average rate per acre unduly high, such seigniorage shall be proportionately reduced at the discretion of the British Government.

16. In case of any falling in the seasonal supply of water available in the river the British Government and the other States will share the actual supply according to the original shares fixed



and the States shall have no claim for compensation from the British Government on account of any such reduction of the supply.

17. The British Government will have full and exclusive control of the distribution of supplies at the canal head and the head gauge registers with discharges observed shall be held to be the authoritative data for calculating the quantity of water supplied.

If for the purpose of accuracy of gauging and avoiding the influence of silt at the actual canal head the regulating gauge is placed at a certain distance down the canal the data obtained shall be taken to fulfill the conditions of the head gauge.

18. No party will have any claim for restitution of water not used by it when available.

19. The several parties shall pay the same share of the annual charges for the maintenance including extensions and improvements of the canal works as they pay of the first cost of the works and provide the funds annually as required.

20. The original construction of the canals with collateral works including distributaries shall be carried out by and under the control of a Chief Engineer appointed by the British Government whose sole charge shall be the construction and working of this project, and separate Superintending Engineers shall be appointed for each State.

21. The maintenance and management of the headworks with their connected works and in the case of Bikaner the main line down to the State border shall vest entirely in the hands of the British Government.

22. The British Government undertake to maintain and to manage the canals and their distributaries on behalf of the State concerned for the first three years after their completion, but each State will distribute the supply from the outlets through its own Revenue Staff. After this period the system shall be handed over to the State, subject to the proviso that this period may be extended at the option of the State concerned.

23. On the initiation of construction, a programme of colonization shall be drawn up between the Chief Engineer and the Colonisation Officer of the State and the construction programme, as far as possible, shall be regulated to meet the requirements of the Colonization Officer.

24. During the period of construction, and the period of management referred to in paragraph 22 the details of Superintendence, powers of local officers and other matters connected with the management shall be settled by the Punjab Government and the Government of the State concerned, subject to the confirmation of the Govt. of India.

25. For purposes of administration the Canal Act, VIII of 1873, suitably modified shall be introduced by each State and officers against the Act shall be made over by the canal officers for trial to the officers of the Government in whose territory the officer was committed.

26. The miscellaneous produce such as wood and grass, etc., on joint headworks will be shared by the parties concerned in proportion to their share in the first cost.

27. The British Government reserves to itself the right of extending or altering the river works at any time in any way it pleases on the understanding that the share of the water first assigned in the parties under this agreement shall not be diminished without their assent being obtained.

28. Until the State canals have been handed over to the respective States for managements it shall be the duty of the officers in charge to pay due attention to any representations of the

Governments of the States concerned or of their officers and to carry out their wishes as far as may be practicable or advisable.

29. Provided that the supplies assured to Bahawalpur under this agreement are not reduced, the British Government, if it desires to do so, may take a canal from above the weir on the Panjnad into Sind.

On the assumption that a capacity of 7,500 cusecs will be required for Sind, a share of the cost of the Panjnad Headworks equal to 3,750/9566 will be borne by the British Government whether the canal is constructed for that tract or not.

If the canal is constructed the entire cost of construction of the canal will be borne by the British Government.

30. In case of any difference of opinion arising between any officers of the States concerned and the British Canal Officers on any matter relating to the management of the canal, it shall ordinarily be settled between the Government of the States and the Chief Engineer and in the event of their differing it shall be referred to the Lieutenant-Governor of the Punjab for decision.

31. If any difference of opinion shall arise between the Government of either of the States concerned and the Lieutenant-Governor of the Punjab as to the construction of this agreement or any matter under it, a reference may be made to the Governor-General in Council whose decision shall be final.

32. If within four months of receipt of debit the States do not provide their share of the funds necessary for carrying out the works for the proper maintenance of the Headworks and connected works and in the case of Bikaner, for the Bikaner Main Line also the British Government shall have the power to stop or restrict supplies, until such time as payment is made.

33. The Governor-General in Council will at all times be ready to receive any representation from the Government of any of the States concerned if such Government considers that the spirit of the present proposals are from any cause not fully acted up to by the officers of the Punjab Government on whom the immediate duty of carrying them out will devolve.

34. If at any time it is found desirable for the more efficient working of the canal system to store water on the Beas it shall be optional for the three parties to share the cost of the storage in proportion to the benefits to be received by them.

Executed at Simla, this 4<sup>th</sup> day of September, 1920.

H.W.M. IVES,

Secretary to Govt., Punjab,  
Public works Department,  
Irrigation Branch.

SADUAL SINGH  
( Bikaner State Public Works Member )

RAHIM BAKHSH

President, Council of Regency,  
Bahawalpur State

K. RUSTOMJI  
( Home Member )

**<sup>3</sup>AGREEMENT BETWEEN THE SECRETARY OF STATE FOR INDIA IN COUNCIL AND LIEUTENANT HIS HIGHNESS RAJA JOGINDER SEN BAHADUR, RAJA OF MANDI**

<sup>4</sup>An AGREEMENT made the third day of March one thousand nine hundred and twenty five between the Secretary of State for India in Council (hereinafter together with his successors and assignees referred to as Government) of the one part and Lieutenant His Highness Raja Joginder Sen Bahadur, Raja of Mandi (hereinafter called the Darbar) of the other part.

WHEREAS Government has under consideration a project for the supply of electric power to the Punjab commonly known as the <sup>5</sup>Uhl River Hydro-Electric Project in Mandi State, a description of which is contained in the report on the said project signed by Lieutenant-Colonel B.C. Battye., R.E., on the tenth day of January one thousand nine hundred and twenty four, and WHEREAS if and when such scheme is put into execution it will be necessary to establish a Headworks, Power House and connected works within the territory of Mandi State and WHEREAS it is intended that the purposes for and the rates at which power shall be sold, disposed of or applied shall from time to time be decided by the management of the project appointed by Government. Now for the mutual benefit of Government and of the Darbar IT IS HEREBY AGREED that if and so soon as Government shall finally decide to put into execution the said Hydro-Electric Project, either as at present projected or with such changes or modifications as may hereafter be sanctioned by Government, but not in any other event, the following provisions shall come into force and be carried into effect that is to say –

1. In consideration of the benefits hereinafter described the Darbar shall give on lease to Government free of charge all land for permanent and temporary occupation which may be required for the purposes of the said project all the water of the Uhl river above the site of the proposed dam shown in the attached map and all earth, lime or other building stone required for the works hereinafter referred to Government will bear the cost of all expenses incurred by the Darbar for the re-establishment in suitable circumstances of any inhabitants who have to be removed from any land or houses for the purposes of the scheme and for compensating any inhabitants not so removed in respect of damage to land or property sustained by reason of the scheme. Further in the case of land, temporarily occupied, Government will bear the cost of restoring such land to its original condition, or alternatively of paying the capitalized value of compensation and in the case of water at present used for irrigation or for driving flour mills, Government will bear the cost of compensation for loss of such water when it occurs, at rates to be agreed upon.
2. Government shall have the free use of water in one or more of the tributaries of the Rana River for purposes of temporary power development during the period of construction of the works herein mentioned and will pay full compensation for any loss caused by the diversion for temporary power development of any water at present used for irrigation or driving flour mills.
3. That Darbar will grant a lease of ninety-nine years of all the land and water rights other than temporary, required for the said project. The Darbar will retain full jurisdiction and sovereign

---

<sup>3</sup> The agreement has been partially superseded and varied by subsequent agreement of 1965 between the Punjab State Electricity Board and the President of India as Govt. of Himachal Pradesh.

<sup>4</sup> The agreement is about sharing of power.

<sup>5</sup> Uhl river is tributary of Beas.

rights over such land and after the expiration of ninety-nine years the lease will be renewable by Government on such terms as may be agreed upon between the parties and any case in which mutual agreement is impossible shall be referred to arbitration as hereinafter provided.

4. Excluding the tunnel, flumes and pipe-lines and haulageway which shall so far as possible nor traverse culturable land. Government will not require for permanent occupation more than forty acres of culturable land at the headworks and not more than thirty acres at the power station near Shanan for the first stage of the project and not more than a further seventy-five acres of culturable land for the second stage of the project.

5. Should a tramway be built in connection with the project, as shown in the said report or otherwise, the ordinary rules regarding the payment of compensation laid down by Government of India in the case of Indian States will govern the case so far as cultivated and culturable land is concerned. As regards unculturable land the Darbar agrees to the principle that no rent should be paid.

6. Should it eventually be decided to increase the water supply by the construction of a dam near the headworks, cultivated land amounting to not more than sixty-five acres will by flooding be thrown out of cultivation. As the flooded area will comprise most of the cultivated land attached to the villages of Dedhangna, Bret, Brot, Thuju, Kaduhan and Ghog, it will be necessary to remove the inhabitants of these villages and provide them with land of similar area and quality, elsewhere. The cost of these operations which will be conducted by the Darbar will be debitable entirely to Government. The Darbar will give its consent to any measures necessary for such increase of water supply upon receiving notice from Government of its intention.

7. In return for the free grant of land, water and miners as set forth above, the Darbar will be granted power for use or sale within the Mandi State free of charge subject to a maximum limit of half of one percent of the peak load capacity of the power station, situated in the Mandi State, according to the development of the project and a minimum of two hundred and fifty kilowatts which will be supplied if required during the year of operation delivered at Mandi town at a pressure of four hundred and forty volts, alternating current.

Should the Darbar at any time require power in excess of the above free allowance of half of one per cent or two hundred and fifty kilowatts whichever is the greater, Government agree to supply the extra power required subject to a maximum limit of one thousand kilowatts exclusive of free supply at cost price as hereafter defined. Cost price shall be assumed to be ninety per cent of the tariff rates for ordinary bulk supply for the time being in force in the Punjab. Should either party consider that ninety per cent of the tariff is either less than or in excess of cost price that party may require a special audit to determine the percentage of such tariff rates which represents actual cost price. The party requiring the audit shall bear the cost thereof in any event but the percentage determined by the audit shall come into force from the date when the audit was demanded.

If and as soon as the maximum demand on the power station in Mandi State (to be ascertained in the same manner) as hereinafter specified for the purpose of royalty, has exceeded thirty-nine thousand kilowatts, the Darbar shall be entitled to an additional free supply of two hundred and fifty kilowatts making a total minimum free supply of five hundred kilowatts.

In addition to the above described free power and power at cost price the Darbar will be entitled to royalty of so many rupees per Kilowatt of maximum demand generated at the power station in Mandi State at any one time for a continuous period of not less than twenty minutes within each calendar year, as measured by an approved maximum demand indicator at any time

during the said calendar year under normal conditions of working such maximum demand readings to be recorded monthly.

The rate in rupees per kilowatt to be paid to the Darbar will be on a sliding scale, increasing with the total amount of power generated, in accordance with the following scale.

#### SCALE OF ROYALTY

When the maximum power generated at the power station at one time for not less than twenty minutes in any one calendar year does not exceed thirty five thousand, nine hundred and ninety-nine kilowatts.	Nothing
When the maximum, power generated at the power station, as defined above, exceeds thirty-five thousand, nine hundred and ninety-nine kilowatts.	One rupee per kilowatt.
When it exceeds thirty-nine thousand kilowatts	Two rupees per kilowatts
When it exceeds forty-two thousand kilowatts	Three rupees per kilowatt
When it exceeds forty-five thousand kilowatts	Three rupees eight annas per kilowatts

In addition to free power and to royalty at the rates described above, the Darbar will be entitled to the use, for irrigation or power purposes free of charge, of al the tailrace water discharged into the Rana river, below the Power Stations, provided that the water is not required for development of the fourth stage of the project which contemplates diverting the tail water into the Beas. The Government will decide within twenty years of the completion of the first stage, whether the fourth stage will be required.

8. The Superintending Engineer, in charge of works under construction in the State-or other officer appointed by the Punjab Government and agreed to by the Darbar shall be invested by the Darbar with the powers of a Third Class Magistrate, under the authority of the Mandi State District Magistrate during the construction of the works. He shall also be empowered to decide civil suits the value of which does not exceed Rupees one thousand. All civil cases in which any person employed on the works is a party and all criminal cases in which any such person is a complainant or an accused person which can legally be instituted in the court of the Superintending Engineer or officer appointed as above mentioned shall be instituted in that court and in no other. Such officer will be given a Muharrir by the Darbar, but the Muharrir's pay and all expenses connected with the appointment of such a Magistrate will be borne by the Government, the Darbar only supplying the usual standard forms.

9. The Darbar will allot an area for the supply of fuel and timber as near the site of the works for which the same may be required as shall be conveniently possible. Government agrees to do all things possible to prevent any fellings or lopping without the authority of the State Forest Department, payment for wood will be made at the ordinary State Forest Department rates.

10. As the small amount of labour available in the State is ordinarily required for the Salt Quarries, Government will have to import labour for their works. In case of emergencies, the

Darbar will, however, do their best to supply any coolies required at current local rates. Government agrees as far as possible not to employ unskilled Sikhs and Pathans.

11. Government agreed to pay due attention to any complaint on the part of the Darbar in regard to the employment or removal of undesirable characters. Should there be any disagreement between the parties on this project, the matter shall be referred to the Agent to the Governor General, Punjab States, whose decision will be final.

12. The Darbar undertake to close shops which in a radius of three miles of the works during the construction of the works and Government undertake to make good to the Darbar any loss that may be occasioned by the closure of such shops. Should Government open liquor shops at the works, the amount realized by the sale of such liquor contracts will be payable to the Darbar.

13. The Darbar will charge no duty of any kind on any article or materials required for the purpose of the said project and the works connected therewith or for the bonafide use of employees at the works.

14. In the event of internal upheaval of a nature to jeopardise the safety of the Hydro-Electric works and operating staff, if in the opinion of the Resident Engineer Incharge of the power the station, the safety of the works and staff are jeopardised, the Punjab Govt. with the concurrence of the agent to the Governor General, Punjab States, shall be at liberty to take such steps, including the importation either of police or troops as it may consider necessary for the safeguarding of the said works and staff.

15. Government shall be at liberty at any time to hand over the working of the Hydro-Electric Scheme to any Body ,statutory or otherwise, brought into existence for the purpose provided that any such arrangement shall not effect the liability of Government or its responsibility to or its relations with the Darbar under this agreement. In such event Government will be responsible for ensuring that the terms of this agreement are fully complied with by the Body responsible for the working of the scheme.

16. In the event of any dispute between the Government and the Darbar with regard to the interpretation of this agreement or in regard to points left open for mutual agreement between the parties or which may arise in any other way in connection with the project, the matter shall be referred to the Agent to the Governor General, Punjab States whose decision will be final provided that the Agent to the Governor General, Punjab States, may with the decision of one or more arbitrators.

IN WITNESS WHEREOF the Parties have hereunto set their respective hands the day and year first above written. Signed at Lahore by Sirdar Dina Nath.

Sd/-

DINA NATH

Bar-at-Law, Chief Secretary to the Mandi Darbar, on behalf of His Highness the Raja of Mandi, and in the presence of.

1. (Sd) A. Cargill,  
Under Secretary,  
Buildings and Roads .
2. (Sd) B.C. Battye,  
Lt. Col., R. E.  
Suptdg. Engineer,  
Hydro Electric Circle.

Signed at Lahore by A.R. Astbury, Esquire, Officiating Secretary to Government, Punjab, Public Works Department, Buildings and Road Branch, for and on behalf of the Secretary for State of India in Council and by order of the Governor of the Punjab.

Sd/-  
A.R. ASTBURY  
3.3.1925

## **<sup>6</sup>AGREEMENT REGARDING SUPPLY OF ENERGY IN MANDI TOWN**

This AGREEMENT made the twenty-sixth day of December, one thousand, nine hundred and thirty five between the Secretary of State for India in Council (hereinafter referred to as Government) of the one part and Captain his Highness Raja Sir Joginder Sen Bahadur, K.C.S.I., Raja of Mandi (hereinafter called the Darbar) of the other part.

WHEREAS the parties described above entered into an agreement on the third day of March, one thousand nine hundred and twenty-five and under Clause 7 of the said agreement the Darbar is entitled to the supply of electrical energy in Mandi Town at a pressure of 440 volts which was subsequently modified to 400 volts by mutual consent of the parties.

AND WHEREAS the Darbar required permission to extend the present Extra High Tension Line erected by the Hydro-Electric Department between Mandi and Jogindernagar to the Palace, Government hereby agree to the installation of this extension to the agreement of 1925, which will continue to govern the parties, the energy, hereinafter referred to being regarded as part of that allowed free under clause 7 of the said agreement, and subject to the following terms and conditions which have been accepted by the Darbar:-

- 1) The Darbar will install at the Palace end of this extension the necessary transformer sub-station of proper capacity to the satisfaction of Government for transforming the electrical energy from that of the extra High Tension supply to 400/230 volts, for use in the Palace.
- 2) The Extra High Tension Line from the Punjab Public Works Department sub-station at Mandi to the Palace shall be built and maintained at the expense of the Darbar. Should Government at any time consider it necessary to increase the voltage of the main line from Jogindernagar to Mandi from 2000 to 33000 vlts, the Darbar shall be responsible for carrying out, to the satisfaction of Government, such modifications in the line from the Punjab Public Works Department sub-station at Mandi to the Palace and in the transformer and switch gear installed at the place sub-station, as may be necessary to render them suitable for operation at the increased voltage.
- 3) To avoid the expense of metering this supply at the Punjab Public Works Department sub station at Mandi, this supply shall be metered on the low tension side of the Darbar's transformer in the Palace substation, the meter being installed by Government at the expense of the Darbar, but such readings shall be subject to an addition of 10 percent to cover the losses in the line and the transformation losses in the Palace sub-station and the Darbar shall accept the reading of energy recorded by this meter plus 10 percent as the measure of the energy consumed.
- 4) This extension of the Extra High Tension Transmission line between the Punjab Public Works Department Sub-Station at Mandi and the Palace Sub-station shall continue to be maintained at the expense of the Darbar in a proper State to the satisfaction of Government.
- 5) The extra High Tension line specified above together with transformer, switchgear, etc., is and shall remain the property of the Darbar and the Darbar shall have all rights and power over them subject to the terms of the agreement.

---

<sup>6</sup> The agreement has been partially superseded and varied by subsequent agreement of 1965. The agreement is about sharing of power.



6) In the event of a breach of terms of this agreement, the Government will be entitled to stop the supply of energy on this Extra High Tension extension to the Palce sub-station.

IN WITNESS WHEREOF the parties have hereunto set their respective hands the day and the year first above written.

D.K. SEN

Signed at Lahore by the Chief Minister, Mandi State, on behalf of Captain His Highness Raja Sir Joginder Sen Bahadur, K.C.S.I., Raja of Mandi, and in the presence of

witness                      G.V.B. Gillan  
Secretary to the Hon'ble the Agent to the  
Governor General, Punjab States

F.H. PUNKLE

Signed at Lahore by the Chief Secretary to Government, Punjab for and on behalf of the Secretary of State for India in council and by order of the Punjab Government (Ministry of Local Self-Government) in the presence of

Witness                      Chuni Lal  
Personal Assistant to the Chief Secretary  
to Government, Punjab.

**<sup>7</sup>AGREEMENT BETWEEN EAST PUNJAB GOVERNMENT AND THE GOVERNMENT OF PATIALA AND EAST PUNJAB STATES UNION REGARDING SIRHIND CANAL AND DISTRIBUTION OF SUPPLIES**

**PREAMBLE**

A. Whereas all the obligations of His Majesty, existing towards Indian States or the rulers thereof, and all powers, rights, authority or jurisdiction exercisable by His Majesty, in or in relation to the Indian States by treaty, grant usage, sufferance or otherwise, lapsed under Section 7(b) of the Indian Independence Act of 1947; and whereas the existing agreements and administrative arrangements in matters of common concern should continue for the time being between the Dominion of India or any part thereof, and the Indian States; and whereas the <sup>8</sup>Patiala and East Punjab States Union Government have asked for the abolition of the Canal Agent's Office at Patiala (transferring the control and administration of the Sirhind canal Office at Patiala from the canal Agent to the Patiala and East Punjab States Union Government), the "Terms of Agreement" between the British Government and the States Patiala, Jind, and Nabha regarding the Sirhind Canal executed in 1873 are hereby modified under clause 28 of the "Convention and Working Agreement" drawn under clause 27 of the said "Terms of Agreement".

B. The East Punjab Government will hereafter be named as East Punjab and the Government of Patiala and East Punjab States Union will be named as Patiala Union in the modified agreement for the sake of abbreviation. Similarly the combined Branch and the Patiala Feeder, taking off from Manpur will be hereafter referred to as East Punjab Branch and Patiala Feeder, and the Kotla Branch belonging to the Patiala Union for Dabwali system for the irrigation of East Punjab share.

2. Water shall be supplied from the East Punjab Branch channels as well as from Patiala Feeder channels to all the villages, which lie along their courses and are already receiving irrigation under the terms of Agreement of 1873 and the working agreement of 1903. The supplies to these villages will not be cut off except with the concurrence of the Government to which the village belongs.

3. The Patiala Union shall pay to the East Punjab Government an annual sum as seigniorage on the Sutlej water supplies to the Patiala Feeder.

4. The seigniorage to be paid by the Patiala Union in consideration of the water supplied to them by East Punjab Government will be at a rate not exceeding four annas per acre.

5. The charges for seigniorage leviable from the Patiala Union will be calculated in accordance with the sliding scale as given below.

---

<sup>7</sup> The Agreement is no longer in use due to territorial changes after 1956 and is superseded by "Agreement on construction of Bhakra Nangal project between Punjab and Rajasthan in January, 1959".

<sup>8</sup> Patiala and East Punjab States Union is also known as PEPSU.

Net Return East Punjab Branches	Rate of Seigniorage Per Acre
Not exceeding 6 percent	Nil
Over 6, but not exceeding 7%	1 anna
Over 7, but not exceeding 8%	2 annas
Over 8, but less than 9%	3 annas
9 percent or over	4 annas

- A. Gross area irrigated on East Punjab Branches, less
- i) half area on Dabwali Distributary.
  - ii) area of Dohara Kasht
  - iii) Wadh area
  - iv) Dofasli area (are irrigated in both crops in the year)
- B. Average supply passed into East Punjab Branches
- N. Average supply passed into feeder.
- E. Average supply passed into Dabwali Distributary
- S. Area on which seigniorage charges are to be calculated.

$$\text{Then } S = A \times \frac{N - E}{B}$$

### **Method of Arriving at the Amount of Seigniorage**

The value of “S” will be worked out for each crop, Kharif and Rabi separately. After this, the value of “S” for both crops will be added together and the rate as per sliding scale applied.

6. In cases of any falling off in the annual supply of water entering in the Main Canal the actual supply will be shared by the two partners according to the proportion fixed in clause 1, and the Patiala Union shall have no claim for compensation from the East Punjab Government on account of any such reduction of the supply.

7. The Gauge registers at the regulating heads of the east Punjab Branch; the Abohar and Bhatinda Branches etc. taking off two miles below the head of the East Punjab Branch the head of the Main Canal and the Head of Patiala Feeder shall be held to Punjab to give authoritative data for calculating the quantity of water supplied.

The water account for the Patiala Feeder and the East Punjab Branch will be based on the gauges at mile 3 of Patiala on the one hand, and mile 5 of Abohar Branch and mile 7 of the Bhatinda Branch on the other hand.

The gauges at three sites will be read and recorded by the officials of East Punjab Government who shall be solely responsible for regulation.

Officers and the staff of both the Governments will be at liberty to inspect and check the gauges in any territory, whenever they so desire, and every facility will be given by both the Governments for such purposes.

The records of gauges and discharges kept by the two Governments may also be made available when required by one Government to the officers of the other Government.

8. The Patiala Union will not have any claim against the East Punjab Government on account of water escaping unused from East Punjab Branch, because it is not required or used in its territory.

9. The Union will pay 36% of the maintenance cost, as well as of the cost of special works carried out on the Main Line of Sirhind Canal including the Manpur Regulator, and the Patiala Feeder upto 2000 ft. Copies of the account of expenditure of the East Punjab Government will be furnished periodically to the Patiala Union whenever desired by the latter.

10. The management of the Main Canal and their connected work and of Patiala Feeder upto 3000 feet shall rest entirely in the hands of East Punjab.

11. The management of Patiala Feeder from R.D. 3000 below the off take and all its branches and their connected works shall rest entirely in the hands of the Patiala Union, which will bear all charges regarding their maintenance and special works.

12. Offenders against canal regulation in villages irrigation from the Feeder for East Punjab, or bordering on Patiala Feeder, and its Branches shall be made over by the Canal officers, for infliction of penalties to the officers of the government in whose territory those villages are situated. A right of reference to the East Punjab Government being allowed in case of dispute or difference of opinion.

13. Each Government shall be bound to give a right of passage through its lands for any water channel, large or small when required by the other Government, the only compensation claimable from the Government to which such water course belongs, being the value of the land, occupied and the property thereon. The supervision of Rajbahas and other minor channels thus made shall remain with the Government to which they belong, as in the case of other similar works with in its own territories.

14. In case of dispute between East Punjab and Patiala Union as to the amount of compensation to be paid on account of land taken up, or any other matter under this agreement, the amount of compensation or dispute shall be determined by an officer appointed by Government of India.

15. The tolls levied on boats, rafts, etc. navigating the canal shall be the same on all the channels, whether those channels belong to the East Punjab Government or Patiala Union.

16. No transit duties on good passing along the canal shall be levied by any of the Government concerned. This will not prevent the levy of customary duties on good or merchandize landed from boats etc. plying on the canals for consumption in towns, etc.

17. The amount of toll levied on through traffic shall be shared between the East Punjab Government and the Patiala Union, in proportion to the distance traversed on the channels belonging respectively to each.
18. A share of the navigation tolls on the Main Canal shall be allotted to the Patiala Union in proportion to the share of the entire water supply i.e. 36%.
19. In all other cases the tolls shall belong to the Government in exclusive possession of the channels concerned.
20. The navigation tolls to be credited to the Patiala Union thus consist of two portions:-
- 1<sup>st</sup> : Share of tolls on the main canal.
  - 2<sup>nd</sup> : Share of “through” traffic tolls between the East Punjab Branch and Patiala Feeder.
21. A share of the value of miscellaneous produce such as wood, grass, etc., on the Main Canal, shall be credited to the Patiala Union in proportion to the share of the water supply allotted to its i.e. 36%.
22. The East Punjab Government reserves to itself the right of extending or altering the Canal at any future time in any way it pleases, on the understanding that the share of the water first assigned to the Patiala Feeder and other rights of the Patiala Union concerned under this Agreement shall not be interfered with or diminished without their consent being first obtained. And the expenses of such extension or alteration will be distributed in proportion to the advantages expected to accrue from such action to and of the parties concerned under this Agreement.
23. In consideration of the advantages given by the canal from the Sutlej, the Union will allow the East Punjab, if it desires to do so, to take small water-course from the Ghaggar for water supply to the Cantonment and Town of Ambala the water course to carry a discharge of about 20 cusecs. A portion of the charge for seigniorage on the Sutlej water shall be remitted to compensate for the grant of Ghaggar water if this water course be made; no other claim to lie against the East Punjab in connection with the construction of the water course.
24. In case of any differences of opinion arising between the canal officers and the East Punjab and Patiala Union on any matter relating to the management of the Canal it shall be referred to the Governor of the East Punjab whose decision shall be final. If any difference of opinion shall arise between the Patiala Union and the Governor of East Punjab as to the construction or meaning of this Agreement or of any matter arising out of this agreement, a reference may be made to the Government of India for appointment of a “Commission of Enquiry” whose decision shall be final.
25. It shall be at any time competent for the East Punjab to resume the entire management of the Canal works or irrigation in the territories of the Union if it shall consider that the Union has not properly fulfilled the obligation which attach to the discharge of duties which will devolve on it under the arrangements detailed above.

26. The obligations may be summed up as follows:-

- 1<sup>st</sup>: Complete regularity in the payment of the salaries of all persons employed on the Canals and in the provision of the funds necessary for carrying out the works; which will be needed for the proper maintenance of the canal. If, for any want of proper attention on the part of the "Union" the East Punjab is at any time forced to advance money for the due performance of works, or payment of salaries etc., which will properly fall on the "Union" under these arrangements then the East Punjab must be understood to have the right to take complete charge of the whole administration of the canals, channels, and irrigation pertaining to the "Union" and to retain them under its own officers until the evil complained of be corrected and matters be placed on a sound footing. But in such case, out of the income from the canal after deducting expenses, any surplus which may accrue shall be made over to the "Union."
- 2<sup>nd</sup>: Complete impartiality in the distribution of the water among the villages along the canal so that the East Punjab villages and those of the "Union" shall, if required, share the water equally also an equal administration of justice to all persons over whom the officers of the "Union" may exercise jurisdiction, so that the subjects of the East Punjab or of the "Union" shall be dealt with according to the same principles or law as are exercised by the officers of the East Punjab.
- 3<sup>rd</sup>: Ready and friendly compliance on the part of the Government of the "Union" with those requests of the East Punjab and its superior officers who have chief charge of the Irrigation Department in East Punjab which shall be declared by them to be essential for the proper maintenance and satisfactory working of the canals as a whole.

The Governor of East Punjab will at all times be ready to receive any representation from the Government of the Union, if that Government considers that the spirit of the present proposals are from any cause not fully acted upon by the officers of the East Punjab on whom the immediate duty of carrying out devolves.

### **WORKING AGREEMENT**

27. The officers of the East Punjab will have the power to enter on land in the Patiala Union outside the limits or boundaries of the Sirhind canal and its branch channels in case of any accident happening or being apprehended to any of canal or its connected work, and to execute all works which may in their opinion be necessary for the purpose of repairing or preventing such accidents. Compensation will in every such case be tendered to the proprietors or occupiers of the said lands for all damages done to the same; and if such tender be not accepted, the matter will be referred to the Union in order that compensation may be awarded in accordance with the regulations in force in the Patiala Union.

28. The officers of the Patiala Union will in like manner have power to enter on lands in the East Punjab outside the limits or boundaries of Patiala Feeder in case of any accident happening or being apprehended to the Patiala Feeder or its distributaries, and to execute all works which may be

necessary for repair or prevention of such accidents. Compensation will in every case be tendered to the proprietors or occupiers of the said lands for all damages done to same; and if such tender be not accepted the matter shall be referred to the East Punjab for award of compensation in accordance with regulation in East Punjab.

29. In order to ensure the distribution of the available supply in proportion to the share of the Patiala Union and to guard against breaches in the lower portions of the branches which would result from the sudden closure of any of the Branches, the Patiala Feeder will rest with the officers of the East Punjab, provided that:-

- a) The supply in the Patiala Feeder shall never exceed a certain maximum gauge which will be determined from time to time by the Executive Engineer, Ludhiana Division, in consultation with the Executive Engineer Incharge of the Patiala Feeder.
- b) During periods of insufficient supply in the main canal, distribution between East Punjab and Patiala Feeder shall be done according to the Rotational Programme framed from time to time.
- c) In the event of a breach in the Patiala Feeder or of a sudden cessation in the demand, the supply entering its head shall not be shut off to such an extent as may cause the regulating gauges of Bhatinda and Abohar Branches at mile 7 and 5 respectively to rise above the limits which may be from time to time prescribed by the Executive Engineer, Ludhiana Division. Should a further reduction of the supply be required it will be given only after the effect of reduction from the head of Sirhind Canal reaches Manpur.

30. The requirements of the Patiala Union will be communicated to the Executive Engineer, Ludhiana Division, at suitable intervals in the form of a requisition or indent, stating the depth of water and corresponding supply required at the head of Patiala Feeder. If sufficient water be available the Executive Engineer will pass into each Branch the full supply indented. If insufficient he will either reduce the supplied (or depth) asked for in each branch, or in rotation so as to run the others with the fully supply indented for, or as near to the indent as may be practicable. The method to be adopted in the distribution of the supplies between the Branches will depend on the exigencies of the Irrigation and according to the Rotational Programme framed from time to time.

The indent for Dabwali Distry System will be placed by Executive Engineer, Abohar Division of Sirhind Canal on the Executive Engineer of Patiala Union incharge of Kotla Branch, with a copy to the Executive Engineer, Ludhiana Division, and the former (Executive Engineer incharge of Kotla Branch) will include the same in his indent of Kotla Branch. Similarly the indent at mile 3 of Feeder will be placed by Executive Engineer or by a Sub-Divisional Officer of Patiala Union on Sub-Divisional Officer, Head-works Sub-Division at Rupar with a copy to Executive Engineer, Ludhiana Division.

31. The distribution of the supply for each indent period must be settled on its own basis, and the fact of a party having indented for less than its full share in previous period will not entitle it more than its due share in a given period. Similarly, if a party does not take its full or sanctioned

share in any day or a period, it will not on this account be entitled to more than its share on any other day during the same period.

NOTE:- This article relates only to cases in which a party has not taken on a particular day or for a particular period the full gauge allowed by the Executive Engineer. It will not effect the rotational programme framed by the Executive Engineer, Ludhiana Division.

32. The Executive Engineer, Ludhiana Division, will as soon as possible, after the receipt of the indent, inform the Indenting Officer of Patiala Union about any modifications or reductions.

33. These gauges registers will be carefully maintained in bound books by the Executive Engineer, Ludhiana Division, and will show for each day:-

- a) The gauge indented for and that allowed by the Executive Engineer, Ludhiana Division, when the indent has been modified.
- b) The actual gauge readings in the Branch.
- c) The volume discharges.
- d) The reasons for the allowed indents not being complied with in full.

At the close of each month the daily discharges will be totalled.

34. A copy of the monthly abstract will be sent by the Executive Engineer, Ludhiana Division, to the Superintending Engineer of the Circle as soon as possible after the close of each month, and it will be the duty of the Superintending Engineer to scrutinize these returns carefully, and to satisfy himself that the principle of proportionate distribution is attended to by the Executive Engineer. The Executive Engineer will also send a copy to the "Union" if requested to do so.

35. Complaints on the part of the "Union" regarding distribution of water will be addressed to the Superintending Engineer of the Circle and sent through the Executive Engineer, Ludhiana Division who, while forwarding the complaints, will attach his explanation to it. The Superintending Engineer will communicate his decision on the subject to the "Union" and an appeal will lie to the Governor of the East Punjab under clause 27 of this Agreement.

36. The "Union" will be bound to make arrangements for the supply of labour for urgent works, delay in the execution of which would endanger the safety or efficiency of Sirhind Canal and its branches. The names of the villages which are to supply labour, the number of labourers to be supplied by each village, the names of the responsible persons who shall be addressed when labour is required to be collected, the rate of wages, and other details will be settled by the "Union" in communication with the Superintending Engineer of the Circle and the arrangements will be such as will ensure the labour being promptly supplied on the requisition of the Executive Engineer, Ludhiana Division, or of the Sub-Divisional Officers.



37. East Punjab villages commanded by the distributaries of Patiala Union will be entitled to a share of the supply sufficient for the irrigation of the same percentage of the area commanded, as may be allowed in other villages on the same distributaries, subject to the following conditions:-

- a) The regular payment of all charges for water supplied whether for irrigation or other purposes, subject to the conditions of Article No.40.
- b) The due observance of such rules and regulations for the distribution of the supply, maintenance of water courses etc. as may be made by the Union and are in accordance with the Canal Act of 1873 and rules passed under it.
- c) Abstention from willful or malicious damage to the State Distributary or its connected works, or from interference with the officers or servants of the Union in the discharge of their legitimate duties.
- d) The supply of a fair and reasonable number of labourers on payment in the event of a breach of the banks of the Distributary or other accident within the boundaries of the villages concerned.

In the event of these conditions not being fully complied with, the Union may make a representation on the subject to the Deputy Commissioner of the District in which the village lies who will pass such orders as may be appropriate after due investigation. Cases of offences under Section 70 of the canal Act will be tried by a Magistrate deputed by the Deputy Commissioner of the village concerned.

In the event of a general or persistent disregard of the above conditions the Union may, after communication with Deputy Commissioner concerned, reduce or withdraw the supply assigned to the village in question provided that the supply shall not be reduced or withdrawn during the currency of a crop, and that no outlet shall be closed or removed for a longer period than one year or two harvest without the concurrence of the East Punjab Government.

38. The Deputy Commissioner of the village concerned will be the medium for all communications on matters relating to the Canal, between the Patiala Union and the East Punjab villages irrigated from the Patiala Branches. The Union will address him when they find reason to complain regarding the action of the villages and he will take such action as may appear necessary in each case, keeping the Union informed of the final orders passed by him. Similarly complaints on the part of villages will be addressed to him, and he will, after due investigation, send on to the Union cases which appear to require action on the part of the Union, the final orders passed by the "Union" in each case will be communicated to him.

39. The charges for water supplied to East Punjab villages from the Patiala Feeder or its Branches whether for irrigation or for other purposes, are not to exceed the charges which are leviable under the schedule of rates in force on the East Punjab Branches for water supplied from those Branches to villages of the East Punjab, and the Patiala and East Punjab States Union. The Superintending Engineer of Sirhind Canal will supply Patiala Union with a schedule of the rates in force on the East Punjab Branches for irrigation from Canals and Escapages, and also for supply of

water for other purposes, and will communicate any alteration in the said schedule that may from time to time be sanctioned by the East Punjab Government.

40. The Deputy Commissioner of the village concerned will be sole Agent through whom the sums from East Punjab villages irrigated from the Patiala Feeder are to be recovered, and the Union will refrain from collecting the money direct from the inhabitants of East Punjab villages except as provided in Article 42 of this convention.

41. The procedure for the recovery of water-rates on account of irrigation in East Punjab villages from the Patiala Feeder will be as follows:-

- a) If the measurements of the land irrigated are made by the officials of the Patiala Union, it will be the duty of these officials to inform the Deputy Commissioners of the villages concerned of the dates on which the measurement will be made. The latter will issue orders to the Lambardars and Patwaris to attend the measuring parties. On completion of the measurements the officers of the Patiala Union will hand over the 'Parchas' to the Lambardars for distribution to the villagers and make out the Demand Statements, which will be forwarded to the Deputy Commissioners of the districts concerned who will then collect the revenue on assessed.
- b) The villagers may lodge any complaint within the prescribed period either with Patiala Union officials or with the Deputy Commissioner. The latter officer will forward any objections so received to the Union for due inquiry. If remission be granted, the Patiala Union officials will forward the usual remission statements, to the Deputy Commissioner, who will take the necessary action. The amount due as fees to Lambardars, which shall equal 3 per cent on the amount to be collected, will be shown in the "Khataunis" which will be forwarded to the Deputy Commissioner.

The Deputy Commissioner, will, after making the necessary deductions on this account, remit the balance of the demand to the Patiala Union.

No retrenchment will be made by the Patiala Union from the amount due as fees to Lambardars, on accounts of non-fulfilment of the conditions laid down in Rules 37, passed under the Canal Act VIII of 1873, but the Patiala Union will duly report to the Deputy Commissioner cases in which those conditions have not been complied with to its satisfaction, and the latter will take action as he may consider necessary of which the Patiala Union concerned will be duly informed.

- c) The East Punjab Government may if requested to do so by the Patiala Union, undertake to record and measure the irrigation in the East Punjab villages from the Patiala Feeder and its Branches etc. subject to such conditions as regards payments by the Patiala Union of the cost of the Establishment required and other matters as may be approved by the East Punjab Government.
- d) The East Punjab Government reserve to itself the right of deputing Patwaris to attend the Patiala Union measurements in East Punjab villages, irrigated from the Patiala Feeder and its Branches etc. who will take a copy of the Patiala Union Khasra or measurement

paper; will make out the Demand Statements and prepare and distribute the “Parchas”. In this case the procedure prescribed in clauses (a) and (b) will be so modified, that the Patiala Union officials will not make out the “Parchass” or the Demand Statements, but will merely forward to the Deputy Commissioner an abstract of the demand, or “Jamabandi” for each village, while in addition to the deductions for Lambardars fees of three percent on the amount to be collected, further deduction of two per cent will be made for the remuneration of the Patwaris employed.

42. Demand statements for the recovery of charges other than water-rates from the East Punjab villages irrigated from the Patiala Feeder, will be sent by the Patiala Union to the Deputy Commissioner of the village concerned provided that in case in which the villagers do not dispute the claims they shall be permitted to pay such demands direct to the officials of the Patiala Union concerned. All amounts collected by the Deputy Commissioner on account of charges other than water rates shall be remitted to the Patiala Union in the same way as provided in the case of water rates.

43. The Patiala Union will, after the close of each year ending 31<sup>st</sup> March, forward to the Superintending Engineer, Sirhind Canal for inclusion in the annual revenue report of that canal, statistical return showing the working of the distributaries of the Patiala Feeder, during the past year in the Patiala Union.

The returns will be in such forms, will contain such information, and will be forwarded on such dates as may from time to time be prescribed by the East Punjab Government. In like manner the East Punjab Government will forward to the Patiala Union similar returns and annual reports relating to the East Punjab Branches and distributaries.

44. The foregoing stipulations will remain in force until modified or added to with the consent of the East Punjab Government and the Patiala Union. It will be open to the East Punjab Government and to the Patiala Union to propose such modifications and additions as may from time to time be found desirable, provided that they shall be binding only if both parties agree.

Chief Secretary to Govt. Patiala & East Punjab  
States Union

Chief Secretary to Govt.  
East Punjab

For Rajpramukh, Patiala & East Punjab States  
Union

For Governor of East Punjab

Witnesses:

1) Chief Engineer & Secretary to Govt. Patiala and  
East Punjab States Union, Irrigation Branch

1) Chief Engineer & Secretary to  
Govt., East Punjab, PWD,  
Irrigation Branch.

2) Under Secretary to Govt. Patiala & East Punjab  
States Union

2) Under Secretary to Govt.,  
East Punjab, PWD,  
Irrigation Branch.

# **AGREEMENT FOR CONSTITUTION OF THE BHAKRA CONTROL BOARD AND BHAKRA ADVISORY BOARD**

## **GOVERNMENT OF INDIA MINISTRY OF WORKS, MINES AND POWER RESOLUTION**

New Delhi, the 25<sup>th</sup> September, 1950

<sup>9</sup>No.DW-II-22(3) At a conference held on the 25<sup>th</sup> September, 1950, in New Delhi at which the representatives of the Central Government and the State Governments of Punjab (I), PEPSU, Rajasthan and Bilaspur were present, it was decided to set up a Bhakra Control Board and a Bhakra Advisory Board to ensure efficient, economical and early execution of the Bhakra Nangal Project including all connected works in Punjab (I), <sup>10</sup>PEPSU, Rajasthan and Bilaspur. The terms of agreement arrived at between the various Governments concerned are set out below:-

### **CONSTITUTION OF THE BHAKRA CONTROL BOARD AND BHAKRA ADVISORY BOARD**

With a view to ensure efficient, economical and early execution of the Bhakra-Nangal Project, including all connected works in Punjab (I), PEPSU and Rajasthan, the Central Government and the State Governments of Punjab (I), PEPSU and Rajasthan agree to set up a Bhakra Control Board and a Bhakra Advisory Board as described below. They also agree that the Control Board should take over all charge of all technical and financial aspects relating to the construction of the Project; the actual work of construction being carried out, under the direction of the Control Board, by the Chief Engineer concerned of the State in which the work lies, except that in respect of the construction of the Bhakra Dam and appurtenant works which lie partly in Punjab and partly in Bilaspur, the work will be done by the Chief Engineer, Punjab.

2. The three State Governments further agree to delegate powers to their respective Chief Engineers to contract for works, supplies and services at the direction of the Control Board; such contracts to be executed as on behalf of the State Governments concerned.

3. The Bhakra Control Board will consist of the following:-

- |     |   |               |
|-----|---|---------------|
| i)  | Shri Chandu Lal Trivedi   | Chairman      |
| ii) | Consulting Engineer to the Govt. of India for Waterpower,<br>Irrigation and Navigation (Shri A.N. Khosla) | Vice-Chairman |

---

<sup>9</sup> This Resolution was later annexed to "Agreement on construction of Bhakra Nangal project between Punjab and Rajasthan in January, 1959" and is superseded by Punjab Reorganisation Act, 1966.

<sup>10</sup> PEPSU refers to Patiala and East Punjab States Union consisting of Patiala, Nabha, Jind and other small princely state of Punjab region.

- iii) Joint Secretary to the Ministry of Finance, Govt. of India  
(Shri S. Ratnam)
- iv) Chief Engineer and Secretary, Bhakra Dam.
- v) Secretary, Finance, Punjab (Shri K.S. Malhotra)
- vi) Chief Engineer, PWD, PEPSU
- vii) Chief Engineer, PWD, Rajasthan

The Board will be assisted by a whole time Secretary (an Officer preferably of the rank of Superintending Engineer) and a Deputy Secretary an officer of the rank of Deputy Secretary or Under Secretary, Finance Department) and such other staff as may be necessary, with headquarters at Delhi till otherwise decided by the Board.

The Chief Engineer concerned with any part of the project will be invited to attend as Advisor when matters relating to his part of the Project are under consideration of the Control Board.

4. In particular and without prejudice to the generality of the provision in paragraph 1 above, the Bhakra Control Board shall:

- i) Scrutinize the estimate of the project prepared by Punjab, advise necessary modifications and recommend the estimate for administrative approval of the Government concerned;
- ii) Examine and approve from time to time the delegation of such powers both technical and financial, as it may deem necessary for the efficient execution of the project to the Chief Engineer, Superintending Engineer and Sub-Division Officers engaged in the execution of the project;
- iii) Examine and where necessary, lay down specifications and schedule of rates for various classes of work with a view to secure sound and efficient execution of the project.
- iv) Approve all tenders and contracts the cost of which exceeds the powers of sanction of the Chief Engineers.
- v) Approve all proposals for award of work or supplies, on contract other than those based on public tenders and on detailed quantitative estimates and works allotted on work order basis on schedule rates;

NOTE: - (1) Where total financial liability under a contract is definitely ascertainable at the time of placing the contract and where the contract itself is result of a public or limited call for tenders, prior submission of the proposals to the Control Board will not be necessary so long as the contract is otherwise within the powers of sanction of Chief Engineers.

NOTE:-(2) This will not effect the powers delegated from time to time to the Chief Engineers, Superintending Engineers, Executive Engineers and Subbivisional Officers.

- vi) Frame rules as to delegation of powers and procedure for the purpose of carrying out its business;
- vii) Decide after ascertaining the views of Bhakra Advisory Board the programme of construction of different parts of the project in all the three States, keeping in view the funds available, the economics of the project and the desirability of obtaining quick results;
- viii) Decide after ascertaining the views of the Bhakra Advisory Board on the stage development of Waterpower and the withdrawals of water from the reservoir during the construction period for irrigation and power purposes with a view to securing best use of water available.
- ix) Receive monthly progress reports both as to works and expenditure in a prescribed form from the Chief Engineers, review the progress of different units of the project and lay down steps to be taken to expedite the work.

5. The Bhakra Control Board will be assisted by an Advisory Board which will have the following constitution and functions:

### **CONSTITUTION**

- i) Consulting Engineer to the Government of India for Water-Power, Irrigation & Navigation-Chairman.
- ii) Representative of the Ministry of Finance, Government of India.
- iii) Member, Hydro-Electric, C.W.I.N.C.
- iv) Secretary, Finance, Punjab.
- v) Chief Engineer, Bhakra Dam & Secretary to Govt: , Punjab
- vi) Chief Engineer Bhakra Canals & Secretary to Govt., Punjab
- vii) Chief Engineer, Electricity & Secretary to Govt. of Punjab
- viii) Finance Secretary, PEPSU
- ix) Chief Engineer & Secretary to Govt. PWD, PEPSU
- x) Finance Secretary, Rajasthan
- xi) Chief Engineer, Irrigation, Rajasthan

xii) Chief Commissioner, Bilaspur.

The Secretary and Deputy Secretary of the Bhakra Control Board will also act as Secretary and Deputy Secretary respectively of the Bhakra Advisory Board.

## **FUNCTIONS**

The functions of the Board will be to advise the Central and State Governments concerned and the Bhakra Control Board on all aspects of Bhakra Nangal project and will include the following~

- i) to arrange discussions for facilitating mutual appreciation of the respective viewpoints on the participating Governments in regard to overall plan, the programme and the place of construction;'
- ii) to examine the programme and progress on the project from time to time in the three participating states;
- iii) to resolve differences arising at technical level on the suitability, adequacy of feasibility of any important part of the project, only such differences will be taken up as are admitted by the Consulting Engineer to the Govt. of India for Water Power, Irrigation & Navigation;
- iv') to advise, at the request of the State Governments concerned, on the internal distribution of the allocated supplies of water from Bhakra to different areas with a view to the optimum utilisation of such supplies.

6. The meetings of the Advisory Board shall ordinarily be held once every three months, and those of the Control Board monthly or as necessary.

ORDER: Ordered that this Resolution be communicated to the State Governments of Punjab (I), PEPSU, Rajasthan and Bilaspur, the several Ministries of the Government of India, the Comptroller and Auditor General of India, Prime Minister's Secretariat, Secretary to the President and Planning Commission.

Ordered also that the Resolution be published in the Gazette of India and that the 'State Governments concerned be requested to publish it in the State Gazettes, for general information.

Sd/-  
B.K. GOKHALE  
Secretary to the Govt.  
of India;.

**RECORD OF THE DECISIONS ARRIVED AT THE INTER-STATE CONFERENCE ON THE DEVELOPMENT AND UTILISATION OF THE WATERS OF THE RIVERS RAVI AND BEAS HELD IN ROOM NO. 12 NORTH BLOCK, NEW DELHI ON THE 29<sup>TH</sup> JANUARY, 1955.**

After a brief discussion of the demands for the waters as given by the various States, the following decisions were taken:

1. <sup>11</sup>The supplies both flow and storage in the rivers Ravi and Beas over and above the <sup>12</sup>actual prepartition utilizations based on mean supplies in the rivers shall be allocated as under:

Share of <sup>13</sup> Punjab	5.90 M.A.F.
Share of Kashmir	0.65 “
Share of Rajasthan	8.00 “
Share of <sup>14</sup> PEPSU	1.30 “

Total	<u>15.85 “</u>
-------	----------------

In case of any variation in total supplies the shares shall be changed pro-rata on the above allocations subject to the condition that no change shall be made in the allocation for Kashmir State which shall remain as 0.65 MAF.

2. The distribution of flow supplies shall be in the same ratio as the allocations mentioned above.

3. The splitting up of the allocated supplies between Kharif and Rabi may be left to engineers. The matter may be referred to the Government of India if they cannot arrive at an agreement on this issue.

4. The proposed capacity of Madho Beas Link may be increased from 8,000 to 10,000 cusecs.

5. The question of allocation of the cost of water including the cost of storages and other works may be taken up separately as the Conference was concerned only with the distribution of supplies.

6. It is left to each States to decide as to how best to utilise the supplies allocated to it. The States, however, must submit their proposals in this regard immediately to the Government of India (Planning Commission).

---

<sup>11</sup> This clause has been superseded by subsequent agreement of 1981 on surplus Ravi- Beas waters. The supplies of 15.85 MAF is based on annual series of 1921-45.

<sup>12</sup> Actual preparation utilization as per RBWT report is 3.13 MAF.

<sup>13</sup> Punjab includes Territories of Haryana.

<sup>14</sup> Acronym for Patiala and East Punjab States Union. The territory of PEPSU is now part of Punjab and Haryana.



**RECORD OF THE DECISION TAKEN, AT THE INTER-STATE MEETING OF  
THE CHIEF ENGINEERS ON THE DEVELOPMENT AND UTILISATION OF THE  
WATERS OF THE RIVERS RAVI AND BEAS HELD IN ROOM No.12 NORTH BLOCK,  
NEW DELHI ON THE 1<sup>st</sup> OF MARCH, 1955**

Item No.1- Modification, if any, in the projects of Sirhind Feeder as prepared by Punjab and Rajasthan Canals System as prepared by C.W.& P.C. in the light of the decisions taken at the Inter-State meeting held on the 29th January, 1955.

