



**GOVERNMENT OF INDIA
MINISTRY OF WATER RESOURCES**

**REPORT OF THE
RAVI AND BEAS WATERS TRIBUNAL**

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Judge, Supreme Court of India**

MEMBER

**Hon'ble Shri Justice A.M.Ahmadi
Judge, Gujarat High Court**

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ABBREVIATIONS USED

Abbreviation	Full
Punjab	State of Punjab
Haryana	State of Haryana
Rajasthan	State of Rajasthan
BMB	Bhakra Management Board
BBMB	Bhakra-Beas Management Board
CWC	Central Water Commission
CGWB	Central Ground Water Board
MAF	Million Acre Feet
MBL	Madhopur Beas Link
S.Y.L.	Sutlej Yamuna Link Canal
cusec or cs	Cubic Feet Per Second
cumec	Cubic meters per second
E.C.	Electrical Conductivity
C.C.A.	Culturable Command Area
C.A.	Culturable area
M	Meter
MSL	Mean Sea Level
Cm	Centimeter
mm	millimeter
pH	Acidity & Alkalinity of Water
Ex.P 1, p. 1	Punjab's Vol. No. and page no.
Ex.H 1, p.1	Haryana's Vol.No. and page no.
Ex.HR 1, p.1	Haryana's Rejoinder and page no.
Ex.R 1,p.1	Rajasthan's Vol. No. and page no.

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8. Shri K.C. Sharma, Superintending Engineer
9. Shri R.K. Bhatia, Superintending Engineer
10. Shri J.P. Gupta, Superintending Engineer.
11. Shri Vithal Ram, Superintending Engineer.
12. Shri S.P. Gupta, Consultant.
13. Dr. B.R. Chauhan, Retired Professor of Law.

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Advocates:

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 2. Shri M.S.Grewal, Advocate General.
 3. M/s. M.S.Khera, S.Ravindra Bhat, P.S.Joshi and R.S.Sodhi, Advocates.
- shri Soli Sorabjee, Senior Advocate appeared for a day.

Other Representatives:

1. Shri Rajinder Singh, Secretary, Irrigation & Power.
2. Shri R.S.Gill, Member, State Planning Board.
3. Shri Manohar Singh, Member, Technical, Punjab State Electricity Board.
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5. Shri J.S.Atwal, Chief Engineer, River Waters Dispute.

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Other representatives:

1. Shri Rajendra Jain, Secretary, Irrigation & Power.
2. Shri A.P.Singhal, Chief Engineer, Irrigation (HQs.).
3. Shri Y.P.Bhatia, Officer on Special Duty.
4. Shri K.T.Sukhani, Superintending Engineer & Water Controller.
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IV. For the Union Territory of Delhi.

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CHAPTER I

THE PUNJAB SETTLEMENT AND THE CONSTITUTION OF THE TRIBUNAL

An Accord called 'The Punjab Settlement' was signed at New Delhi between the Prime Minister of India and Sant Harchand Singh Longowal, President of the Shiromani Akali Dal, on the 24th July 1985, paragraph 9 whereof bearing on the question of sharing of River Waters reads as under:-

"9. SHARING OF RIVER WATERS:

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 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 in this respect to be taken expeditiously;

9.3. The construction of the SYL Canal shall continue. The canal shall be completed by 15th August 1986."

In pursuance of the above Settlement, the President of India promulgated an Ordinance on the 24th January, 1986 called 'The Ravi and Beas Waters Tribunal Ordinance, 1986' (Ordinance No. 2 of 1986), 'to provide for the constitution of a Tribunal for the verification of the quantum of usage of water claimed by the farmers of Punjab, Haryana and Rajasthan from the Ravi-Beas system as on the 1st day of July, 1985, and the waters used for consumptive purposes and for the adjudication of the claim of Punjab and Haryana regarding the shares in their remaining waters.' Section 3 of the Ordinance conferred power on

the Central Government to constitute a single member Tribunal to be presided over by a person nominated by the Chief Justice of India from amongst persons who at the time of such nomination are Judges of the Supreme Court for the verification and adjudication of the matters referred to in paragraph 9 of the Punjab Settlement. Accordingly, the Ravi and Beas Waters Tribunal was set up by Notification No. S.O. 28(E) dated 25th January, 1986 to be presided over by Shri Justice V. Balakrishna Eradi, a Judge of the Supreme Court of India, for the verification and adjudication of the matters referred to in Reference No. F.15 (2)85-IT of even date of the Ministry of Water Resources, Government of India. Later, on the 18th March, 1986 a Bill to replace the aforesaid Ordinance was also introduced in Parliament (Lok Sabha).

In the meanwhile it was felt that the object could be better achieved by the constitution of a Tribunal under the provisions of the Inter-State Water Disputes Act, 1956 (Act XXXIII of 1956), (hereinafter called 'the 1956 Act'), through a suitable amendment. Accordingly, Parliament inserted a new provision, section 14, by the Inter-State Water Disputes (Amendment) Act, 1986. The newly added section 14 reads as under:-

"14. (1) Notwithstanding anything contained in the foregoing provisions of this Act, the Central Government may, by notification in the Official Gazette, constitute a Tribunal under this Act, to be known as the Ravi and Beas Waters Tribunal for the verification and adjudication of the matters referred to in paragraphs 9.1 and 9.2, respectively, of the Punjab Settlement.

(2) When a Tribunal has been constituted under sub-section (1), the provisions of sub-sections (2) and (3) of section 4, sub-sections (2), (3) and (4) of section 5 and sections 5A to 13 (both inclusive) of this Act relating to the constitution, jurisdiction, powers, authority and bar of jurisdiction shall, so far as may be, but subject to sub-section (3) hereof, apply to the constitution, jurisdiction, powers, authority and bar of jurisdiction in relation to the Tribunal constituted under sub-section (1).

(3) When a Tribunal has been constituted under sub-section (1), the Central Government alone may suo moto or at the request of the concerned State Government refer the matters specified in paragraphs 9.1 and 9.2 of the Punjab Settlement to such Tribunal.

Explanation For the purposes of this section, 'Punjab Settlement' means the Memorandum of Settlement signed at New Delhi on the 24th day of July, 1985."

In consequence of this amendment, the Ordinance was repealed. On 2nd April, 1986, by Notification No. S. O. 169(E), the Central Government in exercise of the powers conferred upon it by sub-section (1) and sub-section (2) of section 14 of the 1956 Act constituted the Ravi and Beas Waters Tribunal for the verification and adjudication of the matters referred to in paragraphs 9.1 and 9.2, respectively, of the Punjab Settlement. The constitution of the Tribunal is as under:-

- | | |
|--|----------|
| 1. Shri Justice V. Balakrishna Eradi,
Judge of the Supreme Court. | Chairman |
| 2. Shri Justice A.M. Ahmadi,
Judge, Gujarat High Court. | Member |
| 3. Shri Justice P.C. Balakrishna Menon,
Judge, Kerala High Court. | Member |

The headquarters of the Tribunal was fixed at New Delhi.

The Tribunal held its first sitting on April 10, 1986 and directed issue of notices to the States of Punjab, Haryana and Rajasthan to file their statements of case and claims pertaining to the matters mentioned in the Reference by May 5, 1986 and directed that the preliminary hearing of the case by the Tribunal be held on May 12, 1986. On May 12, 1986, the Tribunal directed that the parties may file their rejoinders and documents on Point No.1 of the Reference on or before May 24, 1986 and directed that the case be heard on Point No.1 from May 26, 1986. However, on May 23, 1986, at the request of the State of Haryana, the case was adjourned to June 3, 1986. The hearing of the case started on June 3, 1986 on Point No.1. The hearing on Point No.1 was concluded on July 11, 1986. Hearing on Point No.2 commenced

on July 28, 1986 and the hearing on this point was concluded on December 22, 1986.

Prior to the hearing of the case, the Tribunal visited the three States to have a first hand information about the System and Project Sites of the two rivers in question. The visits were as follows:

1. State of Haryana April 20, 21 and 22, 1986.
2. State of Rajasthan April 28, 29 and 30, 1986.
3. State of Punjab May 14, 15, 16 and 17, 1986.

The State of Punjab filed their Statement of case and 19 exhibits. The State of Haryana filed their Statement of case and 31 exhibits. The State of Rajasthan filed their Statement of case and 7 exhibits.

A list of the exhibits filed by the three States is appended. (See Appendices 15, 16 and 17 respectively at Pages 335-339)

CHAPTER II

TERMS OF REFERENCE

Simultaneously, in exercise of the powers conferred by sub-section (3) of section 14 of the 1956 Act, the Central Government referred the following two matters for verification and adjudication by the aforesaid Tribunal:-

"(1)The farmers of Punjab, Haryana and Rajasthan will continue to get water not less than what they were 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 Tribunal.

2. The claim of Punjab and Haryana regarding the shares in their remaining waters will be adjudicated by the Tribunal."

The Tribunal was expected to submit its report within a period of six months from 2nd April 1986, the date of reference. The period for submission of the Report was extended thereafter.

It may at this stage be mentioned that the language employed by Item (1) of the reference is verbatim the same as found in paragraph 9.1 of the Punjab Settlement except that in Item (1) of the reference, the expression 'were using' is employed whereas in paragraph 9.1 of the Settlement, the expression used is 'are using'. We are pointing out this variation at this stage because certain submissions were made in the course of the hearing based on this variation found in paragraph 9.1 of the Settlement and Item (1) of the reference to this Tribunal. We will deal with the submissions in this behalf at the appropriate stage.

CHAPTER III

THE RIVERS

The rivers, the Ravi and the Beas belong to the Indus System. The Indus System of rivers comprises the main river Indus and its tributaries, the Kabul, the Jhelum and the Chenab, often described as the Western rivers and the Ravi, the Beas and the Sutlej in the East. The main river Indus rises in Tibet from behind the Himalayas north of Kailash Mountain, flows a course of 2900 Km. through Jammu and Kashmir and Pakistan before debouching into the Arabian Sea near Karachi. The Ravi rises in Himachal Pradesh, enters the plains near Madhopur in Punjab, skirts along the international boundary between India and Pakistan until it merges into the Chenab. The river Beas flows from its headwaters in Mandi, Himachal Pradesh, and after flowing for about 460 Km. meets the Sutlej. Like the main Indus river, the Sutlej rises in the Tibetan Plateau near Mansarovar Lake, is augmented by the waters of Beas at Harike and flows into the Chenab at Panjnad in Pakistan.

PHYSIOGRAPHY, SOIL, CLIMATE, RAINFALL, ETC.

GENERAL

The Indus Basin from the snows of the Himalayas to the Arabian Sea has a drainage area of about 1,165,500 Sq. Km. most of which lies in India and Pakistan, except for 13 per cent lying in Tibet and Afghanistan. Within India, the Indus basin includes the whole of Jammu and Kashmir and Punjab and parts of Himachal Pradesh, Haryana and Rajasthan. Fed by melting snow, the Indus and its tributaries are perennial but with wide seasonal variations in the flow during the year. The leanest flow period for these rivers is winter. In February, the Indus, the Jhelum and the Chenab begin to rise while the three Eastern rivers rise during the May-June :

INDUS BASIN STATEWISE DRAINAGE AREAS

State	Drainage area in Sq. Km.
Jammu and Kashmir	193,762
Himachal Pradesh	51,358
Punjab	50,302
Haryana	9,939
Rajasthan	15,814
Chandigarh	114
Total	321,289

The catchment basin of the Ravi is 14,442 Sq. Kms. and that of the Beas is 20,303 Sq. Kms.

PHYSIOGRAPHY

PUNJAB: The State of Punjab is spread over an area of 50,362 Sq.Km. It has two major physiographical divisions, namely, the sub-montane tract and the alluvial plains.

The sub-montane tract which lies between the Himalayas and the Indo-Gangetic plains, includes the upper portions of the three districts of Gurdaspur, Hoshiarpur and Ropar. Soil erosion is a serious problem in parts of this region.

The plains are part of the Indo-Gangetic plain and comprise the eight districts of Amritsar, Kapurthala, Jalandhar, Ludhiana, Patiala, Sangrur, Bhatinda and Ferozpur and the lower portions of the three districts of the sub-montane tract.

The three principal rivers in the State - the Sutlej, the Beas and the Ravi - are all snow-fed and perennial.

HARYANA: This is a small State having a total area of 44,212 Sq.Km. In the North, it is bounded by the Siwalik range, and in the East by the Yamuna. The Aravalli range, running South of Delhi through the Gurgaon and Alwar districts and on to the desert of Bikaner, forms the boundary to the South-West. To the West, the Ghaggar stream forms part of the boundary between Haryana and Punjab.

The State lies in the basins of the Indus and the Ganga, and is formed almost entirely of alluvium. Its North-Eastern district of Ambala lies largely in the foothills of the Siwaliks. Karnal and Rohtak districts are in the plains to the South of the Aravalli range. Extensive sand dunes, several metres in height, run in a contiguous strip of desert, 7,770 Sq. Km. in area adjoining Rajasthan. There is a gradual rise from the plains towards the Sohna plateau and the Aravalli range.

The Haryana plain has an average elevation of 283 M. above sea level. Sand dunes occur in parts of Sirsa, Fatehabad, Hissar, Bhiwani, Dadri, Mahendragarh, Narnaul, Rewari and Jhajjar Tehsils. The height of the Aravali range varies considerably; the highest point being 518 M. above sea level. The Morni hills with an elevation of 1,499 M. in the Naraingarh tehsil of Ambala constitutes the highest point in Haryana. The Pinjore gardens, a famous tourist spot, are at a height of 676 M. above sea level.

The State can roughly be divided into two tracts, namely, the Ghaggar tract and Western Yamuna tract; the first forming almost 3/5th of the region. In the South, the Sahibi 'Nadi' rises in the Alwar series of the Aravalli hills and eventually falls into the Yamuna, crossing the Ghaggar and Rewari tehsils of the State.

RAJASTHAN: This second largest State in the country having an area of 342,271 Sq.Km. can be divided into four physiographic divisions, viz:-

- (1) Aravalli Range and the Hill Region
- (2) Western Sandy Plains
- (3) Eastern Plains; and
- (4) South-Eastern Pathar (Hadoti Plateau).

The Aravalli Range is the dominant mountain range. Though not uniform in width, it runs diagonally across the State from the North-East near Delhi for a distance of 692 Km. to the South-West upto the plains of Gujarat. Within Rajasthan, it runs from Khetri in the North-East to Khed-Brahma in the South-West, about 500 Km. from Delhi. Near Khetri it becomes more prominent and forms well-marked ranges to the west of the Sambhar Lake. The lake itself is an important basin of interior drainage, occupying an area of about 145 Sq.Km. From Ajmer onwards the Aravalli Range has a width of 50 Km. and begins to throw out spurs to the South and South-East towards Udaipur and Dungarpur. It has a higher elevation in the South-West, and the Gurushikhar peak at Mount Abu rises to 1,727 M. above MSL.

The plains to the West of the Aravalli constitute the Western sandy, semi-arid to arid region. Large areas of Bikaner, Jodhpur and Jaisalmer districts lie in this region. The monotony of the desert is broken by isolated patches of scrub jungle and stunted vegetation. There are also numerous small hillocks dotting the area. The mean elevation of the State ranges between 214 and 1,300 M., the major portion of the State being less than 370 M. above MSL.

SOILS

PUNJAB: The sub-montane region has forest and hill soils, which range from slightly acidic to highly acidic in reaction, and which are in different stages of podsolization. Though rich in humus, they contain very little soluble salts and are somewhat deficient in lime and phosphoric acid. The districts of Ferozpur and Bhatinda have desert soils which not only lack moisture, but are also deficient in organic matter, nitrogen and phosphorus.

The most predominant soil groups in the State belong to the class of Indo-Gangetic alluvium and are found in the remaining area. The soil crust has an average depth of 25 cm.

It contains 10 to 15 per cent clay. The crust contains sodium salts and the control of their movement is a major problem. The soils are deficient in nitrogen and organic matter. The alkaline and saline soils are highly deficient in nitrogen, phosphorus and potassium. The problem of salinity and alkalinity is very acute in the districts of Amritsar, Ferozpur and Sangrur and acute in Gurdaspur, Jalandhar, Kapurthala, Ludhiana and Patiala districts.

HARYANA: The soils of Haryana largely consist of alluvium containing sand, clay, silt and hard calcareous concentrations. In the southern region known as the Khadar, the alluvium consists of sand and some silt deposited by rivers and small mountain-streams. Broadly, the State can be divided into five soil regions:-

(i) Desert soils - These are found in parts of the Hissar, Mahendragarh and Gurgaon districts where the annual rainfall is less than 300 mm. These soils are deficient in nitrogen, phosphorus and potash.

(ii) Siorozen soils - These are found in parts of the Rohtak, Hissar, Gurgaon and Mahendragarh districts where the annual rainfall varies from 300-500 mm. Salinity and alkalinity are serious problems, particularly in irrigated areas. Erosion by wind is common. Almost all these soils are deficient in nitrogen, phosphorus and potassium.

(iii) Arid brown soils - These are found in parts of the Gurgaon, Karnal, Rohtak and Jind districts, where the annual rainfall varies from 500-650 mm. Salinity and alkalinity are serious problems. There are also problems of wind and water erosion. These soils are very deficient in nitrogen but contain phosphorus and potassium.

(iv) Tropical arid brown soils - These are found in the remaining parts of Karnal and in major parts of Ambala district where the annual rainfall ranges between 750-900 mm. Water-logging, drainage, salinity and alkalinity are fairly serious problems. These soils are deficient in nitrogen, phosphorus and potassium.

(v) Reddish brown soils - These are found in parts of the Ambala district where the annual rainfall ranges between 1000-1500 mm. The erosion of soil due to run-off is a very serious problem. The soils are mildly acidic to neutral in reaction and deficient in nitrogen and phosphorus but contain potash, zinc and iron.

RAJASTHAN:- The soils of Rajasthan can be divided into the following seven categories:-

- (i) Desert soil;
- (ii) Grey and brown (desert soil);
- (iii) Red and yellow soil;
- (iv) Ferruginous red soil;
- (v) Mixed red and black soil;
- (vi) Medium black soil; and
- (vii) Alluvial soil.

The desert soil occupies the largest area. The whole of the State, west of the Aravallis, upto the International border with Pakistan is covered by sand dunes. The soil contains about 90 to 95 per cent sand and about 5 to 7 per cent clay. Phosphates, together with nitrates, make these desert sands potentially fertile for growing agricultural crops and plants but since water is scarce, the entire tract remains unproductive.

Grey and brown (desert) soil occurs in the districts of Barmer, Jhalawar, Jodhpur, Sirohi, Pali, Nagaur, Sikar and Jhunjhunu. The whole of this area lies west of the Aravallis and is characterised by vast stretches of sandy plains, broken at places by hillocks and rock outcrops. The fertility of the soil, which is saline and alkaline, increases towards the east and north-east.

Red and yellow soil occurs in the western parts of the districts of Udaipur, Bhilwara and Ajmer. Silty loams to silty clay loams are common. It has good moisture holding capacity.

Ferruginous red soil occupies the central and southern part of Udaipur district and the whole of the Dungarpur district. Compared to the heavy and medium black soils, it has a lower content of lime, potash, iron oxide and phosphorus. In different areas the red soil varies greatly in depth and fertility. It is of lighter texture, porous and friable in structure and invariably free from 'Kankar' nodules.

Mixed red and black soil is found in the eastern parts of the districts of Udaipur, Chittaurgarh, Dungarpur, Banaswara and Bhilwara. The pH value of the soil is neutral to alkaline. Medium black soil is mostly found in the

districts of Kota, Bundi and Jhalawar in the south-eastern part of the State. The soil in this region is black and deep. On the basis of the colour on the surface, the soils in this region have been grouped into heavy soil, medium heavy soil and red and yellow soil.

Alluvial soil occupies the north-eastern parts of the State, comprising the districts of Alwar, Bharatpur, Jaipur and Sawai Madhopur and the Central part of the Ganganagar district. It is red in colour and deficient in lime, phosphoric acid and humus. It varies in texture from clayey to sandy loam. In some parts it contains kankar, which lies either in sands or sandy clays, sometimes holding gravel.

The principal soil types found in the various districts in the basin are shown in the table below:-

Soils of Indus Basin

Name of the State/ District	Predominant types of soils
PUNJAB	
Hoshiarpur	Alluvial, brown hill (on sand stones and shales)
Jalandhar	Alluvial
Ludhiana	Alluvial, chestnut brown (alluvial)
Firozpur	Chestnut brown (alluvial), desert
Amritsar	Alluvial, chestnut brown (alluvial)
Gurdaspur	Alluvial, brown hill (on sand stones and shales)
Kapurthala	Alluvial
Bhatinda	Chestnut brown (alluvial)
Sangrur	Chestnut brown (alluvial), alluvial
Patiala	Alluvial, chestnut brown (alluvial)
Ropar	Alluvial

HARYANA

Hissar	Chestnut brown (alluvial), desert
Jind	Chestnut brown (alluvial), alluvial
Karnal	Alluvial
Ambala	Alluvial

RAJASTHAN

Ganganagar	Chestnut brown (alluvial), desert
Bikaner	Desert

CHANDIGARH

Chandigarh	Alluvial
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CLIMATE AND RAINFALL

PUNJAB: The climate is essentially of a continental character. During summer (April to June) the temperature shoots up to almost 43°C, and is associated with heat waves and occasional dust storms. During winter (October to March) the temperature drops to about 4°C and below. Occasionally there are winter showers.

The south-west monsoon brings rain between July and September, while the winter rains caused by depressions are crucial for rabi crops. The annual rainfall in the plains varies between 400 and 800 mm. and in the sub-montane districts between 800 and 1,150 mm. The average rainfall in the two regions of the State in different seasons, is given below:-

(Average for 5 years, 1980-84, mm.)

Season	Sub-montane	Plains
Hot weather season (April to June)	147	88
Rainy season (July to September)	574	445
Cold weather season (October to March)	97	55
	<u>818</u>	<u>588</u>

HARYANA :- The climate over the year is of a continental character, very hot in summer with the mercury rising to over 40°C in the months of May and June and very cold in winter with the temperature dropping to almost 2°C to 3°C in January. Cool winds with occasional western disturbances bring rain during winter while summer is characterised by hot winds and occasional dust-storms, particularly in sandy and dry tracts of Mahendragarh and Hissar.

The rainfall in Haryana State is scanty and erratic. It is highest (about 2,160 mm) in the foot-hills, and the lowest (250 to 380 mm) in the south. The rainfall is distributed between the monsoon rains from the middle of June to September, on which the autumn crop and spring sowing depend and the winter rains from December to February, which benefit the rabi crop. About 80 per cent of the total rainfall occurs in the period from July to September and this concentration of rainfall occasionally causes floods affecting large areas.

RAJASTHAN:- The climate of this State, which has large tracts of desert and semi-desert areas, is characterised by extreme temperatures, severe drought conditions and high winds. The summer (March to June) is severe and intense, scorching with temperature rising to merely 48° C. The winter (October to February) is quite cold with the temperature falling below freezing point at certain places. The soil which is sandy heats up rapidly during the day and cools down equally fast as the sun sets, causing wide differences in the maximum and minimum temperatures. The State is perhaps the driest in the country.

Rajasthan receives rain from both the Arabian Sea and the West Bengal branches of the south-west monsoon, and 80 to 90 percent of the rain in the State is precipitated in the period from June to September. The 50 cm. isohyetal line which runs along the western edge of the Aravalli range divides the State into two parts. To the east and south of this line, the rainfall gradually increases, whereas to the west it rapidly decreases. On an average the State receives 53.6 cm. of rainfall, but there are wide variations in its distribution. Jaisalmer and Bikaner in the west receive hardly 17 and 29 cm. of rain respectively while Banswara and Jhalawar in the east receive about 93 cm.

Some rain is accompanied by local thunder storms. Jhalawar and Jaipur have 40 to 45 days of thunder storms in a year while Ajmer and Kota have 30 to 45 days. Jodhpur has about 20 days whereas Bikaner and Barmer have only about 10 days. Ganganagar rarely experiences thunder storms. .

CHAPTER V

PRE-PARTITION DEVELOPMENT

Until the middle of the Nineteenth century a network of inundation canals had been built for supplying water to low land areas adjacent to the rivers during the summer months, but soon thereafter several large canal systems came to be constructed, the first being the (Upper) Bari Doab Canal, a perennial canal on the Ravi completed in 1859 supplying water to about a million acres lying between the Ravi and the Beas. Next came the Sirhind Canal Project on the Sutlej undertaken in 1872-73 and opened in 1882 intended to irrigate about three million acres lying in Punjab and the adjoining Princely States of Patiala, Nabha and Jind. The construction of a permanent headworks at Madhopur was planned and undertaken in 1868 but before the headworks could be commissioned, it was seriously damaged by floods necessitating a revision of the project in 1874. The Lower Chenab Canal and the Lower Jhelum Canal were placed in operation in 1892 and 1901 respectively. The Triple Canals Project comprising the Upper Jhelum Canal and the Upper Chenab Canal and the Lower Bari Doab Canal were completed by about 1915.

The advent of the First World War did not impede the development effort and by 1919 a number of new projects were proposed, prominent among them being (1) the Sutlej Valley Project; (2) the Sukkur Barrage Project; and (3) the Bhakra Project, the first comprising a system of three headworks and nine canals from the Sutlej with two off-taking canals meant to irrigate new areas in Punjab, Bahawalpur and Bikaner; the second comprising a barrage across the Indus and the third intended to irrigate areas in South-East Punjab and Bikaner from a storage of 2.76 MAF at Bhakra. The State of Bahawalpur objected to the Sutlej Valley Project on the ground that since the available waters did not meet with its needs and those of Punjab, no water could be spared for Bikaner, a non-riparian State. The Haveli Project conceived in 1937 was completed by 1939 and Punjab had commenced work on the Thal Project. Sind apprehended that the construction of a storage reservoir on the Sutlej at Bhakra would adversely affect the operation of the inundation canals and produce a shortage of water for the Sukkur Barrage canals. The Gang canal taking off from Ferozpur Headworks was opened in 1927 to irrigate the areas of Bikaner. By about 1932 all the canals of the Sutlej

Valley Project were completed. Following the protest lodged by State of Bahawalpur, a Committee of Experts known as the Anderson Committee was appointed, which submitted a unanimous report. The recommendations of this Committee were accepted by the concerned parties and the Government of India in 1937. So far as the complaint of Sind was concerned, a Commission known as Rau Commission was appointed in 1941 which submitted its report in July 1942. The recommendations made by this Commission were not acceptable to both Punjab and Sind. After prolonged negotiations an agreement was drawn up sometime in 1945 but before a final decision could be taken, the country was divided.

CHAPTER VI

POST-PARTITION DEVELOPMENT AND THE INDUS WATERS TREATY

On the geographical division of the Indian sub-continent in August 1947, two independent sovereign nations, India and Pakistan, came into being. The new international boundary separating the two Countries cut across the Indus System of rivers - the Upper reaches of the main Indus river and its Eastern tributaries came to lie in India while the lower reaches found their place in Pakistan. A vast part of the network of existing canals fell within the territory of Pakistan but the installations which supplied water to these canals were situated in India. The impact of the new frontier severing the existing canal system was soon felt by Pakistan as the headwaters of the river system lay in India, giving rise to apprehensions, may be unfounded, that the supply of water to the lower reaches through these canals may be cut off by India any time. Pakistan also felt that the proposed Bhakra-Nangal Project would restrict the supply of water to the Bahawalpur area. As suspicion and distrust mounted, in 1951 the President of the World Bank offered the 'good offices' of the Bank to help the two countries to find a solution to the Indus dispute. The suggestion was that the water resources should be co-operatively developed and so used as to promote the development of the Indus Basin as one single unit. With the World Bank playing the role of a 'good officer', the officers of the two countries tried hard to work out a settlement, but in vain. India claimed all the usable supply of waters from all of the Eastern rivers and 7 per cent of the Western rivers while Pakistan's claim was to 70 per cent of the Eastern rivers and all the Western rivers. To break the impasse, in 1954 the World Bank proposed a plan under which the waters of the Western rivers (the Indus, the Jhelum and the Chenab) would be reserved for the exclusive use and benefit of Pakistan whereas the entire flow of the three Eastern rivers (the Ravi, the Beas and the Sutlej) would be available for the exclusive use and benefit of India, except that for a specified transition period required for the construction of replacement canals in Pakistan (later fixed as ten years), India would continue to supply from these rivers in accordance with an agreed schedule withdrawals in Pakistan. After prolonged negotiations the Bank's proposals with modifications became acceptable to both countries which led to the

signing of the Indus Treaty on 19th September 1960. Thus, so far as the Eastern rivers, the Ravi, the Beas and the Sutlej are concerned, unrestricted rights of development and use of their waters came to be conferred on India under the said Treaty after the transition period which expired on 31st March 1970.

While the negotiations for the Indus Treaty were in progress, an agreement was reached between the concerned States on the areas to be irrigated and the location of water supplies from the Bhakra Nangal Project. The Bhakra canals were opened by India on 8th July 1954. Further, in anticipation of a Treaty with Pakistan on sharing of Indus waters as proposed by the World Bank in 1954, the State Governments of Punjab, Pepsu, Jammu and Kashmir and Rajasthan were required to prepare a development programme for the utilisation of the waters of the Eastern rivers that were to become exclusively available to India. Whereas the waters of the river Sutlej had already been planned to be utilised in the States of Punjab, Pepsu and Rajasthan through the Bhakra Nangal Project, the surplus waters of the Ravi and the Beas, excluding the pre-partition use, had to be planned for utilisation by the States of Punjab, Pepsu, Jammu and Kashmir and Rajasthan. After partition the surplus Ravi-Beas waters available for utilisation, excluding the pre-partition use of 3.13 MAF, were worked out to be in the order of 15.85 MAF based on the mean supplies, 1921-45 series. On 29th January 1955, the Minister of Works and Power, Government of India, succeeded in securing an agreement between the concerned States whereunder 15.85 MAF of the waters of the Ravi and the Beas came to be allocated between the concerned States thus:-

Jammu and Kashmir	0.65 MAF.
Pepsu	1.30 MAF.
Punjab	5.90 MAF.
Rajasthan	8.00 MAF.

Pursuant to this agreement for optimum utilisation of the Eastern river waters, the three States jointly proposed two projects, the Beas Project Unit I (Beas Sutlej Link) and Beas Project Unit II (Pong Dam), the first envisaged the use of 3.82 MAF of Beas waters for generating electricity and its subsequent diversion into Sutlej for irrigation purposes; while the second envisaged the storage of water into the Pong Reservoir till the filling period and its release to Harike to augment the Sutlej waters. The waters of the Ravi came to be diverted through a canal (capacity approximately 10,000 cusecs) at the Madhopur Head Works into river

Beas whose waters ultimately merged into the Sutlej at Harike. The construction of a dam on the Ravi was also envisaged. A map showing the various engineering works and connected main canals completed or under construction on the Eastern Rivers is appended hereto. (Appendix 5 Page 316). Thus by this integrated system the waters of all the three Eastern rivers are pooled together to provide irrigation to arid areas in the South. Since, by the agreement of 1955 it was left to each State to decide how best to utilise the waters allocated to it, construction of the Sirhind Feeder Canal was undertaken to supply the Ravi Beas waters to the lower areas of Bhakra Nangal from Harike which were hitherto served by Sutlej waters.

In 1953 the Central Water and Power Commission prepared a preliminary project for the utilisation of the Sutlej water to serve the desert areas of Rajasthan. After surveying the area, the Government of Rajasthan finalised the Project in 1956 and the work thereon started sometime in 1958. This canal, named Indira Gandhi Canal, now in the last stages of its construction takes off from Harike Barrage and runs along a distance of 649 Km. out of which the first 204 Km serve as a feeder canal. The canal is expected to irrigate arid areas lying along the Pakistan border of Ganganagar, Bikaner and Jaisalmer districts. The formal agreement was executed between the Governments of Punjab and Rajasthan on 13th January 1959 detailing the extent of areas to be served by the project in each State, the allocation of costs between the two States and related matters.

CHAPTER VII

REORGANISATION OF THE STATE OF PUNJAB

On the bifurcation of the State of Punjab into two separate States of Punjab and Haryana with effect from 1st November 1966 fresh disputes arose between the newly formed States as regards the sharing of river waters. The Punjab Reorganisation Act, 1966, (31 of 1966) made special provisions in regard to the rights and liabilities of successor States in relation to Bhakra-Nangal Project and Beas Project. The relevant provisions of the said Statute which need to be noticed at this stage are sections 78, 79 and 80. They read as under:-

"78. (1) Notwithstanding anything contained in this Act but subject to the provisions of sections 79 and 80, all rights and liabilities of the existing State of Punjab in relation to Bhakra-Nangal Project and Beas Project shall, on the appointed day, be the rights and liabilities of the successor States in such proportion as may be fixed, and subject to such adjustments as may be made, by agreement entered into by the said States after consultation with the Central Government or, if no such agreement is entered into within two years of the appointed day, as the Central Government may by order determine having regard to the purposes of the Projects:

Provided that the order so made by the Central Government may be varied by any subsequent agreement entered into by the successor States after consultation with the Central Government.

(2) An agreement or order referred to in sub-section (1) shall, if there has been an extension or further development of either of the projects referred to in that sub-section after the appointed day, provide also for the rights and liabilities of the successor States in relation to such extension or further development.

(3) The rights and liabilities referred to in sub-section (1) and (2) shall include--

- (a) the rights to receive and to utilise the water available for distribution as a result of the projects, and
- (b) the rights to receive and to utilise the power generated as a result of the projects;

but shall not include the rights and liabilities under any contract entered into before the appointed day by the Government of the existing State of Punjab with any person or authority other than Government.

(4) In this section and in sections 79 and 80,--

(A) 'Beas Project' means the works which are either under construction or are to be constructed as components of the Beas-Sutlej Link Project (Unit I) and Pong Dam Project on the Beas river (Unit II) including--

(i) Beas-Sutlej Link Project (Unit I) comprising--

- (a) Pandoh Dam and works appurtenant thereto;
- (b) Pandoh-Baggi Tunnel.
- (c) Sundernagar Hydrel Channel.
- (d) Sundernagar-Sutlej Tunnel.
- (e) By-pass Tunnel.
- (f) Four generating units each of 165 M.W.capacity at Dehar Power House on the right side of Sutlej river.
- (g) fifth generating unit of 120 M.W capacity at Bhakra Right Bank Power House.
- (h) transmission lines,
- (i) Balancing Reservoir;

(ii) Pong Dam Project (Unit II) comprising --

- (a) Pong Dam, and works appurtenant thereto,
- (b) Outlet works,
- (c) Penstock Tunnels,
- (d) Power Plant with four generating units of 60 M.W each.

(iii) such other works as are ancillary to the works aforesaid and are of common interest to more than one State;

(B) '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 M.W each.

79. (1) The Central Government shall constitute a Board to be called the Bhakra Management Board for the administration, maintenance and operation of the following works, namely:-

- (a) Bhakra Dam and Reservoir and works appurtenant thereto;
- (b) Nangal Dam and Nangal-Hydel Channel upto Kotla Power House;
- (c) the irrigation headworks at Ropar, Harike and Ferozepur;
- (d) Bhakra Power Houses;

Provided that the administration, maintenance and operation by the said Board of the generating units of the Right Bank Power Houses which have not been commissioned shall commence as and when any such unit has been commissioned;

- (e) Ganguwal and Kotla Power Houses;

- (f) Sub-stations at Ganguwal, Ambala, Panipat, Delhi, Ludhiana, Sangrur and Hissar and the main 220 KV transmission lines connecting the said sub-stations with the power stations specified in clauses (d) and (e); and
- (g) such other works as the Central Government may, by notification in the Official Gazette, specify.

(2) The Bhakra Management Board shall consist of-

- (a) a whole-time Chairman and two whole-time members to be appointed by the Central Government;
- (b) a representative each of the Governments of the States of Punjab, Haryana and Rajasthan and the Union territory of Himachal Pradesh to be nominated by the respective Governments or Administrator, as the case may be;
- (c) two representatives of the Central Government to be nominated by that Government.

(3) The functions of the Bhakra Management Board shall include--

- (a) the regulation of the supply of water from Bhakra-Nangal Project to the States of Haryana, Punjab and Rajasthan having regard to-
 - (i) any agreement entered into or arrangement made between the Governments of the existing State of Punjab and the State of Rajasthan, and
 - (ii) the agreement or the order referred to in sub-section (1) of section 78;
- (b) The regulation of the supply of power generated at the power houses referred to in sub-section (1) to any Electricity Board or other authority in charge of the distribution of power having regard to--

(i) any agreement entered into or arrangement made between the Governments of the existing State of Punjab and the State of Rajasthan.

(ii) the agreement or the order referred to in sub-section (1) of section 78, and

(iii) any agreement entered into or arrangement made by the existing State of Punjab or the Punjab Electricity Board or the State of Rajasthan or the Rajasthan Electricity Board with any other Electricity Board or authority in charge of distribution of power before the appointed day in relation to the supply of power generated at the power houses specified in sub section (1):

(c) the construction of such of the remaining works connected with the Right Bank Power House as the Central Government may specify;

(d) such other functions as the Central Government may, after consultation with the Governments of the States of Haryana, Punjab and Rajasthan, entrust to it.

(4) The Bhakra Management Board may employ such staff as it may consider necessary for the efficient discharge of its functions under this Act:

Provided that every person who immediately before the constitution of the said Board was engaged in the construction, maintenance or operation of the works in sub-section (1) shall continue to be so employed under the Board in connection with the said works on the same terms and conditions of service as were applicable to him before such constitution until the Central Government by order directs otherwise:

Provided further that the said Board may at any time in consultation with the State Government or the Electricity Board concerned and with the previous approval of the Central Government

return any such person for service under that Government or Board.

(5) The Governments of the successor States and of Rajasthan shall at all times provide the necessary funds to the Bhakra Management Board to meet all expense (including the salaries and allowances of the staff) required for the discharge of its functions and such amounts shall be apportioned among the successor States, the State of Rajasthan and Electricity Boards of the said States in such proportion as the Central Government may, having regard to the benefits to each of the said States or Boards; specify.

(6) The Bhakra Management Board shall be under the control of the Central Government and shall comply with such directions, as may from time to time, be given to it by that Government.

(7) The Bhakra Management Board may with the approval of the Central Government delegate such of its powers, functions and duties as it may deem fit to the Chairman of the said Board or to any officer subordinate to the Board.

(8) The Central Government may, for the purpose of enabling the Bhakra Management Board to function effectively, issue such directions to the State Governments of Haryana, Punjab and Rajasthan and the Administrator of the Union territory of Himachal Pradesh, or any other authority, and the State Governments, Administrator or authority shall comply with such directions.

(9) The Bhakra Management Board may, with the previous approval of the Central Government and by notification in the Official Gazette, make regulations consistent with this Act and the rules made thereunder, to provide for-

- (a) regulating the time and place of meetings of the Board and the procedure

to be followed for the transaction of business at such meetings;

- (b) delegation of powers and duties to the Chairman or any officer of the Board;
- (c) the appointment, and the regulation of the conditions of service, of the officers and other staff of the Board;
- (d) any other matter for which regulations are considered necessary by the Board.

80. (1) Notwithstanding anything contained in this Act or in any other law, the construction (including the completion of any work already commenced) of the Beas Project shall, on and from the appointed day, be undertaken by the Central Government on behalf of the successor States and the State of Rajasthan:

Provided that the Governments of the successor States and the State of Rajasthan shall at all times provide the necessary funds to the Central Government for the expenditure on the project (including the expenses of the Board referred to in sub-section (2)) and such amounts shall be apportioned among the successor States and the State of Rajasthan in such proportion as may be fixed by the Central Government after consultation with the Governments of the said States.

(2) For the discharge of its functions under sub-section (1), the Central Government may--

- (a) by notification in the Official Gazette and in consultation with the Governments of the successor States and the State of Rajasthan, constitute a Board to be called the Beas Construction Board with such members as it may deem fit and assign to the Board such functions as it may consider necessary; and
- (b) issue such directions to the State Governments of Haryana, Punjab and Rajasthan and the Administrator of the Union territory of Himachal Pradesh or any

other authority, and the State Governments, Administrator or other authority shall comply with such directions.

(3) The notification constituting a Board under clause (a) of sub-section (2) may empower the Board to appoint such staff as may be necessary for the efficient discharge of its functions:

Provided that every person who immediately before the constitution of the Board was engaged in the construction or any work relating to the Beas Project shall continue to be so employed by the Board in connection with the said works on the same terms and conditions of service as were applicable to him before such constitution until the Central Government by order directs otherwise;

Provided further that the Board may at any time in consultation with the State Governments or the Electricity Board concerned and with the previous approval of the Central Government return any such person for service under that Government or Board.

(4) Nothing contained in this section shall be construed as enabling the Central Government to reduce or enlarge the scope of the Beas Project as agreed to between the Governments of the State of Rajasthan and the existing State of Punjab except after consultation with the Governments of the States of Haryana, Punjab and Rajasthan.

(5) Any component of the Beas Project in relation to which the construction has been completed after the appointed day may be transferred to the Central Government by the Board constituted under section 79 whereupon the provisions of that section shall apply as if it were a work included in sub-section (1) of that section.

(6) The Bhakra Management Board constituted under section 79 shall be renamed as the Bhakra Beas management Board when any of the components of the Beas Project has been transferred under sub-section (5), and the Beas Construction Board shall cease to exist when all the components of the Beas Project have been so transferred."

Thus all the rights and liabilities of the composite State of Punjab in relation to Bhakra-Nangal Project and Beas Project on the appointed day, that is, 1st November 1966, became the rights and liabilities of the successor States to be fixed by agreement between the States within two years failing which, as may be determined by an order of the Central Government. These rights include the rights to receive and utilise the water available for distribution and the rights to receive and utilise the power generated as a result of the projects. The 'Beas Project' and the 'Bhakra Nangal Project' have been comprehensively set out in clauses (A) and (B) of sub-section (4) of section 78 of the said Act. The Bhakra Nangal Project was complete then but the Beas Project was still under construction and that is why section 80 cast a duty on the Central Government to complete the same on behalf of the two successor States and the State of Rajasthan albeit with the funds provided by the three party States in such proportion as may be fixed by the Central Government. For the proper management, maintenance and operation of certain works of the Bhakra Nangal Project set out in section 79 the constitution of a Board called the Bhakra Management Board was envisaged. Under sub-section (5) of section 80 the Central Government was empowered to transfer any component of the Beas Project completed after the appointed day to the Board constituted under section 79 whereupon the Board was to be renamed Bhakra Beas Management Board. By section 97 the Central Government was empowered to frame the rules in respect of the matters catalogued in clauses (a) to (j) of sub-section (2) thereof in regard to the proper functioning of the Board and certain other incidental matters.

CHAPTER VIII

THE DISPUTE

By the agreement of 1955, out of the surplus waters of the Ravi and the Beas estimated at 15.85 MAF, excluding pre-partition use, composite Punjab was allocated 7.2 MAF, Rajasthan 8.00 MAF and Jammu and Kashmir 0.65 MAF. After bifurcation of the State, a dispute arose between the two successor States as to their respective shares in the 7.2 MAF water allocated to composite Punjab. The State of Haryana claimed 4.8 MAF out of the total of 7.2 MAF on the principle of equitable distribution whereas Punjab staked its claim to the entire quantity of 7.2 MAF on three counts, namely, (1) Haryana is not a riparian State, in that, neither of the two rivers flow through it nor does any part thereof fall within the valleys or basins of the two rivers; (2) the head-works of the canals for the distribution of river waters are all situate in reorganised Punjab; and (3) Punjab planned an irrigation intensity of 200 per cent to utilise the said waters. Subsequently, at a meeting called by the Government of India on 19th September 1968, a decision was taken on the sharing of Ravi Beas waters on ad hoc basis, 35 per cent for Haryana and 65 per cent for Punjab, pending finalisation of the dispute. As the dispute could not be finally settled within the stipulated time by agreement between the two party States, Haryana approached the Government of India by their communication dated 21st October 1969 for a decision under section 78 of the Punjab Reorganisation Act. Pursuant to the demand made by Haryana, a high level Committee of independent Experts was appointed by the Central Government by notification dated 24th April 1970. The Committee by its report submitted in February 1971 recommended 3.78 MAF to Haryana. While this report was under consideration, Shri D.P.Dhar, Deputy Chairman, Planning Commission, was asked to examine the question and he by his Note dated 24th March 1976 recommended 3.74 MAF for Haryana and 3.26 MAF for Punjab retaining 0.20 MAF for Delhi. Haryana, however, put forward a claim for 6.90 MAF on the plea that the irrigated area and the intensity of irrigation in Haryana were far below that of Punjab. As the stalemate continued, the issue was referred to Shri Y.K.Murthy, Chairman, Central Water and Power Commission, for examination who introduced the concept of "Divisible Pool" and concluded that only 4.4 MAF was available for division and allocated 3.09 MAF to Haryana (inclusive of 0.03 MAF meant for Delhi). In working out the divisible pool, only that part of Ravi Water which was transferred to Beas from Madhopur

entered the calculations. This report submitted in May 1979 was objected to by Haryana on the plea that certain relevant factors such as availability of underground water, intensity of irrigation, extent of cultivable areas, etc., had been totally overlooked by Shri Murthy. The State of Punjab also forwarded its comments to the effect that Haryana was entitled to only 0.9 MAF of water. As the dispute could not be resolved despite a high level meeting of the Chief Ministers of the two party States, the Government of India by notification dated 24th March 1976 determined the dispute as required by section 78 of the Punjab Reorganisation Act and allocated 3.5 MAF to each of the two States and the remaining 0.20 MAF to Delhi. It further observed that on further exploitation it would be possible to augment the supply by 0.617 MAF in which case Haryana would be entitled to further allocation. In order to make full use of water allocated to Haryana under this statutory decision, a proposal for the construction of the Sutlej Yamuna Link (SYL) Canal was mooted. As the State of Punjab was not reconciled to the allocation made by the Government of India, it filed a suit in the Supreme Court challenging the decision of the Government of India. Haryana too filed a suit for compelling Punjab to implement the decision. While these suits were pending, an agreement was entered into between the Chief Ministers of the three States on 31st December 1981 whereunder out of the surplus Ravi Beas waters determined at 17.17 MAF on the basis of the revised flow series 1921-1960, 4.22 MAF came to be allocated to Punjab, 8.60 MAF to Rajasthan and Haryana retained 3.5 MAF. It was further stipulated that Punjab would complete the SYL Canal within a period of two years, that is, by the 31st December 1983. It was lastly agreed that until such time as Rajasthan was in a position to utilise its full share from the surplus Ravi Beas waters, the unutilised share of Rajasthan may be used by Punjab. On the signing of this agreement the party States unconditionally withdrew the suits pending in the Supreme Court. After the signing of this agreement the Government of Punjab released a White Paper on 23rd April 1982 hailing the agreement which had resulted in increase of 1.32 MAF of waters to Punjab over the allocation made by the Government of India while the allocation to the State of Haryana remained unchanged. Soon thereafter, certain political developments took place in Punjab which ultimately led to the Punjab Legislative Assembly passing a resolution on 5th November 1985 repudiating the said agreement of 31st December 1981 and declaring the White Paper issued on 23rd April 1982 as redundant and irrelevant. There were prolonged negotiations thereafter which culminated in the signing of the Punjab Settlement on the 24th July 1985 at New Delhi.

CHAPTER IX

CLAIMS AND COUNTER CLAIMS

After the constitution of the Tribunal by Notification of 2nd April 1986, the Tribunal at its first meeting held on 10th April 1986 directed notices to issue to the three party States calling upon them to file their Statements of Case and Claims with reference to the Terms of Reference of the Tribunal. Accordingly, the party States have filed their Statements and have put forward their points of view on the two points referred to this Tribunal which, stated in a nutshell, are as under.

The State of Punjab contends that under Item No.1 of the Terms of Reference the farmers of the States of Punjab, Haryana and Rajasthan have been assured water not less than what they were using from the Ravi-Beas System as on 1st July 1985. Similarly, those using water for consumptive purposes have also been assured that the quantity of water to be supplied to them will remain unaffected. Under this term, the Tribunal is required to merely verify the quantum of usage as may be claimed by the party States. The contention, therefore, is that while the waters of the Ravi and the Beas belong entirely and absolutely to the State of Punjab and no other State can legally lay a claim to the said water, a concession is made in regard to certain committed uses from the Ravi-Beas System as on 1st July 1985 to the farmers of the three States and to those using water for consumptive purposes. The quantum of usage under these two heads is left to the Tribunal to verify so that the guarantee or assurance given by the first two sentences of Item No.1 to the two classes of users is firmly and finally settled and does not remain in a blurred area. So far as the quantum of actual usage as on 1st July 1985 by the farmers of the three States and by those using for consumptive purposes is concerned, the utilisation claimed by Punjab is as under:-

Punjab	13,336	Cusec day
Haryana	1,843	"
Rajasthan	6,216	"

The above utilisation as on 1st July 1985 is sought to be multiplied by 365, the total number of days in a year, and

applying the conversion factor of $1.9835/10^{-6}$ the annual utilisation from the Ravi-Beas System under both the heads by the three States is worked out as :-

Punjab	9.655 MAF
Haryana	1.334 MAF
Rajasthan	4.500 MAF.

Punjab, therefore, contends that the Tribunal should verify the usage of water under both the heads as indicated above.

As regards the second Term of Reference, Punjab contends that after the quantum of actual usage is verified by the Tribunal, the said quantity of water should be set apart as assured or guaranteed to the two classes of users and deducted from the total available supply of 15.85 MAF or 17.17 MAF, as the case may be, and the balance should be taken as "remaining waters" of Punjab and Haryana for the purpose of adjudication. Hence, according to Punjab, in the surplus waters that remain, Rajasthan has no claim whatsoever because under Item No.2 of the reference, only the claims of Punjab and Haryana in the remaining waters have to be adjudicated by the Tribunal. The adjudication contemplated by Item No. 2 of the reference in the remaining waters is between Punjab and Haryana only and hence Rajasthan cannot enter the field. Punjab also contends that neither Haryana nor Rajasthan can claim a share in the remaining or surplus waters as they are non-riparian States and do not fall within the valleys or basins of the Ravi and/or the Beas. In other words, the remaining or surplus waters belong exclusively to Punjab through which the said two rivers flow and Punjab is entitled to make full use of the said waters without let or hindrance from the other two States. It is, therefore, Punjab's case that after the user is verified as contemplated by Item No.1 of the reference, Punjab is entitled to all the remaining waters and Haryana has no claim thereto.

Haryana on the other hand contends that the Terms of Reference require the Tribunal to 'first verify' the quantum of usage of water from the 'Ravi-Beas System' as on 1st July 1985 by the farmers of the three party States and 'thereafter' adjudicate the claims of Punjab and Haryana in 'their' remaining waters. According to Haryana, the Ravi-Beas System referred to in Item No.1 of the Terms of Reference is 'the river system which augmented the committed supplies as planned in the Bhakra-Nangal Project and as specified in the Bhakra-Nangal agreement'. According to it, the Bhakra Project was conceived to

irrigate the arid areas in the South and South-West of Punjab as a part of this integrated water system. Explaining the Ravi-Beas System and how it forms part of an integrated system, it is pointed out that the Bhakra Nangal Project was conceived during the pre-partition days on river Sutlej, its water was committed to specific areas in the erstwhile State of Punjab (including the present Haryana) and Rajasthan and the quantity of water to be supplied to the various areas of these two States was specified in the Bhakra-Nangal agreement. The waters of the Sutlej were supplied to specified demarcated areas of the concerned States through the Bhakra Main Line, the Sirhind Canal and the Bist Doab Canal emanating from Sutlej. The total quantum of water supply upto the Head Works at Ropar was quantified under the Bhakra Nangal Project. However, since the committed supplies from Sutlej at Nangal were not sufficient to irrigate the high and arid areas of present Haryana, it was felt essential to augment the supplies at Nangal by the surplus waters of the Ravi and the Beas. It was realised on an analysis of the availability of water from the two rivers that the low lying areas of composite Punjab and Rajasthan which were hitherto fed by Sutlej waters could be irrigated by Ravi-Beas Waters from Harike. By this method 2.37 MAF of Ravi-Beas Waters came to be supplied through Harike to areas now forming part of Punjab and Rajasthan. Thus Sutlej waters to the extent of 2.37 MAF became available at Bhakra-Nangal for distribution to the high and arid areas of composite Punjab (now in Haryana). The supply was further augmented to the extent of 3.82 MAF on the completion of the Beas-Sutlej Link. Thus the total supply of Ravi-Beas waters at Nangal was to the tune of 6.19 MAF (2.37 MAF + 3.82 MAF) from this system. Further, the Madhopur-Beas Link built in 1954 diverted Ravi waters to Beas thereby augmenting the supply of water at Harike. As a part of the integrated system the Pong Dam on river Beas was constructed under Beas Project Unit II to store monsoon flow of the river Beas for replenishing the supplies at Harike during the lean period. This integrated system would be complete on the completion of the Thein Dam now under construction on river Ravi having a storage capacity of 1.90 MAF. On the completion of this Dam the waters from the river Ravi which flow to Pakistan during the monsoon season will be stored and made available during the non-monsoon period. This, according to Haryana, explains the Ravi-Beas system referred to in Item No.1 of the Terms of Reference.

Referring to the language of Item No.1 of the Terms of Reference, Haryana contends that the assurance to the farmers is that they will continue to get water not less than what

they are using from the system as on 1st July 1985. The concept of the user by the farmers necessarily implies the user in the fields as distinct from the release of waters at the canal heads. To put it differently, Haryana contends that the Tribunal must verify the use of water by the farmers of the three States at the farm-gate and not at the canal heads. Even though under the said Term of Reference user has to be verified as on 1st July 1985, such user on a single day cannot seal the fate of the farmers of the three States for years on end and consequently on a true interpretation of the said term the date 1st July 1985 must be understood as a part of the annual cycle, water year, which forms the basis for the distribution of waters by the Bhakra-Beas Management Board.

According to Haryana, it would be unjust to the farmers and other consumptive users to compute the usage as on a single day, more so because it is an admitted fact that there were breaches in the Bhakra Main Line in Punjab territory which had resulted in cessation of supply of waters to the farmers of Haryana for a period of almost three months in 1984-85. Computation made on the basis of a water year with reference to 1st July 1985 would, in these peculiar circumstances, not truly represent the usage for irrigation and consumptive purposes. In the circumstances, it would be most reasonable to verify the user with reference to a period of four or five years omitting the year 1984-85 during which breaches had admittedly occurred. Without prejudice to its stand in this behalf, Haryana has computed the user with reference to 1st July 1985, for a water year ending on 30th June 1985 and average user over a period of 4/5, years excluding the permissive user, perpetrated mis-user, etc., by Punjab, as under:-

State	As on 1st July 1985.	Water Year prior to 1st July'85.	Four Years' Average.	Five years' average.
Punjab	1235 cs.	1.135 MAF	1.566	1.480
Haryana	1842 cs.	1.036 "	1.766	1.620
Rajasthan	5043 cs.	4.867 "	4.975	4.954
Total	8120 cs.	7.038 MAF		

Further, quantum of usage by the farmers as on 1st July 1985 must, contends Haryana, refer to the legitimate and bona fide user and not permissive user or perpetrated mis-user. It is, therefore, contended that while verifying the quantum of usage of the waters from the Ravi-Beas System as on 1st July 1985, the quantum of permissive user and perpetrated mis-user by Punjab must be excluded. Lastly, it is contended that the assurance to the farmers and those using water for consumptive purposes can be met from other available uncommitted sources, such as, additional water generated by organising improvements of the canals and the water distribution system, by plugging avoidable wastage, etc. If this is done, it would augment the surplus Ravi-Beas waters to be distributed between Punjab and Haryana under Item No.2 of the reference.

Haryana contends that while adjudicating the claims of Punjab and Haryana in the remaining waters under Item No.2 of the Reference, the Tribunal must have regard to the earlier developments leading to the agreement of 29th January 1955 whereby the surplus 15.85 MAF, excluding the pre-partition use, came to be divided between the State of Punjab, Pepsu, Jammu and Kashmir and Rajasthan, the considerations which weighed in the signing of the Indus Treaty in 1960, the Government of India Notification dated 24th March 1976 under Section 78(1) of the Punjab Reorganisation Act and finally the tripartite agreement signed by the Chief Ministers of Punjab, Haryana and Rajasthan on 31st December 1981. We have already briefly outlined the developments which had taken place during the said period and we do not feel called upon to recapitulate them except to the extent necessary to appreciate Haryana's point of view. The agreement of 1955 left it to each State to decide how best to utilise the waters allocated to it and in pursuance thereof composite Punjab prepared a master plan in 1956 for optimum use of the waters of the three Eastern rivers. A proposal was mooted to utilise 2.68 MAF of water from composite Punjab's share to irrigate areas now forming part of Haryana by flow-irrigation. No water was, however, allocated to irrigate the higher arid areas of Haryana which could not receive flow-irrigation. If the requirements to irrigate the higher arid areas were kept in mind, Haryana's need would obviously be much more than 2.68 MAF which is why the construction of the Sirhind Feeder Canal was undertaken to supply Ravi-Beas waters to the lower areas of Bhakra-Nangal Project from Harike, which area was hitherto served by Sutlej water. This enabled the diversion of the Hydrel water from Nangal/Ropar to irrigate the high arid lands of Haryana. The water thus diverted

from Nangal/Ropar was also not sufficient to irrigate the entire of the high arid areas of Haryana. Since the total requirement over and above the planned utilisation of Sutlej through Bhakra reservoir was estimated to be about 6 MAF and as the quantum of available water from the Sirhind Feeder was only 2.37 MAF, water from Beas had to be transferred through Beas-Sutlej Link to augment the Sutlej supplies for serving the high and arid areas of present Haryana. That is why under Beas Project Unit I it was proposed to provide 3.756 MAF of water to irrigate some of the high and arid lands of Haryana. A network of lift canals had to be laid to irrigate additional high and arid areas but because of the non-completion of the SYL Canal, Haryana has not been able to receive and utilise its full share of Ravi-Beas waters. Viewed in this perspective, it would appear that the allocation of 2.144 MAF of water to Haryana area of erstwhile composite Punjab under the Punjab Government Order of 20th October 1961 was far below the need of present Haryana area which had more arid land with less rainfall and less underground water as compared to the Punjab area. This was realised within a few months after the order of 20th October 1961 and a fresh assessment was made whereunder the areas now comprising Haryana were estimated to need 7.343 MAF as against 7.602 MAF required for areas comprising the present Punjab.

Two Committees (i) The E.P.S. Committee called 'The Food Committee on Land and Water Use in Punjab' and (ii) The Development Committee constituted in 1965 reviewed the order of the erstwhile Punjab Government dated 20th October 1961; the former recommended a total allocation of 4.56 MAF for areas forming part of the present Haryana while the latter felt that the bulk of Ravi-Beas waters must go to the present Haryana. Haryana, therefore, contends that the subsequent Government of India order of 24th March 1976 under Section 78(1) of the Punjab Reorganisation Act allocating 3.5 MAF of Ravi-Beas waters to Haryana can never be said to be generous; on the contrary, it is far below 4.8 MAF demanded by Haryana.

Haryana further contends that the rights to the exclusive use of the Eastern rivers were acquired by India under the Indus Water Treaty 1960 at the cost of Pound Sterling 62.06 million (equivalent to about Rs.110 crores) and, therefore, no single State can contend that it has exclusive rights to the said river waters. That apart, even under Section 65 of the Punjab Reorganisation Act the Central Government is empowered to apportion the assets of the erstwhile State of Punjab between the

successor States in a just and equitable manner irrespective of the location of such assets. Section 78 also provides for the division of assets and liabilities of the Bhakra-Nangal Project as well as the Beas Project. The Bhakra Project, contends Haryana, envisages integrated use of the rivers the Beas, the Sutlej and the Ravi, and as such the waters of the Ravi also fall within the ambit of Section 78 but even if it is assumed that the waters of the Ravi cannot be brought within the ambit of Section 78, the same becomes divisible under Part VI of the statute dealing with apportionment of assets and liabilities. It is, therefore, contended that Haryana has statutory rights in regard to Bhakra-Nangal and Beas Projects under Section 78 of the Act in the construction whereof it has made contributions. The decision of the Government of India dated 24th March 1976 under Section 78(1) being statutory in nature, is binding on both parties and even though the allocation of 3.5 MAF was considered to be far below the legitimate and justified needs of Haryana on the basis of equitable distribution, Haryana accepted the same as well as the tripartite agreement of 31st December 1981 even though no additional allocation of water from the Ravi-Beas System was made in its favour as provided by the order of 24th March 1976. Haryana has not been able to fully utilise its share of the Ravi-Beas waters because the SYL Canal has not been completed by the State of Punjab even within the time stipulated by the agreement of 31st December 1981. In view of the above, Haryana contends that the State of Punjab is estopped from contending that Haryana should not be allocated any part of the remaining waters and in no case 3.5 MAF allocated to it under the Government of India order of 24th March 1976 and the agreement of 31st December 1981. On the contrary, Haryana argues that in accordance with Item No.2 of the Terms of Reference the Tribunal is free to allocate a share larger than 3.5 MAF to Haryana, and Punjab cannot be heard to contend to the contrary.

The State of Rajasthan contends that the jurisdiction of the Tribunal is restricted to the verification of the quantum of usage from the Ravi-Beas System as on 1st July 1985 so far as Rajasthan is concerned. This jurisdiction does not extend to empowering the Tribunal to deal with Rajasthan's share and/or the method or manner of delivery of Rajasthan's share to it since the same has been finally settled by the 1955 agreement which came to be reinforced by the 1981 agreement. Thus, according to Rajasthan, it is not concerned with Item No.2 of the Terms of Reference which is limited to adjudicating the shares of Punjab and Haryana in their remaining waters. It has, therefore,

restricted its Statement of Claim and counter-statements to the verification aspect covered by Item No.1 of the Reference and has refused to enter the area covered by the second item on the categorical plea that the share of Rajasthan determined by the 1955 agreement and later reinforced by the 1981 agreement remains unaffected. According to it, Item No.2 of the Terms of Reference is limited to adjudicating the shares of Punjab and Haryana 'in their remaining waters' which according to the 1955 agreement worked out to 7.20 MAF and according to the 1981 agreement 7.72 MAF. It has pointed out that excepting the shares of Punjab and Haryana which fall for adjudication under Item 2 of the Reference, the shares of other States, namely, Jammu and Kashmir, Delhi Territory and Rajasthan, fall outside the said term and need not be touched or dealt with by the Tribunal. According to it the expression 'remaining waters' used in Item No.2 of the Reference means 7.72 MAF allocated under the 1981 agreement. On this premise Rajasthan has scrupulously avoided making any submission whatsoever concerning Item No.2 of the Terms of Reference.

In regard to Item No.1 of the Reference, it has pointed out that it is a mere verbatim reproduction of paragraph 9.1 of the Punjab Settlement made without any application of mind and has nothing to do with the jurisdiction of the Tribunal. While stating that under Item No.1 the farmers and others using water for consumptive purposes have been assured that they will continue to get water not less than what they were using from the Ravi-Beas System as on 1st July 1985, Rajasthan contends it is difficult to comprehend how the assurance will be met if the availability of water falls in a given lean year below the verified usage. It, therefore, contends that there has been a mechanical reproduction of paragraph 9.1 of the Punjab Settlement in the Terms of Reference without proper application of mind as it does not provide how the assurance given to the two classes of users would be honoured when it becomes well nigh impossible to supply the verified quantity of water on the available flow supplies falling below the committed utilisation.

Dealing with the phraseology of Item No.1 of the Reference, Rajasthan submits that it is common knowledge that the use of water by farmers and others for agricultural and consumptive purposes on one single day can be of no significance and, therefore, reference to 1st July 1985 in the said term can only mean usage of water for one water year ending on 30th June 1985. Secondly, water which Rajasthan receives from the Ravi-Beas System is made available to it from Harike Headworks which is at a

distance of about 179 km from Rajasthan border and passes through the 600 km long canal system from Masitawali Headworks before reaching the farmers and others and this transit time cannot be accounted for if the discharges on a single day are considered relevant. Thirdly, it would not be correct to assume that the availability of water on a single day during the filling period would be the same throughout the year. Lastly it is equally erroneous to assume that water was in fact available to every farmer in the three States on 1st July 1985 and that he had made use thereof to irrigate his field. The usage on 1st July 1985 cannot be representative of the usage throughout the year and hence the method adopted by Punjab of multiplying the usage on 1.7.1985 by 365 is totally unrealistic. This is manifest from the fact that the total utilisation by the three States, Jammu and Kashmir and Delhi by the said method comes to 15.489 MAF whereas the total availability in the water year ending on 30th June 1985 was only 14.009 MAF as per Bhakra-Beas Management Board figures. This shows that the figures supplied by Punjab are hypothetical only. Rajasthan, therefore, denies that the utilisation of waters from the Ravi-Beas System as on 1st July 1985 was 13336 cusecs day since they do not tally with the figures submitted by the Bhakra-Beas Management Board. It also disputes the figures about the water released to Rajasthan on 1st July 1985 as the same do not tally with the figures submitted by the Bhakra-Beas Management Board. It has further pointed out that the releases were much less than Rajasthan's indents and, therefore, do not represent the true figures of Rajasthan's requirement on 1st July 1985. Rajasthan's share was fixed at 9290 Cs. on 1st July 1985 by the Technical Committee of the Bhakra-Beas Management Board out of anticipated usable availability of 24799 Cs. on that day and yet the actual delivery made to Rajasthan on that day was only 6249 Cs. Similarly, Punjab's share was fixed at 9887 Cs. against the anticipated usable availability of 24799 Cs. and yet 13328 Cs. were unauthorisedly released or delivered to Punjab on that day which included the unutilised share of Jammu and Kashmir and Rajasthan as well as the unauthorised use of Haryana's share in the water. In other words, Rajasthan also contends that while verifying the usage of water by the farmers of Punjab, the Tribunal should deduct the permissive and/or unauthorised user by that State. It agrees with the interpretation put by Haryana that the usage claimed can only be legitimate usage and not usage of water falling to the share of other States made with or without the consent of those States. Therefore, according to Rajasthan, the excess use made by Punjab on account of that State being physically in control of headworks situated within that State

should be ignored while verifying the usage under Item No.1 of the Reference. Rajasthan has given the figures of actual total use of waters from the Ravi-Beas System during the past three years ending June 1985 as well as on 1st July 1985 out of total usable availability, which are as under:-

(All figures in M.A.F.)

Period	Total useable availability of surplus waters.	Indent of Rajasthan (Excluding Pre-Partition share)	Due share of Rajasthan as per 1981 agreement.	Quantity delivered to Rajasthan at Harike.
1	2	3	4	5
1-7-82 to 30-6-83	12.890	6.80	6.639	5.279
1-7-83 to 30-6-84	13.076	6.870	6.736	5.465
1-7-84 to 30-6-85	10.191	7.599	5.588	4.630

Note:- All the above figures in columns 3, 4 and 5 are exclusive of 1.11 MAF, which is Pre-partition use.

(All figures in Cusecs)

Date	Useable availability.	Indent	Due share of Rajasthan than as per 1981 agreement.	Actual deliveries to Rajasthan
1-7-85				
(a) Against Pre-partition share	7260	2360	2360	2360
(b) Against surplus	14726	9560	8045	3889
(c) Total	21986	11920	10405	6249

These figures of usable availability and due shares of Rajasthan are as per the 1981 agreement.

Without prejudice to its contention that the scope and ambit of Item No.2 of the Reference is restricted to adjudication of the shares of Punjab and Haryana in 'their' remaining waters, that is, 7.72 MAF, as determined under the 1981 agreement, Rajasthan maintains that its share from the Ravi-Beas system is rooted in the 1955 agreement and the 1981 agreement, which are very much in force and are binding on the States of Punjab and Haryana so far as Rajasthan is concerned. Referring to the historical background leading to the signing of the various agreements, it has pointed out that Rajasthan was allocated only 8 MAF out of 15.85 MAF of surplus waters as against its claim of 10.86 MAF needed for irrigating its desert areas, whereas the demands of Punjab and Pepsu were fully met while Jammu and Kashmir was allocated more than its demand, the benefit whereof still percolates to Punjab. It has further pointed out that during the prolonged negotiations leading to the signing of the Indus Treaty in 1960, the Kingpin of India's case was the urgent need to irrigate the dry and thirsty desert of Rajasthan by constructing a

canal. This was the *raison d'etre* for allocating all Eastern rivers to India which in its turn necessitated the payment of Pound Sterling 62.06 million to Pakistan. Thus, contends Rajasthan, the waters of the Eastern rivers are national property and no single State can claim exclusive proprietary rights to their waters. Even under the terms of the Indus Waters Treaty "all waters of the Eastern rivers shall be available for the unrestricted use of India" which term unmistakably suggests that the waters of the Eastern rivers are available to India, that is, all the concerned States of the Indus System in India and cannot be claimed exclusively by a single State as has been done by Punjab. It is further pointed out that since the signing of the Inter-State agreement in 1955, Rajasthan has always paid its due share in the expenditure incurred on the construction of the Ravi Beas System. To obtain its share from the Ravi-Beas System, Rajasthan had to bear and has borne the cost of the irrigation component of Beas Projects Unit I and II. In addition the expenditure on exclusive works of Rajasthan including the Rajasthan Feeder in Punjab aggregating to Rs.466.95 crores upto 31st March 1985 has been borne by Rajasthan. Thus, Rajasthan has incurred an expenditure of Rs.609.65 crores upto the end of March 1985 for the use of its share in the Ravi-Beas waters and it is further expected to provide necessary funds under Section 80 of the Punjab Reorganisation Act. Rajasthan complains that under the provisions of the said Act the maintenance and operation of Ropar, Harike and Firozpur headworks ought to be under the Bhakra-Beas Management Board but in gross violation of the statutory provisions, the State of Punjab continues to be in control of these headworks, with the result that the other States are at the mercy of Punjab in the matter of supply of water to them. It states that taking advantage of its being in control of the headworks, the State of Punjab during the period of peak demand normally withdraws more water than its share to meet its requirements at the cost of the farmers of the other States. It is for this reason that Rajasthan contends that the surplus waters used by Punjab over and above its share under the 1955 agreement as well as the 1981 agreement must be excluded while verifying the usage under Item No.1 of the Reference.

In the above premise, Rajasthan prays that the Tribunal should hold that it has no jurisdiction under Section 14 of the Act as also under the Terms of Reference to alter, vary or affect the share of Rajasthan in the Ravi-Beas waters determined under the Inter-State Agreements of 1955 and 1981 which continue to have binding force. It further prays that Rajasthan's

usage of water under both the heads, irrigation and consumptive purposes, be verified as 8.709 MAF in the water year ending on 30th June 1985.

