

Indus Water Disputes and India-Pakistan Relations

Doctoral Dissertation

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PREFACE

I developed special interest in this topic in the late 1980s during my MPhil studies; though the issue of river-water sharing between India and Pakistan was on my mind since my childhood.

In late 1950s military government of President Muhammad Ayub Khan launched a border-belt scheme to put under cultivation the land which was vacated because of complete diversion of Sutlej River by India under the Indus Waters Treaty (IWT) of 1960 between India and Pakistan. At that time a number of retired army-men were allotted that land and they settled in the area; my father was one of the beneficiaries.

In 1962 when they planned to cultivate that land there was no facility of canal water for irrigation. They tried to manage the problem by other means, but during the rainy season flood waters, released by India, destroyed their crops. My father was one of the victims too.

In late 1960s, when I was a school boy, our Headmaster arranged a visit to show us the construction of a link canal about five kilometres from my school and briefed us about the huge Indus Development Project undertaken under the IWT: the huge cranes which I saw at that time digging the canal never have seen again in Pakistan.

In early 70s with the completion of the Indus Development Project, when there was hope for the supply of irrigation water, India started construction of Salal Dam thus endangering the supply from the river Chenab.

Later, when I came across the land owners and farmers I observed that there were apprehensions among them that this grand project would be useless if India keeps on flooding their lands and withholding supplies from the western rivers on its will and the questions were being asked about the benefits of the IWT.

In 1985 and again in 1988, during rainy seasons, India opened the gates at the river headworks which flooded the Ravi and the Sutlej and caused huge destruction of life and property in Lahore and destroyed greatly the mature crop of cotton—the major export product of Pakistan—and all other valuable crops in Punjab. In 1985 India created the Wullar Barrage issue and started construction of a barrage at river Jhelum Main.

All this was sufficient motivating me to dig out the facts causing tension in India-Pakistan relations.

I have read a dispassionate and comprehensive account of pre-partition scenario which ultimately led to the Partition of the Subcontinent; consequently, it dissected one of the world's biggest river systems in total disregard to the dictates of natural geography and intrinsic ecology. Rightly or wrongly, it seems to me that all concerned were in the grip of developments which were beyond the wit of man to control. Man had released the whirlwind and men had to live with the resulting disasters. Wonder is not that mistakes have been done but it was due to the utter neglect of riparian rights and intentional exploitation of vulnerabilities and weaknesses of the other party.

Water flows immutable laws of nature. Man makes own laws and practice them until they serve his interests otherwise breaks them. All the laws, assurances, guarantees, understanding and even treaties could be honoured, not as a matter of obligation only, but as the condescending sweet will of the parties.

Governments are always liable to change but a river/canal endures for centuries, if not for ever, and preserves the natural ecology to the benefit of all. Every state should take equal interest in its maintenance; which is possible only in the absence of hostilities.

Unfortunately, India and Pakistan could not succeed in ending their mutual animosity therefore facing the self-created whirlwind. My first attempt to comprehend the problem was during my MPhil (Masters/Magister) studies when I produced a thesis entitled *Wullar Barrage Issue: An Analysis* at the Pakistan's premier institute, Quaid-i-

Azam University Islamabad, in the subject of International Relations. Main section of the study was published as *Wular Barrage* by a Pakistani premier think-tank, *Pakistan Horizon*, Vol. 47, No. 1 (Jan. 1994).

The completion of this D o c t o r a l project owes profound thanks and gratitude to numerous peoples and institutions that eagerly cooperated with me during my field work. My special thanks are due for those anonymous referees, appointed by Routledge who strongly recommended the manuscript for publication. Their expert comments and critique enormously enhanced the quality of this manuscript.

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In the US, during my one-year stay at the University of Illinois Urbana-Champaign (UIUC) program in Arms Control, Disarmament and International Security (ACDIS), one name I can never forget is that of Dr. Paul F. Diehl, Prof. of Political Science (presently Chair of the Department), who provided continual encouragement, academic guidance and prompt feedback in the initial phase of conceptualising my thesis. I have learnt a lot by joining his course for doctoral students on *International War* and benefited immensely from his excellent scholarship on changing dimensions of war and international security, especially water and environmental conflicts. Going well out of his way, he helped me officially and in a private capacity in facilitating my access to the relevant people, institutions and research material. He was always

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List of Selected Acronyms and Abbreviations

AJK	Azad Jammu and Kashmir
AK	Azad Kashmir
BCM	Billion Cubic Meters
BRBC	Bombanwala-Ravi-Bedian-Dipalpur Canal
BRBD	Bombanwala-Ravi-Bedian-Dipalpur
BS	Beas Sutlej
CAMs	Conflict Avoidance Measures
CBDC	Central Bari Doab Canal
CBMs	Confidence Building Measures
CENTO	Central Treaty Organisation
C-in-C	Commander in Chief
DMU	Decision Making Unit
FAO	Food and Agriculture Organisation
GDP	Gross Domestic Product
GWP	Global Water Partnership
HP	Hilal-e-Pakistan
IBIS	Indus Basin Irrigation System
IBAB	Indus Basin Advisory Board
IBRD	International Bank for Reconstruction and Development (World Bank)
ICJ	International Court of Justice
ICS	Indian Civil Service
ILA	International Law Association
ILC	International Law Commission
IPRI	Islamabad Policy Research Institute
IRS	Indus River System
IRSA	Indus River System Authority
IWMI	International Water Management Institute
IWT	Indus Waters Treaty
J&K	Jammu and Kashmir
KKH	Karakurum Highway
KM	Kilometres
KW	Kilowatts
LBDC	Lower Bari Doab Canal
MAF	Million Acre Feet
MAF	Million Acre Feet
MBG	Ganges-Brahmaputra-Maghna
MCM	Million Cubic Meters
ME	Middle East
MR	Marala Ravi
NDP	National Drainage Programme
NWFP	North Western Frontier Province
PEPSU	Patiala and East Punjab States Union
PLO	Palestinian Liberation Organisation
PPC	Punjab Partition Committee
PPP	Pakistan Peoples Party
SCARPs	Salinity Control and Reclamation Projects
SEATO	South East Asia Treaty Organisation
SVP	Sutlej Valley Project
TCP	Triple Canals Project
TVA	Tennessee Valley Authority
UBDC	Upper Bari Doab Canal
UCC	Upper Chenab Canal
UJC	Upper Jhelum Canal
UNEP	United Nations Environment Programme
UNSC	United Nations Security Council
USSR	Union of Soviet Socialist Republics
WAPDA	Water and Power Development Authority
WB	World Bank
WWC	World Water Council

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INTRODUCTION

Conflict is a fact of international relations. Its causes range from disputed territories or un-demarcated boundaries associated with vital resources (realpolitik or geopolitics) to political or ideological incompatibilities (idealpolitik). Existing or perceived incompatibilities can lead to formation of hostile actors who aggravate conflict behaviour; conflict behaviour can become armed, and, thus, social relations become militarised. Wars have their genesis in such a state of affairs. Several factors relating to both schools of thought can be identified in the Indo-Pakistan conflict. From a neo-realistic perspective,¹ this study examines their conflicting interests, as they are bound to the irredentist territory of Kashmir, and argues that conflict over Kashmir is not exclusively ideological but also fundamentally connected to the control of the Indus water resource. There exists, to date, neither significant research focussing predominantly on this aspect of Indo-Pakistan relations nor studies have undertaken from the perspective of (neo)realism. In fact, the existing literature would appear conceiving Indo-Pakistan conflict as an ideological, emotional and political tangle. This theory-driven study formulates a model with which to address the question of 'water, war, and peace linkages' using a rational choice approach substantiated with extensive empirical data.

Objectives

The prime objective of this study is to formulate a model which explains the role of international rivers in inter-state relations in general, and the intertwined nature of the disputes over Kashmir and the Indus rivers in particular. The focus lies on uncovering those factors of conflict in the Indus Basin which are not related to identity and investigating their linkage with political ideology, strategic planning, and warfare between India and Pakistan on the one hand and comprehending the circumstances under which enduring rivals prefer accommodation over vital concerns and postpone political issues on the other. The main concern is one of explaining how Indo-Pakistan conflict over the Indus waters has been managed in such a way that, despite being one of the major root-causes of the Kashmir conflict, it has been overshadowed by other concerns in the analyses of Indo-Pakistan relations.

Historical Overview

The roots of the conflict between India and Pakistan can be traced to the bitter and bloody circumstances under which the two South Asian nations emerged onto the global stage in 1947. The intertwined nature of the Kashmir and Indus disputes have direct linkage to the Radcliffe boundary award, according to which the British Punjab was divided between India and Pakistan at the time of Partition of the Subcontinent, and under which India gained

¹ Michael T. Klare, *Resource Wars: The New Landscape of Global Conflict* (New York: Henry Holt and Company, 2002), p. 187; Stanley Waterman, "Partition—A Problem in Political Geography," in Taylor, P. and J. House, eds., *Political Geography* (London: Croom Helm, 1984); Scott Burchill, "Realism and Neo-realism" in Scott Burchill and Andrew Linklater, (eds.), *Theories of International Relations* (Basingstoke: Macmillan Press, 1996), pp. 67-92.

control of the headworks² of two rivers providing irrigation in West Punjab (Pakistan) and the only land-link (from Indian territory) to the princely state of Kashmir, through a road over Madhopur headworks.³ Consequently, by capturing parts of Kashmir, India gained access to the catchment areas⁴ of the whole of the Indus river system,⁵ where its five tributaries—the Jhelum, Chenab, Ravi, Sutlej, and Beas—originate (see Map-1).

Kashmir has continued to be the bone of contention in their relations.⁶ Maharaja Hari Singh, the ruler of the 'princely state' of Kashmir, sought the continuation of independent status and offered a 'standstill agreement' to both India and Pakistan. The offer was accepted by the latter but rejected by the former. The Muslims of Kashmir revolted against the Maharaja, allegedly demanding accession of the state to Pakistan. India launched a military offensive on 26 October 1947, claiming that the Maharaja had signed an instrument of accession with its leaders. On 1st April 1948, India cut off the irrigation water from the rivers flowing into Pakistan. Then, in May 1948, Pakistan also mobilised its troops. Both sides captured parts of Kashmir territory. Posturing for a peaceful resolution, India referred the issue to the United Nations Security Council (UNSC) and both countries accepted the UN-supervised ceasefire, agreeing to its resolution of instituting a plebiscite under its supervision, which has not been implemented so far.⁷ Since then the only projected ongoing cause of the Kashmir conflict centres around the idea of conflicting ideologies: on the one hand India is seeking to maintain its 'secular outlook' and negate the very rationale behind the creation of Pakistan, the 'two-nation theory', by retaining control over a Muslim majority state, Jammu and Kashmir, while on the other hand Pakistan is struggling for the region's 'liberation' from the Indian 'yoke', aiming for its integration with it.

² The term "headworks" generally refers to a structure erected on a river which can control and regulate its flow.

³ Gurdaspur was recognized as a Muslim-majority district in the June 3 Plan "as preliminary step until the report of the Boundary Commission has been put into effect." See Aloys Arthur Michel, *The Indus Rivers: A Study of the Effects of Partition* (New Haven: Yale University Press, 1967), pp. 157, 192; Mosely recounts the story of the "rough sketch map" which was taken down over the telephone on August 8, 1947, and forwarded to Sir Evan Jenkins, showing not only the headworks but the towns of Ferozepur and Zira on the Pakistani side. See Mosley, Leonard, *The Last Days of the British Raj* (New York: Harcourt, Brace & World, and London, Widenfeld and Nicolson Limited, 1962), p. 230.

⁴ The term "catchment area" refers to the upland territory which receives a high proportion of precipitation and the areas which collect this water in streams to form rivers.

⁵ The Indus River has five major tributaries: the Jhelum, the Chenab, the Ravi the Beas and the Sutlej. These in turn have inspired the name Punjab (punj = five & ab = water/river), the land of the Five Waters/Rivers. The Indus rises from Mount Kailas in Tibet and traverses many miles through the Himalayas before it is joined by its tributaries in the Punjab. The River Kabul is excluded, for most of the purposes of this study, because it neither crosses the Indus Plains nor was it a subject of the Indus Waters Dispute. It is not beyond the realm of possibility that a dispute may someday arise between Pakistan and Afghanistan over the waters of the Kabul and its major affluent, the Chitral-Kunar. Thereafter it passes into Sindh (Pakistan) to pass out into the Arabian Sea (see Map-1). See Michel, *Indus Rivers*, op. cit., p. 41.

⁶ Dr. Riaz Ali Shah (Jinnah's personal doctor) states in his Diary (Publishing House, Bull Road publication 1950) that Quaid-i-Azam was quoted to have said: "Kashmir is the Jugular vein of Pakistan and no nation or country would tolerate its Jugular vein remains under the sword of the enemy". <http://www.klc.org.pk/klc/pumphlet/index.htm>

⁷ UNSC resolution adopted on 5 January 1949, (Document No. S/1196, dated the 10th January, 1949), see the full text at: <http://www.a-r-k.org/treaties.htm#>

The realpolitik dimension of the Kashmir conflict surfaced when India withheld the river water supply to Pakistan on 1st April 1948, but was overshadowed mainly because of the anticipated policies of ideational and identity politics on both sides, and partly due to its disassociation from the Kashmir issue, which India demanded as a precondition of accepting mediation on the Indus rivers dispute.⁸

The water issue became a question of survival for Pakistan and soon attracted attention of the international community. India claimed exclusive rights over the waters of all international rivers originating from its territory. Following twelve years of negotiations and mediation, away from public scrutiny and under the auspices of the World Bank, the issue was resolved in the form of the Indus Waters Treaty (IWT) in 1960. It was hailed internationally as a model of conflict resolution, however, there were some who questioned its legitimacy and effigies of both the leaders were burnt in their respective state capitals.

The IWT allocated unrestricted use of three eastern rivers of the Indus system—the Ravi, Beas and Sutlej—to India, and three western rivers—the Indus, Jhelum and Chenab—to Pakistan, barring some ‘specified uses’ in Indian-held Kashmir. Although the IWT ensured supplying the waters of all three of the western rivers to Pakistan, it has not eliminated the root-cause of the conflict over the Kashmir territory inherent in its geography. Kashmir is bounded by snow-covered peaks and valleys at the foothills of the Himalayas (see Map-1). The fact that melting snows and heavy summer precipitation in the valleys constitute the only source of fresh water feeding the entire Indus river system has enhanced its strategic importance. The Indus river system serves as a life-line to the predominantly arid lower riparian, Pakistan, and if India ever gave up control of Jammu and Kashmir—whether to Pakistan or an independent regime of some sort—it would lose its status as an upstream riparian and, therefore, much of its clout in determining the politics and fate of the region.⁹ For Pakistan, an unrestricted flow of the Indus river system is a question of ‘life and death’ and, for India, maintaining control of it is a ‘real political tool’ with which to exercise power over Pakistan by controlling its vital water resources.

Relevance of Existing Literature

The existing literature provides a wealth of insights into the role of international rivers in generating conflict and the achievement of settlements between riparian states, yet remains silent on the contribution of such settlements to the promotion of cooperation and peace between them. An analysis of incidents of accommodation amid enduring rivalries and their impact on the wider relationship is thus absent in the literature. In fact, the focus instead lies on two divergent and extreme viewpoints: that “water is a resource of war” and “water is a catalyst for peace”—a continued debate between so-called Alarmists and the Optimists, respectively. History presents numerous instances where rival riparian states, despite having

⁸ The Indian PM, Jawaharlal Nehru, at the time of accepting mediation offer, in a letter to World Bank’s President Mr. Black, dated 25 September 1951.

⁹ Michael T. Klare, *Resource Wars: The New Landscape of Global Conflict* (New York: Henry Holt and Company, 2002), p. 187.

resorted to the use of force, finally reach accommodation over cross-boundary rivers. On the whole, however, such settlements have seldom promoted cooperation and peace between them, and their rivalries have generally remained intact. The instance of Indo-Pakistan accommodation over the Indus rivers, coupled with protracted conflict and number of wars over the Kashmir territory, provides a conspicuous example of this phenomenon.