1. It appeared during discussion that from the point of view of initial cost, time required for construction and operational requirements, the best arrangement would be if the <sup>15</sup>Sirhind Feeder would serve only the areas in Punjab which can be commanded by it. A figure of 2,650 cusecs was indicated as the capacity of the Feeder for this purpose.

2. The portion of the Bhakra areas in Rajasthan which can be commanded from <sup>16</sup>Harike, could in that case be fed from the new Rajasthan Canal when built and provision could be made for this purpose, at the cost of Punjab in the capacity of the Rajasthan Canal in its upper reach in Punjab territory.

3. A capacity of 18,500 cusecs for the Rajasthan canal areas, as distinct from the supplies required for the Bhakra areas vide (2) above was tentatively considered to be suitable.

4. Chief Engineer, Punjab intimated that he would submit an estimate for Sirhind Feeder as proposed in (1) above by about the 15<sup>th</sup> March, 1955.

On receipt of this estimate the proposal of restricting the capacity of the Sirhind Feeder to the requirements of Punjab areas, vide (1) and (2) above would be re-examined. The Planning Commission may be requested to provide funds for the immediate construction of Feeder, subject to this reassessment.

5. The Chief Engineer, Rajasthan would take immediate steps for the preparation of a final project estimate for the Rajasthan Canal. He would request the Chief Engineer, Punjab for supply to him of an estimate of the cost of construction of the upper reach of the Rajasthan Canal lying within Punjab territory. The Chief Engineer, Punjab indicated that it should be possible for him to send this estimate to the Government of Rajasthan by the end of August, 1955 and the Chief Engineer, Rajasthan indicated that he would send an estimate for the Rajasthan Canal to the Government of India and the Planning Commission by September, 1955.

It was suggested that a senior revenue officer should be put on special duty to prepare a project for colonising the areas on the Rajasthan Canal and the programme of construction should be coordinated with the programme of colonisation. Chief Engineer, Punjab indicated that it would

---

<sup>15</sup> Sirhind Feeder off taks from Ferozepur Feeder at RD 55413 ft. and runs in a length of about 136.50 Km . It has an authorized capacity of 5264Cs. Ferozepur Feeder offtakes from Harike barrage.

<sup>16</sup> Located on Satluj d/s of confluence of Beas and Satluj. Length of barrage is 636.118 m having 22 no of bays with design discharge of 18400 cumecs

take about 6 months to prepare the estimates of the Rajasthan Canal lying within the boundary of the Punjab State provided Rajasthan Government makes a request to the Government of Punjab for the estimate and they also accept the cost of carrying out the survey and preparation of the estimate.

6. The Government of PEPSU should submit concrete proposals for utilizing their share of supplies from the Ravi and Beas.

Item No.2- Splitting up between Kharif and Rabi of the allocations of supplies to various states as agreed in the Inter-State Conference held on the 29th January, 1955.

The flow supplies shall be shared in the same ratio as the total supplies. The allocation during Kharif and Rabi shall also be in the same proportion.

The question of sharing the cost of storage works on Ravi and Beas should be taken separately.

Item No.3- Allocation between the States concerned on supplies in and cost of Sirhind Feeder.

In case the suggestions in sub-para (1) of item 1 above were ultimately found acceptable, the entire cost of the Sirhind Feeder would be borne by the Punjab.

Item No.4-(a&b)- Agency for construction of Rajasthan Canal System (a) the head reach situated within the Punjab State, and (b) the lower reach in Rajasthan State.

The head reach of the Rajasthan Canal situated within the Punjab State will be constructed by the Punjab, and the lower reach will be constructed by Rajasthan.

Item No.5- Consideration of funds required year wise and phased construction programme.

The States concerned should submit the project Reports and estimates, including the scheme in the current plan and to provide Central assistance the phased construction programme and the funds required.

On receipt of this information, the Planning Commission may be asked to include the scheme in the current plan and to provide Central assistance for the scheme without delay.

Item No.6(a&b)- Steps necessary for:

a) Acceptance of the projects and allocation of funds for the year 1954-55 and 1955-56 by the Planning Commission.

After technical scrutiny of the projects, the Planning Commission may be requested to include the projects in the current plan and to approve of Central assistance for the work.

b) Starting of the works on both the projects in respect of :

i) Reservation and allocation of machinery available from Bhakra Nangal project including its reconditioning etc.

ii) Other civil works.

The necessary machinery for the construction of the Sirhind Feeder is readily available from the Bhakra Nangal project. The Punjab would however, transfer as much machinery to Rajasthan as possible for the construction of the Rajasthan Canal.

The Punjab should take immediate advance action to prepare the necessary papers in respect of acquisition of land in that state for the construction of the Sirhind Feeder and the Rajasthan Canal.

Item No. 7- procedure for allocation of funds by Finance and provision of the two projects in the First and Second Five Year Plans.

After technical scrutiny by the C.W.& P.C. and financial examination by the Ministry of Finance and Project reports and estimates received from the States concerned will be submitted to the Planning Commission for approval and allocation of funds. The Government of India will thereafter issue expenditure sanction for the payment of the funds in the form of loans. The terms and conditions of the loans to be advanced for the purpose during the rest of the First Five Year Plan and second Five Year Plan will be settled in due course.

Item No. 8- Work on <sup>17</sup>Madhopur Beas Link to increase capacity from 6,000 to 8,000 cusecs as already authorised by Planning Commission and further increase from 8,000 to 10,000 cusecs as desired at Inter-State Conference .

The earth work in the Madhopur Beas Link should be so carried out as to take a discharge of about 5,000 to 6,000 cusecs in the first stage and upto 10,000 Cusecs later on. The masonry works should be designed for discharge of 10,000 cusecs.

Item No.9- Any other points relevant to the immediate commencement and expenditure completion of Sirhind Feeder, Rajasthan Canal and Madhopur Beas Link.

It was suggested by the Ministry of Irrigation and Power that it will be advantageous to complete the construction of the Sirhind Feeder by May 1956 to utilise the Kharif supplies. The Rajasthan Government should take immediate action to do the preliminary survey and other works required for the construction of the Rajasthan Canal.

---

<sup>17</sup> Madhopur beas link transfers water of Ravi from Madhopur headworks to Beas d/s of Pong dam.

**RECORD OF DISCUSSION HELD AT CHANDIGARH BETWEEN THE CHIEF ENGINEERS OF PUNJAB, PEPSU AND RAJASTHAN ON 9-9-1956 REGARDING THE APPORTIONMENT OF COST OF CONSTRUCTION OF THE COMMON PROJECTS**

**PRESENT**

1. Shri S.L. Malhotra, I.S.E.,  
(Chief Engineer, Punjab).
2. Shri M.L.Batra, I S.E.,  
(Chief Engineer, PEPSU).
3. Shri. K.L. Bhatia,  
(Director, Central Designs)
4. Shri Moti Ram, I.S. E. ,  
(Chief Engineer, Rajasthan)
5. Shri Ujagar Singh  
(Executive Engineer, Designs)

1. Rajasthan do not want that whole of the Rajasthan area at the tail of the Bhakra Main Branch be given water through the Sirhind Feeder out of the Punjab and PEPSU share of Ravi Beas waters. They want that about 700 Cs. be given to this area out of the Rajasthan share through Rajasthan Canal. This would reduce the discharge of the Sirhind Feeder correspondingly and will also delay the utilisation in India of the Ravi Beas supplies released by Pakistan by about 4 years.

2. Punjab and PEPSU have planned to utilise the Sutlej supplies released by the construction of the Sirhind Feeder upto its present designed capacity (viz.4760 cusecs) through Sirhind Canal, Bhakra Canals and Narwana Branch in other areas in the Punjab and PEPSU. Rajasthan now want to utilise part of their share of Ravi Beas supplies through Narwana Branch. The Punjab plan for utilisation of their share of supplies, will, therefore have to be completely modified.

3. Since the Punjab and PEPSU schemes for utilisation of these supplies are completely upset by this proposal of Rajasthan and since acceptance of the Rajasthan proposal will mean that it will become very difficult for Punjab and PEPSU to utilise their full share, they cannot agree to the proposal. It is, therefore, suggested that this question should be settled at Ministerial level under the aegis of the Government of India.

4. So far as the apportionment of the cost to be incurred for the utilisation of the supplies in concerned, each State will bear the cost in accordance with the acre feet proposed to be utilised by them through these works.

## **AGREEMENT ON SETTING UP THE RAJASTHAN CANAL BOARD**

### **RESOLUTION**

**Dated 19<sup>th</sup> December, 1958**

110, DW-III-26(1)/58 At a conference held on the 7<sup>th</sup> November, 1958 in New Delhi at which the representatives of the Central Government and the State Governments of Punjab and Rajasthan were present, it was decided to set up a “Committee of Direction” and a “Rajasthan Canal Board” to ensure efficient, economical and early execution of the Rajasthan Canal Project, including all connected works in Punjab and Rajasthan and the colonization of the areas covered by the Project. It was also agreed that the colonization policy should be determined by the Central Government in consultation with the Governments of Rajasthan and Punjab. The terms of the agreement arrived at between the various Governments concerned are set out below:-

### **CONSTITUTION OF THE COMMITTEE OF DIRECTION AND THE RAJASTHAN CANAL BOARD**

With a view to ensure efficient, economical and early execution of the Rajasthan Canal Project including all connected works in Punjab and Rajasthan and implementation of the colonization policy, as determined from time to time by the Government in consultation with the Governments of Rajasthan and Punjab, the Central Government and the State Governments of Punjab and Rajasthan agree to set up a ‘Committee of Direction’ and a ‘Rajasthan Canal Board’ as described below. They also agree that the ‘Committee of Direction’ should lay down the overall policy in regard to the execution of the Rajasthan Canal Project and allied works and the development of the entire area covered by the Project and that the Rajasthan Canal Board should be in overall charge of the Project and the development of the Project areas in accordance with the policy laid down by the ‘Committee of Direction’ from time to time. The participating Governments also agree that the actual work of construction should be carried out under the directions of the Rajasthan Canal Board by the Chief Engineer concerned of the State in which the work lies.

2. The participating State Governments further agree to delegate powers to and authorize under article 299 (1) of the Constitution their respective Chief Engineers to enter into contract for works, supplies and services at the direction of the Rajasthan Canal <sup>18</sup>Board; such contracts shall be expressed to be made by the Governor of the State concerned. For purposes of implementing the colonization policy, the actual field work will be under the administrative control of an officer of the rank of Commissioner who would be appointed by the Government of Rajasthan. The Commissioner would be responsible to and shall in all matters comply with the directions given by the Rajasthan Canal Board from time to time.

### **3. CONSTITUTION AND FUNCTIONS OF THE COMMITTEE OF DIRECTION:**

The Committee of Direction will consist of :

- i) the Union Minister of Irrigation and Power or his representative;
- ii) the Chief Minister of Rajasthan or his representative and;
- iii) the Chief Minister of Punjab or his representative.

---

<sup>18</sup> The Board is no longer in existence.

The Committee will be presided over by the Union Minister of Irrigation and Power and in his absence by the Chief Minister of Rajasthan. The Chairman of the Rajasthan Canal Board, referred to in paragraph 4 infra, will act as Secretary to the Committee.

- 2) The meetings of the Committee shall be held once in every three months or at shorter intervals whenever considered necessary.
- 3) The Committee of Direction will lay down the policy in regard to the execution of the Rajasthan Canal Project and allied works in accordance with the estimate as sanctioned from time to time and for the development of the entire area covered by the Project. The Committee will issue directions to the Board on such matters as it considers necessary or as may be referred to it by the Board.

#### CONSTITUTION AND FUNCTIONS OF THE RAJASTHAN CANAL BOARD

- 1) The Rajasthan Canal Board will consist of the following:
  - i) Chairman;
  - ii) Chairman, Central Water and Power Commission or his nominee;
  - iii) Joint Secretary, Ministry of Finance (or an officer deputed by him to attend any particular meeting);
  - iv) Secretary to the Government of Rajasthan Finance Department;
  - v) Chief Engineer in charge of the project in Rajasthan;
  - vi) Chief Engineer in charge of the project to Punjab;
  - vii) Colonisation Commissioner.
- 2) The Chairman of the Board will be appointed by the Government of Rajasthan in consultation with the Central Government. He will be assisted by the requisite staff. The Board will have a financial Adviser who will be appointed by the Central Government in consultation with the Rajasthan Government.

The Secretary of the Board will be appointed by the Rajasthan Government on the recommendation of the Board. He will also work as Deputy Secretary to the Committee of Direction.

- 3) The Headquarters of the Board will be at such place in Rajasthan as the Government as the Government of Rajasthan may decide.
- 4) The Rajasthan Canal Board will be in overall charge of the Project and development of the Project areas. It will implement:
  - i) the policy laid by the Committee of Direction from time to time; and
  - ii) the colonization policy to be laid down by the Central Government in consultation with the Governments of Rajasthan and Punjab.
- 5) In particular and without prejudice to the generality of the provision in paragraph (4) above, the Rajasthan Canal Board under the general guidance of the Committee of Direction shall:
  - i) prepare in consultation with the concerned Ministries of the Central Government and Departments of the State Governments a Master Plan for the overall integrated development of the Project and project areas which will include the irrigation system, land development, roads, railways, industrial and marketing centres, etc.,

- ii) take steps for the preparation of necessary estimates of costs of different components of the Master Plan by the concerned authorities (including the Board), when so authorized, and for the execution of works by these authorities or the Board after the financial sanction has been obtained;
- iii) Scrutinize the sanctioned estimate of the Rajasthan Canal Project and take such action for its modification and revision as may be found necessary from time to time. The project estimate will be sanctioned and, if necessary, subsequently revised by the Government of Rajasthan after such consultations with the Government of India and the Planning Commission as may be considered necessary;
- iv) examine and decide on all proposals for obtaining expert advice;
- v) advise from time to time regarding the delegation of such powers, both technical and financial, as it may deem necessary for efficient, economical and speedy execution of the project, to the Chief Engineers, Superintending Engineers, Executive Engineers and Sub-Divisional Officers engaged in the execution of the Project;
- vi) advise from time to time regarding the delegation of such powers as may be found desirable and necessary to officers in charge of colonization of the Government lands;
- vii) examine and, where necessary, lay down specifications and schedule of rates for various classes of works with a view to sound and efficient execution of the project;
- viii) approve (a) all detailed estimates and contracts the cost of which exceeds the powers of sanction of the Chief Engineer and (b) all proposals for award of work or supplies on contracts other than those based on public tenders and on detailed quantitative estimates and works allotted on work-order basis on scheduled rates. The contracts, however, shall be expressed to be made by the Governor of Rajasthan or the Government of Punjab, as the case may be, and shall be executed on their behalf by the officers authorised to do so, in accordance with powers delegated to them by the State Government concerned.

NOTE: i) Where total financial liability under a contract is definitely ascertainable at the time of placing the contract and where the contract itself is the result of the public or limited call for tenders, prior submission of the proposals to the Board will not be necessary so long as the contract is otherwise within the powers of sanction of the Chief Engineers.

2) This will not affect the powers delegated from time to time to the Chief Engineer, Superintending Engineers, Executive Engineers and Sub-Divisional Officers.

a) frame rules as to delegation of powers and procedure for the purpose of carrying out business;

b) decide the programme of construction of the project, keeping in view the funds available, the progress of colonization and development of project areas and the desirability of obtaining quick results;

c) take appropriate steps for the development of land and utilization of canal waters including the setting up of demonstration and experimental farms;

- d) work out detailed proposal on all matters pertaining to the colonization of State wastelands under the projects including the terms on which such lands or any interest therein should be transferred, the selection of transfer, the mode of disposal and the recovery of the sale proceeds of the lands and or of lease money and, after obtaining the approval of the Central Government, take such steps as may be necessary to carry out the approved proposals;
- e) recommend the grant of leases of fisheries in Rajasthan Canal system. The leases, however, shall be expressed to be granted by the Governor of Rajasthan or the Governor of Punjab, as the case may be, and shall be executed on their behalf by the Officers authorized to do so in accordance with the powers delegated to them by the State Government concerned.
- f) exercise, in relation to the technical sanction, administrative approval and other sanctions required for the construction of the Rajasthan Canal project and in relation to any other administrative matters concerning the project, the power of the State Government under the various codes, manuals, rules and regulations, as may be delegated to it by the State Government concerned from time to time;
- g) advise State Govt. concerned on administrative matters relating to the staff employed for the time being in connection with the project to the extent it may consider necessary;
- h) receive monthly progress reports both as to works and expenditure in a prescribed form from the Chief Engineers, Punjab and Rajasthan, review the progress of the project and lay down steps to be taken to expedite the work; and
- i) receive monthly progress reports from colonization officers, review the progress of colonization and lay down steps for coordinated development of the area.

Sd/-  
(T.SIVSANKAR)  
Secretary to the Govt. of India



**AGREEMENT ON CONSTRUCTION OF <sup>19</sup>BHAKRA NANGAL PROJECT BETWEEN  
<sup>20</sup>PUNJAB AND RAJASTHAN IN JANUARY, 1959**

Articles of Agreement made and entered into this thirteenth day of January, Nineteen hundred and fifty-nine, between the Governor of Punjab (hereinafter referred to as Punjab Government) of the 1<sup>st</sup> part, and the Governor of Rajasthan (hereinafter referred to as Rajasthan Government) of the 2<sup>nd</sup> part.

WHEREAS the States of the Punjab and Rajasthan have agreed to collaborate in the construction of a dam across the river Sutlej at Bhakra and other ancillary works executed under the Bhakra Nangal Project for extension and improvement of irrigation and generation of Hydro-electric power on the terms and conditions hereinafter appearing;

NOW THESE PRESENTS WITNESS AND IT IS HEREBY AGREED BY AND BETWEEN THE PARTIES AS FOLLOWS:

1. In this agreement the following expressions shall unless excluded by or repugnant to the context have the following meaning, namely:-

- 1) “Project” means the works executed or to be executed under the Bhakra Nangal Project;
- 2) “Bhakra Nangal Project” where the context so admits, means the works to be constructed as given in the Bhakra Nangal Project Report and Estimates, as revised or as may be revised from time to time.
- 3) “Perennial Irrigation” means irrigation which covers both Kharif and Rabi crops.
- 4) “Non-perennial Irrigation” means irrigation for the Kharif period only.
- 5) “Restricted Perennial Irrigation” means irrigation which covers both Kharif and Rabi crops except for the months of July and August.
- 6) “Capacity Factor” means the ratio of the mean supply to the authorized full supply discharge of a channel and mean supply for a period connotes the sum of the daily supply in cusecs divided by the number of days during that period.
- 7) “Main Canal” means any channel taking off from the Head Works irrespective of discharges.

---

<sup>19</sup> As per Section 78 of Punjab Reorganisation Act, 1966, Bhakra-Nangal Project means –

- (i) Bhakra Dam, Reservoir and works appurtenant thereto;
- (ii) Nangal Dam and Nangal-Hydel Channel;
- (iii) Bhakra Main Line and canal system;
- (iv) Bhakra Left Bank Power House, Ganguwal Power House and Kotla Power House, switchyards, sub-stations and transmission lines;
- (v) Bhakra Right Bank Power House with four units of 120 MW each.

<sup>20</sup> Punjab in this Agreement covers territories of both Punjab and Haryana.

- 7-A) “Branch Canal” means any channel taking off from the main canal or another Branch Canal having a head discharge of more than 350 cusecs.
- 8) “Distributary” means any channel taking off from the main or Branch canal and carrying a head discharge upto 350 cusecs.
- 9) “Common channel” means a channel that supplies water for irrigation to both the parties.
- 10) “Existing Areas on the Sirhind Canal” means the areas that were included in the Chakbandi of the Sirhind Canal prior to the extension Irrigation from the Project.
- 11) “Chakbandi” means the entire process of collection of data for working out details of gross commanded and culturable commanded areas of channels as a whole or of individual outlets for working out the chak boundary. Chak boundary is the boundary of areas reserved for irrigation from any particular outlet.
- 12) “Culturable Commanded Area” means the portion of the culturable area which is commanded by flow irrigation.
- 13) “Supplies” means the total water supplies that would be available from the river Sutlej and its tributaries above Rupar minus that part of the supply escaped below Rupar, which is over and above the authorized discharges of canals off-taking at Rupar.
- 13-A) “Stored Water Supply” means the supply stored in the Bhakra reservoir out of waters of the river Sutlej and its tributaries above Bhakra Dam.
- 14) “Project Area” means the area that are included in project.
- 15) “Transmission Line” means electric power line of voltage of 66 KV and above.
- 16) “Cost” means the capital cost worked out after deducting the capital receipts from the capital expenditure in accordance with the rules and orders of classification now in force in the Punjab with such modifications as may be mutually agreed upon from time to time.
- 17) “Common Transmission Line, Common Grid Sub-station or other Common Electrical Works” means any such transmission line, Grid Sub-station or other electrical works that serve both the parties or serve a common pool consumer.
- 18) “Common Pool Consumer” means a consumer who is supplied with power by mutual agreement from the available power from the project before it is shared between the parties.

2. Subject to the arrangements for control during the construction period of the Project already agreed upon in the Government of India Resolution No.DW-II-22(3), dated the 25<sup>th</sup> September, 1950, (Appendix A) the design and construction of Bhakra Dam, its appurtenant works, generating stations, transmission lines, all collateral works and main canals and branches serving the common interest of the parties hereto shall be under the exclusive control of the Punjab Government, but every possible attention shall be given to the wishes of Rajasthan Government as to the precise direction and position of the channels and transmission lines.

- 3. a) As far as possible, the canals, the branches and distributaries shall be designed and located territorially.
- b) The Canals, branches and the distributaries that exclusively serve the area of one State shall be designed and constructed by the State concerned at its own expense.

4. Land required for irrigation channels or transmission liens shall be acquired by the party in whose territory such land is situated in accordance with the law in force in that State and shall be made over to the State executing the works. The price of land and other incidental expenses of acquisition shall be paid by the party for whom the land is acquired and the same shall be dealt with as part of the expenditure on the works concerned.

5. The project area has been classified into three zones, restricted perennial, non-perennial and perennial. The maximum culturable commanded area of a State that shall be included in a Zone, shall be limited to the following:-

Name of State	Zone-I Restricted Perennial (Acres) CCA	Zone-II Non-Perennial (Acres) CCA	Zone-III Perennial (Acres) CCA	Total CCA
Punjab	1588599	600183	2752798	4941580
Rajasthan	-	-	920000	920000
Total	1588599	600183	3672798	5861580

6. The area specified in Article 5 supra shall be allotted the following supply per thousand acres of culturable commanded area at distributary head:-

Zone-I              Restricted Perennial              2.25 Cs.

Zone-II              Non-Perennial

a) Outside the existing boundary of the Sirhind Canal ( 4,49,208 acres CCA)      3.5 Cs

b) Within the existing boundary of the Sirhind Canal (150975 acres CCA)      2.5 Cs

Zone-III              Perennial              2.75 Cs

7. The existing area on the Sirhind Canal shall receive supplies as described hereunder:

	Culturable Commanded Area (Acres)	Water allowance per thousand acres of culturable commanded area at distributary head(Cusecs)
a) Non-perennial area in Punjab (North-East of straight line joining Ferozepure and Jakhal.)	2,11,106	2.5
b) Perennial area South-West of the straight line joining Ferozepur and Jakhal. (i)Area on Abohar and Bhatinda Branches	13,49,419	2.75

(ii)Area on Ghaggar, Kotla-Choe Branches	5,78,000	2.75
c) Perennial area North-East of straight line joining Ferozepure and Jakhal.		
(i)Area on Abohar and Bhatinda Branches	5,34,539	2.37
(ii)Area on Ghaggar, Kotla- Choe Branches	10,51,000	2.00

8. The existing areas on the Sirhind canal as specified in Articles 7 supra and the areas included in the Project as specified in Article 5 supra shall be governed by the same capacitors throughout the year and the shortages shall be prorata, subject to the provisions made in para 17 infra.

The project full supply capacity factors are as under:-

#### CAPACITY FACTORS

Months	Kharif			
	Zone I Restricted Perennial	Zone II Non-perennial	Zone III Perennial	
			Period	Factors
April	0.33	-	April	0.50
May	0.75	0.80	May	0.90
June	0.75	0.95	June	0.90
July	Closed	0.80	July	0.80
August	Closed	0.80	August	0.80
September	0.75	0.90	September	0.90
Mean Kharif	0.43	0.71	Mean Kharif	0.80
	Rabi			
October	0.90	0.90	October	0.90
November	0.90	-	November	0.90
December 1-15	0.50	-	December 1-10	0.90
December 16-31	0.33	-	December 11-31	0.50
January 1-15	0.33	-	January 1-10	0.50
January 16-31	0.50	-	January 11-31	0.50
February	0.75	-	February 1-10	0.50
	-	-	February 11-28	0.75
March	0.75	-	March	0.75
Mean Rabi	0.69	-	Mean Rabi	0.72

9. 1) Based on the provisions of Articles 5,6 and 7 supra the shares of the parties in the 'Supplies' (inclusive of 'Supplies' for the existing areas of the Sirhind Canal) measured at Distributary Head, shall be as under (Calculations attached as Appendix 'B').

:-

- |     |   |        |
|-----|---|--------|
| i)  | Period 21 <sup>st</sup> September to 20 <sup>th</sup> May |        |
|     | Punjab  | 88.89% |
|     | Rajasthan   | 11.11% |
| ii) | Period 21 <sup>st</sup> May to 20 <sup>th</sup> September |        |
|     | Punjab  | 88.91% |
|     | Rajasthan   | 11.09% |

The above percentages will be subject to re-calculation in the event of the storage capacity of the Bhakra Dam being increased in the future.

2) The corresponding <sup>21</sup>shares of the parties in the Stored Water Supplies shall be as under:-

Punjab	84.78%
Rajasthan	15.22%

10) In the case of channel belonging exclusively to a party hereto the discharge delivered at the head of the channel minus absorption losses in the channel as worked out in accordance with the formulae given below, shall be deemed to have been supplied at the Heads of the Distributaries:-

Lined Canals	2 Cusecs per million square feet of wetted area
Unlined canals	Absorption loss 5.0 (Q-0625 per million square feet of wetted perimeter) where Q = Discharge of channel in the reach.

Based on these formulae tables for absorption losses shall prepared.

These formulae shall be subject to review on the basis of joint observation.

11. The gauge registers at the regulating heads of the channels shall be held to give authoritative data for calculating the quantity of water supplied. The record of gauges and discharges kept by either party shall be made available to the other party for reference, if required.

12. 1) No State shall have any claim on account of water being wasted due to a breach or a cut for any other cause.

2) Any loss due to a breach or a cut in a common channel shall be borne proportionately by the parties.

---

<sup>21</sup> Share of Punjab, Haryana and Rajasthan in Sutlej water as per Joint Secretary, Ministry of Irrigation and Power letter dt 24/11/1972 are 8.02 MAF (including old use of 4.55 MAF), 4.33 MAF (including old use of 0.08 MAF) and Rajasthan 1.43 MAF. Mean year availability based on 1921-60 series in Sutlej is assessed by the Board as 14.01 MAF.

13. All extensions or alterations in the dam and appurtenant works, river works and the channels and works for the conservation of catchment areas affecting these works, at any future time, considered necessary shall be executed by the Punjab Government.

Provided that no such works shall be undertaken without the prior concurrence of the Rajasthan Government except in the following cases:-

- 1) Works deemed to be emergent by the Punjab Government of which intimation shall be sent to the Rajasthan Government as soon as possible and their concurrence obtained.
- 2) Such other categories of works as may be mutually agreed upon.

The cost of such works shall be distributed amongst the parties in the proportion of benefit derived.

14. Either party shall be free to supplement the water supplies of the areas served by the Bhakra Nangal Project and the existing areas on the Sirhind Canal by tapping sub-soil water in its own State and at its own cost, provided that such a step does not operate to the prejudice of the other party.

15. The discharge amounting to 1794 cusecs, released by the transfer of Sirsa Branch area from the Western Jumna Canal system to the Bhakra System shall be utilized for improvement and extension of irrigation on the Western Jumna Canal.

16. In consideration of the fact that the area of Rajasthan served by the Ghaggar river has been included in the project, Rajasthan shall have no claim whatsoever on the supplies of the Ghaggar river.

17. Notwithstanding the provisions of articles 5, 6, 7 and 8 supra, either party shall be free to utilize the Kharif or Rabi supplies in the area specified in Articles 5 and 7 supra in whatever manner it likes, but transfer of supplies allocated for the period from 21<sup>st</sup> May to 20<sup>th</sup> September, to the period from 21<sup>st</sup> September to 20 May, or vice-versa, shall not be permitted.

18. Regulation Rules shall be framed jointly by the parties on sound and practical lines. Subject to these rules a party may be permitted to vary the day to day indent of its channels provided it gives reasonable notice such as may be sufficient to effect the change and provided further that such changes do not adversely affect the releases of water for the generation of power to the limits visualized in the project.

19. Such portion of the cost of the Bhakra Dam, and its appurtenant works as is or may be allocated to 'Irrigation' shall be borne by the parties in the ratio of their authorized allocation of stored supply in acre feet including absorption losses during the period from 21<sup>st</sup> September to 20<sup>th</sup> May, as per detailed calculation on Appendix 'C'.

20. Such portion of the cost of the Nangal Dam as is or may be allocated to "Irrigation" shall be apportioned between the parties in the ratio of their allocated full supply discharge at the head of the Nangal Hydel Channel (vide) Appendix 'C'.

NOTE:- In working out the above, the present authorized full supply discharge of the channels that are being transferred from the Patiala II and III Feeders to the Bhakra Main Line shall be accounted for as laid down under Article 22 infra.

21. Such portion of the cost of the Nangal Hydel Channel as is or may be allocated to 'Irrigation' and the cost of the Bhakra Main Line and Common Channels, other than the Sidhwan Branch, shall be shared by the parties on the basis of the sum of the product of cusec miles calculated by reaches, apportionable to either party on the lines illustrated in the example below:-

Example:- i) A branch having a discharge of one thousand cusecs at its head has the following off-take and absorption in the various reaches:-

Each in Miles	Point of off-take	Discharge of off-take	Party owing the off-take channel	Absorption loss in reaches
0-10 miles	10	200	Punjab	20
10-25 miles	25	400	Punjab	18
25-45 miles	45	300	Rajasthan	12
		50	Punjab	-
		950		50

(ii) The discharge and absorption losses shall be as follows:-

Reach in miles	Discharge absorption loss in reach	Discharge of absorption in off-take	Off-take including the reach above	
45-25	Rajasthan	$\frac{300 \times 12}{350}$	10 plus 300	310
	Punjab	$\frac{50 \times 12}{350}$	2 plus 50	52
25-10	Punjab	$\frac{452 \times 18}{762}$	10 plus 452	462
	Rajasthan	$\frac{310 \times 18}{762}$	8 plus 310	318
10-0	Punjab	$\frac{662 \times 20}{980}$	13 plus 662	675
	Rajasthan	$\frac{318 \times 20}{980}$	7 plus 318	325

iii) Discharge multiplied by length of miles shall be as follows:-

<u>Miles</u> Rajasthan Punjab	<u>45-25</u> 310 x 20 52 x 20	<u>Punjab</u> 1040	<u>Rajasthan</u> 6200	<u>Total</u> 7240
<u>Miles</u> Rajasthan Punjab	<u>25-10</u> 318 x 15 462 x 15	6930	4770	11700

Miles Rajasthan Punjab	$\frac{10-0}{325 \times 10}$ $\frac{675 \times 10}{675 \times 10}$	6750	3250	10000
<u>Total</u>		14720	14220	28940
	Say	A	B	T

If the cost of the Branch is 25 lacs, then the cost shall be divided as follows:-

Debitable to Punjab	$\frac{AX25}{T}$	$= \frac{14720 \times 25}{28940} = 12.71 \text{ lacs}$
Debitable to Rajasthan Government	$\frac{BX25}{T}$	$= \frac{14220 \times 25}{28940} = 12.20 \text{ lacs}$

NOTE:- In working out the above, the proportionate cost of the Nangal Hydel Channel and Bhakra Main Line for passing the existing discharges of Channels that are being transferred from the Patiala II and III Feeders to Bhakra Main Line shall be accounted for as laid down in Article 32 infra.

22. The proportionate cost of the construction of the links and other connected works for replacing the present authorized discharges of the channels that are being transferred from the Patiala II and III Feeders to the Bhakra Main Line, as well as the proportionate cost of construction of the Nangal Dam and the Nangal Hydel Channel as is or may be allocated to 'Irrigation' and the proportionate cost of the Bhakra Main Line, shall be included in the cost of remodeling of the Sirhind Canal.

NOTE:- The Proportionate cost of the construction of the Nangal Dam, and the Nangal Hydel Channel as is or may be allocated to 'Irrigation' and the proportionate cost of the Bhakra Main Line and the New Links to accommodate the additional discharge required to improve the water allowance of existing areas shall be borne exclusively by the Punjab Government.

23. The cost of remodeling Rupar weir and the Sirhind Canal shall be borne by the Punjab Government, but the proportionate share in the cost on account of the discharge allowed to the Grey Canal areas from the newly constructed Sidhwan Branch shall be a common charge as enunciated under Article 24 infra.

24. The proportionate cost of remodeling the Rupar Headworks, the Sirhind Canal, the Main Line and the Sidhwan Branch, including the Grey Canal Feeder, on account of supplies required for taking up the irrigation of existing Grey Canal area by the Sidhwan Branch shall be allocated to the parties in the same ratio as the cost of the Bhakra Dam.

25. The uptodate booked capital cost of the Sirsa Branch shall be credited to the Western Jumna Canal and debited exclusively to the Punjab portion of the Bhakra Canal Sytem, in determining the total expenditure of the New Narwana Branch, which absorbs the Sirsa Branch of the present Western Jumna Canal System from R.D. 88,000 downwards.



26. The cost of remodeling the Western Jumna Main Line from Tajewala to Indri and of the Sirsa Branch from head to R.D. 88,000 in order to accommodate the additional discharge required for the running of the lower part of the Sirsa Branch, now to form part of the Narwana Branch, shall be shared by the parties in the same ratio as the cost of the Bhakra Dam.
27. The water obtained for the lower portion of the Sirsa Branch below R.D. 88,000 from the Western Jumna Canal shall be added to the 'Supplies' and shall be shared between the two parties in the same proportion as the cost of Bhakra Dam.
28. The cost of construction of common distributary channels shall be shared by the parties on the basis of the designed cusec miles for each party.
29. In the case of the common distributaries referred to in Article 28 above, either party shall manage the portion that lies in its territory.
30. Revenue from Irrigation shall be realized and used by the State in whose territory a village lies irrespective of the authority managing the channels.\
31. For overall administrative and technical reasons, particularly the need for unified control in developing power, the Punjab Government shall manage and administer the common electrical part of the Project. In so doing the Punjab State shall act in the interest of the Project as a whole.
32. Either party shall contribute to the capital cost of the electrical portion of the project as follows:-
- i) Such portion of the cost of the Bhakra Dam and its appurtenant works, the Nangal Dam and the Hydel Channel as is or may be allocated to 'Electricity' shall be shared in proportion to the share of either party in the Stored Water Supply.
  - ii) The cost of generating stations, step-up sub-stations and connected works of both Bhakra Nangal shall be shared in proportion to the share of either party in the Stored Water Supply.
  - iii) The cost of common transmission lines and grid sub-stations but excluding the special arrangement as specified in Articles 33 and 34 infra, shall be shared in proportion to the share of either party in the Stored Water Supply.
  - iv) The cost of transmission lines and associated Sub-stations constructed for supply of power to a Common Pool Consumer and one of the parties to this agreement shall be shared as under:-
    - a) the cost of the line and the associated grid Sub-stations, shall, in the first instance, be divided in the ratio of loads envisaged to be carried by the said transmission line for the common pool consumer and the party receiving the power
    - b) the portion of the cost attributable to the common pool consumer shall be shared between the parties in the ratio of Stored Water Supply as indicated in Article 32(1) supra; and
    - c) the remaining cost shall be borne by the party deriving benefit from the line.
33. Where a common transmission line is included in the project for construction at a particular voltage and/or capacity and if in the interest of one of the parties it becomes necessary to construct

the line at a higher voltage and / or capacity, the capital cost of the common line, and Grid Sub-station shall be shared as follows:-

- a) The cost of the line of the voltage and/or capacity as envisaged in the project which would have been constructed otherwise than for the interest of that party, shall be determined first including the cost of similar grid sub-stations.
- b) The cost of the line of the higher voltage and / or capacity to be constructed including the grid sub-stations shall then be assessed.
- c) The cost mentioned in clause (a) above shall be shared in the same ratio as the shares of the parties in the Stored Water Supply. The difference between the cost mentioned in the clauses (a) and (b) above shall be shared as follows:-
  - i) 60% in the same proportion as the shares of the parties in the Stored Water Supply.
  - ii) 40% shall be contributed by the Party, on whose account the higher voltage and / or capacity line is installed.

34. In regard to the portion of a 'Transmission Line' which is for the exclusive benefit of a party, the cost of that portion, including the cost of the grid sub-stations shall be borne by that party.

35. a) If any material modification or extension to the generating plant is considered necessary by any of the parties, it shall obtain the concurrence of the other party and such works shall thereafter be executed by the Punjab Government. The cost of the such works as also the benefits to be derived therefrom shall be shared by the parties in proportion to their share in the stored water supply.

b) Where it is considered necessary subsequent to construction as planned in the Project, to either augment or convert a transmission line and / or Grid Sub-Station below 132 KV to 132 or above, the cost of such conversation shall be met as below:-

- i) If the transmission line and / or Grid Sub-station serves exclusively the interest of one party only, such party shall provide the funds; and
- ii) If the transmission line and / or Grid Sub-station serves the interest of both the parties, the cost shall be shared in the same proportion as the share of the parties in the Stored Water Supply.

36. Where a transmission line or a part thereof which is exclusively owned by one party runs through the territory of the other party, that other party shall provide the party owning the line, suitable facilities for managing its line or manage it for the owning party as may be agreed upon.

37. a) Either party shall be entitled to receive as a matter of right a share of the electric power at any time available, after meeting the demands of the common pool consumers, in proportion to its share of Stored Water Supply.

Provided that any increase of firm power beyond 3,65,000 K.W. arising from the use of Ravi and / or Beas Waters in the Sirhind Feeder thereby conceiving corresponding supplies of water in the Bhakra Reservoir shall be shared in proportions to be worked out by mutual agreement.

NOTE: For the purposes of this clause, 'Power' means Killo Watts and Killo Watt-hours.

b) No party shall make any commitment for supply of power to a common pool without the prior consent of the other party in writing.

38. The parties agree that when the Right Bank Power Station comes into service, power to the extent of 25,000 KW for a fertilizer factory in Rajasthan shall be sold to the Rajasthan Government at the Power House busbars from the common pool at a rate which bears the same relation to the cost of generation as the present rate to Nangal Fertilisers bears to the present cost of generation;

Provided that the rate shall not be less than the rate at which power is supplied to the Nangal Fertilisers at the busbars;

Provided further that the provisions of clause (b) of Article (41) infra shall not apply in this case and the Punjab Govt. shall not be called upon to share any portion of the cost of augmenting the transmission lines and grid sub-stations for the purpose of supply to this factory;

Provided further that this article shall not bind the parties if by the end of a period of two years from the date of the commissioning of the second unit of the Right Bank Power Plant, no firm requisition for power for such a fertilizer factory is forthcoming from the Rajasthan Government.

NOTE: The revenue derived by sale of power at the busbar shall be shared by Punjab and Rajasthan Governments in the ratio of Stores Water Supply. The Punjab Government however shall have no claim on the revenue derived from the sale of energy by Rajasthan Government to the factory.

39. In implementing the provisions of Article 37 supra, it shall be necessary to lay down by mutual consent detailed procedure, with a view to a safeguarding the interest of either party and at the same time to ensuring that adequate and timely arrangements are made for the utilization of surplus power. The said procedure shall be subject to revision by mutual consent.

40. Either party shall receive power from the project at Grid rates mutually agreed upon. For the time being supply of power to the parties shall be given at grid rates as recommended by the 'Electricity Tariff Advisory Committee' on Tariff for the supply of power from the Bhakra Nangal and Uhl River Project of 1953 on which the parties were represented. The grid rate shall be subject to revision from time to time by mutual agreement between the parties.

41. a) If in the case of any special industry like electric-chemical, electro-metallurgical etc. the party, in whose areas such industry exists or is to be set up, wishes to give supply out of its own share at a special rate lower than the grid rate, the rates of such supply shall first be tentatively agreed upon by mutual agreement with the other party, and these rates shall then be negotiated with the prospective consumer. In such a case the party in whose area such a consumer is situated, shall be charged for that quantum of power, which is taken by the industry at the tariff at which supply is actually given to that industry less discount upto 5 per-cent as may be decided by mutual agreement between the parties.

b) If such power is given out of the common pool by mutual agreement between the parties hereto, all expenditure incurred for giving supply to this industry, as also the revenue therefrom shall be shared between the parties in the same ratio as their share in the Stored Water Supply.

c) If the works constructed to give supply to such a common pool consumer are not contiguous to the main works of the common electrical works / and it is not convenient for the authority maintaining the common electrical works to maintain such works, the same shall be maintained by party in whose jurisdiction they are situated and the actual cost of maintenance shall be charged to the common electrical works.

42. The common electrical portion of the Bhakra Nangal Scheme including the Civil and Electrical Works in respect of the Bhakra and Nangal Power Houses, the portion of common civil works allocated to power, the common transmission lines and Grid Sub-stations of voltages of 66 KV and above including all ancillary works, and the transmission lines and Grid substations of even

below 66 KV provided to serve common pool consumers but excluding the special arrangements as specified in Article 33 shall be common Schemes as between the parties. All operational expenses other than interest relevant to this portion of the scheme and all income also so relevant, shall be accounted for in it. Payment of interest charges shall be the responsibility of other party. Profit or loss shall be shared in the same proportion as the shares of the parties in the Stored Water Supply:

43. 1) The cost of the Bhakra Dam, the Nangal Dam and the Nangal Hydel Channel shall be shared by the Irrigation and Electricity Portions of the Project. In allocating shares, the possibility of a power plant being constructed on the right bank at Bhakra shall be taken into account.

2) In the eventual picture, when the Right Power Plant has been constructed, the cost of these works shall be shareable in the following manner:-

i) The common cost of the Bhakra Dam i.e. excluding the cost directly chargeable to irrigation and to Electricity shall be apportioned between Irrigation & Electricity in the ratio 360:267.

ii) The cost of the Nangal Dam and the Nangal Hydel Channel shall be apportioned in the ratio 50:50.

3) The proportionate cost of the Bhakra Dam, the Nangal dam and the Nangal Hydel Channel chargeable to Electricity under Clause (2) above shall be distributed between the Pre-Right Power Plant stage and the Post-Right Power Plant Stage in the ratio 250:115.

4) Of the share to be borne by Electricity in the Pre-Right Power Plant Stage, as worked out under Clause (3) above at present estimated at 19.39 crores of rupees only a sum of 16 crores of rupees in addition to 3.75 crores of rupees on account of distributable cost, shall be charged to Electricity. The allocation of the balance to Electricity shall be taken up for settlement by mutual agreement between the parties on completion of the project or earlier. Pending settlement, such balance amount shall be charged to Irrigation.

(5) On raising the dead storage level at Bhakra from EL 1440 to EL 1462 , an additional amount of Rs.3 crores may be charged to Punjab Electricity meeting Board (299-A of 83<sup>rd</sup> meeting).

6) The share to be allocated to Electricity in the Post-Right Power Plant Stage shall be borne by Irrigation until the Right Power Plant is commissioned, when it shall be transferred to Electricity. The question of transferring the accumulations of interest on this sum to Electricity shall be taken up for settlement by mutual agreement at that time.

(Calculations on present estimated cost are attached in Appendix 'D')

44. If any damage such as water logging or Thur, is caused to the area of a party due to the operation of common works, the net cost of remedial measures shall be charged on such works and shall be borne by the parties in the same ratio as the cost of the common works.

Provided that the scheme for remedial measures shall be formulated by the affected party in consultation with the other party.

45. While the construction is in progress, the loans for common works shall be obtained by the Punjab Government and the share of the Rajasthan Government based on the actual expenditure incurred during a year shall be debited to them annually along with interest charges thereon.

46. On completion of the works an account shall be drawn out by the Punjab Government of the exact share of either party of the cost of common works in accordance with the provisions of this agreement, and a final statement shall be prepared of the exact share due from the parties when either party shall pay or receive back any difference between the actual payment, year by year, and its ultimate share of the cost.

47. Except as otherwise provided in this agreement, the management and administration of common irrigation works of the Project including the Bhakra Dam, the Nangal Dam and the Nangal Hydel Channel, whose costs are shared by the electrical part of the Project, shall be with the party constructing such works.

48. i) The cost of management and administration of every individual common electrical and irrigation works under Articles 31 and 46 supra, including the cost of maintenance, operation, extension and improvement of such works, shall be shared between Electricity and Irrigation, and also between the parties in the same ratio as the cost of the respective works, provided that for simplification of accounts, the parties may agree to composite percentages for sharing such costs in respect of groups of common works.

ii) The accounts of the management and administration of such works shall be maintained separately from those of other works of the project and on no account shall expenditure chargeable to exclusive works be debited to common works. The party managing and administering any common works, shall be entitled, however, to charge the proportionate cost of administrative and supervisory charges on a scale to be mutually agreed upon.

iii) The party other than the one managing the administration of common works shall at all times have the right to access to the accounts of such works. The managing party shall furnish to the other party periodically such information and statement of accounts in such manner as may be mutually agreed upon.

49. Revenue receipts derived from common works shall be distributed between the parties to the project in proportion to their shares of capital cost.

50. All disputes relating to the day-to-day operation and maintenance of the common works shall ordinarily be resolved by the respective Chief Engineers for Irrigation and Power of the two States by mutual discussion. Any dispute which cannot thus be resolved shall be referred to a Standing Committee consisting of the respective Chief Engineers of the two States with a representative of the Central Water and Power Commission as Chairman. The advice tendered by this Committee shall be given due weight by the Punjab Government.

51. Difference of opinion between the parties in any matter arising out of this Agreement shall be referred to such person as may be mutually agreed upon and failing such agreement to such person as may be nominated by the President of India. The decision of such person shall be final and binding on the parties.

In witness whereof the parties here to have set their hands hereunder on the dates respectively mentioned against their signatures, in the Ninth Year of the Republic of India.

Sd/-  
N.K. Mukerji  
Secretary to Govt. Punjab,  
Irrigation & Power Deptts.,  
for and on behalf of the  
Governor of the Punjab.  
Dated 13.1.1959

Sd/-  
Z.S. Jkala,  
Secretary to Govt. of Rajasthan  
Irrigation & Power Deptts.  
for and on behalf of the  
Governor of Rajasthan  
Dated 13.1.1959

1. Witness  
Sd/-  
H.R. Bhatia  
Chairman Designate, Punjab

1. Witness  
Sd/-  
K.P.U. Menon  
Chairman Rajasthan

Sate Electricity Board

2. Witness

Sd/-

T.Sivasankar

Secretary to the Govt. of India

Ministry of Irrigation & Power

State Electricity Board

2. Witness

Sd/-

R.R. Behal

Joint Secretary to the

Govt. of India,

Ministry of Irrigation & Power

## APPENDIX “A” ( ARTICLE 2)

Refer to Agreement on Constitution of Bhakra Control Board of this compilation.

## APPENDIX ‘B’ ( ARTICLE – 9)

Shares of the partners in the supplies of the river Sutlej inclusive of the supplies for the existing area of Sirhind Canal measured at distributary head:-

### Part-I Share for the period 21<sup>st</sup> September to 20<sup>th</sup> May

#### A) NEW AREAS

#### 1. New Areas, water allowances and discharge at distributary head:-

##### a) PUNJAB

	Type of Irrigation	CCA in acres	Water allowances per thousand acres of CCA at Distry. Head(cusecs)	Discharge at Disty Head (Cusecs)
i)	Restricted perennial	15,88,599	2.25	3,575
ii)	Non-perennial (a)	4,49,208	3.50	1,573
	(b)	1,50,975	2.50	377
	Sub total(a & b)	6,00,183		1,950
iii)	Perennial	27,52,798	2.75	7,570
	b) RAJASTHAN			
	Perennial	9,20,000	2.75	2,530

2. The number of days the above supplies will be drawn from River Sutlej during the period 21<sup>st</sup> September to 20<sup>th</sup> May, according to agreed capacity factors for the three types of areas would be:-

i)	Restricted Perennial	157.3 days
ii)	Non-perennial	52.9 days
iii)	Perennial	173.7 days

3. Each State would need the following acre ft. of supply at distributary head during the period.

a)	<u>Punjab</u>	<u>Acre feet</u>
i)	Restricted perennial    3575 x 157.3 x 2	11,24,695
ii)	Non-perennial            1950 x 52.9 x 2	2,06,310
iii)	Perennial                7570 x 173.7 x 2	<u>26,29,818</u>
	Total	<u>39,60,823</u>
	Say	39,61,000

b) Rajasthan

i)	Perennial	2,530 x 173.7 x 2	8,78,922
		Say	8,79,000

B. Existing Areas on Sirhind Canal

4. Existing areas, proposed water allowance and discharge at distributary head would be as under:-

Punjab

	Type of Irrigation	CCA in acres	Water allowances per thousand acres at the Disty. Head in cusecs	Discharge at Disty. Head in cusecs
i)	Area lying North-East of Ferozepore Jakhal Line			
	Non-perennial	2,11,106	2.50	528
	Perennial	5,34,539	2.37	1,267
		10,51,000	2.00	2,102
ii)	Area lying South West of Ferozepore Jakhal Line			
	Perennial	19,27,419	2.75	5,300
		Total perennial		8,669

5. Each State would need the following acre ft. of supply at Distributary Head for areas in para (4) above on Bhakra capacity factors.

	<u>Punjab</u>	<u>Acre Ft.</u>
i)	Non-perennial	528 x 52.9 x 2
		55,862
ii)	Perennial	8669 x 173.7 x 2
		30,11,611
		30,67,473
		Say 30,67,000

6. Total supplies and the share at distributary head State-wise would be as under:-

a)	<u>Punjab</u>	<u>Acre ft.</u>	<u>Percentage</u>
i)	New Areas	3,961,000	
ii)	Existing Sirhind Canal acres	3,067,000	
	Total	7,028,000	88.89



b) Rajasthan

i) New Areas 8,79,000 11.11

### C. ABSORTION OF LOSSES

#### 1. Share in stored supplies for absorption losses in Bhakra Canal System.

The quantities worked out above are the net requirements that are to be met from stored supplies at distributary head exclusive of absorption losses. Appreciable quantity of water will, however, be lost through absorption in Main Canal and Branches. The share of such absorption losses in cusecs in the Bhakra Main Line System worked out reach by reach is as per table below:-

Name of the Channel	Total Absorption losses	Share of Punjab				Share of Rajasthan
		Restricted perennial	Non-perennial	Perennial	Existing area of Sirhind Canal transferred to B.M.L.	Perennial
1.	2.	3.	4.	5.	6.	7
Sadul Branch	18			-		18
Karni Singh Branch	3			-		3
Rori Branch	65			36		29
Ottu Feeder	37			15		22
Ratia Branch	58			58		
Fatehabad Branch	211			176		35
Bhakra Main Branch	64			20	2	42
Barwala Sub Branch	69			69		
Sirsa Branch	240			240		
Sarusti Branch	48	37		11		
Narwana Branch	59	12		47		
Ghaggar Link	45			9	36	
Bhakra Main Line	128	2		78	7	41
Nawanshahr Branch	47	47				
Bist Doab Canal	102	102				
Sidhwan Branch	215		215			
Total	1409	200	215	759	45	190

2. This would mean the following share in acre ft. of water from stored supplies on account of absorption losses in New Bhakra Canal.

a)	<u>Punjab</u>		<u>Acre ft.</u>
i)	Restricted perennial	200 x 157.3 x 2	62,920
ii)	Non-perennial	215 x 52.9 x 2	22,747
iii)	Perennial	759 x 173.7 x 2	263,677
	Total		-----
			349,344
	Say		349,000
b)	<u>Rajasthan</u>		
	Perennial	190 x 173.7 x 2	66,000
		Say	66,000

3. The increase in absorption losses in the Sirhind Canal system is as under:-

		<u>Punjab</u>	
		-----	
		Perennial	Non-Perennial
Punjab Branches		438	182
PEPSU Branches		299	(-)208
Sirhind Canal Main Line		153@	110*
	Total	-----	-----
		<u>890</u>	<u>84</u>

@ includes 45 Cusecs of column 6 of the table under C.1

\* include 56 Cs for old Grey Canal Areas.