In its counter-statement the State of Punjab has contended that the allocation of 8 MAF to Rajasthan under the 1955 agreement cannot be sustained as the said allocation was based on two assumptions, namely, (i) the cultural command area was 52 lakh acres and (ii) the said quantity of water was required to irrigate 36 lakh acres with 69 per cent intensity. Both these assumptions were later found to be incorrect since it was realised that the culturable command area by flow irrigation was only 23.90 lakh acres and the intensity of irrigation was actually 110 per cent as against the proposed 69 per cent. When these inaccuracies in the statistical data supplied by Rajasthan came to light, the State of Punjab demanded withdrawal of 4.5 MAF of waters out of 8 MAF allocated to Rajasthan under the 1955 agreement. It was emphasised that a non-riparian State could never be permitted 110 per cent intensity of irrigation when Punjab which owned the waters had a maximum intensity of 62 per cent only. It was pointed out in the notes and communications addressed to the Government of India in this behalf that even if 4.5 MAF of surplus water was withdrawn from Rajasthan and given to Punjab, the latter will still achieve an intensity not exceeding 75 per cent. Punjab complains that even though repeated requests were made to the Government of India to reduce the share of Rajasthan from 8 MAF to 3.5 MAF and divert the surplus 4.5 MAF to Punjab, the Government of India turned a deaf ear to its requests and instead, by implication, confirmed the allocation while determining the dispute between Punjab and Haryana by notification dated 24th March 1976. According to Punjab since the allocation of 8 MAF to Rajasthan was based on incorrect and misleading data, the share of Rajasthan determined under the 1955 agreement had to be ignored. It is pointed out from events which preceded the 1955 agreement that it was expected to serve a limited purpose, namely, to convince the World Bank Officers about the genuineness of our case for all the eastern waters and on the signing of the Indus Treaty the objective was fully satisfied and the Agreement stood exhausted. Instead of ignoring the same, when it came to be reinforced by the 1981 agreement, the people of Punjab protested against the same as it could not be justified even on the needs criterion. In Punjab's view both the 1955 and 1981 agreements have no legal efficacy as they do not satisfy the requirements of Article 299 of the Constitution and further insofar as the former is concerned it is void and ineffective, because it has

outlived its utility and is even otherwise contrary to the provisions of law. Since there was no question of granting a share to Rajasthan from the Ravi-Beas Waters it was not included in Item No. 2 of the Reference, but only the actual usage as on 1st July 1985 by that State was intended to be protected. There is, therefore, no question of granting 8 MAF or 8.60 MAF to Rajasthan but only that quantity which is verified under Item No.1 of the Reference.

in regard to the averments concerning Item No.1 of the Reference, Punjab contends that the Tribunal must go by the actual words of the said term without adding any gloss and verify the actual usage as on 1st July 1985 and multiply the same by 365 to arrive at the annual user. Dealing with the contention that Item No.1 of the Reference is a verbatim reproduction of paragraph 9.1 of the Punjab Settlement without application of mind, it is contended that the assurance or guarantee given to the farmers of the three States as well as those using water for consumptive purposes must obviously depend on the availability of water. Since Item No.1 of the Reference employs the expression 'as on 1.7.1985', the supplies which passed at the head of the canal/contact point on that day must form the basis of verification, as in irrigation practices and water accounting the supplies passing at the head of the canal/contact point on a particular day are entered in the water accounts as deliveries to such areas falling in the command of the channel. The statements filed at Annexures F1 to F4 by Rajasthan are challenged as irrelevant on the ground that the Tribunal must verify the quantum of usage by Rajasthan as on 1st July 1985 and its utilisation shares and indents for the earlier period have no relevance whatsoever. It is pointed out that even according to the practice of the Bhakra Beas Management Board the indent or share whichever is less is taken when the actual supplies are to be made by one State to the other. When the indent is less than the share, only the indented supply is discharged for the safety of the canal. It is, therefore, pointed out that the shares given by Rajasthan are on the higher side as compared to those fixed by the Bhakra-Beas Management Board as reconciled with the other concerned States. Referring to the utilisation figures of 6249 Cusecs on 1st July 1985, it is pointed out that there is a difference of 33 Cusecs (Punjab's figure is 6216 Cusecs) because on that day the supplies at Tail Sirhind Feeder were actually 1187 Cusecs and not 1154 cusecs as taken by Rajasthan. Punjab, therefore, contends that the actual utilisation of water by Rajasthan from the Ravi-Beas System was 6216 Cusecs and not 6249 Cusecs as contended

by Rajasthan. The quantum of usage of water by Rajasthan on the basis of 6216 Cusecs as on 1st July 1985 works out to 4.5 MAF in a year including pre-partition use. Punjab, therefore, contends that the surplus waters would be available for adjudication under Item No.2 of the Reference.

In the Claims Statement a grievance is made that some of the Ravi-Beas supplies shown as utilised by Rajasthan have not been utilised in the projected areas. 0.31 MAF to 0.42 MAF came to be used in Bhakra areas whereas 0.08 MAF to 0.31 MAF escaped through diversion channel into Ghaggar depressions during the three water years from 1st July 1982 to 30th June 1985 as detailed below:

Period	Utilisation in		
	Bhakra areas	Ghaggar depressions	Total in MAF
1.7.84 to 30.6.85	0.417 MAF	0.308 MAF	0.725 MAF
1.7.83 to 30.6.84	0.314 MAF	0.090 MAF	0.404 MAF
1.7.82 to 30.6.83	0.356 MAF	0.083 MAF	0.439 MAF

Punjab contends that these utilisations need to be deducted from the total utilisation by Rajasthan from the Ravi-Beas System on 1st July 1985. Similarly, Haryana has also averred that Ravi-Beas Waters drawn by Rajasthan through Rajasthan Feeder are allowed to escape into large natural depressions/storage in the desert areas whenever not required by the farmers of Rajasthan or when over-drawn and this needs to be deducted while verifying the user by Rajasthan under Item No.1 of the Reference. Rajasthan has repelled this contention in its counter statement as factually incorrect. It has pointed out that waters in the said natural depressions near Suratgarh are the flood waters of Ghaggar river and have nothing to do with the Ravi-Beas waters. According to it, these depressions are part of Ghaggar river development control scheme in Rajasthan and since Rajasthan is always in dire need of water, these waters are stored in the depressions for utilisation.

While reiterating its stand that neither Haryana nor Rajasthan can legally lay a claim on the waters of the Ravi and the Beas, Punjab contends that all previous agreements, decisions and awards stand superseded by the Punjab Settlement and the consequential amendment of the 1956 Act. Even otherwise they are ultra vires the 1956 Act inasmuch as they do not purport to resolve any dispute relating to inter-State rivers or valleys. Under the Indus Waters Treaty, India is allowed the unrestricted use of the waters of the eastern rivers, but the said use has to be made consistently with the laws and the provisions of the Constitution which cannot be bypassed by invoking the Indus basin concept which has no relevance. Prior to the partition of the country, East Punjab had the right to use these waters with other riparian Provinces and this fact was acknowledged by West Punjab after partition as is evident from the standstill agreements executed in 1947 and thereafter. Immediately after partition the Chief Engineers of East Punjab and West Punjab entered into two agreements on 20th December 1947 whereby it was agreed to maintain the status quo upto 31st March 1948 in respect of canal supplies and drawing of waters from the eastern rivers. After the expiry of the said period East Punjab agreed to continue the supply on payment basis as per the Simla agreement of 18th April 1948. Subsequently, an Inter-Dominion Conference was held at Delhi which led to the signing of the 4th May 1948 agreement which is included as an Annexure to the Indus Waters Treaty 1960. This, contends Punjab, establishes that the Eastern rivers were always treated as belonging to East Punjab even by West Punjab and the Dominion of Pakistan. That is why even at the Conference of 17th January 1952 held in the Ministry of Natural Resources and Scientific Research under the Chairmanship of Shri A.N.Khosla it was decided that the surplus supplies from the Ravi should be utilised in the first instance to meet the additional requirement of Upper Bari Doab canal, Chak Andher tract and Shah Nahar canal and thereafter the balance, if any, should be fed into the Sirhind canal and the residue into the Rajasthan canal. It was further agreed that the surplus Ravi waters should be stored by Punjab and used exclusively for its own requirements. The underlying idea was to first meet the irrigation requirements of Punjab in toto and only thereafter the surplus supplies were to be transferred to other States.

Under the Government of India Act 1935, Entry 19 of List II in the Schedule, and even under Section 4 read with Section 8(2) of the Indian Independence Act 1947, the right to legislate on water was conferred on the Province/State as

is the case under Entry 17 of List II in the Seventh Schedule to the Constitution of India; and hence only the State of Punjab can legislate in respect of Ravi-Beas waters, which, it is contended, is a sure indication that both Haryana and Rajasthan have no right in the said waters. For the same reasons it is emphasised that the Indus Waters Treaty 1960 can be of no assistance to the said two States since even Articles 3 and 4 of the Constitution do not confer power on Parliament or the Government of India to allocate the natural resources, such as, River Waters, Mines, Minerals, etc., of one State to another State; at the most the existing uses in the territory of the successor State carved out of the composite State can be preserved and protected. Therefore, according to Punjab, both Haryana and Rajasthan have no right in the remaining waters save and except that to which Haryana may be entitled from the Beas Project under the Punjab Reorganisation Act.

Stating that the claim of Haryana in the remaining waters is based on three documents, viz., (i) the agreement of 1955 (ii) the award of 1976 and (iii) the agreement of 1981, it is contended by Punjab that none of these documents is consistent with the provisions of the 1956 Act or the Constitution. So far as the agreement of 1955 is concerned it is stated that the decisions taken at the said inter-State Ministerial Conference were only interim and tentative in nature made with the sole object of bolstering India's claim before World Bank officials and were not intended to be a final and lasting arrangement between the concerned States. It is said that Chaudhary Lahiri Singh, Minister of Irrigation, Punjab, who attended the said conference had neither the authority nor the competence to surrender the constitutional and legal rights of the people of Punjab in the said river waters by agreeing to share the waters with non-riparian States. Even the Rules of Business obtaining on 29th January 1955 and the date on which the minutes of the conference were finally confirmed, did not permit the said Minister to enter into any such agreement or arrangement with other States in regard to the sharing of waters belonging to Punjab and hence the agreement of 1955 has no legal efficacy. In fact, it is manifest from a contemporaneous communication addressed by the said Minister to the Central Government soon after the Conference that there was no consensus-ad-idem amongst the participants of the Conference and the minutes were hesitatingly confirmed by the said Minister because of certain compelling circumstances. It is also averred that the said

decisions were based on certain assumptions as regards surplus waters and the needs of Punjab which were factually incorrect.

In order to work out the water requirements of each country from the Indus system, the World Bank proposed the setting up of Working Parties by the two countries and accordingly the Indian designee submitted his formulations on 6.10.1953. While working out the availability of supplies, the dependability criterion of 2 years out of 3 was taken to provide an optimum use of the available waters. According to the draft plan the requirement to irrigate the total area proposed to be irrigated was estimated to be 38.36 MAF, whereas the dependable supplies from the 3 eastern rivers worked out to 27 MAF only, thereby leaving a gap of 11.36 MAF. Since the total requirement for Punjab was 27.91 MAF, there was no question of supplying water to any other State. However, while finalising the plan, the dependability criterion was changed to 1 out of 2 years to artificially augment the supplies to the detriment of Punjab, and that is why Punjab contends that the 1955 agreement proceeds on the wrong assumption that the total supplies available were 15.85 MAF, excluding the pre-partition use, instead of 12.15 MAF on the dependability of 2 out of 3 years. Punjab, therefore, contends that since the 1955 agreement/decision was based on incorrect assumptions, its very base was doubtful and shaky and could not be acted upon. Further, according to it, since the 1955 agreement does not satisfy the requirements of Article 299 of the Constitution, the Tribunal should refuse to look into it. As regards the award of 1976, the contention is that it too is based on inaccurate data and ignores the provisions of the Constitution as well as the ultra vires nature of Section 78(1) of the Punjab Reorganisation Act.

Immediately after the said award the Governor of Punjab as well as the successive Chief Ministers had drawn the attention of the Central Government to this fact, but to no avail. Alternatively it is said that by virtue of Section 78(1) of the Punjab Reorganisation Act, Haryana at best can claim a share from the Beas Project as defined in Clause 'A' of sub section 4 thereof, which makes no mention of the Ravi waters and since the Ravi waters are neither stored nor diverted through the Beas-Sutlej Link, Haryana cannot lay a claim on the Ravi waters except to the extent of 0.9 MAF earmarked for Haryana areas under the revised Beas Project Unit II (March 1966). So far as the 1981 agreement is concerned, it is urged for the same reasons that it is not consistent with the Constitution and the laws and also

does not comply with the requirements of Article 299 of the Constitution and must, therefore, be ignored. Besides, as it has been repudiated by the Legislature of the State of Punjab, it has no legal efficacy and cannot be acted upon. Lastly, it is said that all the three documents stand superseded by the Punjab Settlement and hence the Tribunal must decide the reference within the terms of the said settlement.

Dealing with Haryana's contention that river waters being a national asset are apportionable under Section 65 of the Punjab Reorganisation Act on equitable considerations, it is contended that the said provision can have no application so far as distribution of river waters is concerned. On the plea that the distribution of waters should be made on equitable considerations, it is contended that equity can be invoked by a party which has a right to share the waters and not by a State which has no right whatsoever. The needs of Punjab exceed the total availability of water from the system and, therefore, there can be no question of granting water to any other State. Haryana which lies in the Ganga basin can certainly tap the said resources and link up the available 11.7 MAF of Ganga waters with the Jamuna at Tajewala Head Works and provide water irrigation to areas within Karnal, Rohtak, Gurgaon, Mohindergarh and Hissar Districts. Haryana can also harness Yamuna waters since more than 80 per cent of Haryana lies in the basin of Yamuna. Besides, Punjab has already parted with 63 per cent of the waters from the three eastern rivers which is no small sacrifice. Haryana can, therefore, meet its needs, if any, from the other untapped sources rather than seek to enrich itself at the cost of Punjab. On the other hand, Punjab has no other source except the three eastern rivers, the total supply wherefrom is not sufficient to meet the requirements of Punjab. If the demands of Haryana and Rajasthan are conceded, about 25 lac acres in Punjab presently receiving irrigation from the Ravi-Beas system will be deprived of such irrigation and the hope of irrigating another 31 lacs acres which are presently not receiving irrigation will be totally frustrated. It will further reduce the availability of ground water and the huge expenditure incurred by the farmers of Punjab on tubewells and pump-sets will be wholly wasted. It is, therefore, contended by Punjab that even on the principle of equity pure and simple, Punjab is justified in seeking restitution of its waters from Haryana and Rajasthan which have no legal or equitable right to the waters from the Ravi and/or the Beas. On the above grounds Punjab contests the claims of both Haryana and Rajasthan to a share in the remaining waters.

In its rejoinder the State of Haryana contends that the Punjab Settlement cannot and does not have the effect of effacing history and superseding all earlier agreements, decisions and awards; in fact, the adjudication of shares between the two States must be made having regard to the historical background narrated earlier. The 1955 agreement was a prelude to the Indus Waters Treaty whereunder the eastern rivers were allocated to India and since the said decisions taken at the Inter-State Conference were ratified by the erstwhile Punjab Government, the present State of Punjab, a successor State, cannot challenge or doubt its validity. Besides, having secured the unrestricted use of the three eastern rivers on that basis, it is not open to Punjab to contend that both Haryana and Rajasthan being non-riparian States are not entitled to a share in the river waters. No such objection was raised prior to the reorganisation of the States in 1966; otherwise a suitable provision would have been made in the Punjab Reorganisation Act and Section 78(1) thereof would have been differently worded. So also, the 1976 award being statutory in nature, cannot be challenged as ultra vires the Punjab Reorganisation Act or the 1956 Act. The contention that if the interpretation put by Punjab in regard to the 1976 award is not accepted, it would render section 78(1) ultra vires the Constitution is denied. It is stated that such a contention cannot be raised before this Tribunal and in any case it is not open to Punjab to put forward any such plea after the withdrawal of the suit in the Supreme Court. It is further pointed out that after a satisfactory working of the 1955 agreement for almost 26 years it was felt necessary to modify the same due to increased availability of water and this was achieved by the 1981 agreement which still holds the field. The 1981 agreement was ratified by the letter of the Chief Secretary of Punjab dated 15th March 1985 and hence it could not be unilaterally revoked. Consequently, according to Haryana, it is impossible to contend that the rivers being natural resources of Punjab 'are assets which are not divisible and go with the territory'. Haryana further contends that the jurisdiction of this Tribunal is circumscribed by the terms of reference and the newly inserted section 14 in the 1956 Act and it does not extend to declaring or treating any prior decisions, agreements or awards as ultra vires the said Act or the Punjab Reorganization Act or the Constitution. Punjab's contention that in view of Entry 19 in List II of the Government of India Act, 1935, Entry 17 in List II read with Article 246(3) of the Constitution (which is subject only to Entry 56 in List I) Punjab has absolute and unqualified rights over the river waters is countered on the plea that the

said provisions merely confer legislative competence but not proprietary rights over the river waters; proprietary rights must be shown 'dehors' Entry 17 in List II of the Constitution. It is also contended that the agreements/decisions need not comply with Article 299 of the Constitution which applies to merely commercial agreements and not agreements of the type with which we are concerned. Haryana, therefore, contends that the Tribunal must decide the reference without questioning the legality and validity of the previous decisions, agreements and/or awards so as not to render the entire Punjab Settlement nugatory.

It is next contended that since Haryana lies in the Indus Basin and the rivers, the Ravi and the Beas form part of the Indus system and as the waters of the eastern rivers were acquired by India on payment of a substantial amount to Pakistan, Haryana's right to a share in the Ravi-Beas waters was indisputable and that is why Item No.2 of the reference was couched in language which implicitly but unmistakably conceded such a right and merely left the question of apportionment of the remaining waters for adjudication by the Tribunal. This is also so because even under the provisions of Sections 78 to 80 of the Punjab Reorganisation Act Haryana has a proprietary interest in the Beas Project which interest came to be determined under the 1976 Award. Haryana, therefore, rejects Punjab's contention that the waters of the two rivers belong to it exclusively and absolutely and contends that its share in the remaining waters should be determined on principles of equity and need. It further contends that the use of the expression 'East Punjab' in the Indus Treaty as well as the prior standstill agreements cannot confer an absolute right on Punjab to the exclusion of Haryana. According to Haryana, the prior 1948 and 1952 agreements stand superseded by the subsequent 1955 and 1981 agreements which still hold the field and are not superseded by the Punjab Settlement.

Punjab's contention that the total supplies worked out on 75 per cent dependability criterion were of the order of 27 MAF only whereas Punjab's needs were estimated to be 27.91 MAF and hence there being no surplus waters, neither Haryana nor Rajasthan was entitled to any supply whatsoever, but the Indian designee deliberately worked out the total supplies at 34 MAF on the criterion of mean supplies with a view to providing water to the said two States to the detriment of Punjab, is countered by Haryana by pointing out that all these questions were deliberated at length between the representatives of the concerned

States and the Government of India and a final decision was taken that the criterion of mean supplies should be adopted and on that basis the 1955 agreement was arrived at and hence it is too late for Punjab now to contend that the total supplies were determined by applying the wrong criterion. The grievance of Punjab that it has suffered injustice on account of the application of a wrong criterion is also countered on the plea that the Chief Engineers of the concerned States had at their meeting of 23rd November 1954 agreed to adopt the mean flows instead of the dependability criterion and this was adopted at the Inter State Ministerial Conference of 29th January 1955. Haryana also denies the contention that Punjab's total requirements were estimated at 27.91 MAF. On the contrary, according to Haryana, the total needs of composite Punjab were estimated to be 38.36 MAF inclusive of 18.67 MAF required for the present day Haryana and hence the requirements of Punjab worked out to 20.29 MAF only. So also the contention that out of the 27 MAF supplies through replacement canals only 10 MAF became available to India under the Indus Treaty which could at best be distributed amongst the three States is denied and it is contended that if 11.3 MAF committed supply from Sutlej and 3.13 MAF pre-partition uses are deducted, there still remained a balance of a little over 12.5 MAF out of which 10 MAF became available from Pakistan on account of replacement work and the balance 2.5 MAF remained uncommitted which clearly demonstrates that Punjab's contention in this behalf is wholly misconceived. Further, according to Haryana, under the 1959 agreement, of the available 13.55 MAF Sutlej supplies, composite Punjab was allocated 7.88 MAF designed to irrigate famine-stricken areas of Hissar and Rohtak. However, Haryana areas to be fed by these waters were subsequently reduced with the result that presently Sutlej waters serve only a small part of Haryana areas. Under the 1959 agreement, Punjab areas below Harike could only be irrigated by Sutlej waters. However, since composite Punjab needed Ravi-Beas waters at Ropar for irrigating Haryana areas, this was achieved by using Ravi-Beas waters in Punjab areas below Harike in lieu of Sutlej waters thereby saving an equivalent quantity in Bhakra reservoir for use in Haryana areas. Therefore, Punjab's contention that since the waters used below Harike are Ravi-Beas waters and the waters at Ropar are Sutlej waters, there is no supply available for the high arid areas of Haryana is a travesty of facts. On the completion of the Beas Project additional Ravi-Beas waters have become available at Harike and hence the Sutlej waters used below Harike can now be released for use at Ropar for feeding Haryana areas.

The contention of Punjab that under the Beas Project Unit II (Revised), Haryana can at best claim 0.9 MAF under section 78(1) of the Punjab Reorganisation Act is denied and it is contended that the revised project had not been sanctioned until the reorganisation of the erstwhile State of Punjab and, therefore, the share of Haryana would have to be determined on the basis of the project as it existed on and before 1st November 1966. It is further contended that even under the revised project there is nothing to support Punjab's stand that Haryana would get not more than 0.9 MAF in the Beas Project. Taking into account 2.37 MAF of waters available at Ropar/Nangal and 3.82 MAF becoming available through the Beas Sutlej Link, the total quantum of available Ravi-Beas waters works out to 6.19 MAF. Haryana, therefore, reiterates that it was entitled to more than 3.5 MAF allocated to it under the 1976 award but it accepted the award in larger national interest with a view to resolving the conflict between the two States. For the same reason it did not object to the retention of its share at 3.5 MAF under the 1981 agreement even though its share in reality shrunk to 3.23 MAF out of 15.85 MAF instead of rising to 3.81 MAF out of 17.17 MAF. Haryana, therefore, contends that there is no room for Punjab to make a grievance of unjust treatment at the hands of the Central Government since in fact and in reality, Haryana had to accept less than its due share of Ravi-Beas waters. Haryana also denies Punjab's allegation that the 1981 agreement was signed by the then Chief Minister of Punjab under compelling circumstances or on account of undue pressure brought to bear on him. It states that the Chief Minister of Punjab signed the 1981 agreement after fully understanding the implications thereof and this is manifest from the White Paper issued by the Punjab Government soon thereafter. The subsequent unilateral repudiation of the 1981 agreement by Punjab cannot render it non-est.

Haryana reiterates that adjudication of the shares in the remaining waters between Punjab and Haryana must be made on principles of equity. Contesting the correctness of the statistical information and data furnished by Punjab in this behalf, Haryana contends that the gross irrigated area from all sources in Punjab is 150 per cent of the cultivable area while it is only 95 per cent so far as Haryana is concerned. It is further pointed out that the gross estimated area from tube-wells is 84 per cent of the cultivable area in Punjab whereas it is only 44 per cent of the cultivable area in Haryana; the net irrigated area from tubewells is 50 per cent in Punjab and only 26 per cent in Haryana. It is further pointed out that the ground-water

availability in Punjab is to be kept in mind in estimating the irrigation needs of that State. This would indicate that the use of ground-water availability in Punjab is about three times that in Haryana though the geographical areas do not vastly differ. The area being irrigated from tube-wells in Punjab is nearly twice that of Haryana. The use of ground water in Haryana is less on account of salinity while so far as Punjab is concerned, it is in a position to make use of these waters in paddy areas to supplement canal irrigation. In short, according to Haryana, the ground-water resources in Punjab must be taken into account in determining the shares of the two States in the surplus Ravi-Beas waters. It has denied the allegation that Haryana can tap surplus Ganga and Yamuna waters and has pointed out that there are several claimants so far as these waters are concerned and there is no possibility of tapping the said resources in the near future because of the complexity of the questions. It, however, contends that this question is not germane and Punjab has raised it with a view to confusing and complicating the questions at issue under Item No.2 of the reference.

Lastly, the State of Haryana contends that the expression 'as on 1.7.1985' in Item No.1 of the reference and in paragraph 9.1 of the Punjab Settlement relates to the Ravi-Beas system as existing on that date and this becomes amply clear when read with the words 'are using' preceding it found in paragraph 9.1 of the Punjab Settlement. The words 'are using' were, it is contended, unintentionally changed to 'were using' in the terms of reference, but so far as this Tribunal is concerned, it must go by the exact text of the Punjab Settlement since paragraphs 9.1 and 9.2 thereof are incorporated in Section 14 of the 1956 Act. To put it differently, Haryana contends that the usage for irrigation as well as consumptive purposes has to be determined from the Ravi-Beas system as existing on 1st July 1985 but not necessarily the use as on 1st July 1985. It, therefore, reiterates that in verifying the usage of water under paragraph 9.1 of the Punjab Settlement and Item No.1 of the reference, the Tribunal need not confine itself to the use on a single day, that is, 1st July 1985 but may verify the same on the basis of usage over a period of time immediately preceding the Punjab Settlement. In other words, it disputes the interpretation put on Item No.1 by Punjab and to an extent supports the interpretation placed by Rajasthan.

What we have hitherto set out under this head merely contains a summary of the case put forward by the party States and nothing stated therein is to be read as reflecting the Tribunal's views or understanding of the factual position in relation to the relevant matters.

CHAPTER X

INDUS BASIN STATES

Before we proceed to consider the legal and the constitutional aspects bearing on Punjab's proprietary claims in the river waters, we think it proper to examine the factual aspect whether or not Haryana and Rajasthan fall within the Indus Basin. In the report of the Irrigation Commission, 1972, Chapter XVIII, entitled "The Indus Basin", the boundary of the Basin is described in paragraph 18.2 at pages 435 and 436 as under:-

"18.2. The Indus Basin is bounded on the east by the Himalayas on the north by the Karakoram and Haramosh ranges, on the west by the Sulaiman and Kirthar ranges and on the South by the Arabian Sea. The basin in Indus territory has a maximum east-west length of about 855 km. along 75 degree east longitude and a maximum north-south width of about 560 km. along 34 degree 25' north latitude. The basin has a double fan or palm shape.

The upper portion of basin lying in Tibet (China), Jammu and Kashmir, Himachal Pradesh and part of Pakistan comprises mostly mountain ranges and narrow valleys. In Punjab, Haryana and Rajasthan in India and West Punjab and Sind in Pakistan, the basin is one flat vast stretch of what was once desert and waste land, but which is now the renowned and fertile granary of both countries. Down South, in Sind, the basin includes some delta areas."

It is clear from the above paragraph that parts of Punjab, Haryana and Rajasthan fall within the Indus Basin.

Inviting our attention to paragraph 18.9 on page 438 of the report, Mr. Rao, however, pointed out that the Irrigation Commission erred in concluding that parts of Haryana and Rajasthan fell within the Indus Basin because it erroneously assumed that the river Ghaggar was a tributary of the Indus. Paragraph 18.9 may be reproduced for ready reference:

"18.9 The river Ghaggar has its source near Dasshai a small hill station at an elevation of 1,927 m. (77 degree 50' north latitude) in the Simla district of Himachal Pradesh. The river flows in a generally south-westerly direction practically throughout its length. It enters the State of Haryana near Kalka about 10 km. from its source. Continuing to flow in the same direction, the river criss-crosses the boundary line between Punjab and Haryana at a number of places. The Patielawali Nallah joins it at two different places on its right bank before it receives, through the Saraswati, the combined waters of its three important left bank tributaries viz., the Tangri, the Markanda and the Saraswati, near village Shatrana, about 148 kms. from its source. From here on the direction flow of the river is more westerly than southerly. From about 8 km. down stream of this confluence the river crosses the Bhakra Main Line Canal and about 28 km. further lower down, the river crosses the Ghaggar Branch of the Bhakra system. Continuing to flow for about 107 kms. more in a generally south-westerly direction, the river is tapped at Ottu headworks where two canals, one Northern and the other Southern take off for irrigating the nearby areas. The canals go a little beyond Hanumangarh town in Rajasthan. Thereafter, the river disappears in the sand dunes of the Rajasthan desert. The river has a total length of about 291 kms. and its drainage area, though difficult to assess precisely, can roughly be placed around 1,309 sq. kms. up to the Ottu Weir."

From the above it is obvious that the Ghaggar (with its tributaries) is a non-perennial flash river which peters out in the sand dunes of the Rajasthan desert. Being a monsoon stream, it mainly flows between June and September of each year. Nowhere in the above paragraph has the Ghaggar been described as tributary of the Indus. We may next notice a note on Ghaggar River (Ex.P-6,p.38) which contains extracts from various publications including the report of the Irrigation Commission 1972 to which we have already referred. It carries a part map (Plate I) extracted from the report of the Indian Irrigation Commission (1901-1903)

showing the flow of the Ghaggar river. The extracts and the map indicate that the river while criss-crossing the present boundaries between Punjab and Haryana flows through the districts of Ambala, Karnal and Hissar before disappearing in the Rajasthan desert. These extracts further show that in ancient times the Ghaggar was considered an affluent of the Sarusti (Saraswati) and when ancient texts speak of the latter, they include under that name the former also. In 'Geology of India and Burma' by M.S. Krishnan, Sixth Edition, pages 22-23, there is a mention about the course of the rivers Saraswati and Ghaggar. According to that text the Saraswati, rising in the Siwalik hills passed by the border of Ambala District, entered the plains of Adhbadri before disappearing in the sands beyond Bhawanipur and Belchhaper. It reappeared after a short distance and flowed through Karnal. The Ghaggar joined it at Rasula in Patiala after a course of about 175 kms. and got lost in the sands near Hanumangarh in Bikaner. It is further pointed out that in Vedic literature, the Saraswati is described as a great river, greater than the Indus and Ganges. It flowed in the Rann of Kutch which was then a fairly deep gulf permitting the entry of Ocean-going vessels. It is believed to have finally dried up in about the middle of the thirteenth century. Lastly, reference was made to certain maps from 'Ancient Geography of India' by Cunningham to show that the Ghaggar and Saraswati river system was never a part of the Indus system. These maps refer to (a) Campaign of Alexander in the Punjab (B.C. 327-326), (b) travels of Hwen Tshang in the Punjab (A.D. 631-633); and (c) Travels of Hwen Tshang in North West India (A.D. 635-637) (Ex.P.6, pp. 43-44). These maps have been produced to present a composite picture of the river system obtaining in ancient times. These maps show that the two rivers flowed down the Siwalik hills, passed through Ambala region and covered a course through Sirsa, Mirgarh and Mojgarh. The course of the river beyond Mojgarh is, however, not charted on the said maps or the enlarged version (Ex.P5, p.190) prepared by Punjab.

From the above documentary evidence it can at best be said that the rivers Ghaggar and Saraswati were perennial till they finally dried up in the thirteenth century. At present the river Ghaggar is a monsoon stream which mainly flows between June and September. It criss-crosses the boundary line between Punjab and Haryana at many places. The above documentary evidence at best supports Punjab's contention that it is not a tributary of the Indus. The ancient maps chart out its course upto Mojgarh only and not beyond, making it difficult to rule out the possibility of its meeting the Indus on its onward

journey to the sea. But assuming it did not meet the Indus even in ancient times, does it prove that the Indus Basin did not extend to parts of Haryana and Rajasthan? The argument that the Irrigation Commission observed in paragraph 18.2 of its report that in Punjab, Haryana and Rajasthan the Basin was one flat vast stretch because it erroneously assumed that the river Ghaggar formed part of the Indus system of rivers is, to say the least, misconceived. Merely because while describing the river system reference was made to the Ghaggar in paragraph 18.9 of the report, it does not follow that the Commission treated Ghaggar to be a tributary of the Indus and, therefore, came to the conclusion that parts of Haryana and Rajasthan fell within the Indus Basin. Nowhere in paragraph 18.9 has the Commission suggested, even remotely, that the Ghaggar was a tributary of the Indus. It seems to us that a reference was made to the Ghaggar because it was a flash stream flowing during monsoon within the Indus Basin. Since the bed of the river Ghaggar was situate within the Indus Basin, the Commission thought it proper to make a mention thereof in the report. The Commission, however, made a categorical statement in paragraph 18.2 of the report that the States of Haryana and Rajasthan fell within the Indus Basin.

This view which we are inclined to take finds support from the maps found on pages 19 and 20 of N.D. Gulhati's well-known work entitled 'Indus Waters Treaty'. The author was one of our principal negotiators/designee who had largely contributed to the successful making of the Indus Waters Treaty in 1960. Chapter II of the book contains two maps/figures on pages 19 and 20 based on the Survey of India maps. The figure on page 19 shows the Indus region while the figure on page 20 demarcates the Indus Basin. These figures show that the Indus region and the Indus Basin comprised parts of Haryana and Rajasthan also. In this connection the following statement on page 21 of the book needs to be noticed:-

"Within India, the Indus Basin lies in Jammu and Kashmir, Himachal Pradesh, Punjab, Haryana and Rajasthan. According to the pre-1947 political sub-division, the Indus Basin in India comprised the British Provinces of the Punjab, N.W.F.P. and Sind; the then princely States of Jammu and Kashmir, Patiala, Nabha, Faridkot, Jind Kapurthala, Bikaner, Bahawalpur, Jaisalmer, Khairpur, Bilaspur, Mandi, Chamba and several other small states in the Punjab hills, the

North-West Frontier States and tribal area, together with parts of the British Province of Baluchistan and of the Indian States of Jodhpur and Jaipur."

The above categorical statement by an expert who was the Indian designee and one of our principal negotiators, whose contribution in moulding the Indus Waters Treaty was significant, is entitled to great weight and cannot be lightly brushed aside as a factual error as was contended by Mr. Rao.

Extracts from the Draft Outline prepared by the Indian Designee for the Indus Basin Working Party (Ex.H-15) have been produced and relied upon by Haryana in support of its contention that both Haryana and Rajasthan belong to the Indus Basin. While describing the river Sutlej, it is observed therein as under:-

".....It is known that the Sutlej took a southerly course at Rupar, instead of turning west, as now, to join the Beas. Thus the Sutlej or the Hakra--for both streams flowed in the same bed--is probably the lost river of the Indian desert, whose waters made the sands of Bikaner and Sind a smiling garden. By 1245 the Sutlej had taken a more northerly course, the Hakra had dried up, and a great migration took place of the people of the desert -- as it thus became -- the Indus valley. The course then taken by the Sutlej was apparently a continuation of the present course of the Ghaggar. About 1593, the Sutlej left the Ghaggar and went north once more. The Beas came south to meet it, and the two flowed in the same channel under various names -- Macchuwah, Hariani, Dand, Nurni, Nili and Garah. Then the Sutlej once more returned to its old course and rejoined the Ghaggar. It was only in 1796 that the Sutlej again left the Ghaggar and finally joined the Beas."

It would be interesting to note that according to the author of the Text 'Geology of India and Burma', the Ghaggar further to Rasula in Patiala was called the Hakra or Sotar whose dry bed indicates that it must have once contained a large river. So far as the Ghaggar is concerned, it is said that 'the river was once

an affluent of the Indus, the dry bed of the old channel is still traceable'. The maps appended to this document (Ex.H-15) also support the contention that both Haryana and Rajasthan are within the Indus Basin. The statement that the river Ghaggar was once an affluent of the Indus was utilised in support of the argument that if the course of the river was charted beyond Mojgarh in the maps produced by Punjab, it would have shown that it met the Indus before debouching in the sea. Be that as it may, what is important is not whether the Ghaggar met the Indus before losing its identity but whether Haryana and Rajasthan belong to the Indus Basin regardless of the Ghaggar. Unless it is established that the statement made by the Irrigation Commission as well as the learned author Gulhati that parts of Haryana and Rajasthan belonged to the Indus Basin was based on the erroneous belief that Ghaggar was a tributary of the Indus or that it met the Indus before merging into the sea, lack of positive evidence in that behalf would be of no consequence, whatsoever.

Reliance was also placed on a note entitled 'Hydrology by S.L. Chowdhury' (Ex.P.11) wherein the State of Haryana has been divided into three basins viz., (i) the Yamuna drainage basin; (ii) the Ghaggar drainage basin; and (iii) the internal basin. It was urged that this note prepared by no other than the Deputy Director, Ground Water Directorate of Haryana, does not show that any part of Haryana falls within the Indus Basin. This note or Research Paper forms part of Working Papers submitted by different individuals at a Workshop on "Studies for the use of Saline Water in the Command Areas of Irrigation Projects Haryana, India", held in July, 1983 under the auspices of Haryana State Minor Irrigation (Tubewells) Corporation Ltd., a Government of Haryana Undertaking. The map (Ex. P 15, p.354) which shows the three basins indicates that the Indus Basin areas are flat and have no drainage out-falls in either of the rivers Yamuna or Ghaggar. The note in the map shows that the land area slopes from North-east to South-west forming a saucer shaped depression (internal basin) without a natural outlet, causing water logging and salinity problems. It must be remembered that these papers were prepared for the limited purpose of identifying saline water zones and for tackling the problem of disposal of saline water from the area described as the internal basin of Haryana. Such studies undertaken by individuals to identify the problem of salinity in Haryana cannot be relied upon for the purpose of determining the expanse of the Indus Basin even if some of them are prepared by State officials and have been read in other forums. It is interesting to note that in the same volume

extracts from a document entitled "Bulletin of National Hydrograph Network Special Data, Haryana 1983" (Ex.P.32 p. 36) is produced by Punjab, wherein there is a reference to Indus Basin (Sutlej sub-basin) at three places, which negatives the contention that no part of Haryana falls within the Indus Basin. We are not impressed by the argument of Mr. Rao that Central Ground Water Board was also labouring under the same erroneous belief as the Irrigation Commission, 1972.

From what we have discussed above, particularly the authentic statement found in paragraph 18.2 of the Irrigation Commission Report, 1972 and the two maps/figures based on the Survey of India maps found on pages 19 and 20 of Gulhati's book and the positive statement made by the author at page 21, coupled with the other material placed on record, it seems clear to us that besides Punjab, parts of Haryana and Rajasthan also belong to the Indus Basin.

It was however, urged by Mr. Rao that even if it is conceded for the sake of argument that the Indus Basin extended to parts of the present day States of Haryana and Rajasthan, with the partition of the country in 1947 and the main river Indus falling exclusively in the Dominion of Pakistan, the Indus Basin ceased to exist for us and we became concerned with the basins of the three eastern rivers only. In our view, there is a basic fallacy in this line of thought because it is well known that rivers defy man made boundaries and river basins do not cease to exist merely because an international boundary runs across it. On the partition of the country, most of the water supply areas fell in the Dominion of India, most of the irrigated lands went to the Dominion of Pakistan and most of the irrigable lands were left in India. All these lands formed part of the Indus Basin and continued to be so notwithstanding the new international boundary. Just as a river does not respect State frontiers so also State frontiers are of no relevance so far as its drainage area is concerned. A river basin or a river valley is that tract of land which is drained by a river or its tributaries. Both surface streams and ground water flow respond to the force of gravity and take the downward gradient towards a single outlet regardless of man made boundaries. True it is that on the partition of the country the major part of the main Indus river does not traverse through Indian territory, but it has its tributaries in India. That however does not mean that the Indus system of rivers had ceased to exist as a fact on a new international boundary having come into existence. We are,

therefore, of the view that the Indus Basin comprising parts of Haryana and Rajasthan continues to exist as a geographical fact even after the partition of the country in 1947. On partition, it got politically divided but its physical unity continued. So also certain rivers which were intra-State rivers become international rivers on the division of a country but that does not per se affect the course of such rivers. Before partition, the Indus river system was developed as a single unit; on partition it got divided and till the signing of the Indus Waters Treaty in 1960, the rights of India and Pakistan in the waters from the said system were governed by international law.

CHAPTER XI

SCOPE OF INQUIRY

"Of the elements which make for political controversy in human affairs, the control of rivers is one of the most persistent....."(Lord Birdwood, *India and Pakistan: A Continent Decides* (New York, 1954 p. 130). In no other area of the country is this as true to-day as in Punjab where the two rivers, the Ravi and the Beas flow. Unlike other issues, disputes touching river waters tend to be highly sensitive because of its popular appeal particularly in areas where the mainstay of the economy is agriculture. For States which mainly depend on agriculture, it is all the more vital because it not only kindles popular interest but keeps it alive with each agricultural season and worsens in drought and famine conditions. Every cusec of water allocated to one State is frowned upon as it results in reduction of the irrigable area or reduces the intensity of irrigation elsewhere thereby embittering relations between the concerned States. While rivers themselves may not be the source of tension, the discord prevailing in regard to distribution of their waters assumes threatening proportions particularly in situations of drought and famine when sentiments and emotions run high generating avoidable heat making a negotiated settlement impossible, leaving no alternative but a settlement through an independent judicial Tribunal, as in the present case.

This Tribunal has been called upon to deal with two specific issues, the first relating to the verification of the usage by the farmers and other consumptive users of the three party States from the Ravi-Beas system as on 1st July, 1985 and the second, regarding the adjudication of the shares of Punjab and Haryana in their remaining waters. Item No. 1 of the reference can be divided into three parts: the first part provides that the farmers of the three States will continue to get water not less than what they were using from the Ravi-Beas system as on 1st July, 1985; the second part posits that water used for consumptive purposes will also remain unaffected; while the third part casts an obligation on the Tribunal to verify the quantum of usage claimed by the party-States. The first sentence of Item No. 1 merely assures that the farmers of the three States will continue to get water not less than what they were using from the Ravi-Beas system as on 1st July, 1985. It seeks to preserve and

protect the quantum of usage by the farmers from the system as on 1st July, 1985. The second sentence also holds out an assurance that waters used for consumptive purposes shall not be diminished. The third sentence requires the Tribunal to verify the claims in regard to the quantum of usage for irrigation and consumptive purposes from the Ravi-Beas system as on 1st July, 1985. Item No. 2 of the reference calls for adjudication of the claims of Punjab and Haryana regarding the shares in their remaining waters. It is clear from the aforesaid terms of reference that while under Item No. 1 the Tribunal is required merely to verify the quantum of usage by the farmers and consumptive users of Punjab, Haryana and Rajasthan from the Ravi-Beas system as on 1st July, 1985 Item No. 2 of the reference requires the Tribunal to adjudicate the claims of Punjab and Haryana on the sharing of their remaining waters.

It is essential at the very outset to clearly understand the scope of Inquiry before us. We have already referred to the language of paragraphs 9.1 and 9.2 of the Punjab Settlement which is substantially reproduced in the terms of reference. The newly inserted Section 14 in the 1956 Act which we have reproduced earlier also makes a specific reference to the said two paragraphs of the Punjab Settlement. The new section begins with a non-obstante clause and empowers the Central Government to constitute a Tribunal for the verification and adjudication of the matters referred to in paragraphs 9.1 and 9.2 of the Punjab Settlement. By sub-section (3) thereof the Central Government is empowered to make a reference to the Tribunal so constituted either suo motu or at the request of any concerned State. When a Tribunal is constituted under section 14(1), the provisions of sub-section (2) and (3) of section 4, sub-section (2), (3) and (4) of section 5 and section 5A to 13 (both inclusive) insofar as they relate to the constitution, powers, authority and bar of jurisdiction shall apply subject to sub-section (3) thereof. It is, therefore, true that the provisions of paragraphs 9.1 and 9.2 of the Punjab Settlement have received statutory recognition and this Tribunal, constituted under section 14(1), is required to verify and adjudicate the matters referred to therein. The terms of reference substantially reproduce paragraphs 9.1 and 9.2 of the Settlement.

Now in trying to understand the scope of the inquiry before the Tribunal it is necessary to bear in mind certain landmark decisions taken in the past regarding the sharing of river waters before the signing of the Punjab Settlement. Soon after the partition of the country, a decision was taken by the

concerned States on 29th January, 1955 for the distribution of supplies, both flow and storage, from the Ravi and the Beas, estimated to be 15.85 MAF over and above actual pre-partition use. Thereunder 8.00 MAF of water was allocated to Rajasthan, 5.90 MAF to Punjab, 0.65 MAF to Jammu and Kashmir and 1.30 MAF to PEPSU. On the merger of PEPSU with Punjab in November, 1956, the share of composite Punjab rose to 7.20 MAF. Later, the Indus Waters Treaty was signed in 1960 whereunder the waters of the three eastern rivers, the Ravi, the Beas and the Sutlej, were reserved for exclusive use by India after the transition period. The State of Punjab was reorganised with effect from 1st November, 1966 and that raised the question of Haryana's share in the waters allocated to Punjab (inclusive of the share of PEPSU) under the agreement/decision of 29th January, 1955. In exercise of power conferred by section 78(1) of the Punjab Reorganisation Act, the Central Government issued a notification dated 24th March, 1976 (Ex. R 1, Ann.C) allocating 3.5 MAF to Haryana and not more than 3.5 MAF to Punjab. Since the available supplies were initially estimated on the basis of the 1921-1945 flow series and since Punjab was none too happy with the allocation made by the Central Government, a fresh agreement was executed between the party-States on 31st December, 1981 (Ex. R1, Ann.8) in the presence of the Prime Minister of India whereunder the available supplies were estimated to be of the order of 17.17 MAF on the basis of 1921-1960 flow series and the said quantity of water was distributed as: 4.22 MAF for Punjab, 3.50 MAF for Haryana, 8.60 MAF for Rajasthan, 0.65 MAF for Jammu and Kashmir and the balance 0.20 MAF for Delhi Water Supply. Even after this agreement was signed by the Chief Ministers of the concerned States, the question of sharing of water resources continued to be a politically live issue in Punjab and that is why specific provision came to be made in paragraphs 9.1, 9.2 and 9.3 of the Punjab Settlement.

From the above it becomes apparent that the genesis of the allocation of water resources between the concerned States is to be found in the 1955 agreement/decision. It is under the said decision that the waters came to be allocated between the concerned States for the first time. Under the said agreement/decision Rajasthan received 8.00 MAF of water out of the available surplus of 15.85 MAF (1921-1945 flow series). After this agreement was arrived at the Government of Punjab issued an order dated 20th October, 1961 for the utilisation of 7.2 MAF of water allocated to it. Under this order the major part of the water was to be utilised in Punjab areas of composite Punjab which

caused considerable dissatisfaction to the farmers of Haryana areas. To resolve the dispute two Committees were appointed which submitted their reports in 1965 but before any final decision could be taken on the basis thereof, the decision to reorganise the State of Punjab was taken sometime in March, 1966. Pursuant thereto, the State of Punjab was reorganised in November, 1966 under the Punjab Reorganisation Act, 1966. The disputes between the States of Punjab and Haryana continued and certain Committees were constituted to resolve the same. While this dispute was pending, there was a press report that Haryana was trying to get water from Rajasthan out of its share of 8.00 MAF which the latter was not in a position to use in toto till the Rajasthan Canal was completed. This prompted Punjab to claim withdrawal of 4.5 MAF of water from the share of Rajasthan for the first time in 1970-71 on the plea that Rajasthan was not in a position to use more than 3.5 MAF. Thereafter on 24th March, 1976, the Government of India, after taking into consideration the various reports received by it, determined the shares of Punjab and Haryana in the 7.2 MAF of the water under section 78(1) of the Punjab Reorganisation Act. As this determination also did not satisfy Punjab, efforts were made at various levels to resolve the dispute and ultimately the tripartite agreement was executed on 31st December 1981 by the Chief Ministers of the three States in the presence of the Prime Minister of India. As stated earlier, even this agreement came to be repudiated by Punjab and after hectic political activity, the Punjab Settlement was signed on 24th July, 1985. We have dealt with the development in this behalf in greater detail while examining the question of legality and validity of the 1955 agreement and have pointed out that the real dispute was between Punjab and Haryana and had it not been for the press report in regard to Haryana's efforts to persuade Rajasthan to temporarily part with some water from its share of 8.00 MAF while the Rajasthan Canal was under construction, Punjab would not have demanded the withdrawal of water from Rajasthan. This factual background must be kept in mind while trying to understand the scope of the inquiry before us. The Punjab Settlement was signed between the Prime Minister of India and Sant Harchand Singh Longowal, President of Shiromani Akali Dal, a political party. No State Government was directly a party to it but the Punjab Legislative Assembly adopted a resolution on 6th March 1986 seeking its early implementation. No such direct acceptance was made by either Rajasthan or Haryana of the Punjab Settlement but on the constitution of this Tribunal and on the Central Government having referred the issues for verification/adjudication by this Tribunal, the State of Rajasthan submitted to the jurisdiction of

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this Tribunal in regard to Item No. 1 of the reference only whereas the State of Haryana submitted to the Tribunal's jurisdiction on both the terms of reference. The State of Rajasthan made it clear in its Claim Statement as well as rejoinders that it was not a party to Item No. 2 of the reference and hence its share in the river waters allocated by the 1955 agreement and revised or modified by the 1981 agreement remains unaffected and cannot be varied or altered without its consent. According to Rajasthan both the agreements are legal and valid and the Tribunal is not competent to overlook them insofar as Rajasthan's share is concerned. According to it the Tribunal cannot go into the legality and the validity of the said agreements/decisions. The State of Punjab on the other hand contends that under Item No. 1 the Tribunal has to verify the actual usage by the farmers and other consumptive users of the three States and as the verified usage is protected by the said term, deduct the quantum of usage from the total available supplies from the Ravi-Beas system and distribute the remaining waters between Punjab and Haryana according to their respective entitlements under the Constitution and the laws. To put it differently, according to Punjab all the earlier agreements, arrangements and decisions stand superseded by the Punjab Settlement and hence after protecting the actual usages verified under Item No. 1 of the reference, the balance water from the Ravi-Beas system has to be allocated between Punjab and Haryana as per their entitlements in accordance with the Constitution and the laws. In this behalf Punjab's contention is that Haryana can in law lay a claim to not more than 0.90 MAF from the remaining waters. The State of Haryana has in its Claim Statement adopted a more or less similar stance in regard to the interpretation of the two terms of reference, although according to it, it would be entitled to a major share in the remaining waters on the principle of equitable distribution. However, in the course of arguments before this Tribunal, Mr. Sibbal, learned counsel for Haryana, stated that he was not in a position to justify the stand taken in the pleadings of Haryana on the true interpretation of the terms of reference and did not advance the same but instead contended that the interpretation canvassed by Rajasthan was correct for otherwise the whole reference was likely to be rendered incompetent. He also contended that the Tribunal cannot nullify the earlier two agreements and the award under section 78(1) of the Punjab Reorganisation Act and in any case they were and are perfectly legal and valid. It is in this background of pleadings that we must decide the scope of the inquiry before us.

Now, as pointed out earlier, Item No. 1 of the reference does not present any difficulty insofar as the ambit of the inquiry under that head is concerned. All the three States have submitted to the jurisdiction of the Tribunal and have presented their points of view through counsel on that point. The real difficulty arises when we come to Item No. 2 of the reference, the text whereof concerns the States of Punjab and Haryana only. Under that term the Tribunal is called upon to adjudicate 'the claim of Punjab and Haryana regarding the shares in their remaining waters'. In other words, according to Punjab, out of the total available supplies, the quantum of usage verified under Item No. 1 of the reference must be deducted and the balance water would be available for adjudication under Item No. 2 of the reference. On the other hand, Rajasthan contends that since it is not a party to Item No. 2 of the reference and since it has not, directly or indirectly, agreed to reopen the question of its share in the total available supplies from the Ravi-Beas system, its share under the agreements remains unaffected and cannot be touched by the Tribunal; to do so would be to violate the principle of *audi alteram partem*. Punjab's answer is that the whole purpose of the Punjab Settlement would be defeated if the earlier agreements are not treated as superseded and the question of entitlement of water from the Ravi-Beas system is not examined *de novo* in the light of the provisions of the Constitution and the laws. It contends that it was only after Punjab's stand that Rajasthan is not entitled to any water from the Ravi-Beas system was conceded that Punjab agreed to preserve and protect the existing user by Rajasthan and hence there was no question of Rajasthan having a share in the remaining waters necessitating its inclusion in Item No. 2, of the reference. It is, therefore, clear that according to Punjab, Rajasthan would not be entitled to any water from the Ravi-Beas system beyond the actual user verified under Item No. 1 of the reference.

We have carefully considered the rival points of view canvassed before us and we are of the view that the contention urged by Rajasthan must prevail. Elsewhere in this report we have upheld the legality and the validity of the 1955 and 1981 agreements whereunder Rajasthan became entitled to 8.00 MAF and later 8.60 MAF of water from the Ravi-Beas system. It is well settled that without the consent and concurrence of both the contracting parties, the rights and obligations flowing from 'a contract cannot be discharged.' Since a contract or agreement rests on the agreement of the parties, it is binding on them till such time they decide to relieve each other of the

obligations thereunder. A contract can, therefore, be discharged by agreement between the contracting parties. No single party to the contract can put an end to the contract and refuse to honour its commitments thereunder. To do so would tantamount to a breach of the contract which would confer a right of action on the other party to claim performance i.e., enforcement of the contract. A unilateral breach of contract does not, of itself, terminate the obligation, it merely entitles the opposite party, if he so chooses, to regard himself as relieved or discharged from the obligation of further performance thereof. It would be open to the opposite or injured party to treat the agreement as subsisting or in existence and demand performance thereof by the party committing the breach. Non-implementation of an agreement concerning the use of distribution of water may give rise to a water dispute as defined by section 2(c) of the 1956 Act. Fortunately, before any such dispute can arise, the present reference has been made.

There is no doubt whatsoever that the State of Rajasthan was not a party to the Punjab Settlement. It at no time agreed to reopen the 1955 and/or the 1981 agreements, whereunder it became entitled to a certain quantum of water from the Ravi-Beas system. On the basis of the 1955 agreement, it took certain follow-up action and incurred heavy expenditure to provide a network of canals for the utilisation of water allocated to it.

Elsewhere in this report we have set out in detail the follow-up action taken by the erstwhile Punjab Government in pursuance of the said agreement/decision. Since the agreement was based on the possibility of the waters of the eastern rivers being allocated to India, the Government of India sanctioned or confirmed the same only after the Indus Waters Treaty was signed by India and Pakistan. The Beas Project, Unit I and Unit II, were planned on the basis of the said agreement/decision and in 1970 the cost of the Beas Projects was apportioned between the concerned States. The genesis of the 1981 agreement is also the 1955 agreement. If the submission that the Punjab Settlement intended to supersede the previous agreement is entertained, it would also set at naught all subsequent decisions taken from time to time by the concerned Governments as well as the Government of India. But as stated, earlier, unless the concerned contracting parties agree, the agreement/decision would be binding on the concerned party-States and it cannot be overlooked. Since the State of Rajasthan contends, and there is no evidence to the contrary, that it had not directly or indirectly, consented to the reopening of the 1955 agreement, we must proceed on the footing that the said agreement

is not discharged by the consent of the concerned party-States. Incidentally it is nobody's case that the rights of other non-consenting parties, Jammu and Kashmir and Union Territory of Delhi, are affected by the Punjab Settlement.

It was then said that since Rajasthan is a party to Item No. 1 of the reference and since it had submitted to the jurisdiction of the Tribunal, by necessary implication it must follow that it had consented to the reopening of the previous 1955 and 1981 agreements. There is no merit in this submission for the simple reason that the verification of actual usage contemplated by Item No. 1 of the reference is innocuous and does not in any way impinge upon the terms of the said two agreements. To put it differently, the verification of actual usage can be done while keeping the two agreements intact, i.e. without being required to alter, vary or modify any of the earlier decisions. We are, therefore, not inclined to think that merely because Rajasthan has submitted to the jurisdiction of this Tribunal so far as Item No.1 is concerned, it must be taken that it has by necessary implication, consented to the reopening of the earlier agreements.

That brings us to the question whether by virtue of the insertion of section 14 in the 1956 Act, which incorporates by reference paragraphs 9.1 and 9.2 of the Punjab Settlement in the statute, all previous agreements/decisions are liable to be reopened notwithstanding the want of consent on the part of Rajasthan. The newly added section 14 empowers the Central Government to constitute a Tribunal under the Act, to be called the Ravi and Beas Waters Tribunal 'for the verification and adjudication of the matters referred to in paragraphs 9.1 and 9.2 respectively of the Punjab Settlement. Paragraph 9.2 of the Punjab Settlement may be reproduced for ready reference. It reads as follow:-

"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 in this respect to be taken expeditiously."

The said paragraph is in three sentences. The first sentence enjoins the Tribunal to adjudicate 'the claim

of Punjab and Haryana regarding the shares in their remaining waters'. The second sentence requires the Tribunal to render its decision within six months and makes the same binding on both parties. It is, therefore, clear on a plain reading of the first two sentences of paragraph 9.2 of the Punjab Settlement that it arraigns only two parties, Punjab and Haryana, before the Tribunal and makes the decision of the Tribunal binding on both of them. There is, therefore, no room for doubt that Rajasthan was not envisaged as one of the claimants or parties to the process of the adjudication contemplated by the said term. Both Punjab and Haryana also contend that under Item No. 2 of the reference, which is a verbatim reproduction of the first sentence of paragraph 9.2, Rajasthan is not a party and can have no say in the matter. Rajasthan categorically contends that so far as Item No. 2 of the reference is concerned, it being outside the scope does not propose to submit to the jurisdiction of the Tribunal. That is why the State of Rajasthan has not filed any statement of claim on item No. 2 of the reference and has made it clear in unmistakable terms that it does not submit to the Tribunal's jurisdiction. On that premise it contends that the Tribunal has no jurisdiction to alter, vary or modify any of the terms of the 1955 or 1981 agreement/decision in respect of the share allocated to Rajasthan thereunder since it has not consented to the reopening of the said agreements/decisions.

But it was argued on behalf of Punjab that on a conjoint reading of both the terms of reference it is plain that after the actual user by the three States is verified, the quantum of verified user must be deducted from the total available supplies and the balance or surplus water would be 'their remaining water' available for adjudication by the Tribunal. To state it in concrete terms if out of the total supplies of 15.85 MAF, the verified user comes to 5.85 MAF, the balance of 10.00 MAF would be the subject matter under Item No. 2 of the reference. More tersely put, if the verified user by Rajasthan is 4.5 MAF it would be entitled to only that quantity of water from the Ravi-Beas system and the remaining 3.5 MAF out of its share of 8.00 MAF under the 1955 agreement/decision would be lost to it and would form part of 'their remaining waters' under Item No. 2 of the reference. The argument, though attractive at first blush, suffers two basic fallacies, viz., (i) it would imply undoing of the 1955 and 1981 agreements, as also depriving Rajasthan of its full share in the waters fixed thereunder without its consent and (ii) result in flagrant violation of the principle of *audi alteram partem* in that, the Tribunal would be required to decide the

quantum of remaining water after deducting the verified user from the total available supplies regardless of Rajasthan's share under the said agreements. We have already indicated earlier that Rajasthan has not consented to the reopening of the agreements. The agreements could not be thrown overboard without the consent of the concerned State Governments. Since Rajasthan never consented to the discharge of the agreements, the question which we must consider is, whether the share of Rajasthan under the agreements was intended to be reduced by the insertion of section 14 in the 1956 Act. It was said that Parliament made specific mention of paragraphs 9.1 and 9.2 of the Punjab Settlement while inserting the new section 14 in the 1956 Act as it intended that the question of allocation of waters from the Ravi-Beas system should be examined de novo regardless of the earlier agreements/decisions. This objective was sought to be achieved by the terms of reference, the first term protecting the actual user by the three States regardless of whether or not the States of Haryana and Rajasthan were entitled in law to claim water from the Ravi-Beas system, and the second term requiring adjudication of 'their remaining waters'. Admittedly, Rajasthan is not a party to Item No. 2 of the reference and, therefore, it cannot lay a claim to the surplus waters under paragraph 9.2 of the Punjab Settlement. Once the verification under Item No. 1 of the terms of reference is over, Rajasthan would be out of the picture and according to Punjab in view of section 14, it would not be entitled to water beyond the verified usage even if the verified usage falls short of its share of 8.00 MAF under the agreement. In substance this would mean that if the verified usage for Rajasthan is less than 8.00 MAF (in fact Rajasthan claims a usage of less than 8.00 MAF under Item No. 1), it would be required to forego the balance, its protestations and absence of consent for reopening the agreements, notwithstanding.

Two posers naturally arise. The first is, whether an intention can be attributed to Parliament to strip Rajasthan of its share in the river waters allocated under the agreements without giving it an opportunity of stating its case before the Tribunal? Can it be said that Parliament intended by the insertion of section 14 to withdraw a substantial quantity of water out of Rajasthan's share of 8.00 or 8.60 MAF allocated to it under the earlier agreements without its consent and without giving it an opportunity of being heard? Courts of law and Judicial Tribunals frown at attempts to deprive a party of its right in breach of the principle of natural justice. It is abhorrent to our sense of justice that a party having a right,

either under statute or contract or agreement, should be stripped of that right without according it an opportunity of being heard. Any such action would be liable to be struck down as violative of the principle of natural justice. It is implicit in the rule of law that the principle of natural justice should govern those who are required to discharge judicial or quasi-judicial functions. In modern times in civilised society it is unthinkable that a party can be deprived of its valuable right without so much as giving it an opportunity of being heard before it is stripped of its right. Ordinarily, even where a statute is silent, the rule of natural justice is read into it where its effect is likely to adversely affect the right of a party. Would it then be permissible to infer, in the absence of clear language indicating the same, that Parliament intended to deprive Rajasthan of water beyond the quantum verified under Item No.1 of the reference, regardless of the allocation made under the earlier agreements? There is no warrant in the language of section 14 to infer that Parliament intended to take away water from Rajasthan's share allocated under the earlier agreements without its consent. Such a view would be violative of the principles of natural justice and would not commend to a judicial Tribunal.

The second question is, whether Parliament was competent to deprive Rajasthan of its share in the river waters allocated under the earlier agreements without the consent of Rajasthan? It is nobody's case that Rajasthan had consented to reopening of the earlier agreements to entitle Parliament to enact a law on that premise. That being so the question is, whether Parliament can be attributed the intention to strip Rajasthan of its share in the river waters when it enacted section 14 if in law it was not competent to so legislate? We inquired of the learned counsel Mr. Rao to point out the relevant provision under which Parliament could by law deprive Rajasthan of its share in the river waters allocated to it under earlier agreements between the concerned States. Mr. Rao was not able to point out any entry from the relevant List empowering Parliament to enact such a law but he urged that the source of power could be traced from Articles 2 and 3 of the Constitution. Article 1 proclaims that India shall be a Union of States. Article 2 empowers Parliament to admit into the Union, or establish, new States. Article 3 next provides that Parliament may by law -

- "(a) form a new State by separation of territory from any State or by uniting two or more

- States or parts of States or by uniting a territory to a part of any State;
- (b) increase the area of any State;
 - (c) diminish the area of any State;
 - (d) alter the boundaries of any State;
 - (e) alter the name of any State;"

Articles 2 and 3 merely empower Parliament to alter the geographical limits of the Union or the States or alter the name of any State but they do not confer any power on Parliament to alter the terms of binding agreements between two or more States without the consent of the concerned State. No such power can be read in Articles 2 and 3 of the Constitution and in the absence of any other specific provision empowering Parliament to unilaterally discharge agreements, decisions or contracts between States, we must hold that since parliament had no such legislative competence it could not have intended to do so by the insertion of section 14 in the 1956 Act.

In support of its contention that under Item No.2 of the reference the Tribunal has jurisdiction to adjudicate the shares of Punjab and Haryana leaving out the share allocated to Rajasthan, strong reliance was placed on the statement of Shri P.Shivshankar, Union Minister of Commerce, made on the floor of the Rajya Sabha on 20th March, 1986, which reads as under:-

"The point is, Haryana and Punjab had been contesting the figures of the usage of Rajasthan. Haryana and Punjab were not satisfied when Rajasthan was giving a particular figure. They were saying it was more than five point something; I do not exactly remember at this stage. They said 'we use this water' and both the States were not agreeing that they were using. That is one part of it. What Punjab was saying that they were using 6.2 MAF, Haryana was not accepting and what Haryana was saying Punjab was not accepting. Therefore, Rajasthan has been brought into the accord for the limited purpose of determining the usage as on 1st July, 1985. There is nothing else so far as Rajasthan is concerned."

Our attention was drawn to the full text of the proceedings in the Rajya Sabha of 20th March, 1986 (Ex. P.13)

to point out what the other participants, particularly Shri B. Shankaranand, Minister of Water Resources and Shri Asoke Sen, Minister of Law and Justice, had to say in regard to the object of insertion of section 14 in the 1956 Act. Mr. Rao, however, invited our attention to a few decisions of the Supreme Court, namely (i) State of Travancore - Cochin vs. The Bombay Company Ltd., (1952) S.C.R. 1112; (ii) State of West Bengal vs. Union of India ((1964) 1 S.C.R. 370); (iii) Kesavanada Bharti vs. State of Kerala, (1973) Supp.SCR 1) and Sushma Sharma vs. State of Rajasthan, (1985) Supp. S.C.C. 45) in support of his contention that speeches in Parliament cannot be admitted and used as extrinsic aids for interpreting a statute or any provision of a statute. We do not consider it necessary to scrutinise the case law on the subject as we are satisfied on a close reading of the speeches of the Hon'ble Members and Ministers who participated in the debate, that it would be unwise to pick a statement here and there to gather the intention of the Parliament in inserting section 14 in the 1956 Act. True it is that there are a few statements in the speeches of Shri P. Shivshankar and Shri Asoke Sen which support the interpretation canvassed by Rajasthan but we do not think it advisable to base our judgment as regards Parliament's intention in introducing section 14 in the 1956 Act thereon. We think, even without resorting to these speeches, it is possible for us to reach a definite conclusion from the plain language of the terms of reference and certain attendant circumstances.

There is yet another circumstance which has a bearing on the question at hand. Under the 1955 agreement, Jammu and Kashmir received 0.65 MAF of waters from the Ravi and the Beas. Under the 1981 agreement, while the share of Jammu and Kashmir was retained at 0.65 MAF, the Delhi Water Supply was allocated 0.20 MAF out of the shares of Punjab and Haryana. Since neither the State of Jammu and Kashmir nor the Union Territory of Delhi is party to the proceedings, their shares under the agreement(s) cannot be disturbed in the present proceedings; to do so would be to offend the principle of natural justice. For the same reason it would be in gross violation of the principle of *audi alteram partem* to limit the share of Rajasthan to the user verified under Item No.1 of the reference.

For the above reasons, on a true interpretation of paragraphs 9.1 and 9.2 of the Punjab Settlement, Item Nos. 1 and 2 of the terms of reference and the newly added section 14 of the 1956 Act, we are of the view that this Tribunal cannot alter the share of Rajasthan fixed under the 1955 agreement and later modified under the 1981 agreement.

CHAPTER XII

PROPRIETARY/OWNERSHIP RIGHTS IN RIVER WATERS

We have already pointed out earlier while stating the claims put forward by the party-States that the principal contention of the State of Punjab is that the waters of the Ravi and the Beas belong to Punjab absolutely and in their entirety and neither Haryana nor Rajasthan has any right therein. However, under paragraph 9.1 of the Punjab Settlement a concession was made to protect existing usage as on 1st July, 1985 as there was no intention to deprive the farmers and other consumptive users of Haryana and Rajasthan of the waters which they were actually using from the system as on that day. In paragraphs 9 to 15 of its counter-statement to Haryana's statement on Item No.2 (Ex.P-3), Punjab contends that according to the scheme of the Constitution it is entitled to utilise the water resources from the said two rivers as the last downstream State within its territory by virtue of Entry 17 in List II of the Seventh Schedule (State List) read with Article 246(3) of the Constitution. According to Punjab this sovereign power of the State is subject only to Entry 56 in List I (Union List) which empowers Parliament to provide for regulation and development of inter-State rivers and river valleys to the extent it is declared by law to be in public interest. Since no such law is enacted by Parliament, there is no fetter on the right of Punjab to use the river waters for irrigating lands within its territory to the exclusion of the other two States. Before 26th January, 1950, the Province of East Punjab enjoyed the same power under Sections 4 and 8(2) of the Indian Independence Act, 1947, read with Entry 19 in List II of the Government of India Act, 1935. That is why, contends Punjab, the rights of East Punjab over the waters of the eastern rivers were always recognised by the Government of West Punjab as well as the Dominion of Pakistan. It is, therefore, contended that like other natural resources, e.g. mines and minerals, river waters go with the territory in which they flow and no other State, much less non-riparian States like Haryana and Rajasthan, can lay a claim over those waters. The State of Punjab also disputes the claim put forth by Haryana that both Haryana and Rajasthan fall within the Indus Basin and are, therefore, entitled to share in the waters of the Ravi and the Beas which are tributaries of the Indus as co-riparian States. While denying the fact that Haryana

and/or Rajasthan fall within the Indus Basin, Punjab further contends that in order to lay a claim on the waters of the Ravi and the Beas what is relevant is to prove that they fall within the Basins of these two rivers, which they admittedly do not. Both Haryana and Rajasthan not being riparian States are therefore not entitled to any water beyond the committed use in regard to which Punjab has made a concession in paragraph 9.1 of the Punjab Settlement. It is further contended that the power to reorganise States conferred by Articles 3 and 4 of the Constitution cannot and does not extend to allocation or distribution of natural resources, including river waters, of one State to another. Needless to state that both Haryana and Rajasthan dispute the claim put forward by Punjab and contend that they are entitled to a share in the river waters by virtue of their being co-riparian States and under the 1955 agreement and the 1976 award as modified by the 1981 agreement. Punjab on the other hand contends that the aforesaid previous agreements and award stand superseded by the Punjab Settlement. Several objections and contentions have also been raised regarding the legality and validity of the said three documents which we have dealt with separately.

In view of the above, the core issue which figures prominently throughout the pleadings of the State of Punjab is whether the waters of the Ravi and the Beas belong absolutely to Punjab and neither Haryana nor Rajasthan has any claim or right therein. At the very outset when the State of Punjab filed its claim statement (Ex.P-1) it contended in unmistakable terms that it owns the waters of the said two rivers absolutely and to the exclusion of Haryana and Rajasthan and, therefore, the said two States can claim only that quantum of water as may be verified by the Tribunal under Item No.1 of the reference and the remaining waters would be at the disposal of Punjab for being used within its territory, except at best to the extent of 0.90 MAF allocable to Haryana under Section 78(1) of the Punjab Reorganisation Act. Therefore, the primary issue, purely and simply, is whether the claim of Punjab that it alone has proprietary rights in the waters of the Ravi and the Beas is well-founded. Put differently, whether Haryana and/or Rajasthan have no right whatsoever in the waters of the said Item No.1 of the reference? In order to appreciate this principal contention which runs like a golden thread throughout the fabric of Punjab's pleadings, it would be advantageous to bear in mind the legislative history.

LEGISLATIVE HISTORY

Having cleared the deck on the question of Haryana and Rajasthan being Basin States, we now proceed to examine Punjab's contention regarding its ownership in the river waters. For a proper appreciation of Punjab's point of view in this behalf, it is necessary to take stock of the Legislative history.

Before the Government of India Act 1919, no major irrigation project could be undertaken without the express sanction of the Secretary of State. In the case of a dispute between Provinces the matter had to be referred to the Secretary of State, whose decision was final and binding on the concerned Provinces. However, under the Government of India Act 1919, partial autonomy was granted to the Provinces and by virtue of Item 7 of Part II of Schedule I irrigation became a Provincial but reserved subject. Under the Government of India Act, 1935, the power to legislate on 'water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power' was transferred by Entry 19 of List II in the Seventh Schedule of the Act to the Provincial Government. The executive authority of the Province having been made co-extensive with its legislative power by virtue of section 49(2), but for the restrictions placed by sections 130 to 133 of the said Act, each Provincial Government would have been free to do what it thought fit with the water supplies within its Province. However, the aforesaid group of sections provided that if a Province lodged a formal complaint against another regarding interference with its water supplies, the Governor General was authorised to appoint a Commission to investigate the matter and submit a report, on the basis whereof the Governor General could pass final orders unless any party to the dispute desired a reference to His Majesty in Council for final orders. The orders made by the Governor General or His Majesty in Council, as the case may be, were binding on the Province affected thereby unless varied. This would show that no Province could take action as would affect prejudicially the interest of another Province or its people. The jurisdiction of the Federal Court or any other Court to entertain any suit or action in respect of such dispute which could be dealt with as stated above stood ousted.

By the Indian Independence Act, 1947, as from 15th August, 1947, British India came to be divided into two

independent Dominions of India and Pakistan. Section 2 defined the territories forming the new Dominions. By virtue of Section 4 the Province of Punjab as constituted under the Government of India Act, 1935 ceased to exist and instead two new Provinces known as West Punjab and East Punjab came to be constituted. Section 6 conferred on the legislature of each of the new Dominions full power to make laws for that Dominion including laws having extra territorial operation. Sub-section (2) of section 8, however, provided that each of the new Dominions and all Provinces and other parts thereof shall be governed as nearly as may be, in accordance with the provisions of the Government of India Act, 1935, unless any other provision was made by or in accordance with a law made by the Constituent Assembly of the concerned Dominion under sub-section (1) thereof. Simultaneously, by section 3(1) of the India (Provisional Constitution) Order, 1947, as from the appointed day, that is, 15th August, 1947, the Government of India Act, 1935 including the provisions thereof which had not come into force before the appointed day were applied to India with the omissions, additions, adaptations and modifications set out in the said Order and the Schedule thereof. Briefly stated in the absence of any other provision made by or in accordance with a law made by the Constituent Assembly, the provisions of the Government of India Act, 1935, subject to changes and modifications made by the Order or in the schedule thereto, applied even after the appointed date. Except for certain incidental changes necessitated on account of the formation of new Dominions no change of substance was made in Sections 130 to 133 of the Government of India Act, 1935.