Secondly, water conflicts have been intimately connected with other issues of a political, ethnic, identity-related or religious nature, and as a result, no single war in the past has been exclusively acknowledged as a water war. Moreover, water has been frequently dismissed as a developmental issue and thus categorised as an issue of “low-politics”.

Thirdly, water conflicts have often been infused with environmental issues, with water scarcity generally viewed as a form of environmental scarcity. This issue forms the crux of an unending debate between the Alarmists and the Optimists over whether water can be an exclusive cause of conflict. Though both sides agree that water is a major cause of domestic conflict and also a contributory factor in international conflicts, they disagree on the question of whether it can be the sole cause of inter-state wars and conflicts. Some authors also challenge the idea of population growth as a key factor in environmental conflicts and contend that the uneven development and unequal distribution of resources at the national level (i.e. structural scarcity) is the main cause of domestic violence.¹⁰ However, the acuteness of scarcity and its role in international or inter-state war and conflict in the future (as advocated by Klare¹¹) is yet to be firmly established. Thus, conducting the study on the conceptual basis of water scarcity and environmental conflicts would make it speculative, controversial and purely futuristic in nature. In Gleditsch’s words, such an assertion amounts to “using the future as evidence.”¹² The only relevance of the question of future water scarcity and conflict to the case under study is the likely rise of competition over the Jammu and Kashmir territory, a natural source of vital fresh water. Some correlations with this assertion are established in chapters six and seven.

International law on international rivers and water-ways advocates the beneficial exploitation of cross-boundary water resources, where it does not result in detrimental effects to the lower riparian, and the upholding of the principles of equitable river apportionment,¹³ but lacks the ‘commercial arm’ or military might to enforce these ‘high principles’. Although the principles have generally been upheld by the majority of nations in achieving settlement on cross-boundary water resources, in the case under study, international law has been totally

¹⁰ Miriam R. Lowi, “Water and Conflict in the Middle East and South Asia: Are Environmental Issues and Security Issues Linked?”, *Journal of Environment and Development*, Vol. 8, No. 4 (1999), pp. 376-396.

¹¹ Michael T. Klare, *Resource Wars*, op. cit., p. 182.

¹² Nils Petter Gleditsch, “Armed Conflict and the Environment,” in Paul F. Diehl and Nils Petter Gleditsch, eds., *Environmental Conflict* (Boulder, Colorado: Westview Press, 2001), p. 266.

¹³ *Declaration of Madrid, Yearbook of the Institute of International Law*, Vol. 24, p. 365; *Final Act of the 7th Conference of American States LXXII*, International Conferences of American States (1st Supp. 1933-1940), pp. 88-89; Brierly, *Law of Nations*, (1942), p. 159; and Oppenheim, *International Law* (6th Ed., Lauterpacht, 1947), Vol. I, p. 430.

disregarded. Thus it has no direct relevance to Indo-Pakistan accommodation over the Indus dispute. In other words, international law assisted the adversaries in contesting but not in resolving their dispute. It may become relevant if either party abrogates the Indus Waters Treaty in the future or refers the case to the International Court of Justice for adjudication. The only relevance of international law to the case under study is that both India and Pakistan had contested their claims on the basis of riparian rights before signing of the Indus Waters Treaty in 1960 and it is highly likely that the issue may be referred to the International Court of Justice in future. This aspect is analysed in more detail in chapter four.

The role of the geographical attributes of a boundary or a territory, where these constitute vital resources, in inducing conflict is well documented in the literature. Boundaries are lines of opportunity for both conflict and cooperation since they can impact greatly on human physical, social and economic well-being.¹⁴ If the demarcation of boundaries does not facilitate the realisation of these goals for the states on both sides of the boundary, the boundaries themselves can become a cause of conflict. As Waterman points out, the hardships of the peoples of Ireland and Palestine have their roots in superimposed boundaries which insufficiently take into account geographical realities.¹⁵ Similarly, the boundary drawn in Punjab provided India with an opportunity to use cross-boundary water resources as military weapon on the one hand and a motivation to capture Kashmir territory on the other (the aspect is explained in chapter 3). This resulted in the Indus water dispute

¹⁴ Hartshorne and Stephen Jones, "A Unified Field Theory of Political Geography," *Annals of the Association of American Geographers*, Vol. 64, 1954; J. Douglass, "Conflict Between States," in Pacione, M. ed. *Progress in Political Geography*, (London: Croom Helm, 1985); J. Prescott, *Political Frontiers and Boundaries* (London: Allen and Unwin, 1987); Stanley Waterman, "Partition--A Problem in Political Geography," in Taylor, P. and J. House, eds., *Political Geography*, (London: Croom Helm, 1984); Saul Cohen, *The Geopolitics of Israel's Border Question* (Boulder, Colorado: Westview, 1986); Tonkin, E., "Borderline Questions: People and Space in West Africa", in *Border Approaches: Anthropological Perspectives on Frontiers*, H. Donnan and T. Wilson, eds., (Lanham, MD: University Press of America, 1994); G. A. Bingham, Wolf, and T. Wohlgenant, *Resolving Water Disputes: Conflict and Cooperation in the U.S., Asia, and the Near East* (Washington, DC: US Agency for International Development, 1994); Julian Minghi, "Boundary Studies in Political Geography," *Annals of the Association of American Geographers*, Vol. 53, 1963. Reproduced in Kasperson, Roger and Julian Minghi, eds. *The Structure of Political Geography*, (Chicago: Aldine, 1969); J. Prescott, *The Geography of Frontiers and Boundaries* (Chicago: Aldine, 1965), p. 13. Prescott makes the important point that Curzon differentiated between "natural" and what Ratzel and, later, Kjellen mislabelled as the geopolitically "Natural" frontiers, to which nations ought to strive. To avoid such confusion, Broek (1940, 9) argues for the term "physiographic" boundary. For details please see the web site: <http://www.pnl.gov/ces/academic/mideast2.htm>; Thomas Holdich, "Political Boundaries," *The Scottish Geographical Magazine*, Vol. 32, (1916), p. 502. Holdich also suggests that annexation of any territory against the will of its inhabitants is "a political blunder." <http://www.pnl.gov/ces/academic/mideast2.htm>; Thomas Holdich, "Political Boundaries," *The Scottish Geographical Magazine*, Vol. 32, (1916); Douglas Johnson, "The Role of Political Boundaries," *The Geographical Review*. Vol. 4, No. 3 (September 1917), pp. 208-213; Jan Broek, et al., "The Problem of 'Natural Frontiers,'" *Frontiers of the Future* (Berkeley: University of California, 1941); Committee on International Relations 1940; Spykman 1942, cited in Minghi, eds., *The Structure of Political Geography* (Chicago: Aldine, 1969); Stephen Jones, *Boundary-Making: A Handbook for Statesmen in Treaty Editors and Boundary Commissioners* (Washington, DC: Carnegie Endowment for International Peace, 1945).

¹⁵ Stanley Waterman, "Partition—A Problem in Political Geography," in Taylor, P. and J. House, eds., *Political Geography* (London: Croom Helm, 1984).

which culminated in an international war between India and Pakistan in 1948. Moreover, the armistice boundary in Kashmir, established under the UNSC ceasefire of 1948/1949, created an enduring situation of suspense which has instilled an enormous sense of insecurity in both the Pakistani state and public, who perceive themselves vulnerable as the Jammu and Kashmir territory remains under Indian control (the aspect is explained in detail in chapter 2 and 3).

This fact draws additional support from the observation of Michael Klare, who views the Indian intransigence in retaining control over the Jammu and Kashmir territory linked with water-politics of India not to relinquish upper riparian status and was overshadowed by ideological, political and military dimensions. Klare argues that Indian upper riparian status in Kashmir possesses enormous political implications for the future use of the Indus rivers and the fate of regional politics.¹⁶ It also establishes the status of Kashmir as a hydro-strategic territory on the one hand, and the Kashmir dispute as a conflict of realistic interests, based on the vital Indus water resource, on the other. The argument also draws strength from the findings of Lipschutz that scarcity is an outcome of resource control and not of the given attributes of nature.¹⁷ If we consider the perception of water scarcity to be a product of the control of a critical resource, then the territory of Jammu and Kashmir qualifies as a vital water resource whose control is a real geo-political and geo-strategic tool for the upper riparian and a question of national security and survival for the lower riparian. This fact directs us to explore the hydro-strategic (i.e. economic and security) dimensions of the Kashmir dispute and its linkage with conflict between India and Pakistan, based on the concept of 'resource wars'. The objective would be one of determining whether the first war over Kashmir (1948-49) between India and Pakistan was aimed at capturing river catchment areas and achieving control over river structures. If this was indeed the case, then it can be termed a 'resource war'. Two aspects of international river resource are thus central to this study: firstly, that water is a resource of war, and secondly, that water is a catalyst for accommodation between enduring rivals. The first aspect provides the main focus of chapter three and second aspect is analysed in chapter five.

The main challenge posed by the literature is that the concept of accommodation remains acutely underdeveloped. The focus of the existing literature is either on adversarial or cooperative strategies. There is not only an omission of the concept of accommodation, but peace initiatives have often been defined as "sharp reversals of foreign policy from a conflictual to a cooperative strategy."¹⁸ In fact, most of the work on accommodation has been carried out in the context of the US-Soviet rapprochement of the late 1980s and the Arab-Israeli peace initiatives of the late 1970s and 1990s. Ironically the greatest cause for concern

¹⁶ Michael T. Klare, *Resource Wars*, *op. cit.*, p. 187.

¹⁷ Ronnie D. Lipschutz, "Damming Troubled Waters: Conflict over the Danube: 1950-2000," paper presented at Environment and Security Conference, *Institute of War and Peace Studies*, Columbia University, New York, Oct. 24, 1997.

¹⁸ Ben D. Mor, "Peace Initiatives and Public Opinion: The Domestic Context of Conflict Resolution," *Journal of Peace Research*, Vol. 34, No. 2 (1997), p. 198.

is the tendency to mislabel 'accommodation' as 'cooperation' or 'peace'. This has resulted because the sub-field of accommodation has primarily emerged from the fields of cooperation and conflict. Surprisingly, the signing of the Indus Waters Treaty between India and Pakistan is generally viewed as a model of conflict resolution and cooperation. In fact, the lower riparian is often forced to accept the terms of the upper riparian and it accepts these conditions in an effort to manage the conflict minimising consequent losses. The Indus Waters Treaty certainly serves as a fine example of conflict management, but can it be termed a model of cooperation or peace between India and Pakistan? This so far unanswered question demands rigorous academic inquiry.

General Assumptions

International politics, like politics anywhere or at any level, is driven by interests. The topmost singular national interest of any state is maximisation of power by controlling more and more vital resources and maximisation of security by safeguarding whatever it possesses. Fresh water resource in an arid region is a vital national concern and a question of survival for an agrarian economy of riparian states. The key assumptions, in this study, are that water is a source of conflict and a potential trigger of wars between riparians; the geographical location of the territory in question enhances the likelihood of conflict; a negotiated settlement is sought when the enduring rival riparians reach a "mutually hurting stalemate"¹⁹; accommodation is possible when the lower riparian is militarily weak and committed to cutting its economic losses; third party mediation can play decisive role for a settlement when the mediator also possesses the resources required to lessen the stalemate. But such solutions may not promote peace between the riparian states since the upper riparian remains in a position to create new disputes. In other words, water is a source of conflict and most often compels the lower riparian (on account of its disadvantageous geographic location) to initiate accommodation in an effort to minimize its losses. Such settlements rarely, however, become a catalyst for peace between the riparian states and in fact often limit the process of accommodation in a long-run. A durable settlement is possible when the envisaged solution is politically acceptable, economically feasible and environmentally sustainable.

Case Selection

The study focuses on two aspects of the role of international rivers in the relations of enduring rival riparians: 1) water as a source of conflict or war, and 2) accommodation over cross-boundary water as a preferred security strategy between enduring rivals. Many such inter-state conflicts are active amongst the users of international river basins in different parts of the world. Some of the widely discussed major conflicts are: the Jordan, Litani, Orontes and Yarmuk Rivers (Israel and Arab nations), the Nile (Egypt, Sudan and Ethiopia), the Euphrates (Turkey, Syria and Iraq), the Danube (Hungary and Slovakia), the Han (North and

¹⁹ William Zartman, *Ripe for Resolution and Intervention in Africa* (Oxford: Oxford University Press, 1985).

South Korea), the Amu and Syre Darya (Central Asian States), the Ganges (India, Bangladesh and Nepal), and the Indus (India and Pakistan and in future may involve China and Afghanistan). However, the criterion of enduring rival riparian states highlights two prominent cases: India and Pakistan, and the Arab nations and Israel. This study focuses exclusively on the role of the Indus river system in the Indo-Pakistan conflict. In order to investigate the first of the two abovementioned aspects, the Indo-Pakistan War of 1948 is analysed comprehensively in chapter 3.

With regard to the second aspect, a number of cases can be observed in which Pakistan initiated accommodation, according to the definition of the phenomenon selected for this study, and India reciprocated, or vice versa. Examples include the Inter-Dominion Agreement (see Appendix 1) between the East and West Punjab Governments on 4 May 1948 during the first Kashmir war, which culminated into the signing of the Indus Waters Treaty (1960); the Tashkent Declaration (1966), following the 1965 Indo-Pakistan war; the Simla Accord (1972), following the 1971 war and the emergence of East Pakistan as the separate state of Bangladesh; the Salal Dam issue, which erupted in 1974 and was settled in 1978 (three more major water issues later emerged: that of the Wullar Barrage in 1984; the Baglihar Dam in 1994, and more recently the Kishenganga Project—all of which are still to be resolved); and the recent composite dialogue process initiated by Pakistan in 2004. The accommodation on Salal dam is discussed in chapter 5 and the issues of Wullar, Baglihar and Kishenganga are discussed in chapter 7.

In fact, almost all the issues between India and Pakistan can be studied under the framework evolved in this study. This framework is also suitable for investigating the phenomenon of accommodation as a preferred security strategy, both in the relations among Third World states and those among the Great Powers. However, in order to highlight the role of international rivers as an inducer of accommodation between enduring rival riparians, Pakistan's initiation of accommodation vis-à-vis the upper riparian, India, has been selected for this study.

This study is limited to the dynamics of conflict and accommodation between India and Pakistan and relates exclusively to the issues of control and the right to utilize international rivers—the Indus River System, and more specifically, the negotiation over and settlement of the dispute through mediating the Indus Waters Treaty and all other agreements and issues relating to river waters.

For the selection of cases pertaining to accommodation, two main criteria were followed: firstly, the case should represent different time periods (i.e., different political, economic and security realities) in the history of Pakistan, if not different regimes. Secondly, the cases should represent Pakistan's accommodative initiatives towards India on issues related to river waters only. This second criterion was used to narrow the scope for analysis. Finally, constraints of scope and space are responsible for the limited selection of comparable cases. Thus, the study focuses on the Indus Waters Dispute, or, more specifically, the signing

of the Indus Waters Treaty (1960), and all post-treaty water-related disputes between Pakistan and India are mentioned only in brief terms.

Data Sources

The study aims at identifying the factors which have contributed to conflict and accommodation over the issue of Indus water resources in Indo-Pakistan relations. The water issue has been unlinked from the Kashmir issue and the process of mediation kept top-secret. Policy-makers remain tight-lipped on the subject as any emphasis of the matter would be contrary to the identity politics both states have perpetuated since their inception. Therefore, fresh and structured interviews with state officials are neither useful nor possible.

Public perception is always considered a good yard-stick with which to measure the intensity of a social phenomenon, but in this case public perception is restricted to the scarcity issue only. State diplomacy remains as opaque as before. Visits to India or Indian-controlled Kashmir are neither considered necessary nor permissible given the security circumstances in the region and the sensitive nature of the issue.