The equivalent foot acres would be as below:

<u>Punjab</u>		<u>Acre ft.</u>
Perennial	890 x 173.7 x 2	309,186
Non-perennial	84 x 52.9 x 2	8,887
	Total	-----
		318,073
	Say:	318,000

4. Improvement in capacity factors of existing Sirhind Canal Supplies:

Pre-Bhakra full supply discharge at head of Sirhind Canal is 8438 Cs. Existing capacity factors of Sirhind Canal during sowing and maturing of Rabi Crop are 0.73 and 0.51 respectively.

These would be improved to 0.75 and 0.63. This means that stored supplies would be available for 7.5 days more as under:-

$$71(0.75 - 0.73) + 49(0.63 - 0.51) = 7.30 \text{ days say } 7.5 \text{ days.}$$

Quantity of water required in acre ft. will be  $8438 \times 7.5 \times 2 = 1,26,530$  or 1,27,000.

5 The shares of partners in the stored supplies at Bhakra from 21<sup>st</sup> September to 20<sup>th</sup> May at Bhakra Capacity Factors would be:-

		Punjab Acre ft.	Rajasthan Acre ft.
1.	At distributary head for new area	3,961,000	879,000
2.	At distributary head for improvement of water allowance of existing Sirhind Canal Area	506,000	Nil
3.	Absorption losses in new Canals	349,000	66,000
4.	Absorption losses in Sirhind Canal system due to improvement at (2) above	318,000	NIL
5.	Improvement of capacity factors of existing Sirhind Canal areas	127,000	Nil
	Total	5,261,000	945,000

6. The share of cost of construction of Bhakra Dam on above proportion, therefore, will be :-

Punjab	84.78
Rajasthan	15.22
	-----
	100 %
	-----

## APPENDIX 'C' (ARTICLE 19)

### ALLOCATION OF COST OF CONSTRUCTION OF BHAKRA DAM BETWEEN THE PARTICIPATING STATES

The shares of the partners in the stored supplies at Bhakra for the period 21<sup>st</sup> September, to 20<sup>th</sup> May, are worked out below:-

#### A. New Areas

1. New areas and water allowances are given in Appendix-B-Part-I, Para-1.
2. Discharge required at distributary head by the partners for these areas works out as per table below:-

Name of the State	Type of Irrigation	Discharge at Distributary head
a) Punjab	i) Restricted perennial ii) Non-perennial iii) Perennial	3574 Cs. 1950 Cs. 7570 Cs.
b) Rajasthan	i) Perennial	2530 Cs.

3. The number of days the above supplies would be drawn from storage during the period 21<sup>st</sup> September to 20<sup>th</sup> May according to the agreed capacity factors for the three types of areas would be as under:-

Period	Restricted Perennial		Non-Perennial		Perennial	
	Capacity factor	No. of days	Capacity factor	No. of days	Capacity factors	No. of days
September 21-30	0.75	7.5	0.90	9.0	0.99	9.0
October	0.90	27.9	0.90	27.9	0.90	27.90
November	0.90	27.0	-	-	0.90	27.90
December 1-10	0.50	5.0	-	-	0.90	9.0
11-15	0.50	2.5	-	-	0.50	2.5
16-31	0.33	5.3	-	-	0.50	8.0
January 1-15	0.33	4.9	-	-	0.50	7.5
16-31	0.50	8.0	-	-	0.50	8.0
February 1-10	0.75	7.0	-	-	0.50	5.0
11-28	0.75	13.5	-	-	0.75	13.5
March	0.75	23.2	-	-	0.75	23.3
April	0.33	9.9	-	-	0.50	15.0
May 1-20	0.75	15.0	0.80	16.0	0.50	18.0
Total		157.3		52.9		173.7

4. Each State would need the following acre ft. of supplies at distributary head for the above areas during the period 21<sup>st</sup> September to 10<sup>th</sup> May.

a)	<u>Punjab</u>	<u>Acre ft.</u>	<u>Acre ft.</u>
i)	Restricted perennial	3575 x 157.3 x 2	1,24,695
ii)	Non-perennial	1950 x 52.9 x 2	206,310
iii)	Perennial	7570 x 173.7 x 2	2,629,818
		Total:	3,960,823
		Say:	3,961,000
b)	Rajasthan (i) Perennial	2530 x 173.7 x 2	878,922
		Say	879,000

#### B. EXISTING AREAS ON SIRHIND CANAL

Share in stored supplied at distributary head required for improving the water allowance and capacity factors on Sirhind Canal areas.

The details of the areas and improvement in water allowance is as under.

1. Area lying to the South-West of the Line joining Ferozporer with Jakhal.

a) Punjab	C.C.A. in acres	Water allowance in Cusecs per thousand acres of CCA	
		Existing	Proposed
Punjab Branches (Perennial)	13,49,419	2.37	2.75
PEPSU Branches (Perennial)	5,78,000	1.69	2.75
b) Rajasthan	Nil	Nil	Nil

2. Area lying to North-East of Line joining Ferozepore with Jakhal.

a) Punjab	C.C.A. in acres	Water allowance in Cusecs per thousand acres of CCA	
		Existing	Proposed
Punjab Branches (Perennial)	2,11,106	2.42	2.50

PEPSU Branches (Perennial)	10,51,000	1.69	2.00
b) Rajasthan	Nil	Ni	Nil

3. The increase in discharge at distributary head on account of above improvement in water allowances would be as under:-

a) Punjab

i)	Perennial	13,49,470	@ (2.75 – 2.37) Cs %0	513 Cs.
		5,78,000	@ (2.75 – 1.69) Cs %0	613 Cs.
		10,51,000	@ (2.00 – 1.69) Cs %0	326 Cs.
				-----
				1452 Cs
ii)	Non-Perennial	2,11,106	@ (2.5 – 2.42) Cs %0	17.00 Cs

b) Rajasthan NIL

This will be equivalent to following supplies in acres ft. at distributary head for the period 21<sup>st</sup> September to 20<sup>th</sup> May.

a)	<u>Punjab</u>	<u>Acre ft.</u>
	Perennial	1452 x 173.7 x 2
		504,425
	Non-Perennial	17 x 52.9 x 2
		1,799
	Total	-----
		506,224
	Say	506,000

PART-II – SHARES FOR THE PERIOD 21<sup>ST</sup> MAY TO 20<sup>TH</sup> SEPTEMBER

a) NEW AREAS

1. The areas, water allowances and discharge at distributary head would be same as per para 1, part-A-1.

2. The number of days the supplies would be drawn from River Sutlej during the period 21<sup>st</sup> May to 20<sup>th</sup> September according to agreed capacity factors for the three types of areas would be:-

i)	Restricted perennial	45.8 days
ii)	Non-Perennial	104.9 days
iii)	Perennial	104.5 days

3. Each State would need the following acre ft. of supply at distributary head during the period.

a)	<u>Punjab</u>		<u>Acre ft.</u>
i)	Restricted Perennial	3573 x 45.8 x 2	3,27,470
ii)	Non-Perennial	1950 x 104.9 x 2	4,09,110
iii)	Perennial	7570 x 104.5 x 2	15,82,130
			-----
			23,18,710
		Say	23,19,000
b)	<u>Rajasthan</u>		
	Perennial	2,530 x 104.5 x 2	528,770
			Say 529,000

B. Existing area on Sirhind Canal

4. The areas, water allowance and discharge at distributary head would be same as at para 4 of part I.

5. Each State would draw the following acre feet of supply at distributary head at Bhakra capacity factors.

	<u>Punjab</u>		<u>Acre ft.</u>
i)	Non-perennial	528 x 104.9 x 2	110,774
ii)	Perennial	8669 x 104.5 x 2	1811,821
			-----
			1922,595
		Say	1922,000

6. Total supplies and the percentage shares at distributary head State-wise would be as under:-

a)	<u>Punjab</u>	<u>Acre ft.</u>	
i)	New areas	23,19,000	%age share
ii)	Existing Sirhind Canal areas	19,22,000	
	Total	-----	
		42,41,000	88.91
b)	<u>Rajasthan</u>		
i)	Perennial	529,000	11.09
	Total	4770,000	100.00

## APPENDIX 'D' (ARTICLE 43)

	<u>Rs. Crores</u>
Total cost of Bhakra Dam including cost of works to be done by Irrigation for left & right Power Houses	68.31
Direct cost for Power	8.72
Direct cost for Irrigation	2.73
Common cost for distribution (68.31 – (8.72 plus 2.73))	56.86
Share chargeable to E.B.	
$\frac{56.86 \times 267}{267 \text{ plus } 360}$	24.20
Total chargeable to E.B. 24.20 plus 8.72	32.92
Cost already charged to E.B.	
i) Director cost left power plant	5.61
ii) Director cost right power plant	3.11
iii) Distributable cost for:	
A-Preliminary	
C-Works	
Diversión works,	
Flood Protection works,	
Plant Layout & Misc. works,	
1-Transmission Lines,	
K-Building	
O-Miscellaneous	
R-Railways and Communications,	
P-1) Maintenance of works	
ii) Annual Maintenance and Repairs of K-Buildings	
VI - Special T&P	
VII – Losses of Stock	
II-Establishment	
V – Receipts on capital Account	
Indirect charges	<u>3.75</u>
Total	12.47 Crores

Additional cost now chargeable to E.B.



Bhakra Dam	32.92 – 12.47	20.45	Crores
Nangal Dam	50% of 3.94	1.97	Crores
Nangal Hydel Channel 50% of 11.79		<u>5.90</u>	Crores
		<u>28.32</u>	
Cost Chargeable to Bhakra Left Power Plant and Nangal power house		$\frac{28,32 \times 150}{250 \text{ plus } 115}$	19.39 crores
Cost chargeable to Right Power Plant		$\frac{27,32 \times 115}{250 \text{ plus } 115}$	8.91 crores

<sup>22</sup>**SUMMARY RECORD OF THE DECISION TAKEN IN THE MEETING HELD ON  
15.2.1965 IN ROOM NO.12 (NORTH BLOCK) NEW DELHI ON CERTAIN MATTERS  
RELATING TO THE GOVERNMENT OF PUNJAB AND RAJASTHAN**

A meeting was held in the room of the Union Minister of Irrigation and Power on 15<sup>th</sup> February, 1965 to discuss and arrive at a satisfactory solution of certain matters relating to the Govts. of Punjab and Rajasthan. Besides, the Union Minister of Irrigation & Power (Dr. K.L. Rao), the Minister of Public Works Punjab (Chowdhary Rizaq Ram) and the Minister of Irrigation, Rajasthan (Shri N.R. Mirdha), the meeting was attended by the following officers:-

Ministry of Irrigation & Power

1. Shri V. Nanjappa, Secretary I & P.
2. Shri H.C. Kalra, Joint Secretary (I).
3. Dr. J.K. Malhotra, Additional Commissioner.
4. Shri B.K. Uppal, Deputy Secretary (I), I & P.

Central Water & Power Commission

Shri M.R. Chopra, Chairman, CW&PC.

Ministry of Finance

Shri V.V. Chari, Additional Secretary.

Government of Punjab

1. Shri S.S. Grewal, Secretary, I&P.
2. Shri G.S. Sidhu, Chief Engineer (Drainage).
3. Shri Jatindra Singh, Chief Engineer (Hydel).

Government of Rajasthan

1. Shri Z.S. Jhala, Secretary, I&P.
2. Shri R.N. Chowdhary, Chief Engineer, Rajasthan Canal Project.
3. Shri H.S. Chowdhary, Chief Engineer, Bhakra, Gang & Ghaggar Canal.

After discussing the various aspects of the matter the following decisions were reached on the outstanding issues:

- i) Distribution of surplus waters of the rivers Beas & Ravi.

During the year from 1<sup>st</sup> April, 1965 to 31<sup>st</sup> March, 1966, 30% of the surplus supplies in the rivers Ravi & Beas, i.e. the supplies over and above the pre-partition uses from these rivers in India and after making the deliveries due to Pakistan under the Indus Waters Treaty, shall be made available to Rajasthan. This percentage, will be applicable only to the year 1965-66 and the question of the distribution of supplies in future years will be taken up at a later date.

---

<sup>22</sup> The agreement is no longer in use

N.B.: Any supplies escaped below Madhopur will be ignored in working out the supplies.

ii) Distribution of the Sutlej 'Component' between Rajasthan and Punjab.

The consideration of this item was postponed.

iii) Share in the 'Free Flow' of the River Sutlej

It was stated by Punjab that the distribution of the free flows in the river Sutlej was already being made in accordance with the Bhakra Nangal Agreement of 13.1.1959. No further action was, therefore, required.

iv) Apportionment of Cost of Common Works between Rajasthan and Punjab

The principles for apportionment of cost of various common works were agreed to as under:-

a) Harike Barrage

1) Both the States shall make out a case for that position of cost which in their opinion should be borne by the Government of India and will send the same to the Ministry of I & P.

2) The balance cost shall be divided between Punjab and Rajasthan as under:-

Barrage:- On the basis of ultimate utilization.

Regulator:- On the basis of ultimate designed discharges.

b) <sup>23</sup>Ferozepur Feeder

After deducting the cost if any, that may be borne by the Government of India, the balance shall be apportioned in cusec mile basis.

c) <sup>24</sup>Makhu Canal

The cost of this work shall be shared by Rajasthan and Punjab in the ratio of 5 : 8.

d) Madhopur Beas Link

The cost will be apportioned on the same basis as for Barrage under item (iv) (a) (ii) above.

v) Irrigation Supplies to Sidhmukh Area

The agreement already reached in regard to this item in Sept. 1963 was accepted and will be ratified by both the State Governments.

---

<sup>23</sup> Ferozepur Feeder off takes from Harike Headworks. It has capacity of 11192 Cusecs

<sup>24</sup> The Makhu Canal, with a designed capacity of 292 Cusecs offtakes at Harike headwork. The Makhu Canal system spreads over a length of 92.8 Km and has a culturable command area of 20600 hectares.

**<sup>25</sup>SECOND SUPPLEMENTAL AGREEMENT DATED 9<sup>TH</sup> APRIL 1965 BETWEEN THE  
PUNJAB STATE ELECTRICITY BOARD AND THE PRESIDENT OF INDIA AS GOVT. OF  
HIMACHAL PRADESH REGARDING UHL RIVER HYDRO-ELECTRIC PROJECT**

This agreement made the Ninth day of April one thousand, nine hundred and sixty five between the Punjab State Electricity Board, a body corporate under the Electricity (Supply) Act, 1948 (hereinafter referred to as the Supplier) which expression shall include its lawful successors and assigns of the one part, and the President of India as Government of Himachal Pradesh State (hereinafter referred to as the consumer) which expression shall include his lawful successors and assigns of the other part.

Whereas the Punjab State Electricity Board being successor to Punjab State Government and acting on behalf of the participating States in the Bhakra Nangal Power Project has been given power to manage and administer the common electrical part of the said project.

And whereas the erstwhile Mandi State has fully acceded to India and merged in the Union Territory of Himachal Pradesh and the Government of Himachal Pradesh has become lawful successor to His Highness Raja of erstwhile Mandi State, by virtue of which the Government of H.P. has full powers to manage and administer the electrical energy given by the supplier and received and purchased by the consumer under the terms and conditions of the existing Agreement of 3<sup>rd</sup> March, 1925 (hereinafter referred to as Principal Agreement and the Agreement of 26<sup>th</sup> December, 1935 (hereinafter referred to as the First Supplementary Agreement) between the then Secretary of State for India in Council and His Highness Raja Sir Joginder Sen Bahadur, Raja of Mandi.

And whereas under the terms and conditions of the Principal and the first supplementary Agreements, the electrical energy supplied by the suppliers and received by the Consumer, upto 500 KWs free of charge and additional upto 1000 KWs as concessional at 90 percent Bulk supply rates, could only be used and distributed by the Consumer in the area covered by the erstwhile Mandi State.

And whereas the consumer, after the formation of the Union Territory of Himachal Pradesh was desirous and the supplier agreed to allow the consumer to make use of both free and concessional supply of energy in the areas governed by the consumer outside the areas of the erstwhile Mandi State for general benefit and development in whole of the Union Territory of Himachal Pradesh.

And whereas to effectuate this purpose, the parties hereinto have agreed to the following decision and considered it necessary by way of this agreement (hereinafter referred to as "Second Supplementary Agreement") (for the supply of power and billing thereof only) to supersede the relevant terms and conditions embodied in the Principal Agreement as well as the First Supplementary Agreement as far as supply from Jogindernagar and billing thereof is concerned:-

1. Metering of entire supply taken by the consumer, for areas in and outside erstwhile Mandi State, will be done at Jogindernagar Power House.
2. In order to calculate the Maximum Demand and energy used by the Consumer a minus meter with a Maximum Demand Indicator will be installed by the Supplier at the point of tee off for Kulu (near Drang). The readings of this meter will be subtracted from readings of the existing meter(s) at Jogindernagar Power House.
3. There will be no barrier to the use of the 500 KWs (Free supply for erstwhile Mandi State) which may be utilized by the consumer anywhere within the Union Territory of Himachal Pradesh.

---

<sup>25</sup> Agreement is about sharing of power.

4. All supplies including 1000 KWs available to the consumers, under the Principal and First Supplementary Agreements (in excess of 500 KWs free supply mentioned at item 3 above) will also be available for use anywhere in the whole of the Union Territory of Himachal Pradesh, but will be billed at hundred percent Bulk supply Tariff. No Concessional supply at 90 percent Bulk supply Tariff will be admissible. For this purpose the Bulk supply Tariff will be taken to man the Board's standard' Bulk supply Tariff Rates as applicable to the Distributing Licenses, as may be in force from time to time.

5. The Units to be allowed free out of the total consumption as recorded by the meter at Jogindernagar Power House, for the purpose of billing will be worked out on prorata basis. For example, if the maximum demand and the consumption of the consumer from this source of supply if 'X' KW, and 'Y' KWH respectively then the total units to be allowed free would be  $500 \times Y/X$ . All units excess will be charged in full Bulk supply rates, as mentioned at item 4 above.

6. The power supplied to the consumer at any point other than Jogindernagar Power House (Shanan) shall not be included in the free concessional supply.

Now therefore, this Second Supplementary Agreement witnesseth and the parties hereto agree as follows:-

(i) That the Principal Agreement dated 3<sup>rd</sup> March, 1925 and the First Supplementary Agreement dated 26<sup>th</sup> December, 1935 referred to above shall be so read and construed as if for the relevant terms and conditions relating to supply of power and billing contained therein the aforementioned decisions as per items 1 to 6 are substituted.

(ii) That subject only to the variations herein contained, the Principal Agreement as well as the First Supplementary Agreement mentioned above shall continue to be in full force and effect.

In witness whereof the parties hereinto have set their respective hands on the day and year first above written.

Sd/- T.S. NEGI  
Chief Secretary to H.P. Govt.  
Signed at Simla by Thakur Sen Negi  
Chief Secretary to Govt. of H.P. for and  
on behalf of the President of India

Witness

1. (Signature)  
full Name  
(Address)

Sd/-  
G.K. Nag.  
Engineer Officer  
To Chief Engineer MPP and Power H.P. Govt.

2. (Signature)  
(Full Name)

Sd/-  
DILBAGH SINGH  
Assistant Surveyor of Works,  
Office of the Chief Engineer, MPP & Power, Simla-4

Signed at Patiala by B.B. Mahajan  
Secretary for and on behalf of the  
Punjab State Electy. Board.

Witness:

1. (Signature)  
(Full Name)  
(Address)

Sd/-  
H.L. Gupta,  
Assistant Engineer  
Punjab State Electricity Board, Patiala.

2. (Signature)  
(Full Name)  
(Address)

Sd/-  
Dy. Superintendent (Sales),  
P.S.E.B., Patiala.

**AGREEMENT BETWEEN RAJASTHAN AND HARYANA ON THE UTILISATION OF GHAGGAR WATER IN NOHAR PROJECT BY RAJASTHAN AND SURPLUS WATERS AT HARIKE THROUGH RAJASTHAN FEEDER TO HARYANA DATED 17<sup>TH</sup> SEPTEMBER, 1973.**

**1. Utilisation of Ghaggar waters for Nohar project**

(i) Haryana agrees to the construction of Nohar Feeder for Rajasthan from Ottu Weir for a capacity of about 1500 Cs and the utilisation of surplus Ghaggar water in this Feeder subject to availability after meeting full requirements of Haryana for the present and future flow, storage and diversion schemes for the utilisation of Ghaggar water.

While Haryana would be within its rights to construct any schemes for the utilisation of water of Ghaggar or its tributaries, it would send to Rajasthan copies/notes on such schemes for their information.

(ii) Nohar Feeder and other connected works falling within Haryana territory will be constructed by the Irrigation Department Haryana at the cost of Rajasthan. Rajasthan will, however, be entitled to the use of the present or remodelled Ottu weir free of cost. The cost to be paid by Rajasthan at Ottu weir, would thus, be that of the off-taking regulator specifically required for Nohar feeder.

(iii) Rajasthan will be at liberty to use their share of Bhakra supplies meant for Southern Ghaggar canal in Nohar Feeder as and when considered necessary by them and make up the requirement of the Southern Ghaggar canal, from other alternate sources available with Rajasthan as deemed fit.

**2. Utilisation of surplus waters at Harike through Rajasthan feeder by Haryana**

(i) Rajasthan agrees to use of surplus water that may be available at Harike, after meeting Rajasthan's requirements/present and future and Punjab's share by Haryana and its transportation through Rajasthan Feeder/Rajasthan canal to the extent of the capacity available in Rajasthan feeder/Rajasthan canal. Indent for the supplies needed by Haryana shall be placed by Haryana on Rajasthan who would include such requirement, in their indent on the regulating authorities.

(ii) The use of Rajasthan Feeder/ Canal, Harike barrage and other appurtenant works for the supply of surplus waters to Haryana shall be free of cost but Haryana will pay to Rajasthan cost of such works as off-taking regulator, or channel that may be specifically required to be built by Rajasthan, for Haryana for delivering supplies.

Sd/-  
Bansi Lal,  
Chief Minister, Haryana

Sd/-(17/9/1973)  
Barkatullah Khan,  
Chief Minister, Rajasthan

Sd/-  
H S Chatha,  
Minister of State  
Irrigation & power, Haryana  
New Delhi, 17<sup>th</sup> September, 1973

Sd/-  
Ramchandra Choudhary,  
Minister for Irrigation  
& Rajasthan Canal Project, Rajasthan

**<sup>26</sup>GOVERNMENT OF INDIA NOTIFICATION OF 24<sup>TH</sup> MARCH, 1976 ON SHARING OF RAVI BEAS WATERS BETWEEN PUNJAB AND HARYANA ARISING OUT OF RE-ORGANISATION OF STATE OF PUNJAB**

New Delhi, the 24<sup>th</sup> March, 1976.

**NOTIFICATION**

S.O. WHEREAS under the Indus Water Treaty of 1960 the waters of the three rivers, namely, Sutlej, Beas and Ravi became available for unrestricted use by India after 31<sup>st</sup> March, 1970.

AND WHEREAS while at the time of signing the said Treaty, the waters of the Sutlej had already been planned to be utilized for the Bhakra-Nangal Project, the surplus flow of rivers Ravi and Beas over and above the pre-partition use, was allocated by agreement, in 1955 (hereinafter called the 1955 Agreement) between the concerned States as follows, namely:

Punjab	7.20 MAF (including 1.30 MAF for PEPSU)
Rajasthan	8.00 MAF
Jammu & Kashmir	<u>0.65 MAF</u>
	<u>15.85 MAF</u>

and for the purpose of the said allocation, the availability of water was based on the flow series of the said rivers for the years 1921-1945;

AND WHEREAS after the allocation aforesaid, there was a reorganization of the State of Punjab, as result of which successor States were created, and it became necessary to determine the respective shares of the successor States out of the quantum of water which would have become available in accordance with the allocation aforesaid for use in the erstwhile State of Punjab.

AND WHEREAS under section 78 of the Punjab Re-organisation Act, 1966 (31 of 1966), the successor States were required to reach an agreement (after consultation with the Central Government) within two years from the first day of November, 1966 in relation to the Bhakra Nangal and Beas Project and in the event of their failure to reach such an agreement, the Central Government was required to determine the rights and liabilities of the successors States having regards to the purpose of the said projects;

AND WHEREAS by reason of the inability of the successor States to reach an agreement with regard to their rights and liabilities in relation to the Beas Project within the period aforesaid, the State of Haryana made an application to the Central Government for making the determination referred to in sub-section (1) of Section 78 of the Punjab Re-organisation Act, 1966 (31 of 1966);

AND WHEREAS for the purpose of making the said determination the Government of the States of Punjab and Haryana were given opportunity to state their views at several meetings conveyed for this purpose by the Central Government.

---

<sup>26</sup> This notification has been modified by subsequent Agreement of 1981 on sharing of surplus Ravi-Beas waters.



AND WHEREAS the Government of the State of Punjab and Haryana have been unable to come to an agreement inspite of all the reasonable facilities which have been afforded to them to come to such an agreement.

AND WHEREAS the purposes of the Beas Project, inter-alia, include integrated use of the waters of Ravi, Beas and Sutlej rivers and extension of Irrigation to arid land and also water supply to Delhi.

AND WHEREAS as result of Beas Project, the entire quantum of Beas waters, and a part of Ravi waters will become available and that the balance waters of the Ravi will be available after further conservation works on this river such as the Thein dam are completed;

NOW THEREFORE, in exercise of the Powers conferred by sub-section (1) of section 78 of the Punjab Re-organisation Act, 1966 (3) of 1966), the Central Government hereby makes the following determination, namely:-

Taking note of the facts that Haryana has large arid tract and also several drought prone areas and the present development of irrigation in the State of Haryana is substantially less as compared to that in the State of Punjab, and further taking into consideration that comparatively large quantity of water is needed for irrigation in the State of Haryana and there is limited availability of water from other sources in the State, the Central Government hereby directs that out of the water which would have become available to the erstwhile State of Punjab on completion of the Beas Project (0.12 MAF hereof is earmarked for Delhi Water Supply), the State of Haryana will get 3.5 MAF and the State of Punjab will get the remaining quantity not exceeding 3.5 MAF when further conservation works on the Ravi are completed, Punjab will get 3.5 of 7.2 MAF which is the share of the erstwhile State of Punjab. The remaining 0.08 MAF, out of 7.2 MAF is recommended as additional quantum of water for Delhi water supply for acceptance by both the Government of Punjab and Haryana.

AND WHEREAS the above allocation on completion of the Beas Project is based on the 1921-45 flow series corresponding to availability of 11.24 MAF in the Beas at Mandi Plain (after allowing for 1.61 MAF as pre-partition uses) and the availability of 4.61 MAF in the Ravi after allowing for pre-partition uses and losses in the Madhopur Beas Link.

AND WHEREAS the fluctuations in the Ravi flow have a very small effect on the availability of water on completion of the Beas Project.

It is hereby declared that if the availability of water in the Beas at Mandi Plain is more or less in a particular year, the share of the State of Haryana would be increased or decreased, as the case may be, pro-rata taking into consideration the provisions of the 1955 agreement and the requirement of Delhi Water Supply.

Sd/-

(C.C. Patel)

Addl. Secy. to the Govt. of India

## **MINUTES OF THE MEETING WITH THE CHIEF MINISTERS REGARDING IMPLEMENTATION OF THE THEIN DAM PROJECT HELD ON 3<sup>rd</sup> OCTOBER, 1977**

Present:

### **Government of India**

1. Shri Morarji R. Desai, Prime Minister
2. Shri Surjit Singh Barnala, Minister of Agriculture & Irrigation

### **Government of Punjab**

1. Shri Parkash Singh Badal, Chief Minister
2. Shri Balwant Singh, Minister of Finance.

### **Government of Rajasthan**

1. Shri Bhairon Singh Shekhawat, Chief Minister
2. Shri Sampat Ram, Minister of Irrigation

### **Government of Himachal Pradesh**

1. Shri Shanta Kumar, Chief Minister

### **Government of Haryana**

1. Shri Virender Singh, Minister of Irrigation & Power

### **Government of Jammu & Kashmir**

1. Shri A. Sonam Narboo, Minister of Irrigation

Shri V. Shankar, Principal Secretary to the Prime Minister, Shri R.V. Subrahmanian, Secretary, Department of Power, Shri C.C. Patel, Secretary, Department of Irrigation, Shri Y.K. Murthy, Chairman, Central Water Commission; and Shri K.S. Subrahmanyam, Chairman, Central Electricity Authority, also attended the meeting. Senior officers from the States were also present.

The Prime Minister, while welcoming the Chief Ministers and Ministers from the States, observed that it was unfortunate that having paid a large sum of money to Pakistan and the waters having become available for unrestricted use by India from 1970, we have not been able to commence work on the Thein Dam Project which is of national importance and the waters continue to run waste. There is no difference, as far as he was aware, regarding sharing of waters but some differences appear to be there regarding sharing of power. The Prime Minister also observed that the three concerned States, where the project is located or whose lands would get submerged, have come to an understanding regarding sharing of the power from Thein Dam.

The Chief Minister, Rajasthan, drew attention to the 1955 agreement regarding sharing surplus Ravi-Beas waters which entitles Rajasthan to the use of 8 maft. of water and the erstwhile Punjab State 7.2 maft. He said that Rajasthan has been allocated 58.5% of the power to be generated at Pong Dam in Beas Project (Unit-II) and 20% of the power to be generated at Dehar power station (Beas Project Unit I) on the basis of their share of waters. In the same manner Rajasthan should also get power from the Thein Dam. In this connection, he drew attention to the order passed by the Government of India on 17<sup>th</sup> June, 1970, allocating costs of the irrigation and power components of the Beas Project between erstwhile Punjab and Rajasthan. He also mentioned that according to the last para of the order, the Thein Dam should also be treated in the same manner as the Beas Project.

He also drew attention to the 1964 correspondence with the Punjab Chief Minister in which the latter had agreed to share power with Rajasthan. In view of this he felt that the claim of Rajasthan in Thein Dam has been accepted and Rajasthan has a right to the power at Thein Dam based on its share of water.

The Haryana Irrigation Minister stated that the Indus system of rivers in India is being treated as an integrated system both for irrigation and power and being a successor State to erstwhile Punjab they had a claim in the power. As regards Haryana's share from the surplus Ravi-Beas waters, the same has been determined by the Government of India vide their order of March 1976 to be 3.5 maft. The Irrigation Minister, Haryana, agreed that Haryana cannot draw waters from the Thein Dam.

It was explained that the 1955 agreement referred to sharing of waters of Ravi-Beas and did not entitle the concerned States to power benefits therefrom, if such power generated in territories other than those of the claimant States.

The Chief Minister, Himachal Pradesh, pointed out that all the waters of Ravi-Beas are contributed by Himachal Pradesh and it would be unfair if Himachal Pradesh is denied its rights to exploit the waters for purposes of power benefits in its territory. He did not agree with the principle that the States having right to the use of waters should also share the power benefits.

The Chief Minister, Punjab, pointed out that the 1955 agreement related to the entitlements to the use of water for irrigation and not for hydro power generation. He also mentioned that according to Dr. A.N. Khosla the 1955 Inter-State agreement did not cover hydel generation but defines only the quantitative allocation between the various States for distribution of water for irrigation.

It was explained that the rights to share power benefits are different from the rights to share to the use of water for irrigation. The Beas Project is located in Himachal Pradesh and the power benefits therefrom are being shared by agreement amongst the States entitled to the use of waters for irrigation. The same analogy cannot apply for Thein Dam, which is located in Jammu & Kashmir and Punjab. According to the general practice in our country the power benefits are being exploited by the State or States in whose territory the hydro power projects are located such as Rihand in Uttar Pradesh whose waters benefit Bihar, Mahi-Bajajisagar Project which is a joint project of Gujarat and Rajasthan and whose waters benefit Gujarat. It was explained that the Ravi-Beas waters and the Sutlej waters are planned to be used in an integrated manner for the purposes of irrigation since the irrigation systems are inter-connected. This did not necessarily imply the corresponding entitlements of the concerned States in the power generation. Prime Minister also made it clear that in all these matters entitlement flows either from statute or from agreement and since there is no governing statute as such, rights could be conferred only on a specific agreement and not on mere verbal assurances or correspondence. After discussion, it was decided that the construction work of the Thein Dam should start immediately and the Government of India would consider the claims of Rajasthan and Haryana regarding sharing Thein Dam Power. Government of India would also consult Dr. Khosla who had made recommendations regarding sharing of the cost for irrigation and power amongst erstwhile Punjab and Rajasthan States for the Beas Project, Unit I & II.

The Chief Minister, Rajasthan, felt that the construction of Thein Dam should be in charge of the Government of India on the lines of the Beas Project being executed by the Beas Construction Board. It was observed that the general practice in the country is that the construction of a project is undertaken by the State in whose territory in project is located. After discussion it was decided that there shall be an Inter-State Control Board with the Union Minister of Agriculture and Irrigation as Chairman, the Union Minister of Energy as Vice-Chairman and the Chief Ministers and the Ministers of Irrigation and Power of the concerned States as Members. The Board will take policy decisions and will give directions to the Punjab Government during the construction stage as well as during operation. The Project however, will be implemented by Punjab. All efforts shall be made to

accommodate the staff rendered surplus from the Beas construction work. There shall also be a Standing Committee under the Control Board which will meet regularly and review progress and secure expeditious implementation of the project. The Chief Minister, Rajasthan, raised some apprehensions. So far, even the project report of Thein Dam had not been made available to them. Besides the provision in the Act of Parliament viz., the Punjab Reorganisation Act 1966, which lays down that headworks of Rupar, Harike and Ferozepur shall be transferred to the charge of Bhakra Management Board, had not been implemented. As a result, there was difference regarding water availability amongst the partner States. The Chief Minister, Punjab, stated that the question of transfer of headworks should be discussed in a separate meeting. After discussion, it was decided that the project report should be immediately supplied to the Rajasthan Government. Rajasthan agreed that they will forward their comments regarding the headworks of Thein Dam within 10 days and it was decided that Punjab Government should take into consideration the comments of Rajasthan before commencing the work. As regards transfer of the control of the irrigation headworks of Rupar, Harike and Ferozepur to the Bhakra Management Board, it was decided that the provisions of the Punjab Reorganisation Act in this regard should be implement immediately and that the Central Government would ensure this.

The Chief Minister, Rajasthan, raised the question of damage to the Ujina Regulator in Haryana as a result of which large quantities of waters from Haryana side are flooding Rajasthan areas. The Prime Minister felt that the operational control of the Inter-State Ujina-Pahari-Kama-Goverdan drain system would be with the Centre so that disposal and regulation of waters is made keeping in view the best interests of the whole region. This was agreed to.

**AGREEMENT DATED 19<sup>TH</sup> JANUARY 1979 BETWEEN THE GOVERNMENTS OF  
HIMACHAL PRADESH AND PUNJAB REGARDING THEIN DAM AND POWER PLANT  
SCHEME**

A. THIS agreement made this Nineteenth day of January, 1979 (One thousand nine hundred and seventy nine) between the Governor of Punjab through the Secretary to the Government of Punjab (Department of Irrigation and Power), Chandigarh (hereinafter referred to as the 'Punjab Government' which expression shall include, wherever the context so admits or requires, its successors and assignees) of the first part and the Governor of Himachal Pradesh through the Secretary (MPP & Power) to the Government of Himachal Pradesh (hereinafter referred as the 'Himachal Pradesh Government' which expression shall include, wherever the context so admits or requires, its successors and assignees) of the second part.

B. WHEREAS the Punjab Government has prepared a multipurpose scheme to harness water supplies of river Ravi for inter-alia irrigation and hydro-electric power benefits. AND WHEREAS the aforesaid scheme envisaged construction of Thein Dam, Thein Dam Power Plant and Thein Dam reservoir located in Gurdaspur district of Punjab State, Kathua district of Jammu & Kashmir State and Chamba district of Himachal Pradesh as outlined in the Ravi-Project-Unit-I. Thein Dam and Power Plant Report Volume-I, II (1968) and III 1977) prepared by the Public Works Department of Punjab Government's Irrigation Branch, Chandigarh (hereinafter called 'The Thein Dam Project' or simply 'The Project') for generation of power and irrigation benefits.

C. AND WHEREAS a portion of the reservoir of the Thein Dam Project falls within the territory of the State of Himachal Pradesh and as such the Punjab Government and the Himachal Pradesh Governments have agreed to share the benefits of the Project to the extent and in the manner herein provided.

D. AND WHEREAS the Governments of Punjab and Himachal Pradesh, having fully considered the peculiar facts and circumstances, relating to the Thein Dam Projects agree that it was not possible to evolve a specific set of principles for the purpose of sharing costs and benefits of hydro-electric power, accruing from the Thein Dam power plant and that in the very nature of things, an ad-hoc understanding would have to be reached between the two Governments.

E. AND WHEREAS the Punjab Government now wants to undertake the construction of the Thein Dam Project and the Himachal Pradesh Government has agreed to use its good offices to ensure that the Punjab Government proceed with the construction work of the Project and complete the same as speedily as possible and operate the Project to achieve the objectives of the Project as envisioned in the Project in the most efficient manner.

F. AND WHEREAS to achieve the envisaged objectives as referred to in the preceding clause, the Himachal Pradesh Government shall ensure speedy, smooth and cooperative action in respect of survey and acquisition of land.

G. AND WHEREAS both the Punjab and the Himachal Pradesh Governments undertake to ensure full implementation of this agreement by their respective State Electricity Boards.

Now, therefore, for the mutual benefit of Punjab State and Himachal Pradesh State in respect of this project but not for any other purpose, it is hereby agreed between the parties that if and when the project as a whole or any part thereof is put into operations by the Punjab Government the following provisions shall come into force and be carried into effect, that is to say:-

1. The Punjab Government will use the waters of the river Ravi for the purpose of power development and irrigation, subject to the exercise by the people of Himachal Pradesh of their

existing rights to these waters for irrigation, driving of water mills, transport of timber. The Himachal Pradesh Government will have the right to construct the Chamera Hydro Electric Project. The Himachal Pradesh Government shall adopt the alternative proposal for Chamera Project as now proposed by Punjab Government (Chamera to Chuhan) if on detailed investigations, the latter alternative is found technically and economically feasible. The Himachal Pradesh Government shall ensure that the viability of the Thein Dam Project as already conceived is not affected in either case. The two governments agree in principle to collaborate in the Chamera Project. They agree the cost of investigations of the Chamera Project, including the cost already incurred by Himachal Pradesh Government. The Punjab Government will compensate Himachal Pradesh for the proportionate additional cost of tunneling in case the alternative proposal involves additional length of tunneling.

Further any change in the project, if likely to effect adversely the rights of the Himachal Pradesh Government embodied in this agreement shall be effected after consultation with Himachal Pradesh Government.

Further, the Himachal Pradesh Government shall have the right to make consumptive use of water upstream of Thein Dam in Himachal Pradesh on the river Ravi or its tributaries or from Thein Dam Reservoir, free of cost, upto 21 cusecs. The non-consumptive water involved in such use shall be released into the Thein Reservoir after treatment as enjoined by the concerned law.

2. In full settlement of the Himachal Pradesh Government's claims on the Project the Punjab Government shall:

- (i) (a) Supply, free of cost to the Government of Himachal Pradesh 4.6% (four point six percent) of the total energy generated at Thein Dam every month immediately after the machines start generating power. The Punjab Government shall ensure that the supply to Himachal Pradesh even during peak load hours of the Himachal Pradesh power system is maintained at not less than 4.6% of the total power generated during these hours.
- (b) In case Himachal Pradesh is not in a position to utilize part or whole of its share of power, the power shall be sold to Punjab Government on preferential basis. If the whole of Himachal Pradesh's share of power is sold to Punjab Government the Himachal Pradesh Government will be paid an amount of Rs.82.5 lakhs (Rupees Eighty two point Five lakhs) annually at the end of each financial year. This amount will be reduced pro-rata depending on the utilization of the power by the Himachal Pradesh Government. This arrangement will, however, be reviewed after five years of the operation of the power house(s).
- (ii) The Punjab Government shall provide required space free of cost in sub-stations of the project for location of equipment of Himachal Pradesh State Electricity Board for evacuating Himachal Pradesh's share of power. The layout, design and specifications of the works to be carried out and equipment to be installed by Himachal Pradesh at the PSEB's Sub-Station(s) will, however, be installed by mutual agreement.
- (iii) The Punjab Government shall endeavour to recruit labour belonging to Himachal Pradesh retrenched from the Beas Project on preferential basis upto 10% for Thein Dam Project.
- (i) The Himachal Pradesh Government shall acquire under the Land Acquisition Act, 1894, in force and at the expense of the Punjab Government such private land and property within the territory of Himachal Pradesh as may be required in connection with the construction, operation and maintenance of the Project or submerged in the Thein Reservoir to be formed as a result thereof. The land and property so acquired shall be transferred to the ownership of the Punjab Government.

- (ii) Himachal Pradesh Government will also arrange to transfer Government land that may be required permanently by the Punjab Government for the purposes connected with the construction, operation and maintenance of the Project or that may be submerged in the Thein Dam reservoir to the ownership of the Punjab Government. The compensation for such transfer shall be paid at par with the compensation assessed for the contiguous, comparable private land acquired under the Land Acquisition Act, 1894.
4. The land of Himachal Pradesh Government that may be occupied temporarily for the construction of the Project shall be restored in its original condition when no longer required and a sum of equal to its rent as may be determined by the Himachal Pradesh Government for the period of occupation of such land shall be paid by the Punjab Government to the Himachal Pradesh Government.
5. The Punjab Government shall pay to the Himachal Pradesh Government compensation as may be assessed by the Forest Department of Himachal for the damage done to the trees on Government land outside the acquired land, at the prevailing market rates at the time of damage. If any Department of Himachal Pradesh Government is charged market rate at that time, the same rate shall be applicable.
6. The Himachal Pradesh Government will permit the Punjab Government to collect and use on payment of royalty as per the rules, save as in Rule 3-A of the Himachal Pradesh Minor Minerals (Concession) Revised, Rules (1971), in force from time to time boulders, shingle, lime-stone and other building materials (except precious and semi-precious minerals) from the river beds and / or from the lands acquired for or transferred to or leased out to the Punjab Government for the purpose of construction or operation and maintenance of the Project.
7. The fishing, recreational and navigational rights in the river channel and reservoir/lake portion located in the territory of Himachal Pradesh shall remain vested in Himachal Pradesh Government subject only to such restrictions as may be necessary for the safety of the Project.
8. The Punjab Government shall permit the free use by the Himachal Pradesh Government of all service roads constructed and maintained by them in the territory of Himachal Pradesh in connection with the Project.
9. The Punjab Government shall provide satisfactory arrangement, at the cost of the Project, for the transport of timber floated in the Ravi across Weir/Dam that may have to be built on the river upto the existing pick up point for timber haulage.
10. The Punjab Government shall make arrangements for the rehabilitation of the persons to be ousted from the lands or houses that would be acquired for the purpose of the Project by allotting them alternative cultivable land and shelter or by providing employment. Preference may be given to such oustees for establishing hotels and stalls, and other business for earning livelihood.
11. The Project shall be constructed and managed by the Punjab Government.
12. If the Punjab Government in the interest of the Project feels that necessity of soil conservation measures in the catchment area of the Thein Reservoir lying in the territory of Himachal Pradesh, the same shall be executed on the request of the Punjab Government by the Himachal Pradesh Government at the cost of the Project.
13. The stamp duty, if any leviable on this agreement shall be borne by the Punjab Government.
14. The parties may enter into any supplementary agreement with a view to setting any other points of details not covered under this agreement.

15. That if any doubt, dispute, question or difference shall, at any time arise, touching and concerning the construction, affect, meaning of these presents or any matter hereinafter contained in their respective rights and liabilities hereunder, then every such dispute, doubt, question or difference shall be referred to two Arbitrators one each to be nominated by each of the two State Governments. The decision of the Arbitrators/Umpire shall be final, conclusive and binding upon the parties.

16 The covenants herein contained shall, in the case of each party hereto, be binding upon and shall ensue for the benefit of their respective successors.

In witness whereof the parties of this agreement have executed it on the dates respectively indicated against their signatures.

For and on behalf of the Governor of  
Himachal Pradesh

Sd/-  
(P.P. SRIVASTAVA)  
Financial Commissioner-cum-  
Secretary (N.P.P. & Power)  
To the Govt. of Himachal Pradesh

Witness

Sd/-  
(Shanta Kumar)  
Chief Minister,  
Himachal Pradesh  
Sd/-  
(Kishori Lal Vaidya)  
Power Minister,  
Himachal Pradesh

Sd/-  
Sd/-  
(W F Desouza)  
Chairman,  
HPST TE Electricity Board

For and on behalf of the Governor of  
Punjab

Sd/-  
(K.D. VASUYDEVA)  
Commissioner & Secretary,  
Irrigation & Power to the Govt. of Punjab.

Witness

(Prakash Singh Badal)  
Chief Minister,  
Punjab  
Sd/-

(B R Tandon)  
Industries Minister,  
Punjab  
Sd/-

Balwant Singh  
Finance Minister,  
Punjab

Attested  
Sd/-22/1/1979  
JS Atwal,  
Director, Designs,  
Thein Dam,  
Chandigarh



## **AGREEMENT REGARDING THEIN DAM AND POWER PLANT SCHEME BETWEEN PUNJAB AND JAMMU & KASHMIR**

This agreement is made at Delhi on twentieth day of January, 1979 (one thousand nine hundred and seventy nine) between the Governor of Punjab (hereinafter called the Punjab Government which expression shall include his successors and assignees) of the first part and the Governor of Jammu and Kashmir (hereinafter called the Jammu & Kashmir Government which expression shall include his successor and assignees) of the second part.

Whereas the Punjab Government prepared a scheme for storage of water and Hydro Power Generation (hereinafter called the Thein Dam Project) on the River Ravi near village Thin which village is situated in the territory of Jammu & Kashmir State (32° 26' 30" Latitude 75° 43' 38" Longitude); and

Whereas, the site for the Thein Dam Project is so located that both the States of Punjab and Kammu & Kashmir can take advantage of the water resources available from River Ravi for irrigation and Power generation; and

Whereas, the Thein Dam Project is multipurpose scheme for irrigation and generation hydro electric power on large scale and located nearly 15 miles upstream of Madhopur headworks, the left flank of the Dam to lie in the Punjab and the right flank in the State of Jammu & Kashmir; and

Whereas, in accordance with the decision taken in the "Inter-State Conference on the development and utilization of waters of the rivers Ravi and Beas" held on 29.1.1955 under the aegis of Government of India, the Jammu & Kashmir Government is entitled to a fixed quantum of 0.65 MAF per annum of the supplies both flow and storage irrespective of any variation in rivers' from the aforesaid rivers Ravi and Beas in addition to the actual pre-partition utilization of Ravi River Waters; and

Whereas, the entire allocated quantum of water to the State of Jammu & Kashmir in terms of this agreement is to be provided from the River Ravi alone; and

Whereas, the parties to the agreement with a view to preventing the existing wastage of the water from River Ravi below Madhopur headworks, are desirous of early completion of the Thein Dam Project; and

Whereas, the parties to the agreement have jointly surveyed the area required for the Thein Dam Project including that which would be submerged by the reservoir below R.L. 530.96 Mt. (1742.0 feet); and

Whereas, the villages, families, persons, houses, shops and cultivated and un-cultivated areas, etc., likely to be affected by the construction of the Thein Dam Project as already accepted are to be duly compensated and rehabilitated with a view to better their prospects.

Now, therefore, this deed witnesseth and the parties, hereto, hereby mutually, agree as follows:-

1. the parties to this agreement shall be joint partners in the Thein Dam Project. The Jammu & Kashmir Government shall, however, make investment only in the irrigation portion of the project in accordance with its share in the water from storage, i.e. 10 per cent of the total cost of the project, attributable to irrigation portion thereof.

2. All lands required at any time for the Thein Dam Project situated in the territories of the respective States shall be acquired at the cost of the Project in accordance with the relevant laws in force in the concerned States. The title to the land acquired for the project in the State of Jammu &

Kashmir shall, however, vest in the Jammu & Kashmir Government who shall make available the lands so acquired to the Thein Dam Project on lease in accordance with the rules in force in the State. The compensation paid shall be deemed the premium for the lease and any other charges payable to the Jammu & Kashmir government for the entire period which shall be renewed as and when required during the life time of the Project.

3. The persons affected by the dam area and other areas acquired for the Project shall in addition to the payment of compensation due under the laws of the States concerned, be rehabilitated on land or alternate avocations so as to better their future prospects. To achieve the aforesaid subject, a joint Committee of officers of two State Governments headed by the Chief Secretaries shall be constituted to draw up a suitable rehabilitation scheme keeping in view the experience gained in the rehabilitation of Pong Dam ousters in Himachal Pradesh. The entire cost of compensation payable under law and the cost of rehabilitation shall be debited to the Thein Dam Project.

4. The Jammu & Kashmir Government shall receive a fixed share of 0.65 MAF of the supplies, both flow and storage, irrespective of any variation in flow from the rivers Ravi and Beas, in addition to its actual pre-partition 0.04 MAF utilisation of Ravi River Waters.

5. The Jammu & Kashmir Government will specify 10 daily pattern of its irrigation requirements during the Kharif and Rabi seasons to utilize its total share in flow and storage supplies throughout, on 10-daily pattern from River Ravi in the Post-Thein Dam Project Stage. Till such time as the aforesaid Project is constructed and commissioned, the J & K Government will continue to get actual pre-partition, and its prorata share of free low from Ravi which is 0.46 MAF in a mean year. After construction of Thein Dam Project is completed the Punjab Government shall regulate and release supplies so as to ensure utilization by the Jammu & Kashmir Government of its fixed allocation of 0.65 MAF of the supplies according to its aforesaid 10 daily pattern. The utilization 0.65 MAF shall be in addition to its actual pre-partition utilization.

6. The J & K Government shall take off Ravi Canal from Shahpurkandi barrage and contribute towards cost of the aforesaid barrage, an amount equal to the difference in costs of taking off Ravi Canal from below Thein Dam and that required for taking off the same from Shahpurkandi barrage. A mutually agreed estimate of the cost based on rates prevalent in 1979-80 would be drawn up by the two State Governments and in case of any differences arising, the estimates would be got vetted by the Central Water Commission whose decision shall be conclusive, final and binding on the parties.

The construction of the Shahpurkhadi barrage shall start at the first technically feasible opportunity and every effort shall be made to ensure its completion as early as possible so that water supply to Ravi Canal under construction by J & K Government starts at the earliest.

7. The Jammu & Kashmir Government shall get a share of 20 percent in the total power generated at the Thein dam and Shahpurkhadi barrage at cost of generation at Busbars, provided that if the Jammu & Kashmir Government is unable to utilize the aforesaid share of power within its territory or is otherwise desirous of selling the same, the surplus power shall be sold to the Punjab Government at a mutually agreed rate. A separate agreement shall be drawn up for such sale of un-utilised power by the J & K Government with the Punjab Government which shall provide for a periodic review of the selling rate. In case, however, the Punjab Government at any time is not desirous to purchase the said surplus power in whole or in part, then the J&K Government shall be at liberty to sell such power elsewhere.

