

**AGREEMENT BETWEEN INDIA AND PAKISTAN ON
AD HOC TRANSITIONAL ARRANGEMENTS FOR
THE IRRIGATION USE OF THE WATERS OF
THE INDUS SYSTEM OF RIVERS
Washington, 17 April 1959**

WHEREAS representatives of India and of Pakistan, together with representatives of the International Bank, are engaged in the preparation of a comprehensive plan for the irrigational use of the waters of the Indus system of rivers, and

WHEREAS by agreements dated June 21, 1955, October 31, 1955 and September 24, 1956, the Government of India and the Government of Pakistan agreed upon *ad hoc* transitional arrangements for the periods April 1 to September 30, 1955; October 1, 1955 to March 31, 1956; and April 1, 1956 to March 31, 1957 respectively, and

WHEREAS it is considered desirable that *ad hoc* transitional arrangements should be made for the period April 1, 1959 to March 31, 1960,

NOW THEREFORE, the Government of India and the Government of Pakistan agree as follows :—

A. FOR THE PERIOD APRIL 1 TO OCTOBER 15 :

1. Except as provided in paragraphs 2, 3, and 7 below, India agrees to limit withdrawals from river flow (for direct use in canals or for storage) in Indian territory, in each water-accounting period specified in paragraph 10 of this Agreement, to the equivalent of the following :
 - (a) 10, 250 cusecs from April 1 to July 10, 12,000 cusecs from July 11 to August 31, 10,500 cusecs during September, and 10,000 cusecs from October 1 to 15 from the Sutlej, as at Rupar, *plus*
 - (b) 3,500 cusecs during April, 4,500 cusecs during May, 5,500 cusecs from June 1 to September 30, and 5,100 cusecs from October 1 to 15 from the Sutlej and Beas combined; as at

Ferozepore, provided that the withdrawal from the Beas component does not exceed 16% of that component (during the period October 1 to October 15 the Beas component shall be as corrected for gains and losses between Ferozepore and Islam), *plus*

- (c) Any Ravi supplies (after having given effect to paragraph 9 of this Agreement) transferred to the Beas and received at Ferozepore.
2. In addition to the withdrawals that India would be entitled to make under paragraph 1 above, India may make further withdrawals equivalent to amounts related to Pakistan's ability to replace. These amount, by water-accounting periods, shall be the aggregate of (a) and (b) below limited to amounts related to the effective capacities of the link canals, such amounts being as defined under (c) below :

- (a) 80% of the equivalent (at Ferozepore) of any Ravi supplies escaped below Madhopur.
- (b) 80% of the gross amount, determined as below :

When the discharge at Meralā is below the floor discharge shown in column 2 of the following Table, the gross amount, as at Ferozepore, shall be zero. When the discharge at Meralā reaches or exceeds the ceiling discharge shown in column 3 of the Table, the gross amount as at Ferozepore shall be the amount shown in column 4 of the Table. For discharges at Meralā between those shown in columns 2 and 3, the gross amount, as at Ferozepore, shall be the proportional intermediate amount.

TABLE

Period	Floor Discharge at Meralā	Ceiling Discharge at Meralā	Gross amount as at Ferozepore, corresponding to the ceiling discharge	Effective capacity as at Ferozepore
(Col. 1)	(Col. 2)	(Col. 3)	(Col. 4)	(Col. 5)
April	1-10	11,100	4,300	8,600
	11-20	9,800	8,600	9,700
	21-30	10,000	11,900	11,900
May	1-10	15,700	13,000	13,000
	11-20	17,700	13,000	13,000
	21-31	19,500	13,000	13,000
June	1-10	16,500	13,000	13,000
	11-20	19,800	13,000	13,000
	21-30	19,200	13,000	13,000

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	(Col. 1)	(Col. 2)	(Col. 3)	(Col. 4)	(Col. 5)
July	1-10	17,700	31,900	13,000	13,000
	11-20	19,700	34,400	13,000	13,000
	21-31	18,200	32,500	13,000	13,000
August	1-10	11,900	25,900	13,000	13,000
	11-20	13,000	26,900	13,000	13,000
	21-31	16,300	29,700	13,000	13,000
Sept.	1-10	18,000	32,000	12,000	12,000
	11-20	18,700	33,000	12,000	12,000
	21-30	20,200	34,000	12,000	12,000

(c) the limiting amount shall be 80% of the effective capacity shown in column 5 above.

(d) During October 1 to 15, India may make additional withdrawals, over and above those specified in paragraphs 1 and 2 (a) above, of 400 cusecs as at Ferozepore. If, during this period, river supplies in Pakistan are sufficiently good to permit the transfer of further additional amounts, Pakistan will cause such supplies to be transferred and will, through its Special Commissioner, notify the Indian Special Commissioner of the amounts which may be made available as additional replacement supplies.