The most relevant sources of information are to be found in the official correspondence between India and Pakistan, and in their communications with the mediator (see Appendix 1-7). Moreover, the minutes of the bi-party and tripartite meetings between them served the main source of information. The second most important source is the geographical and historical literature. Some useful analyses and opinions are available as primary as well as secondary sources, particularly in the text of the Indus Waters Treaty and in debate over its interpretation which has emerged relating to post-Treaty water issues. Therefore, data is chosen from various sources: primary [archival] as well as secondary; general library collections.

The primary data, such as regular official correspondence between the states both before and during the mediation process, has been collected from Pakistan National Archives and National Documentation Centre [renamed recently as National Documentation Wing], Cabinet Division, Government of Pakistan, Islamabad and Office/Library of Permanent Commissioner for Indus Rivers Pakistan, Lahore. Reliance has been made on the (auto)biographies of leaders and the interviews of stake-holders, conducted by various analysts across a range of time periods. Post-IWT bilateral correspondence pertaining to some major water issues has been collected from the official library of the Commissioner for Indus Waters, Lahore, Pakistan. Official reports, compiled by various inquiry commissions, have been sourced from the respective ministries of the Government of Pakistan, especially those responsible for irrigation, agriculture, and water and power. Data related to global water codes and bilateral and multilateral protocols, agreements and treaties have been collected from the UN Treaty Series available in various UN libraries and also, in some cases, on the internet.

In terms of secondary data, all possible sources have been explored: books, research journals, and leading international and regional newspapers available in the major libraries of Pakistan, a network of libraries accessible through the library of the University of Illinois, Urbana-Champaign, USA, and the libraries of the University of Heidelberg, Germany. Specifically, I would like to acknowledge pioneering works by Aloys Arthur Michel, Niranjan Das Gulhati, Mushtaqur Rahman, Thomas Homer-Dixon, Oscar H. K Spate, Basheer Khalil Nijim and Richard R. Baxter. Excellent works relating to negotiation and third-party mediation by Jacob Bercovitch, William Zartman and Frank R. Pfetsch were of great help. Some unpublished theses, written at the last quarter of 20th century, by Haroon Haider Bhatti, Jinping Guo, Rashid Ahmad Malik and Humaira Linda Afzal were of substantive utility (*Extracts taken from the above-listed sources were suitably cited, however, the author apologises in advance for any inadvertent omission or inappropriate treatment*).

Some fundamental facts were collected from various think-tanks, working exclusively in the area of water and environment, such as the International Rivers Network, Berkeley, USA; the Stockholm Environment Institute, Sweden; and the International Water Management Institute, Colombo, Sri Lanka, all served as substantial sources of information. Moreover, some parts of earlier published (before December 2010) and unpublished works of the author have been incorporated in this volume with suitable revisions and updates.²⁰ The information in this study is updated to as of December 2010.

What is New?

The study makes a new case for the claim that neo-realistic interests between rival neighbouring states are the cause of conflict and accommodation, and brings to light the competition for the control of vital water resources as an issue of high-politics in the field of international relations.

It explains when rival nations compromise on vital concerns and why they put political issues on the backburner. It addresses the question of linkage between the Indus waters and the Kashmir dispute and highlights its role in political thinking, strategic planning and warfare between India and Pakistan. The research reinforces the belief of geo-politicians that competition over, and control of, vital resources—be they oil, strategic materials for warfare,

²⁰ “Wullar Barrage: Device to Dissolve Kashmir in the Name of Development”, chapter in IPRI Book on *Pakistan-India Peace Process: The Way Forward* (Islamabad: Islamabad Policy Research Institute, 2010), pp. 173-193; “Water Disputes and Pak-India Relations,” *Regional Perspectives*, April 2009, Institute of Policy Studies, available at: http://ips-pk.org/index2.php?option=com_content&do_pdf=1&id=829; “Water, War, and Peace: Linkages and Scenarios in India-Pakistan Relations”, an abridged form of thesis published as *Heidelberg Papers in Asian and Comparative Politics*, Vol. 37, ISSN 1617-5069, (2008); “Salal Dam Issue,” *Margalla Papers*, National Defence College Journal, Islamabad, Pakistan (Spring 1997); “Wular Barrage”, *Pakistan Horizon*, Pakistan Institute of International Affairs, Vol. 47, No. 1, 1994. *Wullar Barrage Issue: An Analysis* (MPhil Thesis submitted to the Department of International Relations, Quaid-i-Azam University, Islamabad, Pakistan, 1991).

water and sea lanes or minerals—is the main cause of conflict between states, and adds substance to that belief by attributing equal significance to the territorial control of freshwater resources between riparian nations.

The discovery of this new dimension of the Kashmir conflict, based on the neo-realistic interests of riparian states in controlling vital water resources, is the hallmark of the study. The study also highlights the pitfalls in the field of mediation and exposes the role of self-interested mediators in providing unsustainable solutions. It explains how the rival nations pursue accommodation as a preferred strategy in order to safeguard their foremost national interests of security and power maximization, bilaterally as well as in the international political system, when the conflict “hurts” both of them. Given that the literature on the neo-realistic security dimensions of the Kashmir conflict is practically non-existent, the original contribution of this study is the formulation of a theoretical model which explains the dual phenomena of conflict and accommodation between rival riparian states. A further contribution of the study is to bridge this theoretical gap and open up new vistas for research.

The case under study (i.e. the nature of the Kashmir conflict and its linkages with the control of Indus water resource) has been most often projected as a politico-ideological issue, overshadowing the geographical and economic dimensions inherent in its hydro-strategic nature and importance of the territory. Therefore, there is no significant study which focuses on the geo-economic, socio-ecological and security dimensions of the Kashmir conflict. It is usually argued that the environmental or ecological dimensions of a conflict have no direct linkage to the economic or power balance of the disputants and as such cannot be considered a cause of war. However, the case under study appears able to prove the contrary, since the economy and power balance between India and Pakistan may be strongly affected by the emerging ecological disaster in Pakistan.

It is, according to popular perception, time to acknowledge that the emerging scenario has fast-approaching implications. Policy-makers have to re-evaluate their conflicting policies. The question is; where do they stand after around a decade of pursuing the ongoing policies? Would any solution to the Kashmir dispute ignoring the water factor usher in peace between India and Pakistan? What type of solution to the Kashmir issue can offer durable peace between India and Pakistan? This study attempts to address such critical questions and identify emerging scenarios which may compel policy-makers to take appropriate measures. Hence the theoretical as well as the policy-related importance of the study cannot be underestimated.

Chapter 1

THEORETICAL FRAMEWORK

This chapter defines the puzzle and formulates a theoretical framework based on two central concepts: *water as a resource of war* and *accommodation as a preferred security strategy* between enduring rival riparians. The focus lies on identifying both the factors of conflict and their comparative role in war over water resources, and the factors facilitating accommodation between states. The objective is to formulate a model which facilitates a deeper understanding of the linkage of water, war and peace in the relations of rival riparian states in general, and the India-Pakistan conflict over Kashmir in particular.

1.1 The Puzzle

*“Water is the true wealth in a dry land; without it, land is worthless or nearly so. And if you control water, you control the land that depends upon it”.*¹

Nations have often fought to assert or resist control over natural resources such as oil, materials for warfare, sea lanes, farm lands, minerals and other vital assets. “Throughout human history, but particularly since the system of sovereign nation states,...struggles over access to and control over natural resources...have been a root-cause of tension and conflict.”² Hurst claims that “although there is considerable rivalry among nations over the possession of such things as oil, gas and uranium, the most dangerous rivalry between countries can be for the possession of water, one of the elements without which man cannot exist.”³

Water is without doubt a critical resource for human survival, economic development, and ecological balance in nature. Hardly any other natural resource affects so many areas of human life, therefore scarcity of water, in particular, affects a broad spectrum of spheres, from health to human rights, the environment to the economy, prosperity to poverty, culture to politics, and conflict to war. Water can mean the difference between life and death, as “every living being is made from water.”⁴ Moreover, water defies political boundaries therefore can be a potential cause of war.

Traditionally, water has been an abundant resource for development, virtually amounting to a free good. However, the situation is now changing rapidly. A point has been reached where water scarcity has become a potential threat to national stability, regional

¹ Stegner in Peter H. Gleick, (ed.), *Water in Crisis: A Guide to the World's Fresh Water Resources* (New York: Oxford University Press, 1993a), p. 9.

² Michael Renner, et al., “International Conflict and Environmental Degradation,” chapter 5 in *New Directions in Conflict Theory, Conflict Resolution and Conflict Transformation*, ed., Raimo Vayrynen (London: Sage, 1991) p. 290.

³ C. K. Hurst, “Water in International Affairs,” in *Behind the Headlines*, Vol. XVI, No. 3 (Sept. 1956), p. 16.

⁴ Al-Quraan, Sura Al-Ambia, Aayat No. 30 and Sura Al-Noor, Aayat No. 45 also quoted by Malin Falkenmark in his paper on: “Living at the Mercy of the Water Cycle,” *Water Resources in the Next Century* (Stockholm Symposium, Publication No. 1 (August 12-15, 1999), p. 13.

peace, and international security. Experts are of the opinion that in the twenty-first century, wars will be waged for access to freshwater resources [rivers] and, as a consequence, will endanger international peace and security. A recent United Nations Security Council (UNSC) report has identified a number of potential flash-points for future conflicts over water, with the Indus Basin appearing high on the list.⁵

Literature on 'water wars' and 'water peace,' depicts two main currents of thought: one, that 'water is a resource of conflict' [Alarmists],⁶ and the other, that 'water is a catalyst for peace' [Optimists].⁷ Nevertheless, history of inter-state relations presents numerous instances where even enduring rival states were able to reach an agreement on river-sharing without going to war, although all such settlements hardly served as a successive catalyst for peace. For the most part, their ideological and political rivalries remained intact and they did not relinquish their irredentist territorial claims. The most pertinent example in this context is that of Indo-Pakistan relations. The rivalry of these two states encompasses every dimension of conflicting interstate relations, ranging from *idealpolitik* to *realpolitik*. Nevertheless, both states agreed on a rivers' diversion formula in the shape of the Indus Waters Treaty in 1960 which, however, did not lead to conflict-free, mutually peaceable working relations, even for a short period. Above all, neither of the states relinquished their historical territorial claims over Kashmir. The puzzle of why, for example: Pakistan accepted the Indian demand for the permanent diversion of three out of the system's six rivers in 1960, and India apparently agreed not to interfere with the flow of rivers in Jammu and Kashmir under its administrative control but why both never compromised on the issue of Jammu and Kashmir territory, underpins the main trajectory of this research.

Both states remain uncomfortable with the Treaty.⁸ In May 2002, the Indian government considered abrogation of the Treaty, 'to teach Pakistan a lesson'—a fact then widely published in Indian newspapers.⁹ Concerns have been openly expressed in Pakistan

⁵ "Water, the Looming Source of World Conflict," *Agence France Presse* (March 20, 2001). Quoted in the *UNSC Global Policy Forum*, NY available at: <http://www.globalpolicy.org/security/index.htm>

⁶ Some leading Alarmists are: Beschomer (1992); Bulloch & Dawish (1993); Gleick (1994); Hillel (1994); Isaac & ShuvaI (1994); Kally (1993); Kelly & Homer-Dixon (1996, esp. pp. 21-22); Lowi (1992, esp. p. 52); Murakami (1995); Postel (1992); Starr (1991, 1995); Starr & Stoll (1988); Wolf (1995); Easterbrook, Gleick, Wolf, Lowi, Beschornor, Beamont, Agnew, Anderson, Falkenmark, Starr, Starr & Stoll, Ismail Searageldin, Wally N'Dow; Agnew, John & Stuart Corbridge, (1995); Beaumont (1997); Dordrecht: Kluwer; Beschornor, Natasha (1992); Bulloch, John & Adel Dawish (1993); Christopher, Warren (1996); Dalby, Simon (1990); Dalby, Simon (1995); Starr, Joyce R. & Daniel C. Stoll, eds. (1988).

⁷ Some leading Optimists are: Kader Asmal (2000); Peter Rogers, (1993); Abul Kalam (1996); Shamsar Ali (1993); Philip Flood (1995).

⁸ Center for International and Strategic Studies, Washington DC, "Pakistan's Future and US Policy Options", Working Group-IV: *Energy and Water*, September 24, 2002. The Group headed by Teresta Schaffer.

⁹ "J&K wants Centre to annul Indus Treaty", *The Asian Age*, (14 April 2002), available at: <http://jammu-kashmir.com/archives/archives2002/kashmir20020414c.html>; B.G. Verghese, "Talk of abrogating Indus Water Treaty: Misconceived facts, fallacious arguments," *Chandigarh Tribune*, India, (Monday, April 29, 2002), available at: <http://www.tribuneindia.com/2002/20020429/edit.htm>; Adam Nayyar, "What Indus water treaty means," *Daily Dawn*, (January 10, 2002), available at: <http://www.dawn.com/2002/01/10/op.htm>; Tara Shankar Sahay, "India to abrogate Indus Waters

that “it was the military regime of General Ayub Khan, which surrendered to Indian blackmail and World Bank and US pressures to sign away every drop of three of the five tributaries of the Indus [river system] to India”.¹⁰ According to historical usage, as designated by international law, “India was entitled to 8 per cent of the water of the Indus river system. Instead, the Indus Basin Treaty of 1960 allocated 20 per cent to it”.¹¹ On 27 July 2004,

Pakistan's legislators moved a motion in the National Assembly urging the government to include Indus waters' sharing issue in the ongoing peace process [composite dialogue] and immediately consider buying water from India to tide over acute water shortages and renegotiation of the 1960 Indus Water[s] Treaty between the two countries to get more water from the Sutlej river.¹²

Speaking on a point of order, a parliamentarian remarked that “the Indus Waters Treaty was perhaps the only pact on the earth in which a 'nature resource' was 'sold out’”.¹³

Some Indian thinkers are of the opinion that the primary objective of Pakistan's interest in Kashmir is to secure its water resources. According to a recent study made by the Mumbai-based Strategic Foresight Group:

The primary objective of Pakistan's interest in Kashmir is to secure its water resources.... A conflict over and between the people of Kashmir and the Government of India will soon become a thing of the past. On the other hand, a water-war between Kashmir and Pakistan is inevitable in the future.... If India and Pakistan take a political decision to restructure their relations, they will have to ensure that water serves as a flow to bring them together, rather than taking them further on the course of conflict. Water situation in Pakistan is worse. The flow of river water is dropping precipitately at nearly seven per cent a year. Pakistan's per capita water availability has declined from 5600 cubic metres at the time of independence to 1200 cubic metres in 2005. It is expected to reach a threshold level of 1000 cubic metres before year 2010 or

Treaty,” [refiff.com](http://www.refiff.com) (New Delhi: December 27, 2001), <http://www.rediff.com/news/2001/dec/26ccs1.htm>; Ministry of Foreign Affairs, India, Parliament Q&A (Lok Sabha), Dated December 11, 2002, Question No. 3342, Shri Digvijay Singh, The Minister of State for Foreign Affairs, question by Charan Das Mahant, available at: <http://meaindia.nic.in/parliament/ls/2002/12/december11-3342.htm>; “Abrogation of Indus Waters Treaty,” Indian Lok Sabha, Q&A, dated March 3, 2002, Shri Ummar Abdullah, Minister of State for Foreign Affairs responded to Shri Malava Sirinivasulu, question number 2783, available at: <http://meaindia.nic.in/parliament/ls/2002/03/mar20-2783.htm>; see also, arindam-banerji.sulekha.com/blog/post/2002/10/what-is-our-leverage-against-pakistan/comments.htm, [links.jstor.org/sici?sici=0030-851X\(192906\)2%3A6%3C361%3API%3E2.0.CO%3B2-G](http://links.jstor.org/sici?sici=0030-851X(192906)2%3A6%3C361%3API%3E2.0.CO%3B2-G); www.palit.com/2002_01_13_tkl_archive.asp; www.thedailystar.net/dailystarnews/200112/28/n1122808.htm, www.saag.org/papers7/paper660.html and www.himalmag.com/2002/june/commentary_inpk.htm,

¹⁰ Kaiser Bengali and Haris Gazdar, “Resolving the Water Crisis, *Dawn* (Karachi) April 1, 2001.

