

AGREEMENT ON UTILISATION OF THE WATER RESOURCES OF THE DAMODAR BARAKAR, AJOY, MAYURAKSHI SIDHESHWARI NOON BEEL AND MAHANANDA RIVER BASINS, WHERE BIHAR AND WEST BENGAL ARE CO-BASIN STATES, REACHED BY THE CHIEF MINISTERS OF WEST BENGAL AND BIHAR AT PATNA ON THE 19TH 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:

1. 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 within 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 Dam ;

(iv) Bihar will replenish the withdrawals from Konar reservoir by corresponding supplies from Tenughat Dam through the proposed Tenu-Bokaro 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

(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 percent 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 1st of July.

(b) Keep the Tenughat Reservoir full to its capacity on the 30th of September.

(c) Keep the Panchet Reservoir at least at dead storage level on the 30th of June after meeting the downstream commitments.

- (d) Keep at least 25,000 acre feet of storage at Panchet reservoir on the 15th of July after meeting the downstream commitments;
- (e) Keep at least 50,000 acre feet of storage at Panchet reservoir on the 31st of July after meeting the downstream commitments;
- (f) Keep the Panchet reservoir full to its capacity between 30th September and 31st 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 Bihar 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 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 guilding 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 this 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 those dams to be 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 purposes and simultaneously the full flood storage at Maithon will be made available through acquisition of land in Bihar between RL 49.5 and RL 500; and

(v) Storage in the reservoir behind Tenughat dam from 600 cusecs to 900 cusecs shall synchronise with the acquisition of 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 feet. 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 Fulbaruj. 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 uses 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 that 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
Witnessed by:

(Sd.) (Jyoti Basu)
Chief Minister, West Bengal

Sd. (Sachida Nand Singh)
Irrigation Minister, Bihar

Sd. (Provash Roy)
Irrigation Minister, West Bengal.

Place : Patna

Dated : 19th July, 1978.

SIDE LETTER DATED 29TH JULY 1978, REGARDING IMPLEMENTATION OF AGREEMENT DATED 19TH 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 19th 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) of 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.
4. 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 Tenughat Dam. It is anticipated that a quantity of 2,50,000 acre 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 19th 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/- K.A. Ramasubramaniam
29-7-1978

Chief Secretary,
Bihar

Place : CALCUTTA.

Date: 29th July, 1978.

Sd/- A.K. Sen
29-7-1978

Chief Secretary,
West Bengal.