The Constituent Assembly came into existence on 9th December, 1946. It was entrusted the formidable task of framing a Constitution for free India. On 29th August, 1947 a Drafting Committee under the Chairmanship of Dr. Ambedkar was appointed to scrutinise and revise the Draft Constitution prepared by the Constitutional Advisor Shri B.N. Rau. The Ambedkar Committee presented the Draft Constitution on 21st February, 1948. The said Draft Constitution contained Articles 239 to 242 which were in substance in *pari materia* with sections 130 to 133 of the Government of India Act, 1935, except that in place of the expression 'Governor General', the expression 'President' and in place of the expression 'Government of a Governor's Province', the expression 'Government of any State' came to be substituted along with certain other incidental changes. Article 239 enabled a State Government specified in Part I or Part II of the First Schedule to complain to the President if the interest of that

State or its inhabitants in the water from any natural source of supply was or was likely to be affected prejudicially. Article 240 enjoined upon the President to appoint a Commission to investigate into the complaint unless he was of opinion that the issues involved were not of sufficient importance to warrant such action. On receipt of the Commission's report, the President was required to make an Order in accordance therewith unless he sought the opinion of the Supreme Court on any important question of law, in which case, unless the Supreme Court agreed with the Commission, he was required to make a back reference to the Commission to modify its report in accordance with the opinion of the Supreme Court before implementing the same. Article 241 was couched in the same language as Article 239 except that it referred to a State in Part II of the First Schedule. Article 242 laid down that neither the Supreme Court nor any other Court shall have jurisdiction to entertain any action or suit in respect of any matter, if action in respect of that matter might have been taken under any of the three last preceding Articles by the Government of a State or the President. However, subsequently, on 9th September, 1949, Dr. Ambedkar proposed the replacement of Articles 239 to 242 by Article 242-A to provide for a simpler machinery for the settlement of water disputes. The new Article 242-A empowered Parliament to provide, by law, for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any inter-State river or river valley and to exclude such disputes or complaint from the jurisdiction of the Supreme Court or any other Court. The proposed change was accepted whereupon the said provision was renumbered Article 262 in the revised draft approved by the Drafting Committee. On a motion introduced by Dr. Ambedkar, the revised draft was put to vote and was adopted by the Constituent Assembly on 26th November, 1949. The Constitution came into force on 26th January, 1950.

Article 262 of the Constitution (which is verbatim the same as Article 242-A proposed by Dr. Ambedkar which was later re-numbered Article 262 in the revised draft) provides as under:-

"262. Adjudication of disputes relating to waters of inter-State rivers or river valleys. (1) Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of

the waters of, or in, any inter-State river or river valley.

(2) Notwithstanding anything in this Constitution, Parliament may by law provide that neither the Supreme Court nor any other Court shall exercise jurisdiction in respect of any such dispute or complaint as is referred to in clause(1)."

Reference may also be made to the relevant Entries in List I (Union List) and List II (State List) in the Seventh Schedule of the Constitution. Entry 56 of Union List reads as under:-

"56. Regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest."

It may incidentally be mentioned that Entry 97 in List I is a residuary entry covering any other matter not enumerated in either List II or List III (Concurrent List) of the Schedule. Article 248 which deals with the residuary powers of legislation confers on Parliament exclusive power to make any law with respect to any matter not enumerated in the Concurrent List or State List. It may be mentioned that there is no entry in the Concurrent List touching any of the matters arising for our consideration in this Reference. Entry 17 in List II (State List) reads as under:-

"17. Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power subject to the provisions of Entry 56 of List I."

Article 245 lays down that subject to the provisions of the Constitution, Parliament shall be competent to make laws for the whole or any part of the territory of India and the legislature of a State will be competent to make laws for the whole or any part of the State. Article 246(1) stipulates that Parliament shall have exclusive power to make laws with respect to any of the matters enumerated in the Union List. Similarly, Article 246(3) provides that the legislature of any State shall have exclusive power to make laws for such State or any part thereof with respect

to any of the matters enumerated in State List. By virtue of Article 246(2) both Parliament and the State Legislature may legislate on any matter enumerated in the Concurrent List. The extent of the executive power of the Union and the State is indicated by Articles 73 and 162 respectively. Article 73 provides that the executive power of the Union shall extend to the matters with respect to which Parliament has power to make laws provided that such power shall not, save as expressly provided in the Constitution or any law made by Parliament, extend in any state to matters with respect to which the Legislature of the State has also power to make laws. Article 162 states that the executive power of a State shall extend to the matters with respect to which the Legislature of State has power to make laws. On a conjoint reading of the aforesaid provisions it becomes immediately clear that but for the restriction placed by Article 262 of the Constitution any State Government would have felt free to take legislative or executive action in respect of waters of an inter-State river which would have the effect of prejudicially affecting the rights of another State or its inhabitants in those waters.

In exercise of power conferred by Article 262 of the Constitution, Parliament enacted the 1956 Act (The Inter-State Water Disputes Act, 1956) to provide for the adjudication of disputes relating to waters of the inter-State rivers and river valleys. Section 3 of the Act provides as under:-

"3. If it appears to the Government of any state that a water dispute with the government of another state has arisen or is likely to arise by reason of the fact that the interests of the State, or of any of the inhabitants thereof, in the waters, of an inter-State river or river valley have been or are likely to be, affected prejudicially by-

(a) any executive action or legislation taken or passed, or proposed to be taken or passed, by the other State, or

(b) the failure of the other state or any authority therein to exercise any of their powers with respect to the use, distribution or control of such orders, or

(c) the failure of the other State to implement the terms of any agreement relating to the use, distribution or control of such waters, the state Government may, in such form and manner as may be prescribed, request the Central Government to refer the water dispute to a Tribunal for adjudication."

The expression 'water dispute' is defined by Section 2(c) to mean any dispute or difference between two or more State Governments with respect to --

- "(i) the use, distribution or control of the waters of, or in, any inter-State river or river valley, or
- (ii) the interpretation of the terms of any agreement relating to the use, distribution or control of such waters or the implementation of such agreement, or
- (iii) the levy of any water rate in contravention of the prohibition contained in Section 7."

Section 4 provides for the constitution of a Tribunal. On the Constitution of the Tribunal, Section 5 enjoins upon the Central Government, subject to the prohibition contained in Section 8, to refer the water dispute and any matter appearing to be connected with, or relevant to, the water dispute to the Tribunal for adjudication. On such reference, the Tribunal has to investigate the matters and submit its report to the Central Government setting out the facts found by it and giving its decision on the matters referred to it. If, upon consideration of the decisions of the Tribunal, the Central Government or any state Government is of opinion that anything therein contained requires explanation or that guidance is needed upon any point not originally referred to the Tribunal, the Central Government or the State Government as the case may be, may, within three months from the date of the decision, again refer the matter to the Tribunal for further consideration; and on such reference, a further report giving such explanation and guidance as the Tribunal deems fit has to be forwarded to the Government. Section 6 requires the Central Government to publish the decision of the Tribunal in the Official Gazette. The decision of the Tribunal is made final and binding on all the parties to the dispute and such parties are duty bound to give effect to the decision. Section 7 prohibits any State

Government to impose or authorise the imposition of any seigniorage or additional rate fee, by whatever name called, in respect of the use of the river water by any other State or the inhabitants thereof. Section 8 which overrides section 3 and 5 precludes reference to a Tribunal of any dispute that may arise regarding any matter which may be referred to arbitration under the River Boards Act, 1956. Section 11 which begins with a non-obstante clause posits that neither the Supreme Court nor any other Court shall have or exercise jurisdiction in respect of any water dispute which may be referred to a Tribunal under this Act. Section 13 empowers the Central Government to make rules to carry out the purposes of the Act.

As pointed out earlier, Parliament inserted a new provision, Section 14, in the 1956 Act for the verification and adjudication of the matters referred to in paragraphs 9.1 and 9.2 respectively of the Punjab Settlement. The newly added section 14(1) empowers the Central Government, notwithstanding anything contained in the foregoing provisions of the Act to constitute a Tribunal under the Act for the verification and adjudication of the aforesaid matters. On the constitution of a Tribunal under sub-section (1), the provisions of sub-sections (2) and (3) of section 4, sub-sections (2), (3) and (4) of section 5 and sections 5A to 13 (both inclusive) of the Act relating to the constitution, jurisdiction, powers, authority and bar of jurisdiction apply subject to sub-section (3) thereof. Sub-section (3) of Section 14 enables the Central Government *suo-motu* or at the request of the concerned State Government, to refer the matters specified in paragraphs 9.1 and 9.2 of the Punjab Settlement to the Tribunal constituted under sub-section (1) thereof. Section 14(1) thus contemplates the constitution of a Tribunal under the Act, to be known as the Ravi and the Beas Waters Tribunal for the verification and adjudication of the matters specified in paragraphs 9.1 and 9.2 of the Punjab Settlement, notwithstanding anything contained in sections 1 to 13 of the said statute.

In exercise of the power conferred by Entry 56 in List I of the seventh Schedule of the Constitution, the Central Government enacted the River Boards Act, 1956 (No. XLIX of 1956) to provide for the establishment of River Boards for the regulation and development of inter-State rivers and river valleys. Section 2 makes a declaration that it is expedient in the public interest that the Central Government should take under its control the regulation and development of inter-State rivers and river

valleys to the extent provided by the said Act. Section 4 contemplates the establishment of River Board for advising Governments interested in relation to such matters concerning the regulation and development of inter-State river or river valley or any specified part thereof and for performing such other functions as may be specified by Notification. Section 14 empowers the Central Government, after consultation with the Governments interested, to empower the Board to perform all or such of the functions catalogued in section 13 as may be specified. These powers include advising the Government interested on any matter concerning the regulation or development of any specified inter-State river or river valley, preparation of schemes, including multi-purpose schemes for carrying out the said object, allocating among the Governments interested the costs of executing any such scheme, supervising the progress of the measures undertaken by the Governments interested and performing such supplemental, incidental or consequential functions as are considered necessary. For the purpose of efficiently performing the functions under the Act, the Board may be conferred all or any of the powers set out in section 16 of the Act. Section 22 provides for resolution of any dispute or difference arising between two or more Governments interested with respect to any advice tendered by the Board, any measures undertaken by any Government interested in pursuance of any advice tendered by the Board; the refusal or neglect of any Government interested to undertake any measures in pursuance of any advice tendered by the Board; the sharing of benefits or financial liabilities arising out of any advice tendered by the Board; or any other matter covered by the Act or touching or arising out of it, by a reference of the matter under dispute to arbitration of a person to be appointed by the Chief Justice of India from amongst persons who are or have been Judges of the Supreme Court or are Judges of a High Court. The decision of the Arbitrator is made final and binding on the parties to the dispute and they are under an obligation to give effect thereto. The Central Government is empowered to make rules on any of the matters set out in sub-section (2) thereof to carry out the purposes of the Act. In exercise of this power the Central Government has made rules called the River Boards Rules, 1958. Rule 11 sets out the matters in respect of which the Board may tender advice to the Government interested; rule 12 indicates the matters in respect of which the Board may require Government interested to furnish information and rule 13 provides for the assistance to be rendered by the Central Government to Government interested for the execution of any scheme prepared by the Board.

CENTRAL ASSISTANCE

We have noticed that under the Government of India Act, 1935, (Entry 19, List II, Seventh schedule) irrigation was a provincial subject. It continues to be a State subject under the Constitution by virtue of Entry 17, List II in the Seventh Schedule notwithstanding Entry 56 in List I of the same Schedule. Since there is no declaration as required by the said entry in the Union List and since the declaration under section 2 of the River Boards Act, 1956 is limited to the extent provided by that enactment, the State Government's power to legislate under Entry 17 in List II, though subject to Entry 56 in List I, has remained unfettered. Even though the Central Government enacted the River Boards Act as far back as in 1956, it has remained on paper only as no River Board has thus far been appointed under the said statute. It is thus clear that in the matter of utilisation of water resources within a State, the Constitution casts an obligation on the States and assigns it an important role to play in the agricultural and industrial sectors. Since most of the rivers in the country flow through two or more States, notwithstanding the legislative power conferred on the States by Entry 17, List II, in view of Article 262, the Central Government has to play the important role of overseeing the activities of the concerned States to avoid disputes, differences and frictions between the States through which the river flows. The State Governments have to so utilise the waters within the State or plan projects for the better and more effective use of the water supplies in a manner as not to prejudice the interest of the upstream or downstream States which would give rise to a dispute or complaint under Article 262 read with the provisions of the 1956 Act. It is in this field that the Central Government has to play an effective role. Even though the Constitution does not make any specific provision conferring power on the Central Government in this behalf, reference may be made to Entry 20, List III, in the Seventh Schedule, entitled 'Economic and Social Planning' read with Article 246(2) of the Constitution. Besides, Article 248 grants exclusive power to the Parliament to make any law with respect to any matter not enumerated in the State List or the Concurrent List.

Since most of our rivers run through two or more States, the Central Government has the onerous duty to co-ordinate the activities of the concerned States in regard to the development of river resources. The concerned Ministry of the

Central Government has, therefore, to lay down certain norms and guidelines which the State Governments would be expected to follow to receive technical and financial assistance from the Central Government. To promote understanding between the concerned States and to mediate to resolve disputes and differences between the States, it is very often called upon to perform difficult and delicate tasks, as in the case of the 1955 and 1981 agreements/decisions. The role of the Central Government in the field of irrigation underwent a radical change after independence having regard to the fact that our economy was mainly based on agriculture. An autonomous body called the Central Board of Irrigation set up in 1927 comprising technical experts from the Central and concerned State Governments was enlarged to cover both the fields of Irrigation and Power and was renamed the Central Water and Power Commission. This body comprises experts from both the water and power fields and is charged with the responsibility of advising and co-ordinating schemes for conserving and utilising water resources put up by concerned States. Being the highest technical body, the Central Government as well as the Planning Commission attach great weight to its views. The Central Board of Irrigation and Power, also an autonomous advisory body, promotes research on irrigation and hydro-electric power projects, publishes literature on the subject and provides a forum for exchange of views on technical aspects.

Over and above providing technical assistance, the Central Government also extends a helping hand in financing irrigation and power projects planned by State Governments. Since we attained independence we have given high priority to irrigation and power for our economic growth. This has given a fillip to our agricultural economy and has enabled us to take long strides in the field of industrialisation. Our Five Year Plans have paid special attention to the needs of the country in these fields. The Planning Commission, on the basis of technical advice from the Central Water and Power Commission on the feasibility and viability of the Projects submitted by concerned State Governments, gives financial assistance to the States for implementing the projects. Without financial assistance from the Central Government, it would be well nigh impossible for the States to implement their projects from their own funds. That is the reason why all State Governments are virtually obliged to submit their Project Reports on various schemes for approval by the Central Government, which gives the Central Government an opportunity to ensure that the proposed project does not in any manner prejudice the interests of another

State. If there is any possibility of friction, the Central Government takes the opportunity to arrange an inter-State Conference and have the difference ironed out with the help of its good offices. Thus, even though under Entry 17, List II, the State Government has exclusive power to legislate on 'water', the said power is circumscribed by the need to approach the Central Government for finance to implement the project. It is at that stage that the Central Government can before sanctioning the project, ask the State Government to drop irksome provisions likely to conflict with the interest of a neighbouring State and thereby avoid friction and help maintain good neighbourly relations. Since the major part of the financing is done by the Central Government, no construction work on the project is commenced unless the project receives its approval, e.g. Bhakra Nangal Project, Beas Projects, Unit I and II, etc. In order to ensure proper utilisation of its funds, the Central Government also insists on the setting up of Control Boards, e.g. the Bhakra Management Board, Tungabhadra Control Board, Rajasthan Canal Board, Beas Construction Board, Bhakra-Beas Management Board, etc., for the administration, maintenance and efficient and economical execution of various works under the joint supervision of Central and State officials. It is thus clear that although under the Constitution, the State Government enjoys unfettered legislative competence to enact legislation under Entry 17, List II, Seventh Schedule, the same is controlled in view of the State's dependence on the Central Government for finance.

THE CORE QUESTION

Our Constitution broadly adopts the scheme of the Government of India Act, 1935, which in turn was an improved version of the Australian and the Canadian Constitutions. Before the enactment of the Government of India Act, 1935, the governmental power was highly centralised in the Secretary of State but under the reforms introduced subsequently keeping in view the declared policy of Parliament to provide development of self-governing institutions, greater independence was conferred under the Government of India Act, 1919, to Provinces in provincial matters to achieve crucial decentralisation of governmental powers, subject of course to the overall superintendence by the Governor General in Council or Secretary of State, as the case may be. The newly introduced section 45-A provided for classification of subjects as Central and Provincial in relation to governmental functions. It was in pursuance of

this scheme that partial autonomy was granted to the Provinces and irrigation became a provincial but a reserved subject under item No.7 Part II Schedule I of the Act. However, by virtue of Entry 19 in List II of the Seventh Schedule to the Government of India Act, 1935, 'water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power' was made a provincial subject. So also, under Entry 17 of List II of the Seventh Schedule to our Constitution, the very same subject, subject of course to Entry 56 in List I, is a State subject. There was no entry similar to Entry 56 in list I conferring power on the Central Government in the matter of regulation and development of inter-State rivers and river valleys in the Government of India Act, 1935. Secondly, sections 130 to 133 of the Government of India Act, 1935, which laid down the procedure for resolving disputes arising on account of interference with water supplies by one province affecting another were replaced by Article 262 of the Constitution which provides for adjudication of disputes relating to waters of inter-State rivers and river valleys. Yet another difference to be noticed is with regard to the residuary powers; under the Government of India Act, 1935, these powers were not conferred on the Central or Provincial legislatures but under our Constitution they have been conferred on the Union of India by virtue of Article 248 read with Entry 97 in List I of the Seventh Schedule. Just as by section 49(2) of the Government of India Act, 1935, the executive authority of the provinces was made co-extensive with its legislative power, so also under Article 162 of the Constitution the executive power of the State extends to all matters with respect to which the State legislature is competent to make laws. Since no declaration is made as required by Entry 56 in List I, the powers conferred on the State under Entry 17 List II of the Constitution remain unfettered. It is, therefore, clear that in the absence of a declaration and enactment under Entry 56 List I, the State can enact a law under Entry 17 in List II without the inhibition of any law relating to the regulation and development of inter-State rivers or river valleys but subject to Article 257 (1) of the Constitution. The question, however, is whether legislative competence in a State to enact a law in regard to the subject covered under Entry 17 of List II confers proprietary/ownership rights in the river water flowing in that State?

A river which lies from its source to its mouth in the territory of one State is said to be an intra-State river whereas a river which separates or flows through the

territory of two or more States is termed an inter-State river. By this definition there can be no doubt that both the Ravi and the Beas are inter-State rivers. In fact, so far as the Ravi is concerned, since it enters Pakistan at some place or the other, it can be said to be an international river but since under the Indus Waters Treaty the waters of the said river have been reserved exclusively for India, we are free to make full and optimum use thereof as we like without fear of any objection from Pakistan.

Before partial autonomy was granted under the Government of India Act, 1919, the power was centralised in the Secretary of State for India. Under Entry 19 of List II under the Government of India Act, 1935, 'water' became a provincial subject meaning thereby that the provincial legislature could enact a law on that subject. The entry was in fact wider in scope than the one under Entry 17 of List II of the Constitution because the latter is made subject to any law made by Parliament in regard to the regulation and development of inter-State rivers or river valleys under Entry 56 in List I. In *Prasannakumar Das v. State of Orissa*, A.I.R. 1956 Orissa 114, the High Court held that Entry 17 of List II was wider in scope than Entry 56 in List I and included the subject contemplated by the latter. The correctness of this statement was doubted before us but we need not enter into that field because in the absence of any declaration or enactment under Entry 56 of List I, the question does not arise for decision. Suffice it to say that in the absence of the field having been occupied by law under Entry 56 in List I, the State Legislature was competent to enact law under entry 17 of List II without the inhibition of an existing law under the former Entry. But Article 257(1) imposes an obligation that the State must so exercise its executive power as not to impede or abridge the executive power of the Union which includes giving of directions. If there is an enactment made under Entry 56 in List I any State Legislation, being subject to such enactment, if inconsistent therewith would be repugnant to Article 254(2) of the Constitution. But the moot question is, whether the power conferred by Entry 17 of List II on the State Legislature, assuming its scope and ambit is as wide as stated by the Orissa High Court, can be equated to conferment of ownership rights in river waters in the concerned State? If the power to legislate amounts to conferment of ownership rights treating flowing water as a property which could be owned, the same right could be said to have existed in the provincial Government under Entry 19 of List II of the Government of India Act, 1935. On that premise,

the property would vest in ownership in the State Government by virtue of Articles 294 and 296 and could be disposed of under Article 298 of the Constitution. To buttress this argument attention was also invited to the Preamble and section 5 of the Northern India Canal and Drainage Act, 1873 (Act 8 of 1873) which read as under:-

Preamble

"Whereas, throughout the territories to which this Act extends, the State Government is entitled to use and control for public purposes the water of all rivers and streams flowing in natural channels and of lakes and other natural collections of still water; and whereas it is expedient to amend the law relating to irrigation, navigation and drainage in the said territories."

Section 5

"Whenever it appears expedient to the State Government, that the water of any river or stream flowing in a natural channel, or of any lake or other natural collection of still water, shall be applied or used by the State Government for the purpose of any existing or projected canal or drainage work, the State Government may by notification in the Official Gazette, declare that the said water will be so applied or used after a day to be named in the said notification not earlier than three months from the date thereof."

The words 'Provincial Government' were substituted by the word 'Government' by the Adaptation of Indian laws Order, 1937 and later by the Adaptation of laws Order, 1950 the said words 'Provincial Government' were replaced by the words 'State Government'. This only shows that before the Government of India Act, 1935, the right to the usufruct of running water vested in the Central Government and thereafter in the Provincial Government and now in the State Government. Similar provision was also made in section 5 of the Bombay Irrigation Act, 1872. Section 2 of the Indian Easements Act, 1882 expressly saves the right of the

Government to regulate the collection, retention and distribution of waters of rivers from the application of the statute. But the question which still survives is whether the power to legislate conferred on the Provincial Government under the Government of India Act, 1935 and the State Government under the Constitution vests ownership rights in water flowing in its natural channels within the State in the State Government or merely empowers the State Government to control the use of water resources for domestic and irrigation purposes in a manner so as not to give rise to a water dispute within the meaning of section 2(c) of the 1956 Act?

As under the Government of India Act, 1935, even though 'water' became an exclusive Provincial subject, subject of course to sections 130 to 133 thereof, so also under our Constitution, Entry 17 in List II, the State Legislature is competent to enact law in respect of 'Water that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power' but that law must be consistent with Article 262 of the Constitution. Power to legislate ought not to be confused with ownership or proprietary rights in respect of the subject matter because there are several entries in List II of the Seventh Schedule which also empower legislation in respect of properties which do not belong to the State. Therefore, merely because the Constitution permits the State Legislature to legislate on 'water', it is not possible to infer that it is State property to the exclusion of others.

In *Attorney General for the Dominion of Canada vs. Attorney General for the Provinces of Ontario, Quebec, and Novo Scotia*, (1898) A.C. 700, at page 709, the Privy Council observed as under:-

"It must also be borne in mind that there is a broad distinction between proprietary rights and legislative jurisdiction. The fact that such jurisdiction in respect of a particular subject-matter is conferred on the Dominion Legislature, for example, affords no evidence that any proprietary rights with respect to it were transferred to the Dominion. There is no presumption that because legislative jurisdiction was vested in the Dominion Parliament proprietary rights were transferred to it."

This view was quoted with approval in *A.M.S.S.V.M. & Co. Vs. State of Madras* A.I.R. 1954, Madras 291 at 301 (Column 2 penultimate paragraph). On this principle it would follow that the right to legislate on 'water' cannot confer proprietary/ownership rights in the waters of the two rivers on the State of Punjab.

There is another reason which also militates against the view of the State owning proprietary rights in river waters. Even in ancient times flowing water was assimilated to the air and the sea. As a commodity it was common to all. A river was *res publica iure gentium*, open to navigation and fishing to all citizens. It was only feudal Lords who perhaps claimed absolute property rights over that part of the stream which crossed their territories. There is nothing in law for any one including the State to claim absolute proprietary rights in river waters. Running water has, therefore, rightly been called 'a negative community' as it belongs to no one and is not susceptible to absolute ownership rights. The only right which a State can legitimately claim in river waters flowing within its territory is the right to make use thereof provided such use does not affect adversely the right which another State has to make use of the said waters. Put differently, the use that is made must be such as not to give rise to a 'water dispute' within the meaning of section 2(c) of the 1956 Act enacted in pursuance of Article 262 of the Constitution.

Since inter-State rivers flow through two or more States, it is apparent that the most immediate users of the waters of such rivers are the riparians, both governmental and non-governmental. It is obvious that Governments acting on behalf of their citizens and bearing in mind their needs and the usage served by the river supplies are most likely users of the river waters. Besides State Governments, non-governmental agencies such as farmers, factory owners, industrial establishments, etc., also participate in the use of river waters. This is so because such users by virtue of the location of their lands, factories or industrial establishments are in a most advantageous position to enjoy the usufruct, namely, flowing river water. The State Governments by virtue of the geographical location of their territories have the advantage to plan the supply of river waters within their territory for optimum utilisation for the purposes of irrigation, generation of power, navigation and other domestic and municipal uses. The extent of use by each State would depend on several factors like climatic conditions, rainfall, character of soil, needs of farmers and industrial and economic development.

In arid States such as Rajasthan, river water would be mainly used for irrigation whereas in industrially developed States, more water would have to be diverted to meet the needs of industries. Riparians on account of their advantageous geographical situation and possession of lands along the course of rivers tend to present exaggerated claims to the use of river waters for the purpose of irrigation, generation of power, conservation for multipurpose developments and exhibit a marked tendency to monopolise the use of river waters to the exclusion of their neighbours. As water is a scarce commodity and is often not sufficient to satisfy the needs of all desirous of making use thereof, it is not unusual for the participants to either fix the priorities for use inter se or allocate the quantum of water to be used from the available supplies amongst the participants. First comes the use of water for domestic and municipal purposes, second for agriculture and stock-raising in arid and semi-arid areas and then for industrial purposes. Of course, this normal order of precedence would ultimately have to depend on how best the river can serve the local community. The degree of importance of use of water will necessarily vary from place to place and from time to time and the priorities fixed can only be ad hoc as the same will have to undergo changes with the passage of time and changing conditions. In so far as the three States before us are concerned, excluding the use of water for domestic and municipal purposes, the highest priority is accorded to irrigation in varying degrees. Our endeavour at this stage is to emphasise that it is essentially a question of 'use' of available supplies by riparians and not claiming proprietary or ownership rights in flowing waters.

This very aspect of proprietary/ownership rights in river waters was dealt with by the Krishna Water Disputes Tribunal in Chapter XI Volume I of its Report. Relying on the Report of the Joint Committee on Indian Constitutional Reforms 1934 Vol. I Part I, para 225, it observed as under:-

"No State has a proprietary interest in a particular volume of water of an inter-State river on the basis of its contribution or irrigable area. Rules of law based on the analogy of private proprietary interests in water do not afford a satisfactory basis for settling inter-State Water disputes."

The Narmada Water Disputes Tribunal considered this matter in some detail in paragraphs 8.8.1 to 8.8.4 (Page 114) in Chapter VIII Volume I of its Report, the relevant part whereof reads as under:

8.8.1. "As a matter of law, no State has a proprietary right in a particular volume of water of an inter-State river on the basis of its contribution to the available flow or drainage area. It is well-established that the waters of a natural stream or other natural body of water are not susceptible of absolute ownership as specific intangible property."

Quoting Wiel who had set out the 'first principles' of the law of running waters, the Tribunal observed--

"Running water in natural stream is not the subject of property, but is a wandering, changing thing without an owner, like the very fish swimming in it, or like wild animals, the air in the atmosphere, and the negative community in general."

Paragraph 8.8.2 reads as under:-

"In the Institutes of Justinian it is declared concerning things; "They are the property of some one or no one." As further expressed in the Institutes, "By natural law these things are common to all, viz., running water, the sea and as a consequence the shores of the sea." Commenting on this Vinnius says; "Things are such because, while by nature being things everyone has use for, they have not, as yet, come into the ownership or control of anyone." That is they are the property of no one, within the first quotation from the Institutes."

Dealing with the principle of 'Negative Community', the said Tribunal observed as under:-

8.8.3 "This classification of running water with what has been called 'the negative community', such as the air runs through the civil law authorities."

and then proceeds to quote from Potheir and follows it up by the following statement in paragraph 8.8.4:-

"The civil Law Principle that running water was in the 'negative community' passed into English Common Law. In *Ambrey Vs. Owen*, Park B observed:-

"The right to have the stream to flow in its natural state without diminution or alteration is an incident to the property in the land through which it passes; but flowing water is public juris, not in the sense that it is a *bonus vaccans*, to which the first occupant may acquire an exclusive right, but that it is public and common in this sense only, that all may reasonably use it who have a right of access to it, that none can have any property in the water itself, except in the particular portion which he may choose to abstract from the stream and take into his possession, and that during the time of his possession only....But each proprietor of the adjacent land has the right to the usufruct of the stream which flows through it."

We are in respectful agreement with the above enunciation of law and we do not think we can usefully add to the same. The effect of Entry 17 in List II is only to confer legislative power on the State regarding the use of the waters within its territory. In view of the above discussion, we are of the view that Punjab's contention that it owns the waters of the two rivers, the Ravi and the Beas, in their entirety is unsustainable.

There was considerable argument on the question whether our Constitution adopts a federal, quasi-federal or unitary form of Government. Mr. Rao submitted that the express provisions in the Constitution which compare favourably with the scheme adopted by the Government of India Act, 1935, in regard to the distribution of both executive and the legislative powers between the Union and the States are indicative of vesting of sovereign powers in States in regard to matters covered under List II and since 'water' is a State subject, the State has absolute power to deal with it in any manner it likes. According to him the Constitution of India has set up a system of Government in

which the Union and the State derive their respective powers from the Constitution and exercise them in their own right. Under the scheme of the Constitution, in our Parliamentary system, submitted counsel, the States are not subordinate to the Union and in the respective fields assigned to them by the Constitution, they exercise sovereign powers and enact legislation according to their own choice. Therefore, in the matter of utilisation of water from the Ravi-Beas System also, Punjab as the last down-stream State is free to enact legislation under Entry 17 in list II for full utilisation of water regardless of the claim put forward by the other two States. In fact, on the interpretation we have placed on the terms of reference and paragraphs 9.1 and 9.2 of the Punjab Settlement, the question really does not arise but as considerable argument was advanced and a host of case law was cited, we may refer to it in brief.

Before the administrative reforms were introduced in 1921 under the Government of India Act, 1919, the administration of British India was completely unitary and the powers were highly centralised in the Governor General even though for administrative purposes the country was divided into administrative units, each unit being placed under the administrative control of Governors, who were answerable to the Governor General. Under the reforms effected by the Government of India Act, 1919, limited decentralisation of power took place but the unitary form of governance did not cease. Under the Government of India Act, 1935, legislative functions were more or less clearly demarcated in List I and List II of the Seventh Schedule between the Central and provincial Governments. What was sought to be achieved was to unite the Indian princely States and Provinces into a Federation but the response from the former was not forthcoming. Under the scheme of the Statute even though different departments of the Government were administered by elected representatives, the discretionary power of the Governor remained intact and was subject to the powers of the Central Government which functioned on behalf of the British Crown.

Then came the Indian Independence Act, 1947, which brought into existence the Dominion of India which was empowered to make laws for the Dominion. The responsibility of the British Parliament for the governance of the country ceased and the Crown's suzerainty over the princely States ended. Bearing in mind the scheme of the governance of the country then prevailing, with a view to avoiding disturbance in the governmental functioning of this vast country, our Constitution

makers wisely adopted the scheme of the Government of India Act, 1935, in preparing the Constitution.

Article 1 of our Constitution says, India, that is Bharat, shall be a Union of States. Article 2 empowers Parliament to admit into the Union, or establish, new States on such terms and conditions as it thinks fit. Under Article 3 Parliament is empowered by law to form a new State by separation of territory from any State or by uniting two or more States or parts of States or by uniting any territory to a part of any State: increase the area of any State: diminish the area of any State: alter the boundaries of any State: or alter the name of any State. The proviso to that Article requires that the Bill for the purpose shall not be introduced in either House of Parliament except on the recommendation of the President and unless, where the proposal contained in the Bill affects the area, boundaries or name of any of the States, the Bill has been referred by the President to the Legislature of that State for expressing its views thereon. On a conjoint reading of these Articles, it becomes clear that Parliament has the right to form new States, alter the areas of existing States, or the name of any existing State. Under Article 2 it is left to the Parliament to determine the terms and conditions on which it may admit any area into the Union or establish new States. In doing so, it has not to seek the concurrence of the States whose area, boundaries or names are likely to be affected by the proposal. All that the proviso to Article 3 requires is that in such cases the President shall refer the Bill to the legislatures of the concerned States who are likely to be affected to express their views. Once the views of the States are known, it is left to the Parliament to decide on the proposed changes. The Parliament can, therefore, without the concurrence of the concerned State or States change the boundaries of the State or increase or diminish its area or change its name. These provisions show that in the matter of constitution of States, Parliament is paramount. This scheme substantially differs from the federal set up established in the United States of America. The American States were independent sovereign States and the territorial boundaries of those independent States cannot be touched by the Federal Government. It is these independent sovereign units which together decided to form into a Federation unlike India where the States were not independent sovereign units but they were formed by Article 1 of the Constitution and their areas and boundaries can be altered, without their concurrence, by Parliament. It is well-known that since independence, new States have been created, boundaries of existing States have been

altered, States have been re-named and individual States have been even extinguished by Parliamentary legislation.

Our founding fathers did not deem it wise to shake the basic structure of Government and in framing the Constitution followed the pattern of the Government of India Act, 1935. Some of the subjects of common interests, were however, transferred to the Union List, thereby enlarging the powers of the Union to enable speedy and planned economic development of the nation. The Provinces which existed under the Government of India Act, 1935, were not sovereign like the American States and hence they had not parted with any power to the Union under the scheme of our Constitution. No doubt, the scheme for the distribution of powers between the Union and the States was maintained except for some of the matters of common interest being transferred from the Provincial List to the Union List thereby strengthening the administrative control of the Union. It is in this context that the Supreme Court in *State of West Bengal Vs. Union of India*, (1964) 1 S.C.R. 371 at 397 observed:—

"The exercise of powers, legislative and executive in the allotted fields is hedged in by the numerous restrictions so that the powers of the States are not co-ordinate with the Union and are not in many respects independent."

In *Union of India Vs. H.S. Dhillon*, A.I.R. 1972 S.C. 1061 at 1067 (paragraph 14), another feature in regard to the distribution of legislative power was pointed out. It was stated that under the Government of India Act, 1935, the residuary powers were not given either to the Central Legislature or to the provincial Legislatures. Under the Constitution, by virtue of Article 248, read with Entry 97 in List I, the residuary powers have been conferred on the Union.

The preamble of our Constitution shows that it is the people of India who resolved to constitute India into a Sovereign Socialist Secular Democratic Republic and promised to secure to all its citizens Justice, Liberty and Equality and to promote among them all Fraternity assuring the dignity of the individual and the unity and integrity of the Nation. In the people of India, therefore, vests the legal sovereignty when the political sovereignty is distributed between the Union and the States. Article 73 extends the executive power of the Union to the matters with respect to which Parliament has power to make

laws and to the exercise of such rights, authority and jurisdiction as are exercisable by the Government of India by virtue of any treaty or agreement. True, the executive power which is made co-extensive with Parliament's power to make laws shall not, save as expressly provided by the Constitution or in any law made by Parliament, extend in any State to matters with respect to which the Legislature of the State has also power to make laws. Article 162 stipulates that the executive power of a State shall extend to the matter with respect to which the Legislature of the State has power to make laws provided that in any matter with respect to which the legislature of a State and Parliament have power to make laws, the executive power of the State shall be subject to, and limited by, the executive power expressly conferred by the Constitution or by any law made by Parliament upon the Union or authorities thereof. We have also noticed that the executive power of every State must be so exercised as not to impede or prejudice the exercise of the executive power of the Union. The executive power of the Union also extends to giving such directions to a State as may appear to the Government of India to be necessary for those purposes and as to the construction, maintenance of means of communication declared to be of national or military importance and for protection of railways. We have also noticed that the States have to largely depend on financial assistance from the Union. States also receive a share in certain taxes levied and collected by the Union. We have dealt with this aspect in some detail earlier. Article 275 also provides for the giving of grants by the Union to certain States. There is, therefore, no doubt that States depend for financial assistance upon the Union since their power to raise resources is limited. We have pointed this out in some detail earlier in so far as it relates to irrigation and power projects. Even though water and irrigation are State subjects under Entry 17 in List II and ordinarily State Governments are entitled to formulate schemes for development and utilisation of water resources subject to Entry 56 in List I, in view of Entry 20, in List III, as economic planning is a concurrent subject, we have pointed out that every such project must receive the sanction of the Central Government for its financial assistance since discretionary power under Article 282 to make grants for public purposes is vested in the Union, whether it be in regard to one in respect to which Parliament or State legislature can make laws. We have also emphasised earlier that without adequate grant from the Government of India, it would be well-nigh impossible to implement the projects planned by State Governments. It is only after a project is finally sanctioned by the Central Government

that the State Government can execute the same which demonstrates the control that the Union can exercise even in regard to a matter on which the State can legislate. Taking all these and several other limitations into consideration, the Supreme Court in the case of State of West Bengal (supra) came to the conclusion that the Constitution of India was not truly federal in character. By majority it held that the Union was entitled to acquire certain coal bearing areas belonging to the State of West Bengal.

In State of Rajasthan Vs. Union of India, A.I.R. 1977 S.C. 1361 - (1978) 1 S.C.R.1) Beg. C.J., observed in paragraph 51 as under:-

"A conspectus of the provisions of our Constitution will indicate that whatever appearances of a federal structure our Constitution may have, its operations are certainly, judged both by the contents of power which a number of its provisions carry with them and the use that has been made of them, more unitary than federal."

Further, in paragraph 52, the learned Chief justice proceeded to State:-

"In a sense, therefore, the Indian 'Union is federal. But, the extent of federalism in it is largely watered down by the needs of progress and development of a country which has to be nationally integrated, politically and economically co-ordinated, and socially, intellectually and spiritually uplifted. In such a system, the States cannot stand in the way of legitimate and comprehensively planned development of the country in the manner directed by the Central Government."

Pointing out that national planning involves disbursement of vast amount of money collected as taxes from citizens spread over all the States and placed at the disposal of the Central Government for the benefits of the States, His Lordship made the following observations in paragraph 56 of the judgment:-

"If then our Constitution creates a Central Government which is 'amphibian', in the sense

that it can move either on the federal or unitary plane, according to the needs of the situation and circumstances of a case, the question which we are driven back to consider is whether on assessment of the 'situation' in which the Union Government should move either on the Federal or Unitary plane are matters for the Union Government itself or for this Court to consider and determine."

When the Union Government issued a notification dated 23rd May, 1977 constituting a Commission of Inquiry in exercise of its power under section 3 of the Commissions of Inquiry Act, 1952, to inquire into certain allegations made against the Chief Minister of the State, the State of Karnataka instituted a suit under Article 131 of the Constitution challenging the legality and validity of the notification as unjustifiable trespass upon the domain of State powers. While dealing with the issues arising in that suit - *The State of Karnataka Vs. Union of India* A.I.R. 1978 S.C. 68 - (1978) 2 S.C.R.1) - Beg, C.J., once again examined the relevant provisions of the Constitution and the Commission of Inquiry Act, 1952, and observed in paragraph 33 as under:-

"Even in countries with undiluted unitary systems of Government there is devolution of powers of local self-Government for restricted purposes. In our country, there is, at the top, a Central or the Union Government responsible to Parliament, and there are, below it, State Governments, responsible to the State Legislatures, each functioning within the sphere of its own powers which are divided into two categories, the exclusive and the concurrent. Within the exclusive sphere of the powers of the State Legislature is local Government. And, in all States there is a system of local Government in both Urban and Rural areas, functioning under State enactments. Thus, we can speak of a three tier system of Government in our country in which the Central or the Union Government comes at the apex....."

Reference was then made in paragraph 38 to the decision in *State of Rajasthan* (supra) and the passage extracted earlier therefrom was quoted in paragraph 39 with approval. In paragraph 98, after

pointing out that our Constitution has, in it, not only features of a pragmatic federalism which, while distributing legislative powers and indicating the spheres of Governmental powers of State and Central Governments, is overlaid by strongly 'unitary' features, particularly exhibited by lodging in Parliament the residuary legislative powers, and in the Central Government the executive power of appointing certain constitutional functionaries and issuing appropriate directions to the State Governments and even displacing the State Legislatures and the Governments in exceptional circumstances, His Lordship proceeded to observe in paragraph 42 as follows:-

"But, after the Constitution of our Republic, came the gradual disappearance of princely States and a unification of India in a single polity with duality of agencies of Government only for the purposes of their more effective and efficient operations under a Central direction. It was, more or less, an application of the principle of division of labour under at least Central supervision. In other words, the duality or duplication of organs of government on the Central and State levels did not reflect a truly federal demarcation of powers based on any separatist sentiments which could threaten the sovereignty and integrity of the Indian Republic to which members of our Constituent Assembly seemed ardently devoted, particularly after an unfortunate division of the country with certain obviously disastrous results."

Again a Division Bench of the Madras High Court in *N. Karunanidhi Vs. Union of India*, A.I.R. 1977 Madras 192 while dealing with the contention that the Constitution is a federal one and that the States are autonomous having definite powers and independent rights to govern, and the Central Government has no right to interfere in the governance of the State, observed as under:-

"There may be a federation of independent States, as it is in the case of the United States of America. As the name itself denotes, it is a Union of States, either by treaty or by legislation of the concerned States. In those cases, the federating units gave certain powers to the federal Government and retained

some. To apply the meaning to the word 'federation' or 'autonomy' used in the context of the American Constitution, to our Constitution will be totally misleading."

After tracing the history of the governance of the country under the British rule till the framing of our Constitution, which we have already done earlier, the Court proceeded to add as follows:-

"The feature of the Indian Constitution is the establishment of a Government for governing the entire country. In doing so, the Constitution prescribes the powers of the Central Government and the powers of the State Governments and the relationship between the two. In a sense, if the word 'federation' can be used at all, it is a federation of various States which were designated under the Constitution for the purpose of efficient administration and governance of the country. The powers of the Centre and the States are demarcated under the Constitution. It is futile to suggest that the States are independent, sovereign or autonomous units which had joined the federation under certain conditions. No such State ever existed or acceded to the Union."

The High Court, therefore, came to the conclusion that according to our Constitution the State as such has no inherent sovereign power or autonomous power which cannot be encroached upon by the Centre. The very fact that under our Constitution, Article 3, Parliament may by law form a new State by separation of territory from any State or by uniting two or more States or parts of States or by uniting any territory to a part of any State, etc., militates against the view that the States are sovereign or autonomous bodies having definite independent rights of governance. Since we have seen that in certain circumstances the Central Government can issue directions and in emergency conditions assume far-reaching powers affecting the States as well, and the fact that the President has powers to take over the administration of States demolishes the theory of an independent or autonomous existence of a State. The observations made by the Madras High Court in this judgment were approved by the Supreme Court in the case of State of Karnataka (supra) vide paragraph 138 at page 125 of the report.

Mr. Rao, however, invited our attention to a few decisions rendered by the Supreme Court of the United States in support of his contention that each State owns the river waters within its jurisdiction on behalf of its people and no other State can lay a claim thereon. In this behalf reliance was placed on *Issac R Saith Vs. State of Maryland*, 15 L.Ed.269, *James E. Mumford Vs. Charles Otis Wardwell*, 18 L.Ed. 756 at 761, *James W. Mc. Cready Vs. Commonwealth of Virginia*, 24 L.Ed. 248, *The Abby Dodge Vs. United States*, 56 L.Ed. 390 and *Port of Seattle Vs. Oregon and Washington Railroad Company*, 65 L.Ed. 500, wherein it was held that the right of the United States in the navigable waters within the several States is limited to the control thereof for purposes of navigation; and, subject to that right, each State became, upon its Organisation as a State, the owner of the navigable waters within its boundary and of the land under the same. These decisions show that in the United States the principle has long been settled that each State owns the beds of all tide waters within its jurisdiction unless they have been granted away. In the absence of grant, this remained under the exclusive control of the State which has consequently the right in its discretion, to appropriate its tide waters and their beds to be used by its people so far as it may be done without obstructing the superior right of the United States for navigation. In our view, these decisions are of no assistance and cannot be applied to Indian conditions in view of the great distinguishing feature that American States which were originally independent and sovereign units had merged into a federation retaining their independence and sovereignty except to the extent the same was granted away under an agreement or treaty to the federation. At the most, the American decisions can offer guidelines on principles of equitable distribution of river waters where conflicting claims are put forth by interested States.

Reliance was also placed on *Hudson County Water Company Vs. Robert H. Mc Carter*, 52 L.Ed. 828 but, in our view, the same has no application. In that case the State of New Jersey, for the preservation of fresh water of the State for the health and prosperity of its citizens, passed a law making it unlawful for any person or Corporation to divert water in any manner whatsoever outside the State. The opposite party had entered into a contract with the City of New York to furnish a supply of water of not less than 3,000,000 gallons a day. The action was commenced to prohibit the diversion of waters of the Passaic river out of the State. The short question which arose for

consideration was, whether the State of New Jersey was entitled to enact the impugned legislation which prohibited diversion of water from the Passaic river as contracted. The Court came to the conclusion that the State of New Jersey was entitled in exercise of its sovereign powers to protect the interest of the public in the waters of the Passaic river. It further held that one whose rights are subject to State restriction, cannot remove them from the power of the State by making a contract about them. In such cases, the contract will carry with it the infirmity of the subject matter and will render it illegal. This decision, therefore, turns on a wholly different question and has no application whatsoever.

The last decision to which our attention was invited is **Eben Newton Vs. Board of County Commissioners of Mahoning County, Ohio**, 25 L.Ed. 710. That was a case in which the Legislature of Ohio had in 1846 passed an Act providing that the country seat of Mahoning County should be permanently established at Canfield, upon fulfilment of certain prescribed terms and conditions, which were fully complied with. The County seat was established accordingly and remained in Canfield till in 1874 the Legislature passed another Act providing for its removal to Youngstown. Action was initiated stating that under the Act of 1846 there came into being an executed contract within the meaning of the protection of the contract clause of the Constitution of the United States and hence the decision in 1874 to shift the capital to Youngstown was illegal. It was held that the contract clause of the Constitution had no application and even if there existed a contract as claimed, it stood satisfied on the establishment of a County seat at Canfield and since there was no stipulation therein that the County seat should remain there in perpetuity, it was open both under contract and the enactment of 1874, which piece of legislation was legal and binding, to shift it to Youngstown. We fail to understand how any observation made by the Court in the above set of circumstances can have any application to the question of ownership right in flowing river waters.

The doctrine of absolute territorial sovereignty in regard to waters of an inter-State river was considered in paragraph 8.1.1., Chapter VIII, Volume I of the Report of the Narmada Water Disputes Tribunal and was rightly rejected as anarchic. This theory also known as the 'Harmon doctrine' was first enunciated on behalf of the United States, as upper riparian on the Rio Grande river against Mexico through

which the river passed. This doctrine was, however, disclaimed by the United States Supreme Court in *Wyoming Vs. Colorado*, 259 U.S. 419 at 466 (1922).

In view of the above discussion, we are clearly of the opinion that the contention urged on behalf of the State of Punjab that it owns the waters of the Ravi and the Beas exclusively and absolutely is wholly misconceived.

Before we pass on to the next topic, we may consider the observations made in *Secretary of State Vs. Nageswara Iyer*, A.I.R. 1936 Madras 923 at p. 926 to the following effect:-

"A right by prescription can be acquired as against the proprietary right of another but not as against the sovereign right, which under the Indian law the State possesses to regulate the supply of water in public streams so as to utilise it to the best advantage...."

The facts of that case show that villages Thenkarai and Thamarakulam were irrigated by the channel Varahanadi either directly or through offshoots of the main channel. The water of channel Varahanadi after filling the tanks at Thamarakulam passed through a surplus channel and ultimately joined the river. In revenue records Varahanadi channel was shown as a source of irrigation of the said villages while the river was shown as a source of irrigation to the defendant's villages. The Government proposed to take a diversion channel at a point before Varahanadi channel entered village Thamarakulam and fill the tank to facilitate irrigation of the defendant's villages, even if the supply were not sufficient to fill the tank. This was resisted by the agriculturists of the two villages as they feared that it would adversely affect the supply of water to their villages and sued the Government for certain reliefs. It was held that while the plaintiffs were entitled to the accustomed supply of water for irrigation of their lands, they were not entitled to any exclusive rights to the detriment of the State's paramount right to regulate and control the supply of water in public streams and channels. It was in that context that the High Court observed that no prescriptive right could be claimed against a sovereign right which under the Indian law the State possessed to regulate the supply of water in public streams for optimum utilisation. These observations cannot be understood to convey that even after the Government of India Act, 1935 and more particularly after our

Constitution, sovereign rights existed in Provincial Governments or the States created under the Constitution. Since in the case aforesaid the Secretary of State was sought to be restrained from regulating and controlling the supply of water in public streams for the best possible utilisation, the Court felt that what was sought was an encroachment on the State's paramount right which under the law as it then stood was not permissible. Section 2 of the Indian Easements Act, 1882 also makes it clear that nothing contained therein could derogate from any right of the Government to regulate the collection, retention and distribution of water of rivers and streams flowing in natural channels etc. We are, therefore, of the opinion that the observations relied upon have to be read in the context of the law as it then stood before the Government of India Act, 1935. We, therefore, do not think that this decision is of any assistance to the contention of ownership in river waters put forward by the State of Punjab.

CHAPTER XIII

EVENTS PRECEDING THE AGREEMENT/DECISION OF 29TH JANUARY, 1955

On the partition of the country in August 1947, the new international boundary separating the Dominions of India and Pakistan cut across the Indus system of rivers; the upper reaches of the main Indus river and its eastern tributaries lay in India while the lower reaches fell within Pakistan. Since the installations which supplied water to the vast part of the canal system located in Pakistan were situated in India, Pakistan was fully dependent on India so far as the supply of water to these canals was concerned. Soon after partition the Chief Engineers of East Punjab (India) and West Punjab (Pakistan) signed two Standstill Agreements (Ex.P.4 pp.2 to 4) on 20th December, 1947 for maintenance of status quo during the current Rabi crop, that is, upto 31st March, 1948 regarding the running of the Upper Bari Doab Canal and the Sutlej Valley Canal at Ferozepur without prejudice to the case pending before the Arbitral Tribunal for the evaluation and division of Canal assets. The Arbitral Tribunal constituted under the Arbitral Tribunal Order, 1947 and the Punjab Partition (Apportionment of Assets and Liabilities) Order, 1947 submitted its award on 17th March, 1948 regarding the apportionment of the irrigation system of undivided Punjab whereunder the East Punjab Government became the owner of the Central Bari Doab Canal System and the channels of the system in West Punjab were to cease to receive supply of water after 31st March, 1948. As no fresh agreements were executed on the expiry of the Standstill Agreements of 31st March, 1948, East Punjab discontinued the supply of water with effect from 1st April, 1948 but later the Chief Engineers of East Punjab and West Punjab entered into two agreements (Simla Agreements) (Ex.P.4 pp. 5-10) on 18th April, 1948 which were to remain in force until 30th September, 1948 (Re:Supply of Water to Central Bari Doab Channel System in West Punjab) and 15th October, 1948 (Re: Supply of water from Ferozepur Headworks to Dipalpur and other Sutlej Valley Canals) on West Punjab Engineers having agreed to pay a sum of Rs.9,25,000/- and Rs.11,51,000/- respectively to East Punjab. These agreements were subject to ratification by the two countries but, as far as we are aware, West Punjab authorities and the Government of Pakistan did not ratify the same. Ultimately, at the Inter-Dominion Conference held on 3rd May, 1948, an agreement was arrived at on the next day, 4th May, 1948 (Ex.P.4, p.11)

between the Prime Minister of India and the Finance Minister of Pakistan whereunder East Punjab Government assured the West Punjab Government that it had no intention to withhold water from West Punjab without giving it time to tap alternative resources. This was without prejudice to East Punjab's contention that the proprietary rights in the waters of the rivers in East Punjab vest wholly in East Punjab Government and West Punjab Government would not claim a share in these waters as of right, a contention which was strongly disputed by West Punjab. Secondly, West Punjab also disputed East Punjab's right to claim seigniorage charges for water supplied to its area. It may, however, be stated that even before this agreement was executed, East Punjab Government had revived the supply of water to West Punjab which had been cut off on the expiry of the Standstill Agreement of 20th December, 1947. However, despite the execution of this agreement, in the months that followed, the stalemate continued and the Government of Pakistan treating the agreement of 4th May, 1948 as having expired, insisted on adjudication of the dispute by the International Court of Justice or any other International body. Then in 1951, following the Lilienthal proposal for settlement of the pending water dispute, came the World Bank office to lend its good offices to break the deadlock. While efforts were on at the international level to resolve the dispute with Pakistan, a meeting was held at New Delhi on 17th January, 1952 in the room of Shri A.N Khosla, Additional Secretary to the Government of India, Ministry of Natural Resources and Scientific Research, to consider the distribution of supplies from the Ravi, the Beas and the Chenab in Indian territory. The said meeting was attended by representatives of the Government of Punjab and Rajasthan. The minutes of the said meeting were enclosed with the Government of India's letter dated 23rd January, 1952 (Ex.P-4, pp.12 to 18). The minutes of the said meeting show that it was generally accepted that even after meeting the requirements set out in the letter of Shri Khungar, Secretary to the Government of Punjab, P.W.D., Irrigation Branch dated 21st December, 1951 to the Government of India, there would be sufficient surplus supplies in the Ravi and the Beas for Rajasthan canal. Dr.J.K. Malhotra, Officer on Special Duty, Ministry of Natural Resources and Scientific Research, pointed out that the supplies in the Beas, after meeting the requirements of Sutlej Valley Canals, were available in full for use in India. Estimating the withdrawals at Harike for Sutlej Valley Canals at 35,500 cusecs, it was agreed that the remaining Beas waters (inclusive of additions from Sutlej) could be taken as available for Sirhind Feeder and Rajasthan Canal. After discussing the question regarding the

capacity of the proposed Madhopur Beas Link the Committee examined the possibility of the Central Government providing funds for investigation of storage site on the Ravi and concluded that the Central Government itself should investigate into the matter with the Punjab Engineers without any delay. The proposal for a tunnel at Marhu on Chenab of a capacity of 20,000 cusecs was approved as it was thought that besides providing adequate supplies to Rajasthan Canal during the Kharif, it would enable storage of surplus waters on the Ravi for use throughout the year as and when required. These decisions were taken subject to the basic possibility that the existing supplies to Pakistan may have to be continued till a change was negotiated and approved by the Government of India and Pakistan. In the meantime negotiations at the international level had reached a crucial stage and in February 1954 the World Bank proposed a plan for the development and use of the Indus Basin waters which it was thought would benefit both India and Pakistan. This plan was discussed at separate meetings with the Designees of the two countries and while India accepted it in principle, Pakistan continued to have reservations. The Bank proposal gave India full right of development and use of the eastern rivers after a transition period of five years. However, on 8th July, 1954, when India opened the Bhakra Canals, Pakistan reacted sharply as it apprehended a fall in supply to the Sutlej Canals in West Punjab. Notwithstanding this setback, efforts were on to resume further negotiations on the Bank's proposal. While further discussions at the international level were scheduled to commence from December, 1954, Shri T.Sivsankar, Secretary to the Government of India, Ministry of Irrigation and Power, wrote a D.O. letter on 1st January, 1954 (Ex.P-4, p.20) at the behest of Shri Gulzari Lal Nanda, Minister of Irrigation and Power, Government of India, enclosing therewith a separate Note of even date (Ex.P-4 p.23) pointing out the urgent need to arrive at some interim agreement in regard to the development and utilisation of flow supplies available in the Ravi and the Beas. The Note, after tracing the developments that had taken place on the three eastern rivers as well as the Chenab and the Jhelum since independence and the World Bank plan of February, 1954, emphasised that the time was ripe to consider how the waters of the Ravi and the Beas could be put to optimum use. It was pointed out that since the construction of storage on the two rivers would take time, what was of immediate importance was to plan the use of the available flow waters of these two rivers since the Sutlej waters were fully committed for use by the Bhakra Nangal Project. A detailed Annexure (Ex.P-4, p. 27) on the water study carried out by the Government of India

was appended to the Note to facilitate discussion on the question of distribution of the available flow supplies and to determine the quantity of water available for new uses based on certain tentative assumptions. The Annexure also carried details of the extent and nature of irrigation that could be developed from the available supplies. It is clear from the above that the necessity for an interim agreement regarding the flow supplies alone was felt firstly because it was realised that considerable new development was possible from the flow waters of these two rivers since some of the works for utilising the flow waters were complete and other works could be approved after an agreement was reached and secondly because investigations in regard to storage potentials on the two rivers and the collection of technical data in that behalf was likely to take a few years without which a final agreement was not possible. However, the proposed interim arrangement was to cover besides the canals already existing, projects under construction and those likely to be undertaken within the next five or ten years. In view of the above, a conference of the Chief Engineers of the concerned States was called on 12th November, 1954 to be followed by a conference of the Irrigation Ministers of the said States on the next day, 13th November, 1954, at New Delhi. Accordingly a conference of the Chief Engineers of the concerned States was held on 12th November 1954 at New Delhi at which officers of the Government of India were also present (Ex.P.4 p.99). Shri N.D.Gulhati, Chief Engineer and Joint Secretary in the Ministry of Irrigation and Power, Government of India, opened the proceedings and emphasised the need to reach an early agreement in regard to the distribution of flow supplies of the two rivers firstly because the Planning Commission was expected to require a unanimous decision between the concerned States in regard to the various projects for the utilisation of these waters which were in the pipeline and secondly because the talks were about to commence between the representatives of India and Pakistan in Washington in another fortnight or so in regard to the distribution of canal waters between the two countries one of the items for discussion being 'Transitional Arrangements'. Shri Gulhati pointed out that it was necessary to determine in advance how much water could be used in India and the new works proposed for that purpose since the supplies to be replaced by Pakistan during the transition period had to conform to the additional supplies to be absorbed by India in the same period. He stated that since a quick decision was required, it would be desirable to limit it to flow supplies only and revise it at a later date when further supplies became available through storage facilities. Lastly, he stated that the

Note circulated earlier contained certain assumptions regarding water supplies for existing canals which were open to modification. However, Shri S.L.Malhotra, Chief Engineer and Secretary to the Government of Punjab, P.W.D., Irrigation Branch, stressed that the flow supplies alone should not be the subject of an agreement and supplies which might be developed by storages should also enter consideration as he was optimistic that such facilities could be constructed and completed within the interim period provided funds were made available by the Government of India. He emphasised that storage of 1.5 MAF on the Ravi and 5.5 MAF on the Beas was feasible and the storage projects could be prepared fairly quickly and desired to know the rate at which supplies could be withdrawn from Pakistan during the transition period. This he was told would depend on the rate at which Pakistan replaced the supplies and the rate at which India could put the same to use. It was further explained to Shri S.L.Malhotra that the completion of the Bhakra Dam would take another five years and since the resources and energies of the State will be diverted towards the same, it would not be possible to develop the storage sites on these two rivers during the same period. This did not deter the Punjab Chief Engineer whereupon he was asked to suggest how the total supplies, both flow and storage, could be shared between the concerned states. He gave the following details:-

"(a) On the Upper Bari Doab Canal, perennial Irrigation should be extended to all areas with a water table more than 10 feet from the ground surface. The total area to be given perennial irrigation would be 1,354,000 acres; another 135,000 would be given non-perennial irrigation. The water allowances, at distributary head, would be 3.81 cusecs and 4.92 cusecs respectively per thousand acres. This gave a capacity of 6,700 cusecs in kharif and 5,930 cusecs in Rabi. The total volume of water required for the year as a whole came to 3.17 MAF.

(b) For Chak Andher tract a capacity of 700 cusecs (non-perennial) would suffice. The annual volume came to 0.24 MAF.

(c) For Kashmir Canal, a supply of 300 cusecs (non-perennial) was suggested. The annual volume would come to 0.11 MAF.

(d) The Shah Nehar Canal would have a capacity of 1400 cusecs (perennial), with Bhakra capacity factors.

(e) The Eastern Canal would have a capacity of 3,320 cusecs (non-perennial) with the existing capacity factors. The annual volume would be 0.71 MAF.

(f) The Bikaner Canal would have a capacity of 2,720 cusecs, with existing (post partition) capacity factors, averaging 0.61 in Rabi and 0.77 in Kharif. The annual volume required would be 1.36 MAF.

(g) The Bhakra Canals required a total annual volume of 14.59 MAF including 1.26 MAF for western Jamuna Canal areas, and 0.40 for Gurgaon areas. Of this, only 11.31 MAF were available from the river Sutlej, and the rest would have to be obtained from the Sirhind Feeder mentioned in (h) below.

(h) The Sirhind Feeder would have a capacity of 5,900 cusecs, with a total annual volume of 3.28 MAF.

(i) The Rajasthan Canal would have a capacity of 10,000 cusecs (perennial) plus 5,000 cusecs (non-perennial) Rice. The annual volume would come to 6.65 MAF."

Shri Malhotra concluded by stating that the total requirements came to 30 MAF of which 23 MAF would be from flow-supplies and 7 MAF from storage, the entire flow supplies would be just sufficient to meet the requirements of Punjab and PEPSU and, therefore, the supplies required for the Rajasthan Canal could come from storages. As the Chief Engineers failed to reach an agreement, they decided to meet again on 23rd November, 1954. At this stage it is sufficient to note that while the Government of India Note circulated before this meeting desired only an interim agreement on flow supplies (the thrust of Shri Gulhati's remarks was also in that direction), the Punjab Chief

Engineer-cum-Secretary, P.W.D.Irrigation Branch, insisted that the proposed agreement should cover both flow and storage supplies.

At the postponed meeting of the Chief Engineers held on 23rd November, 1954 the requirements of all the concerned States were ascertained as under:- (Ex. P. 4, p.109)

(in MAF)

State	Rabi	Kharif	Total
Punjab	3.00	2.99	5.99
Rajasthan	5.61	6.36	11.97
Pepsu	0.54	0.62	1.16
Kashmir	0.08	0.30	0.38
Total	9.23	10.27	19.50

The availability of total dependable supplies was assessed at 15.74 MAF and the total mean supplies at 19.27 MAF which fell short of the requirements of the four States from the two rivers. It was felt that if arrangements were made to store water which was presently going waste to the sea during the flood season it would be possible to meet all the demands of the four States. Taking note of the fact that the Punjab Government had completed the preliminary investigations and had identified suitable sites for storage on the Ravi and the Beas and detailed investigations were on, it was suggested that a meeting may be held at the ministerial level to decide the capacity of storage dams and other related matters. It was impressed upon all concerned that it was essential that India should be in a position to utilise river supplies to be withdrawn from Pakistan on the latter making alternative arrangements.

On 1st January, 1955 Shri T.Sivsankar, Secretary to the Government of India, Ministry of Irrigation and Power, wrote a D.O letter (Ex.P-4, p.110) to Chaudhri Lahari Singh, Minister for Irrigation, Punjab, stating that since the Chief Engineers of the concerned States had failed to come to an agreement it was thought necessary to hold an inter-State Ministerial Conference on 6th January, 1955 at New Delhi to arrive at an interim agreement in regard to equitable distribution of the Ravi and the Beas flow waters. It was emphasised that it was

important to take all possible steps to develop for use in India all the supplies available from the three eastern rivers to counteract Pakistan's attempt to increase their existing uses while the negotiations at the international level were in progress. Pointing out that the developments of the Ravi and the Beas rivers fell in two broad categories: "(a) Developments based on the flow waters of the rivers Beas and Ravi including supplies in those rivers to be gradually withdrawn from Pakistan (the entire supply of the river Sutlej will be fully utilised with the completion of the Bhakra Dam), and (b) Developments to be based on supplies to be stored on the Ravi and Beas", it was observed that as works connected with the developments of storage supplies could not be undertaken until fully investigated, there would be no difficulty in reaching an interim agreement so far as flow supplies were concerned. This was followed by a D.O letter dated 20th January, 1955 (Ex.P-4 p.112) from Shri N.D.Gulhati, then in Washington, to Chaudhri Lahari Singh, enclosing therewith a copy of his letter to Shri Gulzarilal Nanda in which he had given details regarding the negotiations with Pakistan and World Bank authorities. It was pointed out that the Bank group accompanied by the representatives of the two countries was likely to probe the Indus Basin regions in both the countries in March-April 1955 and before they do so, it would be desirable that Punjab and Rajasthan enter into an agreement, tentative if necessary, regarding the distribution of available supplies. He thought that it would be unfortunate if the internal differences between Punjab and Rajasthan should in any way prejudice India's case in its dispute with Pakistan. He was keen that before the field trip in India commenced, work on the Sirhind Feeder and the Rajasthan Canal should have started to enable India to emphasise its keen anxiety in regard to the said developments and thereby furnish to the Bank team the best possible evidence of the urgent need of the waters of the eastern rivers to India. To facilitate the discussion at the ministerial level, summary statements of available material were prepared and supplied to indicate—

- "1. Demands of waters for the various States as given by the Chief Engineers in their meetings held on 12th and 23rd of November, 1954.
2. Tentative distribution of the flow waters of the Ravi and Beas as proposed by the Ministry of Irrigation and Power in their Note dated the 1st November, 1954.

3. Availability of the flow waters in the Ravi and Beas." (Ex.P-4 pp.81 to 124)

It will thus be seen that before the inter-State Ministerial Conference was held at New Delhi on 29th January, 1955, all the relevant material was made available to the participants and the Government of Punjab was also informed about the negotiations at the international level. It is also necessary to note that the emphasis was to reach an agreement, tentative if necessary, on the flow supplies in the two rivers. It is in this backdrop that the inter-State Ministerial meeting postponed on 6th January, 1955 was held on 29th January, 1955 at New Delhi.

At the said conference Punjab was represented by its Minister of Irrigation Chaudhri Lahari Singh. The following decisions were taken at the said conference:-

"1. The supplies both flow and storage in the rivers Ravi and Beas over and above the actual prepartition utilisations, based on mean supplies in the rivers, shall be allocated as under:-

Share of Punjab	5.90 MAF
Share of Kashmir	0.65 MAF
Share of Rajasthan	8.00 MAF
Share of Pepsu	1.30 MAF

Total	15.85 MAF

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 Madhopur-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 State 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)." (Ex.P-4, p.126).

The record of the decisions reached at the said conference was forwarded to the Chief Secretary, Punjab, by Shri T.Sivsankar by his letter dated 1st February, 1955 (Ex.P-4, p.125) for confirmation. Chaudhri Lahari Singh by his D.O letter dated 7th February, 1955 (Ex.P-4, p.128) replied that the main discussion was as regards the distribution of the supplies totalling 15.85 MAF to which Punjab had agreed; but he expressed a doubt if there was any definite decision taken as regards the distribution of flow supplies. He went on to add that Punjab representatives had not agreed to the distribution of flow supplies in the same ratio as the allocation of the entire supplies. According to him Punjab's minimum needs were about 2500 cusecs of perennial supplies for border areas the Upper Bari Doab Canal and about 5000 cusecs of perennial supplies for the Sirhind Feeder which could not be foregone in anticipation of storage supplies. He said that as far as he and the Finance Minister of Punjab remembered, no decision was reached as regards flow supplies and added that there could be no objection to sharing the Kharif supplies with the other States in the proportion laid down but insisted that the available perennial supplies from the two rivers must be utilised to meet the immediate needs of Punjab before diverting the same elsewhere. He, therefore, desired that the record of the decision taken on 29th January, 1955 should be amended accordingly. This was followed by another D.O letter dated 14th February, 1955 (Ex.P-4, p.129) wherein he stated that he had further discussed the matter in detail with Punjab's Finance Minister and insofar as paragraph 5 of the minutes of the Inter-State Conference was

concerned, both of them were of the definite view that 'the cost of storage should be borne by the other States who are materially gaining from the stored supplies'. He wanted this view point of Punjab to be recorded in the minutes of the proceedings and promised to submit Punjab's case as regards the cost of storages separately. He concluded by adding "Punjab's needs can easily be more than met from the available flow supplies". It will thus be seen that the emphasis shifted from the sole objection as regards the sharing of flow supplies to meeting the cost of construction of storages on the two rivers as well. Meantime, pursuant to paragraph 3 of the record of the decision of 29th January, 1955, the question of splitting the allocated supplies between Kharif and Rabi was considered at the meeting of the Chief Ministers of the concerned States on 1st March, 1955 and it was agreed that "the flow supplies shall be shared in the same ratio as the total supplies". It was also agreed that the allocation during Kharif and Rabi will also be in the same proportion. This virtually put an end to the objection raised in Chaudhri Lahari Singh's letter of 7th February, 1955. Ultimately, in answer to the letter of Shri T. Sivsankar dated 8/9th August, 1955, Chaudhri Lahari Singh confirmed the minutes/record of the Inter-State Ministerial Conference held on 29th January, 1955 by his D.O letter dated 2nd September, 1955 (Ex.P-4, p.130) without any reservation whatsoever. Thus under the said agreement confirmed by all the four states, 15.85 MAF of waters of the Ravi and the Beas, both flow and storage, based on mean supplies available over and above the actual pre-partition utilisation came to be allocated as:-

Punjab	5.90 MAF
Jammu & Kashmir	0.65 MAF
Rajasthan	8.00 MAF
Pepsu	1.30 MAF

Since Pepsu later merged with Punjab in November, 1956, Punjab's share in 15.85 MAF of waters became 7.20 MAF. On the conclusion of the Indus waters Treaty, 1960, the Government of India by their letter No.F-11(1)-CWD-59 dated 7th March, 1961 confirmed the decisions taken at the Inter-State Ministerial Conference of 29th January, 1955 and recommended that the State Governments concerned may take early steps to prepare and agree upon working rules for the regulation of supplies in accordance with the said decision. This in brief is the background in which the 1955 decision came to be made by the concerned states.

CHAPTER XIV

LEGALITY AND VALIDITY OF THE 1955 AGREEMENT/DECISION

Both Haryana and Rajasthan have referred to and relied upon the 1955 agreement in their pleadings, more particularly Rajasthan because it was by this agreement that 8.00 MAF of waters came to be allocated to it. Haryana has not questioned the allocation made in favour of Rajasthan under this agreement but the State of Punjab questions the legality and validity of this agreement on diverse grounds, namely:-

(i) It was manifestly an incomplete and inchoate agreement as it was intended to be tentative and to provide a mere interim arrangement and cannot, therefore, be made the basis for a final determination of the shares of the party States;

(ii) The avowed purpose and object of the agreement was to provide evidence in support of India's claim at the international level in its dispute with Pakistan that it was in need of the waters of the eastern rivers; on the signing of the Indus Waters Treaty in 1960, this limited purpose was satisfied whereupon the agreement stood exhausted. Since it was never meant to be actually implemented, no rights and/or obligations can flow therefrom.

(iii) The decisions taken at the said inter-State Conference were based on certain assumptions and not on verified and reliable data and hence no rights and obligations of a binding nature can arise therefrom.

(iv) The full requirements and needs of Punjab ascertained by the Indian Designee for the purpose of negotiating a Treaty with Pakistan were ignored to a very large extent at the Inter-State Conference to the detriment of Punjab. Instead of adopting the determination by the Indian Designee and the well accepted criteria of dependable flow, the Inter-State

Conference determined the shares on wholly irrelevant and extraneous considerations.

(v) There was no justification in allocating more than 10.00 MAF of waters under the said agreement because even under the World Bank proposal, India was at best to receive not more than that quantum of water from Pakistan on the expiry of the transition period.

(vi) There was no consensus *ad idem* regarding the distribution of flow waters since Punjab was throughout keen and insistent on retaining and utilising the same for itself.

(vii) There was no free consent on the part of Chaudhri Lahri Singh as is clear from his letter of 7th February 1955 but because of pressure brought to bear on him by the Central Government, he reluctantly confirmed the minutes of the Inter-State Conference on 2nd September 1955.

(viii) The unconscionable nature of the agreement betrays exercise of undue influence on Punjab's representatives.

(ix) The agreement is against public policy and, therefore, violative of Section 23 of the Contract Act.

(x) The agreement is arbitrary and, therefore, is in violation of Article 14 of the Constitution.

(xi) Punjab's representatives were not competent to agree to the transfer and allocation of waters to Rajasthan ignoring the needs of the people of Punjab to whom the waters actually belonged; and

(xii) The agreement does not conform to the requirements of Article 299 of the Constitution.