¹¹ *Ibid.*

¹² *Dawn* (Islamabad) August 14, 2004.

¹³ Speaking on the point of order, Dr. Sher Afgan (member National Assembly, Pakistan) of the PPP-Patriots challenged the parliamentary secretary on the issue and made these remarks. For details see, “Treasury benches demand reclamation of Sutlej from India,” *Dawn* (Islamabad) July 28, 2004.

perhaps even 2007. About 50 percent of it is expected to be lost by 2010 making it difficult to support cotton sowing and wheat maturing.¹⁴

According to a report on 31st January 2005, the J&K Assembly also passed a resolution on 3 March 2003 asking New Delhi to reconsider the IWT so as to safeguard the interests of the state.¹⁵

India and Pakistan have fought two major wars over Kashmir, in 1948 and 1965, and there have been numerous further instances when both states reached the brink of war, mainly over the Kashmir issue. Why, then, the Kashmir territory is so vital to Pakistan and India that they adamantly refuse to show any flexibility or grant any concession to one another? Three broad trends in opinion prevail over the Kashmir issue.

Firstly, it is generally believed that the Kashmir issue is an emotional one, rooted in the conflicting ideologies of Pakistan and India. According to this argument, Pakistan came into existence on the basis of the 'two nation theory' and it considers that the integration of the Muslim majority state (Kashmir) with Pakistan is an unfinished agenda of the Partition. India, being a secular state, has always attempted to undermine the concept of the 'two nation theory' and has never accepted even the existence of Pakistan. The reasoning continues that if India relinquishes its hold over Kashmir and agrees to some sort of 'independent Kashmir' the spill-over effects may strengthen a number of India's ongoing separatist movements. As a result, such a move would culminate in the balkanisation of India. Thus, Kashmir serves as a symbolic value of national honour and integrity for Pakistan and India.

Secondly, Kashmir is a political issue. It is a question of the right of self-determination for the people of Kashmir. This right was recognised and promised under the auspices of the United Nations Security Council (UNSC) in 1948, when India took the issue to the UN. Both parties (India and Pakistan) agreed on the implementation of a plebiscite under UN supervision but failed to create a conducive environment in which to carry it out. Following this disappointment, the inhabitants of Kashmir began pursuing their rights through a violent struggle, which has intensified since the late 1980s. Pakistan supports their right to self-determination. Thus Kashmir is an issue relating to both human rights and the political destiny of its inhabitants. Indians believe that the situation has been complicated by the unqualified support of Pakistan.

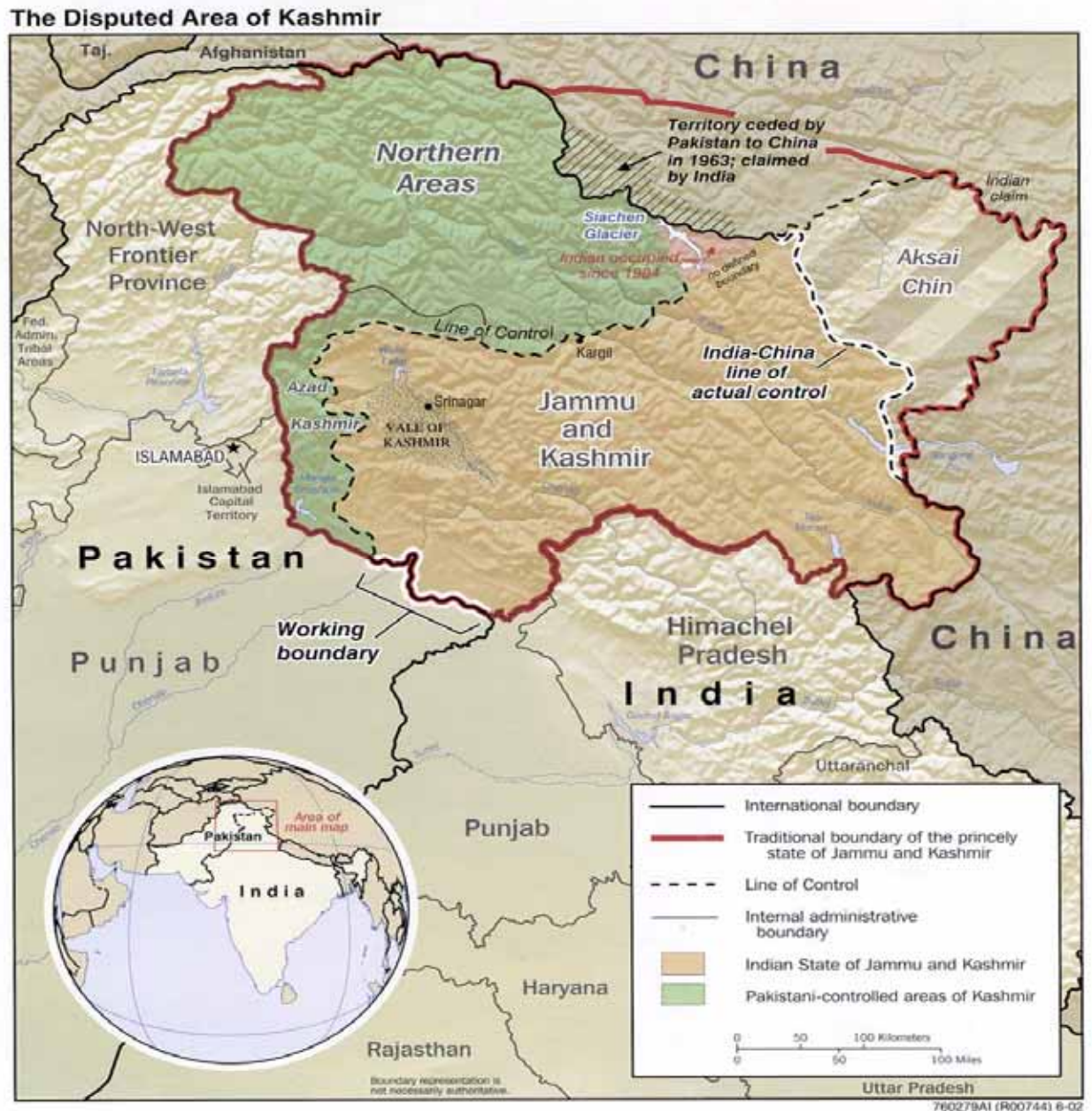
Thirdly, there is a strong belief that Kashmir is an issue of *realpolitik*. The territory of Kashmir is home to the catchment area of one of the world's largest river systems. The Indus river system serves as a life-line to the lower riparian, Pakistan, and "if India were [sic] to give up control of Kashmir—whether to Pakistan or an independent regime of some sort—it would lose its status as an upstream riparian and, therefore, much of its clout in determining the

¹⁴ "Conflict over water between India-Pak 'inevitable in future'", *Strategic Foresight Group*, Doordarshan March 21, 2005.

¹⁵ <http://www.Jammu-Kashmir.com/insights>

river's future use."¹⁶ The argument claims that for Pakistan, an unrestricted flow of the Indus river system is a question of 'life and death', and for India, control over it is a 'real political tool' with which to intimidate, economically strangulate, and undermine Pakistan's very survival as and when it chooses to do so.

Map 2: Territory of Jammu and Kashmir, as currently controlled by India, Pakistan and China.



Source: http://commons.wikimedia.org/wiki/File:Kashmir_map_big.jpg

¹⁶ Michael T. Klare, *Resource Wars: The New Landscape of Global Conflict* (New York: Henry Holt and Company, 2002), p. 187.

This study suggests that the Kashmir dispute is neither purely an emotional issue nor an ideological tangle but equally, if not more so, an issue of *realpolitik*. It is contended that this dimension of the Kashmir dispute was overshadowed in the wake of the Indian resolve to raise the Kashmir issue at the UNSC in 1948 and that *realpolitik* is inherent in the nature of the territory of Kashmir. The importance of the territory lies in its wealth of water resources, together comprising the Indus river system, which flow down into Pakistan. This river system constitutes the ‘jugular vein’ of Pakistan and as such is a matter of life or death for the state’s agrarian economy. India is not prepared to lose the upper-riparian status and Pakistan is fearful of its vulnerabilities—in economic as well as security-related terms. Thus the issue of Kashmir is also a question of the control of the upstream rivers which originate from the territory of Jammu and Kashmir, parts of which were captured by both India and Pakistan in 1948. Later, in the 1962 Sino-India border clash, China also captured part of Kashmir and, in 1963, Pakistan relinquished some of the area of Kashmir to China, where both states built the Karakorum Highway (KKH)—the only land route between the two states which might serve as economic corridor for Pakistan, China and the regions; South Asia, Central Asia and West Asia.

1.2 Core Question

The puzzle outlined above raises some fundamental questions. *The core contention of the study is that the India-Pakistan conflict is not exclusively identity-related, but the issues based on neo-realistic interests—such as the control of freshwater resources—are equally vital.* The following supporting questions provide a framework for argument:

1. Have boundaries been drawn on the geographical basis of access to water resources?
2. During wars between the rival riparians, has territory been explicitly captured because of its access to water sources?
3. Has river water ever been used as a military, political or economic weapon by the upper riparian?
4. Is the capturing and retaining of Kashmir territory linked to the “hydro-strategic” nature of its geography and can the conflict be considered resource-based?
5. When bilateral negotiations between the rival riparians reach a deadlock, do they necessitate third-party mediation?
6. Why do the disputants accept mediation and how it is conducted successfully?
7. When do the rival states choose accommodation as a preferred security strategy on vital concerns and postpone political issues?
8. What are the imperatives and implications of such accommodation?
9. What kind of scenarios emerge and what is the likely future role of river water resources in Indo-Pakistan relations?

These are the major questions that merit rigorous academic enquiry. The study addresses these crucial questions and argues that although the Kashmir issue exhibits further dimensions, it is quintessentially a question of control of the Indus Waters—an issue very likely to surface again in the future and may bring both the nuclear states at the brink of war.

1.3 THEORY: Theoretical Approach

Generally, the behaviour of a state in international system is driven by both identity and non-identity issues alike. To formulate an explanatory model these issues are required to be placed in a theoretical perspective. For instance, with a view on typical territorial aspects in the prevailing international system,¹⁷ the classical realism identifies similarities in power-politics as well as geo-politics. In this context, realists consider international structure as anarchic, which presumably results in conflict.¹⁸ On the other hand, liberals believe that the international environment is inter-dependent which enhances possibilities of cooperation.¹⁹ This is further corroborated by constructivists, who deliberate that liberal societies thrive on their pledge for reciprocation, collaboration and compromise.²⁰ Offensive and defensive strategies of neo-realism; however, focus on national interest with an aim to achieve maximum power and security respectively.²¹ Hence, relations with other states are formulated on rational choices by taking into account the likely costs vs benefits.²²

¹⁷ Hans J. Morgenthau, *Politics among Nations: The Struggle for Power and Peace*, revised ed., Boston: McGraw-Hill 1993; Clive Agnew and Ewan W. Anderson, *Water Resources in the Arid Realm* (Routledge: London, 1992); John Agnew and Gearoid O. Tuathail, “Geopolitics and Discourse: Practical Geopolitical Reasoning in American Foreign Policy,” *Political Geography*, Vol. 11, No. 2. (March 1992), pp. 190-204; Simon Dalby, “Critical Geopolitics: Discourse, Difference and Dissent.” *Environment and Planning D: Society and Space*. 9 (1991), pp. 261-283.

¹⁸ Art, Robert J. and Robert Jervis, “The Meaning of Anarchy” in Art, Robert J. and Robert Jervis, (eds.) *International Politics: Anarchy, Force, Political Economy, and Decision-Making*, 2nd Edition (Harper Collins, 1985) pp. 2-7; Scott Burchill, “Realism and Neo-realism” in Burchill, Scott and Andrew Linklater, (eds.) in *Theories of International Relations* (Basingstoke: Macmillan Press, 1996) pp. 67-92; Robert Jervis, “Cooperation under the Security Dilemma” in Robert J. Art and Robert Jervis, (eds.), *International Politics: Anarchy, Force, Political Economy, and Decision-Making*, 2nd ed., (London: Harper Collins, 1985), pp. 86-101; Kenneth N. Waltz, “Anarchic Orders and Balances of Power” in Robert J. Art and Robert Jervis, (eds.) *International Politics: Anarchy, Force, Political Economy, and Decision-Making*. 2nd ed. (London: Harper Collins, 1985), pp. 08-28.

¹⁹ Robert Gilpin, “Three Models of the Future” in Art, Robert J. and Robert Jervis, (eds.) *International Politics: Anarchy, Force, Political Economy, and Decision-Making*, 2nd ed. (London: Harper Collins, 1985) pp. 375-396; Miriam R. Lowi, *Water and Power: The Politics of a Scarce Resource in the Jordan River Basin*. (Cambridge: Cambridge University Press, 1993); Miriam R. Lowi, “Rivers of Conflict, Rivers of Peace.” *Journal of International Affairs*, Vol. 49, No. 1 (1995), pp. 123-144

²⁰ Michael N. Barnett and Raymond Duvall (eds.), *Power and Global Governance* (Cambridge: Cambridge University Press, 2005); Michael N. Barnett and Martha Finnemore (eds.), *Rules for the World: International Organizations in World Politics*, (Cornell University Press, 2004); Michael N. Barnett and Raymond Duvall, “Power in International Politics,” *International Organization*, Vol. 59 (2005).

²¹ Robert O. Keohane, *Neorealism and Its Critics* (New York: Columbia University Press 1986); Kenneth N. Waltz, “Structural Realism after the Cold War,” in *International Security*, Vol. 25, No. 1 (Summer 2000), p. 5.

²² Robert Jervis, “Cooperation under the Security Dilemma” in Robert J. Art and Robert Jervis, (eds.), *International Politics: Anarchy, Force, Political Economy, and Decision-Making*, 2nd ed., (London: Harper Collins, 1985), p. 86.

Despite having comprehensive discourse on interstate relations, the aforementioned theories explicitly do not expound the water issue between India and Pakistan. A major reason could be the lack of importance of the subject at global level, where the concept of 'water wars' may not have matured enough in the auguries of international politics. Despite an apparent lack of a consistent explanatory model on the subject, neo-realism and neo-constructivism do tend to elucidate the issue. For instance, water dispute can be explained on the basis of state party's behavior/actions as rational actor for maximizing their security in neo-realist perspective, while considering the notion of agreement aimed at stability and continuity of the system in neo-constructivism. Empirical evidences suggest that geography is a cause of conflict between neighbouring states, particularly, if it is overwhelmed with precious natural and strategic resources. In such a case, neo-realism in the context of resource wars befittingly describes the notion of 'mutually hurting stalemate' based on relative gains and losses; whereas, neo-constructivism offers cooperative compromise. Resultantly, both schools of thought present a viable theoretical approach that helps in establishing an explanatory model for highlighting befittingly the strategic importance of Kashmir in the perspective of resource wars particularly the Indus Waters Disputes between the enduring rivals India and Pakistan.

1.4 Core Hypothesis

If enduring rivals reach a mutually hurting stalemate, they prefer accommodation on vital concerns and postpone political issues.

1.5 Sets of Variables

The study utilises two sets of variables. The first set comprises those independent variables which cause war over water resources or generate environmental conflict and includes *geographical imperatives*, such as relative location, the nature of physical boundaries, surface features (e.g. the control infrastructure, both natural and man-made); *economic constraints*, such as the relative dependency of the lower riparian on resources, climate change, land use and water development patterns; and *political factors*, such as domestic constraints and external pressures.

The second set of independent variables produce accommodation between enduring rivals over water resources. These comprise: the incidence of a mutually hurting stalemate (be it military, economic or socio-political), the need to minimise losses (in bilateral and national affairs), the level of commitment to domestic reforms (at the domestic level), and the involvement of a mediator (an external factor influenced by the international power context).

The third set comprises some intervening variables which influence the accommodation process include: successful pre-negotiation deliberations, the culture of negotiation, the involvement of an influential third party, the postponement of political issue(s), silent or secret diplomacy, and the wording of an agreement.