In addition to the withdrawals that India would be entitled to make under paragraph 1 and 2 above, India may make another withdrawals to the extent and in the circumstances specified below :

3. (a) When, in any water accounting period the supplies at Ferozepore below (including withdrawals by the Dipalpur Canal), *plus* the amounts specified for India under paragraph 2 above, exceed the amounts set out below, India may withdraw the equivalent of 50% of the excess (provided that this quantity, viz. 50% of the excess, shall be reduced, but not below zero, by the equivalent at Ferozepore of the amounts, if any, stored during that period) and will allow the balance to escape below Ferozepore :

Period (Ferozepore Dates)		Amount
April	1 - 10	7,000 cusecs
	11 - 20	7,000 "
	21 - 30	8,000 "
May	1 - 10	8,000 "
	11 - 20	11,000 "
	21 - 31	13,000 "

June	1 - 10	16,000	cusecs
	11 - 20	19,000	"
	21 - 30	26,000	"
July 1 to August 31		30,000	"
Sept.	1 - 10	28,000	"
	11 - 20	25,000	"
	21 - 30	19,000	"
Oct.	1 - 10	13,000	"
	11 - 15	9,500	"

- (b) (i) When there is an escapage below Islam, India may withdraw equivalent to the amount of the escapage.
- (ii) If, during a water-accounting period, the equivalent at Ferozepore of the actual delivery at the tail of the Balloki-Suleimanke Link is less than the effective capacity (column 5 of the Table under paragraph 2(b)) and there is an escapage below Khanki or below Balloki not due to an operational emergency, India may withdraw additional amounts, limited to the unused effective capacity or to the equivalent of the escapage, whichever is less. If the escapage has been due to an operational emergency, Pakistan will take steps to discontinue the escapage as soon as the emergency is over.
- (c) There shall be no restriction on Indian withdrawals when, during any water accounting period, the aggregate of (i), (ii) and (iii) below exceeds 35,000 cusecs (without correction for gains and losses) between April 1 and August 31, 30,000 cusecs (without correction for gains and losses) in September and 25,000 cusecs (corrected for gains and losses between Ferozepore and Islam) during the first fifteen days of October :—
- (i) The supply at Ferozepore below (including withdrawals by the Diplapur Canal).
- (ii) The equivalent (at Ferozepore) of any Ravi supplies escaped below Madhopur.
- (iii) Between April 1 and September 30, the appropriate gross amount under paragraph 2(b) above, and, during the October 1 to 15, the amount under paragraph 2(d) above.

The aggregate of (ii) and (iii) will be limited to the effective capacity shown in column 5 of the Table under paragraph 2(b) above.

B. FOR THE PERIOD OCTOBER 16 TO MARCH 31 :

4. Except as provided in paragraphs 5, 6 and 7 below, India agrees to limit canal withdrawals in Indian territory in each water accounting period specified in paragraph 10 of this Agreement to the equivalent of the following :
 - (a) 10,000 cusecs from the Sutlej, as at Rupar, *plus*
 - (b) 3,500 cusecs during the last sixteen days of October and 2,720 cusecs thereafter from the Sutlej and Beas combined, as at Ferozepore, provided that the withdrawal from the Beas component corrected for gains and losses between Ferozepore and Islam does not exceed 21% of that component, as so corrected, *plus*
 - (c) Any Ravi supplies (after having given effect to paragraph 9 of this Agreement) transferred to the Beas and received at Ferozepore.
5. In addition to the withdrawals that India would be entitled to make under paragraph 4 above, India may make further withdrawals equivalent to amounts related to Pakistan's ability to replace. These amounts shall be such amounts, if any, as may be agreed upon between the Special Commissioners.
6. In addition to the withdrawals that India would be entitled to make under paragraphs 4 and 5 above, India may make further withdrawals to the extent and in the circumstances specified below :
 - (a) When there is an escape below Islam (except during the annual closure at Islam headworks) India may withdraw amounts equivalent to the amount of the escape.
 - (b) There shall be no restriction on Indian withdrawals from the Sutlej and Beas when, during any water accounting period specified in paragraph 10 of this Agreement, the supply at Ferozepore below, corrected for gains and losses between Ferozepore and Islam, including withdrawals of Dipalpur Canal, *plus* the amounts specified in paragraph 5 above, exceeds 10,000 cusecs.