Before we proceed to consider the aforesaid contentions formulated by the learned counsel for the State of Punjab, it would be proper to notice whether the terms of the 1955

agreement were made the basis of subsequent action by the Punjab Government. After the said agreement was confirmed on 2nd September 1955, the Government of Punjab took steps to plan the utilisation of 7.2 MAF of waters allotted to it under the said agreement and in pursuance thereof issued the order of 20th October 1961 (Ex.H2, p. 22). That order indicates in which areas of composite Punjab its share in the surplus Ravi and Beas Waters was intended to be utilised. As the farmers of the Haryana area of the State of Punjab were dissatisfied with the proposed plan for utilisation of the 7.2 MAF of waters allotted to Punjab, two Committees called the Food Committee and the Haryana Development Committee were set up which submitted their Reports in the first quarter of 1965 but before any action could be taken on those reports, the State of Punjab was reorganised on 1st November, 1966. At an Inter-State Conference held on 9th September 1968 (Ex.H-2, p. 58), the question of distribution of 1.9 MAF of waters to be withdrawn from Pakistan during the period commencing from 11th September, 1968 to 31st March 1969 was considered and it was decided that after deducting 4.1 per cent allocable to Jammu and Kashmir, the balance should be divided between composite Punjab and Rajasthan in the ratio of 51:49. The share of composite Punjab was further directed to be divided on an ad hoc basis between the States of Punjab and Haryana in the ratio of 65:35. It will be seen from the above that there was no dispute between the concerned Governments in regard to Rajasthan's right to receive a share from the surplus Ravi and Beas Waters but the dispute centred round the further distribution of 7.2 MAF of waters between Punjab and Haryana. However, by its letter dated 20th May 1970 (Ex. P.2, p.76), the State of Punjab while objecting to Rajasthan's proposal to link the Rajasthan Feeder with the Sirhind Feeder on the ground that such action would not be consistent with the 1955 agreement for the first time sought re-assessment of Rajasthan's share in the surplus Ravi-Beas Waters on the plea that Rajasthan was not in a position to utilise 8.00 MAF of waters allotted to it while Punjab was, in dire need of additional waters. This was followed by another letter dated 6th May 1971 (Ex. P.2, p.85) wherein it was stated that Rajasthan was at the most entitled to 3.5 MAF of waters. In support of this statement a detailed Note (Ex. P.2, enclosure to p. 85) was enclosed. It appears from paragraph 10 of that Note that some reports appeared in the Daily Tribune sometime in April-May 1970 regarding negotiations between Rajasthan and Haryana for the supply of some water from Rajasthan's share to Haryana for a specified period while the Rajasthan canal was under construction. That gave rise to the demand for withdrawal of 4.5 MAF of waters from Rajasthan's

share. Thus, for the first time in 1970-71 Punjab questioned Rajasthan's capacity to utilise the full 8.00 MAF of surplus Ravi-Beas Waters; the objection was, however, limited to the quantum of water and not to entitlement. The notification issued by the Government of India dated 17th June 1970 (Ex.R 1 Annexure A-1) also shows that the allocation of cost of Beas Projects was made on the basis of the 1955 agreement. The 1976 award made by the Government of India under section 78(1) of the Punjab Reorganization Act also made reference to the 1955 agreement. Notwithstanding the same, the dispute persisted particularly between the Governments of Punjab and Haryana in regard to the sharing of 7.2 MAF of surplus Ravi-Beas Waters and ultimately Punjab served Haryana with a notice under section 80 of the Code of Civil Procedure on 17th March 1979 challenging the validity of the 1976 award and the vires of section 78(1) of the Punjab Reorganization Act. Thereupon the State of Haryana instituted Suit No.1 of 1979 (H 3, p. 263) under Article 131 of the Constitution in the Supreme Court of India for a declaration that the 1976 award was 'legal and binding on Punjab and for certain consequential reliefs requiring Punjab to implement the same. A specific reference was made to the 1955 agreement in the plaint to which Punjab replied by stating: "The alleged 1955 agreement is not admitted to be an agreement". The State of Punjab also filed a Suit No.2 of 1979 (Ex.P 4, p. 26) challenging the 1976 award firstly on the ground that section 78(1) of the Punjab Reorganization Act under which it was made was ultra vires the Constitution inasmuch as under Entry 17 of List II (State List) the State had exclusive jurisdiction to legislate on the subject of water and not the Central Government and secondly, the Central Government had taken extraneous matters not permitted by section 78(1) into consideration while determining the shares of Punjab and Haryana in the waters allocated to composite Punjab under the 1955 agreement. It is important to note that challenge to the 1955 agreement was scrupulously avoided. Subsequently, when the tri-partite agreement was signed on 31st December, 1981, the 1955 agreement and the 1976 award were modified to the extent indicated in the fresh agreement in terms of the proviso to section 78(1) of the Punjab Reorganisation Act. After signing the tri-partite agreement both Haryana and Punjab unconditionally withdrew the suits which were then pending in the Supreme Court (Ex.H-3, p. 371). Thereafter the Punjab Kisan Sabha and others filed a Writ Petition (Civil) No.360 of 1982 in the High Court of Punjab and Haryana contending that the waters of the two rivers belonged to Punjab; that section 78(1) of the Punjab Reorganization Act was ultra vires the Constitution and, consequently, the 1976 award was

also illegal and void and the subsequent tripartite agreement not being in the interest of the people of Punjab was unacceptable and unenforceable in law. The State of Punjab filed a counter (Ex.H-3, p.376) supporting the legality and validity of (i) the 1955 agreement; (ii) section 78(1) of the Punjab Reorganization Act; (iii) the 1976 award; and (iv) the 1981 agreement. The State of Haryana also filed a detailed counter-affidavit (Ex.H-3, p. 394) praying for the dismissal of the Writ Petition on the ground that the earlier agreements and the award were perfectly legal and valid. Similar Writ Petitions were filed in the High Court by other interested parties and all of them were transferred to the Supreme Court (Ex.H-4, p. 472) and are presently pending in that Court. From the above facts it becomes clear that after the 1955 agreement/decision was confirmed on 2nd September 1955, it was referred to and relied upon by Punjab in the subsequent orders and correspondence until 1970-71 when Rajasthan's capacity to use the full 8.00 MAF of waters allotted to it was questioned. Thus the real dispute was between Punjab and Haryana regarding the distribution of 7.2 MAF of surplus waters allotted to composite Punjab under the 1955 agreement. So far as Rajasthan's capacity to use its full share of 8.00 MAF was concerned, it was well-known that unless the Rajasthan Canal (Indira Gandhi Canal) was completed, it would not be in a position to utilise in full its share and that is why Haryana thought it could persuade Rajasthan to part with some water for a specified period till it was ready to make full use thereof. Naturally Punjab which was the beneficiary of the unutilised share of Rajasthan objected to any such arrangement and consequently sought the withdrawal of 4.5 MAF of waters from Rajasthan's share. However, all these issues were sought to be settled by the 1981 agreement whereunder Punjab received a larger share but the same was purported to be repudiated by the Punjab Legislature on 5th November 1985. This is in brief the scenario subsequent to the 1955 agreement. It is in this backdrop that we must now proceed to discuss the various contentions urged by Mr.Rao, learned counsel for the State of Punjab.

The first question is whether the 1955 agreement was intended to be a tentative and interim arrangement entered into with the sole purpose of securing a better deal at the international level in our dispute with Pakistan? It is indeed true that soon after partition a dispute arose regarding the use of the waters of the Indus System of rivers with Pakistan. That was only natural because the irrigation system which was developed in the Indus Basin as one single unit was cut across by

the newly created international boundary. Certain standstill agreements were executed to tide over the initial difficulties till a permanent and lasting solution was found. At the same time development within the country had to be planned and this is clear from the decision taken in 1952 at the meeting held in the room of Shri Khosla. It was generally accepted at the said meeting that even after satisfying the requirements of Punjab as indicated in the letter of 21st December 1951, there would remain sufficient surplus supplies in the Ravi and Beas to serve the needs of the Rajasthan Canal. At the international level concrete proposals were formulated by the World Bank in about February 1954. Before discussions on the said proposals commenced at the international level, it was realised that some interim agreement in regard to the development and utilisation of the flow supplies from the Ravi and Beas should be arrived at at the domestic level. That is why a Secret Note was circulated with the letter of Shri T. Sivashankar to facilitate discussion. The annexure to the Note supplied information regarding a detailed study carried out by the Government of India on the question of distribution of the available flow supplies from the two rivers. The proposed interim agreement was intended to be limited to flow supplies only because it was felt that investigations in regard to storage potentials on the two rivers were not complete and construction of storages would take considerable time. However, at the Inter-State Chief Engineers' Conference held on 12th November 1954 it was Punjab's representative who insisted that not only flow supplies but also storage supplies should be distributed as in his view storage of 1.5 MAF on the Ravi and 5.5 MAF on the Beas was feasible. He was also prepared to supply all the relevant technical data in this behalf as according to him the Punjab Government had not only completed the preliminary investigations but had also identified the sites for storage dams on the said two rivers. It is, therefore, clear that while the Government of India desired an interim agreement on the flow supplies only, it was Punjab's representative who insisted on including storage supplies in the proposed agreement. At the postponed meeting of the Chief Engineers held on 23rd November 1954 the water requirements of all the concerned States during the Rabi and the Kharif seasons were ascertained. The Chief Engineers could not come to any definite agreement on the actual distribution of waters but it is amply clear that storage supplies became the subject matter of discussion at the behest of Punjab's representative. While calling an Inter-State Ministerial Conference to arrive at an interim agreement in regard to the distribution of surplus Ravi Beas supplies, it was emphasised that all possible steps should be

taken to develop for use in India the available supplies from the three eastern rivers to counteract Pakistan's effort to increase their existing uses from these rivers while negotiations were in progress. That, however, does not mean that the proposed agreement was required solely for the purpose of convincing the World Bank Officers that India was in need of all the waters of the three eastern rivers, but was not meant to be acted upon. To put it tersely, the agreement was not intended to hood-wink the World Bank Officers and Pakistan representatives who were experts in their respective fields and were not novices. The idea was to stop Pakistan from increasing their existing supplies which may ultimately have to be protected under the Treaty. Before the Ministers of the concerned States met, summary statements were prepared and circulated by the Government of India to facilitate discussion of demands for water put forward by the Chief Engineers of the concerned States and distribution of flow supplies. However, the Inter-State Ministerial Conference held on 29th January 1955 decided to distribute both the flow and the storage supplies available in the said two rivers taken at 15.85 MAF on mean supplies (1921-1945 series) as indicated earlier leaving the splitting up of the allocated supplies for Kharif and Rabi to the Engineers of the concerned States. It was also left to each State to decide how best to utilise the supplies allocated to it. The proposals in this behalf had to be submitted to the Planning Commission at an early date. The question of allocation of cost of water including cost of storage and other works was left undecided as the Conference was called for the limited purpose of distribution of supplies. It is, therefore, clear that initially the Government of India desired to work out an interim agreement on flow supplies only. It was the Chief Engineer of Punjab who insisted on the inclusion of the storage supplies also. Even the Summary Statements laid emphasis on the distribution of flow supplies. However, the Conference decided to distribute both flow and storage supplies making it possible to reach a final decision in this behalf. On a plain reading of the agreement/decision it is quite clear that the flow and storage in the two rivers over and above the pre-partition use based on mean supplies was estimated to be 15.85 MAF. The said quantity of water was allocated to the four States, Punjab, Jammu and Kashmir, Rajasthan and Pepsu as indicated earlier. It was further provided that in case of variation in total supplies, the shares shall be allocated pro-rata on the above allocations except that the share of Kashmir shall remain to be 0.65 MAF. The distribution of flow supplies also was stipulated to be in the same ratio. It is, therefore, clear that both flow and storage supplies were distributed between

the concerned States in definite shares and provision was also made for variation in supplies. To remove all doubts it was also stated that the flow supplies shall be distributed in the same ratio. A conscious decision was taken and nothing was left in doubt so far as the distribution of supplies from the two rivers was concerned. The agreement insofar as the distribution of supplies is concerned was exhaustive and complete; only the splitting of the allocated supplies between Kharif and Rabi was left to the Engineers and failing a decision by them, to the Government of India. We are, therefore, of the view that the agreement was complete in all respects so far as the distribution of supplies was concerned. Merely because the allocation of cost was left to be decided subsequently that cannot make the agreement interim or tentative so far as the distribution of supplies is concerned. In any case after the Indus Waters Treaty was finalised and it became known that the eastern rivers had finally fallen to the share of India, the Government of India confirmed the agreement/decision on 7th March 1961 and later issued a notification dated 17th June 1970 allocating the cost of Beas Project Unit I and II between the States of erstwhile Punjab and Rajasthan in the following ratio:

	Punjab (erstwhile)	Rajasthan
Unit I		
Irrigation component	85%	15%
Power component	80%	20%
Unit II		
Both irrigation and power components	41.5%	58.5%

As regards the sharing of cost between Punjab and Haryana, it was decided that the existing arrangement of 60:40 should continue till a final decision is reached. It was further decided that later on, when storage work on the Ravi is taken up, its cost together with that of the Beas Project may be allocated to the partner-States.

It is, therefore, clear from the above that a decision on the sharing of cost was taken between the concerned States. We are, therefore, of the view that a concluded final agreement in regard to the sharing of supplies, both flow and storage, had come into existence between composite Punjab and

Rajasthan.

It was submitted on the basis of the ratio of the House of Lords in *Thomas Hussey v. Horne-Payne* (1879 (4) A.C. 311) that where a Court has to find a contract from exchange of correspondence, the whole of that which has passed between the parties must be taken into consideration. In the first place it must be remembered that this is not a case *stricto sensu* of an agreement having been reached by exchange of letters between the concerned States. The representatives of the concerned States had assembled at New Delhi in the presence of a representative of the Government of India to work out an agreement for the distribution of river waters. All the relevant data was placed at their disposal to facilitate discussion. They finally took certain decisions which were later reduced to writing in the form of minutes of the conference and circulated amongst the participants for confirmation. Except the Irrigation Minister of Punjab none had any reservation in confirming the said minutes. Even the Punjab Irrigation Minister confirmed the decisions after an exchange of correspondence to which we have made mention in *extenso*. We have taken the said letters as well as all the other material into consideration before recording our conclusion and hence we think we have acted within the ratio of the decision relied upon.

Reliance was next placed on a Privy Council case in *Tyagaraja Mudaliyar v. Vedathanni*, (A.I.R.1936 P.C.70) in support of the argument that the 1955 agreement was unenforceable.

That was a case of two brothers S & R who lived separately but were members of an undivided Hindu family and owned and enjoyed extensive movable and immovable properties. On the death of R the surviving brother feeling nervous that the widow of the deceased brother may stake her claim to the property, entered into an agreement with the plaintiff evidencing the undivided status of the family and purporting to make provision for the maintenance of the plaintiff. It was, however, distinctly understood that this document was not to be the final contract for the plaintiff's maintenance but was solely intended to establish the joint undivided status of the family. Consequently the provision for maintenance in the document was never given effect to or acted on by the parties and S continued in possession and enjoyment of all the family properties until his death. In the above fact situation the Court took the view that if a party to an agreement embodied in a document is told that any stipulation in the agreement would not be enforced, he cannot be held to have assented to it. In such

a case the document cannot amount to a real agreement between the parties and no suit can be based thereon.

It is true that the need for an interim agreement in the sharing of flow supplies from the Ravi and the Beas was felt to project our case for all the waters of the eastern rivers at the international level but that does not mean that the proposed agreement was intended to be a mere eye-wash and was not to be acted upon. At the negotiating table India was required to satisfy the World Bank Officers as well as the representatives of Pakistan that India was in need of all the waters of the eastern rivers and was in a position to put the same to good use. The existence of an agreement between the concerned States was expected to provide evidence to support India's case but it is too much to say that for that purpose a sham document was created which it was clearly understood would not be implemented. If it were so, we would not have found the concerned Governments acting in furtherance thereof and the subsequent projects, Beas Project Unit I and Unit II, being based thereon. We are, therefore, not inclined to think that at the time when the 1955 agreement/decision was reached, there was a tacit understanding that it would not be implemented. Actually the Punjab Government order of 20th October 1961 was passed for the utilisation of waters allocated to Punjab after the signing of the Indus Waters Treaty 1960 when all the waters of the eastern rivers finally came to be allocated to India. Therefore, having regard to the fact situation existing in the present case, we fail to understand how the decision relied upon can have any application.

It was next submitted that since the agreement was not based on verified and dependable material, the same could not be acted upon. We have already pointed out earlier that summary statements giving detailed information regarding flow supplies were circulated in advance before the Ministers of the concerned States met. Technical information pertaining to storage supplies was made available by Punjab. Thus complete data on flow and storage supplies was available before the meeting took place. It was Shri S.L.Malhotra, Punjab's Chief Engineer, who stated that preliminary investigations had been completed and storage sites identified on the rivers which enabled the conference to distribute both flow and storage supplies. It is, therefore, difficult to understand how it can now lie in the mouth of Punjab to contend that such decision was not based on verified and dependable data and was unenforceable at law. A party which persuades others to take a decision on the basis of information

and material supplied by it and vouchsafed as dependable cannot be heard to say that the decision is unenforceable as the information supplied was not verified.

The validity of the agreement was also questioned on the ground that instead of adopting the well accepted criterion of dependable flow supplies, the available waters were estimated on mean supplies to the detriment of Punjab. It was pointed out that the data prepared and supplied at the inter-ministerial conference indicated that on the basis of dependable supplies the quantum of available water worked out to 15.74 MAF., whereas on the basis of mean supplies it was estimated at 19.27 MAF and since the allocation of waters between the States was made on the latter basis, Punjab was required to part with a higher volume of water, thereby jeopardising the interest of its farmers. Several agreements including the reports of the Krishna and Narmada Water Dispute Tribunals have been cited (Ex.P3, pp. 177-180) to make good the contention that the quantum of available supplies must be estimated on 75 per cent dependability. It was, therefore, contended that by allocating waters between the concerned States on the basis of mean supplies considerable injustice was done to Punjab. The question, however, is whether the fact that the available supplies were estimated on the basis of mean supplies for allocation of water between the concerned States instead of adopting the dependability criterion, renders the 1955 agreement invalid?

The Krishna Water Disputes Tribunal considered the question of determination of the quantum of available waters for allocation between the concerned States in Chapter IX, Volume I of its Report (1973). The States of Maharashtra and Mysore urged that for the purpose of irrigation, the volume of available water may be computed at 75 per cent dependability, whereas the State of Andhra Pradesh thought that the figure recorded in 1951 which disclosed 86 per cent dependability should be accepted as reliable. After carefully examining the evidence and material placed before the Tribunal in this behalf, the concerned parties arrived at an agreement and informed the Tribunal that 75 per cent dependable flow of the Krishna river at Vijayawada may be adopted as 2060 TMC. The Tribunal recorded its conclusion on the basis of this agreement, the text whereof has been re-produced in the Report. It is, therefore, clear that the conclusion of the Tribunal was based on agreement reached between the concerned States.

The Narmada Water Disputes Tribunal examined the relevancy of dependable flow in paragraphs 8.5.3 to 8.5.7, (Chapter VIII, Volume, I of its Report (1978)). In paragraph 8.5.3 it observed as under:-

"In examining the problem of apportionment, the possibility of maintaining a constant flow through storage facilities is a relevant factor. The volume of water in any stream varies from year to year. By the use of a high volume of water as the basis for apportionment, the upstream-State in a controversy will be favoured as against a lower State in years in which the volume is below the amount used as the basis for apportionment:"

There can be no gainsaying that for determining the available supplies a proper and dependable measure must be adopted to ensure maintenance of a fairly constant and dependable flow. It will be seen from paragraph 9.1.3, Chapter IX, Volume-I of the Report that ultimately the controversy regarding the percentage of dependability was resolved by agreement between the party States to which the Tribunal superadded its seal. Accordingly, the utilisable quantum of waters in Narmada at Sardar Sarovar Dam site was assessed at 28 MAF on the basis of 75 per cent dependability.

The Irrigation Commission Report (1972) also points out that the farmer should be assured of the designed supply in 75 per cent of the years. It also approved of the practice of planning irrigation schemes in India on the basis of 75 per cent dependability. It, however, stated that where a carry over is provided, the 75 per cent dependability can be figured out taking into account the carry over water.

The Godavari Water Disputes Tribunal, however, while considering the question of apportionment of available water supplies in Chapter 4, Volume-I of its Report (1979), stated that it was well settled that in deciding water disputes regarding an inter-State river, the rule of equitable apportionment of the benefits of river should be applied and proceeded to observe as under:-

"There is no rigid formula for the equitable apportionment of waters of a river. Each river

system has its own peculiarities. The river Godavari is a vast river having a wide catchment area and is fed by the waters of numerous tributaries and sub-tributaries. There are many excellent project sites on the main river and its tributaries. A practical method of equitable apportionment of waters of such a river is to take certain defined reaches of the river and allocate waters of such defined reaches among the States which alone can utilise these waters within the river basin. Having regard to the peculiarities of the Godavari river and river basin, the Tribunal finds no objection in allotting to one or more State or States its water upto defined points or projects sites or within certain sub-basins or reaches of the river. Seen in this light, every agreement need not apportion and allocate all waters of a river and river basin."

It may be stated that the available supplies were allotted to the concerned States by the Tribunal on the basis of agreements reached between the concerned States from time to time.

Reference was also made to the facts set out in Gulhati's Indus Waters Treaty at page 120 (foot note). It is stated that the Indian Draft Outline Plan prepared by the Indian Designee consisted of three statements, the first of which showed, for each of the rivers, the 'dependable supply' during each ten day period of the year at the rim stations. The expression 'dependable supply' is explained as under:-

"That quantum of river flow which on the basis of 25 years flow data, was equalled or exceeded on the average in 2 years out of three. This was the first time in the Indus Basin that this conservative criterion was adopted for purposes of planning - the basis generally adopted earlier for individual projects was average river flow. Against 168 MAF, the aggregate average flow of the system at the rim stations, the dependable flow, as adopted, was 148 MAF.

It was submitted that the criterion of

dependable flow being a conservative one may be adopted for planning projects but need not be adhered to in the matter of distribution of water.

From what we have set out earlier, before the inter-Ministerial Conference took place on the 29th January 1955, the Chief Engineers of the concerned States had met twice and at no time was any objection raised in regard to the quantum estimated on the basis of mean supplies. The details regarding the availability of water based on both dependable supplies and mean supplies were also furnished to the representatives of the concerned States. At the said Conference, Punjab's Irrigation Minister was accompanied by the Finance Minister and a conscious decision was taken unanimously to allocate the water on the basis of mean supplies. No demur was raised at any point of time in this connection; in fact subsequent follow up decisions were on the same premise, and hence it is difficult to understand this belated objection raised for the first time before this Tribunal. When both the alternatives were available before the representatives of the concerned States and they unanimously adopted the mean supplies, it is difficult to appreciate how the agreement can be vitiated on the ground that the allocation was not based on the dependable supplies. In our view, this is simply a desperate argument invented to knock out the genesis of the allocation of waters from the system to the concerned States. Merely because the other alternative was not accepted that cannot invalidate the agreement entered into after proper deliberation. We, therefore, hold that this submission is also devoid of any merit.

It was lamented that even though Punjab was to receive/withdraw only 10 MAF of waters from Pakistan under the World Bank proposal of February 1954, under the 1955 agreement all the available water from the system was put in the kitty and allocated between the concerned States, thereby depriving Punjab of its waters. In the first place, it is not Punjab's case that at the time when the agreement or decision was reached it was not aware of the volume of water to be gradually withdrawn from Pakistan. Secondly, under the agreement both flow and storage supplies came to be distributed and not merely surplus flow supplies and lastly the Conference was not called upon to decide how the quantum of water to be withdrawn from Pakistan after the transition period was to be utilised. Even according to the statement made by the Chief Engineer, Punjab, at the meetings preceding the inter-ministerial conference, Rajasthan could be

allotted the entire storage supplies then estimated to be 7.00 MAF (1.5 MAF + 5.5 MAF). Instead, by the agreement Rajasthan was allotted 8.00 MAF out of the surplus flow and storage supplies. Even otherwise the quantum allocated to Rajasthan was less than 10.00 MAF expected from Pakistan after the expiry of the transition period. We are, therefore, not inclined to hold that the 1955 agreement can be set at naught on this feeble ground.

It was next contended that there was no *consensus ad idem* regarding the distribution of flow supplies since Punjab was always keen on full utilisation of flow waters for itself. We have already set out in detail that the initial proposal was to distribute the flow supplies only but it was at the instance of the Chief Engineer of Punjab that storage supplies entered consideration. The storage supplies were estimated to be 7.00 MAF and the proposal was that the whole of it could be allocated to Rajasthan. It is true that Punjab desired to retain the whole of the flow supplies and part with the whole of the storage supplies. Rajasthan's demand was for more than 10.00 MAF of waters. These were the positions taken up by the two States at the Inter-State Ministerial Conference. Ultimately the compromise struck a mean and allocated 8.00 MAF to Rajasthan as against its claim for over 10.00 MAF of waters. Such a decision can never be said to be lacking in *consensus ad idem* as urged by learned counsel for the State of Punjab.

Chaudhri Lahri Singh, Minister of Irrigation, Punjab and the Finance Minister of Punjab had represented Punjab at the Inter-Ministerial Conference held on 29th January 1955. After the conference, when the minutes of the decisions taken at the said conference were circulated for confirmation, the former raised some doubt in regard to the distribution of flow waters by his D.O. letter dated 7th February 1955. We have referred to this matter earlier and have pointed out that on receipt of the letter dated 8/9th August 1955 from Shri T. Shivshankar, Chaudhri Lahri Singh confirmed the minutes by his letter of 2nd September 1955, without any reservation whatsoever. On a plain reading of that letter one does not find any trace of pressure alleged to have been brought on the Punjab Minister. There was no reason to put pressure on him and it is difficult to comprehend why he should submit to pressure. Besides, the pleadings on this aspect are absolutely vague and incapable of being effectively met. A bald statement that the minutes were confirmed under pressure is neither here nor there. There are no specific allegations which can be controverted. Order 6, Rule 2,

Code of Civil Procedure requires that a pleading should set out material facts in support of allegations of misrepresentation, undue influence, etc., on which a party relies for its claim. It is, therefore, incumbent on a party alleging that his consent to an agreement was secured by pressure to furnish the necessary particulars, e.g., who put pressure and on whom, what was the position or status of the person who put pressure vis-a-vis the person who is stated to have submitted to such pressure, the nature of the pressure, the surrounding circumstances, the date, time and place in which it was brought to bear etc., to enable the opposite party to know what case he has to meet. If a party omits or fails to furnish the particulars or furnishes insufficient particulars, the opposite party may be taken by surprise and may find it well nigh impossible to effectively refute the allegation.

In the present case except a bald averment in the pleadings, the State of Punjab has not furnished any particulars in support thereof. No material or evidence worth the name is tendered in support thereof. Except a general allegation which has been firmly denied, there is nothing on the record to warrant a serious scrutiny or sifting of evidence on this point. We can, therefore, safely brush it aside as wholly imaginary.

We then come to the question whether the nature of the transaction betrays exercise of undue influence. Like coercion, undue influence must be specifically pleaded with full particulars. As in the case of fraud, pleadings in regard to undue influence must be precise and supported by full particulars. General allegations would be insufficient to be taken note of by a judicial Tribunal. In the present case while the submission was made by learned counsel for Punjab that the nature of the agreement betrays exercise of undue influence, no averments in the pleadings are found to back it up. The pleadings of Punjab are virtually silent and the facts on record do not justify the inference of undue influence. We, therefore, negative this contention raised in the oral submissions.

Is the transaction unconscionable or opposed to public policy or arbitrary in nature? We think not. Frankly, we think it is astounding, to so contend. We cannot lose sight of the fact that before the high level meeting of the Ministers of the concerned States, the technical experts of the concerned Governments had met more than once to thrash out all the pros and cons of the issues on which decisions had to be taken. All the factual, statistical and technical material was circulated in

advance to facilitate decision-making. It was only thereafter that decisions were taken on 29th January 1955. Even after these decisions were taken, Punjab confirmed the same as late as on 2nd September 1955. Apart from the fact that Punjab subsequently acted on these decisions in the matter of utilisation of waters within the State, at no time before the Government of India confirmed the same on 7th March 1961 (on the conclusion of the Indus Waters Treaty) did the State of Punjab ever brand the decision as unconscionable, arbitrary or against public policy. That is one part of the story.

No clear, precise and specific averments are to be found in the pleadings but we tried to ascertain from the learned counsel the reasons for describing the decisions as unconscionable and contrary to public policy. Counsel submitted that even though the waters of the two rivers belonged to Punjab, without bearing in mind the needs of Punjab, a substantial quantity of water, 8.00 MAF, was given away to Rajasthan in utter disregard of the needs of the farmers of Punjab. The primary duty of every State being to promote and safeguard the welfare and interests of its people (Article 38), it was the duty of those who participated in the decision-making to ensure that the irrigation needs of Punjab were fully satisfied from its water and only in the event of there being surplus could the same be given to meet the irrigation needs of another State. According to Punjab the quantum of water available from the two rivers was hardly sufficient to meet the irrigation needs of Punjab and hence Chaudhari Lahri Singh had no right to grant a largesse of 8.00 MAF of water to Rajasthan ignoring the needs of the farmers of Punjab. Since the water belonged to the people of Punjab they had the right to make maximum use thereof and only in the event of there being surplus which could not be put to use in Punjab could the same be allowed to flow to Rajasthan. To borrow the language from the submissions in *Hudson Country Water Co., v. Robert H. McCarter* 52 L.Ed.828 at 830, while the rights of private proprietors in a running stream may be limited and usufructuary only, the residue of interest or property in the great mass of running waters resides in the State as trustee for the public; and the State has not only the right to preserve, but it is charged with the duty, as such trustee, of preserving the same for the common benefit of all its citizens. It was said that 'for this purpose the State represents its people, and the ownership is that of the people, in their united sovereignty'. See *James W. McCready v. Commonwealth of Virginia*, 24, L.Ed.248, and *The Abby Dodge v. United States* 56 L.Ed. 390 at 392. It was, therefore, urged that by gifting

8.00 MAF of water from the Ravi-Beas system to Rajasthan under the 1955 agreement/decision, the Irrigation Minister of Punjab had failed in his duty to preserve the water for the people of Punjab and hence the agreement was clearly against the interest of Punjab and was wholly unconscionable, in that, such a huge quantity of water could not be given away in total disregard of the needs of the people of Punjab. It would be clear from the line of reasoning adopted by the learned counsel for Punjab, that the submission that the decision is against public policy or public interest and is unconscionable is an interwoven or over-lapping one. That also raises the question whether the unconscionable term of parting with 8.00 MAF of water to Rajasthan is void as being violative of Article 14 of the Constitution.

It is clear from the line of reasoning adopted by counsel that it proceeds on the premise that the waters of the two rivers belong absolutely to the State of Punjab and being of its ownership they could not have been given away to Rajasthan under the 1955 agreement/decision. We have dealt with Punjab's contention regarding ownership in the said waters separately but we propose to answer the contention bearing on the validity of the 1955 agreement on the assumption that the waters belonged exclusively to the State of Punjab. The question still is whether it is per se unconscionable or opposed to public policy to part with 8.00 MAF of water to Rajasthan? Before we proceed to answer the contention, a few facts need to be stated.

We have earlier set out in *extenso* the events preceding the 1955 agreement. Initially the idea was to distribute the flow supplies only but on the Punjab Chief Engineer insisting that storage supplies should also be taken into consideration, he was asked to suggest how the total supplies, both flow and storage, could be distributed between the States. His estimate was that of the total requirement of 30 MAF for all the States, 23 MAF would be provided by flow supplies and 7 MAF from storage which could go to Rajasthan. At the meeting of 23rd November 1954 the requirements of all the concerned States as projected by their respective technical experts were ascertained. Punjab's requirements were ascertained at 5.99 MAF and almost the said quantity, 5.90 MAF, was allocated to it under the 1955 agreement. It is, therefore, clear that in allocating water to the concerned States, the requirements of the State of Punjab were kept in view. Only after meeting the requirements of Punjab, the surplus water was allocated to Rajasthan. Against the estimated requirement of 11.97 MAF, Rajasthan was allocated 8.00 MAF as

against 7.00 MAF suggested by the Chief Engineer of Punjab. These facts clearly bring out that Punjab's requirements were estimated at 5.99 MAF and it was allocated 5.90 MAF as a few adjustments were imperative having regard to the total availability. It is not as if the interest of the people of Punjab had been overlooked; in fact, the representatives of Punjab, both at the technical and political level, were quite alive to the needs and requirements of the people of Punjab. It is in this backdrop that we must examine the contention on hand.

The provisions of the Indian Contract Act, 1872 set out the grounds on which a contract can be invalidated or declared void and unenforceable. Chapter II comprising sections 10 to 30 deal with contracts, voidable contracts and void agreements. Section 10 says all agreements are contracts if they are made by the free consent of parties competent to contract for a lawful consideration and with a lawful object and are not hereby expressly declared to be void. According to section 2(g) an agreement not enforceable by law is said to be void while according to section 2(h) an agreement enforceable by law is a contract. The essentials of a valid agreement are (i) the parties must be competent to contract (ii) there must be free consent (iii) the consideration must be lawful; (iv) the object too must be lawful; and (v) the statute must not have expressly declared it to be void. Every person who is sui juris and who is not of unsound mind or is not disqualified by any law from contracting is competent to contract. Section 14 defines 'free consent'. According to it, consent is said to be free when it is not caused by coercion, undue influence, fraud, misrepresentation or mistake. Although unconscionability is not mentioned as one of the grounds invalidating an agreement, it would be advantageous to refer to section 16(3) which reads as follows:-

"Where a person who is in a position to dominate the will of another, enters into a contract with him, and the transaction appears, on the face of it or on the evidence adduced, to be unconscionable, the burden of proving that such contract was not induced by undue influence shall lie upon the person in a position to dominate the will of the other."

Under section 19 and 19-A when consent to an agreement is caused by coercion, fraud, undue influence or misrepresentation, the agreement is a contract voidable at the option of the party whose

consent was so obtained. We need not refer to the other sections except sections 23 and 24 which read as under:-

"23. The consideration or object of an agreement is lawful, unless -
 it is forbidden by law; or
 is of such a nature that, if permitted, it would defeat the provisions of any law; or
 is fraudulent; or
 involves or implies injury to the person or property of another; or the Court regards it as immoral, or opposed to public policy.

In each of these cases, the consideration or object of an agreement is said to be unlawful. Every agreement of which the object or consideration is unlawful is void.

24. If any part of a single consideration for one or more objects, or any one or any part of a single consideration for a single object, is unlawful, the agreement is void."

Since the Contract Act does not specifically speak about agreements which are unconscionable except for an indirect mention in section 16(3), the question which arises for consideration is to which field does such a contract belong, whether it belongs to the field of undue influence or contracts opposed to public policy; if it belongs to the former category it would be voidable but if it relates to the latter category it would be void. The answer to the poser would depend on the nature of the contract and the attendant circumstances. We will examine it from both the angles. In the first case, the State of Punjab must show that the agreement was the result of undue influence. Apart from the fact that there is no specific plea in this behalf and the necessary particulars have not been furnished in the pleadings, even on the evidence on record there is nothing to show that one of the parties to the agreement was in a position to dominate the will of the representatives of Punjab and had used the same to obtain an unfair advantage. This is not a case of unequals having been pitted against each other so as to hold that one of them was in a position to dominate the will of the other. The facts of this case cannot attract the ratio of *V.S. Rahi & Anr. Vs. Smt. Ram Chambeli* ((1984) 2 S.C.R. 290 at 296). As

stated in *Subhas Chandra Vs. Ganga Prasad*, ((1967) 1 S.C.R. 331) apart from the necessity to raise the plea clearly in the pleadings, under section 16 the first thing to be considered is the relations between the parties, second whether one is in a position to dominate the will of the other and thirdly if that transaction appears to be unconscionable, the burden shifts on the other party. Also see *Afsar Shaikh Vs. Suleman Bibi* ((1967) 2 S.C.R. 327). In the present case the concerned State Governments had entered into the agreement in the presence of Government of India representative. Even though there is a general and vague allegation that pressure was brought to bear on Punjab, as stated earlier, no particulars in that behalf are forthcoming to reach a positive conclusion. Reliance was, however, placed on the observations made in *Central Inland Water Transport Corporation Vs. Brojo Nath Ganguly and others*, (A.I.R.1986 S.C.157) wherein the Supreme Court while interpreting a term in the service contract held it to be void on the plea that it was unconscionable, that is to say, so unfair and unreasonable as to shock the conscience of the Court. Such contracts, in the view of the Court, must be held opposed to public policy and be declared void. That was a case of employees who had no real choice but to accept employment under a 'take it or leave it' contract which empowered the employer to terminate the services of a permanent employee by giving three months' notice or pay plus dearness allowance in lieu thereof. Such a contract which lacked mutuality was held to be opposed to public policy and therefore void. It is difficult to understand how the principle enunciated in this case can be extended to the facts of our case. Here is a case in which waters of the two rivers on which certain States laid a claim were distributed amongst the said States. Even if it is assumed that the waters belonged absolutely to Punjab after they entered Punjab, it is difficult to understand how the grant of water to Rajasthan can be said to be unconscionable or opposed to public policy. On the day of the agreement the needs of Punjab were estimated and on Rajasthan agreeing to contribute towards the storage project costs, out of the expected surplus waters, 8.00 MAF came to be allocated to it. Such a contract entered into by the concerned State Governments can never be branded as unconscionable or opposed to public policy.

We now turn to the challenge based on Article 14 of the Constitution. For the first time in *E.P.Royappa Vs. State of Tamil Nadu*. ((1974) 2 S.C.R. 348) the Supreme Court held that Article 14 embodies a guarantee against State arbitrariness. This was followed in *Maneka Gandhi Vs.*

Union, ((1978) 2 S.C.R. 621) R.D.Shetty v. International Airport Authority, ((1979) 3 S.C.R. 1014) Ajay Hasia Vs. Khalid Mujib, (A.I.R. 1981 S.C. 487) and Kasturi Lal Laxmi Reddy Vs. State of Jammu and Kashmir, ((1980) 3 S.C.R. 1338). In the last mentioned case the Court held that the discretion of the Government to grant contracts is not unlimited and it cannot grant largesse in an arbitrary manner at its own sweet will but it must exercise the discretion reasonably and fairly. Even the Directive Principles concretise and give shape to the concept of reasonableness and, therefore, every Government action must satisfy the test of reasonableness and public interest. It is true that State is a person in the eye of law and we will assume that it can invoke Article 14. (reliance was placed on paragraph 9.18 on page 281 of Constitutional Law of India by Seervai, 3rd Edition) but the question is whether on established facts it can be said that the allocation of 8.00 MAF of water to Rajasthan was unreasonable or arbitrary? In the first place, the parties who were negotiating a settlement were the concerned State Governments and as observed earlier there is nothing to show that any one of them could dominate the will of Punjab representatives nor is there material to support the allegation that pressure was brought to bear on Punjab representatives by the Government of India. In such circumstances it cannot be said that unequals were pitted against each other or that the decision to part with 8.00 MAF of water was taken in an arbitrary fashion. The decision was taken after examining all the pros and cons and it was a mature decision. We are, therefore, not impressed by the argument that the decision of 29th January 1955 is in violation of Article 14 of the Constitution.

An added facet to the argument was that since the waters from the two rivers belonged absolutely to the people of Punjab and could not, therefore, be given away to Rajasthan, under the Rules of Business of the State Government, the Irrigation Minister Chaudhari Lahri Singh was not competent to enter into any such agreement. Put differently, the Rules of Business (Ex.P5, p.74) did not empower the Irrigation Minister Chaudhri Lahri Singh to agree on behalf of the State of Punjab to part with 8.00 MAF of water from the Ravi-Beas system in favour of Rajasthan. Since no such specific plea was raised in the pleadings, the contention was raised by way of an elaboration (Ex.P3(a)) without introducing an appropriate amendment in the pleadings. We do not desire to reject the contention on the technical ground that it does not find mention in the pleadings, although such an objection was raised on behalf of Haryana as well

as Rajasthan, as we think it would be desirable to examine it on merits to put an end to it once and for all.

We have already pointed out earlier that we have dealt with the question of proprietary rights of Punjab in the river waters elsewhere. We are, however, proposing to answer the present contention on the limited question whether Chaudhri Lahri Singh was under the Rules of Business competent to enter into the impugned agreement. We have already pointed out earlier that even though the decisions were reached on 29th January 1955, the minutes of the said meeting at which Punjab's Finance Minister was also present were confirmed in consultation with him as late as 2nd September 1955. Besides, the final confirmation by the Government of India came only after the Indus Waters Treaty was finalised in 1960. In between, the Government of Punjab made preparations for the utilisation of the waters allocated to it under the said agreement. Apart from the order of 20th October 1961 issued by the Punjab Government, we have also noted that the Beas Projects, Units I and II, have been planned by Punjab on that basis. The cost of these projects have also been allocated between Punjab and Rajasthan under the notification of 17th June 1970. We need not set out the follow-up action of the Punjab Government in detail as we have indicated the same in extenso earlier. Suffice it to say that this conduct-evidence is clearly indicative of the fact that the Government of Punjab had approved the decisions taken at the Inter-State Conference of 29th January 1955. It gives rise to the inference that the confirmation must have been conveyed on 2nd September 1955 only after the State Government had approved the decision. It is not possible to believe that the outcome of such an important meeting attended by two State Ministers had not been conveyed or had not come to the knowledge of the Chief Minister. The subsequent order of the State Government dated 20th October 1961 planning the utilisation of water allocated under the said agreement/decision confirms this impression. If it were not so, projects would not have been planned on that basis and the cost would not have been distributed on that basis in 1970. All these facts raise a strong presumption that the agreement/decision was in fact confirmed by the Government of Punjab.

Section 114, Evidence Act, entitles the Court to 'presume the existence of any fact which it thinks likely to have happened, regard being had to the common course of natural events, human conduct and public and private business, in their relation to the facts of the particular case.' Illustration (e)

thereto states that the Court may presume 'that judicial and official acts have been regularly performed'. Thus this section enables a Court to presume a fact from the existence of another fact or facts having regard to the common course of natural events. Illustration (e) authorises the Court to presume that a particular official act, which is claimed to have been performed a few years back, must have been performed regularly. The presumption no doubt relates to the manner in which the official act must have been performed, that is to say, that it must have been performed by complying with all the requirements. Though the section is not mandatory as is evident from the words 'may presume' the Court would be inclined to raise the presumption if the circumstances of the case so warrant, particularly in cases where the contention is raised after such lapse of time as to make the availability of the material evidence difficult. Taking the overall view of the facts and circumstances of the present case into consideration, we are inclined to raise a presumption that the decisions taken at the inter-State Conference were confirmed after following the Rules of Business. Of course, this presumption is rebuttable.

We now turn to the Rules of Business (Ex.P5, p. 74) as corrected upto 31st August 1955. These Rules were framed in exercise of powers conferred by clauses (2) and (3) of Article 166 by the Governor of Punjab. Rule 4 speaks of the collective responsibility of the Council of Ministers. Rule 5 states that subject to orders by the Chief Minister, under Rule 11, all cases referred to in the Schedule shall be brought before the Council in accordance with the provisions contained in Part II and Rule 11 provides for the submission of all cases referred to in the Schedule to the Chief Minister for disposal by circulation or by bringing it for consideration by the Council. If we turn to the Schedule, we do not find any specific item dealing with river waters or inter-State agreements. We may next notice Rule 18 which provides that except as otherwise provided by any Rule, cases shall ordinarily be disposed of by or under the authority of the Minister-in-charge who may, by means of Standing Orders, give such directions as he thinks fit for the disposal of cases in the department. Of course, copies of such Standing Orders have to be sent to the Chief Minister and the Governor. Rule 26 requires that all communications received from the Government of India shall be submitted to the Minister-in-charge, the Chief Minister and the Governor unless of a routine character. It was enjoined by Rule 27 that any matter likely to bring the State Government into controversy with the Government of India or any other State

Government must be brought to the notice of the Minister-in-Charge, the Chief Minister and the Governor. Rule 28 also provides for bringing to the notice of the Chief Minister and the Governor cases raising questions of policy as well as those likely to affect the relations of the State Government with the Government of India or any other State Government. It was, therefore, argued that since the decisions taken at the Inter-State Conference involved policy questions and were likely to affect the relations of the State of Punjab with other States as well as the Government of India which had played an active role, it was not open to Chaudhri Lahri Singh alone or even in consultation with the Finance Minister to finally agree to give away 8.00 MAF of waters to Rajasthan. Now as pointed out earlier, from the subsequent conduct and the implementation of the decisions by the Punjab Government itself a strong inference arises that the decisions were approved at all levels before the minutes were confirmed on 2nd September 1955. Besides a presumption also arises, unless rebutted, that the official act must have been done regularly, i.e., by complying with all the procedural requirements including the requirements under the Rules of Business. Except producing a copy of a single page (Ex. P5, p.94) from the relevant file, no other material is placed to rebut the presumption. On a perusal of the notings made on this page it appears that after the decision to confirm the minutes was taken, the draft of the confirmation letter was submitted for approval and it appears the D.O. letter was approved and issued on 2nd September 1955. This single sheet of paper relates to the stage after the decision was confirmed by the concerned authorities and before the confirmation was conveyed to the Government of India. It only depicts the stage when the file returned to the Department for putting up a draft of the letter of confirmation to be written to the Government of India. It is not possible from this single sheet to infer that the requirements of the Rules of Business had not been followed. The entire file is not produced and it is not possible for us to hold that the inference arising from subsequent conduct or the presumption arising under section 114, illustration (e), Evidence Act, stands negatived or rebutted by the noting on this single sheet from the file. We are, therefore, of the opinion that even this contention is totally devoid of merit.

As a limb of this argument, it was urged that the decisions taken at the Inter-State Conference being executive in character ought to conform to the requirements of Article 166 of the Constitution and since the so called agreement is not authenticated in the name of the Governor as required by

Rule 8 of the Rules of Business it has no efficacy in law. We will assume for purposes of discussion that such authentication was necessary but it is well settled law that any defect of form would not necessarily make it illegal; at best the only consequence of the order or decision not being in proper form would be that it would not be clothed with the immunity granted by clause (2) of Article 166 and a burden would be thrown on the party relying thereon to show that such order or decision was in fact passed or taken. See *I.K.Gas Plant Manufacturing Co. Ltd. Vs. Emperor*, A.I.R. 1947 F.C. 38 at 43; *Dattatraya Moreshwar Panarkar Vs. The State of Bombay*, (1952) 3 S.C.R. 612 at pp. 624-625; *State of Rajasthan Vs. Sripal Jain*, (1964) 1 S.C.R. 742 at 750; *D.G. Vishvanath Vs. Chief Secretary, Government of Mysore*, A.I.R. 1964 Mysore 132 at 142-143; *R. Chitralekha Vs. The State of Mysore*, 6 S.C.R. 369 and *L.G.Chaudhri Vs. Secretary, L.S.G.Department, Government of Bihar*, ((1980) Supp. S.C.C. 374 at 378 to quote a few. We, therefore, see no substance in this submission.

The last point concerns the applicability of Article 299 to such agreement/decision. Since the argument concerns both the 1955 and 1981 agreements we have thought it proper to deal with the same separately. We have come to the conclusion that the challenge based on non-conformity with Article 299 is misconceived and without merit.

Since we do not find any substance in the various challenges directed against the 1955 agreement, we do not consider it necessary to deal with some of the technical objections raised by Haryana and Rajasthan, e.g., (i) the validity of the agreement cannot be challenged in the absence of other concerned States; (ii) the agreement of 1955 having been acted upon and having merged in the 1981 agreement, the State of Punjab is estopped from contesting its validity; (iii) Since the 1955 agreement was ultimately approved by the Government of India, its validity cannot be gone into in the absence of the Union of India being a party to the proceedings, etc. If we had found substance in any of the objections raised by Punjab in regard to the 1955 agreement we would have gone into the technical objections raised by Haryana and Rajasthan. That disposes of the question of the legality and validity of the 1955 agreement.

CHAPTER XV

EVENTS LEADING TO THE CENTRAL GOVERNMENT ORDER OF 24TH MARCH 1976.

Under the terms of the agreement of 29th January 1955, it was left to each State to decide how best to utilise the supplies allocated to it. The States were, however, expected to submit their proposals in this regard immediately to the Government of India (Planning Commission). Soon thereafter, on 27th September 1955, the Chief Engineer, Irrigation Works, Punjab, wrote a letter to the Deputy Secretary to the Government of India enclosing therewith a note containing the proposals of the Punjab State for the utilisation of the supplies of the rivers, the Ravi and the Beas. This note (Ex.P4, p.133) after reproducing the decisions taken at the inter-State Conference on 29th January 1955 emphasises that for full utilisation of the supplies from the Ravi and the Beas it was necessary to build storages amounting to a total of 7.00 MAF; the storages on the Ravi were of the capacity of 1.5 MAF whereas the storages on the Beas would have a capacity of 5.5 MAF making a total of 7.00 MAF. In paragraph 3 of the note it was suggested that Punjab's share of 5.9 MAF over and above the pre-partition use will be utilised on extensions of Upper Bari Doab Canal, increase in the supplies on the Eastern Canal to the level of existing post-partition supplies, increase in the supplies of western Jamuna Canal making the proposed Gurgaon canal perennial, improving capacity factors in Bhakra-Canals and utilisation of the proposed Hoshiarpur Canal. While concluding the Note it was stated that Punjab proposed to utilise its share of 5.9 MAF as below:-

	MAF
"U.B.D.C. ...	1.85
Eastern Canal ...	0.21
Hoshiarpur Canal...	0.79
Sirhind Feeder ...	3.05

	5.9 MAF"

So far as the supplies released by the Sirhind Feeder from Bhakra area, the proposal was to utilise the same as below:-

	MAF
"Western Jamuna Canal	1.07
Gurgaon Canal	0.40
Bhakra & Sirhind Canals	1.21

	2.68 "

After this letter was written, Pepsu merged with Punjab raising Punjab's share in the surplus Ravi-Beas waters from 5.90 MAF to 7.2 MAF (5.90 + 1.30 = 7.20 MAF). The Government of Punjab thereafter passed the order on 20th October 1961 (Ex. H2, p. 22) for the utilisation of the aforesaid 7.2 MAF of surplus waters in the Punjab area. This was based on the proposal contained in Punjab Chief Engineer G.S.Siddhu's letter of 1st July 1961 which was approved with slight modifications as given below:-

	MAF
"1.Extension of irrigation on U.B.D.C. tract.	1.835
2.Chak Andhar Tract	0.163
3.Eastern Canal (improvement of capacity factor)	0.232
4.Makhu Canal	0.163
5.Extension and improvement of irrigation on Bhakra and Sirhind Canal areas including removal of shortage	0.210
6.Gurgaon Canal	0.307
7.Sohna Lift Scheme	0.133
8.Western Jamuna Canal (50% intensity)	0.104
9.Delhi water supply	0.119

	7.257 "

It was directed that further planning may be done on this basis and detailed schemes may be prepared in due course by the Chief Engineers. It must be realised that full utilisation of the Ravi and the Beas supplies was not possible till the completion of the

Thein Dam on the Ravi and the Pong Dam on the Beas Sutlej Link. The share of water for extension and irrigation of Bhakra and Sirhind Canal areas including removal of shortage in Bhakra Reservoir was estimated to be 4.201 MAF for both the Punjab and Haryana areas; 2.6 MAF going to Punjab areas and the remaining 1.601 MAF reserved for Haryana areas. Since a major share out of the total supplies available to composite Punjab fell to the share of Punjab areas, the people, particularly the agriculturists of the Haryana area, felt aggrieved which led the Government of Punjab to appoint two Committees called "The Food Committee on Land and Water Use in the Punjab" on 12th January 1965 and the "Haryana Development Committee" on 20th March 1965. The first Committee under the Chairmanship of Shri Madan Lal, M.I.E., Chief Engineer, Irrigation Works (Punjab), Chandigarh, submitted its report in two volumes on 10th February 1966 (Ex.H-18). Appreciating the necessity of rational distribution of irrigation supplies in various parts of the State, the Committee went into the scientific analysis of the problem both from surface and sub-surface flows. It also took note of the problem of salinisation of soils in the State. The Chairman in the concluding paragraph of his foreword, however, noted as under:-

"In the end, I must state that the data as produced in this report and the views expressed by the Members of the Committee in their individual capacity do not bind the Government in any manner. The data presented in this report is illustrative and not authenticated."

What was perhaps meant was that the views expressed by the members were their personal views since they were all Government officials occupying different positions. It was, therefore, thought necessary to clarify that the report was recommendatory in nature and was not binding on the Government and it was left to the Government to accept, modify or vary the same. The Committee after taking various factors into consideration made certain proposals in paragraph 7.9 of its Report on the principle of equitable distribution of the surplus waters of the two rivers keeping in mind the distribution sanctioned by the Government of Punjab by its order dated 20th October 1961. A comparative table prepared by the Committee based on the detailed calculation made

in Appendix 23 may be reproduced for ready reference:-

S.No. Canal system	Sanctioned allocation (M.A.F.)	Proposed allocation (M.A.F.)
1. Upper Bari Doab Canal	1.998 (including 0.163 for Chak Andhar tract)	0.082 (Chak Andhar tract excluded)
2. Eastern Canal	0.232	0.130
3. Makhu Canal	0.163	0.061
4. Bhakra and Sirhind Canal	4.201	1.240
5. Gurgaon Canal (including Sohna Lift Stage-1) (includes 0.133 for Sohna stage-I)	0.440	0.723
6. Western Yamuna Canal	0.104	2.478
7. Delhi Water Supply	0.119	0.252
8. Sirhind Feeder	...	1.430
9. Ferozepur Feeder	...	0.148
10. Sohna Lift Scheme (Stage II & III)	...	0.178
11. Other areas of Hissar, Mohindergarh and Gurgaon districts outside irrigation boundaries.	...	0.351
	7.257	7.073
Say	7.2 MAF	7.1 MAF

This Committee, therefore, recommended that out of the total available supplies of 7.2 MAF excluding the share of Delhi, 4.56 MAF should be utilised in areas forming part of Haryana and the balance in Punjab areas.

The Haryana Development Committee constituted on 20th March 1965 consisted of elected representatives, officials of the Punjab Government as well as leading citizens from Haryana area with Pandit Ram Sharma as the Chairman. The terms of

reference of the Committee were:-

- "(i) to make a study of socio-economic conditions with a view to assessing the economic deficiencies as well as the perspective potentialities of the region;
- (ii) to make an assessment of the progress likely to be achieved by the end of the Third Plan; and
- (iii) to recommend development measures for an accelerated and integrated socio-economic growth of the region, with particular reference to the Fourth Five-year Plan".

Since the Fourth Plan was in the process of finalisation, the Committee submitted an Interim Report highlighting the urgent needs of the Haryana area to the Punjab Government on 4th August 1965. The Final Report (Ex. H.17) was submitted in January 1966. After taking into consideration the historical and geographical background of the Haryana Region, the extent of backwardness of the region, the population ratio and other relevant matters, the Committee came to the conclusion that the factual position clearly indicated that the Haryana Region was lagging far behind the other region in almost all the main developmental sectors inspite of the implementation of the three Five-Year Plans. These persisting imbalances in the development of the two regions, the Committee felt, had to be rectified in the shortest possible time and for removing the same, much higher allocations were necessary for the region during the Fourth-Five Year Plan period. With this end in view, detailed recommendations were made by the Committee. Dealing with the question of water from the Ravi-Beas complex, the Committee observed as under:-

"Another very important means of solving the irrigation problem of Haryana Region on a long term basis would be to earmark an equitable share of the waters available from rivers Beas and Ravi, for this Region. It estimated that 7.2 million acre-feet of water would be available from these sources. In view of the great existing disparity, the Committee considers that bulk of this additional water must go to the Haryana Region."

Soon after the submission of these Reports, in about March 1966, a decision was taken for the reorganisation

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Soon after the submission of these Reports, in about March 1966, a decision was taken for the reorganisation

of the existing State of Punjab. As a result of this decision the Reports submitted by the aforesaid two Committees were virtually shelved. The Punjab Reorganisation Act, 1966 (No.31 of 1966) was passed on 18th September 1966. On the enactment thereof the State of Punjab was reorganised with effect from 1st day of November, 1966. Section 3 of the Act inter alia provided that on and from the appointed day, (that is, 1st day of November 1966), there shall be formed a new State to be known as the State of Haryana comprising the territories of the existing State of Punjab, namely, (a) Hissar, Rohtak, Gurgaon Karnal and Mahendragarh districts; (b) Norwana and Jind tehsils of Sangrur district; (c) Ambala, Jagadhri and Naraingarh tehsils of Ambala district; (d) Pinjore Kanungo circle of Kharar tehsil of Ambala district; and (e) the territories in Manimajra Kanungo circle of Kharar tehsil of Ambala district specified in the First Schedule. By Section 4 on and from the appointed day, the Union territory of Chandigarh comprising such of the territories of Manimajra and Manauli Kanungo circles of Kharar tehsil of Ambala district in the existing state of Punjab, specified in the Second Schedule, was formed whereupon the said territories ceased to form part of the existing State of Punjab. Some of the territories of the existing State of Punjab specified in section 5 were added to the Union territory of Himachal Pradesh whereupon they ceased to form part of the existing State of Punjab. By section 6 it was stipulated that on and from the appointed day, the State of Punjab shall comprise the territories of the existing State of Punjab other than those specified in sub-section (1) of section 3, section 4 and sub-section (1) of section 5. Thus Parliament in exercise of power conferred by Articles 2 and 3 of the Constitution reorganised the existing State of Punjab with effect from the appointed day, that is, 1st day of November 1966. After the reorganisation thus took place, the apportionment of assets and liabilities of the existing State of Punjab immediately before the appointed day had to be made between the newly formed States as well as the Union territories. Section 65 on which some reliance was placed on behalf of the State of Haryana may be reproduced at this stage:-

"65. Where, by virtue of any of the provisions of this Part, any of the successor States becomes entitled to any property or obtains any benefits or becomes subject to any liability, and the Central Government is of opinion on a reference made within a period of three years from the appointed day by any State that it is just and

equitable that that property or those benefits should be transferred to, or shared with, one or more of the other successor States, or that a contribution towards that liability should be made by one or more of the other successor States, the said property or benefits shall be allocated in such manner, or the other successor State or States shall make to the State primarily subject to the liability such contribution in respect thereof, as the Central Government may, after consultation with State Governments concerned by order determine."

This Section empowers the Central Government to order allocation or adjustment, if any of the successor States becomes entitled to any property or obtains any benefits or becomes subject to any liability and a reference is made to the Central Government within a period of three years from the appointed day by any State for a just and equitable distribution thereof. The next group of important sections which require to be noticed are to be found in Chapter VIII entitled 'Bhakra-Nangal and Beas Projects'. These are sections 78, 79 and 80 which we have reproduced earlier. It would suffice at this stage to state that under sub-section (1) of section 78 'Notwithstanding anything contained in this Act but subject to the provisions of sections 79 and 80, all rights and liabilities of the existing State of Punjab in relation to Bhakra-Nangal Project and Beas Project shall, on the appointed day, be the rights and liabilities of the successor States in such proportion as may be fixed, and subject to such adjustments as may be made, by agreement entered into by the said States after consultation with the Central Government or, if no such agreement is entered into within two years of the appointed day, as the Central Government may by order determine having regard to the purposes of the Projects'. So far as the Bhakra-Nangal Project is concerned, since the water supplies thereunder were planned and committed long before, they are not the subject matter of dispute in the present reference. Section 78(1) which begins with a non-obstante clause is, however, subject to the provisions of sections 79 and 80 of the Act. Under this provision, all rights and liabilities of the existing State of Punjab in relation to the two Projects become the rights and liabilities of the successor States on the appointed day in such proportion as may be fixed and subject to such adjustments as may be made by agreement entered into by the said States after consultation with the Central Government and, failing such agreement within a period of two years from the

appointed day as the Central Government may by order determine having regard to the purposes of the Projects. The section, therefore, envisages an agreement within a period of two years from the appointed day between the successor States as defined in section 2(m) in regard to the rights and liabilities of the existing State of Punjab in relation to the two Projects. If the successor States fail to arrive at any agreement in that behalf within the stipulated period, the Central Government is empowered to determine the same by an order having regard to the purposes of the Projects. If a decision is to be reached purely on the basis of agreement between the successor States, the same must be after consultation with the Central Government. The order or determination made by the Central Government in default of agreement between the successor States could be varied by any subsequent agreement entered into by the successor States again after consultation with the Central Government, vide the proviso to that sub-section. As no agreement was reached between the newly formed States of Punjab and Haryana in regard to the rights and liabilities in relation to the Beas Project within the stipulated period of two years, the State of Haryana approached the Central Government for determination of the rights and liabilities as provided by sub-section (1) of section 78 of the Act. The Central Government by a resolution dated 24th April 1970 constituted a Committee of Experts comprising Shri A.C. Mitra, Retired Engineer-in-Chief, Uttar Pradesh, as Chairman; Shri G.N.Pandit, Retired Chairman, Maharashtra State Electricity Board as Member and Shri U. Ananda Rao, Retired Chief Engineer, Tamil Nadu, as Member and Convener and directed it to submit its report within a period of three months. The Committee submitted its Report on 26th February 1971 (Ex. H-19). The Report is divided into four chapters, Chapter I containing the historical background, Chapter II the data and statistics; Chapter III the claims of the Punjab and Haryana and Chapter IV analysis of the 1961 proposal and recommendations. On a perusal of Chapter III we find that subsequent to the reorganisation of the State, the claims of the two newly formed States, instead of coming closer had diverged. Out of the surplus 7.2 MAF of waters, Haryana claimed 4.8 MAF on the following basis:-

"Requirements of water of Haryana are:

- | | |
|--|------------|
| a) On the basis of one crop per year | 16.40 MAF. |
| b) On the basis of Bhakra pattern
of supplies | 8.55 MAF. |

Against this the water that can possibly be made available to Haryana by pooling and utilising of possible sources is:

i) Ground Water:	
a) Ambala District	0.82 MAF.
b) Karnal District	0.58 MAF.
c) Jind District	0.15 MAF.
	1.55 MAF.
ii) Possible saving by lining of canals of new system and on the existing W.J.C. system (10% of 8.414)	0.84 MAF.
iii) Jamuna Dam:	
a) 2/3rd of storage in Kishau Dam	1.00 MAF.
b) 2/3rd of storage in Giri Dam	
iv) Sahibi	0.10 MAF.
v) Ghaggar	0.25 MAF.

Total	3.74 MAF.

Therefore, the absolute minimum requirements of Haryana out of the Ravi-Beas complex to enable it to run its canals on the Bhakra Pattern is 8.551 - 3.71 i.e., 4.811 say 4.8 MAF."

This claim of Haryana was countered by Punjab on the following grounds:-

- "i) requirements of Punjab cannot be fully met with even with the entire water resources of Sutlej Ravi and Beas.
- ii) Haryana, can, using its own resources, attain an intensity of irrigation of 100%
- iii) While in Punjab the entire irrigation is with natural flow, Haryana cannot use the surplus water without lift irrigation.
- iv) Surplus water is already being utilised in Punjab to a considerable extent; and

v) the three rivers flow through Punjab and as such Punjab has a priority right to use these waters."

According to Punjab the volume of water required to achieve the targets specified for Bhakra Nangal areas for the entire State was 16.938 MAF. The requirements for attaining intensities of irrigation of 100%, 150% and 200% were estimated to be 25.36 MAF, 38.04 MAF and 50.72 MAF respectively. Punjab, however, claimed that the intensity of irrigation for optimum development should be 200 to 300 per cent, but since the total available supplies from the three rivers were only 31.79 MAF, all the waters, excluding 0.65 MAF for Kashmir should be allocated to it. It would, therefore, appear from the above that while Haryana claimed 4.8 MAF from the available surplus of 7.2 MAF from the Ravi-Beas System, Punjab contended that Haryana was not entitled to a drop of water and since it had proprietary rights over the said waters and desired to achieve a higher intensity of irrigation, the entire mass of surplus waters must be allocated to Punjab. That is why, it was rightly commented by the Committee that the cleavage between the two States since reorganisation had increased instead of being bridged. These submissions were taken into consideration by the Committee and after referring to section 78(1) of the Punjab Reorganisation Act and quoting from the Beas Project Report which indicated that one of the purposes of the Project was to supply water to arid areas in Punjab which did not receive water from the Bhakra-Nangal Project, the Committee recommended as under in paragraph 4.21 of the Report:-

"4.21. The allocations approved by the Punjab Government in 1961 after rectifying discrepancies and anomalies noticed by the Committee are given in the Statement below. The 1961 allocations are also shown in the statement for comparison."

Sl. No.	Tract	Allocation (MAF.)			1961 allocations
		Punjab	Haryana	Total	
1.	U.B.D.C.	0.993	-	0.993	1.835
2.	Chak Andhar	0.066	-	0.066	0.163
3.	Eastern Canal	0.136	-	0.136	0.232
4.	Makhu Canal	-	-	-	0.163
5.	Bhakra-Nangal- and Sirhind Canals	1.613	1.623	3.236	4.201
	(a) Sirhind Feeder	0.279	-	0.279	-
6.	Gurgaon Canal				
7.	Sohna Lift I	-	0.640	0.640	0.440
8.	Western Jamuna Canal	-	1.519	1.519	0.104
	Total	3.087	3.782	6.869	7.138
9.	Delhi Water Supply.	-	-	0.119	0.119
	Total	3.087	3.782	6.988	7.257"

After the receipt of the Report of Mitra Committee in February 1971, the Central Government invited the comments of the concerned State Governments on these Reports. These comments were examined by another Committee set up by the then Union Minister for Irrigation and Power comprising S/Shri B.P.Patel, Secretary, Irrigation and Power, S.K.Jain (since deceased), Chairman, Central Water and Power Commission and B.S.Bansal, Joint Secretary, Ministry of Irrigation and Power. After considering the recommendations of this Committee, the concerned Ministry submitted a proposal for the apportionment of surplus Ravi-Beas Waters. It is the say of Haryana that this Committee had recommended 3.04 MAF out of 7.2 MAF for Haryana.

Shri D.P.Dhar, Deputy Chairman, Planning Commission, was thereupon asked to submit a Note which he did on 24th March 1973. Taking note of the allocation of waters made by the erstwhile Punjab Government as well as the reports of the Haryana Development Committee and the Food Committee on Land and

Water Uses in the Punjab, the availability of surplus and ground water and other relevant factors, he was of the view that out of the total availability of 7.00 MAF (0.20 MAF having been excluded for Delhi Water Supply), 3.74 MAF should go to Haryana and the balance 3.26 MAF to Punjab. Comments of the State Governments were once again invited on this Report. The State of Haryana sent its comments on 16th April 1973 (Ex.H2, pp.132-150) contending that the water resources of both the States should be pooled and distributed equitably having regard to the arid and drought prone areas in each State. On this basis Haryana claimed an allocation of 6.19 MAF out of 7.2 MAF allocated to composite Punjab. On the other hand, the State of Punjab reiterated its earlier stand and claimed that the waters of the two rivers belonged to it and at best under section 78(1) of the Punjab Reorganisation Act, taking into account the purposes of the Beas Project, the water allocable to Haryana therefrom could not exceed 0.9 MAF.

On the basis of these Reports and the comments of the concerned States, high level meetings were held at which the Chief Ministers of Punjab and Haryana in the presence of the Union Minister for Irrigation and Power tried to work out an agreement but to no avail. The matter remained under examination for some time till the matter was entrusted to Shri Y.K.Murthy, Chairman, Central Water Commission, for a de novo examination by the Government of India order dated 29th May 1975 (Ex. H2, p.151). Discussions were held with the officers of the Punjab Government on 8th May 1974 and it appears that the earlier contentions were reiterated and it was urged that since Haryana does not lie in the basin of the two rivers, it is not entitled to any water therefrom and under the provisions of the Punjab Reorganisation Act, all that the Central Government can do is to determine the rights and liabilities of the successor States under the Beas Project. According to Punjab, Haryana could lay a claim only to a share in the waters diverted from Beas Project and Pandoh which works out to only 0.9 MAF. On the other hand, the officers of the State of Haryana with whom discussions were held on 9th May 1974, insisted on equitable apportionment of the surplus Ravi-Beas waters and contended that the Central Government ought not to take a narrow view of the language of the statute as contended by Punjab because it would frustrate the objective of the project to do justice to the arid areas of Haryana. On examination of the various documents and taking into account the points of view canvassed by the contesting States, Shri Murthy thought that the two main issues, namely: "(a) determination of the divisible pool of waters which arise as a result of the Beas

Project; and (b) determinating (sic.) the share of Haryana and Punjab in this divisible pool, having regard to the purposes of the project", arose for consideration. After taking into consideration the 1955 agreement and the allocation of waters to different States thereunder, he was of the view on a proper reading of section 78 of the Punjab Reorganisation Act that the claim of Haryana that the entire surplus of 7.2 MAF should be considered for division was not in accordance with the Act. He observed that the Beas Project Report and the several documents furnished by both the States clearly indicated that entire waters of the Beas would become utilisable on completion of the Beas Project (Unit I and II). He then went on to state as under:-

"It is clear from a reading of Section 78 that the waters which are to be divided between Haryana and Punjab are these which have become available for distribution as a result of the Beas and Bhakra Projects. The claim of Haryana that the entire surplus of 7.2 MAF should be considered for division is not in accordance with the Act. The Beas Project Report and the several documents furnished by both the States clearly indicate that the entire waters of the Beas would become utilisable on completion of the Beas Project (Unit I & II).

The Beas waters available for the erstwhile Punjab as a result of Beas Project are worked out as follows:-

Total Beas inflow (1921-45 series)	12.85 MAF
Pre-partition uses	1.61 MAF

Balance	11.24 MAF
Rajasthan's share 8×11.24	

	5.92 MAF
15.2	
Balance	5.32 MAF
Delhi Water Supply - Punjab share	0.119 MAF
Balance for erstwhile Punjab	5.201 MAF "

He then proceeded to consider the availability of Ravi waters through the Madhopur Beas Link which could be included in the divisible pool. In his view, to the extent the Ravi supplies were

surplus to the requirements of canals off-shooting from Madhopur, their integrated utilisation with Beas supplies would be made possible by storage reservoir created behind Beas Dam at Pong. He estimated the quantum of use of Ravi water as a result of the Beas Project at 1.47 MAF and deducting therefrom the proportionate share of Rajasthan, 0.77 MAF, the share of erstwhile Punjab was fixed at $1.47 \text{ MAF} - 0.77 \text{ MAF} = 0.70 \text{ MAF}$. The total divisible pool was thus worked out at Beas 5,201 MAF plus Ravi 0.70 MAF = 5.901 MAF. Thereafter taking note of the fact that the Beas Project was framed on the basis of the 1921-60 Series, he inflated the divisible pool by 0.34 MAF and worked it out to 5.901 MAF plus 0.34 MAF = 6.241 MAF, that is to say, 6.24 MAF.

On a close scrutiny of the Beas Project Report and the various plates accompanying it, the requirements of the canals and the Beas and the Sutlej system as a result of the Beas Project in the erstwhile State of Punjab were examined but he felt that the Beas Project Report and the accompanying plates did not show what the various canal systems would have carried without the availability of water arising as a result of the Beas Project. To put it shortly, after a detailed and careful consideration of the Beas Project, he came to the conclusion that it was not possible to ascertain therefrom how much quantity of water arising as a result of the construction there was proposed to be utilised in Haryana areas and what quantum was earmarked for Punjab areas. He, however, took note of the fact that waters arising as a result of the Beas Project were intended for use both in Punjab and Haryana areas, specially for extending irrigation to arid areas. He then proceeded to examine the factors relevant for equitable distribution of waters keeping in mind the purposes intended to be achieved under the Beas Project. Noting that Haryana had received a raw deal in the past, he concluded in paragraph 16 of the Report (Ex.H2, pp. 153-172) as under:-

" I feel that under the circumstances indicated above, the best course would be to allocate the waters arising on account of Beas Project equally between Punjab and Haryana after keeping apart the supplies earmarked for Delhi Water Supply Scheme."

On this premise, taking the divisible pool at 6.24 MAF as indicated earlier, the share of each State was worked out at 3.12 MAF. Taking note of the D.O. letter written by the Chief Minister of Haryana dated 27th October 1972, wherein he had agreed

for an additional supply of 0.06 MAF of water to Delhi State for drinking water supply, in allocating the surplus Ravi-Beas waters, 0.03 MAF came to be deducted from the share of each State and accordingly the share worked out at 3.09 MAF. Since there was no commitment from Punjab of the type made by the Chief Minister of Haryana, it was observed that if the Punjab Government agreed for the allocation of 0.03 MAF out of their share, then Haryana have to share 0.03 MAF in which case the allocation for Haryana would be 3.09 MAF and the balance would go to the State of Punjab.

On receipt of this report, comments of the States of Punjab and Haryana were obtained and the report together with the comments can be found in a compilation prepared by Haryana (Ex.H-20).