These variables are discussed below, in detail, with a view to formulating a model linking concepts of water-war and water as catalyst for peace capable of explaining the role the Indus River waters in Pakistan-India relationship.

1.6 WATER-WAR LINKAGES: Independent Variables

A number of factors can be identified which may contribute to the generation of conflict over international rivers, however, the location of resources and the nature of state boundaries seem to be the major source of conflict. The geographical attributes that contribute to conflict generation over cross-boundary river water resources can be identified as relative location, the nature of physical boundaries, surface features (such as control infrastructures, both natural and man-made), the relative dependency of the lower riparian, land use and water development patterns, climate and water supply, population and settlement, domestic constraints, and external pressures or relations. Among these factors, relative location seems to be of prime importance, since location is obviously an elemental geographical reality, and also a fundamental geo-political attribute. Once location is determined, it can be conveniently correlated to some other geographic settings and geo-political realities. Moreover, the location factor is both basic and linked to all other factors, especially to the nature of boundaries. Thus, keeping the nature of the case in mind, the focus is on the geographical attributes of boundaries and the location of water sources as central causative factors.²³ Nevertheless, for better comprehension all the factors are precisely conceptualised below in the light of existing literature on the subject.

1.6.1 The Relative Geographic Location

Riparian states can occupy one of three possible locations: upper, lower, and middle.²⁴

A state with a middle location is, in a sense, simultaneously both an upper and a lower riparian, depending on its specific context. Should there be a dispute regarding the use of the river, each riparian is likely to profess those principles of customary international behaviour which are most beneficial for its particular location.²⁵

Four such positions, likely to be maintained by the riparian states, are listed below. Each position has been elaborated in the light of examples from the existing literature regarding the acquisition and use of surface waters in international law and various water codes pertaining to international rivers and the treaties signed between riparians.

²³ The idea of conflict factors and some of their characteristics in determining their relative role in conflict potential in an international river basin have been taken from a study by Basheer Khalil Nijim, for details see Nijim, *The Indus, Nile and Jordan: International Rivers and Factors in Conflict Potential* (unpublished thesis, Indiana University, 1969).

²⁴ F. J. Berber, *Rivers in International Law*, (New York: Oceana Publications, 1959).

²⁵ Nijim, op. cit., p. 5.

1.6.1.1 The Upper Riparian and Absolute Territorial Sovereignty

Adherence to the principle of absolute territorial sovereignty is very common with the upper riparians. This principle means:

“A state is totally free, completely autonomous and entirely independent in its authority over its own territory. Hence, it can take any desired course of action within its territorial borders and its authority is thus absolute over any and all water courses which flow within its territory, even though they may terminate in another country.”²⁶

United States of America has been ardent supporter of this principle. For example, in 1895, in connection with a dispute between the US and Mexico over the Rio Grande River, when the treaty was signed on 21 May 1903, the US agreed to deliver a fixed amount of water flow to Mexico. But the treaty stipulated that such a delivery did not constitute recognition of a Mexican claim to the water, and that the US did not understand it to establish a general principle or legal precedent.²⁷ Same has been propagated in other parts of the world as a number of experts of International Law like Mackay, Hyde, Berber, Fenwick, Briggs, Oppenheim, and Scott are proponent of this principle.²⁸

1.6.1.2 The Lower Riparian and Absolute Territorial Integrity

This principle stipulates that a state may not indulge in a practice injurious to another state.²⁹ Oppenheim states that:

Every state must allow rivers, over which it does not exercise unrestricted territorial sovereignty, whether in respect of their length or their breadth, to follow their natural course; it may not divert the water to the detriment of one or more of the other states with rights to the river, interrupt, artificially increase or diminish its flow.³⁰

Obviously, a lower riparian would happily invoke this principle. Nijim argues that “this principle, by implication, infringes upon the sovereignty of the upper riparian and, in a sense,

²⁶ Ibid., p. 6.

²⁷ U. S. Treaty Series, No. 455, noted in William L. Griffin, “The Use of Waters of International Drainage Basins Under Customary International Law,” *American Journal of International Law*, Vol. 53, No. 1 (January 1959), p. 5; *North American Environmental Law and Policy*, Commission for Environmental Cooperation, Montreal, Canada, 2001, available at: <http://www.cec.org/files/PDF/LAWPOLICY/NAELP7e.pdf>

²⁸ R. A. Mackay, “The International Joint Commission between the United States and Canada,” *American Journal of International Law*, Vol. 22, No. 2, (April, 1928), pp. 292-318; C. C. Hyde, *International Law Chiefly as Interpreted and Applied by the United States* (Boston: Little, Brown and Company, 1945), pp. 565; F. J. Berber, *Rivers in International Law* (New York: Oceania Publications, Inc., 1959).; C. C. Fenwick, *International Law* (New York: Appleton-Century Crofts, 1948), p. 391; H. W. Briggs, *The Law of Nations* (New York: Appleton-Century Crofts, 1952), p. 7274; L. Oppenheim, *International Law: A Treatise*, 8th ed., (New York: Longmans, Green & Company, 1955), Vol. I, p. 465; and R. D. Scott, “Kansas v. Colorado Revisited,” *American Journal of International Law*, Vol. 52, No. 3, (July 1958), p. 42.

²⁹ L. Oppenheim, *International Law: A Treatise*, op. cit., pp. 290-291.

³⁰ Quoted in F. J. Berber, *Rivers in International Law*, op. cit., p. 20.

penalizes them for having an advantageous position, since the lowermost riparian is not equally restricted in its pursuit of unilateral development.”³¹

1.6.1.3 The Middle Riparian and Resource Community

The dilemma for a middle riparian country would be to which principle it should support? If it favours of absolute territorial sovereignty vis-à-vis the lower riparian, then, by its own argument, it may find itself entangled in unfavourable consequences of the same principle, should the principle be invoked by the upper riparian. On the other hand, if the middle riparian advocates the principle of absolute territorial integrity, it may find that it has imposed limitations upon its own freedom of action vis-à-vis the lower riparian—limitations which may compromise some of the development schemes planned by the middle riparian.³²

Nijim believes that a middle riparian state will profess for a third principle of riparian regulation, namely that of a community in water resources. This principle envisages a maximum of cooperation amongst the riparian states in treating the whole river basin as a unit. Its proponents speak sometimes of ‘natural law’ and sometimes, perhaps more pragmatically, of the benefits accruing to all the users, whether they be the benefits of economy or of political comity. The principle has also been supported by non-riparians, especially in the case of navigable waterways.³³ The principle is supported by Smith, Brierly, Moor, and Griffin.³⁴

1.6.1.4 Restricted Sovereignty and Restricted Integrity

An alternative to resource communities, and, occupying place between the principles of absolute territorial sovereignty and integrity, is the principle of restricted sovereignty and restricted integrity,³⁵ which is derived from the three and is embodied in an agreement, can conveniently be termed as “accommodation”. Accommodation refers to an intermediate approach—one neither accepting the absolute sovereignty right of the upper riparian nor absolute integrity in favour of the lower riparian. Moreover, being an approach which lacks a sense of community in the development or use of international river resources, it refers to the total diversion of a river (or rivers) by an upper riparian to form its designated share of a system of rivers. Restrictions are, however, imposed on the upper riparian, not to interfere

³¹ Nijim. op. cit., p. 8.

³² Aline Baillat, *Hydropolitics in Small Mountainous States, Two Cases of Cross-Asymmetries: The Kingdom of Lesotho and the Republic of South Africa, The Kingdom of Nepal and the Republic of India*, (Geneva: HEI Publications, 2004), available at <http://hei.unige.ch/publ/workingpapers/04/wpaper3.pdf>

³³ Nijim, op. cit., pp. 9-10.

³⁴ Herbert Arthur Smith, *The Economic Uses of International Rivers* (London: P. S. King & Son, Ltd., 1931), pp. 150-153; J. L. Brierly, *The Law of Nations* (Oxford: Clarendon Press, 1955), pp. 204-205; J. B. Moore, *Digest of International Law*, op. cit., pp. 128-132; and William L. Griffin, “The Use of Waters of International Drainage Basins...,” op. cit., pp. 75-76.

³⁵ F. J. Berber, *Rivers in International Law*, (op. cit., pp. 26-44) classifies only three principles but argues that fourth principle can be derived. Such a condition is practicable, and fits very well in the case under study—Indus Waters Treaty 1960 between India and Pakistan.

with the downstream flow of those rivers allocated to the lower riparian as its share, except where specified uses have been agreed upon. No joint management of water resources is envisaged under this principle. Instead, the independent development of water resources by both the upper and the lower riparian, with minimal interaction between them, is agreed upon.

Somehow, if the riparians do not reach an agreement and yet neither wishes to press for the respective absolute principles, the status quo tends to be maintained and no development takes place until one riparian insists on a unilateral development. Logically, the conflict potential inherent in such a restriction occupies an intermediate position between the community principle on one hand and the two absolute principles of restricted sovereignty and restricted integrity on the other.³⁶

1.6.1.5 Geographic Location and Conflict Potential

No doubt the principles of absolute territorial sovereignty and integrity imply greater potential for conflict than the communal principle. The sovereignty principle indicates an overriding preoccupation with presumed rights on the part of one party and a denial of the similar interests for others, when these interests appear to be mutually conflicting. It carries an inherent, undeniable sense of power with the upper riparian to intimidate the lower riparian. This ability may, in turn, lead to the resentment on the part of the lower riparian, which can hardly retaliate in kind. In this case, the conflict potential is both a function of the ability of the lower riparian to enforce its claim, as well as the inclination of the upper riparian to respect that claim. However, mere insistence on one or the other of these two absolute principles is itself indicative of a reluctance to reach an accord, and thus a sign of absence of harmony in international relations.³⁷

The principle of absolute territorial sovereignty ranks higher to the principle of absolute territorial integrity in terms of conflict potential. If an insistence on absolute sovereignty of upper riparian leads to the deprivation of lower riparian from what it regards as essential to its national survival and welfare, then it is likely to consider the possibility of resorting to force. While, an insistence on absolute integrity will lead to the use of force only if the lower riparian feels deprived of minimum essentials. In essence, the conflict is, associated with an adherence to absolute sovereignty. Moreover, where extreme positions are held, an insistence on absolute sovereignty will give rise to an initiative in which a river project is executed, whereas an insistence on absolute integrity will translate into the use of force. The former case, involving less extreme action, is more likely than the latter; yet the breaking point will be approached incrementally, and the lower riparian will at some point decide that use of force is the only resort left. On the other hand, pursuit of community principle results in a minimum of conflict potential as apparently there is an agreement not to disagree on riparian

³⁶ Nijim, op. cit., p. 14.

³⁷ Ibid., p. 13.

matters. In fact, of the three principles, this one is overwhelmingly favoured by writers on international riparian regulations.³⁸

Due to great conflict potential the principle of absolute sovereignty is increasingly being regarded as a historical fact, with one writer condemning it as being: "...based upon an individualistic, anarchical conception of international law, in which selfish interests are exclusively taken as the rule of conduct and no solution is offered regarding the opposite interests of upper and lower riparian."³⁹

On the other hand the community principle finds overwhelming support in the actual practice of states, in settling their riparian disputes and in the decisions of arbitration tribunals, both of which comprise two important components of international law.⁴⁰ There are over one hundred treaties in which co-riparians have voluntarily restricted their absolute freedom of action.⁴¹ Moreover not a single international judicial decision supports the principle of absolute sovereignty or absolute integrity.⁴²

The above description signifies that the geographical location of a resource must be predominantly considered in the assessment of the potential of conflict. An upper riparian position, coupled with an exercise of absolute sovereignty, possesses a high conflict potential. A lower riparian position may also lead to conflict, but the potential does not seem to be as great. In case neither party insists on the absolute stance, then in the absence of an agreement a non-formal restriction on unilateral development may be practiced, then the potential for conflict will be lower. A middle-riparian position is likely to be coupled with a preference for the principle of community in resources and consequently the conflict potential will be lowest.⁴³

1.6.2 The Nature of Political Boundaries

The origin of conflict such as water distribution between two states is most often rooted back to demarcation of borders between the states by colonial masters. Boggs have assessed the borders on the basis of their geometric or morphologic composition,⁴⁴ as well as on their genetic nature.⁴⁵

³⁸ Ibid.

³⁹ F. J. Berber, *Rivers in International Law*, op. cit., p. 15.

⁴⁰ L. Oppenheim, *International Law: A Treatise*, op. cit., Vol. I, p. 25; see also C. John Colombos, *The International Law of the Sea*, 4th ed., (London: Longmans, Green and Company, Ltd., 1959), p. 7.

⁴¹ Griffin, op. cit., p. 51.

⁴² Ibid., p. 59.

⁴³ Nijim, op. cit., p. 15.

⁴⁴ S. Whittemore Boggs, *International Boundaries: A Study of Boundary Frontiers and Problems* (New York: Columbia University Press, 1940), pp. 22-28; Please see also Frank R. Pfetsch, "Borders: Cause of Conflict or Catalyst for Peace?", *Eurotimes*, Journal of the Institute for "Jean Monnet" European, University of Oradea and Euroregional Studies, Centre of Excellence, University of Debreen, Vol. 4, p. 14, available at:

Nijim observes that in case of geometric delineation of borders, the potential of conflict remains high because of colonial intent or neglect to value any ethnic, religious and cultural divides. On the other hand, the probability of conflict varies in morphologic division. For instance, chances of conflict would be high in boundaries lying in fertile lands in comparison to a desert landscape. Boundaries in the context of rivers also present a varying possibility of conflict. For example, river boundaries entail a relatively high conflict potential primarily due to a river's facet of uniting over dividing, and its tendency to alter the course of ravine. Conversely, if rivers are expansive with surrounding land overwhelmed with mires, swamps and futile land, the probability of conflict would remain low.⁴⁶

Conflicts are as natural to human nature as needs and interests are. The more practical approach to the question of boundary classification is the one based upon genetic nature. It denotes the relation of the boundary to the cultural pattern existing at the time of boundary delimitation. Here, three types of generic boundaries may be noted, in order of rising conflict potential: antecedent, subsequent, and superimposed. The first predates settlement, so that the evolution of cultural patterns, if any, is related to the established boundary. The subsequent is preceded by the settlement, and tends to take that settlement into account. The third is independent of the existing cultural patterns, and in fact may be forced upon them later, as in the case of truce and armistice lines, or super-imposed boundaries in the event of the political division of a territory between two independent states. In such a case, if any existing control structures (such as headworks, dams and barrages) acquired or awarded to the upper riparian make it capable of depriving the lower riparian of its legitimate share of water resources, the conflict potential is not only high but inevitable too.⁴⁷

1.6.3 Surface Features

The surface features of a region are contributory factors of conflict because utilisation of the valley depends on them. For instance a valley in a remote and rugged mountainous region will possess a minimum of conflict potential due to its relative inaccessibility and the unsuitability of the terrain for resource development. Moreover the factor of surface features is related to existing human wants, needs, and abilities. Similarly, the extensive marshy flood plain of a river is susceptible to flooding and is less useful for human development, hence constitutes low conflict potential.⁴⁸

http://iser.rdsor.ro/main_page/Documents/Eurolimes/pdf/4_eurolimes.pdf, accessed on 22 May 2016.

⁴⁵ R. Hartshorne, "Suggestions on the Terminology of Political Boundaries," *Annals of the Association of American Geographers*, Vol. 26, No. 1, (March 1936), pp. 56-57; See also Frank R. Pfetsch, "Borders: Cause of Conflict or Catalyst for Peace?", *Eurolimes*, op. cit., p.14.

⁴⁶ Nijim, op. cit., p. 17. See also Frank R. Pfetsch, "Borders: Cause of Conflict or Catalyst for Peace?", *Eurolimes*, op. cit., p.14.

⁴⁷ Nijim, Ibid., p. 18; See also Frank R. Pfetsch, "Borders: Cause of Conflict or Catalyst for Peace?", *Eurolimes*, op. cit., p.14.