8. In respect of benefits other than irrigation and power from the Thein Dam and Shahpur Kandhi barrage reservoirs the Government of Jammu & Kashmir and Punjab shall share these benefits in proportion to the areas of submergence in their respective territories. Further the rights for development of fisheries and navigation in the reservoirs created by the Thein Dam and Shahpur Kandi barrage shall be accruable to the parties in proportion to the areas of submergence as aforesaid.

9. 15 percent of the entire personnel required both for irrigation and power side for the construction and operation of Thein Dam Project in all categories shall be taken from J&K State Cadres, subject to actual availability.

10. The construction and arrangement of the Thein Dam Project shall be the responsibility of the Punjab Government. The J&K shall be given representation on the Advisory Board/Committee or any other policy making Board/Committee both on the Irrigation side as well as Power side, which may be constituted for the construction of Thein Dam.

11. Any road or portion thereof which gets submerged by Thein Dam Reservoir shall be re-aligned and constructed at the cost of the Thein Dam Project. The agency for construction of such roads or part thereof shall be the Public Works Department of the concerned State Government. The specifications for such roads shall, however, be approved by the Thein Dam Project Authority.

12. With a view to providing immediate employment opportunities to the displaced persons from the Thein Dam Project, the authority charged with the construction of the said project at various levels shall give preference in matters of employment to such persons.

13. For the material extracted from within the territory of Jammu & Kashmir and meant for utilization on Thein Dam Project, a sum of Rs.1 lakh per annum shall be paid by the Project Authorities for the entire period of construction to the Jammu & Kashmir Government. No taxes, fees, cases, etc. shall be charged on this account by the Government of Jammu & Kashmir.

14. The J & K Government shall not levy or charge or concur in the levy or charge of any taxes, octroi or duty on the materials, machinery or equipment passing through its territory for the purposes of the construction of the Project including the hydro electric part thereof during the period of construction.

15. The parties to the agreement shall ensure that all facilities required for efficient and economic planning, design, construction and management of the Thein Dam Project including the carrying out of surveys, inspection and erection of communication and power lines and installation of plant and equipment area made available by them as and when required.

16. That if any doubt, dispute, question or difference shall at any time arise touching and concerning of the construction, effect, meaning of these presents or any matter hereinafter contained or their respective rights and liabilities hereunder than every such dispute, doubt, question or difference shall be referred to two Arbitrators each to be nominated by each of the two State Governments. The arbitrators so nominated shall, if they so desire nominate an Umpire. The decision of the Arbitrators/Umpire shall be final, conclusive and binding upon the parties.

17. The expense for stamping and completion of this agreement shall be borne by the Government of Punjab.

In witness whereof the parties hereto hereby put their signature upto this deed in token of the acceptance of the terms and conditions hereof on the dates respectively shown against each.

Signed for and on behalf of the  
Governor of Punjab

Sd/-  
(PARKASH SINGH BADAL)  
Chief Minister, Punjab  
20.1.1979

Signed for and on behalf of the  
Governor of Jammu & Kashmir

Sd/-  
(S.M. ABDULLAH)  
Chief Minister, J & K  
20.1.1979

Witness

Sd/-  
(K.D. VASUDEVA)  
Commissioner & Secretary  
Irrigation & Power Deptts.,  
Punjab  
20.1.1979

Sd/-  
(S. NARBOO)  
Minister for works, Power & Ladalk  
Affairs, J & K  
20.1.1979

Sd/-  
(M.S. GILL)  
Principal Secretary to the  
Chief Minister,  
Punjab  
20.1.1970

Sd/-  
(D.D. THAKUR)  
Minister for Finance  
Jammu & Kashmir  
20.1.1970

ATTESTED

Sd/-  
DIRECTOR, DESIGN  
THEIN DAM, CHANDIGARH

<sup>27</sup>No. 18/14/74-DWN/D III

Govt. of India,  
Ministry of Energy,  
Department of Power.

New Delhi - 110001 the 15<sup>th</sup> September, 1981.

To  
The Chairman.  
Bhakra Beas Management Board,  
Bhakra colony, Sector 35-B,  
Chandigarh 160036 .

Sub - Replacement/contribution into Sirsa Branch from Western Yamuna Canal.

Sir,

I am directed to invite your attention to letter No. 7358/61/B-1020/DHD, dated the 23<sup>rd</sup> June, 1975 on the subject mentioned above, making a reference under Rule 7 of the BBMB Rules 1974. The matter has been examined in consultation with the Ministry of Irrigation, and I am to convey the decision of the Government of India as follows :-

1. The Bhakra Nangal Project 1955 and the Bhakra Nangal Project Agreement (1959) should be read together and that in case of any contradiction between the two, the provision of the Agreement should prevail.

2 The Government of Haryana should endeavour to do its best to make available to Sirsa Branch as much of Yamuna waters from its share as possible for utilisation in areas on the Bhakra Canal system.

3. The other partner states of Punjab and Rajasthan should also appreciate the physical limitations under which Haryana has to operate the system, in particular the time taken for transferring areas from Bhakra Canal system to Western Yamuna Canal system and vice-versa and other operational requirements such as breach/cut in the channels, recession in demand in the area below RD. 88,000 of Sirsa Branch etc..

4. During the months of July and August whenever the Yamuna river discharge to the share of Haryana at Tajewala is more than 8400 cusecs and during the month of June and Sept. whenever it is more than 9100 cusecs( the above figures being the requirements of Western Yamuna Canal areas) the Sirsa Branch must run with supplies surplus to the above requirements of Western Yamuna Canal areas upto maximum of its full discharge carrying capacity. The contribution by Sirsa Branch to the Bhakra supplies should be taken as the discharges at Tajewala in excess of 8400 Cs. during the months of July and August and in excess of 9100 Cs in the months of June and September less the transit losses in the Western Yamuna Canal upto Indri as well as in the Sirsa Branch upto R.D. 88,000. If however, any reduction is called for in the discharge being passed through Sirsa Branch during these four months on account of operational constraints such as excess discharge in the Narwana Branch which cannot be further reduced during the period of system adjustment, a corresponding reduction should be made from the contribution of Yamuna waters to the Bhakra

---

<sup>27</sup> Govt. of India decision dated 15.09.81 regarding replacement / contribution into Sirsa branch from Western Yamuna Canal. It is not an agreement.

system. The Haryana Government should give complete data in justification of such reduction to the partner states.

5. The maximum carrying capacity of Sirsa Branch shall be determined for the present as the carrying capacity with minimum free Board at the Railway bridge at RD 44110. The Haryana Govt. in consultation and association with partners states should take up the question of carrying out suitable modification in the railway structure including reduction in the free board, with a view to pass a greater discharge through the canal upto 2800 cusecs, or more to meet with other requirements of Haryana, if any.

6. In order to satisfy the partner States that the above arrangements are being implemented by the Government of Haryana in letter and spirit, the Haryana Government shall supply to the BBMB the daily discharge of the river Yamuna reaching Tajewala, the share of Haryana from this discharge, the discharge passing through the Head Regulator of Western Yamuna Canal at Tajewala, the discharge passing through the Western Yamuna Canal at Dadupur, the discharge passing into the Augmentation Canal, the discharge passing through the Head Regulator at Indri into the Sirsa Branch and also in the Western Yamuna Main Canal below Indri, the discharge passing the head Regulator of the N.B.K. link, the discharge reaching R.D. 88,000 of the Sirsa Branch through Narwana Branch and the discharge fed into the Sirsa Branch by Barwala Link. If Haryana does not supply the information to the BBMB within 72 hours from the time at which the discharge and gauge measurement are normally taken, a contribution of 2502 cusecs for those days for which the information has not been supplied in time during July and August and a contribution of 2814 cusecs during those days for which information has not been supplied during the months of June and September shall be assumed as available to the Bhakra supplies.

7. Haryana shall remodel at its own cost Sirsa Branch from RD 0 to the off take point of the N.B.K link within two years of the date of issue of this order to pass the additional discharge required for irrigation in Western Yamuna Canal areas lying to the right to the N.B.K link which used to be served earlier from the Western Yamuna Canal. During the intervening period, the requirements of the areas to the right N.B.K. link upto a maximum of 600 cusecs prior to the construction of link should be allowed to be drawn through Sirsa Branch, and this requirement should not go towards contribution to the Bhakra supplies.

8. During the period June to September if the discharge being fed into the Sirsa Branch by Barwala Link and Narwana Branch have resulted in less drawal of supplies from the Western Yamuna Canal through Sirsa Branch inspite of the fact that more discharges could have been drawn in terms of (4) above subject to the constraints imposed by the system operation, such discharges being fed by Barwala Link and Narwana Branch should also be taken into account toward Bhakra supplies being contributed by the Western Yamuna Canal. However, the total contribution towards Bhakra supplies will be limited to the availability of the Yamuna waters for Bhakra areas through Sirsa Branch in Terms of para (4) above.

9. When releases from Bhakra exceed the requirements of partner states or when water goes below Harike provided such wastage not obligatory as a result of constraints imposed by systems operation, the contribution of Yamuna waters to the Bhakra supplies shall be reduced to the extent of such releases of wastages.

10. Haryana will discuss with the Railway authorities and take suitable steps to remove the restrictions caused by the railway bridge to enable the designed discharge to be passed and to make

modification, if necessary, in the structure for this purpose. For these discussions, Haryana will associate Punjab and Rajasthan States and the Bhakra Beas Management Board.

11. The above is subject to review on finalisation of the allocation of Yamuna waters among the concerned states.

Yours faithfully,  
sd/-  
(N.L. KHANNA)  
DEPUTY SECRETARY TO THE GOVT. OF INDIA,

**AGREEMENT OF 31<sup>st</sup> DECEMBER, 1981 ON ALLOCATION OF SURPLUS RAVI BEAS  
WATERS AND IMPLEMENTATION OF SUTLEJ YAMUNA LINK CANAL PROJECT  
BETWEEN PUNJAB, HARYANA AND RAJASTHAN**

WHEREAS under the Indus Waters Treaty of 1960, the waters of the three rivers, namely, Sutlej, Beas and Ravi became available for unrestricted use by India after 31<sup>st</sup> March, 1970; and

WHEREAS while at the time of signing of the said Treaty, the waters of the Sutlej had already been planned to be utilised for the Bhakra-Nangal Project, the surplus flow of rivers Ravi and Beas, over and above the pre-partition use, was allocated by agreement, in 1955 (hereinafter called the 1955 Agreement), between the concerned States as follows, namely:

Punjab	-	7.20 MAF (including 1.30 MAF for PEPSU)
Rajasthan	-	8.00 MAF
Jammu & Kashmir	-	<u>0.65 MAF</u>
		<u>15.85MAF</u>

and, for the purpose of the said allocation, the availability of water was based on the flow series of the said rivers for the years 1921-1945; and

WHEREAS the Central Government issued a notification on 24<sup>th</sup> March, 1976, allocating 3.5 MAF of the waters becoming available as a result of Beas Project to Haryana and the balance not exceeding 3.5 MAF to Punjab out of the total surplus Ravi-Beas waters of 7.2 MAF falling to the share of erstwhile State of Punjab after setting aside 0.2 MAF for Delhi drinking water supply; and

WHEREAS the Punjab Government sought a review of the aforesaid notification for increasing the allocation to Punjab and linked this matter to the construction of the Sutlej-Yamuna Link Canal for Haryana in Punjab territory; and

WHEREAS the Government of Haryana filed a suit in the Supreme Court praying inter-alia that a directive be issued to Punjab for expeditiously undertaking construction of the Sutlej-Yamuna Link Canal in Punjab territory and for declaring that the notification of the Government of India allocating the waters becoming available as a result of the Beas Project issued on 24<sup>th</sup> March, 1976, is final and binding; and

WHEREAS the Punjab Government also filed a suit in the Supreme Court challenging the competence of the Central Government to enact Section 78 of the Punjab Reorganisation Act 1966 and notwithstanding this, questioning the notification issued under Section 78 of the said Act; and

WHEREAS adjournment has been sought from time to time in hearing of the suits filed in the Supreme Court by Haryana and Punjab to enable the parties to arrive at a mutually acceptable settlement of the differences that have arisen; and

WHEREAS discussions have been held by the Prime Minister of India and Union Minister of Law, Justice and Company Affairs with the Chief Ministers of Haryana, Punjab and Rajasthan.

Now therefore we the Chief Ministers of Haryana, Rajasthan and Punjab keeping in view the overall national interest and desirous of speedy and optimum utilization of the waters of the Ravi and Beas Rivers and also having regard to the imperative need to resolve speedily the differences relating to the use of these waters in a spirit of give and take do hereby agree as under :



- (i) According to the flow series 1921-60; the total mean supply of Ravi Beas Waters is 20.56 MAF. Deducting the <sup>28</sup>pre-partition uses of 3.13 MAF and transit losses in the Madhopur Beas Link of 0.26 MAF, the net <sup>29</sup>surplus Ravi-Beas waters according to the flow series 1921-60 is 17.17 MAF as against the corresponding figure of 15.85 MAF for the flow series 1921-45, which forms the basis of water allocation under the 1955 Agreement. It is now hereby agreed that the mean supply of 17.17 MAF (Flow and Storage) may be re-allocated as under:

Share of Punjab	-	4.22 MAF
Share of Haryana	-	3.50 MAF
Share of Rajasthan	-	8.60 MAF
Quantity earmarked for Delhi Water Supply	-	0.20 MAF
Share of Jammu & Kashmir	-	<u>0.65 MAF</u>
		<u>17.17 MAF</u>

In case of any variation in the figure of 17.17 MAF in any year, the shares shall be changed pro-rata of the above revised allocations subject to the condition that no change shall be made in the allocation of Jammu & Kashmir which shall remain fixed as 0.65 MAF as stipulated in the 1955 Agreement. The quantity of 0.20 MAF for Delhi Water Supply stands as already allocated.

- (ii) Until such time as Rajasthan is in a position to utilize its full share, Punjab, shall be free to utilize the waters surplus to Rajasthan's requirements. As Rajasthan will soon be able to utilize its share Punjab shall make adequate alternative arrangements expeditiously for irrigation of its own lands by the time Rajasthan is in a position to utilize its full share. As a result, it is expected that during this transitional period when Rajasthan's requirements would not exceed 8.0 MAF, 4.82 MAF of water should be available to Punjab in a mean year when the availability is 17.17 MAF.
- (iii) The Bhakra and Beas Management Board (BBMB) shall be permitted to take all necessary measures for carrying out measurements and for ensuring delivery of supplies to all the concerned States in accordance with their entitlements such as rating the gauge discharge curves, installation of self-recording gauges, taking observations without any hindrance of the discharge measurements. The selection of the control points at which the Bhakra and Beas Management Board would take appropriate measures as mentioned above shall include but be not limited to all points at which Bhakra and/or Ravi-Beas discharges are being shared by more than one State and all regulation points on the concerned Rivers and Canals for determining the shareable supplies. The decision of the Bhakra and Beas Management Board would be binding insofar as the selection of the control points is concerned for the purposes of taking discharge measurements to facilitate equitable distribution of the waters but if any

<sup>28</sup> Pre-partition use from (a) Ravi 1.52 MAF (b) Beas 1.61 MAF. Pre-partition shares of (a) Punjab 1.98 MAF (b) Rajasthan 1.11 MAF (c) J&K 0.04 MAF. Pre-partition use of Punjab from Ravi 1.48 MAF and from Beas 0.5 MAF.

<sup>29</sup> Mean year inflow of (a) Ravi at Madhopur 6.97 MAF (b) Beas at Mandi Plain 13.59 MAF. Net mean year surplus inflow of (a) Ravi=(6.97-1.52-0.26) 5.19 MAF (b) Beas =(13.59-1.61) 11.98 MAF.

State Government contests the decision, the Central Government shall decide the matter within 3 months and this decision shall be final and binding. All the concerned State Governments shall co-operate fully and shall promptly carry out day-to-day directions of the Bhakra Beas Management in regard to regulation and control of supplies, operation of gates and any other matters, in their territories, for ensuring delivery of supplies as determined by Bhakra Beas Management Board in accordance with their entitlements as provided under the Agreement.

- (iv) The Sutlej-Yamuna Link Canal Project shall be implemented in a time bound manner so far as the canal and appurtenant works in the Punjab territory are concerned within a maximum period of two years from the date of signing of this Agreement so that Haryana is enabled to draw its allocated share of waters. The canal capacity for the purpose of design of the canal shall be mutually agreed upon between Punjab and Haryana within 15 days, failing which it shall be 6500 cusecs, as recommended by the former Chairman, Central water Commission.

Regarding the claim of Rajasthan to convey 0.57 MAF of water through Sutlej-Yamuna Link/Bhakra System, Secretary, Ministry of Irrigation, Government of India will hold discussions with Punjab, Haryana and Rajasthan with a view to reaching an acceptable solution. These discussions shall be concluded in a period of 15 days from the date of affixing signatures herein and before the work starts. If no mutually acceptable agreement is reached, the decision of Secretary, Ministry of Irrigation to be given within this period shall be binding on all the parties. In case it is found necessary to increase the capacity of Sutlej-Yamuna Link Canal beyond that decided under above sub-para in any or entire reach thereof, the States concerned shall implement the Link Canal in a time bound manner with such increased capacity at the cost of Rajasthan Government.

The differences with regard to the alignment of the Link Canal and appurtenant works in the Punjab territory would be discussed by the Haryana and Punjab Governments who should agree to a mutually acceptable canal alignment in Punjab territory including appurtenant works within a period of three months from the date of signing of this Agreement. If, however, the State Governments are unable to reach complete agreement within this period, the matter shall be decided by the Central Government within a period of two weeks. Both the State Governments shall co-operate fully to enable Central Government to take timely decision in this regard. The decision of the Central Government in this matter shall be final and binding on both the Governments and the canal and appurtenant works in Punjab territory shall be implemented in full by Punjab Government. However, work on the already agreed reaches of the alignment would start within fifteen days of the signing of the agreement and work within the other reaches immediately after the alignment has been decided. Haryana shall provide necessary funds to the Punjab Government for surveys, investigations and construction of the Link Canal and appurtenant works in Punjab territory. Where, as a result of acquisition of land, extreme hardship is caused to families, the Punjab government shall forward to the Haryana Government suitable proposals for relieving such hardship in line with such schemes in Punjab undertaken in respect of similar canal works in Punjab territory. The Haryana Government shall arrange to bear the cost of such proposals. In the event, however, of any difference of opinion arising on the question of sharing such costs, the parties shall abide by the decision of the Secretary, Ministry of Irrigation, Government of India. The progress of the work shall not, however, be delayed on this account. The Central Government

will be requested to monitor the progress of the works being carried out in Punjab territory.

- (v) The agreement reached in paras (i) to (iv) above shall be implemented in full by the Governments of Haryana, Rajasthan and Punjab. If any signatory State feels that any of the provisions of the Agreement are not being complied with, the matter shall be referred to the Central Government whose decisions shall be binding on all the States. In this respect the Central Government shall be competent to issue such directions or take such measures as may be appropriate to the circumstances of the cases to facilitate and ensure such compliance.
- (vi) The suits filed by the Governments of Haryana and Punjab in the Supreme Court would be withdrawn by the respective Governments without any reservations whatsoever but subject to the terms of this Agreement.
- (vii) The notification of the Government of India allocating the waters becoming available as a result of the Beas Project issued on 24<sup>th</sup> March, 1976 and published in the Gazette of India, part II, Section 3, sub-section (ii) as well as the 1955 Agreement stand modified to the extent varied by this Agreement and shall be deemed to be in force as modified herein.

In case of any difference on interpretation of this <sup>30</sup>Agreement, the matter will be referred to the Central Government whose decision shall be final.

We place on record and gratefully acknowledge the assistance and advice given by our respected Prime Minister Smt. Indira Gandhi in arriving at this expeditious and amicable settlement.

NEW DELHI, the 31<sup>st</sup> December, 1981.

(BHAJAN LAL)  
Chief Minister of  
Haryana

(SHIV CHARAN MATTUR)  
Chief Minister of  
Rajasthan

(DARBARA SINGH)  
Chief Minister of  
Punjab

In the presence of:

(INDIRA GANDHI)  
Prime Minister of India

---

<sup>30</sup> Punjab Govt. claims that this Agreement has been terminated by Punjab Termination of Agreements Act, 2004 enacted by Punjab in 2004.

No.15/1/82-IT  
Government of India  
Ministry of Irrigation

New Delhi, the 15<sup>th</sup> January, 1982

To

1. Shri P.P. Caprihan  
Secretary,  
Irrigation & Power Department,  
Government of Haryana,  
Chandigarh.
2. Shri G. Balakrishnan,  
Secretary,  
Irrigation & Power Department,  
Government of Punjab,  
Chandigarh.
3. Shri M.L. Mathur,  
Secretary,  
Irrigation Department  
Government of Rajasthan,  
Jaipur.

SUBJECT: Rajasthan's claim for conveying 0.57 MAF of Waters through Sutlej-Yamuna Link/Bhakra system in pursuance of the Agreement dated 31.12.81 "regarding allocation of surplus flows of the Rivers Ravi and Beas over and above the pre-partition uses and implementation of the Sutlej-Yamuna Link Canal Project" amongst the Chief Ministers of Haryana, Punjab and Rajasthan.

Sir,

I am directed to convey the decision of the Secretary, Ministry of Irrigation, in pursuance of clause (iv) of the Agreement cited at subject above.

Yours faithfully,  
Sd/-

(R.K. BHATIA)

Deputy Secretary to the Govt. of India.

Encls: As above.

Copy with a copy of the decision is forwarded to Shri B.C. Alva, Chairman, Bhakra Beas Management Board, Chandigarh, for information and necessary action.

Sd/-

(R.K. BHATIA)

Deputy Secretary to the Govt. of India.

NOTE: AWARD FOLLOWS IN THE NEXT PAGE.

## **AWARD OF GOVERNMENT OF INDIA 15<sup>TH</sup> JANUARY, 1982, ON RAJASTHAN'S CLAIM TO CONVEY 0.57 MAF OF WATERS THROUGH SYL / BHAKRA SYSTEM**

The agreement signed by the Chief Ministers of Haryana, Rajasthan and Punjab on 31<sup>st</sup> December, 1981 regarding the apportionment of Ravi-Beas Waters (hereinafter referred to as 1981 Agreement) provides as under:-

“Regarding the claim of Rajasthan to convey 0.57 MAF of waters through Sutlej-Yamuna Link / Bhakra System, Secretary, Ministry of Irrigation, Government of India will hold discussions with Punjab, Haryana and Rajasthan with a view to reaching an acceptable solution. These discussions shall be concluded in a period of 15 days from the date of affixing signatures herein and before the work starts. If no mutually acceptable agreement is reached, the decision of Secretary, Ministry of Irrigation to be given within this period shall be binding on all the parties. In case it is found necessary to increase the capacity of Sutlej-Yamuna Link Canal beyond that decided under above sub-para in any or entire reach thereof, the States concerned shall implement the Link Canal in a time bound manner with such increased capacity at the cost of Rajasthan Government.”

Immediately after the agreement was signed a meeting was convened on 31<sup>st</sup> December, 1981 for implementation of the above part of the agreement along with other matters. It was decided that Rajasthan would submit its case to the Secretary (Irrigation), Government of India by 5<sup>th</sup> January, 1982 with copies to Punjab, Haryana and Bhakra-Beas Management Board and the States of Punjab and Haryana would send their comments by 8<sup>th</sup> January, 1982. It was also decided that Secretary (Irrigation) would take a meeting on 12<sup>th</sup> January, 1982 of all the 3 States. Accordingly, the Statement of the case of Rajasthan and the comments of the other States were received and the meeting was held on 12<sup>th</sup> January (afternoon) which continued on 13<sup>th</sup>, 14<sup>th</sup> and 15<sup>th</sup> January, 1982. This meeting was attended by Secretaries and Chief Engineers of the 3 States and Chairman, Bhakra Beas Management Board. The representatives of the 3 States made an attempt to resolve the issue by discussions amongst themselves before the meeting on 12<sup>th</sup> January, but it was reported that this was not found possible.

There was prolonged discussions and the 3 States produced documents and furnished extracts and further data to support their respective arguments. Clarifications were also obtained on relevant matters. Attempt was made for reaching a mutually acceptable solution by the undersigned but this was infructuous. I, therefore, give the following decision on the claim of Rajasthan to convey 0.57 MAF of waters to Sutlej-Yamuna Link / Bhakra System after taking into account the view points of the 3 States and keeping in view all relevant aspects including cost involved and the extent of accommodation necessary by the concerned States for implementing this decision:-

1. The reasonable requirement of Rajasthan for irrigating Nohar and Sidhmukh areas by flow is assessed as 0.47 MAF and this quantum is considered for providing flow irrigation. Rajasthan's claim of Beas diverted waters at Nangal in excess of 0.47 MAF is not justified.
2. In order to provide flow irrigation, the following mode of conveyance should be adopted:
  - (a) The Bhakra areas of Rajasthan now being served by <sup>31</sup>Southern Ghaggar Canal and <sup>32</sup>Jandwala distributary should be transferred to Rajasthan Feeder and the

---

<sup>31</sup> Southern Ghaggar canal offtakes from Ottu feeder of Rori Branch of Bhakra Main Branch. Bhakra Main Branch starts from tail of Bhakra Main Line (RD538780 Ft of BML).

water thus saved be diverted to Nohar and Sidhmukh area via <sup>33</sup>Fatehabad Branch, Kishangarh Sub Branch and Baruwali distributary by remodeling this system to convey 0.30 MAF at Nangal at the capacity factor for the Bhakra System. The existing Bhakra System in upper reaches would remain unaffected. This should be done at the cost of Rajasthan Government.

- (b) The <sup>34</sup>remaining quantity of 0.17 MAF which is equivalent to about 300 cusecs shall be delivered to Rajasthan ex-Nangal via BML. It has already been unanimously decided in the meeting held by the Secretary (Irrigation) Government of India on 7.11.81 and attended to by representatives of Punjab, Haryana and Rajasthan that BML should be restored to its original designed capacity of 12,500 cusecs and that the work should be taken up immediately. Rajasthan is utilizing at present a capacity of 865 cusecs at <sup>35</sup>contact points on Rajasthan-Haryana border through BML during the peak supply period. Rajasthan would be further entitled to 300 cusecs capacity for Nohar and Sidhmukh areas corresponding to 0.17 MAF to be released ex-Nangal after BML is restored to its original capacity. Rajasthan should pay the cost of restoration of capacity in BML taking into account its increased entitlement.
3. The total quantum of Beas diverted waters through BSL Project is 3.82 MAF at the maximum. Out of this 0.20 MAF would be reserved for Delhi as allocated in 1981 agreement and of the remaining 3.62 MAF, Rajasthan shall be entitled to 0.17 MAF. Haryana shall draw the remaining 0.05 MAF ex-Harike through Rajasthan Feeder from an appropriate point upstream of the Link channel at RD 496250 connecting Rajasthan Feeder and Sirhind Feeder. Haryana can, however, draw water by this arrangement upto 0.08 MAF for supplying its Bhakra areas by flow. Haryana, in its own interest, might examine the feasibility to increase this quantity to the maximum extent in order to make largest use of its share of Ravi-Beas Waters in good years. This should be done at the cost of Haryana.
4. Punjab, Rajasthan and Haryana shall implement the provisions of 1981 Agreement as contained in paragraph (iii) relating to the control of Bhakra and Beas Management Board for ensuring delivery of supplies according to the entitlements in so far as the arrangements contained in paras 2 (a) and 3 herein are concerned.
5. The arrangements under 2(b) above shall come into effect after the capacity of BML has been restored.
6. Punjab, Rajasthan and Haryana shall co-operate fully with one another in implementation of the above decision.

---

<sup>32</sup> Jandwala distributary offtakes from RD 401500 Ft of Bhakra Main Branch.

<sup>33</sup> Fatehabad branch offtakes from tail of Bhakra Main Line and Baruwali distributary from RD 301468 Ft of Fatehabad Branch. Kishangarh sub branch offtakes from RD 160400 Ft of Fatehabad Branch.

<sup>34</sup> Remaining quantity of 0.17 MAF shall be delivered to Rajasthan ex-Nangal via BML, Fatehabad Branch and through Kishangarh Sub Branch and Baruwali distributary of Fatehabad branch.

<sup>35</sup> There are four contact points (CP) on Rajasthan –Haryana border which are as follows (i) On Kishangarh Sub Branch (ii) Baruwali distributary (iii) Southern Ghaggar canal (iv) Jandwala distributary

Further the above decision does not bind the Govt of India in any way to accept any proposal / project which may be submitted to it by any party State in pursuance of the decision contained herein.

Sd/- 15.1.1982  
(C.C. PATEL)  
Secretary to the Government of India  
Ministry of Irrigation

**Minutes of the meeting of Augmentation Water Supply Scheme, Chandigarh held on 6.7.1983 at 3.30 P.M in Home Minister Room, North Block, New Delhi.**

--

1. A meeting was conveyed by the Home Minister on 6<sup>th</sup> July, 1983 at 3.30 P.M to discuss the matter relating to the sharing of 40 cusecs of water out of the first phase of the Chandigarh Water Supply Augmentation Scheme. List of persons who attended the meeting is in the last.
2. Home Minister outlined the need for coming to an agreement on sharing as the project was nearing completion and its benefits should be extended to the people without any delay. Law Minister emphasized that sharing and related aspects should be finally settled at this meeting and there should not be any hitch at a later stage on account of some essential aspect having been overlooked.
3. The meeting took note of the fact that there had been arrangement earlier that out of the 40 cusecs, 30 cusecs will be made available to Chandigarh, U.T. There had been, however, no conclusive agreement as to how the remaining 10 cusecs should be shared between Punjab and Haryana, taking in to account the requirements of Mohali, Panchkula and Chandimandir Cantonment Area. Whereas Punjab had suggested that these 10cusecs should be shared 60:40 between them and Haryana, Haryana Government wanted the entire 10 cusecs to be earmarked for them to meet the need of Panchkula and out of this, they were prepared to meet their requirement of Chandimandir Cantonment Area. It was noted that a decision with regard to the sharing of water was absolutely necessary to enable the Ministry of Works and Housing to get the approval for the revised estimate from the Expenditure Finance Committee and to issue necessary sanction. The cost of Scheme had gone upto very nearly Rs.13 crores.
4. After hearing the Chief Minister of Punjab and Haryana and discussing the matter in all its aspects the following formula for sharing was agreed upon subject to the condition put forth by both the Chief Ministers that the entire cost of these Scheme would be borne by the Govt. of India as against the original understanding that the cost will be proportionately shared between the Chandigarh, Punjab and Haryana.

a. Chandigarh, U.T.	29 Cusecs
b. Punjab	5 Cusecs
c. Haryana	3 Cusecs
d. Cantonment Area	<u>3 Cusecs</u>
	<u>40 Cusecs</u>

It was agreed that the raw water will be supplied free by the two States, 24 cusecs by Punjab and 16 cusecs by Haryana. It was agreed that Ministry of Work and Housing be requested to take into account the change in the arrangement for sharing the cost while issuing the sanction for the revised estimate.

5. The question of determining the agency for operating and maintaining the scheme as well as meeting the cost thereof was discussed next. It was agreed that Punjab and U.T of Chandigarh will look after the operation and maintenance of the pipe line and connected works within their respective areas. The cost of operation and maintenance incurred by Punjab Government will be paid for by the U.T.Admn. in accordance with the norms to be prescribed the Ministry of Work and Housing in consultation with(CPHEEO).



## ANNEXURE

1. Sh.Jagannath Kaushal, Minister of Law, Justice and Company Affairs
2. Sh. P. Vankata Subbaiah, Minister of State for Home Affairs.
3. Sh. Bhajan Lal, Chief Minister, Haryana.
4. Sh. Darbara Singh, Chief Minister, Punjab
5. Sh. T.N. Chaturvedi, H.S.
6. Sh. M. K. Mukherjee, Secy. Ministry of Work and Housing.
7. Sh S.Vardan, Additional Secy, Ministry of Home Affairs.
8. Sh. B.S.Ohja, Principal Secy to C.M, Haryana.
9. Sh. K.Banerjee, C.C. Chandigarh.
10. Sh.Tajinder Khanna, Principal Secy. to C.M. Punjab.
11. Sh V.K. Khanna, Secy. P.W.D. Punjab.
12. Sh. O.P.Malhotra, C.E., U.T., Chandigarh.

**MEMORANDUM OF UNDERSTANDING BETWEEN CHIEF MINISTER OF HIMACHAL  
AND CHIEF MINISTER OF PUNJAB AT THE DISCUSSIONS HELD ON 15.7.1983  
REGARDING ACQUISITION OF LAND IN HIMACHAL PRADESH FOR THE  
ANANDPUR SAHIB HYDEL CHANNEL PROJECT OF PUNJAB**

The Chief Minister of Himachal Pradesh and the Chief Minister of Punjab held discussions on the 15<sup>th</sup> July, 1983 regarding the acquisition of land in village Debit Majri, District Bilaspur in Himachal Pradesh for the Anandpur Sahib Hydel Channel Project of Punjab and reached the following understanding:-

- (i) The Government of Punjab agrees to the release to the Government of Himachal Pradesh of 25 cusec of water regularly for the use in Himachal Pradesh for irrigation and drinking water purposes.  
  
The Government of Himachal Pradesh shall pay for this water on the pattern of payment to the Bhakra Beas Management Board for the water released by the latter to Himachal Pradesh.
- (ii) The release point for this water will be located in the territory of Punjab and will be subject to inspection by the officers of the Government of Himachal Pradesh.
- (iii) The Government of Punjab agreed to make pucca-both the bunds of the Anandpur Sahib Hydel Channel inside the territory of Himachal Pradesh to prevent soil erosion and to maintain the work at the cost of the Government of Punjab. The Government of Punjab further agreed that this work will be done within a period of three months.
- (iv) The Government of Punjab shall construct a bridge across the Anandpur Sahib-Hydel Channel such that both the ends of the bridge are in the territory of Himachal Pradesh. The bridge shall be completed within six months.
- (v) The Government of Himachal Pradesh shall make immediate arrangements for the announcements of the awards for the acquisition of land in question.
- (vi) On the signing of this Memorandum, the Government of Punjab may undertake work in the Anandpur Sahib Hydel Channel project falling within the Himachal territory and the Government of Himachal Pradesh shall render all necessary assistance to enable the Government of Punjab to do so without let or hindrance.
- (vii) The Chief Ministers agreed that the Government of Punjab and the Government of Himachal Pradesh shall execute the formal agreement covering the above points of understanding within 15 days.
- (viii) In case any dispute arises out of this Memorandum of understanding on any point whatsoever including interpretation and implementation, the matter shall be referred to the Union Minister for Irrigation for arbitration and his award on the matter shall be binding on both the Governments.

Sd/-  
(DARBARA SINGH)  
Chief Minister, Punjab  
16.7.1983  
Camp: Simla

Sd/-  
(VIRBHADRA SINGH)  
Chief Minister, Himachal Pradesh  
16.7.1983  
Simla

**MEMORANDUM OF UNDERSTANDING BETWEEN THE CHIEF MINISTER OF HIMACHAL PRADESH AND THE CHIEF MINISTER OF PUNJAB AT THE DISCUSSIONS HELD ON 15.7.1983 REGARDING CONSTRUCTION OF SHAH NEHAR BARRAGE AND MUKERIAN HYDEL CHANNEL PROJECTS BY PUNJAB.**

The Chief Minister of Himachal Pradesh and the Chief Minister of Punjab held discussions on the 15<sup>th</sup> July, 1983 regarding inter-state issues relating to the construction of Shah Nehar barrage and the Mukerian Hydel Channel Projects by Punjab.

Both the Chief Ministers expressed satisfaction that on the following items, both the Governments have come to mutual understanding.

i) Identification of the Areas to be Irrigated in Himachal

	Left Bank of Beas	Right Bank of Beas	Total
Existing Irrigated Area	1,578 Hect. (3,899 Acres)	1,887 Hects. (4,663 Acres)	3,465 Hects. (8,562 Acres)
Potentially irrigable Area	1,787 Hects. (4,416 Acres)	10,035 Hects. (24,798 Acres)	11,822 Hects. (29,214 Acres)
Total:	3,365 Hects. (8,315 Acres)	11,922 Hects. (29,461 Acres)	15,287 Hects. (37,776)

(Conversion factor 1 Hects. = 2.471143 acres)

ii) Tourism and Fishing Rights

The rights of fishing and tourism in the project areas (including the balancing reservoir) should remain with the respective Governments of the States concerned (on territorial basis).

iii) Compensation for Gharats

For the sixty gharats to be rendered in operative in Himachal area, suitable compensation should be paid by the Punjab Government to the right holders of the Gharats according to the principles and practices of the land Acquisition Act which has already been followed elsewhere in Himachal Pradesh including the gharats affected by the existing Pong Dam. This will be done on the basis of evidence in each case on merits.

iv) Compensation for Non Acquired Land etc.

Punjab will pay compensation to a particular private land owner, whose lands have been used under the project without acquisition proceedings on the basis of evidence to be adduced by the land owner. Similarly, Punjab will make payment for the earth borrowed from the private land owners if the latter adduce evidence in this regard.

v) Total Water for Himachal Pradesh

Keeping in view the existing water allowance norms in Punjab and Himachal Pradesh, the two Chief Ministers agreed that 228 (two hundred and twenty-eight) cusecs of water shall be allowed to Himachal Pradesh regularly.

vi) Himachal Pradesh Government will receive this without payment of any cost.

vii) To convey the water to the farmers in Himachal Pradesh, estimates of alternative projects will be prepared by the Chief Engineer, Irrigation & Public Health, Himachal Pradesh in consultation with the Chief Engineer, Irrigation, Punjab in order to ensure that the alternative projects are prepared in the most cost effective manner consistent with the objective of irrigating the Himachal areas already mentioned. If there is any substantial difference of opinion between the authorities of the two Govts., the matter shall be referred to the Central Water Commission for arbitration, whose decision shall be binding on both the authorities.

viii) Consistent with the technical requirements, the Regulator for release of water for the left bank areas will be located in Punjab territory and for the right bank areas, in Himachal Pradesh territory, subject to the condition that the control of the regulators shall be with Punjab and that the technical officers of the Government of Himachal Pradesh shall have the right of inspection of the same.

ix) The Government of Punjab agrees in principle to bear the entire cost of the lined carrier channels for irrigating the areas currently receiving irrigation in Himachal Pradesh including the Head Regulator. For such channels in the potential areas, the Government of Punjab and the Government of Himachal Pradesh agree to share the costs.

The two Chief Ministers mutually decided the following formula for such cost sharing, namely, an estimate for an integrated project for the construction of channels for both the currently irrigated areas and the potentially irrigable areas, would first be prepared on the assumption of the existence of the Shah Nehar Barrage. Simultaneously, separate estimates will be prepared for the carrier channels for irrigating the potentially irrigable areas on the assumption of non-existence of the Shah Nehar Barrage. The difference in costs between these two estimates shall be paid by the Government of Punjab to the Government of Himachal Pradesh.

x) During the interim period when the alternative projects for the currently irrigated areas will be under execution, the Government of Punjab shall pay to the farmers of Himachal Pradesh crop compensation for the loss of irrigation waters in respect of areas actually receiving irrigation during the year.

xi) The Chief Ministers noted that the claim of Himachal Pradesh for share in the power to be generated in Punjab on the Mukerian Hydel Channel is separately under the consideration of the Government of India. They further agreed that the matter will be regulated by any inter-state agreement that might be arrived at under the auspices of the Government of India.

xii) During the interim period of the commissioning of only the first Power House on the Mukerian Hydel Channel, water will be discharged into the river Beas through escape points. The Chief Minister, Punjab assured the Chief Minister Himachal Pradesh that consequent upon such discharge of water, there will be no threat of soil erosion of fields in Himachal Pradesh situated downstream. He further assured the Chief Minister, Himachal Pradesh that in case such damage actually occurs, the Government of Punjab shall take appropriate compensatory and remedial measures.

xiii) The Government of Punjab shall pay to the Government of Himachal Pradesh the entire amount of the former's financial liability referred to in Clause (ix) relating to the existing irrigated areas within three months of the finalisation of the estimates and furnishing of the same by the Government of Himachal Pradesh to the Government of Punjab.

xiv) On the signing of this Memorandum, the Government of Punjab may undertake work in the Shah Nehar Barrage Project and the Mukerian Hydel Project falling within the Himachal territory and the Government of Himachal Pradesh shall render all necessary assistance to enable the Government of Punjab to do so without let or hindrance.

xv) The Chief Ministers agreed that the Government of Punjab and the Government of Himachal Pradesh shall execute the formal agreement covering the above points of understanding within 15 days.

xvi) In case any dispute arises out of this Memorandum of Understanding on any point whatsoever including interpretation and implementation, the matter shall be referred to the Union Minister for Irrigation for arbitration and his award on the matter shall be binding on both the Governments.

Sd/-  
(DARBARA SINGH)  
Chief Minister, Punjab  
16.7.1983  
Camp: Shimla

Sd/-  
(VIRBHADRA SINGH)  
Chief Minister, Himachal Pradesh  
16.7.1983  
Shimla

**AGREEMENT DATED 4<sup>th</sup> AUGUST 1983 BETWEEN THE GOVERNMENTS OF PUNJAB AND HIMACHAL PRADESH RELATING TO THE CONSTRUCTION OF SHAH NEHAR BARRAGE AND THE MUKERIAN HYDEL CHANNEL PROJECT BY PUNJAB**

AN AGREEMENT made this fourth day of August, 1983, BETWEEN the Governor of Punjab (hereinafter called the Government of Punjab) of the one part AND the Governor of Himachal Pradesh (hereinafter called the Government of Himachal Pradesh) of the other part;

WHEREAS the Government of Punjab has undertaken construction of Projects known as Shah Nehar Barrage and Mukerian Hydel Channel Projects to utilize water of river Beas for various purposes in the State of Punjab;

AND WHEREAS these projects involve some territories and rights of people of the State of Himachal Pradesh;

AND WHEREAS by the construction of the said projects by the Government of Punjab, the water flowing in river Beas shall be diverted thereby depriving the inhabitants of the affected areas of Himachal Pradesh their rights of use of water;

AND WHEREAS rights of the inhabitants of the affected area in Himachal Pradesh are to be protected and for that purpose the areas receiving irrigation at present and having the potential for irrigation have been identified;

AND WHEREAS the Government of Punjab has approached the Government of Himachal Pradesh for assistance in the execution and completion of these projects in so far as these are located in the territory of Himachal Pradesh and the Government of Himachal Pradesh has agreed to provide such assistance to Government of Punjab as the parties hereto agreed to the terms and conditions and stipulations as are herein contained.

NOW THESE PRESENTS WITNESS and the parties hereto hereby agree as follows:-

1. That the areas identified to be irrigated in Himachal Pradesh are as follows:-

	Left Bank of Beas	Right Bank of Beas	Total
Existing irrigated areas	1,578 Hects. (3,899 acres)	1,887 Hect. (4,663 acres)	3,465 Hect. (8,562 acres)
Potentially irrigable areas	1,787 Hect. (4,416 acres)	10,036 Hect. (24,798 acres)	11,822 Hect. (29,214 acres)
Total	3,365 Hect. (8,315 acres)	11,922 Hect. (29,461 acres)	15,287 Hect. (37,776 acres)
	Conversion factor 1 Hect.:		2.471143 acres

2. That the rights of fishing and tourism in the project areas (including the balancing reservoir) shall remain with the respective Governments of the States concerned (on territorial basis).

3. That for the sixty gharats to be rendered in-operative in Himachal Pradesh area, suitable compensation shall be paid by the Government of Punjab to the right holders of the gharats according to principles and practices of the Land Acquisition Act which has already been followed elsewhere in

Himachal Pradesh including the gharata affected by the existing Pong Dam. This will be done on the basis of evidence in each case on merits.

4. That Government of Punjab will pay compensation to a particular private land owner, whose land has been used under the project without acquisition proceedings on the basis of evidence to be adduced by the land owner. Similarly Govt. of Punjab will make payment for the earth borrowed from the private land-owners if the latter adduce evidence in this regard.

5. That keeping in view the existing water allowance norms in Punjab and Himachal Pradesh, it is agreed that Himachal Pradesh shall get 228 (two hundred and twenty eight) cusecs of water regularly without payment of any cost.

6. That to convey the water to the farmers in Himachal Pradesh, estimates of alternative projects will be prepared by the Chief Engineer, Irrigation & Public Health, Himachal Pradesh in consultation with the Chief Engineer, Irrigation, Punjab in order to ensure that the alternative projects are prepared in the most cost effective manner consistent with the objective of irrigating the Himachal areas already mentioned. If there is any substantial difference of opinion between the authorities of the two Governments, the matter shall be referred to the Central Water Commission for arbitration whose decision shall be binding on both the parties.

7. That consistent with the technical requirements, the regulator for release of water for the left bank areas will be located in Punjab territory and for the right bank areas, in Himachal Pradesh territory subject to the condition that the control of the regulators shall be with Government of Punjab and that the technical officers of the Government of Himachal Pradesh shall have the right of inspection of the same.

8. That the Government of Punjab agrees in principle to bear the entire cost of the lined carrier channels for irrigating the areas currently receiving irrigation in Himachal Pradesh including the head regulators. For such channels in the potential areas, the Government of Punjab and the Government of Himachal Pradesh agree to share the costs.

It is mutually agreed to have cost sharing formula for which an estimate for an integrated project for the construction of carrier channels for both the currently irrigated areas and the potentially irrigable areas, would first be prepared on the assumption of the existence of the Shah Nehar Barrage. Simultaneously separate estimates will be prepared for the carrier channels for irrigating the potentially irrigable areas on the assumption of non-existence of the Shah Nehar Barrage. The difference in costs between these two estimates shall be paid by the Government of Punjab to the Government of Himachal Pradesh.

9. That during the interim period when the alternative projects for the currently irrigated areas will be under execution, the Government of Punjab shall pay to the farmers of Himachal Pradesh crop compensation for loss of Irrigation waters in respect of areas actually receiving irrigation during the year.

10. That both parties hereto have noted that the claim of Himachal Pradesh for share in the power to be generated in Punjab on the Mukerian Hydel Channel is separately under the consideration of the Government of India. It is agreed that the matter will be regulated by any Inter-State agreement that might be arrived at under the auspices of the Government of India.

11. That during the interim period of the commissioning of the first power house on the Mukerian Hydel Channel, water will be discharged into the river Beas through escape points. The Government

of Punjab assures the Government of Himachal Pradesh that consequent upon such discharge of water, there will be no threat of soil erosion to fields in Himachal Pradesh situated downstream. In case such damage actually occurs, the Government of Punjab shall take appropriate compensatory and remedial measures.

12. That the Government of Punjab shall pay to the Government of Himachal Pradesh the entire amount of the farmer's financial liability referred to in clause(8) relating to the existing irrigated areas within three months of the finalisation of the estimates and furnishing of the same by the Government of Himachal Pradesh to the Government of Punjab.

13. That the Government of Punjab may undertake work in the Shah Nehar Barrage Project and the Mukerian Hydel Project falling within the Himachal territory and the Government of Himachal Pradesh shall render all necessary assistance to enable the Government of Punjab to do so without let or hindrance.

14. That in case any dispute arises out of this agreement on any point whatsoever including interpretation and implementation, the matter shall be referred to the Union Minister for Irrigation for arbitration and his award in the matter shall be binding on both the parties.

15. IN WITNESS WHEREOF Secretary (Irrigation and Power) to the Government of Punjab for and on behalf of the Governor of Punjab and Secretary (Irrigation and Public Health) to the Government of Himachal Pradesh for and on behalf of the Governor of Himachal Pradesh have signed these present on the day and year first above written.

Signed by                      Sd/-  
(G. BALAKRISHNAN)  
for and on behalf of the  
Governor of Punjab

Sd/-  
(A.K. GOSWAMI)  
for and on behalf of the  
Governor of Himachal Pradesh

Address:                      Secretary to the Government  
of Punjab, Department of Irrigation and  
Power

Secretary to the Government  
Chief Engineer Irrigation and  
Public Health,  
Himachal Pradesh.

Witness 1.                      MUKUL JOSIN  
JOINT SECRETARY DEPTT. OF  
IRRIGATION AND POWER,  
GOVT. OF PUNJAB

1.



Witness 2.

Sd/-  
(R. DASS)

Sd/-  
(R.L. SHARMA)

Address

Dy.Secretary (Irrigation Power)  
Punjab Government

Dy.Secretary  
Irrigation & Power  
Punjab Government.

**AGREEMENT REACHED 10.05.1984 BETWEEN THE CHIEF MINISTERS OF RAJASTHAN AND HARYANA AND THE GOVERNOR OF PUNJAB AND GOVERNMENT OF INDIA REGARDING THE SUPPLY OF COOLING WATER FOR ROPAR THERMAL POWR STATION AND COMMISSIONING OF THE ANANDPUR SAHIB HYDEL PROJECT**

The following agreement is drawn up in the overall national interest of expediting the commissioning of power generating capacities in general and in northern region in particular:

**I. Ropar Thermal Stage-I – Cooling Water Arrangement**

1. In the interest of expeditious commissioning of Stage-I of the Ropar Thermal Power Station in Punjab, the first of the two units of 210 MW of which is at an advanced stage of commissioning, the following arrangements are agreed to:-

- i) 600 cusecs of water will be supplied from the Nangal Hydel Channal to cater to the open cooling cycle system already installed for stage-I of the Ropar Thermal Power Station.
- ii) With a view to reducing the off-take of cooling water from the NHC, Punjab will consider the installation of a closed cycle cooling arrangements with cooling towers for Stage-I, and will undertake installation of cooling towers for cooling water supply for Stage-II.
- iii) Punjab will further take expeditious steps to complete restoration of BML to its designed capacity of 12,500 cusecs not later than 31<sup>st</sup> May, 1985. The shares of Rajasthan and Haryana of the funds required for the restoration work of BML will be placed at the disposal of Punjab by the respective State Governments as needed from time to time.

Estimates for the restoration of the capacity of BML have been furnished by Punjab to Haryana, Rajasthan, BBMB and CWC. These estimates will be finalized by the CWC within a period of two months, taking into account the comments of the three States and BBMB, and the decisions of the CWC in this regard shall be final and binding.

Pending finalisation of the estimates by CWC, Punjab will start the work of restoration for which funds will be made available by the three States. CWC will separately monitor the progress of work of restoration of BML capacity by Punjab.

- iv) On restoration of BML to its designed capacity, on May, 1985, whichever is earlier, any drawal of cooling water as determined by the BBMB from NHC by Punjab will be out of Punjab's share in BML.
  - v) In the light of clauses (i) to (iv) above, the States concur to the link-up of NHC with Ropar Thermal Power Station.
2. The administration, maintenance and operation of the regulator for the supply of cooling water to the Ropar Thermal Power Station will vest with the Bhakra Beas Management Board, subject to further review referred to in para 3 below.
3. The above arrangements in respect of supply of cooling water for Stage-I of Ropar Thermal Power Station will be reviewed by the parties to this agreement after a period of one year.