C. GENERAL

7. India may utilise the stored waters in any manner it likes.
8. The water-account required under paragraph 10 of this Agreement will, during the period April 1 to July 10 (Ferozepore dates), be

prepared with due allowance for time-lag as set out in Annex I to this Agreement. During the period July 11 to March 31, such water account will be prepared on the basis of identical dates at various points of river supply and canal withdrawals, without any allowance for time-lag. During the period April 1 to September 30, the corrections to be applied for gains and losses shall be as set out in Annex I to this Agreement. During the period October 1 to March 31, there shall be no allowance for gains or losses, except for those in the reach from Ferozepore to Islam. For this reach, the gains and losses shall be the actual gains and losses, calculated without any allowance for time-lag.

If, at any time between the closure of the Suleimanke Barrage (about the middle of October) and December 25, any supplies are released below Suleimanke, the Special Commissioners will agree on an estimate of the gains which would have accrued in the reach from Suleimanke to Islam but for such release and these estimated gains will be used in the water-account instead of the actual gains or losses but not beyond December 25. This provision will not apply if the release is made when the supply reaching Suleimanke is in excess of 6,000 cusecs or when the supply reaching Islam falls below 350 cusecs, in which event the actual gains or losses will be adopted for purposes of the water-account.

9. India will continue to supply the existing withdrawals of C.B.D.C. as hitherto.
10. Each calendar month will be divided into three periods (1st to 10th, 11th to 20th and 21st to the end of the month) for the purposes of the water-account, except October which will be divided into four periods (1st to 10th, 11th to 15th, 16th to 20th and 21st to 31st). An attempt will be made to balance the water-account for each of the periods specified above but any excess or deficit in Indian withdrawals in any such period will be carried over to the next period for adjustment.
11. (1) The Governments of India and Pakistan will each nominate a Special Commissioner, who shall be charged with the responsibility of supervising, in India and in Pakistan respectively, the implementation of this Agreement. Each Government may, if it so desires, appoint a Deputy Special Commissioner to assist the Special Commissioner.
- (2) The two Commissioners will consult with each other, on the request of either, and each Commissioner will furnish to the Commissioner of the other Government the data specified in Annex II to this Agreement. On the request of the

Commissioner of the other Government, each Government will afford to the Commissioner of the other Government, or his Deputy, all reasonable access to the irrigation works concerned.

- (3) In the event of any serious damage to irrigation works arising from causes beyond the control of the Government of Pakistan, which would have the effect of diminishing the supplies in the Balloki-Suleimanke Link, there shall be consultation between the Special Commissioners as to whether or not any modification should be made in the terms of paragraph 2 of this Agreement on account of such an emergency, and also with regard to the steps to be taken to restore this position to normal.
- (4) In the event of any dispute arising with respect to the implementation of this Agreement, which cannot be resolved by discussion between the Special Commissioners, the matter will be referred to the representatives of the two Governments (participating with the International Bank in the Indus Water Talks) either of whom may, if he considers it necessary, enlist the good offices of the International Bank.
12. This Agreement will be without prejudice to any rights or claims of either Government, and will imply no commitments other than those specified herein for the period covered by the Agreement.
13. This Agreement applies to the period April 1, 1959 to March, 31, 1960. If, at any time during the currency of this Agreement, the International Bank should give notice to the two Governments of its withdrawals from the work of preparation of a comprehensive plan for the irrigation use of the waters of the Indus system of rivers, this Agreement shall cease to have effect as from a date three months after the date of the Bank's withdrawal, or from 31st March, 1960, whichever is earlier.

DONE at Washington, D.C., this 17th day of April, 1959, in three counterparts, of which one shall be retained by each of the parties to this Agreement and the third deposited in the archives of the International Bank for Reconstruction and Development.

For the Government of India

For the Government of Pakistan

Sd/- N.D. GULHATI

Sd/- AZIZ AHMED

Additional Secretary
to the Government of India,
Ministry of Irrigation and Power.

Ambassador of Pakistan
to the United States of America.

ANNEX I

A. *Time-Lag (Days)*

	April	May 1 to July 10
Rupar to Ferozepore	4	3
Harike to Ferozepore	1	1
Ferozepore to Suleimanke	3	2
Madhopur to Balloki	6	4
Balloki to Suleimanke	1	1
Suleimanke to Islam	4	3
Madhopur to Ferozepore via Beas	4	3

B. *Equivalent at tail Balloki-Suleimanke Link (B.S. Link) of supplies below Madhopur*

	Supplies below Madhopur (Cusecs)	Equivalent at tail B.S. Link (Cusecs)
Below	750	0
	750	150
	1,000	400
	1,500	750
	2,000	1,000
	16,000	8,000
	24,000	12,000

For intermediate values of the supplies below Madhopur, the equivalent at tail B.S. Link will be worked out proportionately.