From the above facts it will appear that after the reorganisation of the States with effect from 1st November 1966, efforts were made to work out an agreement as required by the first part of section 78(1) of the Punjab Reorganisation Act. When those efforts failed and a stalemate was reached, the State of Haryana requested the Government of India to exercise its power under the second part of section 78(1) to determine by an order the shares of Punjab and Haryana in the river waters. Even after this request was received, the Government of India did not act in haste but was extremely circumspect and got the question examined by technical experts while it continued its efforts at the political level to find a meeting ground between the two States. The problem was examined in great detail from all pros and cons and the State Governments were given the fullest opportunity to place their points of view before the Central Government. The reactions of the State Governments were also invited on each and every report submitted by Committees appointed by the Government of India to find an amicable solution to the dispute between the two States. It was only after every effort both at the official level as well as the political level failed and it was realised that the stalemate could not be broken by agreement between the rival States that the Government of India was constrained to exercise power under the latter part of section 78(1) of the Punjab Reorganisation Act. Section 78(1) cast a duty on the Central Government to determine the proportion of the rights and liabilities of the successor States arising out of the Bhakra Nangal Project and the Beas Project having regard to the purposes of the Project if the successor States failed to reach an agreement within two years of the appointed day. When every effort to bring about an amicable settlement between the two States

failed, the Government of India felt compelled to perform its duty under section 78(1) and in exercise of power conferred by that provision issued a notification dated 24th March 1976 (Ex. H2. pp. 211-216) allocating the surplus waters between Punjab and Haryana. After referring to the signing of the Indus Waters Treaty in 1960 whereunder the waters of the three eastern rivers became available for unrestricted use by India after 31st March 1970, the agreement reached in regard to the allocation of surplus waters by the concerned States in 1955 on the 1921-1945 Series, the reorganisation of the State of Punjab with effect from 1st November 1966, the requirement of section 78 of the Punjab Reorganisation Act, the failure of the successor States to reach an agreement with regard to their rights and liabilities in relation to the Beas Project within two years, the purposes of the Beas Project and other relevant considerations, the Government of India made the determination in the following words:-

"NOW, THEREFORE, in exercise of the powers conferred by sub-section (1) of section 78 of the Punjab Reorganisation Act, 1966 (31 of 1966), the Central Government hereby makes the following determination, namely:-

'Taking note of the facts that Haryana has a 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 larger quantity of water is needed for irrigation in the State of Haryana and there is limited availability of water from other sources in that State, the Central Government hereby direct that out of the water which would have become available to the erstwhile State of Punjab on completion of the Beas Project (0.21 MAF whereof 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 MAF out 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 Governments 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 at Madhopur (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."

CHAPTER XVI

LEGALITY AND VALIDITY OF THE 1976 AWARD

The award of 24th March 1976 was a determination of the rights and liabilities of the successor States of the existing State of Punjab by the Central Government in view of the State Governments having failed to enter into an agreement in that behalf in consultation with the Central Government within the stipulated time. All rights and liabilities of the existing State of Punjab in relation to Bhakra Nangal Project and Beas Project on the appointed day were declared to be the rights and liabilities of the successor States. The proportion of the rights and liabilities had to be fixed by agreement entered into by the said States after consultation with the Central Government within a period of two years from the appointed day. If the concerned States failed to reach an agreement within the stipulated period, the section empowered the Central Government to determine the same having regard to the purposes of the Projects. In the present case since the successor States of Punjab and Haryana failed to enter into an agreement within two years in regard to the proportion of their rights and liabilities in relation to the Beas Project, the Central Government was invited by the State of Haryana to determine the same having regard to the purposes of the project. After all efforts to bring about an amicable settlement between the two States failed, it became imperative for the Central Government to determine the same by the order of 24th March 1976. This determination or order of the Central Government was challenged before us by the State of Punjab on diverse grounds. It was firstly submitted that the function entrusted to the Central Government by section 78(1) was quasi judicial in character and hence the order ought to have been a speaking order and since no valid reasons were given for the ultimate conclusion reached by the Central Government, the said order was a nullity and could not be enforced. It was further submitted that the reason which weighed with the Central Government, namely, existence of large arid tracts and drought prone areas and the level of development of irrigation in the State of Punjab were extraneous to the scope and ambit of section 78(1) and hence the order was clearly ultra vires the said provision. According to the State of Punjab, on the clear language of section 78(1) the Central Government's determination had to be based on the purposes of the Beas Project and not on

such extraneous considerations which had nothing to do with the Beas Project. If the purposes of the Beas Project had been kept in mind by the Central Government, it would not have allocated the waters from the Ravi-Beas system between the States of Punjab and Haryana in equal proportion for the simple reason that under the Beas Project, irrigation waters were to be provided to specific canal systems in the quantum earmarked for distribution as indicated in the water statements included in the project report. Having regard to the purposes of the Beas Project set out in the Report, only that part of the water diverted through Beas Sutlej Link at Pandoh was apportionable between Punjab and Haryana and became available for distribution at Ropar after excluding losses. On that basis Haryana could at best have been allocated 0.90 MAF of waters under the Beas Project. It was, therefore, submitted that since extraneous considerations had weighed with the Central Government in the allocation made between the States of Punjab and Haryana under the 1976 award or order, the entire award/order was outside the purview of section 78(1) and no reliance could be placed thereon. If section 78(1) was not given this restricted meaning and if it was understood to confer power on the Central Government to make an equitable distribution of the share allocated to the erstwhile State of Punjab, it would render the entire section ultra vires the Constitution which a judicial Tribunal would try to avoid. It was further stated that under the said award conditions obtaining on the appointed day, 1st November 1966, had to be evaluated whereas on a plain reading of the 1976 award the conditions existing as on the date of the award or immediately before it were taken into consideration which rendered the order vulnerable and not in keeping with the requirements of the said provision. Without considering all the purposes of the Beas Project, Ravi waters and waters expected to be stored at the Thein Dam which had nothing to do with the Beas Project were taken into consideration by the Central Government regardless of the scheme of section 78(1) and that too without consultation with the successor State of Himachal Pradesh and the Union Territory of Chandigarh. Lastly, in doing so, the Central Government failed to consider the contention of the State of Punjab that Haryana not being a riparian State in respect of the Ravi and the Beas, had no right whatsoever to the waters of the said two rivers except those flowing from section 78(1) of the Punjab Reorganisation Act. It was, therefore, vehemently argued that the 1976 award was based on extraneous considerations and was not within the scope and ambit of section 78(1) and since the Central Government had acted outside its jurisdiction, the impugned order or award of 1976 was clearly a nullity.

On the other hand, counsel for Haryana contended that after every effort to arrive at an amicable agreement in regard to the distribution of the rights and liabilities of the existing State of Punjab in relation to the Beas Project failed, the Government of Haryana was left with no alternative but to request the Central Government to exercise its powers and to determine the same by impugned order having regard to the purposes of the Beas Project. Before exercising the power conferred upon the Central Government by section 78(1), the Central Government appointed Committees and sought the opinion of experts to enable it to reach a correct conclusion in the matter of distribution of rights and liabilities between the two States under the said provision. After the Central Government was in seisin of the necessary technical data and was fully informed of the purposes of the Beas Project, it passed the impugned order on 24th March 1976, almost a decade after the decision to reorganise the composite State of Punjab was taken. The Central Government, therefore, did not pass the impugned order without proper application of mind and a proper understanding of the purposes of the Beas Project. The dispute was essentially between the States of Punjab and Haryana in regard to the waters which had fallen to the share of composite Punjab under the 1955 agreement and, therefore, there was no need to take into consideration the view points of other States, namely, Himachal Pradesh and the Union Territory of Chandigarh. So far as the States of Punjab and Haryana were concerned, they were fully heard and their views on every Committee Report were invited and considered before the final decision was taken. It was not necessary for the Government of India while adjudicating the claims of Punjab and Haryana to give detailed reasons in support of its conclusion, assuming the word 'determination' used in section 78(1) conferred quasi-judicial powers on the Central Government. Since the determination under section 78(1) by the Central Government was final and was not subject to any appeal or revision to any other forum, all that was necessary for the Central Government was to indicate what had weighed with it while passing the impugned order. On a perusal of the impugned order it is manifest that the Central Government took into consideration the facts, namely, (i) Haryana had a large arid tract with several drought prone areas; (ii) the development of irrigation in the State of Haryana was substantially less as compared to that of Punjab; and (iii) larger quantity of water would be needed for irrigation in the State of Haryana since there was limited availability of water from other sources, before deciding that out of the water that became

available to the erstwhile State of Punjab on the completion of the Beas Project after taking the quantum earmarked for Delhi Water Supply, Haryana should receive 3.5 MAF and the remaining water not exceeding 3.5 MAF should go to Punjab. It was further observed by the Central Government that when further conservation works on the Ravi are completed, Punjab will receive 3.5 MAF out of 7.2 MAF which is the share of the erstwhile State of Punjab under the 1955 agreement. The remaining 0.08 MAF out of 7.2 MAF was recommended as additional quantum of water for Delhi Water Supply for acceptance by both the States. Dealing with Punjab's case that the fact of its being a riparian State was not considered by the Government of India while making the 1976 award, counsel for Haryana pointed out that under section 78(1) what the Central Government was required to determine and decide was the distribution of rights and liabilities of the erstwhile State of Punjab between the two States. Since the State of Haryana was, before reorganisation, a part of composite Punjab - a riparian State - provision had to be made in the Punjab Reorganisation Act regarding the rights of the successor States in the quantum of water allocated to the erstwhile State of Punjab under the 1955 agreement and hence Punjab's hind sight contention that on the reorganisation of the States it alone became entitled to the waters available from the Ravi-Beas System by virtue of Entry 17 in List II is wholly irrelevant and misconceived. On reorganisation of a State into two or more States by virtue of Articles 3 & 4 of the Constitution, provision for the apportionment of assets and liabilities has to be made and accordingly section 65 provided for the distribution of property and other benefits whereas section 78(1) provided for the distribution of all rights and liabilities of the existing State of Punjab in relation to the Beas Project, having regard to the purposes of the project. That being so, on the failure of the two States to enter into an agreement in that behalf within the stipulated period of two years, a duty was cast on the Central Government to determine in what proportion the rights and liabilities of the existing State of Punjab in relation to the Beas Project should be divided between the two States keeping in view the purposes of the project. According to him the main purpose of the Beas Project was to provide water inter alia to the arid and drought prone areas of the State of Haryana and hence the impugned 1976 award was clearly in conformity with the requirements of section 78(1) of the Punjab Reorganisation Act. For these reasons, counsel for the State of Haryana, contended that the 1976 award was clearly intra vires section 78(1) and no part of section 78(1) was

ultra vires the constitution as was sought to be urged on behalf of the State of Punjab.

We do not consider it necessary to examine the rival contentions bearing on the legality and validity of the 1976 Award of the Central Government made under section 78(1) in view of the interpretation put by us on the terms of reference. While examining the scope of the inquiry before us we gave our anxious consideration to the question whether on a true interpretation of paragraphs 9.1 and 9.2 of the Punjab Settlement, Items Nos. 1 and 2 of the terms of reference and the newly added section 14 of the 1956 Act, it was permissible for the Tribunal to take the 1955 and 1981 Agreements as superseded qua Rajasthan also by the Punjab Settlement. We have recorded a clear and categorical finding in the last paragraph of the topic 'Scope of Inquiry' in the following words:

".....,on a true interpretation of paragraphs 9.1 and 9.2 of the Punjab Settlement, items Nos.1 and 2 of the terms of reference and the newly added section 14 of the 1956 Act, we are of the view that the Tribunal cannot alter the share of Rajasthan fixed under the 1955 agreement and later modified under the 1981 agreement."

We rejected Punjab's contention that Rajasthan would be entitled to only that quantity of water as may be verified as its usage under Item No.1 of the reference and if the same is less than 8.00 MAF allocated to it, the balance water would be available for distribution under paragraph 9.2 or Item No.2 of the reference. We have come to the clear conclusion that Rajasthan's share under the 1955 and 1981 agreements cannot be touched or reopened by the Tribunal as it is not made a party under paragraph 9.2 of the Punjab Settlement. So also, we have held that the shares of Jammu and Kashmir and Delhi Water Supply must remain untouched and unaffected.

Under Paragraph 9.2 of the Punjab Settlement and item No. 2 of the reference what the Tribunal is required to adjudicate is 'the claim of Punjab and Haryana regarding the shares in their remaining waters'. It therefore arraigns only two States, Punjab and Haryana, before the Tribunal. Even the later part of that term makes the decision of the Tribunal binding on both parties. Therefore, we are clear in our view that under the said term of reference, the Tribunal is required to adjudicate

the claim of Punjab and Haryana in their remaining waters and of no other State. Therefore, any adjudication made earlier by any authority or even by the parties inter se is liable to be reconsidered by this Tribunal in view of the specific requirement of paragraph 9.2/Item No.2 of the Reference. Since we have to go into the question of determining the shares of Punjab and Haryana in their remaining waters afresh, it is of no consequence to decide on the validity or otherwise of the 1976 award.

Secondly, under the proviso to section 78(1) of the Punjab Reorganisation Act, any order or determination made by the Central Government under sub-section (1) of section 78, can be modified by agreement between the party States in consultation with the Central Government. In the present case such modification took place on the States having entered into an agreement on 31st December 1981 in the presence of the late Prime Minister Smt Indira Gandhi who too put her signature at the foot of the agreement in token of having confirmed or approved the same. On the execution of the 1981 agreement, the 1976 award got merged into the agreement and for that reason also we think it is unnecessary to examine the validity of the said Award or Order of the Central Government.

CHAPTER XVII

EVENTS LEADING TO THE AGREEMENT OF 31ST DECEMBER 1981

The statutory order of the Government of India dated 24th March 1976 allocating a quantum of 3.5 MAF of water on the completion of the Beas Project under Section 78(1) of the Punjab Reorganisation Act was forwarded to the concerned State Governments by a letter of even date of the Additional Secretary to the Government of India, Ministry of Agriculture and Irrigation, (Ex.H2, p. 217). While forwarding the said order it was stated in the letter as under:-

"On further exploitation of water resources available, the State of Punjab, at some stage, may have more water than it needs. The State of Haryana and the State of Punjab, should, therefore, negotiate at an appropriate time, in terms of the provisions of section 78(1) of the Punjab Reorganisation Act, 1966 (31 of 1966) as to the extent to which the share of the State of Haryana in the waters made available on completion of the Beas Project, can be increased."

The above observation is indicative of the fact that the Central Government thought that on further exploitation of available water resources, it would be possible to allocate an additional quantity of water to the State of Haryana. On the strength of this observation, Haryana contended that on the construction of the Thein Dam, additional water resources would be available to the extent of 0.617 MAF presently going waste to Pakistan. Since Haryana has large tracts of arid areas, it is always in need of additional waters since the quantum of water allocated to it is not sufficient to irrigate the entire arid tract. On the other hand, the State of Punjab reacted sharply to the decision of the Central Government as it thought that the allocation made in favour of Haryana would have disastrous effects on the irrigation plans of Punjab and requested for a review. It also emphasised that section 78(1) provided for apportionment of waters between the two States having regard to the purposes of the Beas Project, but this provision had been totally overlooked and extraneous considerations had weighed with the Government of India

which tilted the balance unjustifiably in favour of Haryana. It was also pointed out that during one of the meetings called by the Joint Secretary, Ministry of Irrigation, the Officers of the State of Haryana had handed over a note in which they had calculated their share at 2.146 MAF but instead they were allocated 3.5 MAF which was far beyond their expectation. Soon after the decision of the Government of India, the State of Haryana submitted a Project Report sometime in July 1976 to the Government of India for the construction of the Sutlej-Yamuna Link Canal to carry the water allocated to its arid territories. By about November 1976, it is the case of the State of Punjab that both the States agreed upon alignment of 30 Kilometers of Sutlej Yamuna Link Canal within the territory of Punjab. The State of Haryana initially paid an amount of Rs.1 crore for the construction of the canal to the State of Punjab. It is the case of the State of Haryana that in pursuance of the said agreement the State of Punjab had issued notifications for the acquisition of land for the purpose of construction of the said canal. On its part the State of Haryana started the construction of the Sutlej-Yamuna Canal in its territories by about the end of 1976 and completed a substantial portion thereof by about 1978 for the effective implementation of the Central Government's order of 24th March 1976. The Chief Ministers of both the States had agreed that the construction work in regard to the canal in the Punjab territory would be inaugurated by the Chief Minister of Punjab, Shri Prakash Singh Badal presided over by the Chief Minister of Haryana Chaudhri Devi Lal. A D.O. letter dated 18th April 1978 (Ex.H2, p.218) was written by Chaudhri Devi Lal to his counter part Shri Badal but unfortunately, for one reason or the other, the construction of the canal in the Punjab area was delayed and is still not complete.

On the other hand, it appears, that the Government of Punjab continued to feel unhappy about the decision of the Central Government. Gyani Zail Singh, the then Chief Minister of Punjab, wrote a letter dated 16/19th November 1976 (Ex.P4, p. 247) conveying the sentiments of the people of Punjab and their representatives in regard to the said order and the implications thereof on the sustenance of agriculture in Punjab. He pointed out that the sentiments of the people of Punjab were echoed in the Punjab Vidhan Sabha in March/April 1976 but after rejecting the Notice of Motion, the Speaker, realising the importance of the decision and keeping in view the seriousness of the matter, called a meeting of the leaders of all the parties and groups in the House on 3rd September 1976. At the said meeting the matter was discussed at great length and the result of the

discussion was conveyed by the Speaker to the Chief Minister in the following words:-

"The leaders/representatives present in the meeting noted with grave concern and great anxiety the fact that some areas of Punjab already being irrigated for the last over fifteen years, much before the Reorganisation of the State, will have to be denied irrigation in order to make up the quantity of water to be made available to Haryana. It was felt that the award was unjust to Punjab and needed to be revised keeping in view the genuine claims of Punjab State based on record."

The Chief Minister then proceeded to add that, he fully shared the aforementioned sentiments and felt that the award would gravely upset the agricultural economy of Punjab and would render barren certain areas of Punjab. A brief note setting out the implications of the order passed by the Central Government was enclosed with the letter with a request to reconsider the whole matter afresh. This was reiterated in another letter dated 30th March 1977 (Ex.P4, p. 254) written to the Prime Minister, Shri Morarji Desai by the Chief Minister of Punjab. A separate note on the utilisation of Ravi-Beas waters by the Government of Punjab was also handed over to Shri C.C.Patel, the then Secretary to the Government of India, Ministry of Agriculture and Irrigation, explaining the implications of the decision of the Government of India on the irrigation plans of Punjab. The Chief Minister of Punjab Shri Badal again by his D.O.letter dated 29th August 1977 (Ex.P4, p. 265) invited the attention of the Prime Minister towards his earlier letter and stated that out of 7.2 MAF of the Ravi-Beas Waters allocated to the erstwhile State of Punjab, irrigation to the extent of 5.94 MAF had already been developed in Punjab leaving thereby only 1.26 MAF available for distribution between the successor States. He, therefore, once again requested the Prime Minister to reconsider the order of the Central Government. The Prime Minister replied by his D.O.letter dated 12th September 1977 stating that he should appreciate the difficulty involved in upsetting the accepted position in such matters. Even so, he stated that the matter was being looked into by the Department of Irrigation and he would revert to the subject after the examination was completed. It is clear from the above correspondence that the Central Government order of 24th March 1976 was not acceptable to the State of Punjab

and the latter had therefore, sought a review. As regards the averments made by the State of Haryana in regard to the construction of the Sutlej-Yamuna Canal, the State of Punjab contends that the construction of the said canal not being a subject matter of reference before this Tribunal, an attempt on the part of Haryana to introduce this extraneous issue ought not to be permitted.

From the above discussion it becomes clear that while the Government of Haryana accepted the determination made by the Central Government under section 78(1) of the Punjab Reorganisation Act even though it thought that the quantum of water allocated to it was less, the State of Punjab vigorously contested the same and contended that its implementation would have disastrous effect on the irrigation plan in the State of Punjab. It has also denied the statement of Haryana that on the completion of the Thein Dam 0.617 MAF of additional waters will be available for distribution. Thus while on the one hand the State of Haryana pressed for the implementation of the order of the Central Government, on the other hand the State of Punjab sought its review. In the above circumstances the Government of Punjab issued a notice under section 80 of the Code of Civil Procedure dated 17th March 1979 and ultimately filed a suit No.2 of 1979 (Ex.P4, p. 266) in the Supreme Court of India under Article 131 of the Constitution on 11th July 1979 challenging the validity of section 78 of the Punjab Reorganisation Act on the ground that it entrenched upon the field reserved for the State Legislature and the order passed by the Government of India on 24th March 1976 pursuant thereto. The prayer clause in the copy of the plaint shows that the reliefs were restricted to the vires of section 78(1) as being violative of Article 246(3) of the Constitution and a consequential relief for striking down the Government of India's notification dated 24th March 1976. Certain incidental reliefs were also sought, one of which related to the granting of a declaration that the allocation made in favour of Haryana in excess of 0.9 MAF was contrary to the Beas Project. An injunction was sought against the Union of India as well as the State of Haryana from enforcing any claim in excess of 0.9 MAF allocable under the Beas Project. The State of Haryana also filed Suit No.1 of 1979 for the implementation of the Government of India order of 24th March 1976 (Ex.H3, p.263).

While these suits were pending, according to the State of Punjab, in about June 1980 there was a change in the Government of Punjab when Shri Darbara Singh assumed the office as

Chief Minister of Punjab. In the meantime discussions were in progress at the highest level for finding an amicable solution to the problem and ultimately a tripartite agreement was entered into in the presence of the Prime Minister of India on 31st December 1981 whereunder on the basis of the flow series 1921-60 the total mean supply of Ravi-Beas waters was estimated at 20.56 MAF. Deducting the pre-partition uses of 3.13 MAF and transit losses in the Madhopur Beas Link of 0.26 MAF, the net surplus Ravi-Beas waters was estimated at 17.17 MAF as against the corresponding figures of 15.85 MAF according to the flow series 1921-45 which was the basis for the 1955 agreement. The surplus mean supplies of 17.17 MAF, both flow and storage, was agreed to be 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 and Kashmir	0.65 MAF
Total	17.17 MAF

It was further provided that in case of any variation in the figure of 17.17 MAF in any year, the shares shall be changed pro-rata on the basis of the above revised allocations subject to the condition that the share of Jammu and Kashmir shall always remain fixed at 0.65 MAF as stipulated in the 1955 agreement. So also, the quantity of 0.20 MAF for Delhi Water Supply shall stand as already allocated.

Under the said agreement of 31st December 1981 an important provision was made to the effect that until such time as Rajasthan is in a position to utilise its full share, Punjab shall be free to utilise the waters surplus to Rajasthan's requirements. As soon as Rajasthan was in a position to utilise its full share, Punjab was placed under an obligation to make expeditious alternative arrangements for irrigation of its own lands. As a result, it was expected that during the transitional period, 4.82 MAF of waters would be available to Punjab on the total supplies being 17.17 MAF.

Clause (vi) of the agreement further provided that the suits filed by the Governments of Haryana and Punjab in the Supreme Court should be withdrawn without any reservation whatsoever but subject to the terms of the agreement of 31st December 1981. Accordingly both the State Governments applied for withdrawal of the suits pending in the Supreme Court (Ex. H3, pp. 372-373) which applications were allowed and the suits were ultimately withdrawn (Ex.H3, p. 371).

After this agreement was entered into by the concerned States in the presence of the Prime Minister of India, the State of Punjab issued a White Paper pointing out how advantageous it was to the State of Punjab. Once again there was a change in the Government of Punjab and the Punjab Legislature passed a resolution dated 5th November 1985 declaring the agreement of 1981 as redundant. Thereafter due to certain political developments which took place in Punjab, which are well known, the Punjab Settlement was signed on 24th July 1985.

CHAPTER XVIII

LEGALITY AND VALIDITY OF THE 1981 AGREEMENT.

The legality and validity of the 1981 agreement was challenged by counsel for Punjab on diverse grounds. It was stated that the said agreement was not pursuant to section 78(1) of the Punjab Reorganisation Act; even if it was under the said provision, it was not consistent therewith and even though Rajasthan was not one of the successor States for the purposes of that provision, it was made a party thereto thereby rendering the agreement outside the purview of the said provision. In the same breath it was submitted that since all the other successor States were not parties to the said agreement, the agreement had no efficacy in the eye of law. Besides, as the scope of the agreement is not limited to the Beas Project as contemplated by section 78(1) of the Act but travels beyond the same, it is to that extent inconsistent with the said provision. It was further stated that since the agreement purports to be in modification of the 1955 agreement/decision, it stands vitiated on the same grounds on which the legality and validity of the 1955 agreement was questioned. Since it purports to modify the 1976 Award/Order of the Central Government also, it is invalid for the reasons the 1976 Award/Order stood vitiated. It was lastly stated that, in any event, as the said agreement also does not conform to the requirements of Article 299 of the Constitution, the Tribunal cannot take notice thereof, notwithstanding the fact that it was repudiated by the Punjab Legislature on 5th November 1985 and now stands superseded by the Punjab Settlement.

On the other hand, the State of Haryana contends that since Punjab was not satisfied with the 1976 Award/Order, and whilst the suits filed by the two State Governments in the Supreme Court under Article 131 of the Constitution were pending, vigorous efforts were made both at the official as well as the political level to bring about an amicable settlement between the concerned States having regard to the water dispute pending since quite some time. As a consequence of these efforts the tripartite agreement was arrived at on 31st December 1981 in the presence of the then Prime Minister of India. Even though the State of Punjab had agreed to complete the construction of the Sutlej-Yamuna-Link Canal in its territory within a maximum period of two years it had failed to do so, thereby giving a right

to the State of Haryana to repudiate the agreement if it so desired; however, in larger national interest it did not do so even though under the agreement the quantum of water that it received was less than what Punjab and Rajasthan got thereunder. It was only because the said agreement was advantageous to the State of Punjab that the Punjab Legislature ratified it by issuing a White Paper (Ex. H.4, p.657) dated 23rd April 1982. Later, because of a change in the complexion of the popular Government in Punjab, the newly constituted Legislature passed a resolution on 5th November 1985 unilaterally reudiating the said agreement which the Punjab Legislature had no right or authority to do. Once an agreement is sealed between the concerned parties, as already stated earlier, it cannot be discharged without the concurrence of the parties likely to be affected by the discharge of the agreement. The State of Haryana withdrew its suit then pending in the Supreme Court since clause (vi) of the agreement in terms provided that the suits filed by the Government of Punjab and Harvana in the Supreme Court should be withdrawn without any reservation whatsoever but subject to the terms of the said agreement. In obedience to this clause of the agreement both the State Governments withdrew the suits which were then pending in the Supreme Court and hence, contends Haryana, it is too late in the day now for the State of Punjab to question the legality and validity of the 1981 agreement. Since by the execution of the said agreement the rights of the other successor States to the agreement were not sought to be affected and since the allocation made in favour of the State of Jammu and Kashmir under the 1955 agreement was kept in tact, it was not necessary for all the successor States as well as Jammu and Kashmir and Delhi Water Supply Authority to be impleaded as parties to the agreement. It was further submitted that since Rajasthan was not a party to paragraph 9.2 of the Punjab Settlement i.e. Item No. 2 of the Terms of Reference, its share under the 1981 agreement could not be touched, for the same reasons its share under the 1955 agreement had to remain in tact. It was lastly submitted that since the agreement of 1981 had statutory flavour, inasmuch as it was executed pursuant to the proviso to Section 78(1) of the Punjab Reorganisation Act, it was unnecessary that it conform to the requirements of Article 299 of the Constitution.

On behalf of the State of Rajasthan, Dr. Chitale submitted that but for Article 262 read with section 11 of the 1956 Act, the dispute in question being between two or more State Governments would have been taken to the Supreme Court for adjudication under Article 131 of the Constitution. It is only

because the second part of Article 262 empowers Parliament to oust the jurisdiction of all Courts including the Supreme Court in the matter of adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in any inter-State river or river valley, that section 11 of the 1956 Act provides that neither the Supreme Court nor any other Court shall have or exercise jurisdiction in respect of any water dispute which may be referred to a Tribunal under the Act. The Tribunal, therefore, has no jurisdiction to examine the validity of any existing inter-State agreement as such a dispute though arising in the course of a water dispute, does not strictly fall within the purview of Article 262 of the Constitution. He, therefore, submitted that just as in the case of the 1955 agreement so also in the case of 1981 agreement, Rajasthan's share in the Ravi-Beas water is outside the jurisdiction of the Tribunal as Rajasthan is not a party to paragraph 9.2 of the Punjab Settlement or Item No.2 of the Terms of Reference. Agreeing with the contention of Haryana that Article 299 has no application to such agreements, Dr. Chitale submitted that the said Article applies to contracts between the State on the one hand and the individual on the other and not to political agreements of the type with which we are concerned between two or more States. He also supplemented the argument of Haryana that the 1981 agreement being pursuant to the proviso to section 78(1) of the Punjab Reorganisation Act, did not fall within the purview of Article 299 of the Constitution by stating that because such agreements required the sanction of the Central Government, the parties to the said agreement could execute the same only if the Central Government approved the same. The requirement of consultation with the Central Government for entering into an agreement contemplated by the proviso to Section 78(1) of the Punjab Reorganisation Act, took it out of the purview of 'contracts' envisaged by Article 299 of the Constitution and hence the 1981 agreement was not liable to be struck down for non-compliance with Article 299 of the Constitution, assuming the Tribunal had jurisdiction to examine the legality and validity of the said agreement. In the above premises, Dr. Chitale submitted that none of the challenges directed against the 1981 agreement by Punjab had merit and, therefore, deserved to be rejected.

We do not consider it necessary to examine whether this Tribunal has jurisdiction to scrutinise the legality and validity of the 1981 agreement because we are in a position to dispose of the contentions urged on behalf of the State of Punjab without entering into that aspect. So far as the question of need to comply with the requirement of Article 299 of the Constitution

is concerned, as stated earlier, as this contention also affects the 1955 agreement, we propose to deal with it separately hereafter. Leaving out the aforesaid two contentions urged before us bearing on the question of the legality and validity of the 1981 agreement, we will now proceed to dispose of the remaining contentions.

Soon after the partition of the country in 1947 while the dispute with the Dominion of Pakistan over the sharing of waters belonging to the Indus System of rivers was pending, an agreement was reached between the concerned States on the premise that under the February 1954 World Bank proposals, the waters of the three Eastern Rivers may be allocated to India for its exclusive utilisation. After the Bank proposals had become known it was feared that Pakistan was planning to increase its committed uses from the Eastern rivers and with a view to stalling it from doing so and to counter its allegation that India was not in a position to fully utilise the waters proposed to be withdrawn on the execution of the Treaty, a need was felt to enter into an agreement, tentative if necessary, to indicate how India proposed to utilise the available supplies including the supplies to be withdrawn from Pakistan after the transition period under the proposed Treaty. The Planning Commission was also keen to see that the concerned States arrive at an agreement or arrangement for the optimum utilisation of the waters of the Eastern rivers which were going waste. It was in this background that the concerned States in consultation with the Central Government carried on negotiations for arriving at an amicable settlement in regard to the utilisation of the available surplus supplies. While dealing with the various aspects of the 1955 agreement we have already indicated in detail the circumstances under which the landmark decisions were taken at the inter-Ministerial Conference held in New Delhi on 29th January 1955. We have also pointed out earlier that the Government of India confirmed the said agreement/decision after signing of the Indus Waters Treaty in September 1960 only after it was finally known that the waters of the three Eastern rivers were reserved for use in India. In the meantime, after the execution of the 1955 agreement, the erstwhile State of Punjab had by its order of 20th October 1961 planned the utilisation of the waters of the Ravi-Beas System allocated under the 1955 agreement. The Beas Project, Unit I and II, were also founded on the allocations made under the said agreement. We have already indicated in some detail what steps the State of erstwhile Punjab had taken to implement the 1955 agreement. Under the said agreement Punjab's share was fixed at 7.2 MAF out of the total

surplus supplies of 15.85 MAF. The order of the erstwhile State of Punjab dated 20th October 1961 had created certain misgivings in the minds of the people of Haryana area as they thought that the manner in which the utilisation of Punjab's share was planned under the said order was against the interest of the farmers and other consumers of Haryana area of composite Punjab. Two Committees were appointed to look into the grievances made by the representatives of the people of the Haryana area in this behalf and the Reports of both the Committees suggest that the utilisation planned under the 20th October 1961 order was not wholly just to the people of the Haryana area. However, before any decision could be taken on those Committee Reports, the reorganisation of the State of Punjab was announced.

On 21st March 1966 it was announced in the Lok Sabha that the Central Government had decided to accept in principle the reorganisation of the existing State of Punjab on linguistic basis. Since the boundaries of the proposed new States were to be settled to enable introduction of a legislation, the introduction of the Bill was somewhat delayed. The Punjab Reorganisation Act, 1966 was ultimately passed on 18th September 1966, section 3 whereof provided that on and from the appointed day there shall be formed a new State to be known as the State of Haryana carved out from the existing State of Punjab. By section 5 certain territories forming part of the existing State of Punjab were transferred to Himachal Pradesh. Section 6 laid down that the State of Punjab shall comprise the territories of the existing State of Punjab other than those specified in section 3(1), section 4 and section 5(1) above referred to. By section 2(b), the expression 'appointed day' meant the 1st day of November 1966. Section 2(m) defined the expression 'successor State' in relation to the existing State of Punjab to mean the State of Punjab or Haryana and include also the Union in relation to the Union Territory of Chandigarh and the transferred territories, that is, the territory transferred from the existing State of Punjab to the Union Territory of Himachal Pradesh. In view of this reorganisation which became effective from 1st November 1966 provision had to be made in Parts VI and VIII for the apportionment of assets, rights and liabilities of the existing State of Punjab.

Two provisions of the Act to which our attention was invited are sections 65 and 78(1), the former empowering the Central Government to order allocation or adjustment of property or benefits on just and equitable considerations on a reference made to it within a period of three

years. Section 78(1) to which we have referred in extenso earlier declares that all rights and liabilities of the existing State of Punjab in relation to Bhakra-Nangal Project and Beas Project shall, on the appointed day, be the rights and liabilities of the successor States in such proportion as may be fixed and subject to such adjustment as may be made by agreement entered into by the said States after consultation with the Central Government. On a plain reading of this provision it is clear that with effect from the appointed day all rights and liabilities of the existing State of Punjab in relation to the two projects shall be the rights and liabilities of the successor States. The Section enjoins upon the successor States to fix the proportion and make such adjustments as they may deem proper by agreement to be entered into by the said States after consultation with the Central Government. It further provides that if no such agreement is entered into within two years of the appointed day, then the proportion of the successor States in the rights and liabilities shall be as the Central Government may by order determine having regard to the purposes of the project. The obligation on the part of the Central Government to determine or fix the proportion of the rights and liabilities of the successor States in the two projects arises only in the event of the successor States failing to reach an agreement within a period of two years from the appointed day. In the present case, as pointed out earlier, since the States of Punjab and Haryana could not reach any agreement in regard to the distribution of the rights and liabilities in relation to the Beas Project, the State of Haryana requested the Central Government to exercise the power conferred on it on the expiry of two years after the appointed day. The Central Government appointed a few Committees and got the matter examined through technical experts and made every possible endeavour to bring about a negotiated settlement between the contesting States before exercising the said power. It was only when it realised that a negotiated settlement was impossible because of the divergence of views of the two Governments in regard to the proportion of their rights in the Beas Project that the Central Government was constrained to determine their shares by an order under the said provision. Even after this determination the State of Punjab harboured a feeling of having been unjustly treated necessitating further efforts to secure a negotiated settlement. Once the Central Government had passed an order under sub-sec.(1) of section 78, that order could be varied and modified only in the manner set out by the proviso to that sub-section, that is, by any subsequent agreement entered into by the successor States after consultation with the Central Government. No right of

appeal or revision having been conferred on the aggrieved party, the concerned States had to enter into an agreement after consultation with the Central Government if they desired to vary the order passed by the Central Government determining the shares under section 78(1) of the statute. In pursuance of the proviso to section 78(1) the concerned State Governments, namely, Punjab and Haryana, entered into an agreement along with Rajasthan on 31st December 1981 after consultation with the Central Government which had the effect of varying the impugned order passed by the Central Government under section 78(1) of the Act. The State of Rajasthan was required to be impleaded as a party to the agreement because in terms of the 1955 agreement it was entitled to a proportionate increase in its share of water since the allocation sought to be made under the 1981 agreement was based on the revised 1921-60 series whereunder the mean supply was estimated to be 17.17 MAF (both flow and storage). Neither the State of Himachal Pradesh nor the Union territory of Chandigarh was affected by this agreement since they were not parties to the 1955 agreement or the 1976 award. So far as allocation of water to Delhi Water Supply Corporation and the State of Jammu and Kashmir was concerned, the agreement did not propose to make any change or variation in their shares and hence their involvement was also quite unnecessary. We are, therefore, clearly of the view that merely because the other States as well as the Union territory of Chandigarh and the Delhi Water Supply Authority were not impleaded as parties to the 1981 agreement, the agreement does not stand vitiated. All the parties who were likely to be affected by the 1981 agreement were signatories to the said agreement and since it was in pursuance of the proviso to section 78(1) of the Act, consultation with the Central Government before the signing of the agreement was necessary and that is evidenced by the signature of the then Prime Minister at the foot of the agreement. In our view, therefore, the agreement is consistent with the proviso to Section 78(1) of the Act and has the effect of varying the 1976 award made by the Central Government under the latter part of Section 78(1) of the Act. The proviso to section 78(1) merely stipulates that if the order passed by the Central Government is sought to be varied, it could be done by subsequent agreement entered into by the concerned successor States after consultation with the Central Government. The proviso, however, does not state that except the concerned successor States in regard to whom the determination was made by the Central Government, no other State will be impleaded as a party to that agreement. When a tripartite agreement takes place, some of the terms of the agreement may concern two of the States only while some may concern all the

three States. When an agreement contains interwoven terms, some of which affect two States and some three States, the parties may enter into separate agreements or may enter into a single agreement of a comprehensive nature affecting all the three States. When a tripartite agreement is entered into, that agreement does not cease to be an agreement between the concerned successor States if it has the effect of varying the determination made by the Central Government under section 78(1), as in the present case.

We are, therefore, of the view that merely because the State of Rajasthan is also a party to the 1981 agreement, it does not cease to be an agreement between the States of Punjab and Haryana varying the order passed by the Central Government under section 78(1) of the Act. The inclusion of Rajasthan which was admittedly not one of the successor States cannot, therefore, render the agreement wholly outside the purview of the proviso to section 78 nor can it render it invalid. Its efficacy in the eye of law is not affected merely because the other successor States were not impleaded as parties thereto for the simple reason that their rights were not proposed to be altered, varied or modified by the said agreement. Even if the scope of the agreement travels beyond the scope of the Beas Project, it is not rendered inconsistent with the proviso to section 78(1) of the Act so long as it seeks to vary or modify the Central Government order made under section 78(1) of the Act. The words of limitation that the Central Government order shall relate to the fixation of proportion in the rights and liabilities of the existing State of Punjab in the Beas Project having regard to its purposes are to be kept in mind by the Central Government while exercising power conferred upon it by that provision; but the agreement contemplated by the proviso to that sub-section need not be clothed with the same inhibition that the subsequent agreement will also be subject to the same restriction and will not contain any term in addition thereto. While arriving at an agreement the concerned successor States may vary the order of the Central Government after consultation with that Government but there is nothing in the language of the proviso to indicate that the agreement between the concerned States and any other State shall not contain additional terms. We are, therefore, clearly of the opinion that the agreement of 1981 cannot be set at naught on such considerations.

That brings us to the last limb of the submission made on behalf of the state of Punjab bearing on the

question of the validity of the 1981 agreement. The argument that the said agreement stands vitiated on the same grounds on which the legality and validity of the 1955 agreement was questioned since it purports to modify the 1955 agreement must be rejected for the simple reason that we have come to the conclusion that the 1955 agreement does not suffer from any infirmity and is perfectly legal and valid. It is indeed true that the 1981 agreement in terms refers to the 1955 agreement and the 1976 order of the Government of India in its introductory part and thereafter in clause (vii) the agreement proceeds to state as under:-

"The notification of the Government of India allocating waters becoming available as a result of the Beas Project issued on 24th 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."

On a plain reading of this clause it becomes immediately clear that both the 1955 agreement and the 1976 award of the Government of India stood modified to the extent varied by the 1981 agreement. The agreement which held the field immediately before the Punjab Settlement and the reference to this Tribunal was the 1981 agreement since it sought to modify and vary the earlier 1955 agreement and the 1976 award. Since we have come to the conclusion that the legality and validity of the 1955 agreement is unquestionable, the argument that for the same reasons the 1981 agreement is liable to be invalidated must be rejected. So far as the 1976 award is concerned, we have taken the view that since it stands varied by the thrust of the proviso to section 78(1) on the signing of the 1981 agreement, it ceases to hold the field, as it was not the case of the State of Punjab that despite the signing of the tripartite agreement any part of the 1976 award still survives. All that the 1976 award did was to allocate the 7.20 MAF of waters falling to the share of erstwhile Punjab under the 1955 agreement between the newly constituted States of Punjab and Haryana setting apart an additional quantum of water for Delhi Water Supply Authority for acceptance by both the State Governments. Besides that, it merely added 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 Authority. It is, therefore, obvious that the 1976 award essentially distributed the water allocated to the erstwhile State of Punjab under the 1955 agreement between the successor States of Haryana and Punjab reserving a part thereof for Delhi Water Supply Authority for acceptance by both the State Governments. By the 1981 agreement the allocation was revised taking the net surplus Ravi-Beas waters according to the flow series 1921-60 at 17.17 MAF as against the corresponding figure of 15.85 MAF for the flow series 1921-45 and a reallocation of the waters was made amongst the concerned States retaining the share of Jammu and Kashmir at 0.65 MAF as agreed under the 1955 agreement and earmarking 0.20 MAF for Delhi Water Supply Authority. The remaining water was reallocated between the States of Punjab, Haryana and Rajasthan at 4.22, 3.50 and 8.60 MAF respectively. It is significant to note that while the shares of Punjab and Rajasthan were increased, the share of Haryana remained static even though the surplus Ravi-Beas Waters went up from 15.85 MAF to 17.17 MAF. That is why this agreement was hailed by the then Punjab Government as a major achievement as it had brought additional waters to the extent of 0.43 MAF (4.22 MAF actual allocation minus 3.79 MAF pro rata entitlement = 0.43 MAF) whereas it had reduced the share of Haryana by 0.29 MAF. It is, therefore, obvious that by the 1981 agreement the allocations made between the States of Punjab and Haryana by the Government of India in 1976 were totally varied and no part of the 1976 award survived after the said agreement. That is why we did not consider it necessary to examine the legality and validity of the 1976 award firstly because by virtue of the proviso to section 78(1) it stood varied and merged in the 1981 agreement and secondly because on a true interpretation of the terms of reference we came to the conclusion that the question of allocation of waters between the States of Punjab and Haryana was reopened by paragraph 9.2 of the Punjab Settlement and Item No.2 of the Terms of Reference for adjudication by this Tribunal. So far as the share of Rajasthan under the 1981 agreement is concerned, for the reasons stated while interpreting the terms of reference under the head 'Scope of Inquiry' we held that it can not be the subject matter of adjudication by this Tribunal. The agreement of 1981 notwithstanding, in view of paragraph 9.2 of the Punjab Settlement and Item-No.2 of the Terms of Reference as interpreted by us, the shares of Punjab and Haryana have to be examined/adjudicated afresh by this Tribunal. In view of the above we see no merit in any of the contentions urged by Punjab questioning the legality and validity of the 1981 agreement.

In the light of what we have stated above, we think we need not consider the technical objections raised by the States of Haryana and Rajasthan bearing on the Tribunal's jurisdiction to examine the question of legality and validity of a water agreement entered into by and between two or more State Governments. We also do not consider it necessary to examine the question whether the principle of estoppel or promissory estoppel applies in the facts and circumstances of this case in view of the withdrawal of the pending suits by the States of Punjab and Haryana pursuant to clause (vi) of the 1981 agreement. As we do not see any merit in the various contentions raised by the State of Punjab in regard to the 1981 agreement, we think it is unnecessary to scrutinise the different facets of the contentions raised by the States of Haryana and Rajasthan to meet with the submission canvassed by Punjab. As stated earlier, we will immediately proceed to consider (separately) Punjab's contention that both the 1955 and the 1981 agreements are invalid for non-compliance with Article 299 of the Constitution.

CHAPTER XIX

APPLICATION OF ARTICLE 299 TO THE 1955 AND 1981 AGREEMENTS

It is urged on behalf of the State of Punjab that the agreements dated 29th January 1955 and 31st December 1981 are both void as opposed to Article 299(1) of the Constitution of India. If these agreements are contracts falling under Article 299, it is now well settled that the contracts to be valid should conform to the requirements of Article 299(1). As per Article 299(1) all contracts made in the executive power of the Union or a State shall be expressed to be made by the President or by the Governor of the State, as the case may be, and all such contracts shall be executed on behalf of the President or Governor by such persons and in such manner as he may direct or authorise.

In regard to such a contract by the State the Article postulates:-

- 1) the contract must be expressed to be made by the Governor;
- 2) it must be executed in writing, and
- 3) the execution must be by such person and in such manner as the Governor might direct or authorise.

In *Chatturbhuj Vithaldas Jasani Vs. Moreshwar Parashram and others*, (1954 SCR 817), the Supreme Court stated at page 835 with reference to Article 299:-

"We do not think the provisions were inserted for the sake of mere form. We feel they are there to safeguard Government against unauthorised contracts. If in fact a contract is unauthorised or in excess of authority it is right that Government should be safeguarded. On the other hand, an officer entering into a contract on behalf of Government can always safeguard himself by having recourse to the proper form. In between is a large class of contracts, probably by far the greatest in numbers, which, though authorised, are for one reason or other not in proper form. It is only right that an innocent

contracting party should not suffer because of this and if there is no other defect or objection we have no doubt Government will always accept the responsibility. If not, its interests are safeguarded as we think the Constitution intended that they should be."

It is further stated:-

"It would, in our opinion, be disastrous to hold that the hundreds of Government Officers who have daily to enter into a variety of contracts, often of a petty nature, and sometimes in an emergency, cannot contract orally or through correspondence and that every petty contract must be effected by a ponderous legal document couched in a particular form. It may be that Government will not be bound by the contract in that case, but that is a very different thing from saying that the contracts as such are void and of no effect. It only means that the principal cannot be sued; but we take it there would be nothing to prevent ratification, especially if that was for the benefit of Government. There is authority for the view that when a Government officer acts in excess of authority Government is bound if it ratifies the excess: see the Collector of Masulipatanam Vs. Chavaly Venkata Narainapah (8 M.I.A. 529 at 554). We accordingly hold that the contracts in question here are not void simply because the Union Government could not have been sued on them by reason of Article 299(1)."

The decision in Chaturbhuj Vithaldas' case was explained in a later decision in State of West Bengal Vs. M/s. B.K. Mondal & Sons ((1962) Supplementary 1 SCR 876 at page 895) as follows:-

"All that this Court meant by the said observation was that the contract made in contravention of Article 299(1) could be ratified by the Government if it was for its benefit and as such it could not take the case of the contractor outside the purview of s.7(d) (of the Representation of People Act 1951). The contract

which is void may not be capable of ratification, but, since according to the Court the contract in question could have been ratified, it was not void in that technical sense. That is all that was intended by the observation in question. We are not prepared to read the said observation or the final decision in the case of *Chatturbhuj* (1954 SCR 817) as supporting the proposition that notwithstanding the failure of the parties to comply with Article 299(1) the contract would not be invalid. Indeed, Bose, J., has expressly stated that such a contract cannot be enforced against the Government and is not binding on it."

In *Seth Bikhai Jaipuria Vs. Union of India* ((1962) 2 SCR 880), Shah J. speaking on behalf of the Supreme Court stated at pages 895-896:-

"It is in the interest of the public that the question whether a binding contract has been made between the State and a private individual should not be left open to dispute and litigation; and that is why the legislature appears to have made a provision that the contract must be in writing and must on its face show that it is executed for and on behalf of the head of the State and in the manner prescribed. The whole aim and object of the legislature in conferring powers upon the head of the State would be defeated if in the case of a contract which is in form ambiguous, disputes are permitted to be raised whether the contract was intended to be made for and on behalf of the State or on behalf of the person making the contract. This consideration by itself would be sufficient to imply a prohibition against a contract being effectively made otherwise than in the manner prescribed. It is true that in some cases, hardship may result to a person not conversant with the law who enters into a contract in a form other than the one prescribed by law. It also happens that the Government contracts are sometimes made in disregard of the forms prescribed; but that would not in our judgment be a ground for holding that departure from a provision which is mandatory and

at the same time salutary may be permitted.

There is a large body of judicial opinion in the High Courts of India on the question whether contracts not in form prescribed by the Constitution Acts are binding upon the State. The view has been consistently expressed that the provisions under the successive Constitution Acts relating to the form of contract between the Government and the private individual are mandatory and not merely directory."

In *K.P. Chowdhary Vs. State of Madhya Pradesh & Ors.* ((1966) 3 SCR 919) Wanchoo, J. on behalf of a Constitution Bench of the Supreme Court, after considering the above decisions, stated at page 924:-

"Two consequences follow from these decisions. The first is that in view of Article 299(1) there can be no implied contract between the Government and another person, the reason being that if such implied contracts between the Government and another person were allowed, they would in effect make Article 299(1) useless, for then a person who had a contract with Government which was not executed at all in the manner provided in Article 299(1) could get away by saying that an implied contract may be inferred on the facts and circumstances of a particular case. This is of course not to say that if there is a valid contract as envisaged by Article 299(1), there may not be implication arising out of such a contract. The second consequence which follows from these decisions is that if the contract between Government and another person is not in full compliance with Article 299(1) it would be no contract at all and could not be enforced either by the Government or by the other person as a contract."

The same view is expressed in *Mulamchand Vs. State of Madhya Pradesh* ((1963) 3 SCR 214) wherein it is stated at page 221:-

"The principle is that the provisions of Section 175(3) of Government of India Act, 1935 or the corresponding provisions of Article 299(1) of the

Constitution of India are mandatory in character and the contravention of these provisions nullifies the contracts and makes them void. There is no question of estoppel or ratification in such a case. The reason is that the provisions of section 175(3) of the Government of India Act and the corresponding provisions of Article 299(1) of the Constitution have not been enacted for the sake of mere form but they have been enacted for safeguarding the Government against unauthorised contracts. The provisions are embodied in section 175(3) of the Government of India Act and Article 299(1) of the Constitution on the ground of public policy on the ground of protection of general public and these formalities cannot be waived or dispensed with. If the plea of the respondent regarding estoppel or ratification is admitted that would mean in effect the repeal of an important constitutional provision intended for the protection of the general public. That is why the plea of estoppel or ratification cannot be permitted in such a case."

The case in *Union of India Vs. Rallia Ram* ((1964) 3 SCR 164) related to a contract by acceptance of tender. The notification inviting tenders was issued by the Government of India, Department of Food in the name of the Director of Purchases. The Chief Director of Purchases agreed to sell the goods on certain conditions incorporated in the acceptance note headed "Government of India, Department of Food". The general conditions of the contract which accompanied the letter of acceptance defined 'Government' as meaning the Governor General of India in Council. On these facts it was held that there is no violation of section 175(3) of the Government of India Act for the reason that it was the Governor General who invited the tenders through the Chief Director of Purchases and it was again the Governor General who accepted the tender through the Chief Director of Purchases. This decision was distinguished in *Karamshi Jethbai Somayya Vs. State of Bombay* ((1964) 6 SCR 984). In that case a contract with the Superintending Engineer for the supply of irrigation water was held invalid for the reason that the contract was not expressed to be made by the Governor, and was not accepted on behalf of the Governor.

The decision in **Rallia Ram's** case was distinguished on facts at page 1000 as under:-

"On a fair reading of the correspondence this Court construed that the contract was entered into on behalf of the Governor General and expressed to be made in his name."

In a recent decision of the Supreme Court in **State of Haryana & Ors. Vs. Lal Chand & Ors.** ((1984) 3 SCR 715) it is stated at page 726:-

"There is a distinction between contracts which are executed in exercise of the executive powers and contracts which are statutory in nature. Under Article 299(1), three conditions have to be satisfied before a binding contract by the Union or the State in exercise of the executive power comes into existence: (1) The contract must be expressed to be made by the President or the Governor, as the case may be, (2) It must be executed in writing and (3) The execution thereof should be by such person and in such manner as the President or the Governor may direct or authorise. There can be no doubt that a contract which has to be executed in accordance with Article 299(1) is nullified and become void if the contract is not executed in conformity with provisions of Article 299(1) and there is no question of estoppel or ratification in such cases. Nor can there be any implied contract between the Government and another person. **K.P. Chowdhary Vs. State of M.P.** ((1966) 3 SCR 919). **Mulamchand Vs. State of M.P.** ((1968) 3 SCR 214), **State of M.P. Vs. Rattan Lal** (1967 M.P.L.J. 104) and **State of M.P. Vs. Firm Gobardhan Dass Kailash Nath** (A.I.R. (1973) S.C. 1160)."

Under Article 162 of the Constitution the executive power of the State shall, subject to the provisions of the Constitution, extend to the matters with respect to which the Legislature of the State has power to make laws. As per Article 246 the Parliament has exclusive power to make laws with respect to any of the matters enumerated in List I of the Seventh Schedule and the Legislature of any State has exclusive power to make laws

for such State with respect to matters enumerated in List II. Subject to provisions of Article 254(2) the Parliament as well as the Legislature of the State have power to make laws in respect of matters enumerated in List III of the Seventh Schedule. It is clear from Article 245 that the power of the State Legislature to make laws is confined to the whole or any part of the State. It has no power to make laws for any area outside the territorial limits of the State. Residuary power of legislation is vested in Parliament under Article 248 of the Constitution. Article 262 empowers the Parliament to make laws providing "for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any inter-State river or river valley". We have already noted that Entry 17 in List II relates to 'Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage, and water power subject to the provisions of Entry 56 of List I', whereas Entry 56 in List I relates to 'Regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest'. The residuary power of legislation is however vested in Parliament under Entry 97 of the List I which reads:

"Any other matter not enumerated in List II or List III including any tax not mentioned in either of those Lists."

We have already held that parts of both the States of Rajasthan and Haryana fall within the Indus Basin and a political and geographical division of the country will not render these States outside that Basin.

On the date on which the 1955 agreement was executed, Haryana was a part of undivided Punjab and the agreement, if otherwise valid, is binding on all the three States viz. Rajasthan, Punjab and Haryana. The legislature of the undivided Punjab had no jurisdiction to pass a law to have operation beyond its territories. No law passed by the legislature of Punjab would have affected the rights of Rajasthan as a Basin State for the waters of river Indus and its tributories. On the date on which the 1955 agreement was entered into, the dispute between India and Pakistan on the question of sharing the waters of Indus System of Rivers had not been settled. That dispute was settled by the Indus Waters Treaty between India and Pakistan signed on 19th September 1960. As per the terms of

the Treaty, India became entitled to all the waters of the Eastern Rivers viz. Ravi, Beas and Sutlej as its share in the Indus System of Rivers on payment of Pound Sterling 62.06 million. Indus Basin States in India thus became entitled to share the waters of the Eastern Rivers exclusively allotted to India under the Indus Waters Treaty of 1960. As already stated the executive power of the State under Article 162 of the Constitution is co-extensive with its legislative power. Neither the State of Punjab nor the State of Rajasthan has therefore legislative or executive power beyond the confines of their respective territories. The agreement by way of a settlement relating to the sharing of the waters of the Ravi and the Beas among the States of Punjab, PEPSU and Rajasthan is not, therefore, one falling within the executive power of the States concerned within the meaning of Article 299 of the Constitution. The legislative power of the State with respect to item 17 of List II cannot have operation beyond its territorial limits and none among the contracting states could have passed a law to effect the rights of the other Basin States. Legislative power in respect of inter-State rivers and river valleys to the extent to which regulation and development under the control of the Union is declared by Parliament by law to be expedient in public interest is vested in the Union Parliament under Entry 56 of the List I.

In view of the fact that the executive power of the State of Punjab does not extend to the matters affecting the rights of other Basin States, it is not necessary to consider whether Entry 17 of List II is wider in scope than Entry 56 of the List I of the Seventh Schedule of the Constitution. We consider it also unnecessary to decide whether the expression 'water' in Entry 17 of List II can relate only to the question of water allotted to the respective States as urged by counsel for the State of Haryana.

The Punjab Reorganisation Act 1966 came into force on 1st November 1966. Section 78 provides for the apportionment of rights and liabilities of the existing State of Punjab in relation to the Bhakra Nangal and Beas Projects, among the successor States, by agreement among them after consultation with the Central Government. If no agreement could be entered into within two years after the 'appointed day', the Central Government is empowered by order to determine the apportionment among the successor States. The order so made by the Central Government can also be varied by any agreement by the successor States after consultation with the Central Government.

As per section 80(1) the construction of the Beas Project on and from the appointed date is undertaken by the Central Government on behalf of the successor States and the State of Rajasthan which States are to contribute the necessary funds to the Central Government for the Project. The Central Government is to constitute a Board called "The Beas Construction Board", under sub-sec.(2) for the discharge of the functions of the Central Government under sub-sec.(1). The expenses of the Board are also to be met by the successor States and the State of Rajasthan in such proportion as may be fixed by the Central Government. Sub-section (4) of section 80 expressly enacts that nothing contained in the section shall be construed as enabling the Central Government to reduce or enlarge the scope of the Beas Project as agreed to between the Governments of the State of Rajasthan and the existing State of Punjab except after consultation with the Governments of the States of Haryana, Punjab and Rajasthan. Sub-sections (1) and (3) of section 78 extracted earlier provide for division of the rights and liabilities, as explained in sub-section (3), of the existing State of composite Punjab in such proportion as may be fixed by agreement entered into by the successor States within two years and failing that by the Central Government.

The rights of the existing State of Punjab in regard to the waters of the Beas Project contemplated by sub-section (1) of section 78 relates only to the quantum of water available under the 1955 agreement. Since the successor States of Haryana and Punjab could not agree in regard to the apportionment of the waters of the Beas Project within the stipulated time, the Government of India passed an order by way of a notification dated 24th March 1976 making an apportionment of the 7.2 MAF of water allotted to the erstwhile States of Punjab and PEPSU between the successor States of Punjab and Haryana. The existing allotment of 8 MAF of water to Rajasthan was kept intact.

The proviso to section 78(1) lays down that the 'order of the Central Government may be varied by any subsequent agreement entered into by the successor States after consultation with the Central Government'. The agreement dated 31st December 1981, was in modification of the order of the Government of India issued under section 78(1) of the Punjab Reorganisation Act. It was also in modification of the 1955 agreement. It was also signed by the then Prime Minister of India, evidencing consultation with the Central Government. Such

an agreement has statutory flavour. The 1981 agreement is therefore one in pursuance to the statutory provision contained in section 78(1) of the Act. A contract in pursuance to a statute is not one falling under the executive power of the State within the meaning of Article 299 of the Constitution. *State of Haryana & Ors. Vs. Lalchand* ((1984) 3 SCR 715) referred to earlier related to a statutory contract under the Punjab Liquor Licence Rules. The Supreme Court in the said decision at page 725 quoted with approval the following passage from the decision of the Orissa High Court in *Ajodhya Prasad Shaw & Anr. Vs. State of Orissa & Ors.* reported in A.I.R. (1971) Orissa 158.

"In case the result of our investigation is that it is not a contract in exercise of the executive power of the State in terms of the language used in the Article, it would follow that this constitutional requirement has no application. I have already indicated that the settlement of the shop, the collection of the fee and the grant of the licence are all statutory acts by the prescribed authority. The intention of the Constitution is not to extend the principles in Article 299(1) to cover all possible contracts. This is why specific reference has been made to contracts 'in exercise of executive power'. It is not necessary for the present purpose to examine whether the licensing process involves a contractual agreement. Possibly there is an element of contract in the settlement, but certainly it is not one entered into in the executive power of the State but is regulated by the Statute or the rules made thereunder. In the circumstances in the case of a statutory licence even based upon a contract the requirements of this Article cannot be invoked."

The Supreme Court held at page 727:

"It is settled law that contracts made in exercise of statutory powers are not covered by Article 299(1) and once this distinction is kept in view, it will be manifest that the principles laid down in *K.P. Chowdhary's*, *Mulamchand's*, *Rattan Lal's* and *Firm Gobardhan Dass'* cases are not applicable to a statutory contract."

The contract in pursuance of the Punjab Liquor Licence Rules was accordingly held as not covered by Article 299(1) of the Constitution and therefore not invalid for non-compliance with the requirements mentioned therein.

The Punjab Reorganisation Act was passed by Parliament in exercise of powers vested in it under Article 3 of the Constitution. Article 3 empowers the Parliament by law to-

- (a) form a new State by separation of territory from any State or by uniting two or more States or parts of States or by uniting any territory to a part of any State;
- (b) increase the area of any State, to diminish the area of any State;
- (c) alter the boundaries of any State; and
- (d) alter the name of any State.

Article 4 of the Constitution enacts that such law for re-organisation may contain such supplemental, incidental and consequential provisions as Parliament may deem necessary. The provisions of sections 78, 79 and 80 being incidental and consequential to the re-organisation of States under the Punjab Reorganisation Act, Parliament's power to apportion the rights and liabilities of the existing State of Punjab among the successor States as per section 78(1) of the Act can be traced to Article 4 of the Constitution. The executive power of every State is to be so exercised as to ensure compliance with the laws made by Parliament, vide Article 256 of the Constitution. Section 78 (1) of the Punjab Re-organisation Act provides for apportionment of rights and liabilities of the existing State of Punjab in the Bhakra Nangal and Beas Projects among the successor States by agreement after consultation with the Central Government. Article 299 of the Constitution does not envisage the executive power to be exercised in consultation with the Central Government. Besides it is the law enacted by Parliament which lays down the manner in which the rights and liabilities of the existing State of Punjab have to be divided between the concerned States. Clause 7 of the 1981 agreement expressly affirms the 1955 agreement and the Government order dated 24th March 1976 subject to the modifications provided for therein. The 1955 agreement is therefore affirmed by the statutory agreement dated 31st December 1981. The successor States of Punjab and Haryana were created under the Punjab Re-organisation Act which itself provided for

apportionment as per section 78 (1) of the Act, of the rights and liabilities in the Beas Project. It should, therefore, be held that both the States were created subject to section 78 (1) of the Act. The 8 MAF water allotted to the State of Rajasthan as per 1955 agreement is a liability of the existing State of Punjab recognised by section 78(1) of the Act providing for the apportionment of the rights as obtaining on the appointed day.

Further the agreements dated 29th January 1955 and 31st December 1981 were not contracts covered under Article 299 of the Constitution. Since these were really records of the political decisions arrived at among the concerned States at the instance of the Central Government and were not stricto sensu contracts, the decisions recorded as per the agreements of 1955 and 1981 are not therefore void for reason of non-compliance with the requirements of Article 299 (1) of the Constitution.

To sum up, we are of opinion that neither the agreement of 1955 nor that of 1981 was entered into in the exercise of the executive power of the concerned States and hence Article 299 of the Constitution was not attracted. The agreement of 1981 was also beyond the pale of Article 299 for the reason that it was statutory in character.

We, accordingly, overrule the objection raised by the State of Punjab that the agreements dated 29th January 1955 and 31st December 1981 are void and inoperative.

CHAPTER XX

C.M.P. NO. 21/D-RBWT/86 FILED BY THE DELHI ADMINISTRATION

The Union territory of Delhi has been receiving water from the Ravi-Beas System to meet the drinking requirements of its inhabitants. Neither paragraph 9.1 nor paragraph 9.2 of the Punjab Settlement contemplates providing for water from the Ravi-Beas System to meet Delhi's additional requirement by the Tribunal. The Delhi Administration avers that it has been looking for raw water sources for meeting its requirements, one of the sources identified by the Expert Committee set up by the Ministry of Works and Housing, Government of India, in 1975 was the surplus waters available from the Ravi-Beas System. It submits that the claims of Punjab and Haryana regarding the shares in their remaining waters can be effectively adjudicated by the Tribunal only after taking into consideration the drinking water requirements of the Union Territory of Delhi.

It is averred that in the meeting held on 29th March 1963 under the Chairmanship of the Union Minister of Irrigation and Power the question of supply of water to Delhi for drinking purposes was considered to be one of paramount importance and it was decided to explore all possible avenues on high priority basis to secure additional supplies to meet the increasing needs of the inhabitants of Delhi. At the said meeting it was inter alia decided that "(a) the Punjab Government would continue to supply water to Delhi upto a maximum of 325 Cusecs (equal to 0.119 MAF) as heretofore and would endeavour to meet the shortage experienced especially during the months of May and June. This could be arranged through the Munak and Indri Escapes during the current season, (b) for giving regular, uninterrupted and assured supplies to Delhi to the extent of 325 Cusecs (0.119 MAF) the Punjab Government would immediately start the construction of the Link on Western Yamuna Canal Feeder on high priority basis, and (c) the supply of water has to be made through Indri Munak Escapes." It was clearly laid down that supply would be measured at point of off-take at Munak or Indri Escape, as the case may be.

The Naskar Committee estimated the requirements for the year 2001 for Delhi as under:-

(i) For drinking purposes	925 Cusecs
(ii) For industrial purposes	93 Cusecs
(iii) For gardening purposes	400 Cusecs

Total	1418 Cusecs
	i.e. , 1.05 MAF."

To meet this requirement of 1.05 MAF the Delhi Administration had suggested to the Ministry of Irrigation and Power that it may take up the matter with the concerned States and secure additional water from unutilised Ravi-Beas supplies or from any other alternate source to be indicated by the Ministry of Irrigation and Power. The Delhi Administration had shown its inclination to meet the proportionate cost of making investigations, project reports and estimates in this behalf. The Ministry of Irrigation and Power in its turn forwarded the request to the Member and Convenor of the Committee of Technical Experts on Ravi-Beas Waters.

In view of the aforesaid report of the Naskar Committee, a meeting was held on 14th July 1972 under the Chairmanship of the Union Minister for Irrigation and Power on Conservation of Water Resources for augmenting water supply to Delhi. In the said meeting it was decided, inter alia, that Haryana will ensure that West plant will feed 200 cusecs continuously round the year as under:-

"(i) Delhi will receive 300 cusecs at West plant, 325 cusecs delivered at Munak against 0.119 MAF from Bhakra for six months.

(ii) Delhi will receive 300 cusecs at West plant in the rainy season for about three months, when water is available for releases below Tajewala after meeting indents of Western Yamuna Canal and Eastern Yamuna canal; and

(iii) For the remaining three months or so, Delhi will be given 300 cusecs from Sutlej, i.e., Bhakra, Ravi or Beas for which M.I.P. will hold discussions with concerned authorities i.e., B.M.B. Haryana, Rajasthan and Punjab to get

0.06 MAF, the exact figure to be decided by Joint Secretary, G.B. on the basis of hydrological and pumping, data to be furnished by Chief Engineer (W), M.C.D. Share of Delhi in revised Ravi Beas Waters was, therefore, increased by 0.08 MAF raising it to 0.2 MAF against the earlier share of 0.119 MAF. Vide notification dated 24th March 1976 of Government of India, Ministry of Agriculture and Irrigation."

Notwithstanding this increase, on 23rd August 1978, the Mayor of Delhi addressed a letter to the Prime Minister Shri Morarji Desai to use his good offices to persuade the Government of Punjab and Haryana to come to Delhi's rescue by agreeing to enhance the supply to 1.00 MAF to meet its minimum needs. It was pointed out to the Prime Minister that since water was used for consumptive purposes almost 80 per cent thereof was returned in the shape of waste water and hence the actual consumption was only 20 per cent. In the second master plan prepared by the Delhi Development Authority for the Union Territory of Delhi upto the year 2001 the population of Delhi was expected to be around 128 lakhs inclusive of 6 lakhs in the rural areas requiring additional waters to the extent of 0.871 MAF and this quantity could, in the opinion of the Delhi Development Authority, be easily spared from the surplus Ravi-Beas waters. It was, therefore, prayed that this Tribunal should direct continuance of existing share of 0.2 MAF of water to Delhi and grant additional water to Delhi as requested.

The State of Punjab in its reply to the said C.M.P. has submitted that the finding of the Expert Committee set up in 1975 was irrelevant and no water could be claimed as of right from the Ravi-Beas System as the Delhi Union Territory falls in the Ganga basin where surplus water to the extent of 11.7 MAF is available. Secondly, according to Punjab, Delhi does not find a mention in either of the two terms of reference or paragraphs 9.1 and 9.2 of the Punjab Settlement and hence the demand of Delhi for additional water for drinking purposes is beyond the purview of this Tribunal. Therefore, on both the grounds, namely, (i) the demand made by Delhi is not covered by the terms of reference and (ii) Delhi Union Territory falls in the Ganga Basin and not the Ravi-Beas Basins, it cannot lay a claim for additional waters from the Ravi-Beas System. This, it is said, was made clear by Gyani Zail Singh, the then Punjab Chief Minister, in his D.O. letter addressed to Dr.K.L.Rao, Union Minister, Irrigation and Power.

According to Punjab since the Union Territory of Delhi is a non-riparian State, Punjab cannot agree to meet its full requirements having regard to the pressing needs of Punjab itself. It was also submitted by Punjab that there is no surplus water in the Ravi-Beas System which can be spared for Delhi. On this line of reasoning, Punjab contends that the application filed by the Delhi Administration for additional water deserves to be rejected.

The Delhi Administration has filed its rejoinder to the reply lodged by the State of Punjab. Denying the averment that the findings of the Expert Committee were irrelevant, it contends that Delhi falls within the river valleys of Ravi and Beas and is entitled to look for additional waters from that source. According to Delhi the claim preferred by it for additional waters from the Ravi Beas System is not by way of a concession but as a matter of right both under the Constitution and the laws and since paragraph 9.1 of the Punjab Settlement states that 'waters used for consumptive purposes will also remain unaffected', Delhi is entitled to protect its existing user which is to the extent of 0.2 MAF from the Ravi-Beas System. Paragraph 9.1 of the Punjab Settlement can mean that the right of Delhi and Jammu and Kashmir to the usage from the Ravi-Beas System shall remain unaffected to the extent verified by the Tribunal. Consequently, the Delhi Administration contends that it is entitled to be treated as a party so that it may be able to protect its existing user from the Ravi-Beas System. It is further stated that the adjudication contemplated by paragraph 9.2 of the Punjab Settlement will also affect the rights of the Union Territory of Delhi. If the rights of Delhi are affected without Delhi having an opportunity of being heard, the decision of the Tribunal would be rendered void as violative of the principle of natural justice.

It is further submitted that Delhi being the capital of India, has a floating population with a regular flow of foreign tourists, the daily flow of visitors from all over the country is beyond 10 lakhs. Besides, there is a steady increase in the population on account of urbanisation raising the need for drinking water. It is, therefore, requested that the Tribunal should take this special feature into consideration while submitting its report and make provision for supply of additional water to Delhi from the Ravi-Beas System. Dealing with the argument of Punjab that Delhi is not entitled to any water as of right as it falls in the Ganga Basin, it is submitted that the water of the three Eastern rivers fell to the share of India on

payment of approximately Rs.100 crores to the Government of Pakistan for withdrawal of Ravi-Beas waters which that country was using on the expiry of the transition period. Since the Government of India had paid a substantial amount to the Dominion of Pakistan for acquiring these waters, no single State could lay a claim on the said waters as they are national assets and under our national policy the waters of any river can be distributed on equitable considerations to subserve national interest. The concept of entitlement of river water to a riparian State only is neither relevant nor a decisive factor, even if it is assumed for the sake of argument that the Union Territory of Delhi is non-riparian. Since Delhi is already receiving a certain quantity of water from the Ravi-Beas System, it has a right to protect its interest so far as that quantity is concerned under paragraph 9.1 of the Punjab accord and as the right to get water stands established, it is also entitled to claim additional waters on equitable considerations having regard to the increased needs of Delhi. The suggestion of Punjab that Delhi should try to get waters from the Ganga Basin is refuted by Delhi and it is stated that the Government of Uttar Pradesh has already refused to allocate water to Delhi from the Ganga Basin. There is, therefore, no possibility of Delhi receiving water from the Ganga Basin and, therefore, the only alternative is to look for additional supplies from the Ravi-Beas System. The Union Territory of Delhi has therefore, claimed (i) that its existing supplies should be protected and (ii) that it should be granted additional supplies as may be determined by the Tribunal to meet its increased requirements. Annexures numbering thirteen have been produced by Delhi to support its averments in the representation preferred before this Tribunal. It has also filed written submissions in support of its contentions.