II. Anandpur Sahib Hydel Project – Link up of Anandpur Sahib Hydel Channel with the Nangal Reservoir.

i) In view of the claims raised by Haryana and Rajasthan to sharing of power in Anandpur Sahib Hydel Project, Mukerian Hydel Project, Thein Dam Project, UBDC Stage-II and Shahpur Kandi Hydel Scheme, it is hereby agreed that the Government of India shall refer the matter to the Supreme Court for its opinion. The Supreme Court's opinion obtained by the Govt. of India shall be remitted to the signatory states and shall be binding on them. The terms of reference to the Supreme Court shall be as under:

- a) Are the States of Haryana and Rajasthan entitled to a share in the power generated in the Anandpur Sahib Hydel Project, Mukerian Hydel Project, Thein Dam Project, UBDC Stage-II and Shahpur Kandi Hydel Scheme; and
- b) if they are, what would be the share of each State.

ii) In case no opinion on the above terms is expressed by the Supreme Court for any reason, the parties agree to jointly make a submission to the Supreme Court for referring the dispute to a sitting Judge of that Court whose Award shall be binding on them as well as BBMB.

iii) In case no opinion on the above terms of reference is forthcoming from the Supreme Court and no reference of the dispute is made by the Supreme Court to a Judge of that Court as mentioned in (ii) above, it is hereby further agreed that the Government of India shall refer the matter to a Judge of the Supreme Court to be nominated by it. The Award of the Judge shall be binding on all the signatory States.

iv) In the light of clauses (i), (ii) and (iii) above, the signatory States concur to the link up of Anandpur Sahib Hydel Channel with the Nangal Reservoir to enable commissioning of the Anandpur Sahib Hydel Project expeditiously.

v) The administration, maintenance and operation of the Anandpur Sahib Hydel Project head regulator will vest with the BBMB.

vi) Pending receipt of the opinion of the Supreme Court / decision of the Judge, Government of India will give due consideration to the requests of Haryana and Rajasthan for making available additional power from the Central unallocated share in the Central generating stations.

Signed at New Delhi, on the 10<sup>th</sup> May, 1984.

Sd/-  
(B.D. PANDEY)  
Governor of Punjab

Sd/-  
(BHAJAN LAL)  
Chief Minister of  
Haryana

Sd/-  
(S.C. MATHUR)  
Chief Minister of  
Rajasthan

**Extracts from Punjab Settlement (regarding sharing of river water) reached between Prime Minister of India and Sant Harchand Singh Longowal on 24<sup>th</sup> July, 1985**

9.1 The farmers of Punjab, Haryana and Rajasthan will continue to get water not less than what they are using from the Ravi-Beas system as on 1.7.1985. Waters used for consumptive purposes will also remain unaffected. Quantum of usage claimed shall be verified by the <sup>36</sup>Tribunal referred to in Para 9.2 below.

9.2 The claim of Punjab and Haryana regarding the shares in their remaining waters will be referred for adjudication to a Tribunal to be presided over by a Supreme Court Judge. The decision of this Tribunal will be rendered within six months and would be binding on both parties. All legal and constitutional steps required in this respect be taken expeditiously.

9.3 The construction of the SYL canal shall continue. The canal shall be completed by 15<sup>th</sup> August, 1986.

---

<sup>36</sup> Ravi- Beas Waters Tribunal was constituted as a follow up to the Agreement.

THE PUNJAB TERMINATION OF AGREEMENTS ACT, 2004  
(Punjab Act No.17 of 2004)

AN  
<sup>37</sup>ACT

*to provide for terminating and discharging the Government of Punjab from its obligations under the Agreement dated 31<sup>st</sup> December, 1981 and all other agreements relating to the waters of the rivers Ravi and Beas in public interest.*

Whereas, the State of Punjab is proud of its position in the Indian Union and has equal concern for its neighbours and as a sovereign authority, the State of Punjab considers it its bounden duty to uphold the Constitution and the laws and to protect the interests of its inhabitants ;

Whereas, what was known as ‘Indus system’ before the partition of the country, became irrelevant after partition, since only three east flowing rivers namely, Ravi, Beas and Sutlej, out of the six rivers constituting the said system remained within Indian territory for its exclusive use ;

Whereas, while all the three rivers, Ravi, Beas and Sutlej flow through the territory of the present State of Punjab, none of them flow through either the State of Haryana or the State of Rajasthan ;

Whereas, no part of territories of the States of Haryana and Rajasthan falls within the basin areas of the rivers Ravi and Beas ;

Whereas, even according to the Irrigation Commission only 9,939sq. km. of areas within Haryana fall within the ‘Indus Basin’ (notwithstanding in the Ravi and Beas basin), as against 50304 sq. km. areas within Punjab;

Whereas, present utilisation by Haryana is about 5.95 MAF of water (about 4.33 MAF from Sutlej and about 1.62 MAF from Ravi and Beas);

Whereas, Punjab’s claim of its share in Yamuna water has been turned down even though parts of Punjab fall within Yamuna basin;

Whereas, even though the States of Haryana and Rajasthan are neither riparian nor basin States, they have continued to utilise the waters of rivers Ravi and Beas;

Whereas, the State of Punjab as a good neighbour accepted such utilisations by the States of Haryana and Rajasthan as usages ‘by sufferance’, but not as a matter of any recognition of their rights;

Whereas, the States of Punjab, Haryana and Rajasthan entered into an agreement on 31<sup>st</sup> December, 1981 allocating 3.5 MAF of water to Haryana and 8.60 MAF of water to Rajasthan out of the surplus flow of the rivers Ravi and Beas, then estimated at 17.17 MAF based on 1921-1960 flow series ;

Whereas, no reliable and scientific study of hydrological, ecological and sociological impact of such large scale trans-basin diversion from Punjab to Haryana and Rajasthan had been undertaken;

Whereas, diversion of water on such a large scale from the donor deficit basin of Ravi and Beas to the surplus basin of the Yamuna river is contrary to national water policy guidelines ;

Whereas, such a huge trans-basin diversion of water is likely to have permanent adverse impact on the irrigation and other requirements within the basin areas of Punjab rendering about 9 lakh acres of the basin areas dry and barren;

Whereas, in the wake of large scale militancy in Punjab, the Punjab Settlement was reached, which however, remained unimplemented in letter and spirit;

---

<sup>37</sup> President of India sought the opinion of the Hon’ble Supreme Court in 2004 on the validity and legality of the this Act which is pending.

Whereas, the total availability of waters in the rivers Ravi and Beas has reduced from 17.17 MAF (assumed under the Agreement dated 31<sup>st</sup> December 1981) to 14.37 MAF as per the flow series of 1981-2002;

Whereas, under the Yamuna Agreement dated 12<sup>th</sup> May, 1994, Haryana has been allocated 4.65MAF of water which will be further augmented by the Sardar Yamuna Link.

Whereas, there is material and substantial change in ground realities adverse to the interests of Punjab ;

Whereas, in the circumstances, the terms of the said Agreement dated 31<sup>st</sup> December, 1981 have become onerous, unfair, unreasonable and contrary to the interests of the inhabitants of the Ravi Beas basin, who have lawful rights to utilise the water of the rivers Ravi and Beas;

Whereas, being conscious of the legal position that the obligations arising from an Agreement or a contract do not fetter the powers of the Legislature to enact a law in public interest;

AND Whereas, in these circumstances, it is expedient to enact a law in public interest and in the interests of the inhabitants of the basin areas of the State of Punjab, terminating the Agreement dated 31<sup>st</sup> December, 1981 and all other agreements relating to Ravi Beas waters and to discharge the Government of Punjab from the obligations thereunder;

Be it enacted by the Legislature of the State of Punjab in the Fifty-fifth year of the Republic of India as follows:-

1. (1) This Act may be called the Punjab Termination of Agreements Act, 2004  
(2) It shall come into force at once.
2. In this Act, unless the context otherwise requires,
  - (a) “Ravi Beas Waters” means the waters of the rivers Ravi and Beas flowing or stored and available for distribution in any of the headworks in the territory of Punjab;
  - (b) “Agreements” means all Agreements relating to the Ravi Beas waters including the Agreement dated 31<sup>st</sup> December, 1981 signed by the Chief Ministers of the State of Punjab, Haryana and Rajasthan; and
  - (c) “Government” means the Government of Punjab.
3. Notwithstanding anything contained in any other law for the time being in force and any judgement, decree, order and decision of any Court, Tribunal or Authority, the Agreements shall be deemed to have been terminated with effect from the respective date, they were executed or made, as the case may be.
4. Notwithstanding anything contained in any other law for the time being in force any any judgement, decree, order and decision of any Court, Tribunal or Authority, any obligation of the Government of Punjab arising from the Agreement, shall be deemed to have been fully discharged with effect from the respective date, they were executed or made, as the case may be.
5. Notwithstanding anything contained in sections 3 and 4 of this Act, all existing and actual utilisations through the existing systems, shall remain protected and unaffected.

6. No suit, prosecution or other legal proceedings shall be against the Government or any person for anything which is done in good faith or intended to be done in pursuance of this Act or of any rule or order made thereunder.
7. No Civil Court shall have jurisdiction to entertain any suit or proceedings in respect of any matter arising under or connected with this Act.
8. The Government and its officials shall faithfully and diligently give effect to the provisions and mandate of this Act.
9. (1) The Government may, by notification in the Official Gazette, make rules to give effect to the provisions of this Act.  
  
(2) Every rule made under this section, shall be laid, as soon as may be, after it is made, before the House of the State Legislature while it is in session for a total period of ten days, which may be comprised in one session or in two or more successive sessions and if, before the expiry of the session in which it is so laid or the successive sessions as aforesaid, the House agrees in making any modification in the rule or the House agrees that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be, so however that any such modification or annulment shall be without prejudice to the validity of anything previously done or omitted to be done under that rule.
10. (1) If any difficulty arises in giving effect to the provisions of this Act, the Government may, by an order, in writing published in the Official Gazette, make such provision not inconsistent with the provisions of this Act, as may appear to be necessary for removing the difficulty;  
  
Provided that no such order shall be made under this section after expiry of a period of two years from the date of commencement of this Act.  
  
(2) Every order made under this section shall be laid, as soon as may be, after it is made, before the State Legislature, while it is in session for a total period of ten days.

**<sup>38</sup>AMENDED TERMS OF AGREEMENT BETWEEN THE BRITISH GOVERNMENT AND THE STATE OF JIND FOR REGULATING THE SUPPLY OF WATER FOR IRRIGATION FROM THE WESTERN JUMNA CANAL EXECUTED AT SIMLA ON BEHALF OF THE BRITISH GOVERNMENT BY C.L. TUPPER, ESQUIRE, CHIEF SECRETARY TO THE GOVERNMENT OF PUNJAB, DULY EMPOWERED BY HIS EXCELLENCY THE VICEROY AND GOVERNOR GENERAL IN COUNCIL AND AT SANGRUR ON BEHALF OF THE JIND STATE BY SARDAR RATTAN SINGH, PRESIDENT, COUNCIL OF REGENCY, DULY EMPOWERED BY HIS HIGHNESS THE RAJA OF JIND**

Dated 10<sup>th</sup> August, 1892

The terms of agreement executed on the 29<sup>th</sup> April 1875 are hereby cancelled.

2. In lieu of the cuts from the Canal, by means of which irrigation was originally effected, ten main distributaries with proper masonry heads taking out of the Hansi Branch of the Western Jumna Canal and four masonry heads for water-courses taking out of the Butana Distributary shall be provided for the irrigation of the State from the Western Jumna Canal.

3. The said distributaries and the said water-course heads taking out of the Butana Distributary shall be constructed at the cost of the British Government, but when completed shall be handed over to the Jind State, with the exception of the masonry heads and the portions of the channels within canal limits.

4. The distributaries so made over shall be kept in repair by the Jind State, a deduction being made on this account from the annual charge for water. The deduction shall be calculated at a certain rate of irrigated area fixed with reference to the average cost per acre for maintenance of distributaries elsewhere in British territories.

5. So soon as the ten main distributaries taking out from the Hansi Branch are made over to the Jind State, the British Canal Officer shall thenceforth exercise no interference in regard to the internal management and the distribution of water from them; nor shall he, unless at the request or with the consent of the Jind Canal Officer, reduce the supply entering the heads, provided the full gauge readings specified in Article 7 be not exceeded but the British Canal Officer shall have full power to shut off or to reduce the supply entering the Hansi Branch under the following circumstances;

- (a) As part of a general closure of the Western Jumna Canal for necessary or emergent repairs, of which due notice will be published in the Punjab Gazette for closures of more than ten days' duration.
- (b) For purpose of repairs to any canal work or for usual or necessary silt clearances on the Hansi Branch.
- (c) On occasions of excessive rainfall or general reduction of the demand for canal water, that may render a reduction of the supply necessary, either for the safety of the canal banks or works, or to prevent undue flooding or waste of water.
- (d) For the purpose of a more effective distribution of the supply available for the distributaries on the New Main Line, and for the Delhi and Hansi Branches and the Butana Distributary, all closures and reductions of the supply to the Hansi Branch being as far as possible compensated for by an immediately previous or subsequent increase of the supply which would otherwise be due to that Branch.

---

<sup>38</sup> This agreement is no longer in use as all territories mentioned in the Agreement and distributaries and canals are now part of Haryana.



- (e) In the event of the supply available for the distributaries on the New Main Line and for the Delhi and Hansi Branches and Butana Distributary falling below the demand, in which case the supply to the Hansi Branch shall wither be rateably reduced or shall be regulated as provided in clause (d) of this Article. As long previous notice is possible shall be given to the Jind Canal Officer of all closures or reductions of the supply ordered under clauses (a), (b), (d) and (e).

Immediate notice of all closures or reductions of the supply ordered under clause (c) shall also be given to the Jind canal Officer, who will be consulted as to the length of the period during which the reduction of the supply should be maintained.

6. The British Canal Officer shall have full power to shut off or reduce the supply to the Butana Distributary at his discretion in accordance with the exigencies of irrigation, and the outlets provided on that distributary for the irrigation of Jind territory shall be subject to such periodical and special closures as may be ordered from time to time for British outlets in accordance with Rule 15, passed under Act VIII of 1873, due intimation of such orders being given to the Jind Canal Officer, but no Closure shall be ordered on account of alleged wastage of water owing to disrepair of irrigating channels.

7. The distributaries shall be constructed of sufficient capacity when running to a full gauge, to irrigate in combination with the four water-courses, from the Butana Distributary, an aggregate, an aggregate area of 60,000 (sixty thousand) acres per annum; but in order to compensate for all irregularities or deficiencies in the supply passed into them, the annual charges for the water supplied shall be calculated on an irrigated area of 50,000 (fifty thousand) acres only, and no claims shall be raised by the Jind State for reduction of such annual charge on the grounds of short supply.

8. Gauges shall be placed at the head of each distributary for the determination of all supplies, the zero of the gauge in each case being placed on the level of the bed of the distributary. The following gauge readings shall be held to represent full supplies I the case of each distributary:

Number of distributary	Full supply gauge readings
I	4.0
II	2.0
III	3.5
V	3.5
VI	2.0
VII	4.5
VIII	4.0
IX	3.5
X	3.5
XI	3.0

Note: No.IV is a branch of No.III and has no separate head in the Canal.

#### No.I Distributary

Having been constructed to carry double full supply sufficient for the irrigation of the area dependent on it, shall be closed at the head during every alternative week or other convenient interval of time, and shall be opened in the corresponding alternate intervals. The remaining nine distributaries shall be allowed to run constantly, subject to temporary closures of the Hansi Branch under Article 5 of this Agreement.

Every distributary when open shall be entitled to as full a supply as the supply in the Hansi Branch will permit without being headed up, provided that the above mentioned gauge readings shall in no case be exceeded.

8(a) The Heads of all the Jind Distributaries shall remain under the sole control of the British canal Officer who will arrange for the maintenance of the supply in each at the gauge indented for by the Jind Canal Officer, if not in excess of the full supply gauge reading.

Note - The net amount payable by the State, after making the stipulated deductions, has been fixed for the present at Rs.1,05,500 (One hundred five thousand and five hundred) as detailed below. The rate of 2.4 (two and four tenths) rupees per acre was obtained by striking a mean for five years ending 1883-84 of actual realizations per acre irrigated in the Jind State:-

Gross sum payable:	
50,000 acres at Rs.2.4 per acre	Rs.1,20,000
Deductions	
(1) Maintenance and repairs	5,000
(2) Establishment savings	3,500
(3) Fees to Lambardars and Patwaris	<u>6,000</u>
	14,000
Net amount payable per annum	<u>1,05,500</u>

9. In the event of there being a general reduction of water-rates on the Canal, a rateable reduction shall be made in the amount payable by the State and in the event of the rates being increased, a rateable increase shall be demandable from the State.

10. In case of any difference of opinion arising between any officers of the Jind State and the British Canal Officers relating to the supply of water it shall be referred to the Lieutenant-Governor of the Punjab, whose decision shall be final. If any difference of opinion shall arise between the Jind State and the Lieutenant-Governor of the Punjab as to the construction of this agreement, a reference may be made to the Governor-General in Council, whose decision shall be final.

Executed at Sangrur this twenty-fourth day of July, 1892 on behalf of His Highness of Raja of Jind, by Sardar Rattan Singh, President Council of Regency, in presence of me, Lala Chandu Lal, Mir Munshi.

	Sd/- (C.L. TUPPER)
Dated 10 <sup>th</sup> Aug.,1892	Chief Secretary to Government, Punjab

Approved and confirmed by His Excellency, the Viceroy and Governor-General of India.

FINANCE DEPARTMENT  
SIMLA  
The 16<sup>th</sup> September, 1892

Sd/-  
(H.M. DURAND)  
Secretary to the Government of India

**AGREEMENT BETWEEN RULERS OF BHARATPUR STATE AND GOVERNMENT OF UNITED PROVINCE IN AUGUST, 1905 REGARDING NANDGAON DIG ESCAPE AND FURTHER RULES DATED 9<sup>th</sup> MARCH, 1909 FOR RUNNING THE DIG ESCAPE**

The <sup>39</sup>Bharatpur Darbar agree to pay the cost of construction of an Escape Channel from the Nandgaon Distributary, Agra Canal to the boundary of the Bharatpur State and in connection therewith to construct the necessary channels and work to their tanks at Dig and elsewhere.

2. Therefore the portion of the channel within the United Provinces shall be maintained by and at the cost of the Irrigation, Branch, United Provinces in an efficient condition to secure the due passage of escaped water to the Bharatput State.

3. The channels within the Bharatpur Territory shall be similarly maintained by the Darbar, who agree that no bunds or regulators shall be introduced into these channels whereby the water surface level be raised; or the out fall be impeded at the entrance of the escape channel into Bharatpur Territory.

4. The United Provinces Government agree to pass down the Nandgaon Dig Escape channel a supply of water, free of charge at times when the water is not required on the Agra Canal system save and except at such periods when the necessities of work or other conditions, preclude the opening of the Agra Canal or the Nandgaon Distributary System, of which notice will be given to Darbar.

5. It is agreed that there shall be no restriction as to volume to be passed down, or period in which the escape channel may be opened, except that (if desired by the Darbar) the escape channel shall not be opened for more than 24 hours at a time during the hot weather months without the express consent of Bharatpur State Engineer conveyed through Superintending Engineer, Agra.

6. Within the limits of the Bharatpur State the Darbar shall have free use of the escaped water for any purpose they think fit, subject to the condition that the out fall from British Territory shall not be in any way impeded.

7. The Darbar agree to accept any supply sent down to them under the conditions cited above, and that the short or non supply of water in any season shall not be considered to create any grounds for compensation. No irrigation shall be permitted from the Nandgaon Dig Channel within British Territory.

8. All communications regarding the supply of water to the Bharatpur State shall be dealt with by the Superintending Engineer, 3<sup>rd</sup> Circle, Irrigation Works on behalf of the United Provinces, Government and the State Engineer on behalf of the Bharatpur State.

**FURTHER RULES DATED 9<sup>th</sup> MARCH 1909 FOR RUNNING THE DIG ESCAPE**

1. When water is required in the Dig Escape, the State or Assistant State Engineer, Bharatpur should indent direct on the Executive Engineer, Agra Canal, Mathura specifying the gauge with which the escape should be run.

2. The Dig Escape should not be opened except on the request of the State or Assistant Engineer, Bharatpur or in a case of emergency i.e. to present a breach in the Nandgaon Distributary.

---

<sup>39</sup> Bharatpur state is now part of Rajasthan and requirement of the area covered by erstwhile Bharatpur State are regulated as per MOU of May 1994 on Yamuna water.

3. On receipt of a request for the Dig Escape to be opened, the Executive Engineer should reply stating whether it will be possible to comply or not, and if so he should give at least 24 hours notice of the date when the escape will be opened, so as to enable the State Engineer, Bharatpur to make his arrangements for receiving the water.

4. Whenever it is necessary to open the Dig Escape in a case of emergency, intimation should be immediately sent to the State Engineer, Bharatpur and the escape should not be kept open for a longer period than is absolutely necessary.

Sd/-  
Offg. Executive Engineer  
Lower Division, Agra Canal, Mathura  
Dated 9.3.09

<sup>40</sup>**AGREEMENT BETWEEN THE PUNJAB AND UNITED PROVINCES GOVERNMENTS  
REGARDING SUPPLIES TO THE EASTERN YUMNA CANAL**

On account of the exceptional damage done by the exceptional floods of 1924, the United Provinces and Punjab Governments mutually agree that the agreement made between the two Governments on the 1<sup>st</sup> April 1919 shall be rescinded and that the following agreement shall take its place.

1. That the two Governments agree that with effect from the 1<sup>st</sup> October, 1925, the Eastern Yumna Canal supplies be drawn from the Tajewala Headworks, subject to the following conditions:-

(1) That the United Province Government pay a proportion of the cost of repairing damage done by the floods of 1924 as below:

(a) The whole cost of clearing the Tajewala Nushera supply Channel.

(b) Half the cost of :-

(i) Repairs and alterations below the Eastern Yumna sluices,

(ii) Repairs and alterations to the Eastern Yumna Regulator

(iii) Closing of the two breaches in the upstream left marginal bund and repairs to the bund itself,

(iv) Construction of six new spurs on the left bank.

(2) The breaches in the upstream left marginal bund and the marginal bund itself will be repaired to the full pre-flood section or such greater section as may be agreed upon by the Chief Engineers concerned.

(3) That the United Provinces Government will pay to the Punjab Government as annual contribution of Rs.21,000 as their share of the ordinary maintenance of the works at and above Tejewala and they further agree to bear half the cost of such additional works on the left bank or forcing funds on the right bank as may now or hereafter be necessary to maintain the Eastern Yumna Canal supply provided always that the proposal for such works are first seen and agreed to by the Chief Engineer, United Provinces, as regards the necessity, design suitability and sufficiency of the works proposed when the cost of each individual work exceeds Rs.20,000. In the case of work costing less than Rs.20,000 when the Superintending Engineer, Western and Eastern Yumna Canals, agree that any particular work is necessary the prior approval by the Chief Engineer, United Provinces, Irrigation Branch, is not necessary. When necessary, any difference of opinion on technical points will be referred to the Consulting Engineer of the Government of India for decision.

N.B. - The sum of Rs.21,000 will not be paid for the year 1924-25.

(4) That should the Punjab Govt. owing to the abandonment of the Tajewala Weir, disagreement, or any other cause, desire during the currency of this agreement to cease to give the requisite supplies through the Tajewala Naushera channel, the Punjab Govt. will pay back to the United Provinces Govt. the sum to be paid under paragraph (1) above together with such sums as may be paid under paragraph (3) above, except only the annual contribution of Rs.21,000.

(5) That the Khara channel be closed on continuation of the marginal bund below Fizabad by and at the expense of the United Provinces Government.

---

<sup>40</sup> The Agreement is no longer in use since Tajewala headworks has now been replaced by Hathinikund barrage.

(6) That the Government of the United Provinces reserves the right of temporarily reverting to the old Fyzabad channel should the Punjab Govt. be unable temporarily for any case to give supplies from Tajewala.

(7) That the boundary of control be the same as laid down in the agreement made in 1919 except that the bund closing the Khara channel mentioned in paragraph (5) above shall be maintained by the United Provinces Government.

(8) That in the event of any damage caused by the river on the left bank which may give rise to compensation, the United Provinces Govt. will be responsible for such compensation and will deal with such damage as they consider necessary.

(9) That if at any time the Punjab Government should require to undertake any necessary works for purposes of river control upstream of the dividing line of control referred to in paragraph (7) above the United Provinces Government will permit them to construct such works provided these works will not affect adversely the property of the United Provinces Government of the left bank.

(10) That this agreement is bind on both Governments for a period of twenty five years from the 1<sup>st</sup> October, 1924 and can only be dissolved by mutual consent of both parties except that the annual maintenances figures of Rs.21,000 referred to in paragraph (3) above will be reinvestigated in 1935 on the basis of actual expenditure on works on the left bank of the river during the previous five years.

**<sup>41</sup>WORKING AGREEMENT BETWEEN THE GOVERNMENT OF EAST PUNJAB AND THE JIND GOVERNMENT FOR KHARIF SUPPLY FOR AREAS IN JIND TERRITORY FROM THE SUNDAR SUB-BRANCH OF THE WESTERN JUMNA CANAL EXTENSION SCHEME**

THIS AGREEMENT made on 17<sup>th</sup> day of July, 1943 between the Governor of the East Punjab hereinafter called the 'Government' (which expression shall unless repugnant to the context or meaning thereof includes his successors and assigns) of the one part and the Jind State acting through the Chief Minister, hereinafter called the "Durbar" (which expression shall unless repugnant to the context meaning thereof includes its successors and assigns) of the other part, witnesseth as follows:-

**I. Definitions**

1. In this agreement:-

- (a) the "Sundar Sub-Branch" shall mean the Sundar Sub-Branch of the Western Jumna Canal;
- (b) the terms "distributaries", "minors" and "direct outlets" shall mean the "distributaries", "minors" and "direct outlets" respectively of the Sundar Sub-Branch.
- (c) "Channel" shall mean the "distributaries", "minors" and "direct outlets"; and
- (d) "the Executive Engineer" shall mean the "Executive Engineer incharge of the Sundar Sub-Branch".

**II. Control and management**

2. The control and management of the main channel of the Sundar Sub-Branch, direct outlets and the first one hundred feet of each distributary and minor taking off Sundar Sub-Branch in Jind State territory will always remain in the hands of the Government.

3. (a) The control and management of all distributaries, minors and direct outlets which irrigate exclusively in Jind State will be in the hands of the Governments for a period of five years which period shall be computed from the commencement of Kharif crops 1943 viz. 1.4.43. Provided that the parties may agree by mutual consent to terminate this period at any earlier date.

(b) During this period, the Government will have the right to remodel any of these distributaries and minors without reference to the Durbar provided that the total discharge for Jind areas from the Sundar Sub-Branch is not reduced thereby below their authorized share capacity as specified hereinafter.

4. After the termination of the period prescribed in clause 3, the control and management of the distributaries and the minors in Jind State, subject to the provisions of clause 2, will be handed over by the Government to the Durbar.

5. After clause 4 has come into operation-

- (a) Durbar will receive credit from the Government for the cost of ordinary and special maintenance, extensions and improvements which it may find necessary to make provided that the cost does not exceed the corresponding

---

<sup>41</sup> This agreement is no longer in use as all territories mentioned in the Agreement are now part of Haryana.

average expenditure on the Punjab channels of the Western Jumna Extension channels. Questions of capital expenditure, however, will be determined by mutual agreement, and

- (b) Works of maintenance and repairs and such works of extensions and improvements to the distributaries and minors transferred to the Durbar as do not affect either the full supply discharge or the full supply levels at their heads will be carried out by the Durbar at its discretion.

Alternations to direct outlets on the Sundar Sub-Branch required by the Government for their own area will be carried out without reference to the Durbar provided the alternations do not result in an increase of the authorized full discharge. Alternations to direct outlets irrigating Jind areas required by the Durbar will be carried out by the Government if the total discharge of the outlets is not exceeded hereby after the liability for the cost of alternations of these outlets has been determined by mutual consent.

### III. Regulation and distribution of supplies

6. The Sundar Sub-Branch will be opened only when supplies are available after meeting the present establishment requirements of the Western Jumna Canal.

7. The supplies available in the Sundar Sub-Branch will be distributed between the Government and the Durbar channels in proportion to the share capacities of the two partners. The direct outlets on the Sundar Sub-Branch whether in the Punjab or Jind territory will draw supplies as the supply level of the Sub-Branch permits.

8. Regulation of all channels (Punjab and Jind) will be controlled by the Executive Engineer.

If the supply available is likely to be less than the indent, the Executive Engineer will prepare a provisional rotational programme of which a copy will be supplied to the State Engineer as early as possible before the rotational programme starts operating.

9. In regulating the above supplies, the following principles will be kept in view as far as possible:-

- (i) off taking channels will either be run full supply or nil,
- (ii) each channel will be given full supply for a minimum continuous period of 8 days at a time.

10. For the purposes of regulation of supplies in the Sundar Sub-Branch, the respective shares of the Govt. and the Durbar will be calculated on the basis of the ratio of the sanctioned total head capacities of the Government and Durbar channels, including direct outlets from the Sundar Sub-Branch, existing at the time. At present, this ratio is 299:121 or 71.2% Punjab and 28.8 % Jind.

11. Share supplies will be worked out for each day and any excess or deficit over a 16-day period will be adjusted in the following 16-day period.

12. If any channels are unable for any reason whatever to take their share supply when the supply is available and is due to them either according to rotational programme or in the ordinary course, they will be debited with their share supply in the account. A copy of water account for each 16-day period will be sent by the Executive Engineer to the State Engineer.

13. At the end of each crop, a water account for the whole crop will be prepared and sent by the Executive Engineer to the State Engineer.



14. The State engineer or any of his subordinates authorized by him in this behalf will have access at all times to all gauges on the system. Discharge tables will be framed and altered, where necessary, on the basis of joint observations by officers of both parties. The officer concerned will give 4 days notice of his intention to observe the discharge. If the other officer fails to attend, the observation will be taken in his absence.

15. In case of specific disputes affecting a particular crop between the Executive Engineer and the State Engineer about regulation and distribution of supplies, the matter will be referred by the Executive Engineer or the State Engineer to the Superintending Engineer, Western Jumna Canal Circle, and his decision shall be final.

#### IV. Assessment collection and payment to Punjab

16. All charges for irrigation done in Jind State area for use of water for Sundar Sub-Branch channels will be assessed and collected by the Durbar.

17. The Durbar shall employ its own staff-Patwaris, zilladars, etc. required for assessment and collection.

18. The amount payable each year by the Durbar to Government will be based on the income derived from the Sundar Sub-Branch system in Punjab Territory and will be in proportion to the share discharge. This will be worked out as follows:-

(a) Government share discharge	A
(b) Durbar share discharge	B
(c) Gross direct receipts (i.e. assessment less Kharaba under clauses I and II of rule 20 canal Act) during the year on Sundar Sub-Branch in Punjab Territory excluding special charges	X
(d) Amount payable by Durbar for the year	<u>XxB</u>
	A

Provided that in the event of cuts or breaches or widespread damage to crops as defined in the Northern Indian Canal and Drainage Act of 1873 occurring during any year on the Sundar Sub-Branch so as to appreciably affect the Punjab Irrigation on Sundar Sub-Branch, the amount payable will be based on the average irrigation for the previous two years.

19. From the gross amount payable by the Durbar as calculated in clause 18, deductions will be made on account of -

(a) Establishment charges (Patwaris, Munshis and Zilladars and Revenue Peons) including pensionary charges on Mushis and Zilladars.

Note:- The Durbar agrees to forego the pay of the superior officers and overheads.

(b) Stationery, postage, revenue forms and office contingencies. This will be fixed amount to be mutually agreed upon.

(c) 3% to cover Lambardars' fees for collection.

(d) Amount as permissible as per clause 5 (a).

20. Charges referred to at (a) and (b) in clause 19 above will be worked out on the basis of actual expenditure on the corresponding establishment employed on similar areas on the Sundar distributary in the adjoining Punjab territory.

21. Water rates in the State will be identical with those in the Punjab.

22. In cases of appreciable damage to Jind State crops from widespread calamity falling under clauses III and IV Rule 20 Northern India Canal and Drainage Act of 1873, the Government will give compensation to the Durbar to be worked out in the manner hereinafter given.

The crops will be inspected jointly by the Punjab Deputy Collector incharge of Irrigation from Sundar Sub-Branch and the corresponding State Deputy Collector. If they disagree as to the amount of compensation, the State Engineer and the Executive Engineer of Division will inspect the crops and fix the compensation. In the event of disagreement amongst them, the dispute will be referred for decision to the Commissioner, Ambala Division whose decision will be final and binding on the parties. The amount of compensation, thus decided, will be deducted from the payment due to the Government from the Durbar under clause 18.

23. A bill stating the full amount due from the Durbar with details of calculations will be prepared by the Executive Engineer as soon after the end of the crop as possible and sent to the State Engineer for verification and payment.

24. The amount arrived at as above will be payable by the Durbar within a period of one year from the end of the crop concerned.

#### Penalties and procedure for unauthorized irrigation, wastage of water and other offences.

25. Provisions of the Canal Act VIII of 1873 and the Rules thereunder as applicable to canals in the Punjab will apply to the areas of the State which lie within the irrigation limits of the Sundar Sub-Branch.

26. The jurisdiction under the Canal Act will vest with the officers incharge of the control and management of the Sundar Sub-Branch in respect to all matters affecting its control, management and regulation of supplies and in all other respects, it will vest with the officers of the territory through which the channel passes, except as provided in clause 3 (a).

27. Nothing in this agreement shall affect the power of the Canal Officer to take any action which may be necessary to safeguard the Sundar Sub-Branch or its irrigation in a pressing emergency, provided he is vested with powers by his own Government within his own territory. Nothing contained herein shall affect the jurisdiction of the Jind Criminal Courts even with regard to offences committed concerning the control, management and regulation of supplies.

28. All cases of cuts and breaches or tempering with direct outlets on any channel, whether incharge of the Government or the Durbar will be reported by telegram by the Sub-Divisional Officer incharge to his superior officer and the State Engineer and/or the Collector of the Administration of the territory through which the channel is passing. The latter will promptly join the Sub-divisional Officer concerned for investigation or will dispute, for the purpose, an officer not below the rank of Sub-Divisional Officer.

29. After joint investigation, they will decide whether the damage is the result of an accident or deliberate mischief and take steps as may be required to fix the responsibility for it, or make over the case to the local police.

30. The local officers of the Administration through whose territory the channel is passing will render every possible assistance in the way of supply of labour and necessary materials for repairs to the accidental damage in the same way as they would do in the case of their own channels.

31. If the State Engineer or the Collector, whosoever is concerned, of the territory fails to join the Sub-Divisional Officer in the investigation within a reasonable time, the latter will proceed to investigate the case himself.

32. (a) If the officers of the two administrations agree in their findings, the Sub-Divisional Officer incharge will take further action as required by the rules.

(b) In case of disagreement, the matter will be referred by the Sub Divisional Officer to his superior officer. The latter will arrange joint inspection and investigation at site with the corresponding officer of the other administration. If they fail to come to an agreement regarding the nature of the offence, the matter may either be dropped or taken up with higher authorities if considered necessary.

33. Any special charges assessed for irrigation from a cut will be divided between the two administrations in the same proportion as their respective shares of water in the channel at the time of the cut.

34. If cuts are persistent in any village in spite of warnings and other action under the ordinary law, the administration, concerned will put on punitive police if the conditions laid down in Punjab Government letter No.2661-HG.42720-S, dated 12<sup>th</sup> June, 1942 (copy at Annexure A) are fulfilled and will take any other action as may be adopted in Punjab in future.

#### V.General

35. In the event of a cut occurring in Sundar Sub-Branch in Jind State territory, the same punitive measures will be adopted by the Durbar as are taken in similar case in Punjab territory.

36. This agreement will take effect from the commencement of the Kharif crop of 1943. The Durbar will make the collections for Kharif and Rabi 1942-43 as assessed by the Government, allowing the usual lambardari fee of 3 percent.

37. This agreement will remain in force as long as the supplies available for the Sundar Sub-Branch are dependent upon surplus in the river Jumna at Tajewala during the monsoon season. Should perennial supplies or secured Kharif supplies ever be made available, question of seigniorage, nazrana, nahri part and other indirect receipts will be examined AFRESH. This agreement will then be redrafted in toto to conform to the new conditions.

38. If any question, difference or objection whatever shall arise in any way connected with or arising out of his instrument or the meaning or operation of any part thereof or the rights, duties or liabilities of either party, then save in so far as the decision of any such matter is hereinbefore provided for and has been so decided, every such matter including whether its decision has been otherwise provided for and / or whether it has been finally decided accordingly, or whether the contract should be terminated or has been rightly terminated and as regards the rights and obligation of the parties as the result of such termination shall be referred for arbitration to the Hon'ble the Resident for Punjab States and his decision shall be final and binding and where the matter involved a claim for or the payment or recovery or deduction of money, only the amount, if any, awarded in such arbitration shall be recoverable in respect of the matter so referred.

Sd/- (D.K. KHANNA)

Secretary to Govt. of Punjab, P.W.D., Irrigation Branch

Witness: Sd/- (S.N. KAPUR, Under Secretary to Govt. of Punjab, PWD,  
Irrigation Branch.

Sd/- BALDEV SINGH, Major Genl., Prime Minister, Jind Government.

Witness: S/- SITA RAM, Foreign Minister, Jind Government.

**AGREEMENT BETWEEN RAJASTHAN AND <sup>42</sup>MADHYA BHARAT UNION HELD ON 30<sup>th</sup> JUNE, 1948 AT 8 AM IN THE MANIKBAGH ANNEXE, INDORE**

Summary of the discussion, held on the 30<sup>th</sup> of June, 1948 at 8.00 A.M. in the Manikbhaqh Annexe, Indore, between the representatives of the Ministry of Works, Mines and Power of the Government of India, the Rajasthan Union and Union of Madhya Bharat on multipurpose development schemes on the Chambal River.

Present :-

1. Hon'ble Mr.N.V.Gadgil,  
Minister for Works, Mines and Power  
Government of India.
2. Shri Leladhar Joshi,  
Prime Minister,  
Madhya Bharat, Union.
3. Shri Jaswant Singh Kushwah,  
Public Works Minister,  
Madhya Bharat Union.
4. Shri B.K.Gokhale, C.S.I. CIE, ICS,  
Secretary,  
Ministry of Works, Mines and Power,  
Government of India.
5. Mr.V.Vishwanathan, I.C.S.,  
Chief Secretary,  
Madhya Bharat Union.
6. Mr.M.D.Mittal, M.I.E., ISE.,  
Director, Irrigation,  
Madhya Bharat Union.
7. Mr.N.K.Bhonsale.  
Chief Engineer,  
Madhya Bharat Union.
8. Mr.V.A.Aiyar,  
Chief Development Engineer,  
Rajasthan.
9. Mr.C.R.Iyengar,  
Engineer Consultant,  
Medhya Bharat Union.
10. Mr.P.C.Joglekar,  
Engineer, Chambal,  
Madhya Bharat Union.

---

<sup>42</sup> Madhya Bharat Union is now part of Madhya Pradesh.

1. The proceedings were opened by the Hon'ble Minister who enquired the present stage of investigation of the Indore Project, its salient Features and programme.
2. It was explained that the actual design of the dam would be decided after further geological investigations through borings and drift tunnels. Investigations regarding communications, power plant, lay out of the construction town, layout of the roads, construction of bridges across the Chambal, Sanitation and water supply of the colony and the works area, housing of about 15,000 labour, layout of brick kilns for surkhi manufacture, acquiring of lime-stone for mortar, setting of workshops, etc. are expected to be worked out in detail within six months. To start these investigations and works immediately, the Madhya Bharat Union is prepared to sanction the necessary funds.
3. It was suggested that a lot of equipment is available with disposals. A representative would be sent to select any useful plant which might be available.
4. Establishment:- For purposes of construction, it was thought that one Superintending Engineer for works and one for Power, and three divisions for works and two for power would be adequate. The work would be done departmentally with the help of the petty contractors.
5. Design :- A design office would be set up, which will undertake designs under the general supervision of the Technical Committee decided upon in the meeting on 28<sup>th</sup> June at Udaipur and the Electrical Branch of the <sup>43</sup>CWINC. It was suggested that the Unions of Madhya Bharat and Rajasthan should nominate their representatives for the Technical Committee, and intimate the names to the Government of India without waiting for any formal reference from the Government of India.

Power Plant :— It was considered that six units of 6,000 KW each of electrical generation plant would be needed for the Indore Project, six units of 12,000 KW each for the Mewar Project and four units of 12,000 KW each for the Kota Project. Final details would have to be worked out by March next so that orders may be placed as quickly as possible. Such smaller units possible be had more cheaply and expeditiously from Japan.

---

<sup>43</sup> Central Waterways, Irrigation and Navigation Commission. Central Water Commission is its successor organization.

**<sup>44</sup>DRAFT AGREEMENT BETWEEN THE PUNJAB AND UTTAR PRADESH GOVTS. REGARDING DISTRIBUTION OF SUPPLIES OF RIVER YAMUNA AT TAJEWALA, BETWEEN WESTERN JUMNA CANAL EASTERN JUMNA CANAL AND APPORTIONMENT OF EXPENDITURE ON TAJEWALA HEADWORKS AND RELATED WORKS**

This agreement made on the 12<sup>th</sup> day of March, 1954 between the Governor of Uttar Pradesh on the one part and the Governor of Punjab on the other part, witnesses as follows:-

1. In supersession of all previous orders and agreements on the above noted subject, the supplies of the river Yamuna at Tajewala and the expenditure on Tajewala Headworks and connected training works will be governed by this agreement, which will come into force from 1<sup>st</sup> April, 1950.

2. In the event of the river discharge being less than the total indent of the two canals i.e. Western Yamuna Canal and Eastern Yamuna Canal the supplies available at Tajewala will be distributed in accordance with the table given below:

Total River discharge at Tajewala cusecs=X	Supplies to which W.Y.C. will be entitled in cusecs	Supply to which E.Y.C. will be entitled in cusecs	Remarks
Upto 5890	2/3 X-47	1/3 X plus 47	W.Y.C. takes excess.
From 5890 to 8790	X-2010	2010	
From 9790 to 9280	6780	X-6780	E.Y.C. takes excess
From 9280 to 10900	X-2500	2500	W.Y.C. takes excess

When the total river discharge is in excess of 10900 cusecs the Punjab and the Uttar Pradesh will have the right to utilize the excess over 10900 cusecs in the ratio of 2:1.

3. The shingle Excluder at Tajewala and silt extractor at Dadapur will not be run, until the indent of Eastern Yamuna Canal has been met in full.

4. The supplies will be metered at the meters situated at R.D.1000 on the Eastern Yamuna Canal and R.D.7000 post of regulation beldar of Western Yamuna Canal.

5. The meters referred to in clause 4 above will be calibrated and discharge table framed, which will form the basis of regulation between the two canals. Any changes in the discharge tables found necessary will be made after joint discharge observations by officers of the Punjab and Uttar Pradesh not below the rank of Sub-Divisional Officers, if any, party does not respond to the request of the other party for a joint discharge observation within a week, a change in the discharge table will be made provisionally on the basis of the discharge observed by either party till a joint discharge is observed.

6. If part supply of Western Yamuna Canal is taken through Diversion Channel or through Rafting channel, the same will be metered and its discharge included in working out the total discharge of Western Yamuna Canal.

---

<sup>44</sup> This agreement is no longer in use and is superseded by MOU of 1994 on sharing of Yamuna water.

7. If for any reasons the Punjab fails to meet the share of the Eastern Yamuna Canal to the limit of its indent in any one week, the deficit will be made good in the following weeks.

8. The officers of either Government will have free access to all the works, plans, estimates, reports and other records pertaining to the Headworks, training works and gauging sites on the two canals.

#### MAINTENANCE OF TAJEWALA HEADWORKS

9. The maintenance of Tajewala headworks and related training works will be the responsibility of the Punjab Govt.

10. The Punjab Government will initiate all proposals for proper maintenance of the headworks and training works and improvement of the same, and will carry out all works without reference to the Uttar Pradesh Government except in case of works charged to Capital, the estimated cost of which exceeds Rs.50,000 for each individual work. Such works shall be carried out with the concurrence of Chief Engineer, Uttar Pradesh.

#### APPORTIONMENT OF EXPENDITURE

11. The total actual expenditure on all works and Establishment relating to Tajewala Headworks and training works in any financial year (1<sup>st</sup> April to 31<sup>st</sup> March) will be apportioned between the Punjab and U.P. in the ratio of total discharge in cusec days run in two canals during the year in question. The discharge escaped back into river through the silt extractor at Dadupur will be deducted from the total discharge of Western Yamuna Canal vide clauses 4 and 6 above in arriving at the figures of net supply for Western Yamuna Canal for purpose of clause 2 above.

Debit will be raised by the Punjab Government against the Uttar Pradesh for the latter's share of the expenses soon after the close of the financial year and adjustment will be made in the March supplementary accounts for the year as far as possible.

12. The works expenditure will include expenditure on all clauses of works whether chargeable to Revenue or Capital.

13. Cost of establishment referred to in clause 11 above will be worked out at 27½ of the works expenditure on the Tajewala Headworks and training works, in any financial year (1<sup>st</sup> April to 31<sup>st</sup> March).

In case of capital works, in which specific provision exists in the estimate for establishment charges on the usual percentage basis, expenditure actually booked on works will be counted as works expenditure and establishment charges will be accounted for under establishment.

14. The word "headworks" wherever used in this agreement shall include the weir, the under sluices, and the Regulators and the terms "Training works" shall include all works upstream of the Headworks, and the works downstream upto one mile at either end along the river.

#### General

15. The Government of Uttar Pradesh will have the right to terminate this agreement and to make alternative agreements before obtaining their share after giving three years notice to the Punjab Government. If not terminated earlier, this agreement will be binding on both the Governments for a period of 50 years from 1<sup>st</sup> April 1950 after which it may be renewed.

16. The Chief Engineers of the two Governments will meet every year as soon after the flood season as convenient and discuss problems of common interest.

17. IN WITNESS WHEREOF the Chief Engineer, Uttar Pradesh Public Works Department, Irrigation Branch, for an on behalf of the Governor of Uttar Pradesh and the Chief

Engineer and Secretary to Government, Punjab, P.W.D., Irrigation Branch, for and on behalf of the Governor of Punjab have signed this deed.

Sd/-

Chief Engineer, and Secretary to Punjab  
Government, P.W.D. Irrigation for and on  
Behalf of the Governor of Punjab

Sd/-

Chief Engineer, Uttar Pradesh  
P.W.D., Irrigation Branch, for and on  
Behalf of Governor of Uttar Pradesh.



**Summary Record of decisions arrived at in the meeting held in the Planning Commission on 25<sup>th</sup> March, 1955 regarding the Chambal Project.**

PRESENT :-

Planning Commission

Shri V.T.Krishnamachari.  
Shri G.L.Nanda.  
Shri S.N.Mishra.  
Shri Tarlok Singh  
Shri Yadava Mohan.  
Shri C.S.Parthasarathy  
Shri H.R.Rao.

Ministry of Irrigation and Power

Shri Kanwar Sain.  
Shri M Hayath  
Shri M D Mithal.  
Shri Ripudaman Singh  
Shri M.C. Hiranandani  
Shri G S Mitroo

Ministry of Home Affairs

Shri G Swaminathan.

Ministry of Finance

Shri K.L Rathee  
Shri C.S.Krishnamurthy  
Shri S Ramier  
Shri Sharma  
Shri Harbans Singh Mac

Government of Rajasthan

Shri Ram Nivas Mirdha, Irrigation Minister.  
Shri Moti Ram, Chief Engineer, (Irrigation)  
Shri B N Malhan, Dy Secretary.  
Shri R.N.Chowdhary, Superintending Engineer.

Government of <sup>45</sup>Madhya Bharat

Shri V.V.Dravid, Minister for Labour and Development.  
Shri B.G.Rao, Chief Secretary.

---

<sup>45</sup> Madhya Bharat is now part of Madhya Pradesh.

Shri P.S. Bapna, Planning Secretary.  
Shri A.K.Char, Chief Engineer, Chambal.

The notes on agenda items circulated, prior to the meeting, formed the basis of discussion. The decisions arrived at are recorded below :-

**Item No.1 :— Revised Estimates and phasing of works.**

The project report and estimates should be revised so as to exclude the Rana Pratap Sagar Dam from the Project. Revised report and estimates should be furnished to the Planning Commission quickly.

Construction work on the canal system should be synchronized with that on the Gandhi Sagar Dam. The Kotah Barrage should also be completed simultaneously.

Work on both the Right and Left Canals should proceed simultaneously and the Right Bank Canal in Rajasthan will be completed in time to ensure delivery of Irrigation works to Madhya Bharat at the same time as on the Left Bank Canal in Rajasthan.

**Item No.2 :— Formation of Chambal Control Board.**

The composition of the Chambal Control Board will be as under :-

Central Government

(i) Deputy Minister for Irrigation & Power	Chairman
(ii) The Chairman, Central Water & Power Commission	Member.
(iii) A representative of the Ministry of Finance.	Member.

Government of Rajasthan

(iv) Minister in charge of Chambal Project.	Member.
(v) Chief Engineer (Chambal Project)	Member

Madhya Bharat Government

(vi) Minister in charge of Chambal Project	Member.
(vii) Chief Engineer (Chambal Project)	Member.

The Functions and Powers of the proposed Control Board as defined in Annexure-I were generally approved. The Board will be generally responsible for framing and coordinating programme of construction and maintaining over-all supervision and guidance.

The Board will have a whole-time Secretary. There will also be Financial Adviser to work under the Board. The Governments of Madhya Bharat and Rajasthan will implement the decisions of the Board expeditiously.

### **Item No.3 : Betterment levy and water rates.**

The basis for betterment levy, it was suggested, should be the difference in market value between dry and wet lands. Shri Dravid said that the select committee appointed by the Madhya Bharat State Legislature made certain modifications in the Madhya Bharat Betterment Levy bill and proposed increase in the number of instalments in which betterment levy could be paid, to thirty. Shri V.T.Krishnamachari advised that the number of instalments should be reduced.

### **Item No.4 : Preparation of Revenue and Agricultural Project.**

The Financial Forecasts should be revised on the basis of the exclusion of the Rana Pratap Sagar Dam from the present stage of the Project.

Two more Agricultural Experimental Farms for instructing ryots in the use of irrigation facilities should be set up immediately, in each State. It was stated that soil surveys were being conducted over about 10 percent of the commanded area.

### **Item No.5 : Allocation and sharing of costs of common works :**

Shri V.T.Krishnamachari wanted to know what out of the normal cost of the project, would be the shares of Rajasthan and Madhya Bharat. The Madhya Bharat representatives said that the cost should be shared on 50:50 basis. The Rajasthan representatives expressed the view that the cost of the Right Bank Canal should be worked out on cusec mile basis. It was agreed that the C.W.P.C. would furnish a note on the costs to be shared by each state, in consultation with the Chief Engineers of the two States. The sharing of cost of transmission lines etc.would also be taken account of in this note.

Both the Madhya Bharat and Rajasthan Governments furnished the information that on about 10 percent of the commanded area constituted waste land in either State.

### **Item No. 6:— Claim of Uttar Pradesh on Chambal Waters.**

The representative of the U.P.Government did not attend the meeting. The Chairman, C.W.P.C., expressed the view that it would not be economical to use the Chambal Water in U.P. area and, from considerations of optimum and economical use of waters, the U. P. Government should not press their claim on the Chambal Waters.

### **Item No.7 :— Soil Conservation Measures.**

The Chief Engineer, Rajasthan, informed that a pilot project covering an area of 1000 acres in Rajasthan has been taken up as an experimental measure. It is more important to undertake soil conservation measures in the commanded area than in the catchment area above the reservoirs. It was decided that soil conservation schemes should be prepared by each State. These schemes will not be included in the main estimates of the project and should be dealt with separately.