The above values apply to the period April 1 to August 20. From August 21 to September 30, any discharge below Madhopur will be assumed to reach the tail of the B.S. Link without loss.

C. *Equivalent at Ferozepore of supplies at tail Balloki-Suleimanke Link (B.S. Link)*

Supplies at tail B.S. Link (Cusecs)	Equivalent at Ferozepore (Cusecs)
Nil	Nil
1,000	1,000
2,000	2,200
3,000	3,200
4,000	4,300
5,000	5,400
6,000	6,500
7,000	7,600
8,000	8,600
9,000	9,700
10,000	10,800
11,000	11,900
12,000	13,000

For intermediate values of the supplies at tail Balloki-Suleimanke Link, the equivalent at Ferozepore will be worked out proportionately.

The above values applies to the period from April 1 to August 31. During September, no loss or gain will be taken into account.

D. *Sutlej Component at Ferozepore corresponding to discharges below Rupar*

Discharge of the Sutlej below Rupar (Cusecs)	Sutlej Comp. at Ferozepore (Cusecs)
0	0
1,000	640
1,500	960
2,000	1,280
3,000	1,920
5,000	3,200
7,500	5,400
10,000	7,600
15,000	12,000
20,000	16,400
30,000	25,200
40,000	34,000
50,000	42,800
100,000	86,800

For intermediate values of the discharges below Rupar, the Sutlej component at Ferozepore will be worked out proportionately.

The above values apply for the period April 1 to August 31 (Ferozepore dates). During September, the Sutlej component at Ferozepore will be taken to be the same as the discharge below Rupar.

E. *Equivalent at Ferozepore of withdrawals by Grey Canals or of withdrawals at Harike*

Grey Canal withdrawals or withdrawals at Harike (Cusecs)	Equivalent at Ferozepore (Cusecs)
0	0
1,000	900
2,000	1,800
3,000	2,700
4,000	3,600
5,000	4,500

For intermediate values of the Grey Canal withdrawals or of the withdrawals at Harike, the equivalents at Ferozepore will be worked out proportionately.

The above values will apply for the period from April 1 to August 31. During September, the equivalent at Ferozepore will be taken to be the same as the actual Grey Canal withdrawals or the actual withdrawals at Harike.

ANNEX II

1. The following data will be exchanged for the period April 1, 1959, to March 31, 1960. This data will be transmitted in duplicate by the Special Commissioners *by air mail on a daily basis* :

(a) *Data to be furnished by Pakistan :*

- (1) Discharge of River Jhelum downstream of Mangla.
- (2) Discharge at head of Upper Jhelum Canal.
- (3) Discharge (combined) of old escapes¹ on Upper Jhelum Canal.
- (4) Discharge (combined) of Silt-Extractors² on Upper Jhelum Canal.
- (5) Discharge of River Jhelum below Rasul.
- (6) Discharge of River Chenab downstream of Merala.
- (7) Discharge at head of Merala-Ravi Link.
- (8) Discharge at head of Upper Chenab Canal.
- (9) Discharge at tail of Upper Jhelum Canal.
- (10) Discharge of River Chenab below Khanki.
- (11) Discharge at head of Lower Chenab Canal.
- (12) Discharge of Chhenawan Escape.
- (13) Discharge (combined) of all distributaries on Merala-Ravi Link.
- (14) Discharge at head of Merala-Ravi Sub-Link.
- (15) Discharge at tail of Merala-Ravi Link.
- (16) Discharge at head of Bambanwala-Ravi-Bedian-Dipalpur Link.
- (17) Discharge of Bambanwala-Ravi-Bedian Link escape into River Ravi.
- (18) Discharge at tail of Bambanwala-Ravi-Bedian-Dipalpur Link.
- (19) Discharge of River Ravi at Shahdara.
- (20) Discharge at tail of Upper Chenab Canal.
- (21) Discharge of Deg Nallah.
- (22) Discharge of River Ravi downstream of Balloki.
- (23) Discharge at head of Balloki-Suleimanke Link.
- (24) Discharge at head of Lower Bari Doab Canal.
- (25) Discharge of River Ravi upstream of Balloki.
- (26) Discharge passed from Balloki-Suleimanke Link into Dipalpur Canal.
- (27) Discharge at tail of Balloki-Suleimanke Link.
- (28) Discharge at tail of Montgomery-Pakpattan Link.
- (29) Discharge of River Sutlej upstream of Suleimanke.
- (30) Discharge of River Sutlej downstream of Suleimanke.
- (31) Discharge at head of Pakpattan Canal.
- (32) Discharge at head of Eastern Sadiqia Canal.
- (33) Discharge at head of Fordwah Canal.
- (34) Discharge of River Sutlej upstream of Islam.