We have carefully perused the annexures and the written submissions filed on behalf of the Delhi Administration. While interpreting the terms of reference in the context of paragraphs 9.1 and 9.2 of the Punjab accord, we have come to the conclusion that the jurisdiction of the Tribunal is limited to verifying the use by the farmers of Punjab, Haryana and Rajasthan from the Ravi-Beas System as on 1st July 1985. That paragraph also states that 'waters used for consumptive purposes will also remain unaffected'. It then proceeds to state that the quantum of usage claimed shall be verified by the Tribunal. The second sentence 'waters used for consumptive purposes will also remain unaffected' has also reference to user as on 1st July 1985. On a true interpretation of paragraphs 9.1 and 9.2 of the Punjab

accord, we have come to the conclusion that under the first paragraph all that the Tribunal is required to do is to verify the quantum of user for irrigation and other consumptive purposes as on 1st July 1985 by the States of Punjab, Haryana and Rajasthan only. So far as paragraph 9.2 is concerned, we have come to the conclusion that the Tribunal is required to examine the claim of Punjab and Haryana regarding the shares in their remaining waters. We have also come to the conclusion that the terms of reference do not permit us to reduce the allocation made in favour of Rajasthan under the 1955 and 1981 agreements. In other words, we have come to the conclusion that the share of Rajasthan in the Ravi-Beas waters fixed under the 1955 agreement and subsequently modified under the 1981 agreement cannot be affected since the same is beyond the purview of this Tribunal. For the same reasons we are of the view that the share of Delhi fixed at 0.2 MAF under the 1981 agreement must remain unaffected. To that extent the interest of Delhi stands fully protected and, therefore, there can be no question of permitting the Delhi Administration to intervene as a party on the apprehension that its share may be adversely affected. Even assuming for the sake of argument that the second sentence of paragraph 9.1 namely, 'waters used for consumptive purposes will also remain unaffected' applies to Delhi Administration also, since on a true interpretation of the terms of reference we have come to the conclusion that the share of Delhi Administration fixed under the 1981 agreement cannot be adversely affected by this Tribunal, there is no question of any apprehended violation of the rule of natural justice. The second part of the term of reference requires the Tribunal to adjudicate on the claim of Punjab and Haryana in their remaining waters, the quantum of water to be determined after deducting the share of Rajasthan, Jammu and Kashmir and the Delhi Administration under the 1981 agreement. Item No.2 of the Terms of Reference does not require the Tribunal to determine the share of Delhi Administration in the remaining waters but what that term provides is only to adjudicate upon the claim of Punjab and Haryana in their remaining waters. On a plain reading of the said paragraph it is clear that the contesting parties thereunder are merely Punjab and Haryana and that is why we have come to the conclusion that the share of Rajasthan cannot be affected, to do so would be to violate the principle of *audi alteram partem*. In view of what we have stated while discussing the scope of the inquiry before us, we think the share of Delhi Administration under the 1981 agreement to the extent of 0.2 MAF must stand fully protected but we have no jurisdiction to adjudicate on the demand for additional waters beyond 0.2 MAF under either of the terms of reference.

For the above reasons since the existing share of Delhi to the extent of 0.2 MAF fixed under the 1981 agreement stands protected in view of the interpretation put on the terms of reference, we see no need to permit the Delhi Administration to intervene in the present proceedings as in our view its claim for additional waters beyond 0.2 MAF cannot lie under either of the terms of reference. We, therefore, reject the C.M.P. filed by the Delhi Administration.

CHAPTER XXI

ITEM NO. 1 OF THE REFERENCE
(PARAGRAPH 9.1 OF THE PUNJAB SETTLEMENT)

The reference relating to the matters specified in paragraph 9.1 of the Punjab Settlement requires the Tribunal to verify the quantum of usage of water by the farmers of Punjab, Haryana and Rajasthan from the Ravi-Beas System as on 1-7-1985. The Tribunal is also required to verify the quantum of water used for consumptive purposes as on that date. The settlement assures that the farmers of Punjab, Haryana and Rajasthan will continue to get water not less than what they were using from the Ravi-Beas System as on 1-7-1985. The quantum of water used for consumptive purposes as on that date is also assured.

According to the State of Punjab, the utilisation of waters of the rivers Ravi and Beas by the farmers of Punjab, Haryana and Rajasthan as also water used for consumptive purposes on 1st July, 1985 was as follows:-

Punjab	:	13,336 cusec day
Haryana	:	1,843 cusec day
Rajasthan	:	6,216 cusec day

Multiplying the above use on 1-7-1985 by 365 and applying the conversion factor of 1.9835/10⁻⁶ the annual utilisation of the Ravi-Beas Waters by the farmers of the three States and also for consumptive purposes by these States in terms of million acre feet is said to be-

Punjab	:	9.655 MAF
Haryana	:	1.334 MAF
Rajasthan	:	4.500 MAF

The State of Punjab concedes that the quantity as aforesaid due to the States of Haryana and Rajasthan had been assured under the Punjab Settlement and Punjab has no objection in supplying the said quantity to those States even though Punjab is absolutely entitled to the waters of the rivers Ravi and Beas.

The State of Haryana contends as follows:

The concept of "farmers' user" as incorporated in Item No. 1 of the reference (paragraph 9.1 of the Punjab Settlement) necessarily implies user by the farmers who receive water in their fields as distinct from the releases at the canal heads. The verification of such user as on 1st July, 1985 should relate to the farmers' user in their fields with reference to their crops spread over a period. User on a single day cannot determine the fate of the farmer for the future. Hence the date 1st July, 1985 should be taken as a part of the annual cycle in which the user is to be verified. Distribution of water can best be done with reference to the water in storage before and after the monsoon flows. This annual water cycle called the "water year" forms the basis for distribution of water to the farmers of the three States. In the matter of verification of user under Item No. 1 of the reference, the computation should be with reference to the water made available at the farm gates of the farmers of Punjab, Haryana and Rajasthan, and not on the basis of water released at canal heads at Nangal, Ropar, Madhopur and Harike. In the process of transit of waters from these canal heads, losses occur and the quantum of water supplied to the farmers is much less than the releases at the canal heads. The losses can be reduced by the lining of canals and if waters released at the canal heads are assured to the respective farmers, they will be getting much more in quantity than what they are entitled to under paragraph 9.1 of the Punjab Settlement if steps are taken for the avoidance of loss in transit by the lining of canals. The extent of loss in transit of the water released at the canal head before it reaches the farmers' gate works out to 30% and the loss can be saved to the extent of 22.5% by lining the canals. The date 1st July, 1985, mentioned in paragraph 9.1 of the settlement should be accepted as relating to a water year ending on 30th June 1985 and the verification of use of water by the farmers should be based on the average use for four or five years. The farmers' use cannot be rationally determined with reference to a particular date. The canals are of different lengths and the farms are at different distances from the canal heads. The travel time is different in case of each farmer. The water released on 1st July, 1985 may have reached only a few farmers on the same day while water received by some of the farmers on the said date would have been released during the course of the last week of June. The releases in canals are recorded everyday. The farmers' use cannot be related to it because of the time lag for the waters to reach the farm gates.

The quantum of water used may differ from day to day, and the user by the farmers on a single day should not determine the verified user in paragraph 9.1. The State of Haryana suggests to take July 1, 1985 as the day with reference to an year's user prior to that date representing the two crops as well as filling and depletion periods of storages in a year. It is also contended that admittedly there were breaches in the Bhakra Main Line in the Punjab territory during the year ending on July 1, 1985, resulting in failure of supplies to the farmers of Haryana through the Bhakra Main Line for a period of three months. The period of one year prior to 1st July, 1985 should not therefore be taken into consideration in the matter of verification of the guaranteed user by the farmers of Haryana. It is accordingly submitted that the rational way of computation of the guaranteed quantity of water under paragraph 9.1 of the Settlement is to verify the average user for a period of four years from 1980-81, thus excluding the year 1984-85 when there were breaches in the Bhakra Main Line within the Punjab territory.

It was further urged on behalf of Haryana that the term "user by the farmers" with reference to 1st July, 1985 can relate only to the legitimate and bona fide user by the farmer as on that day. A perpetrated mis-use or permissive use cannot be taken in as user contemplated by paragraph 9.1 of the Punjab Settlement. According to the State of Haryana the assurance that the farmers of each of these States shall continue to get water not less than what has been verified by the Tribunal as "farmers' user" is not relatable to any particular source and the verified quantity may well be ensured from other available uncommitted water systems and sources. It is contended that additional water can be generated by organising improvements of the canals and the water distribution system to the farmers' fields. Punjab had been using 0.60 MAF of the Ravi-Beas water allocated to Rajasthan as provided for in the agreement dated 31-12-1981. Waters from the share due to Jammu and Kashmir were also being used by Punjab. The permissive user of the quantity of water due to Rajasthan and Jammu and Kashmir, according to the State of Haryana, cannot be taken into account in the computation of user of the waters of the Ravi-Beas system by the State of Punjab on 1-7-1985. Haryana had, after the Government Order dated 24th March, 1976, completed the construction of the SYL canal in its territory. The share due to Haryana can be put to use only if the construction of the SYL canal is completed also in the Punjab territory. The State of Haryana had paid a sum of Rs.110.5 crores and supplied machinery worth Rs.2.8 crores to the State of Punjab

for the completion of the SYL canal in the Punjab territory. The agreement dated 31-12-1981 expressly stipulates for the completion of the canal in the Punjab territory within two years from the date of the agreement. There was agreement between the parties in regard to the alignment of the canal. There was also no dispute regarding the canal capacity fixed at 6500 cusecs. The farmers of Haryana were, however, deprived of their share of water from the Ravi-Beas System on account of the failure of Punjab to construct the SYL canal in its territory. Punjab had been using the legitimate share of Ravi-Beas water due to Haryana taking advantage of its own wrong in not completing the construction of the SYL canal. The State of Haryana therefore contends that such misuse of water due to Haryana by Punjab cannot be taken into consideration as legitimate use by Punjab of the waters of Ravi-Beas System as on 1-7-1985. Haryana further contends that even if such permissive use and misuse by Punjab are also to be taken into account under paragraph 9.1 of the Punjab Settlement, the assurance contained therein can be met by lining of canals and water courses whereby losses in transit from the canal head to the farm gate could be avoided and additional quantity of water made available to the farmers. The State of Haryana submits that the savings equivalent at canal heads as a result of the lining of canals and water courses were estimated by Punjab itself in its White Paper issued in 1982. It is also contended that the assurance in paragraph 9.1 can also be met by taking into account the uncommitted and unshared river flows as also from the availability of ground water resources.

It is further contended that the Sutlej content in the waters used by the farmers should be excluded in the matter of verification as on 1.7.1985. The waters of the Bhakra Nangal Project were committed to specific areas in the erstwhile State of Punjab (including the present State of Haryana) and Rajasthan as per the terms of the Bhakra Nangal agreement, 1959. The agreement sets out the quantity of water to be supplied to the various areas of the undivided Punjab and Rajasthan. The waters of river Sutlej available above Ropar and shared among the States of Punjab, Haryana and Rajasthan are called "shareable supplies" from the river Sutlej. Specific areas were demarcated for the supply of Sutlej waters and the water supply to those areas from the river Sutlej are committed waters under the Bhakra Nangal Project. The Bhakra Main Line taking off from Nangal through Nangal Hydel Channel supplies Bhakra waters to areas in Punjab, Haryana and Rajasthan committed to Sutlej waters; Sirhind Canal and the Bist-Doab canal emanating from the Sutlej at Ropar

also supply water to some areas in Punjab committed to Sutlej waters. The total quantum of water supplied up-to the headwork at Ropar was quantified under the Bhakra Nangal Project. Thus the committed supplies from the river Sutlej irrigated parts of Haryana and Punjab and parts of Rajasthan. There was greater need of water for supply to the high and arid areas and to extend irrigation facilities in the present Haryana areas. It was with a view to meeting such needs that an integrated water system was developed to make the surplus waters from Ravi and Beas available at Nangal. Thus the low-lying areas of Punjab and Rajasthan committed to Sutlej waters could be irrigated with the Ravi and Beas waters from Harike through the Sirhind Feeder to the extent of 2.37 MAF, out of which 1.00 MAF was the utilisation by Rajasthan and 1.37 MAF by Punjab. Through the integrated scheme Sutlej waters to the extent of 2.37 MAF at Bhakra-Nangal were available for distribution to the high and arid areas of the erstwhile Punjab. A Barrage at Harike was constructed in 1952 and the Sirhind Feeder was completed in 1956. Further augmentation of the supply at Ropar to the extent of 3.82 MAF took place with the construction of the Beas-Sutlej Link in 1977. Thus a total of 6.19 MAF of Ravi and Beas waters were made available at Nangal for integrated use. The Madhopur-Beas Link was built as early as in 1954 transferring the waters of river Ravi to Beas replenishing the supplies at Harike. The construction of Pong Dam on the river Beas was completed in 1974. The dam was constructed with the object of storing monsoon flows of the river Beas for replenishment of supplies at Harike during non-monsoon period. The extent of pre-partition use of Ravi and Beas Waters by the States of Jammu & Kashmir, Punjab and Rajasthan is as follows:-

State	Point of use		Total
	Madhopur	Harike	
J & K	0.04	-	0.04
Punjab	1.48	0.50	1.98
Rajasthan		1.11	1.11
	Total		
	1.52	1.61	3.13

According to Haryana the Sutlej content of the waters used and the pre-partition use of the Ravi and Beas waters should be deducted in the course of verification under paragraph 9.1. So also, the gains and flows in Sutlej plain between Ropar and Yusafpur, the flows beyond 14000 cusecs available at Ropar and gains and flows of the Ravi and Beas over and above the surplus waters shared as

per the 1981 agreement should also be deducted from the quantum for verification as use by the State of Punjab. It is contended by the State of Haryana that the Sutlej waters available below Ropar beyond the committed Sutlej waters should also be deducted. The quantity of Sutlej waters to be shared as per the 1959 agreement as determined by the B.B.M.B. was limited to 14000 cusecs based on the total discharge capacity of the canals at Ropar. The water available at Ropar is, however, more than 14000 cusecs resulting in escapages below Ropar. This water is available for use at Harike and is used in the Bhakra areas through Sirhind Feeder and other areas. The Ravi and Beas waters for Haryana are released from the Bhakra storage. Haryana could not use its share because of the failure of Punjab to construct the SYL canal. Such part of the Ravi-Beas waters not used by Haryana adds to the Sutlej waters at Ropar. Even if the Sutlej waters at Ropar are less than 14000 cusecs, the two together make up more than 14000 cusecs.

It is also contended by Haryana that the use of the Ravi and Beas waters is on the basis of the quantum of discharge at Mandi plain. There are accumulations and gains between Mandi plain and Firozpur due to flows into the rivers from Nalas, Khunds and rivulets. These accumulations and gains are also used by the State of Punjab. There are similar gains and accumulations in the river Ravi below Madhopur till the point where the river flows into Pakistan. Such accumulations are also used by Punjab and should be deducted from its verified user.

Yet another plea raised by Haryana is that the Ravi-Beas waters are drawn by Rajasthan through Rajasthan Feeder. Some quantities of water escape into natural depressions in the Rajasthan desert whenever water is not required by the farmers or when overdrawn. Such wastage of water cannot be taken as use by the Rajasthan farmers even though the releases are shown in the canal head. The supplies so escaped from the canal system should be ascertained and deducted to arrive at the farmers' use of the waters of Ravi-Beas System by Rajasthan as on 1-7-1985. It is further stated that the water used for consumptive purposes is out of the quantities released at the canal heads and no separate record or data of such consumptive use is available. Since such use is covered by the releases, no additional computation of consumptive use is necessary.

The State of Rajasthan contends that the farmers' use and the consumptive use of the waters of the

Ravi-Beas System as on 1-7-1985 cannot be reckoned on the basis of releases on that particular day. According to Rajasthan the expression "as on 1-7-1985" is intended to cover a period of one full water year ending on 30-6-1985. Rajasthan points out that the water received by its farmers from the Ravi-Beas System is made available from Harike Headworks which is at a distance of 179 kms. from the Rajasthan border. The waters are received by Rajasthan at Masitawali Headworks which is at a distance of 204 kms. from Harike. The canal system in Rajasthan extends to about 600 kms. from Masitawali Headworks. Thus, the water released from Harike Headworks takes varying and considerable time to reach the farmers of Rajasthan. The release of water on a particular day cannot be the sole basis for the computation of the guaranteed supply of water for the whole year to the farmers concerned, and the verification should be for a period of one year taken on the basis of the average for a period of three years. Rajasthan had not been supplied the full quantity of water covered by indents made to the B.B.M.B. and it had not been able to use water to the extent of its requirement. Computation, according to Rajasthan, can only be based on the releases at the canal heads. There is no record of the receipt of water at the farm gates and it will not be possible to verify the water used by the farmers of the three States with reference to receipts at farm gates. No deduction can be made in regard to water escaped into depressions. The quantity of such escapage is negligible, and the water so escaped is also being utilised for the purpose of irrigation by the farmers of Rajasthan and for consumptive purposes such as for use as drinking water for cattle.

In the course of the hearing counsel for Punjab and Haryana stated that no separate accounts of use for consumptive purposes are available and part of the water released for agriculture was used for consumptive purposes. Counsel for Rajasthan stated that the actual use for consumptive purposes was also out of releases from canal heads and it is not necessary to consider consumptive use separately. In view of the submission so made by all the three States we consider it unnecessary to deal with the use for consumptive purposes separately.

The plea raised by Punjab that the use by farmers and for consumptive purposes for one year should be the multiple for 365 days of the releases at canal heads on 1-7-1985 cannot be accepted as realistic. The date 1-7-1985 apparently had been chosen by the signatories of the Punjab accord as a near date prior to the date of the accord and the words used "as on

1-7-1985" would clearly indicate that it is not the discharge at the canal heads on that particular day that is material. The expression 'as on' indicates the terminus date with reference to which the state of facts existing during a period terminating on that date should be ascertained. Though an argument was advanced before us by Counsel for Haryana, based on the slight difference in the language used in paragraph 1 of the Punjab Settlement as compared to that employed in item No. 1 of the reference, we consider that the deviation is of no significance. The use by the farmers and for consumptive purposes is to be reckoned for a whole year and the date has relevance only with reference to the year for computation. Computed on the basis of discharge on 1-7-1985 multiplied by 365 would come to 15.489 MAF as against the availability of 14.455 MAF during the year 1984-85. The waters released on a particular day reach the farmers on subsequent days depending on the travel time. The release should also have reference to the crops on the farmers' fields and the period during which water is needed. Further, on irrigation projects, hydrological conditions vary from year to year and the average of a sufficiently long period of four or five years should be taken to determine the rights of farmers. The agreements on Ravi-Beas waters were based on mean river flows on an annual basis. Even one year's data may not, therefore, be representative. Rajasthan proposed that the average of past three years ending in June 1985 should be the basis for computation. Since, however, there was a breach in the Bhakra Main Line in 1985 disrupting supplies to Haryana, Rajasthan has no objection to reckon the average of three years from 1981-82 to 1983-84. The data furnished by the B.B.M.B. shows considerable variations in the supplies from day to day in various 10 daily periods. For instance, while the release on 1-7-1985 was 21986 cusecs, it was 13413 cusecs on 30th June, 1985 and 19736 cusecs on 2nd July, 1985. 1st July, 1985 falls in the filling season of 1985-86. The supplies are lowest in the depletion period as the 10 daily data given below brings out:

	1-10	11-20	21-28/30/31
January 1985	14574	13320	12630
February 1985	12430	12773	12868
March 1985	14273	14983	14799
April 1985	10858	6208	11925
May 1985	16319	16353	20756
June 1985	21861	21960	18191

What is assured under the Settlement is a continued use by farmers in the future. It cannot be identified with reference to the use

on a single day or on the basis of use of the previous year preceding 1-7-1985. Irrigated areas change from year to year due to several factors including hydrological reasons. The hydrological year in the Ravi-Beas system is from 21st May to 20th May of the succeeding year. The data of a single day or a single year obviously cannot give any true picture of the extent to which there is use. The extent of the total volume of continuous use of water cannot also be measured by data relating to one hydrological year. The agricultural use of water must be regarded as continuous although several fields may not be irrigated every year. If a cultivated land is not, for some reason or other, irrigated in one year, it cannot be said that the irrigation had been abandoned and the area had lost its irrigability. It still retains the right to receive irrigation in future years and should not, therefore, be excluded in considering use. We are, therefore, of the view that, if possible, a period of five years should be taken to ascertain the extent of use of the waters of the Ravi-Beas system. Since, there was a breach in the Bhakra Main Line for over three months disrupting supplies to Haryana, the actual data for 1984-85 is not completely available. However, restructured accounts for that year were prepared by the B.B.M.B. but they were objected to by Punjab and Rajasthan. Haryana suggested that the annual use can be reckoned with reference to the average of four years' data for the period 1980-81 to 1983-84 and, if 1984-85 had to be considered, Haryana has no objection taking into account the restructured accounts. After duly taking into account the technical assistance received by the Tribunal, we are of the view that the feasible course now open to us is to take the average of five years from 1980-81 to 1984-85 adopting the restructured accounts for breach periods in 1983-84 and 1984-85.

The B.B.M.B. compiles the accounts on the basis of the hydrological year (filling period from 21st May to 20th September and depletion period from 21st September to 20th May of the succeeding year). We have, however, obtained data from the B.B.M.B. for the twelve months period ending on 30th June for each of the five years.

Both the States of Punjab and Rajasthan submit that the usage can be verified on the basis of the accounts of releases at canal heads. The State of Haryana, however, submits that the use by farmers can be reckoned only with reference to the availability of water at the farm gates of the farmers. While data may not be available at the farm-gates, the usage at farm-gates could be assessed by multiplying the releases

at the canal heads by the efficiency factors of the Canal Systems, said to be 59.6% in Punjab, 66.7% in Haryana and 60.8% in Rajasthan as on 1-7-1985, on the basis of calculations furnished taking into account the extent of lining of Government canals and water courses. It is, however, seen that data for the actual releases is available only at the canal heads. According to Punjab such releases should be verified to ensure the guaranteed supplies to the farmers, the application of efficiency factors would be a theoretical exercise of no practical value, and that the water courses belong to the respective farmers and lining had been done at the expense of the farmers. Water saved by the lining of Government channels had been used by the respective farmers.

There are 13500 water courses in Punjab and 13081 in Haryana for supply of waters of the Ravi-Beas System or of the river Sutlej or of both. Each water course commands area ranging from 600 to 800 acres. The number of farmgates will run into several hundreds of thousands in each State and the data of deliveries at farmgates is not available. Data is observed of the canal flows at important locations and control points. We cannot, however, lose sight of the fact that lining of canals and watercourses leads to considerable savings in seepage losses and such waters saved will also be available for use. In the course of arguments it was pointed out that the Governments of Punjab and Haryana had recently decided that they would meet the cost of lining watercourses and no part of the cost would be recovered from the farmers. Government channels are being lined from public funds. One cannot also lose sight of the fact that with the growing demands of water, improvements in irrigation techniques such as sprinkler irrigation, drip irrigation etc. will have to be progressively adopted. Such methods would improve the efficiency of canal system.

Since the actual deliveries to the farmers are not measured at farmgates, it is not possible to verify the water used by farmers from the Ravi-Beas System at the farmgates. The claims made by the States of the withdrawals at the canal heads and the Ravi-Beas System component thereof have been duly scrutinised.

WATER ACCOUNTS OF BHAKRA BEAS MANAGEMENT BOARD .

After the reorganisation of the Punjab State

on 1st November, 1966, the Bhakra Management Board was constituted by the Government of India on 1-10-1967 to manage the Bhakra Project works. The Board was renamed as Bhakra Beas Management Board on 15-5-1976 when some completed works of Beas Project were transferred under its charge. Unit II of the Beas Project - Pong Dam was completed on 31-12-1974. The Unit I - Beas Sutlej Link started operation on 7-7-1977.

The B.B.M.B. deals with the operation and maintenance of Bhakra Dam and power plants, Nangal barrage, Nangal Hydel Channel and the escape at Lohand Khad from the Nangal Hydel Channel to Ropar, as well as the Pandoh Dam, the BSL Link, Dehar Power Plant and the head regulator of the Anandpur Sahib Hydel Project. The Punjab Government continues to be in charge of the head works at Ropar and Harike as also the Bhakra Main Line as well as the head regulators in the canals leading to the contact points with Haryana at RD 390 of Bhakra Main Line and at RD 160 of the Narwana Branch. Punjab Government also continues to be in charge of the head regulators of the Eastern Canal, Makhu Canal, Rajasthan Canal, Ferozepore Feeder and the Sirhind Feeder and Bikaner Canal. The Madhopur Headworks, the head regulator of the UBDC, Kashmir Canal, Chak Andhar Canal, the MB Link and its control structures and the escape from UBDC into the Beas are also under the charge of Punjab.

The Bhakra Management Board was preparing water accounts for the Sutlej since its constitution upto 1979-80. From 1980-81 onwards, it is also preparing water accounts for the Ravi and Beas Waters and the BSL diversion. A Technical Committee consisting of the officials of the Board and the participating States reviews the water position of the Sutlej, Ravi and Beas every month and draws up the broad operational programme for the ensuing month. Any variations required in the detailed day to day operation are authorised by the Chairman, B.B.M.B.

A Water Accounts Reconciliation Committee consisting of representatives of B.B.M.B. and States meets every month to reconcile the water accounts. At the end of the filling/depletion period, the accounts for the entire filling/depletion period are also reconciled by the Committee. Gauge and discharge data at Ropar, Harike and Ferozepore headworks, on the canals such as Rajasthan Feeder etc. at contact points with Rajasthan and at the various works on the Ravi and MB Link are observed by Punjab and furnished to the Board and reconciled every 10 days by B.B.M.B. and the Assistant Engineers

of the States. It was complained before us by Haryana that the Board has not been permitted by the Punjab Government to observe the gauges or discharges at these various sites or check the observations by Punjab and it is also not furnishing the gauge discharge data at Mandi Plain on the Beas and at Yusafpur on the Sutlej to the Board or the other States. These are matters for the Government of India to look into and rectify in the light of the provisions of Sections 79 and 80 of the Punjab Reorganisation Act.

The water accounts prepared by B.B.M.B. indicate the available supplies, escapages downstream the headworks, the shares of different canal groups and contact points and shares and indents of the States whichever is lower, the deliveries, excess or shortage of the deliveries from the shares/indents whichever are lower, cumulative excess or shortage in the filling season/depletion season. The water account for the 10 day period-21.5.1983 to 31.5.1983--is appended hereto by way of specimen (Table 1 - Appendix 3, Pages 303-308).

In the case of Ravi and Beas Waters, the fixed share of Jammu and Kashmir and the requirements of Delhi and the pre-partition uses are first deducted from the availabilities at Madhopur and Mandi plain and the shares of Punjab, Rajasthan and Haryana in the remaining waters are worked out. Till 31-12-1981, the shares were calculated in the proportions 3.13 : 7.49 : 3.5 out of 14.85 MAF, a figure resulting by deducting 1 MAF from the 15.85 MAF total surplus waters to account for the lack of storage on the Ravi (pre.Thein Dam).

We are informed that no water accounts could be prepared for the period 1.1.1982 to 4.12.1982, because of lack of agreement among the States. Rajasthan had proposed that their share should be shown as 8.6 MAF (including 0.6 MAF permissive temporary use allowed to Punjab). The Board restarted the water accounts from 5.12.1982 onwards calculating the share of Rajasthan as 4655/9500, share of Punjab as 2850/9500, and share of Haryana as 1995/9500 in the Surplus Ravi Beas Waters, after deducting from the availability the pre-partition uses, the fixed share of 0.65 MAF of Jammu and Kashmir and the actual deliveries to Delhi.

There were breaches in the Bhakra Main Line on 6th June and 20th July 1984 and the supplies through Bhakra Main Line of Sutlej or surplus Ravi-Beas waters to Haryana were either completely or partially disrupted from 6th June to 7th September, 1984. Therefore, the B.B.M.B. restricted the releases

from Pong Dam and compiled water accounts by treating the releases downstream of Ropar above 14000 cusecs, either of Sutlej or BSL Waters, as Ravi-Beas Waters.

In their statements of case and in the course of arguments on the first term of reference, Haryana and Rajasthan pointed out that the water accounts of the B.B.M.B. were subject to the following footnote:

"Deliveries to Punjab also include some supplies made downstream Ropar which have already been booked to Punjab at Ropar. In addition, the deliveries to Punjab also include gains between Ropar and Harike and between Mandi Plain and Harike on account of contribution made by various drains, rivulets, Khads etc."

Rajasthan and Haryana advanced arguments that the various components mentioned in the footnote should be quantitatively identified. Haryana furnished along with their statement of case detailed tables identifying quantitatively Sutlej releases reaching Harike, the gains and losses between Ropar and Yusafpur on the Sutlej and the gains and losses in the Beas below Mandi Plain. Haryana also filed discharge data of Yusafpur and Mandi Plain sites obtained by them from the Government of India.

After hearing the parties, the Tribunal passed the following order:

"It is stated before us by Counsel appearing for the three States that they are agreeable to the figures furnished by B.B.M.B. being adopted by the Tribunal as the basis for verifying the quantum of usage under Point No.1.

Counsel for the States of Rajasthan and Haryana had only this reservation, namely, that the gains/flows below Mandi Plain and below Ropar can be ascertained by reference to the figures to be furnished by Government of India since B.B.M.B. does not have any data concerning the same.

The State of Haryana has furnished some figures of the Government of India. Counsel appearing

for the State of Haryana has also pointed out that in the statement of B.B.M.B., agreement is to the extent of B.B.M.B. figures, subject to the notes given by B.B.M.B.

The State of Punjab is given 10 days' time from today to prepare their Statement to be placed before the Assessors and thereafter, the Representatives of Punjab, in the presence of the Representatives of the other two States, may place their respective submissions before the Assessors regarding the aforesaid limited matter, namely the data concerning the gains/flow below Mandi Plain and Ropar.

The Engineers and Representatives of the three States concerned will appear before the Assessors on the 23rd of June, 1986 along with the representatives of the B.B.M.B. for discussion and submission of their respective stand before them.

Counsel for the State of Rajasthan submits that it may be permitted to produce before the Assessors the documents regarding the pre-partition utilisation of waters of Shah Nehar canal and the usage of water by the State of Jammu and Kashmir. The discussions with the Assessors will be concluded by the 27th June, 1986.

After the discussions with the Assessors are completed the three respective States may, if they so desire, file their written submissions before the Tribunal concerning the subject matter of the discussions on or before the 8th of July, 1986."

The Assessors, after their discussions with the engineers of the respective States between the 23rd and 27th June, 1986, prescribed the proforma on which 10 daily figures should be furnished by the B.B.M.B. These were compiled and furnished by the B.B.M.B. utilising the data at Yusafpur furnished to the Tribunal by the Ministry of Water Resources. These were made available to the States on 18th August, 1986.

In its order of 20.8.1986, the Tribunal granted three weeks' time to the States to study and check up the data prepared by the B.B.M.B. supplied to them and thereafter to have technical discussions with the Assessors.

The discussions with the Assessors by the State Engineers took place on 13th, 17th, 18th, 29th and 30th November, 1986.

SHARES OF STATES:

Punjab argued that, in the past B.B.M.B. accounts indicated both the share of a State and the indent of a State and the lower of these figures was taken as the yardstick for comparing deliveries. It was urged that this practice should continue and excess/shortage in utilisation should be considered in relation to the share/indent whichever was lower.

Haryana and Rajasthan submitted that indents were indicated for day to day operational purposes and they depend on the weather and other conditions in the command, and that the share of a State depended on the actual supply availability and the indent nowhere came in the picture.

We are of the view that indents are meant for regulatory purposes and depend upon the rainfall in the command, any emergencies in engineering work and the stage of development of the projects. The indents cannot, therefore, be mixed up with Shares.

Haryana submits that in the period 1.1.1982 to 4.12.1982, when the B.B.M.B. did not prepare any water accounts, the shares of the States should be computed on the formulation of the Board of 1979 based on the 1976 Govt. of India Order viz. Haryana : Punjab : Rajasthan = 3.5 : 3.13 : 7.49 out of a total of 14.85 MAF, in the pre-Their Stage.

Punjab argued that in this period, the formulation used by the B.B.M.B. from 5.12.1982 based on the 1981 agreement should be applied i.e. the proportion, Haryana 1955: Punjab 2850: (including permissible use of 0.6 MAF of Rajasthan's share) : Rajasthan 4655.

Rajasthan argued that the shares should be

worked out strictly on the basis of 1981 agreement viz., 8.6 MAF for Rajasthan : 4.22 MAF for Punjab and 3.5 MAF for Haryana out of 17.17 MAF.

We are of the view that, since we have to assess the usage of water over a number of years, there should be a common base for computing the shares of the States in all the years considered and this should be based on the 1981 agreement, which allowed permissive use of 0.6 MAF of Rajasthan's share by Punjab. The Board have also rounded off the figures for day-to-day operation. Since we are dealing with annual usages, we have computed these in the exact proportion 4.82 for Punjab (4.22 MAF own share + 0.6 MAF permissive use from Rajasthan's share):3.5 MAF for Haryana : 8 MAF for Rajasthan out of 16.32 MAF (mean 17.17 MAF of surplus Ravi-Beas waters minus 0.65 MAF for Jammu and Kashmir and 0.20 MAF for Delhi).

Rajasthan argued that Jammu and Kashmir was allocated a fixed share of 0.65 MAF in surplus Ravi-Beas waters, but was using only 0.2 MAF or so. The balance 0.45 MAF, it was urged, should be taken into account while calculating the shares of Punjab, Haryana and Rajasthan. At present, all the balance was being used pre-emptively by Punjab.

No evidence was led to indicate that Jammu and Kashmir had allowed any permissive use of their unused share. Further Jammu and Kashmir is not a party to the present proceedings.

Rajasthan argued that Delhi was given a share of 0.2 MAF out of 17.17 MAF and this had to vary from year to year, but that the B.B.M.B. was allowing Delhi to draw much more, and distributing only the remaining water to Punjab, Haryana and Rajasthan. In the course of the hearings, Haryana did not object to the use by Delhi, but only desired that the capacity in excess of 0.119 MAF used for Delhi water supply should be taken into account and added to the use of Haryana. Counsel for Punjab stated that their State would consider the sale of water to the nation's capital for water supply, but that this should not be determined as a share for Delhi out of Ravi-Beas waters.

It is learnt that Delhi is already making payments to the B.B.M.B. for water supply and that these are credited to the Board's accounts, and thus become available to all the partner States.

Haryana argued that the water conveyance system to Delhi had been constructed for conveying only 0.119 MAF and that any additional water actually utilised by Delhi should be taken into account in determining the usage by Haryana since the water was being conveyed by Haryana at the expense of its own irrigation from the limited capacity available at present in the Bhakra Main Line. Since we are determining the actual user, we are unable to accept this contention.

As per the 1981 agreement 4.22 MAF water from the Ravi-Beas System was allotted to Punjab and 8.60 MAF to Rajasthan. The agreement itself provides for and permits Punjab to use 0.60 MAF from out of Rajasthan's share until such time as Rajasthan is able to use its full allotment. As on 1st July 1985 Rajasthan was not able to use its full allotment. The use by Punjab of 0.60 MAF of water from the share due to Rajasthan is a permissive user. Both Haryana and Rajasthan contend that such permissive user by Punjab cannot be taken into account as its legitimate use of the waters of the Ravi-Beas System as on 1-7-1985. We are unable to agree with this contention. A permissive user is also legitimate and use by the farmers of Punjab of 0.60 MAF out of the 8.60 MAF due to Rajasthan is also liable to be reckoned in the matter of verification of use by the farmers of Punjab as on 1.7.1985.

As per the order of the Government of India dated 24th March, 1976, 3.5 MAF (out of the 7.2 MAF water due to undivided Punjab and PEPSU under the 1955 agreement) was allotted to Haryana. The water allotted to Haryana can be put to use only on completion of the SYL canal, part of which is to be constructed in Punjab territory. Haryana had completed construction of the SYL canal in its territory in 1978. The 1981 agreement allotting 3.5 MAF water to Haryana and 4.22 MAF to Punjab specifically provides for the completion of the SYL canal by Punjab within two years from the date of the agreement. The estimated cost of construction of the canal in the Punjab territory was also paid by Haryana to Punjab. The alignment of the canal in the Punjab territory and its capacity at 6500 cusecs had been agreed upon. Nevertheless, the construction of the canal is not completed until this day and Haryana has not been able to utilise its allotment of the waters of the Ravi-Beas System for the failure of Punjab to complete the construction of the canal. We see great force in the submission of Haryana that Punjab should not be permitted to take advantage of its own wrong in the matter of computation of the user of the Ravi-Beas Waters by the farmers of the respective

States as on 1-7-1985. Such use by Punjab of the waters of the Ravi-Beas System allocated to Haryana as per the 1981 agreement cannot be treated as legitimate use by the State of Punjab and will not be taken into account in the matter of verification of user as on 1-7-1985. We cannot, however, add the quantum of water used by Punjab from out of the share due to Haryana as user by Haryana for purposes of verification. Haryana, for whatever reason, could not use its due share under the 1981 agreement and could use only such quantity of water as was released through the existing canal system. Hence in the matter of verification, the actual use by Haryana alone is taken into account.

SHAH NEHAR CANALS

Rajasthan argued that in the statements prepared by the Ministry of Irrigation & Power for the meetings in connection with the 1955 Agreement, the pre-partition uses of various projects were indicated, and even figures as low as 0.04 MAF for Kashmir Canal had been separately identified. In regard to the Shah Nehar Canal, the pre-partition uses were shown as "NA" and the total requirements of 0.79 MAF were shown to be met out of surplus Ravi-Beas Waters. Rajasthan therefore argued that the pre-partition use of 0.32 MAF shown in the B.B.M.B. accounts was not correct and that this requirement had to be met by Punjab out of its share in surplus Ravi and Beas Waters.

Haryana argued that the Shah Nehar Canal System had canals which were similar to kuhls in the hilly areas. Most of the withdrawals at the head were returned to the rivers at the tail of the system. This factor should be taken into account in determining the pre-partition use.

Punjab argued that the pre-partition uses of Shah Nehar Canals were examined at length by a Committee of the Beas Control Board, and the Ministry of Energy had determined the pre-partition use as 0.32 MAF.

The Shah Nehar Canal System comprises ancient canals which were earlier operated by private individuals and then came under the control of the Deputy Commissioner, Hoshiarpur in 1871. The main Shah Nehar Canal came under the control of the Irrigation Department in 1949-50. Other canals known as Sathwan, Ladhri, Ajmer and Nauseria continued to be zamindari kuhls and continued to be under private operation. All these canals are located downstream of Pong Dam, but upstream of

Mandi plain, which along with Madhopur were taken as the sharing points in various agreements for the surplus Ravi and Beas Waters.

The canals were fed from the river Beas by a feeder creek taking off from the river at Ray Head, about 13 kms. upstream of the head regulator of the Shah Nehar Canal, where a boulder crate structure was built almost every year. With the completion of the Pong dam, the floods would mostly be absorbed in the reservoir and the releases from the dam would be controlled and regulated to meet the irrigation requirements at Harike and power requirements including peak operation. As a result there would be great reduction in flow depths and there would also be considerable variations in the releases at various times of the day. The Punjab Government therefore proposed a barrage across the Beas river downstream of the Pong dam with adequate balancing storage capacity for feeding the Shah Nehar System, as well as the proposed Mukerian Hydel System.

The project proposals sent by the Government of Punjab in March 1974 envisaged an annual utilisation of 0.384 MAF. The question of the utilisation was referred by the Central Water Commission to the Government of India.

The Shah Nehar barrage project was thereafter accepted by the Planning Commission, with the utilisation being 0.384 MAF out of which pre-partition use was 0.32 MAF. A project for extension and improvement on Shah Nehar Canal System was also cleared by the Planning Commission in December 1977 for a total utilisation of 0.384 MAF, subject to the utilisation of Punjab being limited to 0.32 MAF as pre-partition use and balance against its share of surplus Ravi and Beas Waters.

From what we have stated above, it is obvious that at the meetings held in connection with the 1955 agreement, the pre-partition utilisation in regard to the Shah Nehar Canal was undoubtedly shown as 'NA' but later the quantum of use was estimated to be 0.32 MAF and the same came to be approved by the Planning Commission also.

The contention raised by Rajasthan, which has to an extent been supported by Haryana, has two facets. Firstly, it would seem that when the 1955 agreement was executed, the pre-partition utilisation from Shah Nehar Canal was shown to be 'NA', not available. Later it was estimated as 0.32 MAF. This fact was known to all the party States when the 1981 agreement was

executed and yet, for reasons best known to them, no mention thereof was made in the said agreement and the pre-partition utilisation was taken to be 3.13 MAF only. One reason may be that if this utilisation of 0.32 MAF was added to 3.13 MAF, the total pre-partition use would have risen to 3.45 MAF which would have reduced the surplus water available for distribution after deducting the shares of Jammu and Kashmir and Delhi Water Supply to 16 MAF only, which if distributed according to the ratio adopted by the 1981 agreement would have resulted in reduced allocations, i.e., 8.43 MAF for Rajasthan, 4.14 MAF for Punjab and 3.43 MAF for Haryana. Since we have taken the view that the share of Rajasthan under the 1981 agreement cannot be touched, it would seem paradoxical that Rajasthan should raise such an objection at such a belated stage.

The second facet to the argument is that if the said quantum of water was not included in the pre-partition use, BBMB was not justified in entering the same in its accounts as Punjab's pre-partition use and the proper course would be to treat the same as additional surplus waters divisible among the three States. It is too late in the day for Rajasthan to so contend as it is not a party to Item No. 2 of the reference and cannot claim additional waters from 0.32 MAF. Besides, Punjab's use thereof having been established, BBMB was completely right in taking note thereof in the accounts maintained by it. The character of the said water not being surplus Ravi-Beas Waters, we agree with Punjab that it cannot be added to the kitty for distribution. In the above circumstances, we reject the contentions of Rajasthan and Haryana in this regard.

BOOKING OF THE USE OF WATERS AT ROPAR

Punjab argued that the booking of the use of water at Ropar should be the same as was done in the past water accounts of the B.B.M.B. Haryana and Rajasthan argued that the water accounts of the B.B.M.B. were accompanied by footnotes which had to be quantitatively evaluated and taken into account while assessing the use of Ravi-Beas System Waters.

At Ropar, the waters received come from both the Sutlej supplies stored in Bhakra dam, gains/losses between Bhakra and Ropar and the supplies of Beas waters (3.82 MAF) through the Beas Sutlej Link.

In the order issued on 15-1-1982 in

pursuance of the 1981 Agreement, the Ministry of irrigation had laid down the use of BSL Waters as follows:-

0.2 MAF for Delhi, 3.45 MAF for Haryana,
0.17 MAF for Rajasthan (Haryana was to draw the remaining 0.05 MAF of its share ex-Harike through Rajasthan feeder from an appropriate point.).

In the past water accounts, the B.B.M.B. assumed all available supplies at Ropar upto 14000 cusecs, the total authorised full supply discharge of the Sirhind and Bist Doab canals, as deliveries of Sutlej water to the Sirhind and Bist Doab Canals. This was irrespective of whether the water available comprised only Sutlej waters or partly of BSL waters of Haryana which could not be used by that State. The actual deliveries in the Sirhind and Bist Doab Canals were not taken into account. It was indicated that the Board adopted the said procedure, as Punjab had not permitted the verification by the Board of Canal withdrawals. The B.B.M.B. also treats all the water flowing below Ropar, with the exception of specific BSL releases, as waste water, and this water is not taken into account in the accounts at Harike. Any gains in the Sutlej between Ropar and Yusafpur or Ropar and Harike or Ropar and Ferozepur, and on the Ravi and Beas below Mandi Plain upto Harike/Ferozepur are also not taken into account.

The Ravi and Beas utilisations of Punjab used to be computed by totalling the canal withdrawals at Madhopur and Harike. At Ropar, the use by Punjab of BSL waters was being calculated as the release from BSL waters for Haryana minus the actual use of Haryana minus the flows released below Ropar above 14000 cusecs.

It was demonstrated by Haryana that in the period 21st May, 1983 to 31st May, 1983, which was discussed at great length, the delivery to Punjab of Sutlej waters at Ropar was shown as 115334 cusec days, while the actual withdrawals in the Sirhind and Bist Doab Canals were only 109237 cusec days. The figures of BSL waters used by Punjab at Ropar was shown in the past B.B.M.B. accounts as 6299 cusec days, while the actual was only 202 cusec days.

The proforma prescribed by the Assessors were devised in order to isolate the various components of the uses/flows at Ropar and have been filled in correctly by the

B.B.M.B. We consider it safe to rely on the data furnished by the B.B.M.B. in the proforma.

**DATA OF YUSAFPUR AND MANDI PLAINS SITES;
WHETHER CAN BE RELIED UPON.**

Punjab argued that the discharge observations at Yusafpur and Mandi plains are not of the requisite standards for water sharing/water accounts, as the discharge observations are made only once a day, against 2 hourly observations at other locations. The flows were highly variable and fluctuating at Yusafpur. It was also stated that the two sites were affected by the afflux of the Harike barrage. It was stated that complete cross sections of the river including storage reach were not available and that the standard method of calculation from cross sections is very lengthy and would need a lot of time. Punjab therefore furnishes some calculations for afflux based on an empirical formula.

Haryana argued that these sites have been observed for a long time and their data is also being furnished by the Government of India to Government of Pakistan. More than 50% of the gains below Ropar occur in the depletion period. Regulated releases from Ropar for Harike and the unused share of Haryana in BSL and of Punjab in the Sutlej constitute 70% of the flows received at Yusafpur and these are releases from Bhakra storage. The range of minimum and maximum discharge between July and September was only 1:3 at Yusafpur and 1:2 at Mandi plain. In four years there were no releases downstream of Ferozepur for 262 days on an average showing that all the gains in the Sutlej below Ropar in these days were fully utilised at Harike/Ferozepur. In another 25 days, the releases were less than the unutilised shares of Haryana in BSL. In another 27 days, the releases were less than the unutilised shares of Rajasthan and Haryana.

Haryana has further argued that for calculating the afflux, all the standard books including the one referred to by Punjab recommend the method of solution of the fundamental differential equation which takes into account the effect of friction and none of the standard books recommend the method adopted by Punjab. The "Treatise on Applied Hydraulics" by H. Addison itself states that the empirical formula gives a "rough notion" of the length of backwater curve. Haryana has further argued that while the Punjab engineers indicated a slope of 0.334% during the technical discussions, they have used an average slope

of 0.25% in the calculations. The calculations are not supported by field data and as such they are not acceptable. With a bed slope of 0.5% and coefficient of roughness 0.35, the backwater length is about 10 km. Even with a very moderate value of 0.03, which gives a bed slope of 0.37%, the backwater is only 14 K.M. These figures are for 953 cusec and these will get reduced for higher discharges. The average discharge at Harike in four years was about 16000 cusecs, and hence the length of back waters would get further reduced.

Rajasthan argued that Mandi plain was the point for sharing surplus Ravi and Beas waters and it was untenable for Punjab to say that the observations here are not reliable. Similarly, Yusafpur observations could also be relied upon. Rajasthan also argued that the formula used by Punjab was for calculating the length of backwater under flow-conditions over an open weir, the afflux being calculated as flood lift over a weir under maximum flood discharge. At Harike, the pond level is maintained by operating gates and in these static head conditions, the afflux would be just half of what Punjab had calculated and since Yusafpur and Mandi plain were more than 20 kms. from Harike, the question of any backwater effect on the gaugings at Yusafpur and Mandi Plain did not arise.

It has to be recognised that there are significant releases at Ropar of Sutlej and BSL waters, and additions of water between Ropar and Yusafpur by regeneration, intermediate flows etc. Similarly, there would be additions to flows between Mandi plain and Ferozepure. These have to be identified for use in the assessment of user of the waters of Ravi and Beas.

Discharge observations on big rivers are made only once a day. Most of the projects are operated on the basis of such single observations only. The distribution of waters at Farakka between India and Bangladesh is being done on the basis of discharge observations once a day.

While gauges may be read hourly or two hourly, they are of significance only in the flood periods which are not of practical importance in the present assessment. In flood periods the waters will be far in excess of the canal requirements.

The flows below Ropar and the gains between

Ropar and Yusafpur and Ferozepur can be made use of and are actually being done so on all the days when there are no releases below Ferozepur. The position would be similar in respect of the Mandi Plain - Ferozepore reach also.

It is also seen from Form Nos. 2 and 5 of Appendix II to Annexure 'H' of the Indus Waters Treaty that Mandi plain and Yusafpur were discharge stations, the data of which were used in the computation of the shares of Pakistan and India and in the preparation of water accounts of the two countries in the period of transitional arrangements. The Indus Treaty was concluded in 1960, while the Harike barrage was completed in 1954. It is not conceivable that any sites affected by the afflux of an existing structure would have been selected for use in the sharing of waters between the two countries.

In these circumstances, we are unable to accept the contention of Punjab that the data of Yusafpur and Mandi plain is not reliable or that the gains are so variable and fluctuating as cannot be made use of.

Punjab further contends that the Sutlej waters are shared at Ropar, any gains below Ropar are not shareable, and the Tribunal has no jurisdiction on the Sutlej waters. We have to verify the usage of the waters of the Ravi and Beas system. If any Sutlej waters are used in any of the canals, it is necessary for us to identify them and take them out of consideration when assessing the usage of the waters of the Ravi and Beas System.

WHETHER WATER USED FOR FILLING THE DEPRESSIONS IN THE GHAGGAR AREA IN RAJASTHAN SHOULD BE DEDUCTED FROM THE USAGE OF RAJASTHAN.

Haryana and Punjab argued that Rajasthan was using a large amount of water, about 0.2 to 0.5 MAF, to fill up the depressions in the Ghaggar area and this should be deducted from the usage of Rajasthan.

Rajasthan explained that after the implementation of the Ghaggar flood control works, available flood waters upto 5000 cusecs were released for planned irrigation in the fertile Nala bed covering an area of 1.2 lakh acres in which large amount of paddy was cultivated. The rest of the Ghaggar water upto 12000 cusecs is released to fill Ghaggar depressions. The area was earlier in the Bhakra command and water used to be

made available from Gang canal and Bhakra canals. Suratgarh and Sundargarh State farms were also developed in this area. Now at times when Ghaggar supplies were scanty, water was released from the escape at R.D. 629 I.G.F. to supplement supplies. Small quantities are released also for consumptive use.

We are of the view that this use of Rajasthan is for beneficial purposes of irrigation, cattle and consumptive use and there is no need to deduct it from the usage of Rajasthan.

According to Punjab, Beas falls into Sutlej at Harike, the combined stream below is the Sutlej and there can be no component of Ravi-Beas gains in the reach Harike-Ferozepore. It is only by geographical convention that the combined stream of the Beas Sutlej is termed the Sutlej because Sutlej is the bigger river. The right bank of the combined stream will continue to get regeneration etc. from the areas irrigated by the Shah Nehar Canal, UBDC etc. Hence we are unable to accept this argument.

HARYANA IS UNABLE TO USE EVEN ITS SHARE OF BSL WATERS SUBJECT TO THE RESTRICTED CANAL CAPACITY

Punjab argued that Haryana has not been able to utilise the Ravi-Beas Waters so far released to it by B.B.M.B.

The B.B.M.B. takes the capacity of Bhkara Main Line as 11250 cusecs at the head and 10222 cusecs at contact points for assessing the capacity available to Haryana for using BSL waters, after using first its share of Sutlej waters.

Haryana pointed out that further limitations have been imposed by Punjab in the capacity at Haryana contact points, bringing it down to 9400 cusecs against the originally built capacity of 10222 cusecs.

The capacity available with 9400 cusec restraint as now computed by BBMB and the utilisations are quite

comparable as would be seen from the following figures:

Year	Share of Haryana subject to capacity restraint at contact points		Actual use by Haryana of Ravi Beas Waters.
	of 9400 cusecs	of 10222 cusecs	
1980-81	1.743	2.618	1.658
1981-82	1.974	2.894	1.905
1982-83	1.762	2.793	1.677
1983-84	1.552	2.510	1.433
Average	1.758	2.704	1.668

In our view the reasons advanced by Haryana are convincing and are accordingly accepted.

SIRHIND FEEDER:

Punjab argued that all the canals at Harike, including Sirhind Feeder, were planned to use Ravi-Beas waters only. The Sutlej water originally intended for the Bhakra areas of Punjab under the feeder was thereby conserved in the Bhakra dam and had all been used up by Punjab for improving irrigation in the Sirhind Canal System. The feeder was also irrigating new areas in Punjab. Under a bilateral agreement, the Karni Singh and Sardul branches of Rajasthan, which were part of the Bhakra canal system and were originally planned to be fed by Sutlej waters, are also now being supplied with Ravi-Beas waters from the tail end of the Sirhind Feeder. The water correspondingly saved at Bhakra had also been already consumed by Punjab in the improvement of the Sirhind canal areas. Punjab therefore urged that all the waters diverted to the Sirhind feeder at its head should be counted as use of Ravi-Beas waters by Punjab.

Rajasthan stated that under the bilateral agreement of 11th July 1955, Rajasthan utilised water to the extent of 0.9 MAF of its share in Sutlej water (out of its total share of 1.40 MAF in Bhakra areas), from the share of Punjab in

Ravi-Beas waters through the Sirhind feeder at Harike and Punjab utilises equivalent quantity of Sutlej water of Rajasthan's share above Ropar. So Rajasthan is entitled to this substitution. Despite the method of accounting, two things must be ensured-

(a) This water is Punjab's utilisation of Ravi-Beas water above Ropar by substitution in lieu of the share of Sutlej water upto 0.9 MAF given to Rajasthan at Harike by Punjab. It should be verified separately upto the Sutlej share of Rajasthan via Punjab and earmarked in the quantities of Ravi Beas Waters of Punjab to enable it to deliver to Rajasthan under the above agreement, and

(b) The excess quantity of Ravi Beas Waters delivered via Tail Sirhind Feeder, over and above the Rajasthan's share in Sutlej water, should be Rajasthan's utilisation of Ravi Beas waters and should be verified accordingly.

Haryana argued that in the allocations of Sutlej Waters, the needs of the erstwhile Bhakra Nangal Punjab areas under the Sirhind feeder are also even now included. The Sutlej component available at Yusafpur should therefore be first taken into account, and the use of Ravi-Beas Waters to meet the balance needs would be supplemental in nature. For verification of utilisation by Punjab, deliveries in Sirhind feeder for Rajasthan limited to its share in Sutlej water should be added to Punjab's utilisation of Ravi Beas Waters for its areas in Sirhind feeder. Haryana supported the proposal of Rajasthan that any excess quantity delivered over and above Sutlej share of Rajasthan at tail of Sirhind feeder be counted as use of Ravi and Beas waters by Rajasthan.

There is a significant component of Sutlej waters in the flows at Yusafpur/Harike/Ferozepore. As long as this component is taken into account in assessing the total use of Punjab, it is not necessary to break up the use of Sutlej waters amongst the different canals at Harike. We are of the view that Sirhind feeder withdrawals by the Punjab should be assessed as the use of surplus Ravi and Beas waters in Punjab areas. The deliveries to Rajasthan at the Sirhind feeder tail upto the extent of Rajasthan's substituted share of Sutlej waters should also be assessed as the use of Punjab. Any excess deliveries to Rajasthan at the tail of Sirhind feeder should however be assessed as the

use of Ravi and Beas waters by Rajasthan

GAINS AND LOSSES AS COMPUTED BY B.B.M.B.

Punjab argued that the calculations made by the B.B.M.B. brought out inconsistent results. In the same period, adjacent reaches of the same river were shown to have different tendencies. The pattern of gains and losses between Ropar and Yusafpur on the Sutlej showed different results from a similar length of reach on the Beas between Pong and Mandi Plain. The actual flows at Mandi Plain had not been used in the computations of the Board. Haryana had taken the actual flows at Mandi plain into account in its calculations, but that too showed similar inconsistencies. The quantum of gains and losses in different reaches also had no relation to the length of the reaches. All the inconsistencies were due to the use of the data of Yusafpur and Mandi plain which were unreliable.

There were also losses at Harike and Ferozepore Ponds. The leakages in Harike gates were counted as gains. All the gains/losses between Mandi plain and Harike and Harike and Ferozepore were attributed to the Ravi and Beas though the latter was Sutlej, whereas nothing was accounted to the Sutlej in the reach between Yusufpur-Harike or Harike-Ferozepur. Punjab urged that gains/losses might be taken as given in the Beas Project Report of 1966 which was based on theoretical studies done over a number of years by experts of Central Government.

Haryana argued that the apparent inconsistencies were due to time lag not being taken into account. Time lags would lose all their impact if longer periods were taken. Haryana presented data to show that on a monthly basis, the gains/losses were quite consistent.

Rajasthan argued that gains/losses assessed from actual data should be taken into account.

The assumptions made in the Beas Project Report of 1966 were based on theoretical studies which were made several decades ago when there were no dams, and in fact there was not much irrigation development in the Punjab. It was indicated by Punjab that no gains/losses studies were made after the commissioning of the dams.

We have already dealt with the question of

reliability of the observations at Yusufpur and Mandi plains and of the Beas losing its identity after joining the Sutlej. As pointed out by Haryana, studies on monthly basis give a consistent picture, and we are under the first term of reference dealing with only annual quantities. It is our view that when actual data is available, it would be unrealistic to depend on theoretical studies made several decades ago, when the dams were not there and there was not much of irrigation development either.

The gains/losses computed by the B.B.M.B. will, therefore, be accepted with the following modifications:-

- (i) The actual data of Mandi Plain site may be utilised instead of the theoretical figures between Pong and Mandi Plain used by the B.B.M.B.
- (ii) The gains/losses between Mandi Plain and Ferozepur may not all be attributed to Ravi Beas waters. As the distances between Mandi Plain and Harike and Mandi Plain and Ferozepur are the same as the distances between Yusufpur and Harike and Yusufpur and Ferozepur, the gains/losses may be attributed equally, in the aggregated reach Mandi Plain to Ferozepur to the Sutlej and to the Ravi-Beas.

A recomputation has been done accordingly by the B.B.M.B.

DISTRIBUTION OF THE GAINS/LOSSES BETWEEN ROPAR AND YUSAFPUR

Punjab stated that the B.B.M.B. was not, in practice, assuming any losses for the specific releases for Harike from Bhakra between Ropar and Harike.

Haryana, in their computations based on the data furnished in August 1986 by B.B.M.B., divided the losses, if any, between Ropar and Yusufpur amongst the specific BSL releases for Harike and the unused BSL waters of Haryana's share released below Ropar, and the Sutlej waters released below Ropar. The gains, if any, are attributed to the Sutlej valley.

In their calculations, the B.B.M.B. has attributed all losses to the Sutlej waters only in the period when Sutlej supplies are actually available at Yusufpur. In periods when there are only BSL flows, the losses have been attributed to the BSL component. In other periods, when both BSL and Sutlej

components are available, the losses have been taken into account only between Ropar and Yusafpur and attributed to Sutlej component only and not divided proportionately. Gains have all been attributed to the Sutlej.

However, as required by the Tribunal the losses between Ropar and Yusafpur when both BSL and Sutlej components are available downstream Ropar have now been recomputed by the B.B.M.B. in proportion to the respective quantum.

IDENTIFICATION OF THE RELEASES BELOW FEROZEPUR

Punjab and Rajasthan argued that the releases below Ferozepur, which take place for about 90-100 days in a year mainly in the flood season, should first consist of Sutlej waters, and only thereafter the Ravi Beas Waters. The reason given was that the Ravi Beas waters comprised largely of regulated releases from the Pong Dam which were intended for irrigation, whereas the Sutlej flows comprised of highly variable components like flows from intermediate streams.

Haryana argued that a large part of the flows at Yusafpur comprised regulated releases from Bhakra specifically for Harike areas or the unused part of Punjab's share of Sutlej water, or the unused share of Haryana in BSL waters flowing downstream of Ropar. Haryana further argued that Sutlej waters should all be used for canals first on priority to the maximum extent feasible, as the Ravi-Beas waters were only supplemental in nature.

In their initial computations, Haryana adopted the principle that Ravi Beas waters would first be released from Ferozepur and only thereafter the Sutlej waters. However, in the calculations furnished after the data from the B.B.M.B. was received in August 1986, Haryana identified the Sutlej waters and Ravi and Beas waters in proportion to the Sutlej component at Yusafpur and Ravi-Beas component at Ferozepur.

The calculations have been done by the B.B.M.B. distributing the flows in proportion to the Sutlej component at Yusafpur and Ravi-Beas waters at Harike in accordance with the proforma prescribed.

At Harike and Ferozepur, the waters of the Sutlej and Ravi-Beas are all mixed up. It is not possible to

identify specifically whether any water released was that of the Sutlej component or from the Ravi-Beas component. The fact remains that the waters have been released mostly in flood time without use. As pointed out by Haryana, the number of days on which no releases had to be made was 262 which would go to over 300 when Haryana and Rajasthan are able to utilise their shares.

After hearing the States, we are of the view that the releases below Ferozepur be identified as that of Sutlej or of Ravi-Beas in proportion of the Sutlej component at Ferozepur and Ravi-Beas component at Ferozepur. The figures have accordingly been recomputed by the B.B.M.B.

The data submitted by the States and the B.B.M.B. have been scrutinised and the deliveries at canal heads have been assessed by deducting the Sutlej component at Ropar utilised downstream, gains and losses between Ropar and Ferozepur and the gains and losses between Mandi plain and Ferozepur. Ropar is at present the sharing point in the Bhakra Nangal agreement for Sutlej waters and Mandi plain and Madhopur were the points adopted for sharing of surplus Ravi-Beas waters in the past agreements.

From the figures so obtained, pre-partition uses have been deducted to show the use of surplus Ravi and Beas Waters assessed on the availabilities at Mandi plain and Madhopur. In the case of Rajasthan, any excess deliveries at the tail of Sirhind Feeder, over and above the Sutlej share due to Rajasthan via Punjab, has been counted as use of surplus Ravi and Beas waters by Rajasthan. The average of the five years commencing from 1st July 1980 represents the use at the canal heads by the three respective States. Table 2 (Appendix 4, Pages 309-315) gives, in abstract, data relevant to the uses of surplus Ravi-Beas Waters.

In the case of Punjab, we have shown separately the use at canal heads of Ravi and Beas waters and other waters. In the case of Ravi and Beas waters, identification has been made of the pre-partition use, use out of the surplus Ravi and Beas waters computed on the basis of availabilities at Madhopur and Mandi plain, and out of Ravi and Beas waters below Mandi plain upto Ferozepur. The permissive use by Punjab of 0.6 MAF of Rajasthan's share of surplus Ravi-Beas waters and of the non-permissive use by Punjab of surplus Ravi and Beas waters also have been indicated.

The net result of our verification as reflected from the appended Tables is as follows:-

Quantum of Ravi and Beas water used by Punjab as on 1.7.1985 excluding pre-partition use was 3.106 MAF.

(This includes 0.352 MAF of permissive use by Punjab out of Rajasthan's share which permission will lapse in terms of the agreement dated 31.12.1981 as soon as Rajasthan is in a position to utilise its entire share.)

Quantum of Ravi and Beas water used by Rajasthan as on 1.7.1985 excluding pre-partition use was 4.985 MAF.

Quantum of Ravi and Beas water used by Haryana as on 1.7.1985 was 1.620 MAF.

CONTROL OF HEADWORKS

1. In its submissions and arguments, Rajasthan pointed out that despite the provisions of the Punjab Reorganisation Act, the maintenance and operation of the Ropar, Harike and Ferozpur headworks, which have to be under the control of the Bhakra Beas Management Board, continue to be still under the control of Punjab Government. It is said that Punjab, during the period of peak demand, normally draws more than its share to meet its requirements with the result that farmers in Rajasthan are made to suffer on account of paucity of water when it is required, mainly at the time of sowing and maturing of crops. Rajasthan states that it had raised this matter in various forums and also addressed a number of letters to the Central government.

2. In any inter-State project, much controversy can arise owing to suspicion, and the lack of opportunity for partner States to verify for themselves the physical data. The Bhakra Beas Management Board has been creditably looking after the vast complex of Beas Dam, Beas Sutlej link, Bhakra Dam and powerhouses, Nangal barrage and hydel channel and powerhouses. Sections 79 and 80 of the Punjab Reorganisation Act contemplate that the headworks at Ropar, Harike and Ferozepur are also to be placed under the control of the Board in order to enable the Board to discharge effectively its function of ensuring the deliveries to the partners of their rightful share.

3. The Thein dam is now under construction by the Government of Punjab. Its operation will have to be done in a coordinated manner with the projects on the Sutlej and Beas rivers.

4. Rajasthan has in its submissions stated that although the Chairman of the Bhakra Beas Management Board is being appointed by the Government of India from outside the partner States, the two full-time members have been, since the creation of BMB/BBMB, always been drawn from the partner States - one from Punjab and one from Haryana only - though Rajasthan is a major shareholder in Ravi & Beas Waters. Rajasthan has requested the Tribunal to recommend to the Govt. of India that the Chairman and the two wholetime Members of the BBMB to be appointed by the Govt. of India may always be drawn from States other than the partner States, or alternatively, the wholetime members may be drawn from the partner states of Punjab, Haryana and Rajasthan by rotation, with the Chairman always being from outside the partner States. Punjab and Haryana have not made any suggestions in this regard. However this is a matter which we feel should be left to the Government of India to consider.

5. We learn that all the officers and staff of the BBMB are now obtained on deputation from the partner States and it is left to the State Governments to propose the persons to fill their quota. It is understood that there is also reluctance on the part of State officers to opt for working in the Board. In the operation and maintenance of the large system of river works on the Sutlej and Beas, it is advisable that the best persons available are selected and there is also a permanent organisation as a core so that the lessons of the past are not lost sight of and experience is utilised. We therefore recommend that the Govt. of India and the State Governments consider having a permanent technical cadre in the BBMB upto the level of Chief Engineer to man 50% of the posts of Officers and staff.

6. All the data acquisition (gauge, discharge and other hydrological observations) is at present being done manually or with mechanical self-recorders and the data communicated to the regulation office by canal telegraph or telephone. The Bhakra and Pong dams had drawn upon the latest technology in the world in their design and construction. All over the world there has been a major transformation in data acquisition, retrieval and processing systems. These make use of the latest electronic instruments and communication technologies

and computers to collect continuously and automatically all important data, store it locally as well as transmit it to the regulation offices where it is immediately processed by computers and the impact of various alternative modes of operation is analysed enabling the most optimal to be selected. We are informed that such systems are on the anvil even in basins like the Narmada, in which major developments have still to be completed. We recommend that a modern data acquisition, retrieval and processing system be expeditiously established under the control of the Bhakra Beas Management Board.

7. The fall in the carrying capacity of the Bhakra main line has affected adversely the ability of Haryana to draw its full share of surplus Ravi and Beas Waters, in the absence of Sutlej-Yamuna link. It is necessary that the work of improving the capacity of the Bhakra Main line should be started without further delay.

CHAPTER XXII

ITEM NO. 2 OF THE REFERENCE
(PARAGRAPH 9.2 OF THE PUNJAB SETTLEMENT)

GENERAL

Interest in water rights has radically altered in the last few decades not only because of its increasing need for irrigation expansion but also because of its increasing exploitation for hydro-electric power which is in great demand on account of rapid industrialisation that necessarily takes place in a developing country. Millions of acres of arable lands are fed by artificial irrigation and further schemes are planned, but, unfortunately their implementation is lethargic for which very often parochial considerations are responsible. The development of water potential for generation of electricity which is of vital importance for the economic growth of a country, does not actually consume water but does most certainly interfere with its pattern of flow often giving rise to water disputes. A State which is likely to be affected by a change in the normal flow of water on account of construction of a dam by an upstream State can be expected to object to any such construction unless a satisfactory solution is found. Similarly, diversion of water to arid or semi-arid areas for irrigation has not been without problems since those who are happily placed apprehend that on account of diversion of water they will experience scarcity of water supply in the foreseeable future. These apprehensions, some well founded and some imaginary, when whipped up for political purposes, increasingly become a cause of concern for the planned development of the country. In consequence of these enlarged multi-purpose uses, frequent disputes regarding the distribution of river waters arise, introducing political tensions resulting in further aggravating the dispute, thereby making just solutions through negotiations difficult, if not almost impossible, as in the present case. Apart from giving rise to a water dispute, pure and simple, since such disputes are interwoven by political considerations, the State is charged with the additional duty to ensure that the peace of the community is not disturbed. The tragedy of our country is that even though year after year devastating floods cause widespread damage to life, property and standing crops in different parts of the country, because of narrow parochial approaches, lack of foresight and proper planning

in national interest, refusal to shed traditional inhibitions and absence of mutual trust between the concerned States, what is possible in this era of developed technology cannot be brought to fruition, the worst sufferers being the people of this vast country in general and the farmers in particular. It is needless to emphasise that the employment of new and more efficient techniques in firstly conserving the existing water resources and then regulating its use so as to ensure an adequate and uninterrupted supply of the minimum needs of farmers may turn barren arid lands into lush green fields. It is, therefore, high time that in national interest the Central Government effectively exercise power conferred on it by Entry 56 of List I in the Seventh Schedule of the Constitution in regard to the regulation and development of inter-State rivers and river valleys so that water which presently goes waste can be harnessed and used for economic development of the country. Consistently with the requirement of law and the Constitution, the Central Government should, in exercise of its legislative as well as executive power, endeavour to ensure optimum utilisation of all available supplies in the larger interest of the nation and the community as is being done in the case of oil and natural gas, rather than merely enact a law, the River Boards Act, 1956, and leave it on paper.

We have already pointed out earlier that as a result of the physical character of flowing water it is described as a negative community for the simple reason that rivers change course, while it is today flowing through one State it may to-morrow flow through another State. So also State boundaries may change from time to time and it is one such change which took place with effect from 1st November 1966 which has given rise to the argument that since the Ravi and the Beas do not flow through any part of Haryana, Punjab alone has ownership rights over their waters notwithstanding the fact that before 1966 when Haryana was part of composite Punjab, it had the same rights as the present day Punjab. Being fluid in character, water compares favourably with mobile elements like the winds or the clouds except that it is wedded to earth. Bearing in mind the physical character of flowing water, the Supreme Court of the United States was prompted in *Missouri vs. Holland* 252 U.S. 416, to compare the same with migrating birds in the following words:-

"To put the claim of the State upon title is to lean upon a slender reed. Wild birds are not in the possession of anyone; and possession is the beginning of ownership. The whole foundation of

the State's rights is the presence within their jurisdiction of birds that yesterday had not arrived, tomorrow may be in another State and in a week a thousand miles away....."

Like water, migratory birds are only transitorily within the State and have no permanent habitat therein. We have already considered the claim of Punjab that it 'owns' the waters of the two rivers in their entirety and is not liable to share it with others, in considerable detail and have rejected it. We, therefore, need not dilate on it any more now. It may, however, not be out of place to mention that though it may appear that the claim of absolute ownership as propounded by Punjab based on the doctrine of territorial sovereignty, may enable it to deal with the waters as it likes within its territory to the exclusion of others, (the Harmon Doctrine), in effect, it cannot be expected to emphasise the same as this doctrine is generally invoked by the uppermost rioarians and not the lowermost riparians.

We have already pointed out earlier that but for Article 262, the provisions of the 1956 Act and Entry 56 in List I, the State Legislature would have been free to legislate on 'water' understood in the wider sense to include inter-State river waters by virtue of Entry 17 in List II of the Constitution. In that event in view of Article 262, the executive power of the State would have been of the same magnitude. Under the Government of India Act, 1935, Entry 19 List II, but for sections 130 to 133, the position would have been more or less the same. Just as sections 130 to 133 restricted the power of the Provincial Legislature to legislate on 'water', our Constitution has also placed fetters on the legislative and executive power of the State Legislature/Government to legislate on 'water' or pass executive orders in that behalf in view of Article 262 and the additional powers emanating from Entry 56 in List I. Under the Government of India Act, 1935, there was no entry similar to Entry 56 in List I nor was there a mention of river valley and hence the powers of the Provincial Legislature/Government were undoubtedly less limited. There was also no entry similar to Entry 97 in List I of our Constitution. Article 262 conveys, as was done by sections 130 to 133 of the Government of India Act, 1935, that no State Government can while exercising its legislative or executive power in regard to an inter-State river or river valley prejudice the rights of other States having a claim for utilisation of waters of such a river. The salient aspects of sections 130 to 133 of the Government of India Act, 1935, have been reproduced in the 1956

Act enacted in virtue of Article 262 of the Constitution. That is why the Narmada Water Disputes Tribunal while dealing with the preliminary issues observed in Volume III page 15 as follows:-

"The law governing the rights of States in respect of the waters of inter-State rivers under the Constitution is, therefore, almost identical with the law under the provisions of the Government of India Act, 1935. Article 262 recognises the principle that no State can be permitted to use the waters of inter-State river so as to cause prejudice to the interests of another riparian State or of a State in the river valley or of the inhabitants thereof."