⁴⁸ Ibid., p. 15.

On the other hand, a fertile valley with considerable potential for storage dams and hydroelectric power may possess a higher degree of conflict potential. The potential would be even greater in the case of a 'mature river valley with good prospects for human settlement' and development. In short, if the part of a river basin is judged by the residents or adjacent population as a good resource— actual or potential— that part will acquire greater potential for conflict.⁴⁹

1.6.4 Climate and Water Supply

Increasing aridity constitutes higher conflict potential. Rising aridity creates an accelerated demand contingent upon decrease in the supply. Under humid conditions, on the other hand, non-fluvial water sources are available for consumptive purposes, and therefore demand for the water supply will be less. Nijim pointed out that humid and arid river basins are different enough to have acquired respective functional associations. Rivers in arid climates have been associated with consumptive and rivers in humid climates with non-consumptive usages. He presents examples from Roman and English laws. For instance, Roman law awarded water rights on the basis of chronological priority, so that once a user had established a pattern of consumption, it need not be concerned about interference from a more recent riparian, even though the latter may be located upstream. On the other hand, in north-western Europe, irrigation was of minimal importance while navigation interests were paramount. English Common Law thus assured to each riparian the undiminished continued flow of the river.⁵⁰ Agreements, in fact, have been reached more readily in the latter type of basin than in the former as "the prosperity of arid regions has been [especially] sensitive to political conditions."⁵¹

1.6.5 Population Density and Settlement Patterns

A sparsely populated river basin usually bears a lower degree of conflict potential than the densely populated one. Similarly, an agrarian irrigation economy will be especially possessive of its river flow and water rights, and thus will possess a high conflict potential, compared to an industrial economy. This presumption is based upon the suitability of power generation potential of a river, given the non-consumptive nature of the water use. However, such an economy may also use the river for the transportation of sewage, resulting in the aggravation of pollution prospects, and consequently of conflict potential too. If the river function is predominantly for navigation or power generation, the potential will be low. For example the resource itself is not diminished in quantity or quality, and any compromise may not go beyond the matter of navigational rules.⁵²

Nijim argues that the higher conflict potential may also be rooted into the core population area, because resistance to change and compromise is likely to be more

⁴⁹ Ibid.

⁵⁰ Nijim, op. cit., p. 16.

⁵¹ Gilbert F. White, *The Nature of Arid Lands*, (Washington, D. C.: American Association for the Advancement of Science, No. 43, 1956), p. 87.

⁵² Nijim, op. cit., p. 18.

effectively articulated by political-administrative, historical-traditional, religious-iconographic cores of population. The potential will be still greater if such cores are located on either side of an international border. Moreover, a river basin in which the population is homogeneous is likely to possess a lower level of conflict potential and vice versa.⁵³

1.6.6 Domestic Scenarios and External Relations

A state which is vulnerable to external pressures harbours a higher probability of conflict potential. Such pressures may include irredentist claims or expansionist intentions. The conflict potential is likely to extend to parts of the river basin outside the state. A river basin located in a politically instable state, bears high potential for conflict. Internal weakness and divisiveness might reduce conflict potential if the state is pursuing defensive external posture but sometimes state's preoccupation with internal affairs might lead it to an aggressive foreign policy in an attempt to achieve internal unity in the face of a presumed external danger.⁵⁴

A state may possibly experience a complementary situation between negative internal and negative external pressures, with one factor reinforcing the other. Such a situation may arise if an irredentist claim is coupled with a serious matter of dissatisfaction by a segment of the internal population. In such a scenario, the conflict potential will be far high.⁵⁵

1.6.7 Summary

It can be assumed that the conflict potential in an arid river basin would be high if the following circumstances exist in combination: a lower riparian confronted by an upper riparian claim of absolute territorial sovereignty, in which surface features provide control infrastructures for the upper riparian and there are no serious obstacles for further river development projects for the upper riparian; the region is ethnically heterogeneous with conflicting territorial claims; the location of the disputed territory is the major source of fresh water supply for the lower riparian; the boundaries are superimposed between the riparian; there is a high population density throughout the basin, with several urban cores and much of the settlement is fairly recent and the demand for water is consumptive in nature.

The factors conceived in this section will be explained and assessed in chapter 2 and 3, both individually and in combination in order to ascertain their relative role in conflict generation in the Indus Basin. The factors facilitating accommodation are identified in the following section.

⁵³ Nijim, op. cit., p. 19.

⁵⁴ Jack Levy, "The Diversionary Theory of War: A Critique," in *Handbook of War Studies*, ed. Manus Midlarsky (Boston: Unwin Hyman, 1989), pp. 258-86.

⁵⁵ Nijim, op. cit., p. 20.

1.7 ACCOMMODATION: Independent Variables

The core question in this section of study concerns: under *what* conditions a lower riparian initiates accommodation vis-à-vis the upper riparian? Under what circumstances accommodation progresses and under what conditions does it regress (i.e. returns backward to procedural accommodation or an adversarial relationship? The second question, explored here, deals with the techniques that facilitate the accommodative process.

The review of the existing literature reveals that no significant study firmly focuses on accommodation between developing states, barring an effort of a student in his masters' thesis from which some of the variables have been incorporated in this study.⁵⁶ The additional theoretical arguments are derived from the literature on negotiation; conflict analysis; conflict management and resolution and also accommodation and cooperation between the former Super Powers; and domestic politics and foreign policy decision-making in the developing world by the end of Cold War. Some explanatory variables are directly deduced by observing the phenomena of accommodation in the developing world, for instance, the role of the presence or absence of a 'culture of negotiation' between the disputants. The role of an influential third party in facilitating the peace initiative and furthering the process of accommodation, where the disputants lack culture of negotiation, was found to be significant in many cases relating to the developing world.⁵⁷

1.7.1 The "Mutually Hurting Stalemate"

William Zartman's concept of a 'mutually hurting stalemate' describes the 'ripe moment' for the third party intervention and willingness of conflicting parties to negotiate. The concept is based on two premises: firstly, that the protracted conflict or the enduring rivalry has reached a stage where its continuance is mutually harmful, and will "hurt" them enough that a policy change becomes an attractive option, and secondly, that if nothing is done to resolve the present deadlock then a situation of stalemate will emerge, leading to "unacceptable costs of a higher magnitude."⁵⁸ In other words, the ongoing situation is not set to improve, but is simply expected to deteriorate if prolonged to an indefinite period. As Jacob Bercovitch argues that *mediation is most useful in protracted conflicts, where the parties have*

⁵⁶ Haroon Haider Bhatti, *Pakistan's Accommodative Moves vis-à-vis India: A Case Study of the Dynamics of Accommodation in the Developing World* (MA thesis submitted to the McGill University, Montreal, Canada, 1999).

⁵⁷ Raymond Cohen, *Negotiating Across Cultures: Communication Obstacles in International Diplomacy* (Washington, D.C.: U.S. Institute of Peace Press, 1991); G. Fisher, *Mindsets* (Yarmouth, ME: International Press, 1988); W. B. Gudykunst & Kim Y. Y., *Communicating with Strangers: An Approach to International Communication*, (Reading, M.A.: Addison-Wesley, 1984); Plantey, A., "A Cultural Approach to International Negotiation," *International Social Science Journal*, No. 93, (1982), pp. 535-543; M. D. Strazar, "The San Francisco Peace Treaty: Cross-cultural Elements in the Interaction between the Americans and the Japanese", in R.P. Anad (ed.), *Cultural Factors in International Relations*, (New Delhi: Abinhav, 1981), pp. 63-76.

⁵⁸ William Zartman, *Ripe for Resolution and Intervention in Africa* (Oxford: Oxford University Press, 1985) quoted in Jinping Guo, *The Dynamics of Accommodation: China's Strategy Towards ROC (Taiwan)*, (M.A. thesis, University of Illinois at Urbana Champaign, 1996), p. 4.

reached an impasse but still want to end their fighting and are willing to compromise to do it.⁵⁹ As a result, the desire to come out of the counterproductive stalemate and to check further conflict escalation motivates a given state to consider a more conciliatory policy toward its opponent.⁶⁰

The dependent variable in this study is Pakistan's initiative for accommodation vis-à-vis India. Two primary aspects of accommodation; initiation and the process, are analysed here. Accordingly, two sets of intervening variables are measured, one analysing the initiation of accommodation, and the other highlighting the various techniques that facilitate the process towards settlement.

Several factors ranging from domestic political, economic and security to external political and military pressures can cause the initiation of accommodation between enduring rivals, but the three main aspects are analysed here: 1) urgency and need to minimise losses [in bilateral and domestic affairs]; 2) level of commitment to domestic reforms [national level]; and 3) involvement of an influential mediator [an external factor or international context].

These factors befittingly assist in explaining (1) who initiates accommodation, (2) at which stage of conflict it is initiated and, most importantly, (3) why it is initiated. It is hypothesised that there are two main causes leading to the willingness of a party to initiate accommodation. One is related to the domestic politico-economic sphere and the other to the external politico-military sphere. Bhatti argues that the presence of either of these factors constitutes a necessary as well as a sufficient precondition for the peace initiation. However, when both of these factors are mutually exclusive or exist independently of one another, an attempt to initiate accommodation becomes highly likely. The third factor, the involvement of a powerful third party, plays decisive role in the 'initiation' phase, as well as in the breaking of deadlocks during the negotiation process.⁶¹

The perception or realisation of a mutually hurting stalemate often becomes a turning point in a conflict and a sufficient cause for the initiation of accommodation, conflict management or conflict resolution. William Zartman termed it a 'ripe moment':

The basic component of a ripe moment is a deadlock that keeps both parties from achieving their goals. But deadlock alone is not enough it must be a particular kind of stalemate that hurts both parties enough to make them feel uncomfortable and unable to break out by an escalation with acceptable costs. But a mutually hurting stalemate is not enough either; in order to be effective, it generally needs to be riveted to the parties' perception through a recent or looming catastrophe that acts as a deadline or is remembered as a warning and that threatens to impose additional

⁵⁹ Jacob Bercovitch, "Mediation in International Conflict: An Overview of Theory, A Review of Practice", in *Peacemaking in International Conflict: Methods and Techniques*, eds. I. William Zartman and J. Lewis Rasmussen (Washington DC: United States Institute of Peace Press, 1997), pp. 125-154.

⁶⁰ William Zartman, "Conflict and Resolution: Contest, Cost and Change," *The Annals*, Vol. 518 (November 1991), p. 17.

⁶¹ Bhatti, op. cit., p. 21.

and unacceptable costs of higher magnitude. But even this is not enough; it is not helpful to be painted into a corner, even a stifling one, if there is no way out. Finally there must be not only a formula for a way out but an indication that the parties are willing in principle to choose it if it is attractive enough and that they will respond positively to the other's moves in that direction.⁶²

1.7.1.1 The Urgency and Need to Minimise Losses

The probability of the initiation of accommodation by a lower riparian depends on the urgency of the issue and the extent of the need to minimise consequent losses. The incidence of this need is mostly expected from the weaker party i.e. the lower riparian and this factor is often exploited by the powerful adversary or upper riparian. If the lower riparian is a developing state, it is more likely to initiate accommodation with a view to minimise losses mainly in three areas: (1) the external politico-military sphere (2) the domestic economic sector, and (3) the domestic political arena.

Bhatti observes that a war, crisis, or near-crisis scenario, bearing a potential to disturb the status quo between rivals or to create a conflict situation between states, brings with it losses in the external politico-military sphere as well. The leaders are motivated to initiate accommodation in order to minimise not only current losses but, more importantly, perceived future losses in the politico-military, diplomatic and domestic spheres. A desire to return to the previous status quo usually results in procedural accommodation, for example, an exchange of prisoners of war and the withdrawal of troops to pre-conflict positions. The rivals may also incline to introduce some conflict avoidance, risk reduction, or confidence building measures, such as the prior notification of troop movements, military exercises or missile testing; the establishment of hotlines; and assurances not to attack some sensitive or core infrastructure such as nuclear facilities. It is highly probable that such accommodative initiatives are restricted to the conflict management.⁶³

There is a likelihood that radical changes in the external politico-military sphere result in an initiative for substantive accommodation as opposed to the one for procedural accommodation. This is likely to occur either: (1) when one party is totally overwhelmed or defeated by the other, (2) when one party enjoys a strategically advantageous position, or (3) when both of them perceive a "mutually hurting stalemate". Overwhelming defeats or complete annihilation of adversaries are rare in contemporary conflicts, therefore, an agreement reached under the first condition may not constitute "accommodation".⁶⁴ However, the second and third conditions are quite frequent and deserve greater attention.

The geographically disadvantageous location of lower riparian vis-à-vis its adversary provides the latter with freedom of action. The possession of upstream territory containing a river control infrastructure (such as headwork or dam) equips the upper riparian with an

⁶² Zartman, *The Annals*, op. cit., 16.

⁶³ Bhatti, op. cit., p. 21.

⁶⁴ *Ibid.*, p. 22.

economic, political and military advantageous tool with which to deprive the lower riparian of its freshwater life-line, choke its agrarian economy, or coerce it into conceding certain political or economic advantages. In such a situation, the lower riparian often has no other option but to accommodate the demands of the upper riparian in an effort to minimise its losses, especially where the lower riparian is simultaneously a militarily weaker state vis-à-vis the upper riparian. Therefore, it is essential to pay due attention to both external losses in the politico-military sphere at the bilateral level, and economic losses and security concerns at the domestic level.

Regimes also initiate accommodation in order to minimise losses in the domestic political and external security spheres. Many developing states face ethno-national movements and actors who challenge the authority and legitimacy of the regime and/or the very existence of the state itself. In such situations, two main types of domestic losses could arise: firstly, challenges to the institutions of the state and its regime, and, secondly, challenges to national unity and territorial integrity. These challenges range from economic recession, the scarcity of resources, and ethno-national movements, to civil wars, armed struggles for liberation, and attempts at succession. In such a situation governments may choose to initiate accommodation with an external adversary to deal with internal "adversaries" and thereby secure the regime.⁶⁵

1.7.1.2 The Level of Commitment to Domestic Reforms

An intensity of commitment to improve domestic political and economic systems presumes the existence of a fragile economy with deteriorating trends. In such situation if a major portion of the state's resources are allocated to defence expenditure it may not permit the successful execution of wide-range domestic reforms. Consequently, failure to pursue reforms, particularly in the economic sphere, would significantly limit resources for future defence needs. Under such circumstances, accommodation with an adversary becomes quite a plausible option.⁶⁶

This not only suggests the various causes for the success of accommodation but also refer to the party who initiates it. Naturally, the regime that wants to carry out domestic reforms and is also in dire need to divert resources from the external politico-military sphere to the domestic economic sphere would be the one to initiate an accommodation. However, it is observed that not all commitments to the reform of domestic political and economic structures are bound to result in peace initiatives abroad. One of the reasons for this may lie in the balance of power between the two states. Obviously, a weaker party, having an inherent sense of insecurity, would always be tempted to come at par militarily with the stronger state, particularly in a situation of enduring rivalry. The greater the asymmetry in

⁶⁵ Ibid., p. 24.