**Functions and Powers of the proposed Control Board for the Chambal**

The Control Board will be generally responsible for the most expeditious and economic execution of the Chambal Project and shall perform the following function viz.:

- (i) to scrutinise the estimate of the project prepared, advise necessary modification & recommend the estimate for administrative approval of the Government concerned.
- (ii) to examine and approve from time to time the delegation of such powers, both technical and financial, as it may deem necessary for the efficient execution of the project, to the Chief Engineers, Superintending Engineers, Executive Engineers and Sub. Divisional Officers engaged in the execution of the project.
- (iii) to examine and, where necessary, lay-down specifications & schedule of rates for various classes of work with a view to achieve sound and efficient execution of the project.
- (iv) to approve all sub-estimate and contracts, the cost of which exceeds the powers of sanction of the Chief Engineers.
- (v) to approve all proposals for award of work or supplies on contract other than those based on public tenders and on detailed quantities estimates and works allotted on work order basis on schedule rates.

NOTE: (1) Where total financial liability under a contract is definitely ascertainable at the time of placing the contract and where the contract itself is the result of a public or limited call for tenders, prior submission of the proposals to the Control Board will not be necessary so long as the contract is otherwise within the powers of sanction of Chief Engineers.

NOTE: (2) This will not affect the powers delegated from time to time to the Chief Engineers, Superintending Engineers, Executive Engineers and sub Divisional Officers.

- (vi) to frame rules as to delegation of powers and procedure for the purpose of carrying out its business.
- (vii) to decide the programme of construction of different parts of the project in the two States, keeping in view the funds available, the economics of the Project and the desirability of obtaining quick results
- (viii) to decide on the stage development or water power and the withdrawals of water from a reservoir during the construction period for irrigation and power purposes with a view to securing best use of water available.

- (ix) to receive monthly progress reports both as to works and expenditure in a prescribed form from the Chief Engineers, review the progress of different units of the project and lay down steps to be taken to expedite the work.

NOTE: With the constitution of the Chambal Control Board, the present Technical Board may be abolished.

<sup>46</sup>**DRAFT PROCEEDINGS OF THE INTER-STATE MEETING BETWEEN THE CHIEF ENGINEERS OF THE PUNJAB, UTTAR PRADESH AND RAJASTHAN REGARDING THE DISTRIBUTION OF WATERS OF JUMNA RIVER HELD ON JUNE 8, 1955 IN THE CHAIRMAN, CENTRAL WATER & POWER COMMISSION'S ROOM**

Present

C.W. & P.C.

- |    |                       |                           |
|----|-----------------------|---------------------------|
| 1. | Shri M.D. Mithal      | In the Chair              |
| 2. | Shri M.G. Hiranandani | Member (P&I), C.W. & P.C. |
| 3. | Shri P.L. Chopra      | Director, (T.E.)          |
|    |                       | Deputy Director (T.E.)    |

Planning Commission

- |    |                   |                          |
|----|-------------------|--------------------------|
| 4. | Shri Yadava Mohan | Chief, Natural Resources |
|----|-------------------|--------------------------|

PUNJAB

- |    |                    |   |
|----|--------------------|---|
| 5. | Shri S.L. Malhotra | Chief Engineer, Punjab                                |
| 6. | Shri M.L. Batra    | Superintending Engineer, Punjab                       |
| 7. | Shri B.R. Lamba    | Superintending Engineer, Western Jumna Canal, Punjab. |

U.P.

- |     |                    |                               |
|-----|--------------------|-------------------------------|
| 8.  | Shri R.C. Sahai    | Chief Engineer, U.P.          |
| 9.  | Shri G.K. Aggarwal | Superintending Engineer, U.P. |
| 10. | Shri P.L. Aggarwal | Executive Engineer, U.P.      |

RAJASTHAN

- |     |               |                           |
|-----|---------------|---------------------------|
| 11. | Shri Moti Ram | Chief Engineer, Rajasthan |
|-----|---------------|---------------------------|

The question of distribution of the Yamuna waters at Tajewala including the proposal of the Punjab Government for re-modelling of the Western Yamuna Canal and the Gurgaon Canal project proposed by the Punjab was discussed at length. The view points of the three States are summarized below.

**RE-MODELLING OF THE WESTERN YAMUNA CANAL**

The position taken up by U.P. is as under:

The Chief Engineer, Punjab, has claimed an increase in the capacity of the Western Yamuna Canal by reason of irrigation of new channels constructed to date and fed from the Western Yamuna Canal without taking into account the requirements of the Agra Canal taking off above Okhla which was constructed in 1874.

According to the existing agreement between the State Govts of the Punjab and Uttar Pradesh, upto 10900 cusecs discharge in the Yamua river at Tajewala, the Punjab will draw 8,400 cusecs and

---

<sup>46</sup> Some of the decision taken in the meeting are varied by MOU of 1994 on sharing of Yamuna water. Susequently UYRB in its meetings has also decided seasonal quantum of water to be drawn by each state from Tajewala and Okhla.

the U.P. 2,500 cusecs. Above this discharge the Punjab and U.P. will distribute the supplies in the ratio of 2:1. The Punjab proposes to increase the capacity of the Western Yamuna Canal in order to be able to draw more water upto 12,000 cusecs when available in the Yamuna River at Tajewala. The U.P.'s stand is that at 10,900 cusecs after the supplies are distributed in the ratio of 8,400 cusecs and 2,500 cusecs, there should be no withdrawals into either canal taking off at Tajewala unless water is escaped below Okhla, i.e. after meeting the requirements of the Agra Canal. According to U.P., therefore, be conditioned by this essential circumstance.

The position taken by Rajasthan is as under:

Rajasthan representative agreed with the views expressed by the Chief Engineer, U.P. According to him, the waters of the Yamuna can benefit the States of U.P., Punjab and Rajasthan and there should be no increase of commitments in any State until the available supplies are apportioned amongst the various States according to their just requirements. The Government of Rajasthan have requested for the construction of a feeder from the Agra Canal for flood irrigation of large areas having at present no means of irrigation in the Bharatpur district. This irrigation can be possible only by using water in the river in late August, September and possibly October if and when available. The supply will be adversely affected if present withdrawals higher up are increased. The capacity of the feeder is proposed to be 500 cusecs. It will run for 4 to 6 weeks during the year in the late August, September and October.

The possibility of extending irrigation to certain parts of Jhunjunu district from the existing Western Yamuna channels is being examined and it is likely that irrigation to a limited extent by flow and low lift may be possible in that area. The quantity of water required may be of the order of about 100 cusecs.

The position taken by the Punjab is as under:

The Punjab does not consider it necessary to reopen the question of the agreement regarding the distribution of supplies at Tajewala between the U.P. and the Punjab signed only last year. It was further pointed out that even the existing capacity of 10,900 cusecs already accepted by U.P. for the Western and Eastern Yamuna Canal systems is not sufficient and under the conditions now sought to be imposed by U.P. even the existing channels of the Western Yamuna Canal will get starved. The last para of clause 2 of the Agreement laying down that above 10,900 cusecs the supplies shall be shared in the ratio of 2:1 was included to enable Punjab to run the Western Yamuna Canal to its full capacity and also to extend irrigation even for about two months to the dry parts of Rohtak, Gurgaon, Karnal and Yamuna Canal to which irrigation has not been extended so far due to the lethargy and hesitation to incur the necessary expenditure by the British Government. Such irrigation has done immense good to the areas to which this has been extended and the Punjab cannot withhold further development of such areas. The Punjab has been claiming supplies for these areas specially in the Karnal, Gurgaon, Rohtak and Hissar districts where even drinking water is not available, when it is surplus to the existing requirements of the Agra Canal.

### **GURGAON CANAL PROJECT PROPOSED BY THE PUNJAB**

Chief Engineer, Punjab, explained that the Punjab has prepared the Gurgaon Canal Project with a discharge of 1,105 cusecs to be run when supplies at Okhla are available over and above the existing requirements of the Agra Canal. Usually the supplies are available in the months of July, August and September and sometimes during the rest of the year. This canal may preferably be separate from the existing Agra Canal, as the demands on the two systems may not synchronize.

The Punjab proposes, in course of time, to convert the Gurgaon Canal into a perennial channel when supplies from other sources including stored supplies of the Yamuna are available.

The Chief Engineer, U.P. stated that his Government has already agreed to the Gurgaon Canal project upto 1,105 cusecs but the canal should take off from the Agra Canal at a suitable point between mile 12 and 15 provided supplies above the requirements of the Agra canal are available at Okhla in the Yamuna river and subject to the proviso that the proposed Gurgaon canal will be a purely non-perennial channel and no claim for any water on a perennial basis is made at any time hereafter.

The U.P. Government will be prepared to consider the question of conversion of the Gurgaon canal into a perennial channel if and when the storage supplies are made available in the Yamuna river and provided such stored supply is apportioned between the two States on equitable basis.

The Chief Engineer, Rajasthan, had no objection to the proposed Gurgaon Canal provided it uses only the supplies of Yamuna water which might be allocated to the Punjab at an Inter-state level. In the event of shortage, the supply will be distributed pro-rata. The Rajasthan Government would also like to participate in the Gurgaon canal project, if possible. The Rajasthan Government will examine this position and give an idea as soon as the project is received.

#### AGREED DECISIONS REGARDING GURGAON CANAL PROJECT

After further discussions, it was decided-

(i) To frame a statement showing the Yamuna supplies available and those required by different States at Okhla weir by 10 days period. This is to be prepared and supplied by U.P., Punjab and Rajasthan States almost immediately.

(ii) That the existing Agra canal will be reconditioned from head to mile 15 and between miles 15 and 69 to carry the revised discharge and cost allocated on agreed basis.

(iii) U.P. has no objection to the construction of the Gurgaon canal project pending exact allocations of supplies and costs.

Sd/-  
( M.D. MITHAL)  
Member (P&I) C.W.P. Commission



**Proceedings of the Meeting held on the 4<sup>th</sup> September, 1960 to discuss the question of allocation of cost of common works of the Chambal Project between the States of Madhya Pradesh and Rajasthan.**

A meeting was held at the residence of Shri Jaisukhlal Hathi, Deputy Minister, Irrigation & Power, Government of India, and Chairman, Chambal Control Board, on the 4<sup>th</sup> Sept., 1960 to discuss the question of allocation of cost of common works of the Chambal Project between the State of Madhya Pradesh and Rajasthan.

The two States were represented by :-

1. Shri Mohan Lal Sukhadia, Chief Minister, Rajasthan.
2. Shri Bheeka Bahi, Minister for Irrigation, Rajasthan
3. Shri Haribhau Upadhyaya, Minister for Finance, Rajasthan
4. Shri Ram Kishore Vyas, Home Minister, Rajasthan.
5. Shri V.V.Dravid, Minister For Labour and Chambal Project, Madhya Pradesh.

The Following officers of the Ministry of Irrigation and Power, Chambal Control Board and of the two State Governments assisted the Ministers in explaining their respective points of views :-

1. Shri J.S.Jain, Deputy Secretary, Ministry of Irrigation and Power
2. Shri K.V.Menon, Under Secretary, Ministry of Irrigation and Power
3. Shri P.S.Rao, Secretary, Chambal Control Board.
4. Shri A.K.Char, Chief Engineer, Chambal Project, M.P.
5. Shri K.P.U.Menon, Chairman, Rajasthan State Electricity Board, Jaipur.
6. Shri K.C.Satsangi, Chief Engineer, Rajasthan State Electricity Board, Jaipur.
7. Shri Moti Ram, Chief Engineer, Irrigation, Rajasthan.

2. The question of allocation of cost between the two States was taken up by the Chambal Control Board as early as 1955 and certain tentative decisions were taken based on the figures of the Project estimate then available. In its 34<sup>th</sup> meeting the Chambal Control Board desired that the Central Water and Power Commission should work out the allocation on cost of common works on the basis of revised estimates. The allocation of costs prepared by the Central Water and Power Commission was sent to the concerned Chief Engineers, who expressed their differing view points in their various letters. The Government of Rajasthan also sent its views in the matter.

After taking into consideration the opinions expressed by the two States, on the disputed points, the Central Water and Power Commission submitted its final recommendations to the Ministry of Irrigation and Power. The recommendations made by the Central Water and Power Commission and the view points of Madhya Pradesh and Rajasthan are summarised below for each item of work, along with the final decision taken thereon.

**(a) Gandhi Sagar Dam :—**

Estimated cost of this work is Rs.1360.25 lakhs and the Central Water and Power Commission had recommended that the cost should be shared equally between the two States. Both the State Governments agreed to this.

**(b) Kotah Barrage :-**

Estimated cost of this unit of work is Rs.382.55 lakhs. The Central Water and Power Commission had earlier proposed that the cost of the Kotah Barrage should be shared in proportion to the withdrawals by the two States but finally recommended that the cost may be equally shared on the same basis as the Gandhi Sagar Dam. The Government of Madhya Pradesh had held the view that the cost of the Kotah Barrage should be shared between Rajasthan and Madhya Pradesh on the basis of the decision arrived at in the 4<sup>th</sup> meeting of the Chambal Control Board according to which the share of Rajasthan should be Rs.28.00 lakhs over and above the share of Madhya Pradesh. Against this, Rajasthan's view point was that the cost of the Kotah Barrage should be shared by Madhya Pradesh and Rajasthan in proportion to the rates of withdrawal of water by each State, i.e.4259 and 3667 cusecs, respectively, as earlier suggested by the Central Water and Power Commission.

After some discussions it was agreed that the most equitable method would be to share the cost of the Kotah Barrage between the two State Governments in equal proportions.

**(c) Left Bank Canal and Distributaries :-**

The total estimated cost of this unit of work is Rs.219.44 lakhs. This work is entirely for the Rajasthan Government and the cost will, therefore, be wholly debited to the Rajasthan Government. Rajasthan Government agreed to this.

**(d) Distributaries in Rajasthan on Right Bank Canal :—**

The total estimated cost of this work is Rs.261.00 lakhs. The work is wholly within Rajasthan and therefore, the entire cost is debitable to Rajasthan Government. Rajasthan Government agreed to this.

**(e) Right Bank Canal in Rajasthan :-**

Estimated cost of this unit of work is Rs.785.90 lakhs. The Central Water and Power Commission had suggested that this cost should be shared between the two State Governments on cusec-mile basis which works out to approximately 75.40% for Madhya Pradesh and 24.60% for Rajasthan. The Government of Rajasthan agreed to this suggestion except that they suggested that the cost of an escape near Banganga (Rs.2.5lakhs) which was being constructed at the instance of Madhya Pradesh Government should be wholly borne by Madhya Pradesh. The Madhya Pradesh Government had also accepted the principle of cusec mile basis that the following amounts should be deducted from the total cost and debited wholly to Rajasthan before the cost is shared on the cusec mile basis.

- (i) Cost of the first 11 miles of the Canal (amount not known). The view point of Madhya Pradesh Government was that the length of the Right Main Canal upto Madhya Pradesh territory would

have been about 70 miles but this increased to all miles because of the change of the site of the Kotah Barrage.

- (ii) Cost of additional works such as Canal drops which had to be provided for due to alternation in the site of the Barrage.

The view point of Madhya Pradesh Government was that these works would not have been necessary if the site of the Barrage had not been shifted to suit Rajasthan. The cost of these works was of the order of Rs.6.50 lakhs.

After some discussion, it was agreed that as there was no significant differences the cost of the Right Main Canal in Rajasthan territory would be shared between Rajasthan and Madhya Pradesh on cusec-mile basis, i.e. in the ratio of 75.40: 24.60 subject to verification of the figures by the two Chief Engineers.

**(f) Right Bank Canal in Madhya Pradesh :—**

The total estimate cost of this work is Rs.1774.20 lakhs. The work is entirely of Madhya Pradesh Government, and therefore, the total cost is debitable to Madhya Pradesh. The Government of Madhya Pradesh agreed to this.

**(g) Gandhi Sagar Dam Power Station :—**

The total estimated cost of this unit of work is Rs.479.12 lakhs. The Central Water and Power Commission had recommended that this should be shared equally between the two States. Both the State Governments agreed to this.

**(h) Transmission Line From Gandhi Sagar Dam to Kotah :—**

The estimated cost of this line was intimated in the meeting by the Chief Engineers of the two State Government as Rs.40.43 lakhs. It was agreed that the cost of this line would be shared equally between the two States Governments, as recommended by the Central Water & Power Commission.

**(i) Transmission Line From Kotah to Sawai Madhopur :-**

The total estimated cost of this line was intimated by the Chief Engineers of the State Governments as Rs.\*69.23 lakhs. It was agreed that the cost would be shared between the two State Governments in proportion to the ultimate transformer capacities and suggested by the Central Water and Power Commission.

**(j) Transmission line From Sawai Madhopur to Gwalior :—**

The estimated cost of this line was not available. However, as the work lies wholly in Madhya Pradesh, the entire cost will be borne by the Madhya Pradesh Government. Madhya Pradesh Government agreed to this.

**(k) Transmission lines in Rajasthan :— Northern Grid :**

The cost of this work was also not available. However as the line lies wholly within the Rajasthan territory, it agreed that their cost will be borne by Rajasthan.

**(l) Transmission line From Gandhi Sager to Neemuch :-**

The estimated cost of this line was intimated by the Chief Engineer, in the meeting as Rs.27.28 lakhs and it was agreed that the cost of this line would be shared in proportion to the ultimate transformer capacities, as suggested by Central Water and Power Commission.

**(m) Transmission lines Southern Grid :-**

Madhya Pradesh :

The estimated cost of these lines was not available. However, as these lines lie wholly in Madhya Pradesh, it was agreed that their cost would be borne by Madhya Pradesh.

\* Figures subject to modification as per figures of detailed estimates.

**Decision dated 16<sup>th</sup> March, 1961 of Government of MP on allocation of cost of common works on Chambal Project.**

**GOVERNMENT OF MADHYA PRADESH  
PUBLIC WORKS DEPARTMENT  
(CHAMBAL)**

No. 924-145/XIX-Ch-/61

Bhopal dated 16<sup>th</sup> March, 1961  
25<sup>th</sup> Phalgun, 1882.

From :Shri A.Z.Siddiqui,  
Deputy Secretary to Govt. of M.P.

To,  
The Secretary,  
Chambal Control Board,  
Bikaner House, Shahjahan Road,  
New Delhi.

Sub:- Allocation of cost of common works on Chambal Project.

In continuation of this Department letter No.1396/784/XIX-Ch/60 dated 22.4.1960 on the subject mentioned above, I am directed to say that the State Government have considered the question of (i) sharing of cost and benefits of the Chambal Project between the two participating States of Rajasthan and Madhya Pradesh, and (ii) allocation of cost of the Project between Irrigation & Power Sectors and have taken the following decisions :-

**(I) Sharing of cost between two participating States, benefit being shared equally :-**

S.No.	Name of work.	Allocation of cost between MP and Rajasthan
(1)	(2)	(3)
1.	Gandhi Sagar Dams.	Fifty percent each.
2.	Kotah Barrage.	Fifty percent each.
3.	Left Bank Canal and Distributaries.	Entirely by Rajasthan Government
4.	Distributaries in Rajasthan on Right Bank Canal.	Entirely by Rajasthan Government
5.	Right Bank Canal with in Rajasthan territory.	Cusec Mile Basis.

6.	Right Bank Canal within (New M.P.) territory.	Entirely by Madhya Pradesh Government.
7.	Gandhi Sagar Power Station.	Fifty percent each.
8.	Transmission line, Northern Grid.	
	(a) Gandhi Sagar Dam to Kotah	Fifty percent each when all the three Power Station come into operation.
	(b) Kotah to Sawai Madhopur	In proportion to the Ultimate transformer Capacity.
	(c) Sawai Madhopur to Gwalior	Entirely by Madhya Pradesh
	(d) Rest in Rajasthan.	Entirely by Rajasthan Govt.
9.	Transmission Line, Southern Grid	
	(a) Gandhi Sagar to Neemuch	In proportion to the Ultimate transformers capacity.
	(b) Rest in M.P	Entirely by Madhya Pradesh

## **(II) Allocation of cost between Irrigation and Power Sectors:-**

### **A) (a) Irrigation Sector.**

1. Gandhi Sagar Dam.
2. Kotah Barrage.
3. Left Bank Canal & Distributaries.
4. Distributaries in Rajasthan on Right Bank Canal.
5. Right Bank Canal within Rajasthan territory.
6. Right Bank Canal within N.P. (New M.P.) Territory.

### **(b) Power Sector :**

7. Gandhi Sagar Power Station.
8. Transmission Line, Northern Grid.
9. Transmission Line, Southern Grid.

### **B) (i) Water utilised in Generating Power to be sold by Irrigation Sector to Power Sector**

(ii) The rate for supply of water be fixed by the State Government in consultation with the Electricity Board, so as to bring the income of about Rs.32.00 lakh equally.

(iii) Charge on full generating capacity should not be made from the first year. Water rates should be charged on 25% of the total generating capacity, 60% load factor in the

first year, 50% in the second year, 75% in the third year, and on full generating capacity from the fourth year and onwards.

(iv) The question of water rate should be reviewed on completion of Rana Pratap Sagar Dam or after a period of ten years, whichever is earlier.

C) The Rajasthan Government should be consulted in regards to the share of the cost to be charged to Irrigation sector and also fixing the rate of supply of water.

Yours Faithfully,

Sd/-  
(A.S.SIDDIQUI)  
Deputy Secretary to Govt. M.P.

No.9I8/XIX /Ch./ 61

Bhopal dated the 16<sup>th</sup> March, 1961  
25<sup>th</sup> Phalgun 1882.

Copy forwarded to :—

1. The Secretary to Govt. of Madhya Pradesh Planning & Development Department, Bhopal.
2. The Secretary, to Govt. of MP, Finance Deptt., Bhopal
3. The Secretary to Govt. of M.P. Public Works Deptt., Bhopal.
4. The Chief Engineer, P.O. Chambal Hydel Works.
5. The Chief Engineer (Irrigation) Jaipur.
6. The Secretary, M.P.E.B. Jabalpur.

Sd/-  
Officer on Special Duty

GOVERNMENT OF INDIA  
MINISTRY OF IRRIGATION AND POWER, CHAMBAL  
CONTROL BOARD, BIKANER HOUSE,  
SHAHJAHAN ROAD.

No.CCB/21/63-1963-1970

Delhi, the 15<sup>th</sup> March, 1963.  
the 24<sup>th</sup> Phalguna, 1884.

To,

The Chief Engineer,  
Irrigation, Rajasthan, Jaipur.

The Chief Engineer,  
Rana Pratap Sagar and Kota Dams,  
Kota (Rajasthan)

The Dy. Chief Engineer,  
Chambal Hydel and Irrigation Scheme,  
Palpur House, 2<sup>nd</sup> S.A.F. Road,  
Lashkar, Gwalior (MP)

The Secretary,  
Madhya Pradesh Electricity Board,  
Jabalpur.

Sub:- Allocation of cost of common works of Chambal Project between the two participating Governments of Madhya Pradesh and Rajasthan.

Sir,

I am to invite a reference to Note Item No.21 of the Second Supplementary Agenda for the 56<sup>th</sup> meeting of the Chambal Control Board held on 8.9.61 (Annex) when the principles of sharing of cost of the Chambal Project between the two participating State Governments of Rajasthan and Madhya Pradesh were approved by the Board. The above subject at the instance of Shri V.V. Dravid, Minister-Member, Madhya Pradesh was considered by the Board at their last meeting held on 2<sup>nd</sup> February, 1963 when the following decision was taken :-

"Shri V.V. Dravid, Minister-member recapitulated the decision taken at the meeting held on 4th September, 1960 at the residence of Shri Jaisukh Lal Hathi, the then Dy. Minister of Irrigation and Power, Government of India and Chairman, Chambal Control Board."

On the question of allocation of cost of common works of Chambal Project between the State of Madhya Pradesh and Rajasthan, he said that though the principles of allocation of cost of various common works had been settled, the final figures are yet not taken. In the context he felt that it would be desirable for the Madhya Pradesh and Rajasthan portions of the project to deposit the accounts of common works of the project in the Board's office so that a report in this regard may be made to the Board.



The Board agreed with the suggestion of Shri Dravid and directed the Chief Engineers of the Project to submit the certified accounts of common works of Chambal Project to the Board's office so that the Board may be apprised of the factual position from time to time.

The direction of the Board as at 'A' above is for your information and necessary action.

Yours FaithFully,

Sd/- (P.S.Rao),  
Secretary, Chambal Control Board.

Copy forwarded tor information to :-

1. The Secretary to Government of MadhyaPradesh, Public Works Department (Chambal) Bhopal.
2. The Secretary to Government of Madhya Pradesh, ElectricityDepartment, Bhopal.
3. The Secretary to Government of Rajasthan, Irrigation and Power Department, Jaipur.
4. The Financial Adviser, Chambal Control Board, New Delhi-40.

Sd/—(P.S.Rao)  
Secretary,  
Chambal Control Board.

**Note on item No.21 of the Second Supplementary Agenda for the Fifty-sixth meeting of the Chambal Control Board to be held at New Delhi on 8.9.1961.**

Sub:-Allocation of cost of common works of Chambal Project between the two participating Governments of Madhya Pradesh and Rajasthan.

1. The question regarding the allocation of cost of common works of Chambal Project between the State of Rajasthan and Madhya Pradesh was under the active consideration of the Control Board and the two participating State Governments ever since the formation of the Board, the back-ground of the case has been briefly narrated in Appendix V/1.
2. As envisaged in para 9 of Appendix V/1., the Secretary to Government of Rajasthan in the Irrigation and Power Department vide his letter dated 27.2.1960 addressed to the Chairman, Central Water and Power Commission (with a copy to the Board's Office) communicated views of the Rajasthan Government on question of allocation of cost of common works of Chambal Project between the Madhya Pradesh and Rajasthan States.
3. He (Secretary to Government of Rajasthan) also sent to the Chairman, Central Water and Power Commission a copy of D.O.letter dated 4.12.1959 from Shri Ram Kishore Vyas, the then Minister of Irrigation, Rajasthan addressed to the Chairman, Chambal Control Board wherein the views of Rajasthan Government referred to in para 2 above were conveyed.

Subsequently, the question was examined by the Central Water and Power Commission and the Ministry of Irrigation and Power. On receipt of Central Water and Power Commission's and Ministry of Irrigation and Power's views, the Chairman, Chambal Control Board desired to discuss the matter with the Minister-Members of the Board.

4. A meeting was accordingly held at the residence of Shri Jaisukh Lal Hathi, Deputy Minister for Irrigation and Power, Government of India (Chairman, Chambal Control Board) on the 4th September, 1960 to discuss the question of allocation of cost of common works of Chambal Project between the States of Madhya Pradesh and Rajasthan. A copy of the Minutes of the meeting is placed at Appendix V/1.

A copy of the proceedings of the meeting held on 4.9.1960 (refer Appendix V/1) was forwarded to the Secretaries to the Government of Rajasthan and Madhya Pradesh with the request to communicate the concurrence of their State Governments to the same. Both the State Governments have since conveyed their concurrence to the proceedings of the meeting held on 4.9.1960 (refer Appendix V/1).

## **SUMMARY RECORD OF THE DECISION TAKEN AT THE INTER-STATE MEETING HELD ON 7<sup>th</sup> NOVEMBER 1963 AMONG THE GOVERNMENTS OF HIMACHAL PRADESH, UTTAR PRADESH, PUNJAB, DELHI AND RAJASTHAN REGARDING YAMUNA WATER DEVELOPMENT**

A meeting was held on 7.11.63 in the Minister's Room on Yamuna Development Schemes when the following were present:-

### Irrigation and Power Ministry

Dr. K.L. Rao, Minister of Irrigation and Power  
Shri V. Nanjappa, Secretary, Ministry of I & P.  
Shri M.K. Kidwai.  
Shri G.K. Vij.

### Central Water and Power Commission

Shri M.R. Chopra.  
Shri D.B. Anand.

### Delhi Administration

Shri DharamVira, Chief Commissioner.  
Shri E.B. Rinboth, Development Commissioner.

### U.P.

Ch. Girdhari Lal, Minister, I&P.  
Shri Prapanna Sharma, Deputy Minister.  
Shri B.B. Lal, Secretary, U.P.  
Shri A.C. Mitra  
Shri S.K. Jain, Project Chief Engineer.

### Rajasthan Government

Shri Nathu Ram Mirdha, Minister, I & P.

### Punjab

Ch. Ranbir Singh, Minister, I&P.

### Himachal Pradesh

Dr. Y.S. Parmar, Chief Minister, H.P.

Dr. K.L. Rao opened the meeting and stated that there were proposals for dams to be built on the Yamuna river or its tributaries at four sites and this meeting was arranged to decide the schemes which should be taken up in the best interests of the country and the concerned states for exploitation of the Yamuna waters in excess of the existing utilization. Referring briefly to the four dams, he states:-

- |               |  |
|---------------|--|
| I. Kishau Dam | It would be located on the Tons River in a very narrow gorge which was half the size of Bhakra and would give a storage of one |
|---------------|--|

million acre feet of water. This site looked more favourable and would yield the maximum benefit.

- |                                    |  |
|------------------------------------|--|
| II. Chandani Dam on the River Giri | This Dam would provide about 0.5 million acre feet of storage but would, however, submerge a holy lake and the town of Dadahu which was undesirable.   |
| III. Lakhwar                       | This did not look a favourable site as the valley was very wide and river was flat.  |
| IV. Kotch Dam on the Yamuna        | This was not a good site. The storage available was small and the cost was very high. This would also submerge very good land of the Himachal Pradesh. |

He thought that it was best to give up the Kotch Dam site and stated that we should largely depend upon the Dams on the Tons and Giri Rivers. He further said that we would have to ensure that the existing pattern of supplies from the Yamuna are not disturbed. That might require the remodeling of the existing barrage at Tajewala at a later stage after the dam on the Giri was constructed. He, therefore, finally proposed that a dam should be constructed at Kishau on the Tons River and the investigation and the preparation of Project should be complete by the U.P. Government expeditiously so that work is undertaken in the 4<sup>th</sup> Plan and benefits start accruing in the 5<sup>th</sup> Plan. Next to this we should take up a dam on the River Giri above its confluence with Jalal and it necessary, another dam on its tributary Jalal, so that the holy lake and the town of Dadahu are not submerged.

He further appealed to the Ministers of U.P. and Himachal Pradesh to agree to share the benefits of the additional waters available in excess of the existing utilizations with other States like Rajasthan which needs waters for instance for the Bharatpur area, the Punjab which needs waters for instance for the Mohindergarh District and Delhi for its drinking and industrial needs. At present, both Punjab and U.P. were helping Delhi by diverting some supplies for Delhi but the needs of Delhi would gradually increase. He further indicated that if firm decisions are taken now then every possible effort would be made to provide funds for the project in the 4<sup>th</sup> Plan. So far as the actual share of the benefits by the respective states were concerned, it could be decided later.

Ch. Girdhari Lal, Minister, I & P, U.P. stated that he would have to take the concurrence of his Government and Cabinet before agreeing to the proposal of sharing the benefits with other States. Dr. K.L. Rao said that unless understanding on general principles was arrived at, the purpose of this meeting would not be served. He further stated that all decisions in such meeting were subject to ratification by the State Governments and Ministries. He, therefore, appealed that sharing of the benefits should in principles be agreed to.

He requested Dr. Parmar, Chief Minister, Himachal Pradesh to indicate his views. Dr. Parmar stated that his Government would be most willing to cooperate so that the Yamuna waters are exploited in the best national interests and the benefits are shared with other States like Punjab, Rajasthan and Delhi. Dr. K.L. Rao further stated that so far as the catchment area of the Tons river was concerned more than half fell in the territory of Himachal Pradesh so in any case U.P. could not claim a share more than 50%, so the other States could easily share out of the remaining 50%, which would otherwise be that of the Himachal Pradesh Government. He was very glad that the Himachal Pradesh Government was willing to share the benefits with other States and so there should be no difficulty. Shri Mirdha, Minister, I & P Rajasthan, stated that he entirely agreed with the proposal of

exploiting the additional Yamuna waters in the best interests of the National and to share the benefits for which Rajasthan Government would be prepared to pay its share of the cost in proportion to the benefits they would get. Shri Dharam Vira, Chief Commissioner, Delhi Admn. also fully agreed with the proposal and indicated the willingness of the Delhi Admn. to pay the proportionate cost of the benefits that Delhi would get.

Dr. Parmar of H.P. praised the new constructive approach and appealed that it should be agreed to in principle and details of share and proportionate costs could be worked out later. Shri Girdhari Lal, Minister of U.P. then agreed to proposal suggested by Dr. K.L. Rao, but suggested that U.P.'s share of benefits from the Kishau Dam should not be less than 50% of the total. Ch. Ranbir Singh I & P Minister, Punjab, stated that he agreed that the proposal to construct the Kishau Dam was the best. He desired it to be expedited. He agreed that the benefits should go to all the adjoining States including Rajasthan and Delhi. Punjab needed waters from the Yamuna for its Mohindergarh District. He further stated that if U.P. and Himachal Pradesh Governments were prepared to investigate and construct these dams then Punjab would have no objection but Punjab Government would like to emphasise that the investigations for the Kishau Dam should be expedited so that work is started as early as possible and pushed up in the 4<sup>th</sup> Plan. He further stated that Punjab was well equipped with personnel and know how and would be most willing to assist in the investigations and construction of these projects. Punjab felt that they would do it at much cheaper cost. However, services of the Punjab Government would be made available only if the Uttar Pradesh and Himachal Pradesh Governments so desire. He further assured that Punjab would be prepared to pay their share of the cos<sup>47</sup>t according to the benefits they would get.

Finally the following proposals were unanimously agreed to:-

(1) Further waters available in Yamuna in excess of the existing utilizations, should also be exploited in the best national interest.

(2) For this purpose, it is considered best to construct a dam across Tons and another across Giri above confluence and if necessary, its tributary Jalal.

(3) Investigations and preparation of the Project reports and Estimates for purpose of sanction and construction of the Dam across Tons will be done by the U.P. Engineers. They may also associate the officers of the Himachal Pradesh.

(4) Investigations and preparation of the Projects Reports of the Dam on Giri will be done by Himachal Pradesh.

(5) The States of U.P., H.P., Punjab, Delhi and Rajasthan have agreed by common consent, to share the cost and benefits of Kishau Dam. The States also request that this dam should be taken up immediately and completed as early as possible.

(6) The benefits on account of the Kishau Dam, will be shared between the States, as will be agreed to at a later conference. The cost of the share will be worked out according to the benefits. The share will be in respect of water and in respect of power produced at the Kishau Dam site only.

---

<sup>47</sup> By 1994 identified storage locations are Kishau on Tons, Renuka on Giri and Lakhwar –Vyasi on main stem of Yamuna.

For the other power developments in U.P. State, the cost will be borne by U.P., Himachal Pradesh can develop irrigation and power development projects up-stream of the Dam unaffected by the latter.

(7) For effective supply of water for existing irrigations, it will become necessary to take suitable special measures when Giri Dam also is built. This may require a balancing pond either by modifications of the barrage at Tajewala, if possible, or a barrage higher up. These investigations may be done by Punjab.

(8) At Lakhwar or at a higher site across main Yamuna investigations may be done by U.P. if any storage reservoir and any conservation on the main river is possible including silt studies.

All the Ministers present in the meeting signed the decisions as indicated above.

**DRAFT <sup>48</sup>AGREEMENT FOR SUPPLY OF 300 CUSECS OF WATER TO RAJASTHAN STATE THROUGH BHARATPUR FEEDER CHANNEL OFF TAKING FROM MILE 1<sup>st</sup> RIGHT BANK OF ARING DISTRIBUTARY OFF TAKING FROM AGRA AT MILE 69 RIGHT BANK**

This agreement is made on the .....dated.....of..... 1964 between the Governor of Uttar Pradesh (which expression shall unless excluded by or repugnant to the context include his successors in office and permitted assigns) of the one part and the Governor of the State of Rajasthan (which expression shall, unless excluded by or repugnant to the context include his heirs, successors, executors, administrators and assigns) of the other part.

WHEREAS THE GOVERNOR of Uttar Pradesh has agreed to supply surplus Yamuna River water to the Rajasthan State through the Agra Canal in the monsoon period for being utilized for irrigating land of Bharatpur District, Rajasthan State.

AND WHEREAS THE GOVERNOR of Rajasthan agrees to take the supply through the Feeder Channel named as Bharatpur feeder channel constructed at the cost of the Rajasthan State to take off from mile 1 of the Aring Distributary taking off from mile 69 of the Agra Canal as shown on the map annexed hereto.

**NOW THIS DEED WITNESSES AS FOLLOWS**

1. This new Feeder channel taking off from Aring Distributary alongwith its appurtenant works including remodeling of Aring Disty in its first mile and strengthening of Regulator floor in Agra canal at mile 69 lying within the U.P. territory which have since been completed by the Uttar Pradesh Government at the cost of Rajasthan State (Rs.9,67,803) will be maintained by the Irrigation Department of Uttar Pradesh at the cost of the Rajasthan State. The Rajasthan Govt. will bear the expenditure involved in the annual maintenance and repair including supervision of the feeder in U.P. upto the amount of Rs.7,000/- year (exclusive of all special repairs needed from time to time). The cost of annual maintenance and repairs including supervision charges shall be adjusted by the Accountant General of the respective Govt. every year on the basis of actual expenditure.

2. The Government of U.P. agrees to pass supply of 300 cusecs, down Bharatpur Feeder channel for a period of about 6 weeks during the months of July and September provided-

(i) Water is available surplus at Okhla and can be spared from the Agra canal after satisfying the U.P.'s own irrigation requirements in the pre-Yamuna Dam's period. For the post-Yamuna Dam's period when less water is likely to be available surplus at Okhla, the Rajasthan Government will receive supplies from its due share of cost in the Yamuna Dams and remodeling of Agra Canal.

(ii) The supply required for the Rajasthan State can be passed in the Agra Canal save and except at such time when the necessities of work and other conditions preclude the opening of the Agra canal of which such notice as possible shall be given to the Governor of the Rajasthan State.

---

<sup>48</sup> Requirement of the area covered by Bharatpur Feeder are now regulated as per MOU of May 1994 on Yamuna water.

(iii) In case constant supplies of 300 cusecs for 6 weeks is not maintained due to unavoidable reasons the Rajasthan Government will be entitled to receive the supplies for a longer period during the same season to make up the deficiency.

3. The Government of the Rajasthan agrees to accept any supply passed in Bharatpur feeder under the conditions cited above and that the short or non-supply of water, due to any cause beyond the control of the U.P. Government shall not render U.P. Government liable for compensation to the Rajasthan Government in respect of any scheme including even water supply to towns.

4. Maintenance charges, incurred on jobs' such as clearance of the tanks and rubbish etc. caused by the running of Agra Canal specially for passing water for the purpose of this agreement shall be borne by the Governor of Rajasthan State and he shall for this purpose contribute Rs.5,000 (Rs. Five thousand only) annually. The position will be reviewed after three years and necessary adjustments on the basis of actual expenditure shall be made by the Accountant General of the Rajasthan of the respective Governments.

5. The annual repairs charges estimates at Rs.7,000 for the Feeder channel and Rs.5,000 for the clearance of Agra Canal shall be placed by the Rajasthan Government at the disposal of the Uttar Pradesh Govt. in the month of April every year.

6. The estimate for special repairs of the Feeder Channel required from time to time will be sanctioned by the competent authority of the Uttar Pradesh and the required amount, which will be intimated to the Rajasthan Govt. by January, will be placed by them at the disposal of the Uttar Pradesh Govt. by the month of April so as to enable repairs to be carried out in time.

7. All communications regarding the supply of water shall be dealt with the Superintending Engineer, III Circle I.W.U.P. on behalf of the Government of the U.P. and Superintending Engineer I.D. Rajasthan, Jaipur on behalf of the Governor of Rajasthan.

8. If any dispute or difference arises between the parties hereto as regards the interpretation of this agreement, such matter shall be referred to the sole arbitration of the Chairman, Central Water and Power Commission, Government of India, or his representative not below the rank of a Member, whose decision in the matter shall be final and binding on the parties hereto and the provisions of the Indian Arbitration Act, 1940 shall apply.



## **AGREEMENTS BETWEEN THE GOVERNMENTS OF MADHYA PRADESH AND UTTAR PRADESH FOR PROJECTS IN BUNDELKHAND**

### **Subject – (i) BHANDER CANAL**

<sup>49</sup>Bhander Canal takes off from mile 6, left bank of <sup>50</sup>Betwa canal, and is being constructed as a part of the <sup>51</sup>Matatilla Dam Project. Except the first two miles of the main canal, i.e. upto Pahuj Syphon, the entire canal system lies in Madhya Pradesh area. The M.P. Government are pressing for early completion and commissioning of the canal system.

2. The U.P. Engineers have not been able to make satisfactory progress on this work, because of the decoit menace and consequent insecurity in this area of Madhya Pradesh, and other difficulties, such as lack of any authority to the U.P. Engineers.

3. This matter was discussed on the 29<sup>th</sup> April, 1965, in the room of Member (WR), C.W. & P.C., between Shri J.P. Mittal, Chief Engineer, U.P., and S/Shri C.H. Sanghvi & K.L. Handa, Chief Engineers, Madhya Pradesh, when it was agreed that in the interest of early completion of the project and early utilization of the irrigation potential created, all the remaining works should be executed by the Madhya Pradesh Engineers chargeable to the Matatilia Project and their operation and maintenance should also be looked after by them. Water for Madhya Pradesh, will be delivered to Madhya Pradesh at Bhander canal head.

4. The financial implications of the above proposals in regard to construction as well as operation and maintenance will be examined and settled separately in the background of the existing agreement between the two States.

5. The U.P. Engineers will immediately supply to Madhya Pradesh Engineers detailed information regarding the stage of construction of the various works.

6. It is requested that this arrangement be ratified by the two States within a month.

Sd/-	Sd/-	Sd/-	Sd/-
(D.B. ANAND)	(C.H. SANGHVI)	(J.P. MITTAL)	(K.L. HANDA)
29.4.65	29.4.65	29.4.65	29.4.65

### **Subject – (ii) RANGWAN DAM**

A meeting was held on the 28<sup>th</sup> and 29<sup>th</sup> April, 1965, in the room of Member (WR), CW & PC, between the U.P. and Madhya Pradesh Engineers, when the following were present.

C.W. & P.C.

---

<sup>49</sup> Bhander canal benefits Datia and Bhind distt of MP and has CCA of 109.97 Th.ha. The further agreement on Bhander canal was arrived at on 18/10/1965.

<sup>50</sup> Betwa canal offtakes from left bank of Parichha Wier on Betwa river in Jhansi distt of UP and is 30.90 km long with head discharge capacity of 143.076 cumec.

<sup>51</sup> The Matatila dam is constructed across river Betwa near Lalitpur Distt of UP. The water from the reservoir as per agreement ( details of agreement not available) is shared between UP and MP in the ratio of 70:30. The original gross storage capacity is 34.04 TMC.

1. Shri D.B. Anand, Member (WR)
2. Shri Hari Singh, Director (WIN)
3. Shri R.C. Shenoy, Director (H&S)
4. Shri J.P. Jain, Chief Engineer
5. Shri J.P. Mittal, Chief Engineer
6. Shri J.N. Srivastava, Superintending Engineer

## **MADHYA PRADESH**

7. Shri C. H. Sanghvi, Chief Engineer
8. Shri K.L. Handa, Additional Chief Engineer
9. Shri P.L.N. Murthy, Superintending Engineer

and other officers from the two States.

2. The question of division of <sup>52</sup>Rangwan waters between the two States, had been discussed earlier, vide C.W. & P.C. letter No.14/72/Irr-64/WIN dated 23.1.1965, in which an allocation of 3,500 m.c.ft. was tentatively fixed for Madhya Pradesh, and a further meeting was proposed. Thereafter, the U.P. Chief Engineer sent working tables indicating their requirements, as per the crop pattern existing at present on the Ken canal.

3. This question was again discussed in today's meeting. It was agreed that the final allocation to Madhya Pradesh should be 2,500/- m.c.ft. from 1<sup>st</sup> July upto 31<sup>st</sup> October, of which not more than 550 m.c.ft. shall be drawn during the month of October; more may be drawn when, and to the extent, the reservoir is overflowing. The withdrawals by Madhya Pradesh between the 1<sup>st</sup> of November, and the end of March, would be limited to 1,500 m.c.ft. In case of Madhya Pradesh contemplating withdrawals upstream of Rangwan, it shall be assured that <sup>53</sup>withdrawals by U.P. of 3,600 m.c.ft. (excluding reservoir losses) after 1<sup>st</sup> November, are not affected adversely.

Shortages, as on 1<sup>st</sup> of November, and excess post-monsoon inflows, thereafter, shall be shared in the proportion of 15 (M.P.) to 36 (U.P.). Madhya Pradesh shall be associated with the inter-state distribution of storage waters.

4. It was agreed that Madhya Pradesh could draw upto 400 m.c.ft. from the storage during October, and 1500 m.c.ft. after 1<sup>st</sup> of November thus making a total of 1900 m.c.ft. out of 5500 m.c.ft. live storage (excluding losses which are almost covered by the post-monsoon inflows). The costs of the reservoir shall, therefore, be shared in the ratio of 19:36 between Madhya Pradesh and U.P. The U.P. Government shall supply figure of upto date cost to the Madhya Pradesh Government within a period of 3 months.

5. The cost of construction of the outlet for drawing water for Madhya Pradesh, shall be borne by Madhya Pradesh. The location of the outlet will be jointly selected by the State Chief Engineers.

6. This agreement may please be ratified by the two State Governments within a period of 3 months from the supply of upto date figures of costs by the U.P. Government.

---

<sup>52</sup> Rangawan dam is on Banne river, a left bank tributary of Ken in Chattarpur, MP joinin Ken u/s of Bariyapur Pick up Wier(PUW). Gross and live storage capacity of the dam are 5.8 and 5.5 TMC respectively. The agreement is modified further agreement of 1<sup>st</sup> Auugust,1972

<sup>53</sup> Withdrawls by UP from Rangawan are utilised in Ken Canal offtaking from Bariyarpur PUW.

Sd/-	Sd/-	Sd/-	Sd/-	Sd/-
(D.B. ANAND)	(J.P. JAIN)	(J.P. MITTAL)	(C.H. SANGHVI)	(K.L. HANDA)
29.4.65	29.4.65	29.4.65	29.4.65	29.4.65

Subject – (iii) <sup>54</sup>JAMNI DAM

The question of distribution of waters of Jamni Dam had been discussed in the Chairman, CWPC's room with the Chief Engineers from U.P. and Madhya Pradesh on the 19<sup>th</sup> July, 1962 in which, amongst other things, it was agreed that Madhya Pradesh, would share water for irrigating upto 3,000 acres in Madhya Pradesh, which worked out to about 214 m.c.ft. from the Jamni Dam, under construction by U.P.

Later, the Madhya Pradesh Government informed the CW&PC that they would like to share waters from the Jamni Dam for irrigating 10,000 acres, requiring a little over 700 million cu.ft.

2. A meeting in this connection was held on the 28<sup>th</sup> and 29<sup>th</sup> April, 1965, in Member (WR)'s room, in which the following were present:-

C.W. & P.C.

1. Shri D.B. Anand, Member (WR)
2. Shri Hari Singh, Director (WIN)
3. Shri R.C. Shenoy, Director (H&S)

Uttar Pradesh

4. Shri J.P. Jain, Chief Engineer (I)
5. Shri J.P. Mittal, Additional Chief Engineer (I)
6. Shri J.N. Srivastava, Superintending Engineer

Madhya Pradesh

7. Shri K.L. Handa, Additional Chief Engineer (I)
8. Shri P.L.N. Murthy, Superintending Engineer

3. The various factors involved in the matter were considered. While the Chief Engineer, Madhya Pradesh, desired allocation of water for 10,000 acres, it was felt that, in the context of the design and construction of the dam, it would not be possible to accommodate so much withdrawal for Madhya Pradesh.

After detailed thought and discussion, it was agreed that, from this Rabi Tank, Uttar Pradesh should make available 450 million cu.ft. of water at the canal sluice of the reservoir. The shortages, as on 1<sup>st</sup> November and extra post-monsoon inflows thereafter, shall be shared in the ratio of 450:2200 between Madhya Pradesh and U.P. The M.P. would be associated with this inter-state distribution of waters.

---

<sup>54</sup> It is located on Jamini river, an inter-state tributary of Betwa joining it d/s of Dhukwan weir and u/s of Parichha Weir. Substantial length of river forms boundary between UP and MP. The dam benefits Lalitpur and Jhansi distt of UP and Tikamgarh distt of MP.

4. The cost of the Jamni Reservoir shall be shared in the ratio of 450:2200 between Madhya Pradesh and Uttar Pradesh. The cost of future works, operation, and maintenance of the reservoir shall also be shared in the same ratio.

With regard to the cost of the common portion of the main Right Bank Canal, it was agreed that Madhya Pradesh will be charged for the difference of cost between the bigger channel, required to accommodate supplies to Madhya Pradesh and a smaller channel that would have been necessary if Uttar Pradesh were to use only its own share of 2200 m.c.ft.

The cost of annual works, maintenance, operation and repairs of the Right Bank Canal will also be shared in the same proportion.

The cost of the channel system in the Madhya Pradesh area shall be borne by the Madhya Pradesh Government.

5. It was also agreed that the agreement should be ratified by the two State Governments within a period of three months.

Sd/-  
(D.B. ANAND)  
Member, CW&PC

Sd/-  
(J.P. JAIN)  
C.E., U.P.

Sd/-  
(J.P. MITTAL)  
C.E., M.P.

Sd/-  
(K.L. HANDA)  
Addl. C.E., M.P.

GOVERNMENT OF MADHYA PRADESH  
PUBLIC WORKS DEPARTMENT

No.3043/2728/XIX/W/65

Dated, Bhopal, the December 65

From

M.A. Khan,  
Secretary to Government.

To

The Director (WIN)  
Government of India,  
Central Water and Power Commission,  
(Water Wing), New Delhi-11.

Subject:- Jamni Irrigation Project in Uttar Pradesh.

Sir,

I am directed to refer to your letter No.14/75(i)/Jamni, Irr./65/WIN, dated the 3<sup>rd</sup>/4<sup>th</sup> May, 1965, on the subject mentioned above and to state that the Government of Madhya Pradesh, is pleased to ratify the decisions reached during the discussion between the officers of the Central Water and Power Commission, Uttar Pradesh State and Madhya Pradesh State on 29.4.1965, in regard to sharing of waters from the Jamni Dam scheme of Uttar Pradesh, as contained in the draft agreement enclosed with your letter referred above.

Yours faithfully,

Sd/-  
(M.A. KHAN)  
Secretary to Government of  
Madhya Pradesh  
Public Works Department

Endt. No.3043/2728/XIX/W-65 dated Bhopal the 29<sup>th</sup> December, 1965.

Copy is forwarded to Chief Engineer, Irrigation Bhopal for information.

Sd/-  
Under Secretary to Govt.

No.36CI(B)/66/XXIII-IB-232 W/60

From

Shri R.C. Pant  
Deputy Secretary to Government,  
Uttar Pradesh,  
Irrigation (B) Department.

To

The Director (WIN)  
Central Water and Power Commission,  
(Water Wing)  
Government of India  
New Delhi.

Dated, Lucknow, February 17, 1966.

Subject:- Jamni Dam Project in Uttar Pradesh.

Sir,

With reference to your letter No.14/75(i)/Jamni/Irr./65/WIN/ dated Dec., 29, 1965, on the subject noted above, I am directed to say that the decisions arrived at in the meeting held on April 29, 1965, in Member (WR's) room and incorporated in the agreement received with Shri Hari Singh's letter No.14/65(i) Jamni/irr.65/(WIN), dated May 3/4, 1965, have been considered and this Government is pleased to ratify those decisions.

Yours faithfully,

Sd/-  
(R.C. PANT)  
Deputy Secretary

No.36(i)/GI(B)/66/XXIII-IB of date

Copy forwarded to the Secretary to the Government of India, Ministry of Irrigation and Power New Delhi, for information in continuation of this Government's letter No.998/GI(B)/65/XXIII-IB dated December 29, 1965.