Now so far as Rajasthan is concerned, it had along with other States including the erstwhile composite State of Punjab entered into an agreement in 1955 whereunder it was allocated 8 MAF out of 15.85 MAF of available surplus supplies. We have while dealing with this agreement pointed out in detail how the State of Punjab had implemented the said agreement from time to time thereafter. Even the Beas Projects, Unit I and II, were planned on the basis of the said agreement. We have referred to the conduct-evidence of Punjab in this behalf because it is well settled that the conduct of the parties subsequent to the agreement is of high probative value as to the intention of the parties and supplies strong evidence that the said party had accepted it as binding and had no intention whatsoever to doubt or question its validity. That is why we felt that the belated effort to question its validity after having implemented it for over a decade was clearly an afterthought and betrayed a desperate attempt to escape from the obligations flowing therefrom. Ordinarily, when an agreement is reduced to writing, the intention of the parties have to be gathered from the language of the instrument and evidence aliunde can be permitted only if one or more of the terms of the document are found to be ambiguous or capable of more than one meaning. So far as we are concerned, the language of the various terms of the 1955 agreement are clear and unambiguous and it was not even suggested that any particular term was capable of more than one meaning. The fact that the composite State of Punjab executed and implemented the same for several years thereafter and took certain irreversible decisions in the implementation thereof without doubting the meaning of any term thereof speaks volumes of Punjab's intention to abide by the agreement. The consistent course of conduct of Punjab subsequent

to the 1955 agreement admits of no inference other than the one that it had entered into the said agreement voluntarily and with full understanding that Rajasthan was to receive 8.00 MAF waters from the Ravi-Beas System thereunder. On other issues also, we have ruled that the 1955 agreement was a legally valid document and was clearly beyond the pale of challenge. Having found the 1955 agreement to be perfectly legal and valid, on a true interpretation of the terms of reference based on paragraphs 9.1 and 9.2 of the Punjab Settlement we have come to the conclusion that so far as the share of Rajasthan under the 1955 agreement is concerned, it is not liable to be reopened before this Tribunal notwithstanding the fact that on verification under Item No.1 of the terms of reference we have come to the conclusion that it was not utilising the entire quantum allocated to it under the 1955 agreement. We have taken the view that under Item No.2 of the reference we are required to adjudicate the claim of Punjab and Haryana in their remaining waters only, which means the quantum of water remaining after setting apart the shares of Rajasthan and Jammu and Kashmir under the 1955 agreement, the State of Pepsu having merged in the State of Punjab in 1956.

The Indus Commission headed by Mr. Justice B.N. Rau was appointed sometime in September 1941 and it submitted its Report in July 1942. It was called upon to decide the dispute between Punjab and Sind. It raised two questions of far-reaching importance, namely:-

"(ia) What is the law governing the rights of the several Provinces and States connected in the present dispute with respect to the waters of the Indus and its tributaries?

(ib) How far do the orders of the Government of India annexed and explained in their letter of March 30, 1937, themselves constitute the law by which the rights in question are to be determined?"

The Indus Commission was of the view that the rights of the several units concerned in the dispute must be determined by applying neither the doctrine of sovereignty, nor the doctrine of riparian rights, but the rule of 'equitable apportionment', each unit being entitled to a fair share of the waters of the Indus and its tributaries. Dealing with issue No. (ib), the Commission observed that the orders of the Government of India dated

March 30, 1937 must be regarded as having secured the most equitable apportionment then possible. The Indus Commission was clear in its view that no State could use the water of an inter-State river so as to prejudicially affect the interest of another State or its inhabitants. A State can be said to be prejudicially affected when it is deprived of its equitable share of waters by refusing to apply the doctrine of 'equitable apportionment'. We have already pointed out that the position in law under our Constitution is more or less similar to the Government of India Act, 1935, except that Article 262 refers to not only inter-State rivers but also river-valleys whereas Entry 56 in List I empowers the Central Government to enact a law for the regulation and development of inter-State rivers and river-valleys. There is also the introduction of Entry 97 in List I and some procedural changes made in section 4 of the 1956 Act which are not material for our purpose. Taking note of these changes the Narmada Water Disputes Tribunal observed in Volume III page 16, column 1, as under:-

"In other words, the theory underlying Article 262 of the Constitution and the Inter-State Water Disputes Act, 1956 is the theory of equitable distribution of waters of an inter-State river between the riparian State or States in the inter-State river valley. As a necessary corollary of this proposition, it follows that the legislative or executive action of a State prejudicially affects the interests of another riparian State or a State in the river valley or its inhabitants, if such legislative or executive action injuriously affects the equitable apportionment of waters to which the latter State is entitled."

Proceeding further, while dealing with the claim of Rajasthan the said Tribunal referred to Entry 17 in List II read with Article 246 and Article 262 of the Constitution and observed on the same page in column 2 as under:-

"The same principle is accepted in Article 262 of the Constitution and in section 2(c)(i) of the 1956 Act, but it has been extended to a limited extent to cover a State situated in a river valley which may not be a riparian State."
(Emphasis supplied).

In that case it was established as a fact that Rajasthan did not fall within the Narmada Basin nor did any part of the river flow therefrom and hence the said Tribunal held that it was not entitled to any water from the river Narmada. In the present case since we have come to the conclusion that parts of Rajasthan and present day Haryana fell within the Indus Basin they were entitled to water from the Indus System of rivers of which the Ravi and the Beas were tributaries and hence the allocation of water between the composite State of Punjab and Rajasthan was governed under the 1955 agreement. It is well settled that in the absence of competent legislation if there is a valid and binding agreement between the concerned States, that agreement operates as law between the parties and the rights and obligations of the contesting States have to be determined in the light of the terms and conditions of the said agreement. In the absence of any legislation, agreement or award, the Tribunal has to decide the dispute on the basis of equitable apportionment, each Unit getting a fair share of the benefits of the available supplies. It seems, therefore, well settled that in deciding a water dispute regarding an inter-State river, the rule of equitable apportionment of the benefits of the river has to be applied.

Under the agreement of 1955, the State of Punjab became entitled to 5.90 MAF of water from the Ravi-Beas System out of a total surplus of 15.85 MAF, the remaining waters having been allocated to the States of Jammu and Kashmir, Rajasthan and Pepsu. In 1956 when the State of Pepsu in the course of reorganisation merged with Punjab, its share of 1.30 MAF under the 1955 agreement became available to the State of Punjab. The State of Punjab thus became entitled to 7.20 MAF of water from the Ravi and Beas System out of the available surplus of 15.85 MAF. After having secured Pepsu's share of 1.30 MAF under the 1955 agreement, it is difficult to understand how it can lie in the mouth of the State of Punjab to contend that the agreement of 1955 is invalid. The 1955 agreement was reached on the assumption that the World Bank proposal of February 1954 will ultimately materialise. It did materialise on the signing of the Indus Waters Treaty, 1960. Now before this Treaty was signed, the Indus Basin was developed as a single Unit, a large network of irrigation canals were situated in West Punjab (Dominion of Pakistan) whereas some of the headworks were situated in the Dominion of India. The Princely State of Bikaner (now part of Rajasthan) was also receiving water through the Bikaner canals through this river system. The dispute between the Dominion of

India and the Dominion of Pakistan which had commenced on the partition of the country and the creation of a new international boundary cutting across the Indus System of rivers, was being vigorously negotiated at the behest of World Bank and the negotiations were at an advanced stage. As stated earlier, sometime in February 1954, the World Bank had proposed that the waters of all the three Eastern Rivers, the Sutlej, the Beas and the Ravi, should be reserved for unrestricted use by the Dominion of India whereas the waters of the Western Rivers, namely, Indus, Jhelum and the Chenab, should be reserved for unrestricted use by the Dominion of Pakistan. While India had accepted this proposal in principle, the Dominion of Pakistan still had reservations. There was an apprehension that by stalling the negotiations Pakistan was trying to increase its actual utilisations with a view to ultimately cutting down the quantum of water which India would withdraw on the signing of the Treaty. This was one of the reasons, though not the only reason, for the urgency of the 1955 agreement to convince the World Bank authorities that India was in a position to utilise the waters to be withdrawn on expiry of the transition period. Since Rajasthan was a part of the Basin, it was entitled to water from the Indus System of rivers of which the three Eastern Rivers were tributaries. The State of Punjab was a riparian State and, therefore, there was no doubt whatsoever that it too was entitled to a share from the Indus System of rivers. It is in this background that the 1955 agreement came to be finalised and, therefore, Punjab's argument that Chaudhri Lahri Singh had gifted away 8.00 MAF of waters to Rajasthan is, as stated earlier, clearly misconceived. If Haryana was a separate State in 1955, it too would have been entitled to water from the Indus System of rivers since a part of Haryana, like Rajasthan was also within the Indus Basin.

INDUS WATERS TREATY, 1960

We now move on to the next stage, namely the signing of the Indus Waters Treaty in September 1960. The full text of the Treaty is reproduced at pages 376 to 392 of Gulhati's famous work entitled "Indus Waters Treaty". The Treaty is divided into 12 Articles, and Annexures "A" to "H"; Appendices to Annexure "H" are, however, not printed. Article I contains the dictionary of the Treaty whereas provisions regarding Eastern rivers are made in Article II, Article III containing provisions regarding Western Rivers. So far as the Eastern Rivers are concerned, clause (1) of Article II states that "all the waters of the Eastern Rivers shall be available for the unrestricted use of India, except as

otherwise expressly provided in this Article." Clause (2) stipulates that except for Domestic Use and Non-Consumptive Use, Pakistan shall be under an obligation to let flow, and shall not permit any interference with, the waters of the Sutlej Main and the Ravi Main in the reaches where these rivers flow in Pakistan and have not finally crossed into Pakistan. The points of final crossing into Pakistan have also been identified. Clause (3) next provides that except for Domestic use, Non-Consumptive Use and Agricultural Use (as specified in Annexure B), Pakistan shall be under an obligation to let flow, and shall not permit any interference with, the waters (while flowing in Pakistan) of any Tributary which in its natural course joins the Sutlej Main or the Ravi Main before these have finally crossed into Pakistan. Clause (5) provides for a transition period during which to the extent specified in Annexure H India agreed to (i) limit its withdrawals for Agricultural Use; (ii) limit abstractions for storages, and (iii) make deliveries to Pakistan from the Eastern Rivers. Clause (6) laid down the transition period to be from 1st April 1960 to 31st March 1970, unless extended. The transition period was not extended and it ended on 31st March 1970. Clause (9) stated that during the transition period, Pakistan shall receive for unrestricted use the waters of the Eastern Rivers which are to be released by India in accordance with the provisions of Annexure H. After the end of the transition period, Pakistan was to have no claim or right to releases by India of any of the waters of the Eastern Rivers. It further provided that in case there were any releases, Pakistan was to enjoy the unrestricted use of the waters so released after they finally crossed into Pakistan but it was clarified that such use shall not confer any right whatsoever, by prescription or otherwise, to a continuance of such use. We are aware that even at present some water from the Ravi crosses over to Pakistan and Pakistan is making use thereof under this clause of the Treaty since we have hitherto failed to harness the same. We need not refer to Article III which contains provisions regarding Western Rivers. Article IV makes provisions regarding Eastern Rivers and Western Rivers. It would be sufficient if we refer to clause (1) thereof. It says: "Pakistan shall use its best endeavours to construct and bring into operation, with due regard to expedition and economy, that part of a system of works which will accomplish the replacement, from the Western Rivers and other sources, of water supplies for irrigation canals in Pakistan which, on 15th August 1947, were dependent on water supplies from the Eastern Rivers". It would now be proper to refer to some of the financial provisions made in Article V on which considerable reliance was placed both by

Haryana and Rajasthan in support of their contention that waters withdrawn from Pakistan belonged to India since this country had paid a substantial amount of Pound Sterling 62,060,000 towards the costs of the replacement works to be effected by Pakistan as stated above. Clause (1) of the said Article provided that in consideration of the fact that the purpose of the system of works referred to in Article IV(1) is the replacement, from the Western Rivers and other sources, of water supplies for irrigation canals in Pakistan which, on 15th August 1947, were dependent on water supplies from the Eastern Rivers, India agrees to make a fixed contribution of Pounds Sterling 62,060,000 towards the costs of these works. This sum was to be paid in ten equal annual instalments on the 1st day of November of each year, the first of such instalments to be paid on 1st November 1960. Each of the instalments was to be paid to the Bank for the credit of the Indus Basin Development Fund to be established and administered by the Bank, and payment was to be made in Pounds Sterling, or in such other currency or currencies as may from time to time be agreed between India and the Bank. No deduction or set-off on account of any financial claims of India on Pakistan arising otherwise than under the provisions of the Treaty were to be made. It is not in dispute that pursuant to these provisions made in Article V of the Treaty, India has made payment to the extent of Pounds Sterling 62,060,000 towards the costs of the replacement works referred to in clause (1) of Article IV of the Treaty. It was rightly pointed out by counsel for Rajasthan and Haryana that the substantial amount of Pounds Sterling 62,060,000 (approximating to over Rs.100 crores) was paid to the Dominion of Pakistan by India and not by the erstwhile State of Punjab. There is no averment in the pleadings of Punjab to suggest that at any subsequent date it reimbursed the Dominion of India in this behalf. It is indeed true that several other countries had extended large scale financial assistance to Pakistan for replacement works and developing its irrigation potential but that cannot mitigate from the fact that the payment to the extent of Pounds Sterling 62,060,000 was made by India to Pakistan for the execution of the Treaty.

EFFECT OF REORGANISATION

The next important event which deserves notice is the decision taken by the Government of India sometime in March 1966 to reorganise the State of Punjab and make certain changes incidental thereto. After the announcement in this behalf was made in Parliament, some time elapsed and the actual reorganisation took place with effect from 1st November 1966. As

pointed out earlier, pursuant to the allocation made under the 1955 agreement and the merger of Pepsu in the State of Punjab in 1956, composite Punjab was entitled to 7.2 MAF of water from the Ravi-Beas System. When the decision to reorganise Punjab was taken, provision had to be made for the distribution of the rights and liabilities of the successor States and one such provision to which we have referred time and again is section 78(1) of the Punjab Reorganisation Act. By virtue of that sub-section all rights and liabilities of the existing State of Punjab in relation inter alia to the Beas Project became the rights and liabilities of the successor States on the appointed day, that is, 1st November 1966 and the proportion thereof was required to be fixed subject to such adjustments as may be necessary by agreement between the said States in consultation with the Central Government within a period of two years from the appointed day; failing such agreement the sub-section empowered the Central Government to determine by order the proportion in which the rights and liabilities of the existing State of Punjab in relation to the Beas Project shall be divided. This the Central Government had to do having regard to the purpose of the Project. It is, therefore, clear on a plain reading of this sub-section that the successor States had a share in the rights and liabilities of the existing State of Punjab, the proportion whereof was to be determined either by agreement between the concerned States within two years or failing such agreement, by the Central Government. Sub-section (2) of section 78 further stipulated that an agreement or order referred to in sub-section (1) shall, if there has been an extension or further development of the project after the appointed day, provide also for the rights and liabilities of the successor States in relation to such extension or further development. Under sub-section(3) the rights and liabilities were to include (a) the rights to receive and to utilise the water available for distribution as a result of the project; and (b) the rights to receive and utilise the power generated as a result of the project except the rights and liabilities flowing from any contract entered into before the appointed day by the Government of the existing State of Punjab with any person or authority other than the Government. Sub-section (4) of section 78 defines the 'Beas Project' which definition we have reproduced verbatim earlier. Suffice it to say that the expression 'Beas Project' is used to include works which are either under construction or are to be constructed as components of the Beas-Sutlej Link Project (Unit I) and Pong Dam Project (Unit II). The definition is an inclusive definition and must, therefore, be read to convey a wider connotation. In order to understand the dimension of the Beas

Project (Unit I) and (Unit II), it would be proper to refer to the relevant provisions of the Project itself.

BEAS PROJECT UNITS I AND II

The site for a storage dam on river Beas at Pong was first spotted in 1926 by Mr. C.E. Blakar. This site was about 24 miles from Mulkerian and was situated opposite village Ghamrur in the last outrange of hills whereafter the river emerged into the plains. For some reason or the other, the project could not be finalised till May 1959 and it received the administrative approval of the Government of Punjab on 24th August 1960. The introductory part of the Project (Unit II) states:-

"A storage dam on river Beas is a vital necessity for fuller utilisation of the waters of rivers Ravi and Beas and to ensure perennial irrigation supplies to Rajasthan canal system, construction works on which is currently in progress. In view of the above, the Beas Dam Project has been allotted a very high priority by the Government of India. Possibilities of generating hydro-electric power and some measure of flood control would be the incidental benefits of constructing a storage dam on river Beas at the proposed site."

This shows that a dam on the Beas, near Pong, was essential to store supplies from the Beas to ensure perennial irrigation supplies to Rajasthan canal system. The mean annual run off of the river Beas was estimated to be 13 MAF and it was thought that sufficient supplies would be available for a live storage of 5.5 MAF. Certain estimates were made and it was provided in Section V paragraph 1 as under:-

"Water studies for Beas Dam cannot be carried out individually for this dam alone. That is so because the waters of the rivers Ravi, Beas and Sutlej have to be eventually pooled together.....For the optimum utilisation of the water resources of these rivers it is necessary to construct Sutlej-Beas Link higher up. Combined water and power studies have been, therefore, carried out for the linked up system, of which Beas Dam is a part, on the following assumptions:-

- (i) Completion of Bhakra Dam and both the power plants on river Sutlej.
- (ii) Completion of Beas Dam.
- (iii) Completion of Madhopur Beas Link with a capacity of 10,000 cusecs.
- (iv) Completion of Sutlej Beas Link.
- (v) Completion of the power plant at the down-stream end of the Sutlej Beas Link with a firm power generation of nearly 11,00,000 KWs.
- (vi) Completion of Sirhind Feeder.
- (vii) Completion of channels for irrigating additional areas to utilise Punjab (India) share of the pooled waters.
- (viii) Completion of Rajasthan Canal.
- (ix) No dam on river Ravi.
- (x) No dam at Larji on Beas.
- (xi) The entire supplies of River Sutlej, Beas and Ravi are available for utilisation in the Indian territory."

It was thus envisaged that the waters available for regulation from the Bhakra and Beas Dams under the assumed conditions will comprise both the inflow in the rivers Sutlej and Beas and the Ravi waters diverted through the Madhopur Beas Link. In paragraph 2 entitled 'Allocation of Waters of Beas and Ravi rivers', it was stipulated as under:-

"Another consideration which has an important bearing on the releases from these dams is the distribution of the unutilised waters of rivers Ravi and Beas between Rajasthan and Punjab according to the stipulated shares of these States."

This clearly has reference to the shares of Rajasthan and Punjab under the 1955 agreement.

The mean annual runoff for the rivers Ravi and Beas based on the average of 25 years from 1921-22 to 1945-46

was taken as follows:-

River Ravi	6.33 MAF
River Beas	12.65 MAF
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Total	18.98 MAF
Minus pre-partition utilisations	3.13 MAF
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Balance	15.85 MAF

The Report then makes a specific mention to the 1955 inter-State Conference and the allocation made from the surplus of 15.85 MAF amongst the concerned States.

The share of Punjab, 7.2 MAF, was proposed to be utilised as under:-

(a) On River Ravi

(i) For extension of irrigation and improvement of capacity factors.	1.91 MAF
(ii) Bet areas	0.24 MAF
	<hr/>
Total	2.15 MAF
	<hr/>

(b) On River Beas

(i) Eastern canal-improvement of capacity factors.	0.20 MAF
(ii) Sirhind Feeder	2.68 MAF
(iii) Makhu canal	0.08 MAF
(iv) Bet areas	0.24 MAF
	<hr/>
Total	3.20 MAF
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Thus the total utilisation from Ravi and Beas came to 5.35 MAF.

It is clearly mentioned that the above utilisation would be possible only after the completion of Thein Dam on river Ravi and Pong Dam on river Beas. Thus, even after the construction of these Dams, out of the total Punjab share of 7.20 MAF, about 1.85 MAF ($7.20 - 5.35 = 1.85$) would remain unutilised. There is a categorical statement to the effect: 'There are no further areas

in the Ravi-Beas basin where this balance share of 1.85 MAF may be used.' Other areas in Punjab where irrigation facilities were needed, could not be commanded from Harike or Madhopur. However, it was possible to irrigate these areas from Bhakra. As such it became imperative that these surplus waters be transferred from Beas to Bhakra reservoir in order to fully utilise the Punjab share of waters. Extensive studies were undertaken for irrigation and power and ultimately the following conclusions were reached:-

"(1) The Beas reservoir, despite the diversion of Beas waters into the Bhakra lake, fills up for 9 years:

(2) The Bhakra reservoir fills up for 12 years out of 14.

(3) It is possible to meet full irrigation requirements of the Bhakra and Beas canal systems for 12 years out of 14.

(4) It is possible to generate 375,000 KW of firm power at Bhakra and 50,000 KW of firm power at Beas Dam even during dry year 1940-41.

(5) Even after releasing about 0.79 MAF of water exclusively for power, the reservoir factors obtained during the dry year 1940-41 are 76% for Punjab and 53.8% for Rajasthan areas.

(6) The proposed height of the dam is quite satisfactory both from the stand point of meeting the irrigation requirements and conserving the Beas supplies to an optimum extent."

The Beas Sutlej Link, Unit-I, is a power-cum-irrigation project. It envisages the diversion of the Beas waters into the river Sutlej through a combination of tunnels and an open channel. The river supplies so diverted would apart from generating electric power enable extension of irrigation to the arid areas in the South and South-West of Punjab, besides improving irrigation facilities on the existing Bhakra areas. The project was so conceived that it fits into the Master Plan for harnessing the irrigation and power potential of the three Eastern Rivers, namely, the Ravi, the Beas and the Sutlej. The Master Plan drawn up to harness the Eastern Rivers envisaged the completion of the following major projects to store the flood waters, which were going waste to sea and to link up the three Eastern Rivers so as

to enable their resources to be pooled for optimum utilisation--

- "(i) Bhakra Dam and Power Plants on the river Sutlej.
- (ii) Beas Dam at Pong and Power Plant on the river Beas.
- (iii) Creation of a storage in the upper reaches of river Beas.
- (iv) Creation of a storage on the river Ravi.
- (v) Madhopur-Beas Link (connecting the Ravi to the Beas).
- (vi) Beas Sutlej Link including a power plant at the tail end of the Link.
- (vii) Harnessing other run-of-the-river drops due to steep slopes of the rivers for hydro-electric generation."

By that date the Madhopur-Beas Link had been completed, the Bhakra dam was nearing completion and preliminary work on the Beas Dam at Pong had already been taken up. It was felt that in order to exploit the three Eastern Rivers to the fullest extent prior to the creation of storages on the Ravi and in the upper reaches of the river Beas, it was necessary to undertake the construction of the Beas Sutlej Link to complete the irrigation and power grid envisaged in the Master Plan. It cannot escape notice that there is a reference to the Master Plan at various places and that is why the State of Haryana had in its pleadings (Ex.H 1, para 14) stated that the said Master Plan was in the possession of the State of Punjab. The State of Haryana craved leave to refer to the Master Plan as and when produced. The State of Punjab was called upon to produce the Master Plan but the State of Punjab failed to produce the same on the plea that no such Master Plan ever existed.

Coming back to the Project, we find a specific mention to the Inter-State Conference of January 1955 at which 15.85 MAF of surplus supplies were allocated amongst the concerned States. It is then stated that the share of 7.2 MAF allocated to Punjab does not meet fully the irrigation needs of the State as per recent survey of the irrigation requirements. It then proceeds to add that it is, therefore, axiomatic that project should be implemented for full utilisation of irrigation waters; though the Master Plan envisages the creation of storages on the Beas, the supplies thus made available cannot be fully utilised for irrigation, unless this project is implemented, for most of

the arid areas are out of the command from Harike (on river Beas) but can be commanded from Nangal Dam on river Sutlej which is almost 450 feet higher than the Harike Barrage. It was therefore suggested that since the Sutlej waters have been fully utilised for the Bhakra areas, the additional requirements can be routed via Nangal Dam for irrigation of arid areas on the construction of the Beas Sutlej Link. It may be noted that a Link to connect the rivers Beas and Sutlej for providing irrigation facilities to areas in State of Punjab and for generating hydro power was first conceived in May 1955, preliminary investigations for this scheme were started in 1956 which led to the preparation of a preliminary report in November 1957. This report contemplated a link between the rivers Beas and Sutlej of 9000 Cusecs capacity. Subsequently another set of proposals was framed in January 1960 which envisaged the creation of a 2.5 MAF live storage in the Suketi valley for impounding the Beas flows but this scheme had to be abandoned as its feasibility was doubted.

So far as the capacity of the Beas Sutlej Link is concerned, studies carried out to determine its size indicated that a net capacity of 7500 Cusecs would transfer the desired volume of waters from Beas to Sutlej to meet the irrigation needs of the arid areas of Punjab and to make up shortage of supplies of Bhakra areas, to relieve the power shortage which would exist even after the completion of the Bhakra power plants and to afford the necessary flexibility for utilising in the Bhakra areas the excess flow in the river Beas during a wet year, in case supplies from the Sutlej happened to be insufficient. The total volume of water proposed to be diverted from Pandoh to river Sutlej in a mean year was 3.82 MAF of which 1.63 MAF was expected to be released back to Beas for utilisation of Harike canals. Thus under the scheme the additional supplies that would be available for Beas Sutlej Link for irrigation to Punjab canals off-taking from Ropar was estimated to be 2.19 MAF in a mean year which would irrigate about 8 lakh acres with an intensity of 62% in the South of Punjab areas. It was also felt that the Beas-Sutlej Link in conjunction with the existing Madhopur-Beas Link would enable inter-linking of the Eastern Rivers essential for the optimum use of the river supplies. Thus in the years when the Beas catchment is wetter than the Sutlej catchment, the Beas-Sutlej Link along with Madhopur-Beas Link was expected to enable equitable distribution of river supplies. It is thus clear from the project report itself that the idea was to irrigate arid lands lying to the South and South West of Punjab via Ropar. In addition to this the Beas-Sutlej Link was expected

to generate 391 MW of electric power which would help industries located in Himachal Pradesh, Punjab as well as Delhi. It is clear from the above that by the construction of the Madhopur-Beas Link and the Beas-Sutlej Link, the Punjab rivers were intended to be linked up so that they could operate in the form of a grid for providing the required irrigation supplies. Similarly, the power plants at Bhakra, Nangal, Pong and Dehar would be inter-linked into an electric grid for efficient and economic operation of the power system.

The Beas Project Unit II was revised in March 1966. That was the month in which the Central Government had announced its proposal to reorganise the State of Punjab. The revised Beas Project was forwarded by the General Manager and Secretary to Government of Punjab, Beas Project Administration, Talwara Township, under his letter dated 25th March 1966 (Ex.H 13, p. 53) to the Secretary to Government of Punjab, Irrigation and Power Departments, Chandigarh, stating that the 1959 project was essentially a feasibility project report and since its submission, intensive geological and hydrological investigations and exhaustive engineering lay out studies had been undertaken necessitating the revision of the project. The letter discloses the various changes proposed to be made in the revised project report over the 1959 report. The introductory part of the report states that since the States of Punjab and Rajasthan are primarily dependent on agriculture, the total exploitation of water resources is absolutely essential. So also, the harnessing of the hydro-electric power is also a prime need for, industrial development. After stating that under the Indus Waters Treaty the waters of the three Eastern Rivers of the Indus Basin have been allotted exclusively for use by India, it is observed as under:-

"For the utilisation of the waters of Beas, a storage reservoir is proposed at Pong. This will enable the utilisation of the Beas waters for supplementing irrigation in Punjab and furnishing supplies for the arid areas of Rajasthan."

Accepting the fact of there being large areas of fertile lands in the plains of Punjab and Rajasthan which for want of irrigation facilities were lying fallow, the need to harness the Eastern Rivers and to conserve the flood waters presently going waste to the sea and to link up the three Eastern Rivers so as to enable integrated utilisation was felt. From the above statement it is clear that large areas of fertile lands situate in Rajasthan were

lying fallow for want of irrigation facilities; it is equally clear that with a view to irrigating these lands 8.00 MAF of water was allocated to Rajasthan under the 1955 agreement. With this end in view, the project envisaged (a) Bhakra Dam and Power Plants on river Sutlej; (b) Beas Dam at Pong and Power Plant on river Beas; (c) Madhopur Beas Link (connecting the Ravi and the Beas); (d) Beas Sutlej Link including a power plant at the tail end of the link; (e) Creation of a storage on river Ravi; (f) Creation of a storage on river Beas in the upper reaches; and (g) Harnessing other run-off the river drops, due to steep slopes of the rivers, for hydro-electric generation. The Bhakra Dam and the Left Power Plant were complete and in operation while the right power plant was under construction and was expected to be commissioned during 1966 itself. The Madhopur Beas Link diverting supplies from river Ravi to river Beas had already been completed. The next stage of development envisaged was the Beas-Sutlej Link and the storage at Pong, the completion whereof would help exploitation of the available resources in full. This would also help extension of irrigation of arid lands and for firming the supplies to Rajasthan Canal which was under construction. It is evident from the above that the three Eastern Rivers were intended to be connected to enable integrated utilisation of their waters. The supplies from Ravi were to be diverted to Beas through the Madhopur Beas Link, the supplies from Beas were intended to be diverted to Sutlej to irrigate the arid areas lying to the South and South West of Punjab. The Beas Sutlej Link in conjunction with the Madhopur Beas Link would thus link up all the three Eastern Rivers, thereby providing flexibility of operation so essential for the optimum utilisation of the river supplies. In Section 4 entitled 'Water and Power Potential' in paragraph 4.1 the following statement is made:-

"According to the Indus Water Treaty, supplies of the three eastern rivers, i.e., Ravi, Beas and Sutlej have been exclusively allotted to India. Bhakra Project was planned for utilising irrigation and power potential of the river Sutlej. The irrigation and power potential of Beas river supplies is proposed to be harnessed by constructing Beas Project. The river Ravi is connected to Beas through Madhopur-Beas Link. To the extent that the Ravi supplies are surplus to the requirements of canals off-taking from Madhopur, their integrated utilisation with Beas supplies would be made possible by storage

reservoir created behind Beas Dam at Pong. The upper stage of the Beas Project - Beas Sutlej Link - purports to divert part of Beas supplies into Bhakra reservoir to partially meet the existing shortages in Bhakra system, to extend irrigation facilities to new areas commanded by canals offtaking above Ropar, and to utilise a substantial drop enroute for power generation. The storage reservoir at Pong on the Beas river would yield potential supplies for Rajasthan canal, irrigate new areas in Punjab and remove the remaining shortages on the Bhakra system through canals offtaking at Harike, besides generating power at the dam site."

Paragraph 4.2 then refers to the inter-State agreement of 29th January 1955 and then refers to the flow available in a mean year for the cycle 1921-22 to 1959-60 from the rivers Ravi and Beas at 6.971 MAF and 13.59 MAF respectively, aggregating 20.561 MAF. The pre-partition utilisation of Punjab, Kashmir and Rajasthan totalling 3.436 MAF is deducted leaving a total of 17.125 MAF to be shared between the three States as under:-

"Kashmir	0.708 MAF	According to the latest figures actual Kashmir requirements are 0.708 MAF instead of 0.65 MAF which are proposed to be met in full.
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Balance for Punjab and Rajasthan	= 16.417 MAF	
Punjab share	= 16.417×7.2	
	<u> </u>	= 7.777 MAF
	15.2	

Rajasthan share	= 16.417×8	
	<u> </u>	= 8.640 MAF
	15.2	

The above shares of Punjab and Rajasthan were inclusive of the reservoir and transit losses. Paragraph 4.3 then sets out the detailed requirements of canals for Punjab, Rajasthan and Kashmir for different periods of the year (Plate 5) including additional

requirements to utilise the surplus waters of Ravi and Beas.

(a) At Madhopur	MAF
U.B.D.C.	2.005
Kashmir	0.708

	2.713

(b) At Harike	
Punjab	3.182
Rajasthan	7.881*

	11.063

(c) At Ropar	
Punjab	2.287**
Rajasthan	0.422

	2.709

Grand Total	16.485

*This includes 0.143 MAF for future development of irrigation in Rajasthan, which demand is not included in Plate 5 as it will arise at a later date.

**This includes 0.548 MAF required for future developments of irrigation in Punjab, which demand is not included in the canal requirements at Plate 5 as it will arise at a later date."

The assumed reservoir and transit losses have then been set out which show that the total losses of Ravi and Beas work out to 0.640 MAF which is divided between Punjab 0.303 MAF and Rajasthan 0.337 MAF. The net surplus supplies, therefore, are 17.125 MAF minus 0.640 MAF = 16.485 MAF. The net shares in the Ravi-Beas Waters after deducting the respective shares of reservoir and transit losses come to--

Kashmir	0.708 MAF
Punjab	7.474 MAF
Rajasthan	8.303 MAF

Paragraph 4.4 then sets out the utilisation of Ravi and Beas supplies for irrigation. The total flow of the Ravi at Madhopur is taken as 6.971 MAF out of which 1.816 MAF represents pre-partition utilisations leaving a balance of 5.155 MAF intended to be utilised firstly for meeting the additional requirements of 2.713 MAF for U.B.D.C. and Kashmir Canal and the remaining 2.442 MAF diverted to Harike through Madhopur Beas Link. However, in the absence of a storage on Ravi it is stated that the actual utilisation at Madhopur will fall short of the requirement by 0.379 MAF. Furthermore, the supplies diverted through Madhopur Beas Link are only 2.204 MAF against 2.442 MAF resulting in an overall wastage of 0.617 MAF below Madhopur out of which 0.1 MAF would in any case have been lost from the surface of the reservoir on Ravi when created. The total flow of Beas at Mandi plain in a mean year is estimated at 13.59 MAF. This is supplemented by the diversion of Ravi waters through Madhopur Beas Link which, in the absence of storage on the Ravi river is 2.204 MAF minus 0.258 MAF (transit losses) leaving a balance of 1.946 MAF. However, this availability does not permit the desired utilisation at Ropar without diversion through Beas Sutlej Link from Pandoh to the Bhakra Reservoir. The total flow available at Pandoh is 6.65 MAF. Diversion of 3.823 MAF through the Beas Sutlej Link of the capacity of 7,500 Cusecs would be possible in a mean year. This would be utilised for meeting the requirements at Ropar and the balance released for utilisation at Harike. The net flow of Beas at Mandi Plain after the diversion at Pandoh and excluding the contribution from Madhopur Beas Link comes to 9.767 MAF. The gains between Pong and Mandi Plain were assumed at 0.582 MAF, the net inflow at Pong thereby being reduced to 9.185 MAF. Releases from the Pong Reservoir during the filling period were made to the extent necessary to supplement the supplies available through Madhopur Beas Link and releases were made from Bhakra to Harike to meet the canal requirements at Harike during this period, thereby the live storage in the Pong Reservoir was 4.92 MAF. It is then stated as under:-

"It is further established by the studies that the canal requirements at Harike and Ropar are met fully in a mean year except in one 10-daily period of June at the commencement of filling period when the total available inflow is less than the requirements during that period resulting in a nominal deficiency of 0.058 MAF. Pending utilisation of 0.548 MAF from Ropar and 0.143 MAF from Harike for the future demands of

Punjab and Rajasthan respectively, storage amounting to 0.459 MAF is retained in the Bhakra and Pong reservoirs at the end of the depletion period and 0.154 MAF is temporarily released from Bhakra for maximising secondary power by releases during a period when irrigation requirements are otherwise fully met."

The summary of the utilisation is then tabulated as under:-

Offtake Location	Canal Requirements MAF			Utilisation MAF		
	Pre-parti- tion	Addi- tion- al	Total	Pre-parti- tion	Addi- tion- al	Total
At Madhopur						
Kashmir Canal	0.036	0.708	0.744	0.036	0.603	0.639
UBDC	1.780	2.005	3.785	1.780	1.731	3.511
Total (1)	1.816	2.713	4.529	1.816	2.334	4.150
Diversion into MB Link			2.442			2.204
Total			6.971			6.354
At Harike						
Punjab Canals	0.500	3.182	3.682	0.500	3.164	3.664
Rajasthan Canals	1.120	7.738	8.858	1.120	7.698	8.818
Future demands of Rajasthan	-	0.143	0.143	-	-	-
Total (2)	1.620	11.063	12.683	1.620	10.862	12.482

At Ropar

Punjab Canals	-	1.739	1.739	-	1.739	1.739
Future demands of Punjab.	-	0.548	0.548	-	-	-
Rajasthan Canals	-	0.422	0.422	-	0.422	0.422
Total (3)	-	2.709	2.709	-	2.161	2.161
Total (1)(2) &(3)	3.436	16.485	19.921	3.436	15.357	18.793

From the above discussions we find that the Beas Project consists of two parts, namely, the Beas Sutlej Link (Unit I) and the Pong Dam on the river Beas (Unit II). Unit I comprises a diversion dam at Pandoh to transfer 3.82 MAF of water of the Beas river to the Bhakra Reservoir. This is intended to supplement the supplies to the Bhakra Reservoir as well as use the natural fall of about 305 meters at Dehar for the generation of power. The Pandoh Dam, a diversion dam in the Kulu valley 21 Kilometers from Mandi in Himachal Pradesh is an earth-cum-rock-fill-dam 76 meters in height. The Beas water at Pandoh is diverted into Pandoh-Baggi tunnel having a capacity of about 9000 cusec. From Baggi onwards the Beas water is taken in an open channel called Sundernagar Hydel channel having a discharge capacity of 8500 cusec. The channel outfalls into the balancing reservoir which takes care of the variation between the supply required for the actual load on Dehar power plant and the discharge in the water conductor system. The water from the reservoir passes through a tunnel terminating into a Surge Shaft having a capacity of 14250 Cusec of water.

The Dehar power plant is located on the right bank of river Sutlej upstream of Slapper Bridge on the Mandi Kulu Road in Himachal Pradesh. Six generating units of 165 MW each have been installed at Dehar. The Beas Sutlej link waters are further utilised to augment the power potential at Bhakra by 148 MW.

Unit II (Pong Dam) comprises an earth-gravel dam on the Beas in Kangra District of Himachal Pradesh intended to release regulated supplies of water into the Rajasthan canal and the Punjab canals taking off from Harike Headworks. The water is also utilised for the generation of power, the power house being

situate downstream of the Pong Dam. The Dam, perhaps the highest of its type in the country, (132.6 meters high) has a live storage capacity of about 5.91 MAF. On the left bank of the Dam a shute Spillway is provided for passing flood waters. The Pong power plant has an installed capacity of 360 MW having six units of 60 MW each.

We have seen that the 1959 project report on Unit I on Pong Dam was based on certain assumptions which did not include a dam on river Ravi although provision for diversion of Ravi waters through the Madhopur Beas Link having a capacity of 10,000 cusecs was contemplated. However, while indicating the utilisation of Punjab's share of 7.2 MAF it was stated that the above utilisation would be possible only after the completion of the Thein Dam on Ravi and Beas Dam on Beas. This would show that the Thein Dam was in contemplation even at that point of time. In the subsequent 1961 Beas Sutlej Link Project Report there was a mention about the creation of storages on the Ravi and the upper reaches of the river Beas as can be seen from paragraph 2 Section 1 entitled "Irrigation Needs" (Ex. H. 13 pp. 12-13). There it is clearly mentioned that the master Plan drawn up to harness the Eastern Rivers envisaged the completion of certain major projects to link up the three Eastern rivers with a view to pooling their resources for optimum utilisation and one of the works mentioned is creation of a storage on the river Ravi. When we turn to the revised 1966 Project on Unit II there is again a specific mention of the creation of a storage on river Ravi in paragraph 1.2 of Section I (Ex.H 13, pp. 63-64). On a conjoint reading of these reports it is clear that the so called Master Plan for harnessing the irrigation and power potential of the three Eastern rivers envisaged the creation of storages on the Ravi as well as the Beas to complete the irrigation and power grid envisaged thereunder. The Thein Dam (Ranjitsagar Dam) envisages the construction of a 482 feet high dam across the river Ravi 24 kilometers upstream of Madhopur Headworks with a power station having 4 units of 120 MW each on its left bank below the dam and one unit of 15 MW in each of the three existing power houses on the Upper Bari Doab Hydrel Channel. The project is intended to provide irrigation benefits to 861520 acres in Punjab, Rajasthan and Jammu and Kashmir. The reservoir is planned for a gross storage of 2.98 MAF and a live storage of 1.9 MAF of water. The project was approved in about April 1982, by the Planning Commission and the construction work has, we are told, already started and is likely to be completed by 1992.

The Beas Project Unit I was proposed to be revised and a tentative revised report was prepared in October 1970 by the Government of Punjab, in the introductory part whereof it is stated that one of the purposes of the diversion of river supplies is to 'enable extension of irrigation to the arid areas in the South and South West of erstwhile Punjab, (now Punjab and Haryana), besides providing irrigation facilities on the Bhakra areas.' Significantly, there is once again a reference to the Master Plan purported to have been drawn up for harnessing the irrigation and power potential by linking up the three Eastern Rivers so as to pool their resources for optimum utilisation.

From what we have discussed above it is obvious to us that the purposes of the Beas Project, Unit I and II, were two fold, namely, to pool the water resources of the three Eastern Rivers for optimum utilisation for irrigation and power. The additional supply thus made available by pooling the water resources was intended inter alia to provide irrigation to arid and semi-arid lands in the South and South West of composite Punjab. Therefore, when the 1976 Government of India Order took note of the fact that Haryana had large arid tract and also several drought prone areas, it is difficult to agree that it based its decision on extraneous considerations. Under section 78(1) reproduced earlier, the shares had to be determined bearing in mind the purposes of the Beas Project and as pointed out earlier one of the major considerations for the Beas Project was to pool the water resources of the three rivers with a view to providing irrigation to arid and semi arid areas lying to the South and South West of composite Punjab.

Under the revised project of 1966 it is Punjab's contention that at best Haryana would be entitled to 0.9 MAF of waters having regard to the purposes of the Beas Project. In this connection Punjab places reliance on plates 5 and 6 appended to the revised report. It was strongly contended by counsel for Haryana that this revised project was prepared bearing in mind the fact that the reorganisation of the erstwhile State of Punjab was likely to take place shortly. This, it may safely be inferred, was known to the State of Punjab even before the announcement was made in Parliament on 21st March 1966. The forwarding letter is of 25th March 1966 which means that the revised report was completed after the announcement was made in Parliament. It is Haryana's contention that this revised report was so manipulated as to adversely affect the interest of the proposed State of Haryana insofar as sharing of 7.2 MAF of waters

was concerned. Counsel emphasised that ever since Punjab's share in the surplus Ravi-Beas waters was finalised under the 1955 agreement, efforts were made to provide minimum water to Haryana areas and the revised project report was so manipulated as to provide less than what was reserved for Haryana areas even under the Punjab Government's order of 21st October 1961. It is a matter of common knowledge that this order of the Punjab Government had caused considerable heart-burning to the people of Haryana area and two Committees were set up to assuage their feelings but before the reports of the said Committees could be implemented the reorganisation took place. We think that the grievance made by counsel for Haryana in regard to the revised Beas Project (1966) is borne out from the record placed before the Tribunal.

In the proposals put forward by Punjab and Pepsu in the meetings of the Chief Engineers of the concerned States convened by the Ministry of irrigation and Power on 12/23rd November 1954, over 3 MAF of surplus Ravi Beas waters was intended for areas now forming part of Haryana. This becomes clear if we peruse the figures (Ex.P 4, pp. 97-108 at p. 97) which may be reproduced here:-

Western Yamuna Canal areas	1.26 MAF
Gurgaon areas	0.40 MAF
Bhakra Canals 1.62	0.89 MAF
(14.59 - 11.31 - 1.26 - 0.4) x 55%	= 0.89 MAF

Bhakra Canal areas of Pepsu (417 cusecs) and Hansi branch of Western Yamuna canal (Pepsu) (445 cusecs) 6.54 MAF including absorption. (Page 108, P-4). These totalled to 3.09 MAF. Against the total demand of 7.28 MAF (5.95 MAF for Punjab and 1.33 MAF for Pepsu), Punjab & Pepsu were allocated 7.2 MAF in the 1955 agreement. Subsequently, in the letter of 27th September 1955 it was proposed to supply water to new areas now in Haryana from the Ravi - Beas System as follows (Ex.P 4, p. 139).

"Western Yamuna Canal	1.07 MAF
Gurgaon Canal	0.40 MAF
Bhakra & Sirhind Canals	0.67 MAF
55% of 1.21	-----
	2.14 MAF"

Adding 0.54 MAF for Pepsu areas now in Haryana, 2.68 MAF was planned for use in Haryana areas. On the finalisation of the provisions of the Indus Waters Treaty, the Chief Engineer, Punjab, by his letter dated 1st July 1961 made certain assessments (Ex. HR 2, pp.53-54) for the utilisation of surplus Ravi Beas waters for the areas now falling in Haryana which worked out to 2.805 MAF according to Haryana estimates and 2.325 MAF according to Punjab estimates. The requirements on the basis of 62% intensity for Western Yamuna Canal region, Gurgaon Canal and Sohna lift scheme upto final stage were estimated (Ex.HR. 1, p.80) at 3.827 MAF by Haryana and 3.347 MAF by Punjab with restraint on capacity of Yamuna Feeder and 4.654 MAF by Haryana and 4.174 MAF by Punjab without such restraint capacity. The Chief Engineer had finally proposed water for Haryana areas (Ex. HR 2 p. 54) at 3.756 MAF according to Haryana and 3.276 MAF according to Punjab estimates out of a total of 8.222 MAF recommended by him. Against these proposals the erstwhile State of Punjab by its order dated 20th October 1961 approved allocations as under (Ex.H2, p.22):-

"Gurgaon Canal	0.307 MAF
Sohna Lift Scheme	0.133 MAF
Western Yamuna Canal	
50% intensity	0.104 MAF
Extension and improvement of irrigation on Bhakra and Sirhind Canal areas including removal of shortage.	2.08 MAF out of 4.201 MAF
	2.624/2.144 MAF"

Till the reorganisation of the erstwhile State of Punjab this order of 20th October 1961 remained in force.

Soon after the order of 20th October 1961 there were discussions on achieving parity of development in various areas of the composite State of Punjab.

In the Beas Project (Unit I) Report of September 1961 the canal requirements at Ropar were shown to be 15.26 MAF (Ex.H 13, p.40). The minimum future water requirements of the canals at Ropar over and above the utilisations from the Sutlej through Bhakra reservoir were indicated to be 6 MAF (Ex.H 13, p. 42). Out of this, requirements of the areas in Haryana were indicated to be 3.756 MAF as claimed by Haryana and 3.276 MAF as per Punjab estimates. The project envisaged increase

in capacity of Bhakra canal to $14040 + 2374 = 16414$ cusec against its existing capacity of 12500 cusec representing an increase of nearly 4000 cusec. The Sirhind canal was proposed to have an increased capacity of $7080 + 2765 = 9845$ cusec. The withdrawals in Bhakra Canal were proposed as $7.81 + 0.96 = 8.77$ MAF, an increase of 2.2 MAF.

We have already pointed out earlier that there was great dissatisfaction in the Haryana region of erstwhile Punjab in regard to the Punjab Government's order of 20th October 1961. The two Committees constituted as a result thereof submitted their reports just before the actual reorganisation of Punjab took place with the result that their recommendations remained on paper. The Food Committee on Land and Water Uses recommended allocation of 4.40 MAF to Haryana areas out of the total of 7.2 MAF available to Punjab (Ex.H 18, p.33). The other Committee, the Haryana Development Committee, recommended that the bulk of the supply of Ravi-Beas waters must go to Haryana region and the water allowance in all parts of Punjab should be on one equitable basis (Ex.H 17, p. 38).

In the above background the General Manager and Secretary to Government of Punjab, by his letter dated 25th March 1966 submitted the revised Beas Project (Unit II) report at a point of time when the decision to reorganise the State of Punjab was already announced in Parliament. In the course of submissions before the Tribunal, Counsel for Haryana vehemently submitted that by this revised project the entire exercise was to deprive Haryana of its legitimate share in the river waters. Several inconsistencies were brought to our notice and we may highlight a few, since we are inclined to agree with the general grievance that the revised project was so designed as to prejudice the interest of proposed Haryana. The inconsistencies which are apparent are set out hereunder:-

- (1) The share of Kashmir is shown to be 0.708 MAF (Ex.H 13, p.72) even though under the 1955 agreement it is clearly stipulated that it shall remain fixed at 0.65 MAF. This is done on the premise that according to the latest figures, actual Kashmir requirements are 0.708 MAF instead of 0.65 MAF proposed under the 1955 agreement. It is difficult to understand how such a change could be made without a revision of the 1955 agreement by the concerned State Governments.

(2) Pre-partition utilisation of Punjab at Madhopur is shown to be 1.78 MAF whereas it was actually 1.48 MAF. Similarly, the pre-partition utilisation of Rajasthan at Harike which was actually 1.11 MAF has been shown to be 1.12 MAF (Ex.H 13, p.72).

(3) The additional canal requirements at Ropar for Punjab are shown as 2.287 MAF of which 0.54 MAF is indicated as required for future development of irrigation in Punjab. Similarly, the requirement of Rajasthan at Harike is shown as 7.881 MAF including 0.143 MAF for future development of irrigation in Rajasthan, (Ex.H 13, p.73). These future requirements are, however, not reflected in the tables and no indication is given as to how these requirements would be met.

The State of Haryana has also pointed out certain inconsistencies in the chart "Areas (now falling in Haryana) provided irrigation facilities as per Beas Project Unit II - Vol.I - 1966 Report" put up by Punjab purporting to show that Haryana would at best be entitled to 0.9 MAF out of the erstwhile Punjab's share, (Ex.P 4, p.141). These inconsistencies can be set out as under:-

- (i) Transit loss in Madhopur Beas Link shown as 0.208 MAF is not correct; it ought to be 0.258 MAF (Ex.H 13 p.90, Co.14).
- (ii) Out of the total inflow at Madhopur of 6.971 MAF, only the following are accounted for:-

UBDC prepartition	1.780 MAF
Kashmir canal	0.036 MAF
UBDC additional	1.731 MAF
Kashmir canal additional	0.603 MAF
M.B.Link losses	0.258 MAF
Transfer to Harike	1.946 MAF

	6.354 MAF

The total thus comes to 6.354 MAF leaving a gap of 0.617 MAF of Ravi Waters unaccounted (see Ex.P 4, p. 141 Col.25 which has not been filled up accordingly).

(iii) From Ropar 1.374 MAF is released. The losses from Bhakra to Harike are shown as 0.123 MAF. The net water at Harike is, therefore, 1.251 MAF. From Madhopur Beas Link 1.946 MAF is received. From Mandi plain comes 9.767 MAF. The total supplies at Harike thus work out to 12.964 MAF. The losses shown are 0.282 MAF (0.158 MAF as reservoir losses and 0.123 MAF as losses between Bhakra and Harike). The inclusion of 0.123 MAF in losses is incorrect as this loss belongs to Sutlej and the losses there should be increased from 0.1 MAF to 0.223 MAF. Then we find that the water released in the interest of power is only 0.154 MAF (Ex.H 13, p.92 col.15). The footnote of 0.15 MAF additional releases made for power is not reflected anywhere in the tables. This would need correction in column 22 as 0.154 MAF. Accordingly column 24 of Item 2.3 should be 16.450 MAF (16.073 MAF (Col.21) + 0.154 MAF (Col.22) + 0.223 MAF (Col.23)). So also column 25 in Item 2.3 should read 17.833 (Col.9) minus 0.123 MAF (Col.8 of Item 2.2) = 16.582 MAF. The total use being 16.450 MAF, 0.132 MAF of Item 2.3 remains unallocated, which along with 0.154 MAF of power releases totals to, 0.286 MAF unallocated. Further, since the losses of Beas are only 0.159 MAF, total utilisation is 12,481 + 0.159 = 12.640 MAF, leaving 0.324 MAF unallocated out of the total availability of 12.964 MAF. Therefore, according to Haryana, the total waters unshared/unallocated in the 1966 report comes to 1.609 MAF as under:-

MAF

0.617	Ravi waters wasted
0.324	Beas waters unallocated
0.159	Pong Reservoir losses unshared.
0.132	Sutlej waters unallocated.
0.154	Sutlej power releases unallocated.
0.123	Bhakra-Harike losses unshared.
0.100	Sutlej reservoir losses unshared.

1.609

This also tallies with Shri Murthy's calculation who remarked in his report that 0.324 MAF of Beas and 0.284 MAF of Sutlej have remained unallocated to any specific canal systems.

The table (Ex.H 13 p.89) also reduces the capacity of Bhakra canal to 13487 cusec (against 16414 cusec in the 1961 Unit I Report) thereby reducing the quantity by 1.27 MAF. On the other hand the Sirhind Canal capacity is increased to

13273 cusecs, from 9845 cusecs in 1961 project thereby increasing the quantity of supply by 1.88 MAF. The water for Gurgaon canal, Sohna (1st Phase) and Western Yamuna is reduced to 0.769 MAF against 1.110 MAF in the 1961 report. No valid reasons are indicated for the changes in the report and for the departure from the Punjab Government's order of 20th October 1961 which was very much in force when the 1966 revised report was prepared. It is obvious from what we have illustrated above that these changes prejudicially affected the interest of Haryana areas of erstwhile Punjab. It is true that the 1966 project report (Unit II) was approved by the Planning Commission on 6th October 1969 but that was expressly subject to the technical comments and suggestions of Central Water and Power Commission (Ex.H 21, p.1) which had required the project authorities to obtain the concurrence of the various States to the changes but the project authorities replied that "This is a rather complicated issue and is likely to take considerable time to be settled" and intimated that the sub-Committee constituted under the Chairmanship of Dr. Khosla may consider the allocation of cost of Beas Project Units I and II between the partner States as also the question of distribution of power which had till then not finalised its award. We do not feel called upon to reproduce the technical comments and suggestions of the Central Water and Power Commission (Ex.H 21, p.1) because we are satisfied from what we have illustrated earlier that the changes made in the revised project report 1966 were undoubtedly detrimental to the interest of the proposed State of Haryana. In the circumstances it is not possible to accept Punjab's contention that Haryana is entitled to 0.9 MAF only as per the computations of the Beas project (1966).

PRINCIPLES FOR ADJUDICATION OF SHARES IN RIVER WATERS

We have already closely examined the legal and constitutional perspectives in regard to the rights in river waters and have negatived the theory of ownership in waters canvassed by the State of Punjab. On a true interpretation of the terms of reference we have come to the conclusion that so far as Item No. 2 is concerned, Rajasthan does not fall within the purview thereof and, therefore, its share determined under the 1955 and 1981 agreements must remain intact notwithstanding the fact that on verification of user under Item No. 1 of the reference we find that Rajasthan was not using its full share of water allocated under the said two agreements. That was

presumably because the Rajasthan Canal, renamed Indira Gandhi Nehar, could not be completed on time because of several constraints with the result that the entire network needed for utilising the full quota of water allocated to it was not available and hence Punjab was permitted to use the extra water under clause (ii) of the 1981 agreement until such time as Rajasthan was in a position to utilise its full share of water. That is why Rajasthan has described such user by Punjab as merely permissive user under clause (ii) of the 1981 agreement. Since we are not concerned with the question of allocation of water to Rajasthan under Item No. 2 of the reference, we are merely required to adjudicate the shares of Punjab and Haryana in their remaining waters, which under the 1981 agreement comes to 7.72 MAF. The question which immediately comes to mind is on what principle should this quantum of water be distributed between the States of Punjab and Haryana. In the absence of legislation, agreement or an order of a competent Tribunal it seems to be settled law that the allocation of water should be on the basis of equity and fairness.

We must therefore firstly consider the question of the proportion of rights and liabilities under section 78(1) of the Punjab Reorganisation Act. That section in terms provides that the proportion of the rights and liabilities of the erstwhile State of Punjab under the Beas Project should be determined by the concerned States by agreement within a period of two years from 1st November 1966; failing that, by the Government of India, having regard to the purposes of the project. We have already indicated by a detailed reference to the project reports the purposes of the Beas Project and we need not restate the same. We have come to the conclusion that the 1976 award got merged in the 1981 agreement. However, in view of paragraph 9.2 of the Punjab Settlement we are called upon to adjudicate the claim of Punjab and Haryana regarding the shares in their remaining waters. Whether we are required to determine the proportion in the rights and liabilities under the Beas Project in terms of section 78(1) or we are required to determine the shares of Punjab and Haryana under paragraph 9.2 of the Punjab Settlement, the question which still survives is on what principle we should determine/adjudicate the same. The State of Punjab heavily leaned on two propositions, namely, (1) the waters of the Ravi and the Beas belong absolutely and in their entirety to the State of Punjab and, therefore, the State of Haryana cannot lay a claim on those waters; and (ii) even assuming Haryana has a right in the waters under the Beas Project, the same cannot exceed 0.9 MAF in view of the calculations set out

in the various plates accompanying the revised Beas Project (1966). We have come to the conclusion that both these contentions are untenable. The first cannot be supported in law and/or under the Constitution and the second because we have found that the allocations under the revised project (1966) have been altered to the detriment of Haryana's interest under the Beas Project. On a critical analysis of the Beas Project, it is noticed that one of its principal purposes was to intergrate all the three Eastern Rivers into a water grid wherefrom water could be provided to areas which could be commanded from various points, namely Madhopur, Ropar and Harike. The waters of the Ravi are proposed to be conserved by the construction of the Thein Dam. The waters of Ravi are transferred to Beas through the Madhopur-Beas Link having a capacity of 10,000 cusecs, the waters of the Beas are diverted to Sutlej to the extent of 3.82 MAF through the Beas Sutlej Link and adjustment is contemplated so that certain high and arid areas in the South and South West of composite Punjab could be commanded from Ropar instead of Harike which is at a lower level. It is, therefore, clear from the Beas Project itself that it provides for the utilisation of waters belonging to the Ravi-Beas System. That is presumably why the Punjab Settlement speaks of the Ravi-Beas System instead of using the expression employed by section 78(1) of the Punjab Reorganisation Act. In substance, however, we are required to determine/adjudicate the shares of Punjab and Haryana in their remaining waters.

The expression 'their remaining waters' used in paragraph 9.2 ought not to be confused with the expression 'the remaining waters' since that is likely to prove misleading. We have already come to the conclusion that the shares of Rajasthan and Jammu and Kashmir fixed under the 1955 agreement and revised by the 1981 agreement must remain intact for they are not arraigned before this Tribunal under paragraph 9.2 of the Punjab Settlement. So also we have come to the conclusion that water received by Delhi Water Supply from the Ravi-Beas System cannot be touched by this Tribunal. If these waters are kept out, the quantum of water that remains out of the total available surplus supplies can be regarded as the water of Punjab and Haryana-- 'their remaining waters' within the meaning of that expression used in paragraph 9.2 of the Punjab Settlement and Item No. 2 of the Terms of Reference. For many years the apportionment of the waters of the Ravi and the Beas has been a bone of contention between the people of Punjab area and the people of Haryana area; since the reorganisation of the erstwhile State of Punjab it has

become a source of irritation between the two States. We must, therefore, carefully determine the principle on which the apportionment must be made between the two States.

We are required to apportion the water between the two States by virtue of Paragraph 9.2 of the Punjab Settlement or Item No. 2 of the Terms of Reference; since Item No. 2 is in the same language as paragraph 9.2 of the Punjab Settlement it would suffice if we refer to the latter. Under the first sentence of paragraph 9.2, the mandate is that the claim of Punjab and Haryana regarding the shares in their remaining waters will be adjudicated by the Tribunal and the latter part of Paragraph 9.2 states that the decision of the Tribunal will be binding on both the parties. Section 78(1) also states that the proportion in the rights and liabilities of the existing State of Punjab in the Beas Project shall be determined by agreement between the concerned States within two years and failing that by the Central Government having regard to the purposes of the project. We have comprehensively indicated what the Beas Project seeks to achieve and it is clear from the terms of the project reports that it seeks to integrate the waters of the three rivers for optimum utilisation for irrigation and power. The three rivers mentioned therein are the Ravi, the Beas and the Sutlej. Since the waters of the river Sutlej are already committed under the Bhakra Nangal Project, we must exclude them from our consideration altogether. Even our terms of reference do not speak about the Sutlej waters. Therefore, if a comprehensive view of the Beas Project is kept in mind, it is obvious that even under section 78(1) the waters from the Ravi and the Beas had to be divided in such proportion as was thought appropriate having regard to the purposes of the project between the two States. In our view, therefore, it is one and the same thing whether we allocate the waters from the Ravi-Beas System or determine the proportion of the shares under the Beas Project, regard being had to the purposes of the project. It may not be out of place here to mention that the expression 'having regard to' merely offers guidance and is not intended to act as a fetter : vide *Stuckey and Others Vs. Hooke* (1906) 2 K.B. p. 20 at pp. 25-26 and *Perry Vs. Wright* (1908) 1 K.B. p. 441 at p. 458. F.J. Berber, Professor of International Law in the University of Munich in his celebrated work "Rivers in International Law" points out at pages 12 and 13 that there are four alternative principles which govern the use of

waters flowing through more than one State, namely:-

"1. The principle of absolute territorial sovereignty, by virtue of which a state can dispose freely of the waters actually flowing through its territory, but has no right to demand the continued free flow from other countries;

2. The principle of absolute territorial integrity, by virtue of which a state has the right to demand the continuation of the natural flow of waters coming from other countries, but may not for its part restrict the natural flow of waters flowing through its territory into other countries;

3. The principle of community in the waters by virtue of which rights are either vested in the collective body of riparians or are divided proportionally, or any other kind of absolute restriction on the free usage of the waters by the riparians is created in such a way that no one state can dispose of the waters without the positive co-operation of the others;

4. A restriction of the free usage of the waters which, it is true, does not extend as far as the principle of a community in the waters but which in differing degrees restricts the principle of absolute territorial sovereignty just as much as the principle of absolute territorial integrity."

While considering the effect of some of the decisions rendered by the United States Supreme Court we pointed out that these decisions are of no assistance and cannot be applied to Indian conditions in view of the great distinguishing feature that American States which were originally independent and sovereign units had merged into a Federation retaining their independence and sovereignty except to the extent the same was granted away under an agreement or treaty to the Federation. We have also while analysing the provisions of the Government of India Act, 1935 and our Constitution stated that our Constitution though generally based on the pattern of the Government of India Act, 1935, has made certain departures in regard to inter-State rivers and river valleys extending the coverage to States situate in a

river valley. The principles enunciated by Berber were considered by the Narmada Water Disputes Tribunal in Chapter VIII, Volume I, and after analysing the constitutional provisions and the laws as well as the decisions cited in that behalf, it ultimately proceeded to apportion the river waters on the principle of equitable utilisation. We have quoted the relevant observations from this report earlier and we need not repeat the same. Shri A.K. Sinha, one of the members of that Tribunal who could not agree on certain points concerning apportionment of water with the Chairman, dealt with certain aspects of the law governing the apportionment of waters in Part III of Volume IV and dealt with the various aspects of the law relating to apportionment of river waters in paragraph 3.2.1 and onwards and in paragraph 3.2.38 observed as under:-

"Rule of 'equitable apportionment' consistently applied in America. In all the American cases that we have mentioned, the Court has consistently applied the third of these principles, that is to say, the principle of 'equitable apportionment'".

It is then pointed out that in the water dispute of Krishna river also, the Tribunal had taken the same view and applied the law or legal principles of equitable apportionment. He then proceeded to observe in paragraph 3.2.40 as under:-

" In fact there is no dispute now between the concerned party States over the application of the law of equitable apportionment to the instant Narmada water disputes before us."

It is, therefore, obvious that in so far as the Narmada Water Disputes Tribunal is concerned, it applied the doctrine of 'equitable apportionment' applied by the United States Supreme Court in some of the decisions to which we have referred earlier. In India, therefore, while the decisions of the United States Supreme Court on the question of sovereign rights claimed by States in that country do not apply in view of the special provisions contained in our Constitution and the laws, the principle of 'equitable apportionment' enunciated by the American Courts has been consistently applied by Tribunals constituted to resolve water disputes. The Krishna Water Disputes Tribunal (1973) also dealt with this question in detail in Chapter XI Volume I of its report and observed as under:-

"Equitable apportionment:- The decisions of the U.S.A. Supreme Court firmly established the doctrine of equitable apportionment of the benefits of an inter-State river. The principle was earlier recognised by the Swiss Federal Tribunal in 1878, **The Zwillikon Dam case** and it also contains the essence of international law on the matter.

In India also, the right of States in an inter-State river is determined by applying the rule of equitable apportionment, each unit getting a fair share of the water of the common river. The doctrine of riparian rights governs the rights of private parties, but it does not afford a satisfactory basis for settling inter-State water dispute."

In view of the above, we think it is now well settled that in deciding water disputes regarding an inter-State river or river valley, the rule of equitable apportionment of the benefits of the river should be applied. We are in complete agreement with this enunciation of the law and we propose to apply the same in the present case in allocating/determining the shares of Punjab and Haryana in their remaining waters.

But the concept of equitable apportionment is not capable of a precise definition and cannot be put in any straight jacket formula. The question of rational apportionment of available river waters among the claimants must, therefore, necessarily depend on several factors which have a bearing on the apportionment of water such as climatic conditions, rainfall, soil conservation, social and economic aspects and so on and so forth. In the final analysis, the Tribunal must find a solution which considering all relevant factors and variables is just and reasonable and in determining what is just and reasonable in the context of conflicting demands, the Tribunal must take into account and have regard to the varied factors which are significant in the particular fact-situation of the case and contribute to a just and proper solution. The Narmada Tribunal in paragraph 9.5.1 (pages 118-119 of Volume I) after quoting from Principle II of the Statement adopted by the American Branch of the ILA in Proceedings and Committee Reports of the American Branch of the International Law Association, 1957, 1948, at p.101,

proceeded to add, as under:-

"In the application of the balancing process, the Tribunal must take into account other important factors such as the hydrological, climatic and physical characteristics of the river basin, the volume of available supply, the statewide drainage area and contribution to the supply of water, the respective economic and social needs of the States, the population of the States, dependent on water supply and the degree of their dependence, alternative methods of satisfying these needs, the extent of lawfully established uses and reasonable requirements for future use of each State, the relative value of different uses and avoidance of unnecessary waste of water. This list of relevant factors is illustrative and not exhaustive. The weight to be given to any relevant factor in any particular case is a matter of judgment and no hard and fast rule can be laid down."

In 1966 the International Law Association framed certain rules (The Helsinki Rules 1966) laying down certain guidelines for the equitable distribution of water among the contesting States. Articles IV and V thereof which are relevant for our purpose are reproduced hereunder:-

ARTICLE IV

"Each basin State is entitled, within its territory, to a reasonable and equitable share in the beneficial uses of the waters of an international drainage basin."

ARTICLE V

(1) What is a reasonable and equitable share within the meaning of Article IV is to be determined in the light of all the relevant factors in each particular case.

(2) Relevant factors which are to be considered include, but are not limited to:

(a) the geography of the basin, including in

particular the extent of the drainage area in the territory of each basin state;

(b) the hydrology of the basin, including in particular the contribution of water by each basin State;

(c) the climate affecting the basin;

(d) the past utilization of the waters of the basin, including in particular existing utilization;

(e) the economic and social needs of each basin State;

(f) the population dependent on the waters of the basin in each basin State;

(g) the comparative costs of alternative means of satisfying the economic and social needs of each basin State;

(h) the availability of other resources;

(i) the avoidance of unnecessary waste in the utilization of waters of the basin;

(j) the practicability of compensation to one or more of the co-basin States as a means of adjusting conflicts among uses; and

(k) the degree to which the needs of a basin State may be satisfied, without causing substantial injury to a co-basin State;

(3) The weight to be given to each factor is to be determined by its importance in comparison with that of other relevant factors. In determining what is a reasonable and equitable share, all relevant factors are to be considered together and a conclusion reached on the basis of the whole."

It would appear from the relevant factors set out in Article V that they are only illustrative and not exhaustive. As observed in *Nebraska Vs. Wyoming*, 325 U.S. 589, 627, the standard of an equitable apportionment requires an adaptation of the formula to the necessities of the particular situation. In *New Jersey Vs. New York*, 283 U.S. 336, 343, the Court indicated that the effort must be to secure an equitable apportionment without quibbling over formulas. It is, therefore, clear that in determining what is just, fair and reasonable, the Tribunal must take into consideration the special and particular features of each case for no two cases can be similar in content. Much would depend on the river system and its development in that region, the principal use

to which water is put by the people of the concerned areas, the climatic conditions, the extent of arid, semi-arid and drought prone zones, the need of water for irrigation and other consumptive uses, etc. There can, therefore, be no single formula applicable to all cases and much would depend on the 'best judgment' of the Tribunal having regard to the facts and circumstances of each case. The Krishna Water Disputes Tribunal in Chapter XI Volume I page 93 of its Report observed as under:-

"There is no mechanical formula of equitable apportionment applicable to all rivers. Each river system has its own peculiarities. In arid regions, the principal need may be for irrigation, while in humid regions there may be more need for power plants, municipal water supply, navigation and preservation of fisheries.

One river system may be more fully developed than another; in one there may be scarcity of water, while in another the supply may be abundant. In one river system, the States may place emphasis on co-operative approach for optimum development of water resources; in another they may desire nothing more than an apportionment of the water for their separate uses. In one river the water diverted for developing the best hydro-power potential may be wasted to the sea; in another the tailrace water may be profitably used again for irrigation downstream."

The factors relevant for equitable apportionment of water would, therefore, vary from case to case and it would depend on the best and informed judgment of the Tribunal to decide in the light of the facts and circumstances of the case what weight it should attach to each factor and no hard and fast mechanical rule can be evolved and applied.

Having regard to the facts and circumstances of the present case, the historical background the agreements entered into with the State of Rajasthan in 1955 and 1981, it seems evident that quantitative apportionment of the available supplies is the most appropriate alternative since the demand for water made by the contesting parties is equally pressing and all the potential claims have to be accommodated in

the available resources position. Efforts must be made to increase the volume of water for use by the community by employing engineering methods, e.g., avoiding large scale seepage, reducing evaporation, harnessing water below the rim stations and making more effective use of available water resources. It is needless to emphasise that every State must realise that it is only one of the claimants and must keep in mind the needs of every claimant while asserting its requirements for it cannot think in terms of having lush green fields within its territories overlooking arid areas and sand-dunes across the border which may in the long run result in avoidable conflicts or large scale migration of population. Consequentially it would seem rational that mutual cooperation between the claimants rather than a perpetual conflict, as in the present case, would promote the efficient utilisation system yielding better results to both. The question of apportionment of river waters among the claimants on equitable considerations, therefore, requires a comprehensive itemisation of a large variety of factors, some of which we have mentioned earlier while dealing with the physiography, soil, climatic conditions, rainfall, etc. We will now proceed to indicate the other relevant factors.

CULTURABLE AREA OF THE STATES OF PUNJAB AND HARYANA

The State of Punjab has contended (Ex. P 3, pp. 92-94) that the areas and the requirements given and recognised by the Dominion of Pakistan in the agreement of 4th May 1948 were as under:-

1. Total culturable area	2,58,19,812 acres.
2. Total requirement at 75% intensity and 3.3 cs. per thousand acres water allowance at canal head for 273.75 capacity days.	46.65 MAF

According to it, out of the above, 1,13,56,912 acres are lying in the present State of Punjab for which the water requirement is 20.52 MAF. In reply, the State of Haryana (Ex. HR 1, p.73) has

stated as under:-

<u>State</u>	<u>C.A.</u>	<u>Water requirement</u>
Punjab	1,06,53,231 acres	19.25 MAF
Haryana	93,65,454 acres	16.92 MAF
Himachal Pradesh	8,94,156 acres	1.62 MAF
Rajasthan	49,06,971 acres	8.86 MAF
Total	2,58,19,812 acres	46.65 MAF

The districtwise break-up of culturable area (Ex. P 3, pp.92-93) is indicated in the agreement of 4th May 1948 for East Punjab as well as East Punjab States (Pepsu). On bifurcation, on the basis of the area now falling in the States of Punjab and Haryana as presently constituted, the position works out as under:-

1. While Punjab has bifurcated the area in the East Punjab districts under new and old areas on the basis of the areas lying in the present Punjab as 48,40,046 acres and 21,98,007 acres respectively, the entire area under States (Pepsu) has been taken as forming part of the present Punjab which is strictly not accurate. In fact only the areas shown at S. Nos. 4,5,6,7 and 9 pertain to Punjab whereas the remaining areas lie in the present State of Haryana. The correct culturable area to be included in Punjab should, therefore, read as under:-

S.No.	State	Total area	Culturable area	Irrigation within existing irrigation boundary	Area to which irrigation facilities required to be extended.
		(Acres)	(Acres)	(Acres)	(Acres)
4.	Kapurthala	4,21,505	3,60,185	-	2,75,250
5.	Malerkotla	1,06,371	1,00,049	11,413	88,636
6.	Faridkot	4,05,282	3,86,946	2,30,639	1,42,572
7.	Patiala	37,94,675	34,89,974	17,94,073	10,00,000
9.	Nabha	6,16,411	5,71,795	1,07,765	4,64,030
Total		53,44,244	49,08,949	21,43,890	19,70,488

2. The area at S. No. 11--Kangra--(Ex. P 3, p.92) pertains to Himachal Pradesh.
3. The bifurcation of area Statewise on the above basis is as below:-

State 1	Total area 2	Punjab 3	Himachal 4	Haryana 5(2-3-4)
East Punjab				
New	1,10,75,110	43,40,846	8,94,156	58,40,108
Old	50,13,572	21,98,007	-	28,15,565
East Punjab States				
New	20,70,488	19,70,488	-	1,00,000
Old	27,53,671	21,43,890	-	6,09,781
Total	2,09,12,841	1,06,53,231	8,94,156	93,65,454
Rajasthan				
New	41,51,971			
Old	7,55,000			
Grand Total	2,58,19,812			

The requirement of each State on the basis of the above culturable area for 75% intensity and 3.3 cs. per thousand acres water allowance at canal head as per basis indicated by the State of Punjab (Ex.P4, P.93) works out as under:-

Punjab	$\frac{4,06,53,231 \times 3.3 \times 2 \times 273.75}{1000}$	= 19.25 MAF
Haryana	$\frac{93,65,454 \times 3.3 \times 2 \times 273.75}{1000}$	= 16.92 MAF
Himachal	$\frac{8,94,156 \times 3.3 \times 2 \times 273.75}{1000}$	= 1.62 MAF
Rajasthan	$\frac{49,06,971 \times 3.3 \times 2 \times 273.75}{1000}$	= 8.86 MAF

General information

Both the States of Punjab and Haryana came into existence on 1st November 1966 by virtue of the provisions of the Punjab Reorganisation Act. Some of the special features of these States are itemised hereunder:-

	Punjab	Haryana
1. Area	50,362 sq.kms.	44,222 sq.kms.
2. Districts	12	12
3. Population (1981 census)	16.79 millions	12.92 millions.
4. Population density.	331 per sq.km.	291 per sq.km.