⁶⁶ Ibid., p. 25.

power and the stronger the commitment to domestic reforms, there would be greater chance of a peace initiative.⁶⁷

Moreover, initiation of accommodation also depends on the nature of regime. A newly formed government may bring radical changes. Sometimes the existing government may also introduce radical reforms as the authoritarian regimes often lack legitimacy and the public support to endure their rule in the land. Bhatti believes that if the reforms are well intentioned and comprehensive, the regime initiates accommodation to divert resources from military to economic sector. However, if these are "token reforms" that are intended to postpone real change, then accommodation may be initiated to beef up internal security and enhance the regime's hold on power. In such instances, resources are not easily shifted from the military to the economic sphere. Rather, military and security forces are shifted from border posts to internal security positions. Here, regime security of existing leadership is the prime cause of initiating a truce with the adversary.⁶⁸

1.7.1.3 The Expectation to Involve a Powerful Mediator

Jacob Bercovitch argues that though multiple motives play role while mediator has to make a decision to intervene in a situation but intervention most often is not for humanitarian interests. These motives include "the desire to affect history, to spread their own ideas, to limit the conflict's impact on their own (national) interests, to extend their own influence"⁶⁹ abroad. Disputants may seek mediation to control conflict escalation as every disputant "may hope that the mediator will influence the other party."⁷⁰

Mediators involve in multiple roles, activities and behaviours. Bercovitch classifies the role of international mediators under three main strategies:

"Communication strategies include contacting the parties, transmitting messages, building trust and rapport, clarifying and supplying missing information. Formulation strategies include arranging the mediation setting and protocols, shaping the agenda, controlling timing and maintaining parties' focus, suggesting concessions, options and settlement proposals. Manipulation strategies include keeping the parties in negotiation, changing their expectations, pressing them to be flexible, filtering information, adding incentives or threatening punishment, and thereafter to withdraw."⁷¹

Bercovitch further observes that the strategic choice and behaviour of the mediator depends on the nature of the conflict,⁷² and the bargaining power of a mediator. The

⁶⁷ Ibid., p. 26.

⁶⁸ Ibid.

⁶⁹ Jacob Bercovitch, "Mediation in International Conflict: An Overview of Theory, A Review of Practice" in *Peacemaking in International Conflict: Methods and Techniques*, eds. I. William Zartman and J. Lewis Rasmussen (Washington DC: United States Institute of Peace Press, 1997), pp. 125-154. Please see also Jacob Bercovitch, "Mediation in International Conflict: An Overview of Theory, A Review of Practice," abstract available at: <http://www.beyondintractability.org/artsum/bercovitch-mediation>, accessed on: 22 May 2016.

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² Ibid.

bargaining power of mediator is further strengthened by the resources in its possession and the ability to offer awards and exert coercion.⁷³

Since the prime focus of this study falls within the developing world, the role of powerful third party in inducing the initiation of accommodation by intensifying the hurting stalemate of the conflicting parties is of import here. Mark N. Katz identifies various ways in which major powers can bring about or reinforce an already existing 'hurting' stalemate between antagonists in the developing world. In his opinion, major powers can employ (1) the mutual cessation of military assistance; (2) a joint diplomatic initiative or even diplomatic pressure; (3) a joint sanctioning of military intervention; or, (4) collaboration with international organisations.⁷⁴ However, economic embargoes or trade restrictions rarely induce a state to seek accommodation, particularly if such moves cripple its already deteriorating economy. Sanctions are also proved to be counter-productive in majority of the cases.⁷⁵

1.7.2 ACCOMMODATION: Intervening Variables

The following six procedures as intervening variables are likely to have a significant impact on the outcome of the process of accommodation.

- 1) Successful pre-negotiation deliberations
- 2) The culture of negotiation
- 3) The involvement of an influential third party
- 4) Quiet or Secret diplomacy
- 5) The postponement of political issue(s) and
- 6) Wording of the agreement

1.7.2.1 Successful Pre-Negotiation Deliberations

Since the negotiation process develops over time, it can be divided into three stages, namely the pre-, main- and post-negotiation phase. Each of the three phases focuses on different negotiation matters, procedural or substantive, and recognizes different modes of conduct and strategies.⁷⁶

Within the *pre-negotiation phase*, three central issues arise: first, the parties must decide whether or not to negotiate at all; second, technical and organizational questions must be raised; and third, the substantive issues of negotiation must undergo selection.⁷⁷

⁷³ Frank R. Pfetsch, *Negotiating Political Conflicts* (Houndmills, Basingstoke, Hampshire: Palgrave Macmillan, 2007), p. 152.

⁷⁴ Mark N. Katz, "Mechanisms of Conflict Resolution," in William Zartman and Victor A. Kremenyuk, eds., *Cooperative Security* (Syracuse: Syracuse University Press, 1995), p. 316, cited by Bhatti, op. cit., p. 27.

⁷⁵ Peter Wallensteen, *Understanding Conflict Resolution, War, Peace and the Global System* (London: Sage, 2002).

⁷⁶ Frank R. Pfetsch, *Negotiating Political Conflicts*, op. cit., p. 10.

⁷⁷ Ibid.

The probability of success of negotiations significantly depends upon the extensive pre-negotiation deliberation. This is primarily due to the functions that pre-negotiations perform. For instance, pre-negotiation communications define the boundaries of the issue, identify the actors or participants, formulate the agenda, and assist the leaders in managing public opinion and political coalitions at home. Moreover, by performing many of these functions, pre-negotiation phase helps in establishing the degree of reciprocity. Since there is no public commitment to negotiation at this stage, pre-negotiation allows the leaders to exit the process at low cost of commitment. The exchange of valuable information helps to reduce risk and uncertainty in the next phase.⁷⁸

1.7.2.2 The Culture of Negotiation

Professor Pfetsch argues that the role of culture in international negotiations is treated as controversial in the negotiation literature. On the one hand, there is the argument, that cultural factors are important to influence the negotiation process and explain among other things the outcome of negotiations. On the other hand, there is the argument that national cultures do not matter very much at all where there exists a professional international negotiation culture that dominates and makes differences between national cultures obsolete.⁷⁹

Nevertheless, culture is one of the several influencing factors which affect the negotiation behaviour of international actors, and cross-cultural antinomies between parties may change the course and outcome of the negotiations. Raymond Cohen, making reference to Fisher, Gudykunst, Kim, and Singer, emphasises that the “relationships between cultural strangers involve more than an awkward encounter between contrasting languages, manners, and habits,” but “not all cross-cultural contacts, of course, results in dissension,” rather “a distinction has to be drawn between four quite different cross-cultural encounters.”⁸⁰

The first kind of possible encounter is the *compatible interaction between similar or related cultures*, as for instance in the negotiations between the states bordering the Rhine over its utilisation as a source of fresh water. A second possible encounter involves *complimentary interaction between dissimilar cultures*, as, for example, in the US-Japanese relationship during the 1951 San Francisco Conference. A third possible cross-cultural encounter takes the form of the *non-complimentary interaction of related cultures*, such as the inability of Arab societies to cooperate over the Euphrates River. Finally, the fourth possibility is that of *incompatible interaction occurring between dissimilar cultures* which have been divided by history, as in the interaction between Israel and Egypt, and India and Pakistan.

⁷⁸ Ibid., pp. 10-14.

⁷⁹ Ibid., pp. 42-63.

⁸⁰ Raymond Cohen, “An Advocate’s View Point,” in Guy Olivier Faure, Jeffrey Z. Rubin (eds.) *Culture and Negotiation* (Newbury Park, London, New Delhi: SAGE Publications, 1993), 22-37.

Such cultural differences can be overcome or even transformed, through harmonization of mutual interests, from hindrances into positive assets for negotiation.⁸¹

In a confrontation between collectivistic and individualistic cultures, the mediators or negotiators can perform vital intercultural functions to protect and, if necessary, save the face of the honour-conscious party. They can smooth the friction between adversarial and conciliatory approaches leading to a conflict resolution; they can ease the linguistic strain between high and low context communicators.⁸² Above all, they can act as cultural interpreters, explaining the parties to one another. Negotiators recognise diversity and eschew universal panaceas, both of which are ready-made recipes for success.

Negotiators prepare their task; firstly, by achieving self-awareness of the hidden assumptions they themselves bring to the negotiating table. Before entering a negotiation, they immerse themselves in their partners' culture and history, not just in those matters relating to the issue at hand. Ideally, they will have knowledge of the target language. Only after doing so they would be in a position to design a negotiating strategy to be adapted suitable for the individual cultural expectations and needs of their interlocutors.⁸³

1.7.2.3 The Involvement of an Influential Third Party

Outcome of the accommodative process mainly depends on the degree of influence of the mediator or magnitude of force used for intervention of any other kind by a powerful third party. Though the degree and concentration of dependence varies from one state to another in the Third World, it would be reasonable to assume that the majority of developing states have close ties to at least one of the major powers. It is due to the interdependent nature of these relationships that major powers become influential players in resolving conflicts in the developing world.⁸⁴

A third party can act as a (1) communicator, (2) formulator and/or (3) a manipulator in negotiation.⁸⁵ However, a major power can assume any or all of these roles, depending on the situation, in support of the accommodative process. Frequently, the nature of their relationship with states in the developing world allows the major powers to act as manipulators by perusing carrot and stick policy in order to save the process from a complete breakdown.⁸⁶

1.7.2.4 Secret or Silent Diplomacy

Secret diplomacy is likely to have a positive impact on negotiation process than the open or public diplomacy. It allows negotiators a great deal of flexibility and room for manoeuvre. Without committing themselves to certain positions publicly, the negotiators can

⁸¹ Raymond Cohen, "An Advocate's View Point," op. cit., pp. 35-37.

⁸² Frank R. Pfetsch, *Negotiating Political Conflicts*, op. cit., p. 48.

⁸³ Raymond Cohen, "An Advocate's View Point," op. cit., pp. 22-37. See also Raymond Cohen, *Negotiating Across Cultures*, op. cit.

⁸⁴ Frank R. Pfetsch, *Negotiating Political Conflicts*, pp. 35-36.

⁸⁵ Ibid., pp. 142-144, see especially Figure 10.2, "Strategies of the Mediator".

⁸⁶ Bhatti, op. cit., p. 29.

change their stance frequently and possibly for the cause of their respective national interest. They are also shielded from the adverse effects of public opinion. Having negotiated the entire deal, they can go back to their respective constituency and sell the agreement at their own pace and desired price.⁸⁷

1.7.2.5 The Deferment of Political Issues

Negotiators always have to bargain simultaneously at two fronts; with their domestic constituencies and also with the adversary. If the public at home and the adversary favour different solutions, the negotiator is left with either of the two discourses: attempt to change public opinion at home or try to cause the adversary to alter its position. However, in situations where neither of the two sides is willing to change its position, decision-makers remove vexing political issue(s) from the agenda in order to reach an agreement on substantive issue(s).⁸⁸

1.7.2.6 Wording of the Agreement

Wording of the agreement directly influence the process and outcome of the negotiation. For interim and procedural agreements, the document is tentatively worded so that it is flexible and open to further interpretation favouring both sides' viewpoints. This procedure, in particular, has been used to win domestic support and legitimacy for the agreement by highlighting concessions extracted by the home side and minimising concessions conceded to the adversary. In some situations, contrary to the tentative wordings a substantive agreement is carefully articulated to check various interpretations advantageous to either party.⁸⁹

1.7.3 Summary

To sum-up the above discussion, one can comfortably assume that regimes attempt to initiate accommodation with their adversaries in order to minimise losses in both the external politico-military and the domestic politico-economic spheres. In a situation of mutually hurting stalemate a likelihood of a substantive agreement would be higher. A government's commitment to domestic political and economic reforms is also likely to lead to a peace initiative. Sometimes, influential third parties may exacerbate the mutually hurting stalemate by withholding military and economic aid and coercing the disputants to come to negotiation table, or persuade them by offering financial and technical support or loans as incentives intended to improve the situation.

The pre-negotiation deliberations facilitates the accommodation process as parties engage in an extensive pre-negotiation deliberation, determine the agenda, set the parameters and boundaries for formal talks. The presence of a potential mediator facilitates

⁸⁷ Ibid.

⁸⁸ Ibid.

⁸⁹ Bhatti, *op. cit.*, p. 30.

the initiation of negotiation process. The mediator becomes influential when it has the potential to generate financial aid and assistance for riparians to develop infrastructure and thereby achieve the goals envisaged by the parties. Other techniques, like secret diplomacy, wording of agreements and postponement of political issues, further facilitate the process.

1.8 MODEL: Assembling the Factors

The model formulated below contains all the key variables mentioned above, including that of 'environmental scarcities as cause of conflict'⁹⁰. This study is, however, limited to the major contributory factors leading to conflict and accommodation over water resources.

The debate of whether and how international rivers contribute to conflict or compel disputants towards compromise often centres on the specific causal role of the resource in question. There are two ways of tackling the issue: one can focus on how water resources influence rational actors' behaviour or analyse the hypothesized relationship between the cause (i.e. the location of the vital resource) and its effect (either conflict or accommodation). The two approaches are compatible and not mutually exclusive.⁹¹

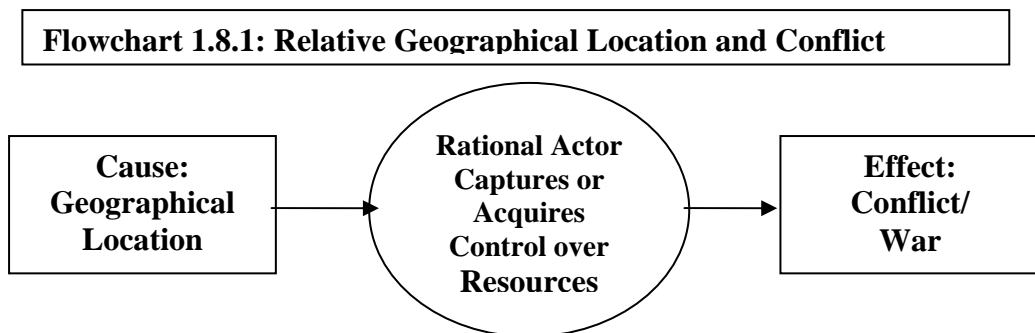
The rational actor or decision making unit, which can be an individual, a group, an organization or a state (here, a riparian state), chooses to act in such a way as to produce an effect: either conflict and perhaps war, or cooperation and peace. The decision making unit might choose, for example, to acquire or capture the resource-base (i.e. conduct war) or change its resource consumption behaviour (i.e. avoid war); both parties might opt for war but reach a mutually hurting stalemate; the lower riparian might succumb to the demands of the upper riparian in order to minimise its losses or alleviate the hurting stalemate and the upper riparian accept the peace initiative (thereby achieving accommodation); or both sides might cooperate to maximize mutual benefits (i.e. achieve peace by eliminating the cause of the conflict).

There are four components, each of which influences the ultimate choice that the decision making unit makes. Firstly, it is confronted with "opportunity structures", an external

⁹⁰ Homer Dixon identifies seven major environmental scarcities: greenhouse warming, stratospheric ozone depletion, acid deposition, deforestation, degradation of agricultural land, overuse and pollution of water resources and depletion of fish stocks. For details please see Thomas F. Homer-Dixon, "Environmental Scarcities and Violent Conflict: Evidence from Cases," *International Security*, Vol. 19, No. 1, (Summer 1994).

⁹¹ Paul Humphreys, *The Chances of Explanation: Causal Explanation in the Social, Medical, and Physical Sciences* (Princeton, NJ: Princeton University Press, 1989); Wesley Salmon, *Scientific Explanation and the Causal Structure of the World* (Princeton, NJ: Princeton University Press, 1984); Peter Van Inwagen, *Time and Cause: Essays Presented to Richard Taylor* (Dordrecht, The Netherlands: Reidel Publishing, 1980); and Tom Beauchamp and Alexander Rosenberg, *Hume and the Problem of Causation* (New York: Oxford University Press, 1981); Jerry Fodor, "Introduction: Two Kinds of Reductionism," in *The Language of Thought* (Cambridge, MA: Harvard University Press, 1975), pp. 1-26; Stephen Schiffer, "Ceteris Paribus Laws," *Mind*, Vol. 100, No. 397 (January 1991), pp. 1-17; and Alexander Rosenberg, "Obstacles to the Nomological Connection of Reasons and Actions," *Philosophy of Social Science*, Vol. 10 (1980), pp. 79-91.

and objective array of options and constraints which determine a set of feasible options. Secondly, the cognitive processes and circumstantial factors in the decision making unit's environment (its psychological milieu) will influence the perceptual salience of opportunities and obstacles. Thirdly, the decision making unit has certain relevant beliefs about the causal consequences of its possible actions (its operational milieu). Finally, it has preferences regarding various outcomes that it believes will arise from its specific action.⁹²



The explanatory power of geographical imperatives provides insights into the nature of the relation between cause and effect. Six variables can be appropriately used to analyse this causal relationship: advantageous geographic location, surface features (man-made and natural), relative dependency of the lower riparian on resources, density and diversity of the population, patterns of resource-use, and opportunity.