Sd/-  
(R.C. PANT)  
Deputy Secretary

No.36(ii)/GI(B)/66/XXIII-IB of date

Copy forwarded to the Chief Engineer, Irrigation Department, Uttar Pradesh, Lucknow for information and necessary action, with reference to Shri K.T.Jain's D.O. letter No.12599/W-3, 125 B-48/Jamni Dam (IVth/13/65, dated December 24, 1965.

2. The State Government has had to agree to the cost of construction of common portion of the main right bank canal as also the cost of annual works, maintenance, operation and repairs thereof being shared between the two States on 'difference in cost' basis in place of cusec miles basis although the latter basis was more beneficial to this State mainly because the Chief Engineer, Irrigation Department, Uttar Pradesh, has already made a commitment to that effect in the discussions held in Member (WR's) room on April 29, 1965. In future the Chief Engineer, Irrigation Department should not make such commitments without obtaining prior approval of Government. The present case should also not be treated as a precedent for adopting difference in cost basis in other cases

By order

Sd/-  
(R.C. PANT)  
Deputy Secretary

Authorised for issue.

Sd/-  
Superintendent  
Irrigation (B) Department.

Copy to Vitt (C) Vibhag, for information.

<sup>55</sup>**AGREEMENT DATED 18<sup>th</sup> OCTOBER 1965 BETWEEN UTTAR PRADESH AND MADHYA PRADESH REGARDING BHANDER CANAL SYSTEM**

In para 4 of an agreement arrived at between the Chief Engineer, Irrigation, U.P. and Madhya Pradesh at a meeting held by Shri D.B. ANAND, Member (W.R.), Central Water & Power Commission on 29.4.65 at Delhi, it was decided that financial implications of the transfer of Bhandar Canal to Madhya Pradesh Government would be decided by the respective States in accordance with the existing agreement. In the meeting held with Shri S.K. Sarkar, Secretary to Government, Irrigation, Power and P.W.D. U.P. today ON 18<sup>th</sup> Oct, 1965 it transpired that U.P. Government wanted that financial implications be settled first before they could agree to ratify the minutes of the said meeting.

2. Accordingly, Shri J.P. Jain, Chief Engineer, Irrigation Department, U.P. and Shri K.L. Handa, Additional Chief Engineer, P.W.D., Irrigation Branch Madhya Pradesh met in the office of the Chief Engineer, Irrigation Department U.P., Lucknow and discussed the financial implications of the proposed transfer of Bhandar Canal to the M.P. Irrigation Branch in regard to the construction of the remaining works of this canal and its operation and maintenance. The following decisions were arrived at:

(I) The construction of the remaining works of Bhandar Canal shall be carried out by the Irrigation Branch of Madhya Pradesh after inviting tenders, based on the 'estimates to be provided by the Irrigation Department, U.P. The tenders shall be accepted by the Madhya Pradesh, Irrigation Branch in consultation with the Chief Engineer, Irrigation Department, U.P. The expenditure so incurred will be booked to the Project estimate of Matatila Dam. The Madhya Pradesh, Irrigation Branch will take over construction materials collected by the Irrigation Department, U.P. and stored at various places on Bhandar Canal System and utilize them on construction of the remaining works. Any materials left unutilized shall be used by them on the future maintenance of the canal system and the credit for the cost of such materials shall be given to Irrigation Department, U.P.

(II) The Madhya Pradesh, Irrigation Branch shall maintain and operate the Bhandar Canal System. The actual cost of the maintenance and operation of the canal system plus the establishment charges shall be limited to Rs.4/- per acre of the area actually irrigated in a particular year. This ceiling of Rs.4 per acre shall be reviewed every five years and revised, if necessary.

(III) The irrigation rates in force from time to time on Betwa Canal System shall apply ipso facto to Bhandar Canal System. A copy of the present rates of irrigational leviable on Betwa Canal System is enclosed as Annexure-I.

(IV) The Madhya Pradesh, Irrigation Branch shall credit the net revenue from the Bhandar Canal System to U.P. Government, Irrigation Department, after deducting the maintenance and operational charges as stated in para 2(ii) above and the actual collection charges from the gross revenue.

Encl: As above.

Sd/-  
(K.L. HANDA)  
Additional Chief Engineer,  
P.W.D., Irrigation Branch, Madhya Pradesh  
18.10.65

Sd/-  
(J.P. JAIN)  
Chief Engineer  
Irrigation Department, Uttar Pradesh  
18.10.65

---

<sup>55</sup> Another agreement on supplies to UP and MP in Bhandar Canal was reached in December, 1973.



**Extract from the summary record of the decision taken by the Chambal Control Board at its Sixty-sixth meeting held at New Delhi on 6<sup>th</sup> May, 1966.**

12.21. Note on adjustments of cost of common works of Chambal Project Stage II and III between Madhya Pradesh and Rajasthan Government and Madhya Pradesh Electricity Board and Rajasthan State Electricity Board (pages 60-66).

After some discussion the Board decided that the cost of Rana Pratap Sagar, Kota Dam Power Station at Rana Pratap Sagar Dam and Power station at Kota Dam may be shared between the Rajasthan and Madhya Pradesh Governments in the ratio of 50:50. Regarding the allocation of expenditure on Dam and apartment works of Rana Pratap Sagar Project between Irrigation and Power, the Board decided that this may be first discussed between the representatives of the two State Governments and the matter brought before the Board separately for consideration.

## **AGREEMENT DATED 1<sup>st</sup> AUGUST 1972 BETWEEN UP AND MP ON SOME IRRIGATION PROJECTS IN BUNDELKHAND**

### **1. RAJGHAT PROJECT**

This Project consists of a dam on Betwa river. It is agreed that this project will be developed in the interests of both Uttar Pradesh and Madhya Pradesh. The project may be built for a live storage of about 62 T.M.C. and dead storage of about 16 T.M.C. to provide for possible silting. Out of this live storage of 62 T.M.C., 9 T.M.C. storage will be reserved for committed downstream uses in Uttar Pradesh and Madhya Pradesh. The balance will be divided between Uttar Pradesh and Madhya Pradesh equally and costs shared in proportion to benefits.

Madhya Pradesh can use 53 T.M.C. for new upstream projects. In years when the annual flow at Rajghat exceeds 119 T.M.C., Madhya Pradesh will be entitled to use also such excesses. From Rajghat reservoir, Uttar Pradesh can use upto 26.5 T.M.C. including half of reservoir losses. In addition to this, Uttar Pradesh will also be entitled to use 9 T.M.C. for committed uses downstream in its area and also for use in Bhandar Canal of Madhya Pradesh.

Any temporary use of water by Uttar Pradesh in excess of the above which may flow down due to non-completion of projects by Madhya Pradesh to utilize their share as allotted to them in the preceding paragraph may be made with the approval of a Joint Board consisting of Chairman, Central Water & Power Commission and Chief Engineers of Irrigation of Uttar Pradesh and Madhya Pradesh. Such use, however will not create any right of permanent use to that excess water by Uttar Pradesh.

### **2. RANGWAN DAM**

Madhya Pradesh can utilize for Kharif crops upto 31<sup>st</sup> October upto 2 T.M.C. and the balance storage as available on 1<sup>st</sup> November will be divided between Uttar Pradesh and Madhya Pradesh in the ratio of 36:15. As Gangau Dam is silted up and is not supplying adequate water for irrigation in Uttar Pradesh, it is agreed that the existing structure may be modified to provide additional storage. This will be equally shared between Uttar Pradesh and Madhya Pradesh after meeting the shortages at Rangwan.

### **3. <sup>56</sup>GREATER GANGAU DAM**

This is a good project and should be undertaken in Fifth Plan. Madhya Pradesh has agreed to complete the investigation upto June 1973. Central Water & Power Commission will assist in completing the investigations. Feasibility report may be prepared as early as possible.

### **4. <sup>57</sup>URMIL DAM**

40 per cent of water available at the dam site proposed by Uttar Pradesh at 75 percent dependability is allocated to Uttar Pradesh and 60 percent to Madhya Pradesh.

### **5. <sup>58</sup>LALITPUR DAM**

---

<sup>56</sup> Greater Gangau dam was not pursued by Govt of MP thereafter and a dam at Daudhan a little u/s of Greater Gangau dam site is planned by NWDA as part of Ken Betwa Link Project.

<sup>57</sup> Urmil dam is on Urmil river, a left bank inter-state tributary of Ken river joining it d/s of Bariarpur PUW. This agreement is further supplemented by decision taken in an inter-state meeting held on 13/1/1977.

<sup>58</sup> Laitpur dam is on Shahzad river, a left bank inter-state tributary of Jamini river which is a tributary of Betwa river( Refer to footnote on Jamini dam also) .

Water will be made available by Uttar Pradesh for irrigation in Tikamgarh District (Madhya Pradesh) for 1800 acres – CCA from Lalitpur Dam, taking the duty same as prevailing on this project in Uttar Pradesh, Madhya Pradesh will construct extension of canal system in their areas at their cost.

1.8.72

Sd/-  
P.C. SETHI  
Chief Minister of Madhya Pradesh

Sd/-  
KAMALAPATI TRIPATHI  
Chief Minister of Uttar Pradesh

## AGREEMENT DATED THE 16<sup>th</sup> SEPTEMBER, 1973 ON BANSAGAR PROJECT

1. Bansagar Project serves some of the worst drought area and therefore, requires implementation immediately so that the recurring damage due to famine and scarcity conditions may cease.

2. In Bansagar Project, a storage of 2 m.a.ft would be for the use of <sup>59</sup>Madhya Pradesh. They may utilize waters upto a total of 2.0 m.a.ft at this site for irrigation, both present and future.

3. Madhya Pradesh will also use 1.0 m.a.ft in the areas upstream of Bansagar for irrigation.

Madhya Pradesh will also use <sup>60</sup>2.25 m.a.ft for irrigation in the areas of Sone Basin in their State down-stream of Bansagar Dam.

Madhya Pradesh can develop power at the foot of the Bansagar dam and in the lower reaches of the Sone in their territory. They can also generate power at Chachai falls making use of the diverted waters which are intended eventually for irrigation.

4. In Bansagar Project, a storage of 1.0 m.a.ft will be for Uttar Pradesh. Uttar Pradesh will use 1.25 m.a.ft of Sone waters for irrigation, out of which 0.25 m.a.ft would be from Kanhar river; and upto <sup>61</sup>1 m.a.ft from the Bansagar dam, and by lifting from Sone river downstream of Bansagar. The Government of Uttar Pradesh will decide the relative proportions of the use of this latter 1 m.a.ft.

5. In Bansagar Project, a storage of 1 m.a.ft will be for <sup>62</sup>Bihar. The allocation of water from Sone river agreed to would be for Bihar <sup>63</sup>7.75 m.a.ft. while it is 5.25 m.a.ft for M.P. and 1.25 m.a.ft for UP. Bihar's irrigation requirements are accepted as 8.00 m.a.ft. Therefore about 0.25 m.a.ft will be supplemented by pumping from the Ganga. Projects in the Sone Basin depending on the availability of 8.00 m.a.ft will be sanctioned for Bihar.

6. The cost of Bansagar including cost of rehabilitation, will be shared approximately in proportion to the water at the site to be utilized by the three States i.e. 2:1, 1:1, i.e. 50%, 25%, 25%.

7. Rules for regulation of filling and use of Bansagar reservoir will be drawn up by a Committee consisting of Chairman, Central Water & Power Commission and Chief Engineer of Irrigation of the three States.

---

<sup>59</sup> In this agreement, Madhya Pradesh covers the territory of Chattisgarh and present day Madhya Pradesh.

<sup>60</sup> As per discussions of an inter-state meeting of Sone basin States on 9<sup>th</sup> June, 1975 convened by Chairman, CWC share of erstwhile MP in 2.25 MAF in 5 sub basins is 0.12 MAF in Banas, 0.53 MAF in Gopad, 0.78 MAF in Rihand, 0.64 MAF in Kanhar and 0.18 MAF in Sone independent.

<sup>61</sup> As per minutes of 57<sup>th</sup> meeting of TAC of MoWR, the planned utilization from Bansagar project by UP is 0.78 MAF including drinking water component of 0.004 MAF.

<sup>62</sup> Bihar covers present day Bihar and Jharkhand.

<sup>63</sup> As per discussions of an inter-state meeting of Sone basin states on 9<sup>th</sup> June, 1975 convened by Chairman, CWC share of erstwhile Bihar in 7.75 MAF in sub basins is as follows: 4.65 MAF in Banas, Gopad, Rihand, Kanhar and Sone independent, 2.1 MAF in North Koel and 1.0 MAF in Bansagar project.

8. If the annual flow in the river is less or more than <sup>64</sup>14.25 m.a.ft. there will be pro rata cut or increase in the use of Sone waters by the three States in proportion to the allocation for the various States as above, after deducting requirements of old irrigation under the Sone barrage, assessed at 5 m.a.ft. which will receive water as priority. The proportion of cut or increase would, therefore, be 5.25:2.75:1.25 for Madhya Pradesh, Bihar and Uttar Pradesh respectively. In planning the National Water Grid priority will be given for irrigating the scarcity areas of Sone river basin.

9. As the hydrology of the river Sone and its tributaries is not well established and as Ganga waters are abundantly available for utilization by lift, the three States agree that the Government of India may set up a special river commission for study of Sone river and draw up a comprehensive plan for the region, taking into account any readjustments in the use of water considered necessary by the States. These studies may be made available in 5 to 10 years. Based on these studies, further planning of irrigation and other benefits to the region will be undertaken after discussions and agreements between the States.

10. This agreement will not be a precedent for any other inter state river basin disputes.

Sd/-  
ABDUL GAFOOR  
Chief Minister, Bihar

Sd/-  
P.C. SETHI  
Chief Minister, Madhya Pradesh

New Delhi,  
Dated the 16<sup>th</sup> September, 1973.

Sd/-  
AKBAR ALI KHAN  
Governor, Uttar Pradesh

<sup>64</sup> As per discussions of an inter-state meeting of Sone basin states on 9<sup>th</sup> June, 1975 convened by Chairman, CWC, the sub basin wise yield was indicated as under:

S.No	Sub basin	Yield (MAF)
1	Upto Bansagar dam	5.0
2	Banas	0.6
3	Gopad	1.2
4	Rihand	3.5
5	Kanhar	1.3
6	Sone(Independent)	0.55
7	North Koel	2.1
	Total	14.25

**AGREEMENT DATED 16<sup>th</sup> SEPTEMBER 1973 BETWEEN THE GOVERNMENTS OF  
BIHAR AND UTTAR PRADESH ON RIHAND RESERVOIR**

Rihand Reservoir built in 1962 is being used by Uttar Pradesh for power generation. The annual flow varies generally from 3 m.a.ft. to 4 m.a.ft. In some years, it goes down to 1.9 m.a.ft. and in some years it goes up beyond 6 m.a.ft. upto 9 m.a.ft.

<sup>65</sup>Bihar requests that 0.3 m.a.ft. of the Rihand storage may be reserved for them for additional waters for irrigation under Sone Barrage in October.

Detailed studies are to be made by a team of Engineers from Bihar and Uttar Pradesh States to draw up detailed recommendations including financial aspects, for consideration by the Governments of Bihar and Uttar Pradesh.

Sd/-  
ABDUL GAFOOR  
Chief Minister, Bihar.

Sd/-  
AKBAR ALI KHAN  
Governor, Uttar Pradesh

New Delhi.

Dated, the September 16, 1973.

---

<sup>65</sup> Bihar covers the Territory of Jharkhand and present day Bihar. Sone Barrage and its command is almost exclusively located in present day Bihar.

**SUMMARY RECORD OF DISCUSSIONS OF THE MEETING HELD ON EIGHTH DECEMBER, 1973 AT 10.30 A.M. IN CWPC COMMITTEE ROOM, BIKANER HOUSE, NEW DELHI, REGARDING SUPPLIES TO BHANDER CANAL**

**Present**

1. Shri J.P. Naegamvala, Member (WR), CW&PC.
2. Shri J.T. Dikey, Chief Engineer, M.P.
3. Shri R.L. Gupta, Chief Engineer, M.P.
4. Dr. S.P. Garg, Addl. Chief Engineer, U.P.
5. Shri N.L. Shankaran, Director (WIN), CW&PC.
6. Shri R.N. Singh, S.E. (U.P.)
7. Shri R.N. Swamy, Executive Engineer, U.P.
8. Shri D.P. Anand, Executive Engineer, M.P.

The demand of Madhya Pradesh for Bhandar Canal for the Rabi Season 1973-74 was put forward as 7.3 TMC, against 5.3 TMC worked out by U.P. After deliberations, M.P. and U.P. agreed that it should be 6.5 TMC and on ad-hoc basis, for this rabi season only. Both the States have not been able to work out an agreed allocation according to the provisions in the agreement because it involves certain interpretations and calculations. Both the States have agreed to jointly work out these calculations and have further meeting with the CW&PC by the first week of March, 1974.

Sd/-  
J.P. NAEGAMVALA  
Member (WR) CW&PC

Sd/-  
J.T. DIKEY  
Chief Engineer MADHYA PRADESH

Sd/-  
R.N. SINGH  
S.E. Uttar Pradesh

## **AGREEMENT DATED 9<sup>th</sup> DECEMBER 1973 BETWEEN THE GOVTS. OF UTTAR PRADESH AND MADHYA PRADESH ABOUT RAJGHAT PROJECT**

The agreement regarding Rajghat reached in August, 1972 was discussed today. It was confirmed that Madhya Pradesh will use its <sup>66</sup>full share of 26.5 TMC from Rajghat. The height of the Rajghat Dam should be decided by the Central Water & Power Commission on the basis of the uses committed as well as planned in the August 1972 agreement (9 plus 26.5 plus 26.5 = 62 TMC). The project should be modified and got cleared for the height so determined.

2. Uttar Pradesh and Madhya Pradesh agree to the setting up of a tripartite <sup>67</sup>Control Board for the speedy, smooth and efficient execution of the various inter-state projects of U.P. and M.P. The Control Board will be under the Chairmanship of the Union Minister of Irrigation & Power with the Chief Ministers and the concerned Ministers of the two States as its Members.

The Control Board will set up such committees and groups, as are necessary, for the execution of the different inter-state projects of U.P. and M.P.

3. It was agreed that, in the Rajghat Project, each state would build the Canal system in its territory. The dam and appurtenant works will be built by a project authority to be appointed by the Control Board. All the personnel needed by the project authority will be drawn from both the States. Funds for the execution of the Dam will be provided by both the States in accordance with their respective shares. A standing Committee of the Board will be constituted for taking such management decisions as may be delegated by the Board.

Pending constitution of the Control Board and the Standing Committee, steps should be taken immediately for commencing works on the project.

Sd/-  
(H.N. BAHUGUNA)  
Chief Minister, U.P.  
9<sup>th</sup> December, 1973

Sd/-  
(P.C. SETHI)  
Chief Minister, M.P.  
9<sup>th</sup> December, 1973.

---

<sup>66</sup> Full Share of 26.5 TMC of MP from Rajghat project is utilised through four canal systems namely (a) Left Bank Canal offtaking from left flank of Rajghat dam (b) Datia Carrier Canal offtaking from left bank of Dhukwan Weir and terminating in Angoori Barrage (c) Datia Irrigation Canal offtaking from left bank of Angoori barrage and (d) Bhandar Canal system offtaking from left bank of 6 mile of Betwa Canal

<sup>67</sup> The Board was established through Betwa River Board Act, 1976 with HQ at Jhansi.



**<sup>68</sup>AGREEMENT DATED 21<sup>st</sup> JULY 1974 BETWEEN THE GOVTS. OF HARYANA AND UTTAR PRADESH REGARDING TAJEWALA AND OKHLA BARRAGE**

In the inter-state discussions held on the 11<sup>th</sup> September, 1972, at New Delhi, Haryana and Uttar Pradesh had agreed that the Tajewala and the Okhla barrage should be constructed immediately. Haryana to construct the Tajewala barrage and Uttar Pradesh to construct the Okhla barrage. It had also been agreed that the cost of the Tajewala barrage would be shared in the ratio of 2:1 by Haryana and Uttar Pradesh respectively. The cost of the Okhla barrage is to be shared in the ratio of the discharges required to be drawn by each State. A technical Committee headed by the Member (D&R) of the central Water & Power Commission and the Chief Engineers of the two States was appointed to examine and finalise within a month the relative economics of remodeling the existing Tajewala works or a new barrage at an alternative site nearby.

2. The technical committee has come to the conclusion that it would be advisable to construct a new barrage at Tajewala. However, there has been no agreement in the Committee on the exact location of this barrage.

3. The committee has also not been able to take an agreed view on the pond level of the proposed Okhla barrage. Haryana has proposed a pond level of 660.00 whereas Uttar Pradesh suggests this to be raised to 660.5 .

4. With a view to expedite construction of the two barrages, the Chief Ministers of Haryana and Uttar Pradesh hereby agree to accept the decision of the Union Minister of Irrigation and Power on the Location of the Tajewala Barrage and the pond level for the Okhla barrage. They also agree that the work on both the barrages should start simultaneously and be completed expeditiously. Funds for the execution will be provided by the respective State Governments in accordance with the programme to be laid down by the Ministry of Irrigation and Power.

Sd/-  
Chief Minister,  
Haryana

Sd/-  
Chief Minister,  
Uttar Pradesh

Dated, New Delhi, the 21<sup>st</sup> July, 1974.

---

<sup>68</sup> Th agreement is no longer in use.

**MINUTES OF THE MEETING OF THE CHIEF MINISTERS OF MADHYA PRADESH AND UTTAR PRADESH HELD AT MADHYA PRADESH BHAWAN, NEW DELHI ON 13.1.1977.**

**Present:**

<b>MADHYA PRADESH</b>	<b>UTTAR PRADESH</b>
1. Shri Shyama Charan Shukla, Chief Minister, M.P.	1. Shri Narayan Dutt Tiwari, Chief Minister, U.P.
2. Shri Ram Chandra Singh Deo, Minister for State for Irrigation, M.P.	2. Shri Lokpati Tripathi, Irrigation Minister, U.P.
3. Shri D.S. Sinha, Engineer-in-Chief, Irrigation Deptt., M.P.	3. Shri R.P. Agrawal Secretary, Irrigation, U.P.
4. Shri R.C. Jain, Resident Commissioner, M.P. Bhawan, New Delhi.	4. Shri Manohar Singh, Chief Engineer, Irrigation Deptt., U.P.
5. Shri R.K. Tikku, Secretary, Irrigation, Government of M.P.	5. Shri G.K. Misra, Addl. Chief Engineer, Irrigation Deptt., U.P.
	6. Dr. S.P. Garg, Addl. Chief Engineer, Irrigation Deptt., U.P.
	7. Shri Vijendra Singh, Addl. Chief Engineer, Irrigation Deptt., U.P.
	8. Shri P.P. Agrawal, Superintending Engineer, Irrigation Deptt., U.P.
	9. Shri T.C. Jain, Executive Engineer, Irrigation Deptt., U.P.

The following projects were discussed:

**1. RAJGHAT PROJECT**

It was decided that work on the project should be started as early as possible. The Chief Engineer and the Secretary of the Control Board, who have been selected, should join early. It was further decided that a provision of Rs.1.00 crores will be made by Madhya Pradesh in its budget for 1977-78 for this project. The project should be sponsored for financing by the World Bank or by a Middle East Country. Government of India may also be approached for taking up the project as a centrally sponsored scheme. It was also decided that Dhukwan Weir should be remodeled as part of the Rajghat Project. Madhya Pradesh will send the project report of the power project near Orchha to U.P.

## **2. <sup>69</sup>PAISUNI PROJECT**

It was agreed that 1462 m.c.ft. of water will be reserved for upstream use in M.P. and the balance will be used by U.P.

## **3. KEN CANAL AND HEADWORKS OF U.P. AND PROPOSED LEFT BANK BARYANPUR CANAL OF M.P.**

M.P. agreed to give permission to U.P. for remodeling Ken Canal and its headworks for 2500 cusecs. U.P. agreed to M.P.'s proposal of making Left Bank Canal from Bariyarpur headworks, U.P. has agreed that it will not increase its irrigation beyond 2.10 lakh acres during Kharif and 1.60 lakh acres during Rabi. It has also been agreed between U.P. and M.P. that the total utilization from the existing system by U.P. shall not be more than <sup>70</sup>37 TMC. M.P. may <sup>71</sup>utilize surplus water beyond 2500 cusecs and/or 37 TMC from the existing system.

M.P. has agreed to the request of U.P. to expedite survey, investigation and formulation of Greater Ganga Project which will be a joint venture.

## **4. KANHAR PROJECT**

U.P. agreed that the total water use by U.P. from Sone basin will not exceed 1.25 MAF of which the water use in Kanhar Sub-Basin will be restricted to 0.25 MAF.

## **5. URMIL PROJECT**

It was agreed that Madhya Pradesh will restrict its upstream use to 20%. The balance water reaching Urmil dam will be shared by M.P. and U.P. in the proportion of 60:40 as per agreement. It was further agreed that the capacity of the Urmil Dam as presently proposed by U.P. should be maintained. The dam will be constructed by the officers of U.P. and the canals will be constructed by the respective States in their areas. The entire work will be done under the supervision of the proposed Inter-State Control Board.

## **6. BANSAGAR PROJECT**

It was agreed that the technical aspects of the proposal made by M.P. Government will be examined jointly by the Technical Officers of two States.

## **7. BHANDER CANAL**

It was agreed that ownership of the entire Bhandar Canal system in M.P. territory will vest in M.P. Government. Water-rates will be collected by M.P. and the canals will also be maintained by M.P. It was also agreed that U.P. will ensure that adequate water will be made available from Matatila for irrigation in M.P. as per the existing agreement. It was agreed M.P. will bear the entire

---

<sup>69</sup> Paisuni is a tributary of Yamuna.

<sup>70</sup> As per TAC Note No 63/1977 of MoWR on Bariyarpur Left Bank canal project of MP, annual water utilization by UP under Ken Canal is limited to 37 TMC out of which 26.57 TMC ( @ 2500 cusecs) is under Kharif( July-Oct) and 10.43 TMC is under Rabi season (Nov-March). MP will draw water from left bank canal between July to October when availability is more than 2500 cusecs at Bariyarpur PUW. MP will meet shortfall in irrigation water requirement for command under Left Bank Canal from Kutni feeder reservoir.

<sup>71</sup> In the meeting with Secretary, Irrigation Department, Govt of India held at New Delhi on 10/12/1981, it was decided that the reservation of uses by MP upstream of Greater Ganga dam will be 80 TMC.

cost for repairs or remodeling of the Bhandar Canal. This agreement is in full and final settlement of all outstanding dues between both the Governments.

Sd/-  
(SHYAMA CHARAN SHUKLA)  
13.1.1977  
Chief Minister, M.P.

Sd/-  
(NARAYAN DUTT TIWARI)  
13.1.77  
Chief Minister, U.P.

AGREEMENT ON UTILISATION OF THE WATER RESOURCES OF THE DAMODAR BARAKAR, AJOY, MAYURAKSHI-SIDHESHWARI-NOON BEEL AND MAHANANDA RIVER BASINS, WHERE <sup>72</sup>BIHAR AND WEST BENGAL ARE CO-BASIN STATES, REACHED BY THE CHIEF MINISTERS OF WEST BENGAL AND BIHAR AT PATNA ON THE 19<sup>th</sup> JULY, 1978.

The State Governments of West Bengal and Bihar desirous of achieving the optimum utilisation of the water resources of Damodar-Barakar, Mayurakshi-Sidheshwari-Noon Beel, Ajoy and Mahananda river basins and recognising the desirability for fixing and delimiting the rights and obligations of each State in relation to the other concerning the use of these waters, have reached, in supersession of earlier understanding, the agreement as set out hereinunder:

#### I. DAMODAR-BARAKAR BASIN

A.(i) The remaining reservoir land within the Maithon Reservoir between RL.495 and RL 500 may be acquired and used for flood moderation primarily;

(ii) Similarly the remaining reservoir land with the panchet Reservoir between RL 425 and RL 445 be acquired and used for flood moderation primarily;

(iii) periodic and partial encroachment within this flood cushion in Maithon and in Panchet reservoir may be made by West Bengal at her option without establishing any permanent claim upon the riparian State for ensuring the supply of that water;

(iv) The cost of such acquisition and of consequential rehabilitation will be borne by the Damodar Valley Corporation as per standards fixed by Bihar Government and by West Bengal Government according to the prevailing land acquisition rules for lands falling respectively within these two States; and

(v) The cost of such acquisition and rehabilitation will not be shared by Bihar.

B. (i) The Tilaiya conservation storage will be utilised by Bihar for irrigation in Damodar and adjacent valley;

(ii) The flood cushion of Tilaiya will be utilised by Bihar in the manner they choose; and

(iii) The hydel power house in Tilaiya may become inoperative.

C. (i) The Konar conservation storage will be utilised by Bihar for irrigation in Hazaribagh and Giridih districts.

(ii) The Flood cushion of Konar will be utilised by West Bengal;

(iii) There may be no possibility of hydel power generation from the Konar Darn;

(iv) Bihar will replenish the withdrawals from Konar reservoir by corresponding supplies from Tenughat Darn through the proposed TenuBokaro Link Channel and/or river sluices and D.V.C. will credit the charges to be collected from the use of such replenishing water in the manner as if the resources were available from the existing Konar Dam; and

---

<sup>72</sup> Bihar covers present day Bihar and Jharkhand in above agreement.

(v) The irrigation charges to be collected from the use of water from the Konar Dam, on the other hand, will be credited to Bihar.

D. (i) The capacity of Tenughat Dam will be augmented from 600 cusecs to 900 cusecs by installation of gates;

(ii) West Bengal will become a co-sharer in the assets and liabilities of Tenughat Dam by capital participation to the extent of 16.67 per cent of the cost (sum-at-charge) of Tenughat Dam;

(iii) For operational purposes the resources available at Tenughat Dam will be controlled by Bihar, West Bengal and the D.V.C. in the following proportions of 56.21 percent, 16.67 percent and 27.12 percent respectively; and

(iv) In order to protect the committed pattern of use from Tenughat and Panchet Dams it will be necessary to honour the following stipulations:

(a) Keep one lakh acre feet of water above dead storage level at Tenughat on 1<sup>st</sup> of July.

(b) Keep the Tenughat Reservoir full to its capacity on the 30<sup>th</sup> of September.

(c) Keep the Panchet Reservoir at least at dead storage level on the 30<sup>th</sup> of June after meeting the downstream commitments.

(d) Keep at least 25,000 acre feet of storage at Panchet reservoir on the 15<sup>th</sup> of July after , meeting the downstream commitments;

(e) Keep at least 50,000 acre feet of storage at Panchet reservoir on the 31<sup>st</sup> of July after meeting the downstream commitments;

(f) Keep the panchet reservoir full to its capacity between 30<sup>th</sup> September and 31<sup>st</sup> of October after meeting the downstream commitments; and

(g) No new storage reservoir shall be constructed on the Damodar River between Tenughat and Panchet.

E. (i) It was observed that due to changes in the parameters of operation and of resource-status in the valley, it will be necessary to operate the Maithon dam differently and in the manner West Bengal chooses in order to meet the committed requirements downstream. Since further new commitments are being made it is premature to recommend, construction of a conservation storage at or near Balpahari on the Barakar. However, the question of having such a conservation storage may be taken up by Biliar and West Bengal after obtaining dependable estimates of the resource situation; and

(ii) However, it was observed that the committed use in West Bengal is to the extent of 32 lakh acre ft. inclusive of hydel generation and evaporation losses. This excludes boro requirement which was not originally envisaged in the project. Tenu will be utilising 6.6 lakh acre ft. annually of which 150 cusecs (1.1 lakh acre ft.) will be for use of West Bengal. Total commitment, therefore, comes to 38.6 lakh acre ft. Present conservative estimate of yield at 75 percent dependability at the dams comes to 45 lakh acre ft. annually. So there will be a surplus of  $45-38.6=6.4$  lakh acre ft. Tilaiya dam with 75 percent dependability has an yield of about 2 lakh acre ft. Thus a dependable surplus of  $6.4-2=4.4$  lakh acre ft. annually emerges as being the quantum of water that can be put to

use in the Barakar and Damodar basin including upstream of Tenu through projects on the tributaries for irrigation and other uses. Bihar may, therefore, proceed with the building up of the infrastructures for the utilisation of 4 lakh acre ft. besides the irrigation through Tilaiya and Konar dams. Increase in the quantum of these 4 lakh acre ft. will be subject to further scrutiny and calculations of availability of real surplus from Damodar and Barakar Basins which shall be taken up by the two states and the results communicated by December, 1980.

F. (i) It is considered necessary that in order to obtain technical efficiency multiple reservoirs within a river system should have a unified control of operation. For Damodar Valley, the jurisdiction of this unified control system will extend over both the Barakar and the Damodar Rivers. This unified control will be administered by a committee consisting of Chief Engineer, (Bihar), Chief Engineer (West Bengal), Chief Engineer (Damodar Valley Corporation) and Member (Central Water Commission) acting as Chairman for all the dams that have already been constructed and also constructed in future within this valley including Tenughat;

(ii) The Damodar Valley Corporation will reallocate the shares on account of the alternation of the purposes for which the Tilaiya and the Konar Dams were originally allocated in consultation with the Central Water Commission. The amount that will be credited to West Bengal will be used by West Bengal in the manner she chooses;

(iii) Konar Dam will be utilised by Bihar for irrigation purposes as soon as the required infrastructure is built up. Simultaneously, Tenughat will replenish the amount of water so withdrawn from Konar by Bihar;

(iv) Tilaiya dam will be utilised by Bihar for irrigation and simultaneously the full flood storage at Maithon will be made available through acquisition of land in Bihar between RL 495 and RL 500; and

(v) Storage in the reservoir behind Tenughat dam from 600 cusecs to 900 cusecs shall synchronise with the acquisition of the land in Bihar for flood cushion in Panchet between RL 425 and RL 445.

G. This part of the agreement shall be subject to the provisions contained in the Damodar Valley Corporation Act of 1948 (14 of 1948), and mutual concurrence of the participating Governments.

## II. MAYURAKSHI-SIDHESHWARI-NOON BEEL BASIN

(i) Irrigation commitment to Bihar from Mayurakshi Dam shall be honoured by not lowering the reservoir water level below RL 363.0 as far as practicable during Kharif season through suitable reservoir regulation. The water level will not be lowered below RL 349 (i.e. dead storage level) in any case. West Bengal would bear the cost of operation of the pumps from the Mayurakshi reservoir;

(ii) West Bengal may construct the Sidheshwari-Noon Beel dam for utilizing upto a maximum of 1.60 lakh acre ft; the balance yield of the rivers will be reserved for use in Bihar upstream of this dam. There will be no flood storage in this dam;

(iii) There will be a joint control of the Mayurakshi and Sidheshwari-Noon Beel reservoirs by Bihar and West Bengal after the Sidheshwari-Noon Beel reservoir comes for commissioning;

(iv) West Bengal will make available to Bihar 10,000 acre ft. of water from Sidheshwari-Noon Beel Dam for irrigation of the areas lying on the right bank of Mayurakshi in Raneshwar Block of Santhal Parganas free of cost;

(v) West Bengal will bear the cost of land acquisition and rehabilitation for the areas submerged in Bihar by Sidheshwari-Noon Beel dam as per scale and standard fixed by the Government of Bihar.

### III. AJOY BASIN

(i) Bihar may implement their four reservoir projects and the Siktia barrage project as planned by them, the utilisation remaining within their share of one million acre ft.;

(ii) West Bengal may construct a flood moderation dam at or near Kalipahari on the Ajoy with a gross storage of 3.30 lakh acre ft. West Bengal may use the surplus resource in the adjacent valleys also. This site may, however, be changed if coal interest are found to be injuriously affected. In that case a suitable alternative site near about on the upstream will be selected; and

(iii) West Bengal will bear cost of land acquisition and rehabilitation for the areas submerged by the Kalipahari dam in Bihar and West Bengal on the scale and standard fixed by the respective Governments.

### IV. MAHANANDA BASIN

(i) In the Teesta project, West Bengal has finalised location of Mahananda Barrage at Fulbarui. From this barrage Bihar can draw water for irrigating approximately 67,000 acres in Bihar depending on the Mahananda resources only. Off-takes may be taken from the West Bengal Canal system if this is economical and reduces land acquisition. Until such time that the Mahananda waters become usable in Bihar or diversion from Teesta is made available, West Bengal will be permitted to draw water from Mahananda through this barrage;

(ii) A joint irrigation project from Bagdob barrage may also be taken up for irrigating areas in Purnea district in Bihar and in Malda district in West Bengal depending upon the available resources of Mahananda in a manner to be mutually agreed upon between the two States. This barrage is envisaged also for regulating the flows of Mahananda into its two branches, the Phulahar and the Barsoi. West Bengal may divert a part of their Teesta resources for supplementing irrigation in areas in West Bengal if necessary; and

(iii) The cost of the Mahananda Barrage at Fulbari will be shared between Bihar and West Bengal in the proportion of the irrigation areas in the respective states. The cost of the head regulators and cross regulators will be borne by the respective states. Similarly the cost of Bagdob Barrage including irrigation system shall be apportioned according to use in the respective States.

2. It is further agreed that a suitable mechanism for review, and/or re-appraisal of the provisions of this agreement will be evolved mutually by the two states.

3. It is also agreed that an agreement on utilisation of the water resources of the Subarnarekha-Kharkai Basin between the two states will be executed separately.



4. It is also decided the in the event of any dispute relating to this agreement and the inability of the two States to settle the matter amicably through mutual discussion, a sole arbitrator of the standing of a Supreme Court Judge would be appointed to settle the matter and his decision shall be final and binding on both the States.

Sd/  
( KARPOORI THAKUR )  
Chief Minister, Bihar

Sd/-  
( JYOTI BASU )  
Chief Minister, West Bengal

witnessed by:

Sd/-  
( SACHIDA NAND SINGH )  
Irrigation Minister, Bihar

Sd/-  
( PROVASH ROY )  
Irrigation Minister, West Bengal

Place: PATNA

Dated: 19<sup>th</sup> July, 1978.

SIDE LETTER DATED 29<sup>th</sup> JULY 1978 REGARDING IMPLEMENTATION OF AGREEMENT DATED 19<sup>th</sup> JULY 1978, BETWEEN THE GOVERNMENTS OF WEST BENGAL AND BIHAR IN RESPECT OF UTILISATION OF WATER RESOURCES OF THE DAMODAR-BARAKAR RIVER BASIN.

The main objective of the Agreement dated 19<sup>th</sup> July, 1978 between West Bengal and Bihar relating to the utilisation of the water resources of the Damodar-Barakar river basin, is to optimise the use of the waters for irrigation. However, it is not the intention of the aforesaid agreement to adversely affect in any significant manner the present generation of hydel power by the Damodar Valley Corporation which is of immense importance for the efficient functioning of its predominantly thermal system, which supplies power to the major industries within the Damodar Valley Corporation region, as also to the city of Calcutta. This side letter pertains to the implementation of the agreement in respect of the Damodar-Barakar basin only.

2. It is recognised that the encroachment upon the flood cushions contemplated in Clause A (III) in the Agreement will be on the basis of guidelines of the Unified Control Committee for operation of the reservoirs and can be utilised to achieve simultaneously efficient flood control in the lower region by completing the lower Damodar Flood Control and Drainage Scheme and improving the flood forecasting system by adopting modern techniques, without affecting to any significant extent the present hydel power generation.

3. The unified control of coordination of multiple reservoirs in the basin to achieve the above objectives will be carried out under the guidelines to be prescribed by the Committee as envisaged in Clause (F(i)) of the agreement, with the aid of latest technology including the use of computers, systems analysis, etc., it should be possible to operate the reservoirs for optimum utilisation of water resources for irrigation, flood control as well as hydel power generation. The day-to-day operation of the Damodar Valley Corporation reservoirs under the direction of such Committee shall continue with Damodar Valley Corporation as at present.

14. It is agreed that Bihar will replace the existing use of waters from Konar by the Damodar Valley Corporation, by corresponding supplies from Tenughat dam through the proposed Tenu-Bokaro link channel and/or river sluices in the Tenughat dam. It is anticipated that a quantity of 2,50,000 acre per feet per annum would be required.

5. A quantity of 25 acre feet of water per day has to be made available from Konar Dam for meeting the existing industrial water commitments entered into by the Damodar Valley Corporation with a few industrial units between Konar Dam and Bokaro Barrage. This would be in addition to the water requirements of Bokaro Thermal Power Station.

6. Water requirements of the existing thermal stations of Damodar Valley Corporation shall be fully met and the minimum requirements of the future thermal stations accommodated to the extent possible.

7. The financial liabilities in respect of the following are:

- (i) Acquisition of land and structures for the Maithon and Panchet reservoirs;
- (ii) Such works as may be necessary for the utilisation of waters of Tilaiya; reservoir for irrigation outside the Damodar Valley;
- (iii) Such works as would be necessary for the replacement of the Konar supplies for Damodar Valley Corporation from Tenughat;

(iv) Raising the capacity of the Tenughat Dam to increase the release from 600 to 900 cusecs, would not be borne by the Central Government as a partner in Damodar Valley Corporation.

8. It is recognised that any utilisation of additional waters envisaged in sub-clause (ii) of para E of the Agreement will be undertaken pari-passu with the augmentation of the storage envisaged in sub-clause (i) and (ii) of Clause A of the Agreement.

9. It is also assured that in proceeding with any construction or operation as a result of the Agreement such processed as the law requires shall be fully gone through and the existing commitments to the extent modified in the Agreement dated 19<sup>th</sup> July, 1978 honoured by the authorities concerned.

10. This side letter is issued after consultation and agreement between the Government of Bihar and West Bengal, Ministry of Energy, Government of India and Damodar Valley Corporation.

Sd-29.7.1978  
( K.A. RAMASUBRAMANIAM )  
Chief Secretary, Bihar

Sd/- -29.7.1978  
( A. K. SEN )  
Chief Secretary, West Bengal

Place: CALCUTTA  
Dated: 29<sup>th</sup> July, 1978.

## AGREEMENT ON SHARING OF <sup>73</sup>KANHAR WATERS

1. The shares of <sup>74</sup>Bihar, <sup>75</sup>Madhya Pradesh and Uttar Pradesh in the utilization of Sone waters in accordance with the agreement reached amongst the States of U.P., Bihar and M.P. on 16<sup>th</sup> September, 1973 shall remain unchanged.
2. It is agreed that at Baradih dam site proposed by Bihar on the border of Madhya Pradesh and Bihar, the availability of waters is 0.90 MAF, whereas the total water availability of Kanhar river upto its confluence with the sone river is 1.30 MAF.
3. It is hereby agreed that the share of Bihar in Kanhar waters at Baradih shall be 0.43 MAF. The <sup>76</sup>share of M.P. shall be 0.47 MAF upto Baradhi dam site and 0.15 MAF between Baradih and M.P. – U.P. border. The shares of U.P. at the Anwar dam site proposed by U.P. shall be 0.15 MAF and between this dam site and the confluence of the Kanhar river with the Sone river 0.10 MAF.
4. It is agreed that Baradih dam may be constructed by Bihar to utilize its share of 0.43 MAF. Madhya Pradesh, if it so desires, may make a proposal within seven months at the latest, to utilize some waters out of its total share of 0.62 MAF from Baradih reservoir in which case the reservoir shall be planned for the combined utilization of Bihar and Madhya Pradesh. The Central Water Commission shall decide the height of Baradih dam as proposed by Bihar for utilization of 0.43 MAF within one month at the latest.
5. The norms of rehabilitation of persons displaced by the construction of dams at Baradih and Anwar shall be as mutually decided amongst the concerned State Govts.
6. Bihar and Madhya Pradesh agree to the construction of a dam near village Anwar as proposed by U.P. for utilizing 0.15 MAF.
7. All the three State Govts. are free to use their share of Kanhar waters in the best manner they like.
8. If the availability of water as assessed above is more or less, the shares of the States shall change pro-rata.

Sd/-  
(Arjun Singh)  
Chief Minister, Madhya Pradesh  
20.2.82

Sd/-  
(Vishwanath Pratap Singh)  
Chief Minister, Uttar Pradesh

---

<sup>73</sup> Kanhar river is tributary of Sone river.

<sup>74</sup> Bihar covers both Jharkhand and present day Bihar. However presently Jharkhand is basin State in Kanhar.

<sup>75</sup> Madhya Pradesh covers both Chattisgarh and present day Madhya Pradesh. Presently Chattisgarh is basin State in Kanhar.

<sup>76</sup> Share of erstwhile MP which was fixed as 0.64 MAF in Kanhar in an inter-State meeting convened by Chairman, CWC is now revised to 0.62 MAF as per this agreement.

Sd/-  
(Dr. Jagannath Mishra)  
Chief Minister, Bihar

Signed in the presence of

Sd/-  
(Kedar Pandey)  
Union Minister for Irrigation  
20.2.82

at New Delhi on 20<sup>th</sup> February 1982.

## **AGREEMENT BETWEEN BIHAR AND U.P. REGARDING CONSTRUCTION OF MUSAKHAND DAM AND IRRIGATION THERE FROM**

1. The total utilization on account of <sup>77</sup>Musakhand dam may be taken as 5.25 TMC of which 2.25 TMC shall be in Bihar and 3.00 TMC in U.P.
2. Irrigation on account of Musakhand dam shall be 21,000 acres ksharif and 8,000 acres Rabi in Bihar and 21,000 acres kharif and 20,000 acres Rabi in U.P.
3. The cost of the Musakhand dam and appurtenant works shall be shared equally between the two State Govt.
4. The cost of remodeling Right Karmanasa canal upto U.P. Bihar border shall be borned by Bihar.
5. The cost of maintenance and operation of the dam and appurtenant works shall be shared equally between the two state Govt., and the cost of maintenance operation of the right Karamanasa canal upto U.P. Bihar border shall be shared on cusec Mile basis.
6. The Karamanasa flows at Latifshah shall be shared in the ratio of 15:85 during kharif and 30:70 during Rabi between Bihar and U.P. so as to release 1.8 TMC during kharif and 0.45 TMC during Rabi to Bihar in a normal year of 13.25 TMC Karamanasa flows at Latifshah. If the flows at Latifshah are likely to be less than 13.25 TMC in any year, supplies to the two states shall be reduced proportionately during the two crop seasons as indicated above.

---

<sup>77</sup> Musakhand dam is on Karamnasa river which forms boundary between UP and Bihar for substantial distance before joining Ganga near Chausa in Bihar.

**MEMORANDUM OF UNDERSTANDING BETWEEN HARYANA AND NATIONAL CAPITAL TERRITORY OF DELHI REGARDING CONSTRUCTION OF ADDITIONAL PARALLEL WATER CARRIER SYSTEM FROM MUNAK HEAD EXCLUSIVELY FOR CARRYING WATER FOR DELHI.**

1. Whereas under the present arrangements the existing channel namely Delhi Branch carries water to Hydarpur water treatment plant of Delhi and also provides irrigation supplies to Haryana areas.
2. And whereas for Wazirabad treatment plant of Delhi the waters are put through Munak Escape into the Yamuna river which result into nearly 50% losses.
3. And whereas the Delhi Branch Channel has been continuously running since its construction and its capacity has considerably reduced.
4. And whereas in consideration of the above factors Haryana made a proposal in February, 1990 for construction of a Parallel Water Carrier System exclusively for carrying waters for Delhi.
5. And whereas the above Parallel Water Carrier System besides feeding the Delhi's Hyderpur treatment plant will supply water to Wazirabad pumping station through appropriate links to the river Yamuna thereby saving considerably losses in the river and will enable closure of Delhi branch for its repairs and maintenance.
6. And, therefore having recognized the need of the above additional Parallel Water Carrier System Haryana and National Capital Territory of Delhi agree on the construction of this Water Carrier System as under:
  - (i) The water carrier shall be fully dedicated to Delhi's water supply requirements.
  - (ii) The capacity and the type of Carrier shall be decided by Delhi Administration, in consultation with Haryana.
  - (iii) The construction of this Carrier shall be carried out expeditiously by Haryana.
  - (iv) The entire cost of this Carrier shall be borne by the National Capital Territory of Delhi.
  - (v) After its construction, Haryana shall maintain and operate this Carrier on behalf of Delhi, the annual charges being paid by Delhi.
  - (vi) The releases for Delhi shall be measured jointly at the head of the system in case closed conduits adopted as Carrier System and at the tail and in case open carrier system is adopted.

- (vii) Delhi will continue to have a share in the capacity of Delhi Branch as here to before and will be free to use the Delhi Branch and the new carrier together in a suitable manner in consultation with Haryana within the overall allocation of Delhi as per MOU dated 30.01.1993.
- (viii) Haryana shall revise the proposal for construction of this carrier within a month of the signing of this Memorandum of Understanding and shall submit it to Central Water Commission for vetting.
- (ix) Delhi shall deposit the money with Haryana in quarterly instalments in advance for meeting the cost of construction of the new water carrier.
7. In case of any differences about interpretation of this Memorandum of Understanding or any difficulties in its implementation the matter will be referred to the Ministry of Water Resources whose decision shall be final.
8. This agreement is without prejudice to the claims and rights of the other party states on their share of Yamuna waters.
9. We place on record and gratefully acknowledge the assistance and advice given by the Union Minister of Water Resources in arriving at this expeditious and amicable settlement.

New Delhi.  
05.02.1993

Sd/-  
Chief Minister  
Haryana

Sd/-  
Governor  
Uttar Pradesh

Sd/-  
Lt. Governor  
Delhi

Sd/-  
Governor  
Himachal Pradesh

In the presence of:

Sd/-  
Union Minister of Water Resources



**MEMORANDUM OF UNDERSTANDING BETWEEN UTTAR PRADESH, HARYANA, RAJASTHAN, HIMACHAL PRADESH AND NATIONAL CAPITAL TERRITORY OF DELHI REGARDING ALLOCATION OF SURFACE FLOW OF YAMUNA SIGNED BY CHIEF MINISTERS OF BASIN STATES ON 12<sup>th</sup> MAY, 1994**

1. WHEREAS the 75% dependable notional virgin flow in the Yamuna river upto Okhla has been assessed as 11.70 Billion Cubic Metres (BCM) and the mean year availability has been assessed as 13.00 BCM.
2. AND WHEREAS the water was being utilized by the Basin States ex-Tajewala and ex-Okhla for meeting the irrigation and drinking water needs without any specific allocation.
3. AND WHEREAS a demand has been made by some Basin States on this account and the need for a specified allocation of the utilizable water resources of river Yamuna has been felt for a long time.
4. AND WHEREAS to maximize the utilization of the surface flow of river Yamuna a number of storage projects have been identified.
5. AND WHEREAS the States have agreed that a minimum flow in proportion of completion of upstream storages going upto 10 cumec shall be maintained downstream of Tajewala and downstream of Okhla Headworks throughout the year from ecological considerations, as upstream storages are built up progressively in a phased manner.
6. AND WHEREAS it has been assessed that a quantum of 0.68 BCM may not be utilizable due to flood spills.
7. NOW THEREFORE, considering their irrigation and consumptive drinking water requirements, the Basin States agree on the following allocation of the utilizable water resources of river Yamuna assessed on mean year availability:
 

1.	Haryana	5.730 BCM
2.	<sup>78</sup> Uttar Pradesh	4.032 BCM
3.	Rajasthan	1.119 BCM
4.	Himachal Pradesh	0.378 BCM
5.	Delhi	0.724 BCM

Subject to the following:

- i) Pending construction of the storages in the upper reaches of the river, there shall be an interim seasonal allocation of the annual utilizable flow of river Yamuna as follows:

---

<sup>78</sup> Uttar Pradesh covers territories of both present day Uttar Pradesh and Uttarakhand

STATES	SEASONAL ALLOCATION OF YAMUNA WATERS (BCM)			
	July – Oct.	Nov. – Feb.	March – June	Annual
Haryana	4.107	0.686	0.937	5.730
Uttar Pradesh	3.216	0.343	0.473	4.032
Rajasthan	0.963	0.070	0.986	1.119
Himachal Pradesh	0.190	0.108	0.080	0.378
Delhi	0.580	0.068	0.076	0.724

Provided that the interim seasonal allocations will be distributed on ten daily basis.