1. The old escapes are those at Bong, Jaggu, Jatli and Rahamanpur.

2. The silt-extractors are those at Kasba, chak Sikandar and Dumbiwala.

(35) Discharge of River Sutlej downstream of Islam.

(36) Discharge at head of Mailsi Canal.

(37) Discharge at head of Bahawal Canal.

(38) Discharge at head of Quimpur Canal.

(b) *Data to be furnished by India :*

(1) Discharge of river Sutlej at Bhakra.

(2) Discharge of river Sutlej at Olinda.

(3) Discharge of river Sutlej upstream of Rupar.

(4) Discharge at head of Bhakra Main Line.

(5) Discharge at head of Sirhind Canal.

(6) Discharge of Bist Doab Canal.

(7) Discharge of river Sutlej below Rupar.

(8) Discharge of Eastern Bein into Sutlej.

(9) Discharge of river Sutlej at Usafpur.

(10) Discharge of river Beas at Dera Gopipur.

(11) Discharge at head of Shah Nahar Canal.

(12) Discharge of river Beas at Mirthal.

(13) Discharge of river Beas at Mandi (plain).

(14) Discharge of Western Bein into Beas.

(15) Discharge at head (combined) of Grey canals.

(16) Discharge upstream of Harike.

(17) Discharge at head of Ferozepore feeder.

(18) Discharge of Makhu Canal.

(19) Discharge at head of Sirhind feeder.

(20) Discharge downstream of Harike.

(21) Discharge of river Sutlej upstream of Ferozepore.

(22) Discharge at head of Bikaner Canal.

(23) Discharge at head of Eastern Canal.

(24) Discharge at head of dipalpur Canal.

(25) Discharge of river Sutlej Downstream of Ferozepore.

(26) Gauge in river Ravi at Mukesar, if observed.

(27) Discharge of river Ravi upstream of Madhopur.

(28) Discharge at head of Upper Bari Doab Canal (including escapages)

(29) Escapages from Upper Bari Doab Canal into River Ravi.

(30) Escapages from Upper Bari Doab Canal into river Beas.

(31) Discharge at head of Upper Bari Doab Canal (excluding escapages).

(32) Discharge of river Ravi downstream of Madhopur.

(33) Discharge at head of Madhopur-Beas Link.

(34) Discharge at tail of Madhopur-Beas Link.

- (35) Discharge of river Sutlej above Bhakra Reservoir, when observation arrangements have been established.
 - (36) discharge of streams discharging into Bhakra Reservoir, when observation arrangements have been established.
 - (37) Reservoir level at Bhakra Dam.
 - (38) Pond level at Nangal Dam.
 - (39) Discharge at head of Nangal Canal.
 - (40) Pond level at Harike.
 - (41) Discharge of escapages (combined) from Nangal Canal into river Sutlej.
2. In addition, the following data will be transmitted by telegram on a daily basis :
- (a) *To be furnished by India :*
 - (1) Discharge of River Sutlej downstream of Rupar.
 - (2) Discharge of River Ravi downstream of Madhopur.
 - (3) Discharge at head of Upper Bari Doab Canal.
 - (4) Discharge of River Sutlej downstream of Ferozepore.
 - (5) Discharge at head of Dipalpur Canal.
 - (6) Discharge of River Sutlej above Bhakra when observation arrangements have been established.
 - (7) Reservoir level at Bhakra.
 - (8) Discharge at head of Bhakra Main Line.
 - (9) Discharge at head (combined) of all canals at Rupar.
 - (10) Discharge at head (combined) of all canals at Harike.
 - (11) Discharge at head (combined) of Eastern and Bikaner canals at Ferozepore.
 - (b) *To be furnished by Pakistan :*
 - (1) Discharge at tail of Upper Jhelum Canal.
 - (2) Discharge of River Chenab upstream of Merala.
 - (3) Discharge of River Chenab downstream of Khanki.
 - (4) Discharge of River Ravi downstream of Balloki.
 - (5) Discharge of River Sutlej downstream of Suleimanke.
 - (6) Discharge at head (combined) of all canals at Suleimanke.
 - (7) Discharge at tail of Balloki-Suleimanke Link.
 - (8) Discharge of River Sutlej downstream of Islam.
 - (9) Discharge at head (combined) of all canals at Islam.
3. India will supply Pakistan with the following Capacity Curves :
- (a) For Bhakra Reservoir.
 - (b) For Nangal Pond.
 - (c) For Harike Pond.
-