Geography of the basin including the drainage areas in each basin.

The areas in the different river basins in the two States are as follows:-

State	Indus basin	Ganga (Yamuna sub-basin)
Punjab	50,304 sq.km.	58 sq.km.
Haryana	9,939 sq.km.	34283 sq.km.

The proportion of Indus Basin areas in Haryana and Punjab is 1:5.

Climate affecting the basin.

We have earlier in Chapter IV indicated the climatic conditions and the rainfall figures of the two States. Except rainfall, the climate in both the States is more or less similar.

Annual Rainfall

Punjab	Haryana
70.77 cm.	55.69 cm.
(Average of 5 years 1980 to 1984)	(Average of 5 years 1979 to 1983)
Proportion	1.27 : 1

Three districts in Punjab (Ferozepur, Faridkot and Bhatinda) covering 17165 sq.km. representing 34.1% of the State's area have less than about 50 cm. rainfall in a year. Statements showing the monthly rainfall by districtwise (1980-84) and the average annual rainfall in districts (1966-84) are appended hereto, as Statements I and II. (Appendices 6 and 7, Pages 317 and 318 respectively).

Five districts in Haryana (Hissar, Sirsa, Bhiwani, Jind and Mohindergarh) covering 22006 sq. km. and representing 49.8% of the State's area have less than 50 cm. of rainfall in a year. Statement showing the monthly rainfall districtwise (1979-83) and the average annual rainfall in the districts (1980-83) are appended hereto, as Statements III and IV (Appendices 8 and 9, Pages 319 and 320 respectively).

Both the States have rainfall less than 1000 mm. and have 20% probability of rainfall departures of more than (-) 25% from the normal. The whole of Punjab falls in the semi-arid zone, where there is a periodical water deficit. In Haryana, about 25% of the State is in the arid zone where there is a constant water deficit, and the remaining 75% or so is in semi-arid zone (Figure 8.2 (Map - Appendix 10, Page 321) and pp. 164-166: Report of the Irrigation Commission Vol.I).

Based on the recommendations of the Irrigation Commission and the National Commission on Agriculture, the Ministry of Water Resources has identified 99 drought prone districts in the country. Out of these, the following four districts lie in Haryana: Bhiwani, Gurgaon, Mohindergarh and Rohtak. They cover an area of 14666 sq. km. and have a population of 4071003, representing 33.2% and 31.5% of the area and population respectively of Haryana State. No part of Punjab has been so identified.

Quality of Irrigation

The data for 1984-85 is as follows:-

	Punjab	Haryana
CCA of Canal Systems	74.90 lakh acres	71.40 lakh acres
Area Irrigated-Khariff,	33.34 lakh acres	16.54 lakh acres
- Rabi	34.43 lakh acres	25.53 lakh acres
- Total	67.77 lakh acres	42.07 lakh acres
Area irrigated as % of CCA	90.5%	58.9%

Crop pattern on canal irrigated area as % of CCA.

	Punjab	Haryana
Sugarcane	0.6	1.6
Cotton	13.9	8.2
Oilseeds	12.5	8.2
Maize	3.3	0.2
Jowar & Chori	4.2	3.5
Bajra	2.4	2.5
Rice	16.8	5.6
Wheat	17.7	21.2
Mixed grain	9.8	-
Barley	2.4	0.7
Gram	-	2.7
Miscellaneous crops	5.6	4.5

The percentage of rice, a heavy consumer of water, is three times in Punjab compared to Haryana.

Canal water used per acre of actually irrigated land.

	Punjab	Haryana
Per acre of CCA	1.81 ft.	1.24 ft.
Per acre-of Irrigated area.	2.00 ft.	2.11 ft.

The figures of both the States are almost similar.

Agricultural

Relevant data is given below:

	Punjab (1984-85) m.a.	Haryana (1983-84) m.a.
Culturable area of State	104.8	95.4
Net area sown	103.5	89
Total cropped area	173.3	140.6
Area sown more than once	69.8 (67.4% of net area sown)	51.6 (58% of net area sown)

Multicropping is slightly more in Punjab.

Net area irrigated from various sources.

	Punjab	Haryana
	(Lakh acres)	
By Govt. canals	34.5	29.3
Private canals	0.1	-
Tanks	-	-
Wells & Tubewells	54.6	24.7
Other sources	0.2	0.1
Total	89.4	54.1

Gross area irrigated

(Lakh acres)

	Punjab	Haryana
By canals	67.8 (1984-85)	42.9 (1984-85)
Other sources	89.2	45.9
Total	157.0 (1984-85)	88.8 (1983-84)

Net area irrigated

----- x 100	86.4%	60.8%
Net sown area		

Gross area irrigated

----- x 100	90.6%	63.2%
Gross cropped area		

Gross area

irrigated by canals

----- x 100	196.5%	146.4%
Net area irrigated by canals		

Gross area irrigated by
groundwater

----- x 100	162.5%	185.1%
Net area irrigated by groundwater		

Groundwater availability and use (according to Central Ground Water Board)

	Punjab	MAF	Haryana
Utilisable groundwater for irrigation	12.38		4.75 (upto 4000 EC) 5.87 (upto 6000 EC)
Net groundwater draft	12.30		3.93 (upto 4000 EC) 4.12 (upto 6000 EC)
Use as % of availability	99.4%		82.7% (upto 4000 EC) 70.2% (upto 6000 EC)
Balance groundwater	0.08		0.81 (upto 4000 EC) 1.75 (upto 6000 EC)
The application of groundwater per acre irrigated by it.	1.38 ft.		0.90 ft.

This may be higher in Punjab because of the larger rice areas.

Economic and social needs of each basin State

Both Punjab and Haryana have similar economic and social needs. The average daily employment in registered factories is: Punjab 273932 (1984), Haryana 228535 (1984) showing almost equal industrial development also.

Population dependent on the waters of the basin in each State

Haryana, with a population of 129.22 lakh (1981) is using 3.68 MAF of Yamuna waters, but the canal system is widespread and intensities are low and thus the whole of Haryana area is dependent on Indus System of waters for improvement of irrigation and its extension.

Punjab, with a population of 167.88 lakhs in 1981, is also wholly dependent on Indus System of waters for irrigation.

		<u>Per capita use of water:</u>	
		Punjab	Haryana
		Acre ft.	Acre ft.
Surface water	13.589 MAF		8.858 MAF
	----- =	0.809	----- =
	16.789 million		12.922 million
			0.685

Ground water (upto 4000 EC)	12.3 MAF ----- 16.789	=	0.733	3.93 MAF ----- 12.922	=	0.304
Ground water (between 4000-6000 EC)				0.19 MAF ----- 12.922	=	0.015
Total			1.542			1.004
Per acre of net sown area	13.589 + 12.3 ----- 10.35	=	2.50 ft.	8.858 + 4.12 ----- 8.9	=	1.46 ft.

FLOW BELOW RIM STATIONS

In its submissions (Ex.H 27) Haryana contended that there were substantial waters available below the rim stations of the Eastern Rivers. We have examined this contention and we find that the Beas brings 0.282 MAF in the reach from Mandi Plain to Ferozepur while the Ravi brings 4.549 MAF between Madhopur and Ravi Syphon. It was the contention of Haryana that these substantial quantities of water available below the rim stations ought to be taken into account while assessing the availabilities in the Ravi-Beas System for allocation between the States of Punjab and Haryana. According to Haryana, engineering works could be constructed at suitable sites and the water available below the rim stations could be pumped for use in different areas of the two States. On the other hand Punjab contended (Ex. P. 17) that the dependability of such flows below rim stations was nil since there was no discharge in parts of the years. It also contended that the cost of constructing suitable engineering works for conserving and utilising the said waters would be enormous. According to Punjab, the river Ravi at the Madhopur-Ravi-Syphon-reach did not form part of the Ravi-Beas System as on 1st July 1985 and hence the waters below the said rim stations fall outside the purview of this Tribunal. As regards the water available between Ferozepur and Sulemanki, it is the contention of Punjab that the river Beas does not exist in that area and hence the said waters cannot be taken to belong to the Ravi-Beas System for allocation between the two States.

It is necessary to bear in mind that under the Indus Waters Treaty all the waters of the three Eastern Rivers became available for unrestricted use by India, Pakistan being

permitted only domestic use, non-consumptive use, and agricultural uses extending to 55,000 acres from tributaries of the Ravi. Under the Treaty, Pakistan is under an obligation to let go without hindrance the waters of the Sutlej Main and the Ravi Main in reaches where these rivers flow in Pakistan but have not finally crossed into Pakistan. So also, Pakistan is not permitted any interference with flowing waters to any tributary which in its natural course joins the Sutlej Main or the Ravi Main before these rivers have finally crossed over to Pakistan. It is, therefore, obvious that so much of the flow in the Eastern Rivers below the rim stations as is capable of being harnessed would be available for use by India.

There can be no doubt that the waters below rim stations can supplement supplies to existing canals which are already or will in future be backed by storages, absence of flow or low flow in some parts of the year need not hinder the exploitation of the available waters. In such integrated operation, the dependability of flow loses the importance it has in an isolated work. It may not be necessary to construct storages to feed the adjoining areas because they could be fed by construction of pumping stations.

As regards the contention that the waters below the rim stations between Mandi Plain and Ferozepur belong to Sutlej and not Beas, it must be remembered that both the Beas and the Sutlej are Eastern tributaries of the main river Indus. The Beas used to flow all the way to Chenab above Punjnad till it was intercepted late in the eighteenth century by the Sutlej near Harike. The annual run-off of the Beas at Mandi Plain is 13 MAF compared to 14 MAF of the Sutlej at Ropar. It is only a geographical convention that the Beas-Sutlej stream is named Sutlej. It could as well have been named Beas. For instance, the Chambal meets Yamuna and the combined river is known as Yamuna although the contribution of the Chambal is more than the Yamuna. Similarly, in the case of Ganga, the smaller main river gives its name to the combined stream beyond the confluence of the tributaries like the Ghaghra, Gandak and Kosi, each of which is larger than the Ganga. Therefore, merely because the river is called the Sutlej beyond the confluence near Harike, it does not necessarily follow that there is no Beas water below the rim stations. In calculating the Beas water below the rim station we have deducted the Sutlej component and have merely taken the Beas component.

While discussing Item No. 1 of the Reference, we have attributed to the Beas half of the gains between Mandi Plain and Ferozepur, the other half being attributed to Sutlej between Yusufpur and Ferozepur. The B.B.M.B. has since compiled the data for five years, each starting from the 1st of July and ending on the 30th of June of the next calendar year.

The additional Ravi-Beas waters below the rim stations are worked out as under:-

4.549 MAF	between Madhopur and Ravi Syphon
0.064 MAF	between Mandi Plain and Ferozepur.

4.613 MAF	

We are aware that it would not be technically as well as economically feasible to utilise all the available waters below the rim stations but after taking into account the technical advise we have received in this behalf we feel it would be feasible to do so to the extent of 40 or 50 per cent. We are taking a conservative estimate of 40 per cent only. Thus, at 40 per cent, the accretions to the Ravi-Beas work out to 1.8452, say, 1.85 MAF. Out of the said utilisable supplies, it would be reasonable to take 60% thereof, i.e., 1.11 MAF, for use in Punjab and Haryana areas.

Alternative means, if any, of satisfying the needs of Haryana

Apart from the Indus System of waters and groundwater, there are no alternative means of satisfying the agricultural needs of the two States. Haryana is already receiving an optimum share in Yamuna flow waters under the agreement of 12th March 1954 (Ex. H 27, p.15) and is unlikely to get any substantial quantities from storage, which are also limited and may not exceed in all 1.5 MAF which would have to be shared amongst U.P., Himachal Pradesh, Haryana and Rajasthan. Haryana's share cannot be expected to exceed 0.5 MAF but that too is extremely doubtful. This is obvious from the Report of the Committee on sharing of Yamuna Waters (Ex. H 26, p. 20) of April 1985.

So far as Ganga waters are concerned, an Expert Committee was constituted on 12th May 1983 to examine if the surplus flood water of Ganga near Hardwar or Narora could be diverted to Yamuna near Karnal and to go into the scope of utilising the same in Haryana, Rajasthan and Delhi and further to examine the effect of such diversion on the water resources availability in U.P. The Committee submitted its report on 14th March 1986 (Ex. H 26, pp. 1-14). That report clearly shows that as U.P. was of the view that there will be no surplus waters and even if there be such flood waters it will be in a position to utilise the same and since there was no unanimity amongst the States, it did not make any recommendation on the points of reference. It is thus clear that there does not at present appear even a remote possibility of Haryana receiving Ganga waters even by temporary diversion of flashes.

The availability of other resources.

Land, water and minerals are the basic natural resources. There are no significant mineral resources in the two States. We have already dealt with land and water. The only other means of meeting future economic and social needs is industry and employment programmes, the cost whereof would be the same to both the States.

The avoidance of unnecessary waste in the utilisation of waters of the Basin.

Both the States are using water much more economically than other States in India. They have also undertaken large scale lining of canals and water courses to effect further economies in water use. In the years to come, one can expect sprinkler and drip irrigation also to develop.

From the relevant material set out above, it is seen that the culturable area of Punjab is larger by about 12,87,777 acres. The geographical area of Punjab in the Indus Basin is five times that of Haryana. Both the surface and ground water run-off in Punjab are significant. The population in Punjab according to the 1981 census figures is substantially higher than Haryana. So also the population density of Punjab is higher than that of Haryana.

The climate in both the States is more or less similar but the rainfall in Punjab is higher than that of

Haryana. The distribution of rainfall in the different districts of the two States has been shown in Statements I to IV appended hereto. While the whole of Punjab is in the semi-arid zone only 75% of Haryana is in semi-arid zone and the remaining 25% is in arid zone. Besides, four districts of Haryana, namely, Bhiwani, Gurgaon, Mohindergarh and Rohtak, have been identified to belong to drought-prone areas of the country. These four districts together cover 14,666 sq. kms. No part of Punjab is identified to belong to the drought-prone area.

The C.C.A. of canal systems of Punjab is 74.90 lakh acres as against 71.40 lakh acres of Haryana. The total area irrigated by Punjab is 67.77 lakh acres as against 42.07 lakh acres of Haryana. The canal water used per acre of actually irrigated land is 2.00 ft. in Punjab and 1.11 ft. in Haryana. The net area sown in Punjab is much more than that in Haryana which naturally boosts up the total cropped area in Punjab. Both the States are, however, surplus in food production and contribute to the national pool. As both the States mainly depend on irrigation, they make economic use of water which is a scarce commodity. Although in their pleadings both the States have contended that they desire to cultivate the whole of their culturable area it seems physically impossible to irrigate more than 90% of the culturable area. Since Punjab's rice production is almost three times that of Haryana, large quantity of water is consumed by Punjab on rice. Both the States are trying to make optimum use of their ground water resources.

While Punjab solely depends on the three Eastern Rivers for its water requirements, Haryana, besides receiving water from the three Eastern Rivers, gets water to the extent of 3.68 MAF from Yamuna which may in time to come be augmented by another 0.5 MAF. There appears no possibility of Haryana getting water from the Ganga. Every effort must therefore be made by the concerned States to put the waters below the rim stations to good use. Lining of canals in the two States is under progress to effect further economies in the use of water. Fortunately, both the States are using their water far more economically than any other State in the country. With the waters below the rim stations being harnessed and put to use, both States will be able to irrigate more lands. The canal water used by Haryana per acre of irrigated area is more than Punjab even though Punjab uses a large quantity of water for rice cultivation.

Out of the total quantity of utilisable supplies below the rim stations, we have thought it just, fair and reasonable to allocate 1.11 MAF to Punjab and Haryana, leaving the balance of 0.74 MAF (1.85 MAF - 1.11 MAF) of utilisable water below the rim stations for further exploitation in future. Of the utilisable supplies below the rim stations indicated earlier, we think that the same can be utilised by Punjab through the Sirhind Feeder and through gravity by construction of a barrage downstream of Madhopur or by pumping the same at any suitable location. The water can be utilised by Haryana also either through pumping at the tail-end of the Sirhind Feeder by arrangement with Rajasthan or by adjustment through Beas-Sutlej Link which has the capacity to take additional quantity of water by construction of appropriate engineering work at a suitable site. In our view, concerted action would be necessary on the part of the concerned States to make use of the available supplies below the rim stations to meet their growing irrigation needs.

We have pointed out earlier that the concept of equitable apportionment of river waters must depend on several factors peculiar to each river system and the backdrop in which the said question arises for determination. The Helsinki Rules 1966 state that each basin State is entitled to a reasonable and equitable share in the beneficial use of the waters of an inter-State drainage basin and what is reasonable and equitable must depend on all the relevant factors in each particular case. The special and peculiar features of each case would have to be weighed to determine what is just, fair, equitable and reasonable in a given case. No hard and fast rule or mathematical formula can be evolved to decide what is just and reasonable as it would vary from case to case for no two cases can have identical features. It would, therefore, depend on the best and informed judgment of the Tribunal based on the particular and peculiar features of each case. We have indicated what we consider to be the relevant factors to be taken into account for the purpose of effecting an equitable distribution. When the more important of these factors are tabulated, the following picture emerges:-

Particulars	Punjab	Haryana	Ratio Punjab/ Haryana
Geographical area	50,362 sq.km.	44,222 sq.km.	1.14 : 1
Indus Basin area	50,304 sq.km.	9,939 sq.km.	5 : 1
Culturable area	1,06,53,231 acres	93,65,454 acres	1.14 : 1
Water require- ments.	19.25 MAF	16.92 MAF	1.14 : 1
Population (1981 Census)	16.79 millions	12.92 millions	1.30 : 1
Population density	331 per sq. km.	291 per sq.km.	1.14 : 1
CCA of Canal systems	74.90 lakhs acres	71.40 lakhs acres	1.05 : 1
Arid areas	Nil	25%	
Rainfall	70.77 cms	55.69 cms	1.27 : 1

While weighing the above, we must bear in mind two important aspects, namely, (i) Haryana was not receiving and utilising the full quantum of water allocated to it under the 1976 award and the 1981 agreement because of the non-completion of the SYL Canal; otherwise the picture would have been different particularly in regard to extension of irrigation in its Southern region and drought prone areas; and (ii) Haryana is receiving 3.68 MAF of Yamuna Waters which is likely to go up by another 0.5 MAF, while Punjab has no other source except Ravi-Beas waters. After bestowing our careful and anxious consideration on all the relevant aspects including those tabulated above, we are of the view that it would be fair, reasonable and equitable to allocate the surplus available supplies calculated on the 1921-60 series

totalling 7.72 MAF plus 1.11 MAF (Flow below rim stations) = 8.83 MAF as under:-

Punjab	5.00 MAF
Haryana	3.83 MAF

The fluctuations in the availability of water in the Ravi-Beas System in any particular year will require the shares of the two States to be increased or decreased, as the case may be, pro rata on the above basis.

CHAPTER XXIII

CONCLUSIONS

In the light of the preceding discussion, our conclusions on the two points referred to us are as under:-

- I. Re: Item No. 1 of the Reference
(Paragraph 9.1 of the Punjab Settlement).

The result of our verification is:

The quantum of water used by the farmers and other consumptive users of the three party States as on 1st July 1985, was as under:

Punjab: 3.106 MAF (This is inclusive of 0.352 MAF of permissive use allowed by Rajasthan under clause (ii) of the 1981 agreement and subject thereto but is exclusive of the pre-partition use of 1.98 MAF as well as 0.32 MAF in Shah Nehar Canal areas.)

Haryana: 1.620 MAF.

Rajasthan: 4.985 MAF. (This figure is exclusive of the pre-partition use of 1.11 MAF.)

- II. Re: Item No. 2 of the Reference
(Paragraph 9.2 of the Punjab Settlement).

On adjudication of the claims of Punjab and Haryana regarding the shares in their remaining waters, we decide and allocate as under:-

Punjab: 5.00 MAF

Haryana: 3.83 MAF

We direct that in the event of fluctuations in the availability of water in the Ravi-Beas System in any particular year, the shares of the aforesaid two States shall be

increased or decreased pro-rata on the above basis.

Note: The shares of Rajasthan in the surplus waters fixed at 8.60 MAF and that of Delhi Water Supply fixed at 0.2 MAF under the 1981 agreement shall remain unaffected. But the demand of Delhi Administration for allocation of additional supply over the existing use of 0.2 MAF is rejected as falling outside the scope of the Reference to this Tribunal.

In answering the two points referred to us, we have strictly confined ourselves to the terms of reference and paragraphs 9.1 and 9.2 of the Punjab Settlement but we think it would not be out of place now to mention that paragraph 9.3 of the Punjab Settlement envisaged the construction of the S.Y.L. Canal and its completion by 15th August 1986. We are informed that the canal is complete in the Haryana area and it is under construction in the Punjab area. This canal is the lifeline for the farmers of Haryana and unless it is expeditiously completed, Haryana will not be in a position to utilise the full quantum of water allocated to it hereunder. It is, therefore, necessary that all concerned should make a concerted effort to see that the construction of the canal is completed at an early date without loss of further time.

We have allocated only a portion of the waters below the rim stations as we think that the said quantity can be used by installation of pumps as a short term measure but the remaining waters below the rim stations also need to be harnessed on a long term basis by installation of appropriate engineering works at suitable sites by the concerned States with the help of the Government of India. Fortunately, the concerned States have excellent teams of experts who can put in a co-operative effort to draw up and implement the necessary project schemes with the advice and assistance of the Government of India at an early date with a view to harnessing every drop of utilisable water available below the rim stations.

The Governments of Haryana, Punjab and Rajasthan shall bear their own costs of appearing before the Tribunal. The expenses of the Tribunal shall be apportioned and paid by the three States in equal shares.

Sd. V. Balakrishna Eradi, J.
CHAIRMAN

NEW DELHI
DATED: 30th January, 1987.

Sd. A.M. Ahmadi, J.
MEMBER

Sd. P.C. Balakrishna Menon, J.
MEMBER

ACKNOWLEDGMENTS

Every task must come to an end and so has this one. The time to recognise our indebtedness and express our thanks to those who toiled and laboured to make this Report possible has arrived. At the outset we desire to express our deep appreciation for the valuable advice, assistance and guidance given to us by our Assessors Shri R.Ghosh and Shri K.V. Rama Rao whose knowledge and experience in technical matters were of immense help to us. We are happy to say that their views were resonant with ours which made the otherwise difficult task relatively easy. Both our Assessors are in complete agreement with our approach indicated in the Report.

Our thanks are specially due to the Registrar Shri R. Subba Rao and the Assistant Registrars who toiled hard to set up the office within record time realising the urgency of our task and ran the office establishment with commendable efficiency. We also thank the other officers and employees on the establishment of this Tribunal and our Personal Secretaries/Stenographers for the hard work put in by them sometimes on closed Saturdays and Sundays also, which has made it possible for us to present this report at an early date.

Our thanks are also due to the officers of the Ministry of Water Resources, the officers of the BBMB, particularly Shri P.A.Kapoor and Shri S.K.Garg, CWC and the C.G.W.B. for readily making the statistical data and other records available at short notice and for rendering such assistance as was needed by the Tribunal.

We would be failing in our duty if we omit to acknowledge the very valuable assistance and cooperation extended by the teams of counsel representing the different States and the Engineers assisting them. But for their industry and devotion we would not have received the able assistance required in a matter like the present one. We thank them, one and all, most sincerely.

APPENDIX 1

MINISTRY OF WATER RESOURCES

New Delhi, the 2nd April, 1986

NOTIFICATION

S.O. 169 (E) - In exercise of the powers conferred by sub-section (1) and sub-section (2) of section 14 of the Inter-State Water Disputes Act, 1956 (33 of 1956), the Central Government hereby constitutes the Ravi and Beas Waters Tribunal for the verification and adjudication of the matters referred to in paragraphs 9.1 and 9.2, respectively, of the Punjab Settlement and the Tribunal shall consist of the following members, namely:-

1. Shri Justice V. Balakrishna Eradi, ...Chairman
Judge of the Supreme Court.
2. Shri Justice A.M. Ahmadi, ...Member
Judge of the Gujarat High Court.
3. Shri Justice P.C. Balakrishna Menon, ...Member
Judge of the Kerala High Court.

2. The headquarters of the Tribunal shall be at New Delhi.

(No.15 (2) / 85-I.T)

RAMASWAMY R. IYER, Secy.

APPENDIX 2

No.F.15(2)/86-I.T.
 Government of India
 Ministry of Water Resources

...
 REFERENCE

In exercise of the powers conferred by sub-section (3) of Section 14 of the Inter-State Water Disputes Act, 1956 (33 of 1956), the Central Government hereby refers the following matters specified in paragraphs 9.1 and 9.2 of the Punjab Settlement to the Ravi and Beas Waters Tribunal constituted under sub-section (1) of section 14 of the said Act, for verification and adjudication, namely:-

1. The farmers of Punjab, Haryana and Rajasthan will continue to get water not less than what they were 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 Tribunal.
 2. The claim of Punjab and Haryana regarding the shares in their remaining waters will be adjudicated by the Tribunal."
2. The Tribunal shall submit its report within a period of six months from the date of this reference.

Sd/-

(RAMASWAMY R. IYER)

SECRETARY TO THE GOVERNMENT OF INDIA

New Delhi,

Dated the 2nd April, 1986

 12th Chaitra, 1908 (Saka)

To

The Chairman,
 Ravi and Beas Waters Tribunal,
 New Delhi.

Note:- The period for submission of the Report was extended.

APPENDIX 3
(See Chapter XXI, Page 217)

TABLE I

SAMPLE WATER ACCOUNTS OF B.B.M.B.

PERIOD 21.5.83 to 31.5.83

<u>Water Account of Sutlej waters and Ravi-Beas waters (diverted through BSL)</u>		Cusec days
1. Releases from Nangal		228043
2. Deliveries in Sirhind Canal		102074
3. B.D.C.		553
4. Escapages below Ropar		18488
5. Total supply available at upstream Ropar Headworks		121115
6. Downstream Ropar which is above 14000 cusec authorised discharge of SC Group(-)		1391
7. Downstream Ropar for Harike out of BSL Diversion.		11000
8. Net supply upstream Ropar (5)-(6)-(7)		108724
9. Pumps & Siphons between Nangal & Ropar(+)		352
10. Total upstream Ropar Head Works 8+9		109076
11. BML at Head		108829
12. Total supply reaching upstream Ropar 10 + 11		217905
13. BSL Diversion released for Haryana & Delhi		52740
14. Balance shareable Sutlej supply (12)-(13).		165165
15. Losses in Channels upto Rajasthan contact points		1199
16. W.J.C. contribution		-
17. Net Sutlej Shareable supply		163966
18. % share of SC Group		55.58
19. Share of SC Group		91132
20. % share of BML Group		44.42
21. Share of BML Group		72834
22. Share of BML Group including losses in Raj channels upto their contact points as then		74033
23. BML at head excluding W.J.C.		74033

Rajasthan Via Haryana

24. Shareable supply	163966
25. FCI consumptive use 16 C/S per day	176
26. Total shareable supply	164142
27. % share	3.44
28. Share	5646
29. Deliveries	7810
30. Excess or shortage	+2164
31. Cumulative excess or shortage	+2164

Rajasthan via Punjab

32. % share	5.83
33. Share	9569
34. Deliveries	17636
35. Excess or shortage	+8067
36. Cumulative excess or shortage	+8067

Haryana contact points

37. Total shareable supply of Sutlej waters	163966
38. % share	34.37
39. Share	56355
40. Dubwali drinking water supplies	33
41. Losses in channels upto Raj, contact points	1199
42. Net share in Sutlej waters (39-40+41)	57521
43. BSL diversion for Haryana only restricted to safe carrying capacity.	45867
44. Total share at Haryana contact points (42 + 43)	103388
45. Indent of Haryana contact points	112442
46. Effect of Delhi supplies & WJC contribution	3850
47. Net Indent (45-46)	108592
48. Indent or share whichever is less	103388
49. Supplies at RD 390 BML	64098
50. Losses upto tail BML (-)	385
51. Withdrawal by Pb through Dhanouri feeder, Jhunir minor and minor outlets (-)	742
52. Net deliveries at RD 390 BML (49-50-51)	62971
53. Supplies at RD 160 Narwana Branch	39600
54. Total deliveries (52+53)	102571

55. Effect of Delhi supplies and WJC contribution	(-)	3850
56. Net deliveries		98721
57. Excess or shortage	(-)	4667
58. Cumulative excess or shortage	(-)	4667

Net Haryana

59. (i) Share in Sutlej water		51875
(ii) Share in BSL water		45867
(iii) Total		97742
60. Deliveries (i) Sutlej water		49711
(ii) BSL water		41200
(iii) Total		90911
61. Excess or shortage		
(i) Sutlej water	(-)	2164
(ii) BSL water	(-)	4667
(iii) Total	(-)	6831
62. Cumulative Excess or shortage		
(i) Sutlej water	(-)	2164
(ii) BSL water	(-)	4667
(iii) Total	(-)	6831

Punjab including Rajasthan

63. Share (37-42+41)		107644
64. Indent		110350
65. Indent or share whichever is less		107644
66. Deliveries (12-54)		115334
67. Excess or shortage		+ 7690
68. Cumulative excess or shortage		+ 7690

Net Punjab

69. Share (65-33)		98075
70. Deliveries (66-34)		97698
71. Excess or shortage	(-)	377
72. Cumulative excess or shortage	(-)	377

WATER ACCOUNT OF B.S.L.

1. BSL Diversion		73900
2. Share of Haryana in Ravi-Beas Water		48890
3. Actual water released for Haryana		48890
4. Supplies for DWSU		3850

5. Supplies for D.E.S.U.	
6. Supplies utilised by Haryana through Gurgaon Canal including losses.	
7. Net for DESU (5-6)	-
8. Total for DWSU+DESU (4+7)	3850
9. Supply released out of BSL Diversion for passing in BML (3) + (8)	52740
10. Carrying capacity of BML at head	123750
11. Share of BML out of Sutlej waters	74033
12. Capacity in BML for BSL Diversion	49717
13. Capacity at Head BML for passing Haryana's share in BSL Diversion.	45867
14. Share of Haryana restricted to carrying capacity in BML or indent whichever is less.	45867
15. Supplies released d/s Nangal dam for Harike out of BSL Diverted water.	11000

WATER ACCOUNT OF RAVI BEAS WATERS

A. Ravi Waters

	Cusec days
i) Inflow of Ravi u/s Madhopur	181995
ii) D/S Madhopur	13868
iii) Prepartition uses of	
a) Kashmir Canal	1100
b) UBDC	35200
c) Total (a+b)	36300
iv) Surplus Ravi Waters (i)-(ii)-(iii(c))	131827
v) Share of J&K @ 0.65 MAF annual	5390
vi) Diversion of Ravi to Beas	126533
vii) Losses due to diversion @ 10% of (vi)	12653
viii) Net surplus Ravi component (iv)-(v)-(vii)	113784

B. Beas Waters from Pong

i) Releases from Pong reservoir	97525
ii) Gains/losses between Pong & Mandi Plain	-5500
iii) Shareable Beas Waters (i)+(ii)	92025
iv) Pre-partition uses of:	
a) Shah Nehar Canal	6710
b) Eastern Canal	12540
c) Bikaner Canal	13640
d) Total a+b+c	32890

v) Net Surplus waters of Beas from Pong (iii) - (iv)d	59135
--	-------

C. Beas Diverted Waters from Bhakra reservoir

i) Releases d/s Ropar	11000
ii) Releases for Delhi Water Supply	3850
iii) Releases for Haryana	48890
iv) Total shareable Beas diverted waters (i) + (iii)	59890

D. Total Surplus Ravi Beas Waters

i) Surplus Ravi component A(viii)	113784
ii) Surplus Beas Water from Pong B (v)	59135
iii) Beas diverted waters C (iv)	59890
iv) Total surplus Ravi Beas Waters (i) + (ii)+ (iii)	232809

E. Water Account of Rajasthan

i) Share of Rajasthan out of surplus RB Waters D (iv) x 4655	9500	114076
ii) Pre-partition use of Bikaner Canal		13640
iii) Total share of Rajasthan (i)+(ii)		127716
iv) Indent of Rajasthan (RF+BC)		123220
v) Indent or share whichever is less		120150
vi) Deliveries to Rajasthan		
a) RF		91900
b) BC		29075
c) Total (a) + (b)		120975
vii) Excess/shortage		+825
viii) Cumulative excess/shortage		+825

F. Water Account of Punjab

i) Share of Punjab out of surplus Ravi Beas Waters D(iv) x 2850	9500	69843
ii) Pre-partition uses of UBDC+Shah Nehar Canal + Eastern Canal.		54450

iii) Total share of Punjab at Madhopur & Harike including Shah Nehar Canal.	124293
iv) Total indent of Punjab	96517
v) Indent or share whichever is less	96517
vi) Deliveries to Punjab	
a) UBDC	26988
b) Sirhind Feeder	49208
c) Eastern Canal (Total)	13957
d) Makhu Canal group	960
e) Shah Nehar Canal	5392
f) Kanianwali minor	242
g) Total a+b+c+d+e+f	96747
vii) Excess/shortage to Punjab at Madhopur & Harike including Shah Nehar Canal	+230
viii) Cumulative excess/shortage to Punjab at Madhopur and Harike including Shah Nehar Canal.	+230
ix) Utilisation by Punjab out of Beas diverted waters	6299
x) Overall excess/shortage	6529
xi) Over all cumulative excess/shortage	6529

G. Water Account of Haryana

i) Share of Haryana out of surplus Ravi Beas Waters D(iv)x1995	

	9500
ii) Share of Haryana restricted to carrying capacity of BML or Indent whichever is less	48890
iii) Deliveries	45867
iv) Excess/shortage	-4667
v) Cumulative excess/shortage	-4667

TABLE-2 (Sheet 1) (See Chapter XXI)

APPENDIX-4

STATEMENT OF USES OF RAVI & BEAS WATERS

Period	1.7.80	1.7.81	1.7.82	1.7.83	1.7.84	Average
	to 30.6.81	to 30.6.82	to 30.6.83	to 30.6.84	to 30.6.85	
	<u>M.A.F.</u>					
<u>I. Share of the States</u>						
1) Total Shareable Supply including actual drawals by Delhi	15.186	15.741	16.126	16.111	12.987	15.230
2) Actual drawals by Delhi	0.447	0.388	0.553	0.465	0.542	0.479
3) Pre-partition uses of Punjab, J&K and Rajasthan including Shah Nehar	3.450	3.450	3.450	3.450	3.450	3.450
4) Share of J&K in surplus Ravi & Beas waters	0.650	0.650	0.650	0.650	0.650	0.650
5) Surplus Ravi & Beas waters for Punjab, Haryana & Rajasthan	10.639	11.253	11.473	11.546	8.345	10.651
<u>Shares out of total Ravi & Beas waters</u>						
6) Punjab						
a) (i) Pre-partition	1.980	1.980	1.980	1.980	1.980	1.980
(ii) Shah Nehar Canal	0.32	0.32	0.32	0.32	0.32	0.32
b) Surplus R&B waters						
(i) 4.22 MAF in a meanyear	2.751	2.910	2.966	2.986	2.158	2.754
(ii) 0.6 MAF permissive use of Rajasthan's share	0.391	0.414	0.422	0.424	0.307	0.392
(iii) Sub total	3.142	3.324	3.388	3.410	2.465	3.146
c) Total Punjab	5.442	5.624	5.688	5.710	4.765	5.446

TABLE-2 (Sheet 2)

Period	1.7.80	1.7.81	1.7.82	1.7.83	1.7.84	Average
	to 30.6.81	to 30.6.82	to 30.6.83	to 30.6.84	to 30.6.85	
	<u>M.A.F.</u>					
7) Haryana - Surplus R&B waters	2.282	2.413	2.461	2.476	1.790	2.284
8) Rajasthan						
a) Pre-partition	1.110	1.110	1.110	1.110	1.110	1.110
b) Surplus R&B waters @ MAP in mean year	5.215	5.516	5.624	5.660	4.090	5.221
c) Total Rajasthan	6.325	6.626	6.734	6.770	5.200	6.331
9) Jammu & Kashmir						
a) Pre-partition	0.040	0.040	0.040	0.040	0.040	0.040
b) Surplus R&B waters @ 0.65 MAP fixed	0.650	0.650	0.650	0.650	0.650	0.650
c) Total J&K	0.690	0.690	0.690	0.690	0.690	0.690
10) Delhi actual uses	0.447	0.388	0.553	0.465	0.542	0.479
11) Total distributable waters 6(c)+(7)+(8)+(9)+(10)	15.186	15.741	16.126	16.111	12.987	15.230
<u>II. Deliveries at Canal Heads</u>						
12) Punjab canals including Rajasthan at tail Sirhind feeder	7.046	7.204	7.436	7.452	6.121	7.052
13) Rajasthan via Punjab at tail Sirhind feeder	0.815	0.830	0.826	0.845	0.653	0.794
14) Share of Rajasthan via Punjab in Sutlej waters or delivery whichever is less	0.670	0.655	0.713	0.718	0.610	0.673
15) Difference (13)-(14) to be deducted from Punjab's utilisation and added to Rajasthan's utilisation	0.145	0.175	0.113	0.127	0.043	0.121

TABLE-2 (Sheet 3)

Period	1.7.80	1.7.81	1.7.82	1.7.83	1.7.84	Average
	to 30.6.81	to 30.6.82	to 30.6.83	to 30.6.84	to 30.6.85	
	<u>M.A.F.</u>					
16) Haryana	1.577	1.992	1.664	1.377	1.492	1.620
17) Rajasthan in Rajasthan feeder and Bikaner canal excluding Kanianwali minor	5.268	6.092	6.388	6.557	5.565	5.974
18) Jammu & Kashmir	0.162	0.149	0.140	0.163	0.153	0.154
19) Delhi	0.447	0.388	0.553	0.465	0.542	0.479
<u>III. Sutlej & Ravi-Beas component at Ferozepur</u>						
<u>Actual flows downstream Ropar</u>						
20) BSL water specifically released for Harike	0.554	0.315	0.622	0.449	0.418	0.472
21) BSL water which could not be delivered to Haryana	0.241	0.229	0.385	0.766	0.188	0.362
22) Sutlej water	0.784	0.931	0.992	1.493	0.305	0.901
23) Total (20)+(21)+(22)	1.579	1.475	1.999	2.708	0.911	1.734
24) Actual at Yusafpur	2.735	2.401	2.878	3.075	1.352	2.388
<u>Gains/losses between Ropar and Yusafpur</u>						
25) Total (24)-(23)	+ 1.156	+ 0.926	+ 0.379	+ 0.367	+ 0.441	+ 0.654
26) Sutlej water	+ 1.199	+ 0.963	+ 0.399	+ 0.469	+ 0.503	+ 0.707
27) Ravi & Beas waters	- 0.043	- 0.037	- 0.020	- 0.102	- 0.062	- 0.053
28) Sutlej component at Yusafpur	1.983	1.894	1.391	1.962	0.808	1.608

TABLE-2 (Sheet 4)

Period	1.7.80	1.7.81	1.7.82	1.7.83	1.7.84	Average
	to 30.6.81	to 30.6.82	to 30.6.83	to 30.6.84	to 30.6.85	
	<u>M.A.F.</u>					
29) Beas component at Yusafpur	0.752	0.507	0.987	1.113	0.544	0.781
30) Actual supplies at Mandi plain	8.694	8.986	9.034	9.498	7.268	8.696
31) Actual supplies reaching Harike	10.723	11.039	11.594	12.312	8.872	10.908
32) Gains/losses between Mandi plain and Harike (31)-(30)-(24)	- 0.706	- 0.349	+ 0.182	- 0.261	+ 0.252	- 0.176
33) Releases downstream of Harike	1.981	1.214	1.236	2.169	0.634	1.447
34) Supplies upstream of Ferozepur	2.560	1.542	1.422	2.302	0.928	1.751
35) Gains/losses between Harike and Ferozepur (34)-(33)	0.579	0.328	0.186	0.133	0.294	0.304
36) Gains/losses between Mandi plain and Ferozepur (32)+(35)	- 0.127	- 0.021	+ 0.368	- 0.128	+ 0.546	0.128
37) Total Ravi Beas component at Ferozepur	9.383	9.483	10.205	10.547	8.085	9.541
38) Sutlej component at Ferozepur (28)+ 50% of (36)	1.959	1.892	1.579	1.919	1.102	1.690
39) Downstream Ferozepur						
a) Proportionate Sutlej component	0.701	0.280	0.288	0.717	0.152	0.427
b) Proportionate Ravi Beas component	1.317	0.876	0.880	1.353	0.335	0.952
c) Total 39(a)+39(b)	2.018	1.156	1.168	2.070	0.487	1.380
40) Net Sutlej component used at Harike/ Ferozepur (38)-39(a)	1.258	1.612	1.291	1.202	0.950	1.263

TABLE-2 (Sheet 5)

Period	1.7.80	1.7.81	1.7.82	1.7.83	1.7.84	Average
	to 30.6.81	to 30.6.82	to 30.6.83	to 30.6.84	to 30.6.85	
	<u>M.A.R.</u>					
41) Ravi-Beas gains/losses between Mandi plain and Ferozepur used at Harike/Ferozepur (50% of 36)	- 0.064	- 0.010	+ 0.184	- 0.064	+ 0.273	+ 0.064
IV. <u>Uses by States</u>						
42) Delhi Surplus R&B waters	0.447	0.388	0.553	0.465	0.542	0.479
43) Jammu & Kashmir						
a) Pre-partition	0.040	0.040	0.040	0.040	0.040	0.040
b) Surplus R&B waters	0.122	0.109	0.100	0.123	0.113	0.114
c) Total J&K 43(a)+43(b)	0.162	0.149	0.140	0.163	0.153	0.154
44) Rajasthan						
a) Pre-partition	1.110	1.110	1.110	1.110	1.110	1.110
b) Surplus R&B waters						
i) in Rajasthan feeder and Bikaner Canal	4.158	4.982	5.278	5.447	4.455	4.864
ii) Excess received at tail end of Sirhind feeder over and above due Sutlej share of Rajasthan via Punjab (15)	0.145	0.175	0.113	0.127	0.043	0.121
iii) Total	4.303	5.157	5.391	5.574	4.498	4.985
c) Total Rajasthan 9(a)+9(b)	5.413	6.267	6.501	6.684	5.608	6.095
45) <u>Punjab</u>						
a) Total waters (Ravi Beas and others) delivered at canal heads	7.046	7.204	7.436	7.452	6.121	7.052

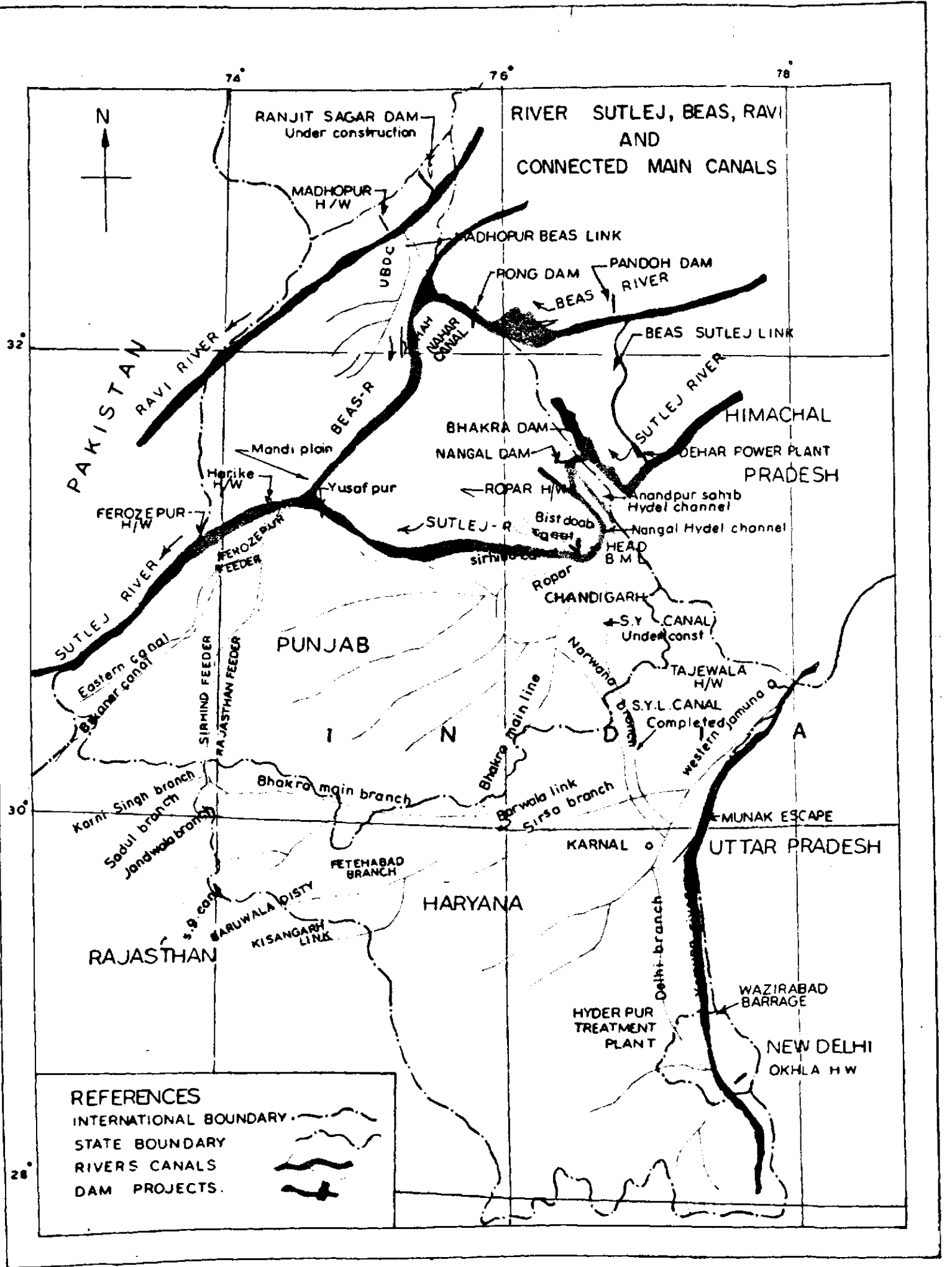
TABLE-2 (Sheet 6)

Period	1.7.80	1.7.81	1.7.82	1.7.83	1.7.84	Average
	to 30.6.81	to 30.6.82	to 30.6.83	to 30.6.84	to 30.6.85	
	<u>M.A.F.</u>					
b) <u>Less</u> excess supplied to Rajasthan at tail end of Sirhind feeder over and above due Sulej share of Rajasthan via Punjab (15)	0.145	0.175	0.113	0.127	0.043	0.121
c) <u>Less</u> net Sulej component used at Harike/Ferozepur (40)	1.258	1.612	1.291	1.202	0.950	1.263
d) <u>Less</u> Ravi Beas gains/losses between Mandi plain and Ferozepur (41)	- 0.064	- 0.010	+ 0.184	- 0.064	+ 0.273	+ 0.064
e) (i) Pre-partition share	1.980	1.980	1.980	1.980	1.980	1.980
(ii) Shah Nehar	0.320	0.320	0.320	0.320	0.320	0.320
f) Surplus Ravi Beas waters used by Punjab (a) - (b) - (c) - (d) - (e) (i) (ii)	3.407	3.127	3.548	3.887	2.555	3.304
comprising						
i) Punjab share (4.22 MAF) of surplus R&B waters	2.751	2.910	2.966	2.986	2.158	2.754
ii) Permissive use (0.6 MAF) of Rajasthan's share of surplus R&B waters	0.391	0.217	0.422	0.424	0.307	0.352
iii) Non-permissive use of surplus Ravi & Beas waters at Madhopur/Mandi plain (45(f)-6(iii))	0.265	-	0.160	0.477	0.090	0.198

TABLE-2 (Sheet 7)

Period	1.7.80	1.7.81	1.7.82	1.7.83	1.7.84	Average
	to 30.6.81	to 30.6.82	to 30.6.83	to 30.6.84	to 30.6.85	
	<u>M.A.F.</u>					
46) Shortage in deliveries of surplus R&B waters to Haryana (7)-(16)	0.705	0.421	0.797	..099	0.298	0.664
47) Position of deliveries of surplus R&B waters to Rajasthan 8(b)-44(b)111	- 0.912	- 0.359	- 0.233	- 0.086	+ 0.408	- 0.236
48) Shortfall in use by J&K of surplus R&B waters 9(b)-43(b)	0.528	0.541	0.550	0.527	0.537	0.536

+



PUNJAB - CLIMATE

Monthly Rainfall by Districts : Average of 5 years 1980-84 (Centimetres)

District	Janu- ary	Febr- uary	Mar- ch	Apr- il	May	June	July	Augu- st	Sept- ember	Octo- ber	Nov- ember	Dece- mber	Total
0	1	2	3	4	5	6	7	8	9	10	11	12	13
Gurdaspur	5.44	6.08	4.57	6.68	3.05	7.77	30.20	21.25	10.60	1.23	1.34	3.65	101.86
Amritsar	2.48	4.22	3.04	3.83	1.99	4.03	24.98	17.58	8.33	1.03	0.41	1.34	73.26
Kapurthala	2.39	3.62	3.29	3.77	2.63	3.89	17.67	12.26	9.59	0.33	0.43	1.43	61.30
Jalandhar	3.73	3.69	3.26	4.22	4.13	7.14	25.35	21.11	12.94	1.10	1.19	2.54	90.40
Hoshiarpur	4.13	5.57	3.56	3.14	2.15	6.26	25.15	20.09	8.26	1.18	0.94	2.91	83.34
Rupnagar	4.49	3.61	2.45	3.48	4.25	7.82	22.22	23.99	10.54	0.97	0.85	2.13	86.80
Ludhiana	3.38	3.12	2.15	2.18	1.71	4.65	20.81	18.55	11.45	1.02	0.42	2.27	71.71
Ferozpur	1.98	2.28	1.80	2.65	1.12	2.18	18.39	10.54	6.93	0.92	0.38	0.97	50.14
Faridkot	2.06	1.65	1.68	1.81	1.02	2.42	14.15	9.24	7.28	0.79	0.35	0.68	43.13
Bhatinda	1.33	1.29	0.90	2.28	0.54	1.41	11.03	8.58	4.68	0.54	0.12	0.38	33.08
Sangrur	3.71	2.09	1.09	3.45	1.66	2.63	19.44	15.10	5.35	0.82	0.33	2.42	58.09
Patiala	4.12	2.96	2.60	3.95	2.94	4.63	23.69	18.79	9.14	1.39	0.83	3.38	78.42

Source: Director of Land Records, Punjab

PUNJAB - CLIMATE

Average Annual Rainfall by Districts in Punjab (Centimetres)

District	1966	1970	1975	1978	1979	1980	1981	1982	1983	1984
0	1	2	3	4	5	6	7	8	9	10
Gurdaspur	101.71	92.63	94.43	90.31	91.16	115.50	94.40	94.60	104.90	100.01
Amritsar	92.94	59.46	54.29	54.27	51.19	86.98	54.27	54.40	65.78	104.66
Kapurthala	74.85	55.49	61.96	1.80	58.20	68.30	-	-	60.30	54.31
Jalandhar	89.71	77.14	64.85	64.56	66.63	87.39	63.63	61.10	115.33	120.41
Hoshiarpur	91.82	99.93	78.78	71.27	70.98	90.61	76.99	78.80	91.08	79.07
Rupnagar	75.55	98.34	86.62	81.57	60.99	75.90	75.39	77.60	127.74	77.66
Ludhiana	69.86	75.67	63.29	65.19	43.01	73.80	63.72	64.70	88.28	68.21
Ferozpur	49.82	23.23	34.97	35.98	38.65	65.62	36.15	36.50	58.90	53.55
Faridkot	⊙	⊙	41.06	42.59	30.53	61.14	42.31	42.90	50.01	29.28
Bhatinda	44.24	49.92	60.20	21.03	24.06	35.59	29.25	31.60	38.31	30.65
Sangrur	49.69	52.19	48.52	8.53	39.74	52.14	-	-	71.19	58.36
Patiala	56.47	55.56	66.02	64.07	48.88	83.57	66.50	68.10	104.30	69.62
PUNJAB	71.51	67.23	62.50	50.17	52.00	73.91	60.28	61.08	88.11	70.48

⊙ Data included in Ferozpur and Bhatinda Districts

Source: Director of Land Records, Punjab

HARYANA

Monthly Normal Rainfall by Districts : Average of 5 years(1979-83) (Millimetres)

Sl. No.	District	Jan-uary	Febr-uary	March	April	May	June	July	Aug	Sept-ember	Oct-ober	Novem-ber	Dec	Total
1.	Hissar	16.1	14.5	20.8	31.3	31.4	26.2	122.2	62.6	29.2	4.5	6.9	8.2	373.9
2.	Sirsa	8.5	20.0	18.9	20.3	23.7	12.0	95.2	47.7	20.0	3.0	16.0	4.7	290.2
3.	Bhiwani	16.2	15.1	18.6	21.3	21.0	25.1	110.0	76.9	14.0	7.6	5.7	5.6	337.1
4.	Gurgaon	17.5	15.1	23.8	21.2	44.7	69.7	213.5	159.4	49.6	8.3	8.9	7.3	639.0
5.	Faridabad	14.4	10.4	18.8	28.2	25.5	64.9	170.1	148.9	58.9	13.0	3.2	6.6	562.9
6.	Jind	14.3	21.5	15.5	31.5	35.7	22.6	121.4	94.4	48.8	0.0	5.7	6.9	418.3
7.	Mahendergarh	15.3	17.3	20.6	13.2	42.1	44.9	156.4	123.7	16.6	6.6	14.3	7.0	478.0
8.	Ambala	72.6	2.4	30.2	36.1	39.1	73.5	316.9	255.7	80.0	10.3	20.6	26.4	993.8
9.	Karnal	35.9	15.9	45.3	33.0	22.8	41.1	252.3	94.2	39.1	6.7	11.6	13.9	611.8
10.	Kurukshetra	33.8	17.2	37.1	32.4	21.1	45.4	214.0	104.9	51.4	4.9	14.9	12.2	589.3
11.	Rohatak	18.1	17.7	27.9	20.3	24.2	51.5	196.0	119.9	39.8	11.3	10.9	7.4	545.0
12.	Sonepat	24.8	19.4	40.9	28.8	32.1	77.5	292.7	226.8	60.2	15.0	12.5	12.7	843.4

Source: Statistical Abstract of Haryana 1984-85, page 76

Statement-IV

(See Chapter XXII - Page 285)

HARYANA
Average Annual Rainfall by Districts

(Centimetres)

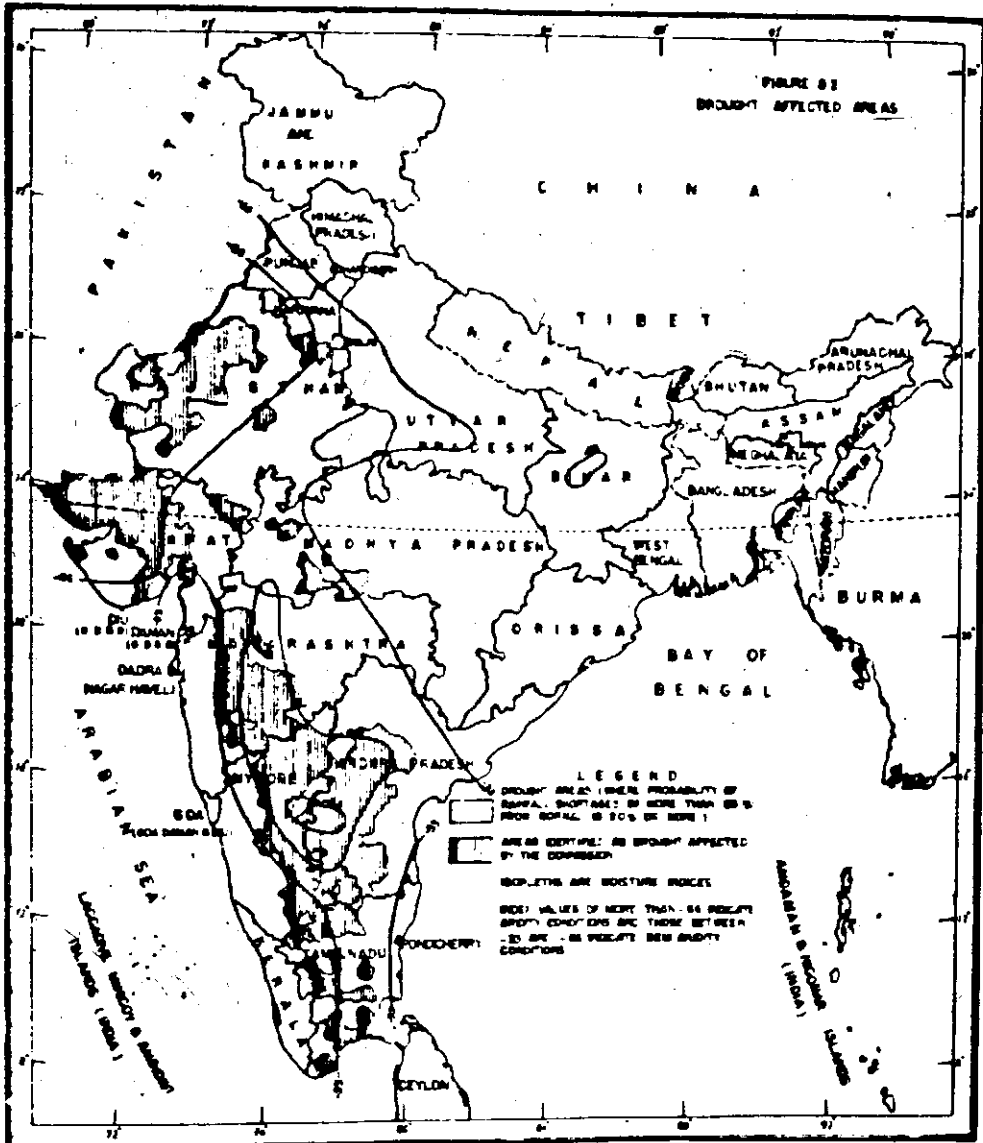
Sl. No.	Name of district	1980	1981	1982	1983
1.	Hisar	29.3	43.7	38.2	48.6
2.	Sirsa	21.3	31.3	35.4	42.5
3.	Bhiwani	30.1	28.5	33.4	57.1
4.	Gurgaon	54.1	58.4	60.9	106.0
5.	Faridabad	52.8	66.8	64.6	92.4
6.	Jind	31.8	20.3	30.4	80.2
7.	Mahendergarh	54.6	44.4	46.5	59.9
8.	Ambala	96.7	90.2	91.1	140.8
9.	Karnal	83.5	57.7	48.5	68.5
10.	Kurukshetra	60.0	63.3	43.6	83.8
11.	Rohtak	46.9	53.1	58.5	83.7
12.	Sonepat	101.4	59.5	86.6	126.9

Source: Statistical Abstract of Haryana 1984-85,
page 77

APPENDIX 10

(See Chapter XXII, page 285)

DROUGHT AFFECTED AREAS



Source - Report of the Irrigation Commission Vol.I

Figure 8.2

APPENDIX 11

1955 AGREEMENT/DECISION

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

1. The supplies both flow and storage in the rivers Ravi and Beas over and above the actual prepartition based on the mean supplies in the rivers, shall be allocated as under:

Share of Punjab	5.90 MAF
Share of Kashmir	0.65 MAF
Share of Rajasthan	8.00 MAF
Share of PEPSU	1.30 MAF

Total	15.85 MAF

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.

The distribution of flow supplies shall be in the same ratio as that of allocation mentioned above.

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 can not arrive at an agreement of this issue.

The proposed capacity of Madhopur-Beas Link may be increased from 8000 to 10,000 cusecs.

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

It is left to each State 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).

APPENDIX 12

GOVERNMENT OF INDIA
MINISTRY OF IRRIGATION AND POWER

NEW DELHI, dated the 17th June, 1970

NOTIFICATION

No.17/152/68-B&B.

WHEREAS the question of allocation of the cost of Beas Project was considered in the context of the Inter-State Agreement 1955 on the development and utilisation of surplus Ravi Beas Waters over and above actual pre-partition utilisations in the 3rd meeting of the erstwhile Beas control Boards held on the 23rd November, 1962 and in pursuance of the decision taken therein, Dr. A.N. Khosla was requested to examine the points raised by the Rajasthan Government and to make recommendations regarding allocation of cost of Beas Project.

AND WHEREAS pending receipt of the recommendation the Beas Control Board at its 6th meeting held on the 13th December, 1963 adopted the following Ad hoc percentage of total-cost, as shares of erstwhile Punjab and Rajasthan.

	<u>Erstwhile Punjab</u>	<u>Rajasthan</u>
Unit I	85%	15%
Unit II	32%	68%

AND WHEREAS after Dr. Khosla gave his recommendations the opinion of participating State Government on the same were elicited,

AND WHEREAS the subject also came up for consideration in the 2nd meeting of the Beas Construction Board held at New Delhi on the 29th April, 1970 under the Chairmanship of the Minister for Irrigation and Power in which the Government of Punjab, Haryana, Rajasthan and Himachal Pradesh were also represented and it was decided as under:-

"As a result of further discussions on this point and as agreed to by the Punjab representatives,

the Board decided that the Central Govt. may be requested to finally determine the shares of the partner States in the cost of the Beas Project on the basis of the recommendations by Dr. Khosla, after giving the due consideration to the views of Punjab in this matter which were being communicated by Punjab Govt. to the Ministry of irrigation and Power."

NOW THEREFORE, after duly considering the views of Punjab Government, since received, on the recommendations of Dr. Khosla and taking into account further recommendations of Dr. Khosla the Government of India have decided as under:-

(a) The cost of the Beas Project Unit I and II will be allocated between the erstwhile State of Punjab (including Haryana) and Rajasthan in the following ratio:-

	Punjab (Erstwhile)	Rajasthan
Unit I (Irrigation Component)	85%	15%
(Power Component)	80%	20%
Unit II (Both Irrigation & Power Component)	41.5%	58.5%

(b) As regard the sharing the cost between Punjab and Haryana the present ad hoc ratio 60:40 will continue, till an agreed ratio is arrived at finally.

(c) Later on, when a storage work on Ravi is taken up, its cost together with that of the Beas Project may be allocated to the partner States.

By order and in the name
of the President of India

Sd/-
(V.V. Chari)
Secretary to the Govt. of India

APPENDIX 13

GOVERNMENT

(Bharat Sarkar)

Ministry of Agriculture and Irrigation
 (Krishi Aur Sinchai Mantralaya)
 (Department of Irrigation)
 (Sinchai Vibhag)

New Delhi, the 24th March, 1976

NOTIFICATION

S.O. 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 31st March, 1970.

AND WHEREAS while at the time of signing 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 and Kashmir	0.65 MAF

	15.85 MAF

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 reorganisation 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 successor 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 (i) 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.

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 (31 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 whereof 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

APPENDIX 14

1981 AGREEMENT

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 31st 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 & 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 and Kashmir	0.65 MAF

	15.85 MAF

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

WHEREAS the Central Government issued a notification on 24th March, 1976, allocating 3.50 MAF of the waters becoming available as a result of Beas Project to Haryana and the balance not exceeding 3.50 MAF to Punjab out of the total surplus Ravi-Beas waters of 7.20 MAF falling to the share of erstwhile State of Punjab after setting aside 0.20 MAF for Delhi drinking water supply; and

WHEREAS the Punjab Government sought a review of the aforesaid notification for increasing the allocation of 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 24th 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 Re-organisation 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 speedily and optimum utilisation of waters of the Ravi and Beas Rivers and also having regard to the imperative need to resolve speedily the difference 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 pre-partition uses of 3.13 MAF and transit losses in the Madhopur Beas link of 0.26 MAF the net surplus Ravi-Beas waters according to the flow series 1921-60 is 17.17 MAF as against the corresponding figures 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 reallocated 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 J & K.	0.65 MAF

	17.17 MAF

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 and 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 utilise its full share, Punjab, shall be free to utilise the waters surplus to Rajasthan's requirements. As Rajasthan will soon be able to utilise its share Punjab shall make adequate alternative arrangements expeditiously for irrigation of its own lands by the time Rajasthan is in a position to utilise 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 hinderance 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 Beas management Board would be binding in so far 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 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 cooperate fully and shall promptly carry out day-to-day directions of the Bhakra Beas management Board 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 the 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 former Chairman, Central Water Commission.

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.

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 cooperate fully to enable Central Govt. 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 Governments for surveys, investigations and constructions of the Link canal and appurtenant works in Punjab territory. Whereas 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 cost, the parties shall abide by 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 work being carried out in Punjab territory.

(v) The Agreement reached in paras (i) to (iv) above shall be implemented in full by the Government of Haryana, Rajasthan and Punjab. If any signatory States 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 case 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 24th 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 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 31st December, 1981.

Sd/-
(BHAJAN LAL)
Chief Minister of
Haryana.

Sd/-
(SHIV CHARAN MATHUR)
Chief Minister of
Rajasthan

Sd/-
(DARBARA SINGH)
Chief Minister of
Punjab

In presence of:

Sd/-
(Indira Gandhi)
PRIME MINISTER OF INDIA

APPENDIX 15

LIST OF EXHIBITS FILED BY THE STATE OF HARYANA

- H-1 Statement of Claims of the State of Haryana.
- H-2 Volume - I, Annexures I to XXIV.
- H-3 Volume-II, Annexures XXV to XXXI.
- H-4 Volume-III, Annexures XXXII to XXXIII.
- H-5 Volume - IV, Annexures XXXIV to XLIV.
- H-6 Utilisation of Ravi Beas Waters by partner States by taking the shareable Sutlej Waters and gains/flows in Sutlej Plain as committed use by the Punjab.
(Kept on record subject to orders of the Tribunal)
- H-7 Bhakra Beas Management Board's waters accounts for the years 1980-81 to 1984-85. (Kept on record subject to orders of the Tribunal).
- H-8 Details/statements of utilisation of surplus Ravi Beas Waters by partner States for the year 1980-81 to 1984-85. (Kept on record subject to orders of the Tribunal).
- H-9 Statement showing Gross/Net use of surplus Ravi and Beas Waters in MAF during the years 1980-81 to 1984-85 with propositions and list of dates and events etc.
- H-10 Inter-State Water Disputes Act, 1956, Reference dated 25-1-1986 and Amendment Act dated 02-04-1986.
- H-11 The River Boards Act.
- H-12 Comparative Statements in support of the statements of claims.
- H-13 Extract of Beas Project Report.
- H-14 Compilation containing the decisions of the U.S. Supreme Court.
- H-15 Extract from the Indus Basin Working Party-Draft outline as prepared by the Indian Designee.
- H-16 CMP No.23/H/RBWT/86: An application for production of certain documents by the Union of India and/or State of Punjab.
- H-17 Extract from Haryana Development Committee Report.
- H-18 Extract from the Food Committee on land and water use etc.
- H-19 Report of the Committee on the utilisation and development of the Ravi and Beas Waters in Punjab and Haryana (Mitra Committee).

- H-20 Comparative Statement on recommendations of the Chairman, Central Water Commission with comments of Haryana Govt., comments of Punjab Government and comments of Haryana Govt. on the comments of Punjab Government.
- H-21 Note for consideration of the Ad-hoc, Advisory Committee on Beas Project Unit-II (Pong Dam).
- H-22 Inflow of river Ravi and Beas and utilisation at various places.
- H-23 Compilation on Punjab Vidhan Sabha Debates of March 31, 1982.
- H-24 Compilation on Ground Water.
- H-25 List of documents of irrigation intensity etc.
- H-26 List of documents on Ganga Waters etc.
- H-27 Details/Distribution of remaining waters.
- H-28 Reply of State of Haryana to the claim of Punjab and Rajasthan under Clause 1 of the Reference.
- HR-I Rejoinder by the State of Haryana to the reply of the State of Punjab to the Claim of Haryana under paragraph 2 of the Reference.
- HR-II Annexures to the Rejoinder by the State of Haryana to the reply of State of Punjab to the claim of Haryana under paragraph 2 of the Reference.
- H-29 Written Submissions filed by the State of Haryana dated 22.12.1986.

APPENDIX 16

LIST OF EXHIBITS FILED BY THE STATE OF PUNJAB

- P-1 Written submissions on behalf of the State of Punjab in relation to para-1 of the Reference with Annexures.
- P-1(a) Statement of Claim by the State of Punjab.
- P-2 Annexures to the Written Submissions.
- P-3 Reply of the State of Punjab of the Statements of case of the State of Haryana on Point No.2.
- P-3(a) CMP No.20/P/RBWT/86: An application for elaboration of pleading filed by the State of Punjab and reply of State of Haryana with Order dated 5-8-1986.
- P-4 List of Annexures to the reply of the State of Punjab of the Statement of case of the State of Haryana on Point No. 2.
- P-5 Additional documents referred to in the pleading by the State of Punjab.
- P-6 List of Annexures of reply to the State of Punjab on Rejoinder by the State of Haryana to the reply of the State of Punjab to the claim of Haryana under para 2 of the Reference.
- P-7 Explanatory notes to the flow charts of Beas river supported by the Punjab Vidhan Sabha debates and Punjab Government stand and White Paper etc.
- P-8 Reply of the State of Punjab to the Statement of the case of the State of Rajasthan on Point No.2.
- P-9 List of Annexures of the reply of State of Punjab to the Statement of case of the State of Rajasthan on Point No.2.
- P-X Written Statement in Suit No.1/79, Supreme Court alongwith Bhakra Nangal Agreement 1959 & Report of Haryana Development Committee with Annexures.
- P-10 List of Documents on Project.
- P-11 Working papers on studies for the use of Saline Water in the Command areas of Irrigation Project, Haryana etc.
- P-12 Table showing Indian Designee's formulation for comprehensive long range plan for most effective utilisation of the water resources of Indus Basin.
- P-13 Extract from Rajya Sabha Proceedings for the period 20-3-1986.
- P-14 River Valley and Basin district-wise.

- P-15 Statement showing percentage of gross area irrigated from Canal, Wells and other sources in the State of Punjab and Haryana during the year 1983-84 etc.
- P-16 Indira Gandhi Nehar project (Rajasthan Canal) Stage - II.
- P-17 Minutes and Agreements on the remaining waters etc. in reply to H-27.
- P-18 Written Submissions of the State of Punjab filed on 8.12.1986.
- P-19 Additional Written Submissions filed by the State of Punjab on 5.1.1987.

APPENDIX 17

LIST OF EXHIBITS FILED BY THE STATE OF RAJASTHAN

- R-1 Statement of Case of the State of Rajasthan:
- R-2 Rajasthan's reply to the Statement of Case by the State of Punjab concerning Para 1 of the Reference.
- R-3 Rajasthan's reply to the Statement of Case by the State of Haryana regarding Para 1 of the Reference.
- R-4 Written submissions on behalf of the State of Rajasthan in relation to para 1 of the reference.
- R-5 Rajasthan's compilation of extracts from International Law, Statutes and Statutory Constructions.
- R-6 Submission of Rajasthan regarding various issues with respect to permissive and legitimate usage of Ravi-Beas Waters under para 1 of the Reference.
- R-7 Written Submissions filed by the State of Rajasthan dated 15.12.1986.