Provided further that the said interim seasonal allocations shall get progressively modified, as storages are constructed, to the final annual allocations as indicated in para 7 above.

- ii) Separate agreement will be executed in respect of each identified storage within the framework of overall allocation made under this agreement.
- iii) The allocation of available flows amongst the beneficiary States will be regulated by the Upper Yamuna River Board within the overall framework of the agreement.

Provided that in a year when the availability is more than the assessed quantity, the surplus availability will be distributed amongst the States in proportion to their allocations.

Provided also that in a year when the availability is less than the assessed quantity, first the drinking water allocation of Delhi will be met and the balance will be distributed amongst Haryana, Uttar Pradesh, Rajasthan and Himachal Pradesh in proportion to their allocations.

8. This agreement may be reviewed after the year 2025, if any of the basin States so demand.

9. We place on record and gratefully acknowledge the assistance and advice given by the Union Minister of Water Resources in arriving at this expeditious and amicable settlement.

New Delhi, the 12<sup>th</sup> May, 1994.

Sd/-  
(MULAYAM SINGH YADAV)  
Chief Minister, Uttar Pradesh

Sd/-  
(BHAJAN LAL)  
Chief Minister, Haryana

Sd/-  
(BHAIRON SINGH  
SHEKHAWAT)  
Chief Minister, Rajasthan

Sd/-  
(VIRBHADRA SINGH)  
Chief Minister, Himachal Pradesh

Sd/-  
(MADAN LAL KHURANA)  
Chief Minister, Delhi.

In the presence of:

Sd/-  
(VIDYACHARAN  
SHUKLA)  
Minister (Water Resources)

**AGREEMENT BETWEEN UTTAR PRADESH, HARYANA, RAJASTHAN, NATIONAL CAPITAL TERRITORY OF DELHI REGARDING CONSTRUCTION OF HATTHNIKUND BARRAGE ON RIVER YAMUNA**

1. Whereas, the sharing of Yamuna waters between the states of Uttar Pradesh, Haryana, Himachal Pradesh, Rajasthan and National Capital Territory of Delhi has been decided under a Memorandum of Understanding dated 12.05.1994 regarding allocation of surface flow of Yamuna.
2. And whereas, Government of Haryana proposed construction of new barrage mainly Hathnikund Barrage to replace the old Tajewala Barrage.
3. And whereas, the states have agreed that minimum flow in proportion of completion of upstream storages going upto 10 cumecs shall be maintained downstream of Hathnikund and downstream of Okhla Headworks throughout the year from ecological consideration as upstream storages are built up progressively in a phased manner.
4. NOW, THEREFORE, having recognized the need to take up construction of Hathnikund Barrage in replacement of old Tajewala Barrage, the states agree as under:-
  - (i) Haryana shall construct, operate and maintain the Hathnikund Barrage and the Regulators therein. The construction shall be in accordance with the designs to be provided by the Central Water Commission in consultation with Central Electricity Authority.
  - (ii) Central Water Commission shall keep in view the allocation to the states of Haryana, U.P., Rajasthan, H.P. and Delhi as per MoU dated 12.05.1994 which includes flood flows while designing capacities of Head regulators for Haryana, U.P., Rajasthan and Delhi.
  - (iii) The regulation of all releases from Hathnikund Barrage shall be supervised by the Upper Yamuna River Board in accordance with the MoU dated 12.05.1994 between basin states regarding allocation of surface flow of Yamuna.
  - (iv) The cost of the Barrage be initially financed by Haryana. The cost of Barrage including the cost of Head Regulators shall be shared by Haryana, Uttar Pradesh, Rajasthan and the National Capital Territory of Delhi. The actual shares shall be decided by the Central Water Commission within one year of completion of the barrage. In case of difference of opinion in respect of the shares in the costs, the matter shall be referred, through the Review Committee of Upper Yamuna River Board to Ministry of Water Resources whose decision shall be final.
5. In case of any differences about interpretation of the Agreement or any difficulties in its implementation, the matter will be referred through Review Committee of Upper Yamuna River Board to Ministry of Water Resources whose decision will be final.

6. We place on record and gratefully acknowledge the assistance and advice given by the Union Minister of Water Resources in arriving at this expeditious and amicable settlement.

New Delhi

Chief Minister  
Uttar Pradesh

Chief Minister  
Haryana

Chief Minister  
Rajasthan

Chief Minister  
Himachal Pradesh

Chief Minister  
Delhi

In presence of  
Minister (Water Resources)

**MEMORANDUM OF UNDERSTANDING AMONG THE STATE OF  
MADHYA PRADESH, THE STATE OF UTTAR PRADESH AND THE  
UNION GOVERNMENT ON KEN-BETWA LINK PROJECT**

**Name & Address of Parties**

1. State of Madhya Pradesh, Water Resources Department, Vallabh Bhawan, Bhopal.
  2. State of Uttar Pradesh, Irrigation Department, Secretariat, Lucknow.
  3. Union Government, Ministry of Water Resources, Shram Shakti Bhawan, Rafi Marg, New Delhi.
- (A) Whereas the Union Government considers the programme for interlinking of rivers as of national importance and work out ways and means for project funding mechanism including share of the States etc., so as to be able to complete the project within the stipulated time frame.
- (B) And whereas the Union Government, in consultation with the States, create appropriate institutional arrangements involving States/Union Government for operation and control of waters in accordance with Agreements reached.
- (C) And whereas the States full cooperation towards this task of linking of rivers in the overall interest of the Nation are required:

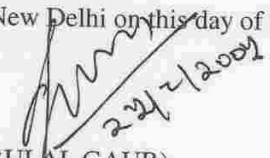
**NOW, THEREFORE, IT IS HEREBY ENTERED INTO  
UNDERSTANDING BY THE PARTIES AS FOLLOWS:**

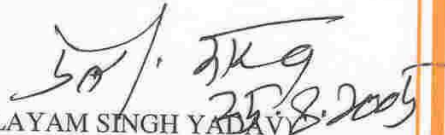
1. Union Government shall identify and decide the organizational framework necessary for completion of the 'Detailed Project Report' (DPR) and 'Implementation of the Link Projects'
2. Specific MOUs as required will be entered into amongst the States of Uttar Pradesh, Madhya Pradesh and Union Government based on the DPR and Agreements reached on scope of the link, sharing of costs and benefits and arrangements for management and control of water etc.
3. Both the State Governments will gain multipurpose benefits through the Ken-Betwa Link Project as per the Feasibility Studies completed by National


Water Development Agency. In pursuance of the said objective, broad consensus and 'in principle' understanding was arrived at through consensus building efforts of the Union Government and the States as reflected in the Chief Engineer (HQ), NWDA letter No. NWDA/TECH-III/122/17/2004 (Vol. V) dated 5.1.2005 in order to ensure optimum and integrated planning, successful implementation and effective monitoring and operation of Ken-Betwa interlinking project under National Perspective Plan. The apprehensions on water sharing, control mechanism and compensation of power loss etc. raised by States will be addressed at DPR stage.

4. Both the States shall enter into and abide by Agreements with the Union Government and amongst themselves in the larger interest of combating natural calamities of floods and droughts in different regions of the country.
5. Any review/amendment of the MOU shall be done if agreeable to by all the parties.
6. This is being concluded amongst the State of M.P., State of U.P. and Union Government for proceeding ahead on the Ken-Betwa Link Project and taking up the project for preparation of DPR.

Signed at New Delhi on this day of 25<sup>th</sup> August, 2005.

  
(BABULAL GAUR)  
Chief Minister of Madhya Pradesh  
FOR STATE OF M.P.

  
(MULAYAM SINGH YADAV)  
Chief Minister of Uttar Pradesh  
FOR STATE OF U.P.

  
(PRIYA RANJAN DASMUNSI)  
Minister of Water Resources  
FOR UNION GOVERNMENT

तार : जलविकास  
Grams : JALVIKAS



दूरभाष : 6519164, 6861044  
Phone : 6519164, 6861044  
फैक्स : 91-11-6960841  
Fax : 91-11-6960841  
E-mail : dgnwda@vsnl.net

**राष्ट्रीय जल विकास अभिकरण**  
(भारत सरकार जल संसाधन मंत्रालय के अधीनस्थ सोसाइटी)  
**NATIONAL WATER DEVELOPMENT AGENCY**  
( A Govt. of India Society under the Ministry of Water Resources )

18-20, सामुदायिक केन्द्र,  
18-20, Community Centre,  
साकेत, नई दिल्ली-110017  
Saket, New Delhi-110017

NWDA/Tech.III/122/17/2004 (Vol.V)

dated: 5<sup>th</sup> January, 2005

To

1. Shri Jai Prakash,  
Chief Engineer (Betwa),  
UP Irrigation Dept.,  
Jhansi
2. Shri S.K.Tiwari,  
Chief Engineer (Dhasan-Ken Basin),  
Water Resources Dept.,  
Govt. of MP,  
Sagar (MP)

**Sub: Proposed Water requirements of UP & MP in downstream and upstream of Daudhan dam in respect of Ken-Betwa link**

Sir,

Kindly recall our discussion of 5<sup>th</sup> January, 2005 after the meeting of CE (IMO), CWC where further possibilities of reaching consensus on water sharing between UP & MP in respect of Ken-Betwa link were explored. Accordingly, a fresh proposal of sharing of water between UP & MP is being sent for consideration and taking the approval of your Government. I am waiting for an early response in this regard.

Yours faithfully,

 05/01/2005

**Encl: As above**

(N.K. Bhandari)  
Chief Engineer (HQ)



**PROPOSED WATER SHARING OF KEN BASIN UPTO DAUDHAN DAM**

S. No.	Particulars	Proposed by NWDA after Meeting (MCM [TMC])
1.	Gross Water available at proposed Dam	6188 [218.54]
2.	Madhya Pradesh (MP) requirement in U/S of dam	2266 [80.03]
3.	Balance Water available	3922 [138.51]
	Regeneration (+)	442 [15.61]
	Net Water Balance Available	4364 [154.12]
4.	Total requirement of MP	
	(a) D/s of Ex Daudhan	1375 [48.56]
	(b) Enroute use	263 [9.29]
	(c) domestic enroute utilisation & transmission losses	49 [1.73]
	Total:	1687 [59.58]
5.	Total Requirement of Uttar Pradesh (UP)	
	D/s of Daudhan including enroute command	1700 [60.04]
6.	Proposed Water Transfer to Betwa Basin	659 [23.27]
7.	Requirement for D/s of dam for ecological needs	318 [11.23]



/SE-III/ WS-Ken.



**MEMORANDUM OF UNDERSTANDING BETWEEN THE GOVERNMENT OF BIHAR AND THE GOVERNMENT OF JHARKHAND ON 26<sup>th</sup> DAY OF JUNE, 2006 REGARDING MANAGEMENT, CONSTRUCTION, OPERATION & MAINTENANCE AND SHARING OF COSTS AND BENEFITS FROM (I) NORTH KOEL RESERVOIR PROJECT, (II) BATANE RESERVOIR PROJECT AND (III) BATESWARASTHAN PUMP CANAL PROJECT.**

After obtaining respective Government's approval, both the Water Resources Secretaries of Bihar and Jharkhand held discussion at Patna (Bihar) on the **26<sup>th</sup> day of June, 2006** regarding inter-State issues relating to the management, construction, operation & maintenance and sharing of costs and benefits from the Projects listed below:

**A. North Koel Reservoir Project**

**B. Batane Reservoir Project**

**C. Bateswarasthan Pump Canal Project**

Both the Governments have come to a mutual understanding to the management of the above three projects on the issues relating to the construction, operation & maintenance and sharing of costs and benefits from the above three projects in the manner indicated below:

**A. NORTH KOEL RESERVOIR PROJECT**

Both the Governments of Bihar and Jharkhand agree that the remaining works of the common components of North Koel Reservoir Project i.e. a dam across River North Koel near Kutku and a Pick-up Barrage near Mohammadganj in Palamu District, Jharkhand, shall be constructed, operated and maintained under the overall guidance of a two-tier Committees constituted for the purpose and the benefits derived thereupon to be shared between the States of Bihar and Jharkhand. The common components of the Project shall be constructed by the concerned department of Government of Jharkhand as a deposit work and its cost be shared between the States of Bihar and Jharkhand in proportion to the irrigation benefits and other uses as per Detailed Project Report (DPR) to be derived by them from this project. The State of Bihar shall deposit its share, as per the approved programme of implementation, to the State of Jharkhand at the beginning of every quarter of the financial year. However, the construction & maintenance work of the incomplete canals other than the common components of the Project and distribution network falling in the jurisdictions of the respective States, shall be carried out by themselves from their own funds.

**A.1 Salient Features of North Koel Reservoir Project**

Salient features of North Koel Reservoir Project are as follows

**(1) Elevation above Mean Sea Level :**

Top of Dam	:	372.00 metre
MWL	:	368.50 metre
Full Reservoir Level	:	367.28 metre
Dead Storage Level	:	330.10 metre

**(2) Storage Capacity :**

Gross Storage Capacity:	1170 MCM
Live Storage Capacity :	960 MCM

(3) CCA in Bihar	:	111800 ha.
CCA in Jharkhand	:	12470 ha.

## **A.2 Common Components of the Project for Inter-State Consideration**

Both the Governments of Bihar and Jharkhand agree that common components of the Project shall be a joint Project. The common components of the joint project are as follows:

### **Unit I - Dam**

- a. All associated balance Civil and Mechanical works viz. Dam, Spillway, and Gates etc.
- b. Balance Land Acquisition and Rehabilitation & Resettlement works, Environmental & Ecological works including cost of transfer of non-forest land and compensatory afforestation.
- c. Cost of land acquisition and the cost of Resettlement and Rehabilitation of the project affected people associated with common components of the projects.

### **Unit II – Barrage**

All associated balance Civil and Mechanical works pertaining to Barrage etc.

### **Unit III- Distribution**

The common carrier canal off-taking from Mohammedganj Barrage upto the border of Jharkhand with Bihar and the structures of this carrier canal.

## **A.3 Water Availability**

Both the Governments of Bihar and Jharkhand agree that the 75% dependable water availability of the river system at the North Koel Reservoir is 987 MCM (0.82 MAF). However this MOU shall not have any adverse effect on the previous agreements for sharing of water in Sone basin.

## **A.4 Sharing of benefits**

### **A.4.1 Water**

Both the Governments of Bihar and Jharkhand agree that:

- (i) 987 MCM (0.82 MAF) available water shall be shared between the States of Bihar and Jharkhand in proportion to the irrigation and M&I (Municipal & Industrial) benefits derived
- (ii) There will be some years in which the actual inflows will be in excess or in deficit. The Governments of Bihar and Jharkhand agree in principle that the excess or deficit based on 10-daily requirement shall also be shared by these two States in proportion to the irrigation and M & I benefits derived.
- (iii) The State of Jharkhand shall have the right for development of aquaculture and Lift Irrigation from the reservoir without affecting the regulation and life of the dam. These shall be extended to the oustee ssettled near to the fringe line of the reservoir.
- (iv) The Govt. of Jharkhand shall have the right for the development of tourism, recreational activities and also drinking water purposes for riverain from the free catchment in between Kutku Dam and Mohammadganj Barrage.

### **A.4.2 Hydropower**

Both the Governments of Bihar and Jharkhand agree that:

- (i) The installed capacity of power generation at the Dam shall be 24 MW (2 X 12 MW).
- (ii) The power generated shall be shared between the States of Bihar and Jharkhand in the inverse proportion to the ratio of CCA.

#### **A.4.3 Joint Monitoring Committee**

Both the States of Bihar and Jharkhand agree that there shall be a **Joint Monitoring Committee** at the level of Secretary to the Government of both the States for the overall management of the inter-state projects between Bihar and Jharkhand for overseeing the execution of joint balance work of dam, barrage, and common carrier canal, etc of the project and O & M of the project after its completion. This joint Monitoring Committee would comprise of Two-tier Committee with powers and functions as explained in the Annexure attached with this MOU.

#### **A.5 Cost Sharing**

Both the Governments of Bihar and Jharkhand recognize that major share of water available is allocated to the State of Bihar and hydropower generated to the State of Jharkhand, hence the sharing of cost on civil works and hydropower generation need not be the same and the total cost considered for sharing shall be the balance cost of common components of the project as referred to in Para A.2 above on the date of signing of the MOU. The sharing of cost of civil works and hydro - power generation shall be as follows:

- a. The total capital cost of balance Civil and Mechanical Works in Unit I-Dam defined in Para A.2 above shall be shared in the ratio of CCA referred above and its Operation & Maintenance Cost shall be shared between the States of Bihar and Jharkhand in the proportion of the irrigation and M& I benefits derived by the respective States based on the Storage utilisation.
- b. The cost of Land Acquisition and Resettlement and Rehabilitation of the Oustees from the reservoir area shall be done as per the National/Jharkhand Rehabilitation Policy and cost to be shared in the ratio of CCA.
- c. The total cost of balance Civil and Mechanical Works in Unit II- Barrage defined in Para A.2 above and its OPERATION & MAINTENANCE COST shall be shared between the States of Bihar and Jharkhand in the proportion of the benefits derived by the respective States on CCA consideration.
- d. The total cost of balance Civil Works in Common Carrier Canal Unit III-Canal defined in Para A.2 above and its Operation & Maintenance Cost shall be shared between the States of Bihar and Jharkhand on Cusec-mile basis.
- e. Since the hydropower generation shall involve operation of irrigation water, a percentage of expenditure on Unit I - Dam will be re-imbursed from the hydropower generating agency. This percentage shall be in the ratio of Irrigation water utilization for Power generation divided by Water utilization for Irrigation purposes. Accordingly, this reimbursed amount shall be distributed between the states in proportion to the cost sharing as indicated at para A.5 (a) above.

### **B. BATANE RESERVOIR PROJECT**

Both the Governments of Bihar and Jharkhand agree that remaining works of the common components of Batane Reservoir Project i.e. a dam across River Batane (tributary of river Punpun) near village Dhobadih (Jharkhand) and a barrage near Lodia village in Jharkhand, shall be constructed, operated and maintained under the overall guidance of a two-tier Committees constituted for the purpose and the benefits derived thereupon to be shared between the States of Bihar and Jharkhand. The common components of the Project shall be constructed by the concerned department of the Government of Jharkhand as a deposit work and its cost will be shared between the States of Bihar and Jharkhand in proportion to the irrigation benefits as per DPR to be derived by them from this project. The State of Bihar shall deposit its share, as per the approved programme of implementation, to the State of Jharkhand at the beginning of every quarter of the financial year. However, the construction & maintenance work of the incomplete canals other than the common

components of the Project and distribution network falling in the jurisdictions of the respective States, shall be carried out by themselves from their own funds.

### **B.1. Salient Features of Batane Reservoir Project**

Salient Features of Batane Reservoir Project are :

#### **(1) Elevation above Mean Sea Level:**

Top of Dam : 774.50 Feet  
MWL : 764.50 Feet  
Full Reservoir Level : 764.50 Feet  
Dead Storage Level : 739.00 Feet

#### **(2) Storage Capacity:**

Gross Storage Capacity: 52000 Acre-Feet  
Live Storage Capacity : 45600 Acre-Feet

(3) CCA in Bihar : 10466 ha.

CCA in Jharkhand : 1660 ha

### **B.2. Common Components of the Project for Inter-State Consideration**

Both the Governments of Bihar and Jharkhand agree that common components of the project shall be a joint project. The common components of the joint project are as follows.

#### **Unit - I Dam**

- a. All associated Civil and Mechanical works viz, Dam, Spillway, and Gates etc.
- b. Balance Land Acquisition and Rehabilitation & Resettlement works, Environmental & Ecological works.
- c. Cost of land acquisition and the cost of Resettlement and Rehabilitation of the project affected people associated with common components of the project.

#### **Unit II- Barrage**

All associated balance Civil and Mechanical works pertaining to Barrage etc.

#### **Unit III- Distribution**

The common carrier canal upto the border of Jharkhand with Bihar and the structures of this carrier canal.

### **B.3. Water Availability**

Both the Governments of Bihar and Jharkhand agree that the 75% dependable water availability of the river system at the Batane Reservoir is 64.14 MCM (0.052MAF) and the sharing of water resources at Batane Reservoir is based on the same.

### **B.4. Sharing of benefits**

#### **B.4.1 Water**

Both the Governments of Bihar and Jharkhand agree that:

- (i) 64.14 MCM (0.052 MAF) available water shall be shared between the States of Bihar and Jharkhand in proportion to the irrigation benefits derived.
- (ii) There will be some years in which the actual inflows will be in excess or in deficit. The Governments of Bihar and Jharkhand agree in principle that the excess or deficit based on 10-daily requirement shall also be shared by these two States in proportion to the irrigation benefits derived.
- (iii) The State of Jharkhand shall have the right for development of aquaculture, lift irrigation from the reservoir without affecting the regulation and life of the dam. These benefits shall be extended to the oustees settled near to the fringe line of the reservoir.

(iv)The Government of Jharkhand have the right for the development of tourism/recreational activities in the reservoir.

#### **B.4.2 Joint Monitoring Committee:**

Both the States of Bihar and Jharkhand agree that there shall be a **JointMonitoring Committee** at the level of Secretary to the Government of both the States for the overall management of the inter-state projects between Bihar and Jharkhand for overseeing the execution of joint balance work of dam, barrage and common carrier canal, etc. of the project and O & M of the project after its completion. This joint Monitoring Committee would comprise of Two-tier Committee with powers and functions as explained in the Annexure attached with this MOU.

#### **B.5 Cost Sharing:**

The total cost of balance Civil and Mechanical Works in Unit I- Dam as defined in Para B.2 above and its Operation & Maintenance Cost shall be shared between the States of Bihar and Jharkhand in the proportion of storage utilization for irrigation by the respective States.

a. The cost of Land Acquisition and Resettlement & Rehabilitation of the Oustees from the reservoir area shall be done as per the National /Jharkhand Rehabilitation Policy.

b. The total cost of balance Civil and Mechanical Works in Unit II- Barrageas defined in Para B.2 above and it's OPERATION & MAINTENANCE COST shall be shared between the States of Bihar and Jharkhand in the proportion of the benefits derived by the respective States on CCA consideration.

c. The total cost of balance Civil Works in Common Carrier Canal Unit III-Canal as defined in Para B.2 above and its OPERATION & MAINTENANCE COST shall be shared between the States of Bihar and Jharkhand on Cusec - mile basis.

### **C. BATESHWARSTHAN PUMP CANAL SCHEME**

Both the Governments of Bihar and Jharkhand agree that remaining works of the common components of Bateshwarsthan Pump Canal Scheme i.e. a pumpingstation in Bihar on the Right bank of River Ganga and a high level main canal,which enters into the Jharkhand's territory at 47.10 RD and leaves Jharkhand'sterritory at 150.00 RD and re-enters into Bihar territory, shall be constructed, operated and maintained under the overall guidance of a two-tier Committees constituted for the purpose and the benefits derived there upon will be shared between the States of Bihar and Jharkhand as per Para C.4. The common components of the Project lying in the territorial jurisdiction of Bihar / Jharkhand shall be constructed by the concerned department of the respective Govt. as a deposit work and its cost will be shared between the States of Bihar and Jharkhand in proportion to the irrigation benefits to be derived by them from this project. The State of Jharkhand / Bihar shall deposit its financial contribution, as per the approved programme of implementation, to the State of Bihar / Jharkhand at the beginning of every quarter of the financial year. However, the construction & maintenance work of the incomplete canals, other than the common carrier canal,of the Project and distribution network falling in the jurisdictions of the respective States, shall be carried out by themselves from their own funds.

#### **C.1 Salient Features of Bateshwarsthan Pump Canal Scheme**

Salient Features of Bateshwarsthan Pump Canal Scheme are :

##### **(1) Pumping Station :**

Discharge : 978 Cusecs

1 <sup>st</sup> Stage Pump (23 metre)	: 6 No Pumps of 60 Cusecs with 850 HP Motor and 1 no of 150 Cusec standby
II Stage Pump (29 metre)	: 14 No Pumps of 60 Cusecs with 660 HP Motor and 2 no of 150 Cusecs standby
<b>(2) Storage Capacity:</b>	
CCA in Bihar	: 22328 ha.
CCA in Jharkhand	: 4887 ha.

## **C.2. Common Components of the Project for Inter-State Consideration**

Both the Governments of Bihar and Jharkhand agree that common components of the project shall be a joint project. The common components of the joint project areas follows.

### **Unit - I — Pumping Station**

- a. All associated Civil and Mechanical works viz, Pump, Motors, Delivery Vat, Barge, Pump House, etc.
- b. Cost of balance land acquisition associated with the common components of the project

### **Unit -III- Distribution**

- a. The common carrier canal of the Project lying in the territorial jurisdiction of Bihar / Jharkhand and the structures of this carrier canal.
- b. Incomplete canals, other than the carrier canal, and distribution network, construction and maintenance work of incomplete canals and distribution network falling in the jurisdiction of the respective States shall be done by themselves from their own fund.

## **C.3. Water Availability**

Both the Governments of Bihar and Jharkhand agree that 978 cusecs water shall be pumped from River Ganga through Bateshwarsthan Pump Canal Scheme and the sharing of water resources through Bateshwarsthan Pump Canal Scheme is based on the same.

## **C.4. Sharing of benefits**

### **C.4.1 Water**

Both the Governments of Bihar and Jharkhand agree that:

- (i) 978 cusecs water pumped from River Ganga through this scheme shall be shared between the States of Bihar and Jharkhand in proportion to the irrigation benefits derived.
- (ii) There will be some years in which the lean season inflow in River Ganga may be less resulting in less pumping. Both the Governments of Bihar and Jharkhand agree in principle that in case of deficit in water availability in this scheme based on 10-daily requirement, supply shall also be reduced in proportion to the irrigation benefits derived.

### **C.4.2 Joint Monitoring Committee**

Both the States of Bihar and Jharkhand agree that there shall be a Joint Monitoring Committee at the level of Secretary to the Government of both the States for the overall management of the inter-state projects between Bihar and Jharkhand for overseeing the execution of joint balance work of Pumping station and common carrier canal, etc. of the project and O & M of the project after its completion. This joint Monitoring Committee

would comprise of Two-tier Committee with powers and functions as explained in the Annexure attached with this MOU.

**C.5 Cost Sharing:**

- a. The total cost of balance Civil and Mechanical Works in Unit I-Pumping Station as defined in Para C.2 above and its OPERATION & MAINTENANCE COST shall be shared between the States of Bihar and Jharkhand in the proportion of the irrigation benefits derived by the respective States based on the CCA consideration.
- b. The total cost of balance Civil Works in Common Carrier Canal Unit III- Canal as defined in Para C.2 above and its OPERATION & MAINTENANCE COST shall be shared between the States of Bihar and Jharkhand on Cusecs - mile basis.

**For and on behalf of  
Government of Jharkhand**

(Mahabir Prasad)  
Secretary to the Government,  
Water Resources Department

**Patna**

**Dated : the 26<sup>th</sup> June, 2006**

**For and on behalf of  
Government of Bihar**

( Hem Chand Singh)  
Secretary to the Government,  
Water Resources Department

**Annexure to the Memorandum of Understanding between the Government of Bihar and the Government of Jharkhand on 26<sup>th</sup> day of June, 2006 regarding management, construction, operation & maintenance and sharing of costs and benefits from (i) North Koel Reservoir Project, (ii) Batane Reservoir Project and (iii) Bateswarasthan Pump Canal Project.**

The Joint Monitoring Committee between Bihar & Jharkhand would comprise of Two-tier committee with the following delegated Powers and Functions :

**1 Standing Committee**

**Constitution:**

**Bihar side**

- |                                       |   |                  |
|---------------------------------------|---|------------------|
| 1. Secretary, WRD                     | - | Member           |
| 2. Engineer-in-Chief, WRD             | - | Member           |
| 3. Chief Engineer (Concerned Project) | - | Member           |
| 4. Chief Engineer (Monitoring), WRD   | - | Member Secretary |

**Jharkhand Side**

- |                                      |   |                  |
|--------------------------------------|---|------------------|
| 1. Secretary, WRD                    | - | Member           |
| 2. Engineer-in-Chief, WRD            | - | Member           |
| 3 Chief Engineer (Concerned Project) | - | Member           |
| 4. CE (Monitoring), WRD              | - | Member Secretary |

The Standing Committee shall meet at least twice in a year and the venue of the meeting would preferably be in Jharkhand and Bihar alternately. The Member Secretary of the host State shall make all necessary arrangements for the meeting.

**Power & Functions**

1. To resolve the outstanding issues between the two States and seek necessary approval of the respective Governments.
2. To review the formulation and subsequent implementation of the agreement.
3. To constitute different Sub-Committees to facilitate smooth and efficient construction / O&M of the common project and co-ordinate their activities.
4. To identify and resolve all inter-state matters related to Water Resources Development Project.

**2 Project Level Joint Operation Committee**

**Constitution :**

- |   |                  |
|---|------------------|
| 1. Chief Engineer, (Bihar)                                      | Member           |
| 2. Chief Engineer, (Jharkhand)                                  | Member           |
| 3. Superintending Engineer, Bihar<br>(Concerned Command Area)   | Member           |
| 4. Superintending Engineer, Jharkhand<br>(In-charge Head Works) | Member Secretary |

The Committee shall meet at least quarterly at suitable venue.

**Power & Functions**

It will provide a forum for co-ordination in all the inter-state matter concerning the project

**(A) During Construction :**

- i) All the bottlenecks arising out of issues connected with the construction of common components of the project shall be addressed by the Committee.



- ii) Formulation of Construction Schedule and Monitor the progress of different construction activities and ensure timely completion of the work.
- iii) Any unresolved issues arising during the execution of the project shall be immediately brought to the notice of the Standing Committee for their redresses.

**(B) During Operation and Maintenance:**

- i) The Committee shall function as a Joint Regulation Committee for the Project.
- ii) The Committee shall prepare / review the regulation plan as per the latest requirement of the project and ensure the water supply accordingly.
- iii) Make necessary arrangements for the joint measurement of the water released to the States as per regulation plan at dam, barrage and pumping station.
- iv) To look into the proper maintenance of the project for its smooth functioning and take all necessary steps towards timely completion of such maintenance works.
- v) In case of emergency situation the Committee shall immediately meet, deliberate, assess the situation and chalk out their remedial measure to be taken and may directly seek the respective government's approval.

**For and on behalf of  
Government of Jharkhand**

(Mahabir Prasad)  
Secretary to the Government,  
Water Resources Department

**Patna**

**Dated : the 26<sup>th</sup> June, 2006**

**For and on behalf of  
Government of Bihar**

( Hem Chand Singh)  
Secretary to the Government,  
Water Resources Department

**MINUTES OF SECOND INTER-STATE MEETING ON REQUEST OF BIHAR FOR CONSTITUTION OF A TRIBUNAL FOR ADJUDICATION OF SONE RIVER WATER DISPUTE HELD BY CHAIRMAN, CWC ON 07.04.2015 AT NEW DELHI.**

1. During the first Inter-State meeting convened by Chairman, CWC at New Delhi on the request of Bihar for Constitution of a Tribunal for adjudication of Sone river water dispute which was held on 16.10.14, it was decided that a Sub-Committee would be constituted under the Chairmanship of Chief Engineer (BPMO), CWC with officers from Irrigation/Water Resources Departments of Governments of UP and Bihar, UPJVNL, UPPCL, GFCC, CWC and CEA as its members to study the feasibility of meeting the irrigation requirement of Bihar by modifying the operation pattern of Rihand hydropower project. Accordingly, the Sub-committee was constituted vide CWC O.M. No. 6/94/2014-RO/1445-1461 dated 27.11.2014. Terms of Reference of the Sub-committee were as under:-

- I. To study the feasibility of meeting the irrigation requirement of Bihar by modifying the operation pattern of Rihand Hydropower project.
- II. Any other related matter.

The meeting of the Sub-committee was held under Chairmanship of CE(BPMO) at CWC, Sewa Bhavan, R.K. Puram New Delhi on 17-12-2014. The report of the Sub-committee was submitted to Chairman, CWC in the first week of March, 2015.

2<sup>nd</sup> interstate meeting was held under chairmanship of the Chairman, CWC with the officials of Govts. of co-basin states of Bihar, UP, Chhattisgarh and Jharkhand on **07.04.2015** at New Delhi to discuss the findings of the Sub-committee and to take further course of action. The officers of Madhya Pradesh (which is one of co-basin states) did not attend the meeting. The list of participants is attached at Annex -1.

2. At the outset, Chairman welcomed all the officers and then asked Shri RK Jain, CE (BPMO) and Chairman of the Sub-committee to make a power point presentation on the report of the Sub-committee. During the presentation, it was informed that the sub-committee during the deliberations tried to find out the answers to the following questions:-

I) When there is no irrigation requirement, is it possible to meet power demand from alternative sources to save water for irrigation use?

II) Are there any constraints in releasing water from Rihand Reservoir to meet irrigation requirement other than availability of water?

III) The need to construct Kadwan dam?

The conclusions drawn by the Sub-committee are as follows:-

- It is not feasible to meet the irrigation requirement of Bihar by modifying the operation pattern of Rihand hydropower project, as in doing so, the interest of UP gets affected.
- Although releases may not be in conformity with the demand of Bihar, Bihar is getting the benefit of regulated releases from Rihand reservoir, whereas as emphasised by UP, there is no mention of regulated releases in any agreement
- Although UP has assured during the meeting of the sub-committee that they will adhere to the recommendations of the JOC as far possible, they have not been able to do so even during the current year itself.

- In the given circumstances, proposed Kadwan dam by Bihar below Obra dam to store and regulate the water released from Rihand reservoir may provide a better and long term solution for fulfilling irrigation requirements of Bihar more reliably.
- Bihar has raised the issue of compensation from Bansagar reservoir in lieu of consumptive utilization by industries/thermal plants etc of U.P. As per the data provided by UP, the utilization on this account during 2013-14 by U.P., Central entities and M.P. are 0.122 MAF, 0.134 MAF and 0.019 MAF respectively.
- The utilization by M.P. is out of their own share but there is no provision for utilization by Central entities/U.P.
- UP has raised the issue of utilization of water by MP in the catchment area of Rihand reservoir without accounting for the same in their share and has requested to assess the details of such utilization through remote sensing.

After the power point presentation, detailed discussions on the report were held. Chairman, CWC mentioned that as concluded in the report of the subcommittee, although Govt. of Bihar is getting its irrigation water requirement partially met from Rihand Dam, for fulfilling the balance demand, Kadwan dam can be a good alternative which will act as a balancing reservoir for Indrapuri (Sone) Barrage. The issue of fixing its level could be decided as per the balance demand (after meeting partial requirement from the releases of Rihand) and simulation(s) can be carried out to fix up its capacity which can meet the irrigation requirement of Bihar worked out on 10 daily basis.

3. Secretary, Water Resources Department (WRD), Govt. of Bihar was of the view that although Kadwan dam is a good alternative for long term solution, it cannot be completed within short period and accordingly there is a need to look forward for short term solution too to tackle the immediate problems of Bihar. Moreover, proposed Kadwan dam is to be situated just near U.P. and Jharkhand border upstream of Sone barrage and submergence in U.P. and Jharkhand would be inevitable. The concurrence from these two states will therefore be required which depends on their cooperation. At present, this seems to be a difficult issue and it is not clear how this peculiar problem of submergence and land acquisition including R&R problem would be viewed by these two states which are non-beneficiary states. Kadwan Dam can only be considered if U.P. and Jharkhand give assurance that they will cooperate and give their consent. Representative of UP suggested that dam site can be shifted so that there won't be submergence in UP or Jharkhand. However, it was informed that as the barrage is very near to the border and the dam has to be constructed above the barrage only, there is no possibility of finding any site which could avoid submergence in the upstream states. On the question of completing the survey of proposed Kadwan Dam by Bihar, Bihar representative replied that requisite survey works to ascertain effect of various FRLs of the proposed dam on the Obra and the property survey works entrusted to survey of India have been completed. He further mentioned that although yearly water availability at Sone Barrage is more or less as per Bansagar agreement, during lean /non monsoon period, water requirement of Bihar is not met and in most of these months, there is deficiency in supply whereas excess water is released during monsoon months. Since, there is no storage arrangement in the Indrapuri Barrage; he desired that UP should release water as per monthly requirements of Bihar from its allocated share. He also pointed out that there is no allocation of water for UP in Rihand but still water is being drawn from Rihand reservoir for many thermal power stations in UP in violation of the agreement. He desired that UP should compensate for the same by releasing water out of their share in Bansagar project.

4. In response, the stand taken by UP Govt. officials was similar to the stand taken by them during the meeting of the sub-committee. Detailed deliberation took place about safety of Rihand Dam, loss of hydropower generation to UP due to change in operating levels of Rihand Reservoir,

commissioning of thermal power plants and about adherence to the recommendations of JOC. UP officials reiterated their concern of not being able to adhere to the recommendations of JOC due to power evacuation problems and non-operation of some transformers but they were optimistic that within a year, the situation is likely to improve with the measures taken by them in respect of transformers, transmission lines and generation unit(s) of Rihand.

5. On insistence of Bihar Govt. representative about meeting the irrigation requirements of Bihar on monthly basis, the UP Govt. officials also pointed out that there was no mention of monthly releases in any of the agreements. In this regard, Chairman GFCC mentioned that whenever there is issue of water distribution, it is based on judicious distribution (that is, satisfying the optimum requirements of the riparian states) which is at present being taken care of by JOC. If UP is not able to release as per recommendation of JOC, there is need to analyse the problem as narrated by UP as to why they are not able to adhere to the recommendation of JOC and how this can be improved. On further deliberations, it was agreed that the situation can be watched for one year regularly and instead of analysing JOC recommendations at the end of season, it would be better to have analysis carried out during the lean period, so that corrective measures could be taken timely. Accordingly, it was agreed that both UP and Bihar may meet bilaterally once in two months at mutual convenience to analyse the releases made vis-à-vis recommendations of JOC.

6. Govt. Of Jharkhand also raised the issue of Kadwan dam submergence in Jharkhand and requested for DPR of Kadwan dam from Bihar to know the extent of submergence in Jharkhand. The Bihar Govt. officials agreed to send copy of DPR to them.

Meeting ended with concluding remarks that the two states U.P & Bihar would meet periodically every two months to analyse the release pattern vis-a-vis the JOC recommendations from Rihand dam and try to solve the issues bilaterally.

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

Annex-I

**List of Participants of Inter-State meeting on Request of Bihar for Constitution of a Tribunal for adjudication of Sone river water dispute held on 07.04.2015 at New Delhi**

**CWC officers**

- 1 Shri A.B. Pandya, Chairman, CWC, New Delhi – in the Chair
- 2 Shri A. Mahendran, Member, WP&P, CWC, New Delhi
- 3 Shri R.K. Jain, CE, BPMO, CWC, New Delhi
- 4 Shri Navin Kumar, CE, IMO, CWC, New Delhi
- 5 Shri R.K. Pachauri, CE, EMO, CWC, New Delhi
- 6 Shri B.P. Pandey, Director, ISM Dte., CWC, New Delhi
- 7 Shri Rishi Srivastav, Director, RO Dte., CWC, New Delhi
- 8 Shri Rajesh Kumar, Director, IP(N) Dte., CWC, New Delhi
- 9 Shri M. Raghuram, Director, Hydrology, CWC, New Delhi

- 10 Shri M.P. Singh, Dy. Director, IP(N), CWC, New Delhi
- 11 Shri Kiran Pramanik, Dy. Director, RO Dte., CWC, New Delhi
- 12 Shri R.K. Goel, AD, IP(N), CWC, New Delhi
- 13 Shri R.K. Parsad, AD-II, IP(N), CWC, New Delhi

#### **MoWR , RD & GR**

- 1 Shri S. KGangwar, Sr. Joint Commissioner, MoWR, RD & GR, New Delhi
- 2 Shri Asit Chaturvedi, Dy. Commissioner, MoWR, RD & GR, New Delhi

#### **CEA**

- 1 Shri Balwan Kumar, Dy. Director, CEA, New Delhi

#### **GFCC officer**

- 1 Shri G.S. Jha, Chairman, GFCC, Patna
- 2 Shri A. Parameshan, Member, GFCC, Patna
- 3 Shri Anil Jain, Director, GFCC, Patna

#### **State Govt. officers**

##### **Bihar**

- 1 Shri Dipak Kumar Singh, Secretary, WRD, Govt. of Bihar, Patna
- 2 Shri Indu Bhushan Kumar, CE (Planning & Monitoring), WRD, Govt. of Bihar, Patna

##### **UP**

- 3 Shri Pardeep Kumar Singh, CE Level -1 & CE (Sone) , U.P. Irrigation Department, Varanasi
- 4 Shri Sailesh Singh SE (H.G.C) , UPJVNL, Rihand Dam, Pipri, UP
- 5 Shri M.R. Agrawal, SE, IWC, Obra, Irrigation Department U.P.
- 6 Shri R.A.S. Kushwaha, AE, RD CD, Pipri Sonebhacha, U.P. Irrigation
- 7 Shri Narendra Prasad, AE, SLDC, Lucknow, U.P. Irrigation

**Jharkhand**

8 Shri Ashok Kumar, CE, Project Monitoring & Planning, WRD, Govt. of Jharkhand.

**Chhattisgarh**

9 Shri R. N. Divya, CE, Hasdeo Ganga Basin, Ambikapur, Govt. of Chhattisgarh

10 Shri U.S . Ram, EE, WRD, Baikunth, Govt. of Chhattisgarh

## **MINUTES OF INTER-STATE MEETING BETWEEN OFFICIALS OF GOVERNMENTS OF UP AND BIHAR ON WESTERN GANDAK CANAL SYSTEM OF BIHAR**

Bihar Govt. on 16.6.14 in a letter addressed to Secretary (Water Resources), GoI stated that designed discharge of Western Gandak Main Canal at the head of canal is 18800 cusec, out of which as per permanent order dated 8.8.1994 of SE Irr. Dept. of UP, 15800 cusec is made available at UP-Nepal border for UP and Bihar in the ratio of 46% and 54% (which comes to 8500 cusec after rounding) respectively, but UP never releases Bihar's full share at 118.4 km of WGMC. Govt. of Bihar has requested to sort out the issue by convening an inter-state meeting, if necessary.

An inter-state meeting between UP & Bihar on the Western Gandak Canal system was held under the chairmanship of Member (WP&P), CWC at 14.30 hrs at New Delhi on 14/8/2014. List of participants is at Annex.

Member (WP&P), CWC welcomed the officers from WR/Irrigation Department of Bihar and UP. Thereafter agenda items were taken up for discussion as below:-

### **1.0 Short supplies to Bihar:-**

As requested in their letter of 16<sup>th</sup> June, 2014, representatives from Govt. of Bihar reiterated their demand of ensuring supply of at least 5000 cusec of water at UP-Bihar border. Representative of Govt. of UP expressed their inability to ensure said quantity of water due to bad condition of main canal in their territory. After discussion, it was decided as under:-

- (1) Govt. of UP will ensure supply of 4100 cusec of water at UP – Bihar border from 18/8/2014 onwards.
- (2) Govt. of UP will make efforts to gradually increase discharge to 5000 cusec at UP-Bihar border.
- (3) Govt. of UP will try to complete the renovation of main canal before next kharif season and try to ensure full share of Bihar at UP-Bihar border from next kharif season.

### **2.0 Allocation of water for Thermal Power Plants from WGMC (called Saran Main Canal in Bihar) of Bihar:-**

Govt. of Bihar proposes to allocate 280 cusec of water out of its share under WG canal system to thermal power plants in Bihar. For this, Govt. of Bihar has proposed to release said quantum of water in the Gandak river from the Gandak barrage and pick up the same at a d/s point after confluence of Gandak river with Ganga. To compensate for this quantity, government of Bihar has proposed that the release of water in the WG Main Canal may be reduced to the above extent and UP may curtail the same from the share of Bihar. However, issue of transit losses during lean season also came up for discussion and Bihar government was advised to conduct a study to determine transit losses and work out the gross quantity to be released in Gandak river from the Gandak barrage to ensure that the required quantity of water for the thermal power stations reaches at the point where water will be taken for the thermal projects. Member (WP&P), CWC advised that Govt. of Bihar may make use of discharge data of CWC G & D stations available, if any for the purpose. Representative from Govt. of UP informed that they do not have any objection to the said proposal and will make necessary changes in their permanent order after exact quantum of water to be deducted from the share of Bihar and to be released in Gandak is decided and conveyed to them. The meeting ended with vote of thanks to the chair.

## List of Participants

## MoWR / CWC, Govt. of India

- 1 Shri A.Mahendran, Member, WP&P, CWC, N. Delhi
- 2 Shri B.P.Pandey, Director, IP(N), CWC, N. Delhi
- 3 Shri M.P.Singh,Dy. Director, IP(N), CWC, N. Delhi
- 4 Shri R.K.Goel, AD, IP(N), CWC, N. Delhi

## Govt. of Bihar

- 1 Shri Dipak Kr. Singh, Secy. WRD, Bihar
- 2 Shri Indu Bhushan Kumar, CE, Monitoring,WRD, Bihar
- 3 Shri Uday Kumar, R.E., WRD, Bihar

## Govt. of UP.

- 1 Shri S.V.Singh, E-in-C, Irrigation , UP
- 2 Shri A.K. Sethi, CE(Gandak), U.P. Irrigation
- 3 Shri B.L. Sachan, SE(Gandak), U.P. Irrigation
- 4 Shri S.P. Singhal, EE, I&P WR, U.P. Irrigation, Meerut



## **AGREEMENT BETWEEN THE STATES OF MANIPUR AND ASSAM ON THE EXECUTION, OPERATION AND MAINTENANCE OF THE JIRI IRRIGATION PROJECT**

This Deed of Agreement made on this the 22<sup>nd</sup> day of February, 1999 between the Governor of Manipur, represented by Secretary, Irrigation & Flood Control Department, and the Governor of Assam, represented by Secretary, Irrigation Department witnesseth as under

1. The Jiri Irrigation Project envisages construction of a Head works across river Jiri, a tributary of river Barak in Manipur at Laingangpokpi in Manipur and two Canal systems with total CCA 5750 hectare; of which 2010 hectare is in Manipur on the left bank and 3740 hectare in Assam on the right bank. The North Eastern Council, Ministry of Home Affairs, Government of India, have agreed to fully fund this project on a 90% grant, 10% loan basis upto its final approved cost.

2. The two State Governments agree to the constitution of the Jiri Irrigation Project Control Board (herein after called Jiri I.P.C. Board ), headed by Vice Chairman, Brahmaputra Board and having as its members the Secretary, Irrigation Department, Government of Assam, the Secretary, Irrigation & Flood Control Department, Govt. of Manipur, Chief Engineer, Brahmaputra and Barak basin, Central Water Commission and Adviser (IFC&WSM), NEC as Member-Secretary, to oversee and monitor implementation of the project in an efficient and economical manner, recommend release of funds and subsequent alteration and maintenance of the project in technical and financial aspects. The two state governments also agree to the constitution of a Monitoring and Coordination Committee by the Board for its assistance. This Committee would be headed by General Manager, Brahmaputra Board, with the concerned Chief Engineers and Superintending Engineers of Irrigation Department, from the State governments of Assam and Manipur and Director, Monitoring & Appraisal Directorate, CWC or his representative as members. Adviser (IFC&WSM), NEC will be the member-secretary of the committee.

3. The Government of Assam agrees to the diversion of about 15 hectare of forest land in Assam for the project in its territory and shall take necessary steps to obtain forest clearance of the Ministry of Environment and Forests, Government of India.

4. The Government of Manipur shall carryout the required pre-construction investigation and building up of infrastructure facility in their territory, so that, the implementation of the project can commence immediately. Such activities on the Assam side shall be carried out by the Govt. of Assam. The two states also agree to acquire land and clear encroachments, if any, within their areas, so that, pre-construction activities of the project go on smoothly.

5. The Head works and the left bank canal system in Manipur territory will be executed by the Government of Manipur. The right bankl canal system in Assam territory will be executed by the Government of Assam.

6. The two State Governments shall draw-up an action plan (pre-construction/ during construction) for the implementation of the project with physical and financial targets for approval by the Jiri I.P.C. Board.

7. The two State Governments agree that the construction progress of the project will be monitored by the Monitoring and Co-ordination Committee to ascertain the justification for recommending the release of fund to the State Governments. In addition, Central Water Commission will be regularly monitoring the progress of the project and the monitoring status report will be placed before the Monitoring & Coordination Committee. The Monitoring & Coordination Committee will bring to the

notice of NEC through Jiri IPC Board any issue meriting urgent attention.

8. The annual utilisation for irrigation and drinking water has been worked out as 98 million cubic metre (3.46 TMC) against the 75% dependable availability of 896 million cubic metre (31.63 TMC). The sharing of water between the two States shall be in proportion to the command area proposed for irrigation in the Kharif and Rabi season of the respective States. Minimum 10% of the river discharge shall be allowed to pass through the Headworks to downstream for ecological reasons. The shortages in 75% dependable flow during the lean period would be met from the pondage. However, during leaner years, some curtailment in irrigation supplies due to shortages in inflow may become necessary. In such an event, the short fall in the availability of water from the figures adopted in the Project report on 10-daily flow at 75% dependability basis, shall be assessed and distress shared between the two States in proportion to the cropped areas of the respective States, after meeting the drinking water requirement.

9. The operation of the Head works will be done jointly by the representatives not below the rank of E.E. of Govt. of Manipur and Govt. of Assam in following manner:

- (i) Joint gauge and discharge measurements of the two canal flows may be carried out by two States.
- (ii) Periodical meetings of the local officers to discuss water availability, water requirement and changes as required in operation plan, and
- (iii) Preparation and approval of seasonal operation plan by Jiri IPC Board.

An officer of the Govt. of Assam, not below the rank of Asst. Engineer, will liaise with the project authorities of Manipur in the day to day operation of the Head works for conveying indents and obtaining flow data on river & withdrawals in canals etc., The withdrawals in canal systems in both the States will be regulated to serve the purpose of irrigation through efficient water management without causing water logging/ drainage congestion and other harmful effects. The conjunctive use of surface and ground water should be made to avoid such situation.

10. The Head works shall be owned by Manipur State and the two canal systems by the respective States within which these are located. The maintenance cost of the Head works after completion, will be shared by the two States as mutually agreed and approved by the Jiri IPC Board in proportion to the area benefited in each State which works out to 65% for Assam and 35% for Manipur. The maintenance of the canal system will be the responsibility of the respective States from their own resources in their own territory and that of the Head works will be the responsibility of Manipur Government on cost sharing basis as stated above. The assessment of maintenance work for the Head works has to be carried out jointly by the two States by officers not below the rank of Executive Engineer.

11. Any dispute arising out of the implementation of the project or any of the clauses of this agreement, shall be first mutually discussed between the two States for an amicable settlement, failing which the matter can be referred by either parties to the Monitoring & Coordination Committee for a decision. In the event of Committee's decision being unacceptable to either of the parties, the Committee will refer the dispute to the Jiri IPC Board for its decision, which shall be final and binding on both the states.

In WITNESS WHEREOF the parties hereto have set and subscribed their respective hands and seals the day, month and year first above-written.

For & on behalf of the  
Governor of Assam

Secretary,  
Irrigation Department,  
Govt. of Assam

For & on behalf of the  
Governor of Manipur

Secretary,  
Irrigation & Flood Control Deptt.  
Govt. of Manipur

In the presence of

Planning Adviser i/c Secretary,  
North Eastern Council,  
Govt. of India.