Firstly, the **location** of rivers can encourage powerful actors to deny the right of a lower riparian to river water originating from its territory, to capture the resource base of the rivers, or to increase an inequitable distribution of resources in their favour. For example, India, a powerful actor, captured the catchment area of the Indus river system in 1947-48, which culminated in international war between India and Pakistan in 1948.

Secondly, **surface features**, such as natural springs, streams, rivers and man-made river development infrastructures (dams, barrages, headworks etc.), while on the one hand encouraging the upper riparian to exploit the situation, on the other hand increase ecosystem vulnerability. In 1948, India cut-off water supplies to Pakistan, by way of the headworks of the Sutlej and Beas rivers which were supplying water to pre-partition Pakistani Punjab. Similarly, India can potentially cut-off supplies from river Chenab and Jhelum or divert water from the Indus. The vulnerability of the ecosystem is often an important variable, contributing to environmental scarcity, and is, at least in part, an external physical factor that is not a function of local institutions or social behaviour. The growing land-degradation in Pakistani Punjab resulting from salinity and water-logging, a consequence of the implementation of Indus Development

⁹² David Dessler, "How to Sort Causes in the Study of Environmental Change and Violent Conflict," in Nina Graeger and Dan Smith, eds., *Environment, Poverty, Conflict*, PRIO Report 2/94 (Oslo: International Peace Research Institute, 1994), pp. 91-112

Project⁹³, is an exclusively external factor. Local authorities and institutions have failed to address the problem despite huge investments in the shape of four SCARPs (salinity control and reclamation projects), five-year plans, and an unceasing input of time and energy. When environmental degradation crosses the threshold of irreversibility, it becomes a continuing burden to society, even if enlightened social change removes the original political, economic and cultural causes of the degradation. In other words, if environmental degradation becomes irreversible it is transformed into an exogenous variable.⁹⁴ The looming irreversibility of ecological chaos resulting from the dam and diversion canal infrastructure in Pakistani Punjab, together with environmental scarcities, is increasingly becoming an exogenous variable.

Thirdly, the **relative dependency of the lower riparian** on resources encourages the upper riparian to capture resource bases. Such a situation compels the lower riparian to initiate accommodation in an effort to minimise its losses. Fourthly, the extent of **density and diversity of the population** is directly proportional to the dependency of the lower riparian. A diverse population gives rise to ethnic cleavages. It further increases the likelihood of conflict if ethnic diversity is accompanied by the pursuit of identity in relation to either of the riparian states. Fifthly, **patterns of resource use** also enhance the conflict potential, since there is no end to the development of resources according to emerging needs over time. The upper riparian nearly always adopts such a strategy as a means of garnering political benefits out of the conflict, attempting to persuade its own population that the lower riparian poses a hurdle to development, and that it is trying its level best to ameliorate the problem.

Finally, **opportunity** becomes a necessary cause of conflict when either one of the riparian states identifies an opportune moment to undertake any given military or political adventure. The upper riparian is nearly always in a position to exploit such occasions of opportunity, whereas the lower riparian will only consider such an option if it perceives the upper riparian to be comparatively weaker in military terms.

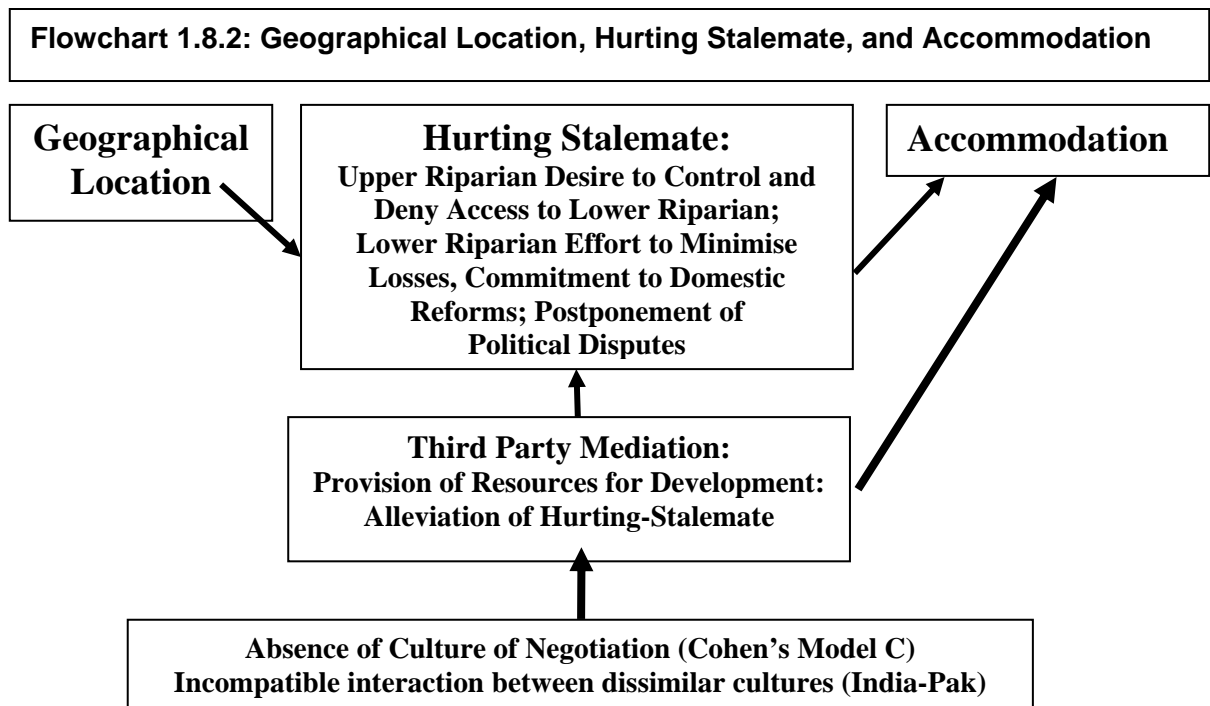
Realism focuses on states as rational maximisers of security and power. In an anarchic system, state behaviour is mainly a function of the structure of security and power relations in the system.⁹⁵ Yet this emphasis on states means that theorists tend to see the world as divided into territorially distinct, mutually exclusive entities, not broader environmental regions or systems. Realism thus encourages scholars to de-emphasise trans-boundary environmental problems,

⁹³ Under the Indus Waters Treaty 1960, India and Pakistan agreed to a permanent division of the Indus Rivers with the construction of a number of dams and canals on both sides of the border. But, "this costly project left the land on both sides of the...border more poorly irrigated than before". For details see Stephen Philip Cohen, "Kashmir—Territory and People: An American Perspective," *IPRI Journal* (Islamabad Policy Research Institute), Vol. 1, No. 1 (Summer 2001), p. 19.

⁹⁴ Homer-Dixon, "Environmental Scarcities and Violent Conflict," op. cit., pp. 35-36. When environmental degradation becomes irreversible, it takes on the character of a 'barrier' cause—that is, a cause that constrains opportunities and precludes options. See Gary Goertz, "Barrier Models of Contexts of International Relations," in Gary Goertz, *Contexts of International Politics* (Cambridge, UK: Cambridge University Press, 1994), especially chapter 6, pp. 90-113.

⁹⁵ Kenneth N. Waltz, "The Meaning of Anarchy," in Robert J. Art and Robert Jervis (eds.), *International Politics: Anarchy, Force, Political Economy, and Decision Making* (2nd ed.), (Colombia: Colombia University Press, 1985), pp. 2-5.

since such problems often cannot be linked to a particular country and do not have any easily conceptualised impact on the structure of economic and military power relations between states. The case under study, however, which focuses on the capture and retention of the hydro-strategic territory of Jammu and Kashmir and its impacts on Indo-Pakistani political thinking, strategic planning and warfare, exhibits very strong and crucial links with the politico-economic structures and military power relations between both states.

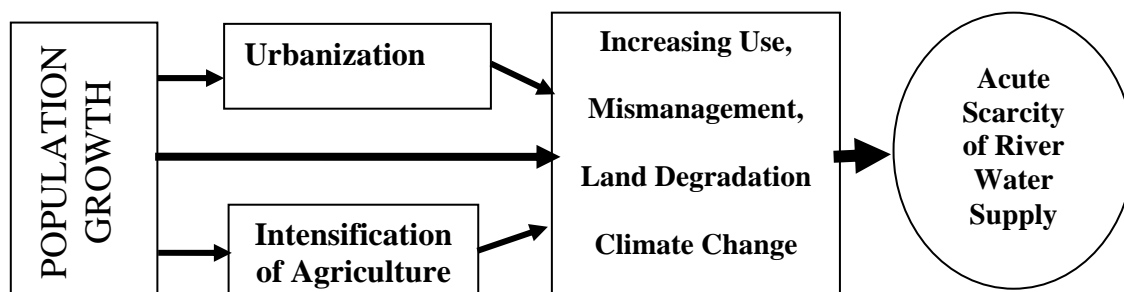


It is evident from the above discussion that both the capture of territories possessing vital natural resources and disputes over the division of river water contributes consistently to the emergence of conflict. Water conflicts are manifested in increasing incompatibilities in the control or new usages of river water between competing parties. From 1940 to 1980, the global water use doubled, similarly going to double again in the following twenty years (1980-2000). As the population increases and the amount of available water resources remains constant, the maximum per capita demand which can be supported by a country decreases correspondingly. It is a commonly acknowledged fact that with each passing day, the gap between the needs of growing populations and the increasing scarcity of fresh water resources widens. In countries possessing a very limited supply of water, especially in arid and tropical regions, it is not difficult to perceive the consequences.

In sum, population growth, accompanied by massive urbanisation, intensified agricultural activity, the mismanagement of water resources, land degradation, and ecological imbalances, tends to increase the demand for water resources as well as pollute the supply.

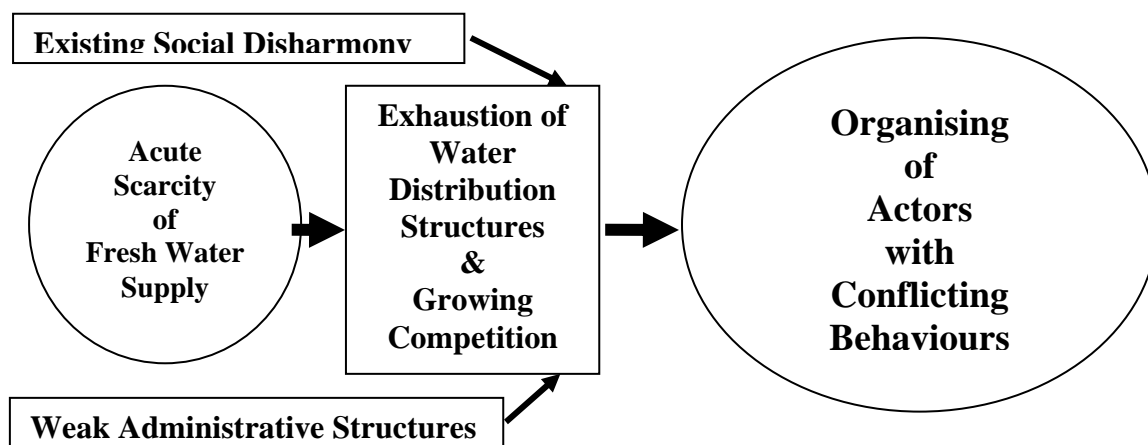
The overexploitation of groundwater resources in combination with the challenges posed by climate change consequently result in an acute shortage (see flowchart 3).

Flowchart 1.8.3: Increasing Demands and Water Scarcity



From this perspective, it will be impossible for all social actors (individuals, groups or states) to remain complacent about the present or future availability of fresh water resources. Unfortunately, these actors tend to focus myopically on their own vested interests. Increased competition can potentially destroy the existing social arrangements which determine water distribution in a given society/river basin. Either newly organised actors with conflicting interests could emerge, or incompatibilities between existing actors could grow in societies burdened by ethnic and social dichotomies.⁹⁶ Incompatibility of interests can create new conflicting actors or groups within a state and in other cases give rise to incompatibility among existing administrative units or between different ethnic groups.⁹⁷ When multiple countries are jointly dependent on the same river systems, upstream withdrawal can potentially lead to “upstream/downstream” conflicts (see flowchart 4).

Flowchart 1.8.4: Water Scarcity and Organisation of Conflicting Actors



⁹⁶ Ashok Swain, “Water Scarcity: A Threat to Global Security,” *Environment and Security*, Vol. 1, No. 1 (1996), p.160.

⁹⁷ Ibid.

It hardly requires mentioning that the origin of violent conflicts in history can be found in a state's desire to capture territory and natural resources. In a situation of water scarcity, multilaterally-owned rivers have provided a fertile breeding ground for conflicts between riparian states. When one state works towards "development" by acquiring or exploiting more than its perceived or agreed share of water resources, it affects the interests of other user states. Subsequent actions by the affected states aimed at protecting their interests eventually result in conflict.⁹⁸

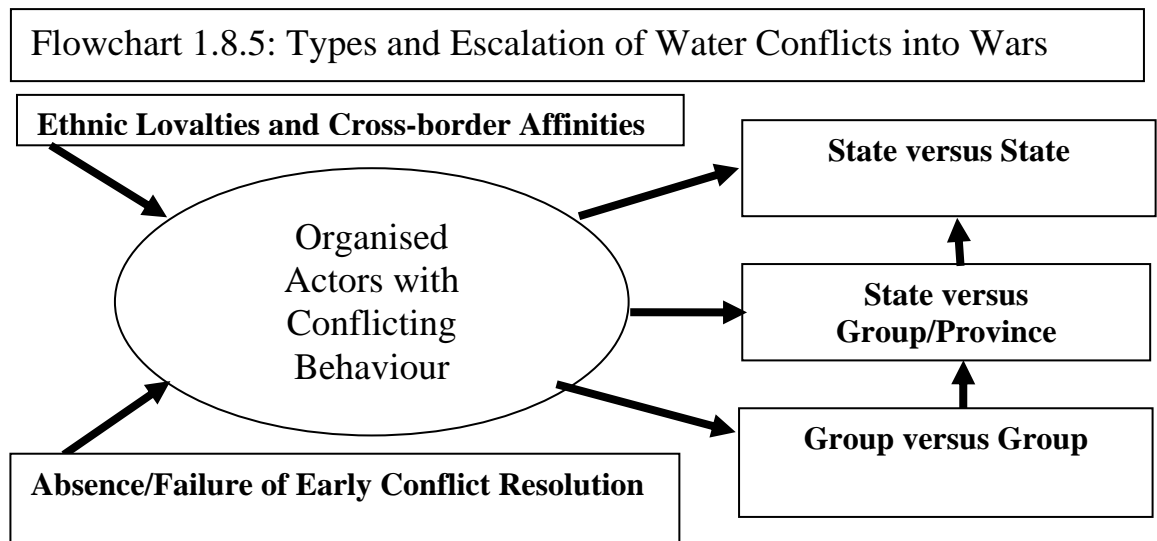
Such conflicts over water can be observed at all levels of society, occurring not only between nation-states, but also within nation-states⁹⁹ and between the different units¹⁰⁰ of the nation-state (see flowchart 5).

The five flowcharts presented above highlight the interaction of various variables which play a role in conflict generation as well as in the promotion of the phenomena of accommodation between the riparian states of international river basins. These factors can be broadly classified in three categories: geographical, political, and economic. Each flowchart shows a part of the linkage between water as a resource of war and accommodation as preferred security strategy in conflict situations over international rivers.

⁹⁸ Many such inter-state conflicts are active among the users of international river basins in different parts of the world. Some of widely discussed major conflicts are: the Jordan, Litani, Orontes and Yarmuk Rivers (Israel and Arab nations), the Nile (Egypt, Sudan and Ethiopia), the Colorado (US and Mexico), the Euphrates (Turkey, Syria and Iraq), the Danube (Hungary and Slovakia), the Han (North and South Korea), the Amu and Syre Darya (Central Asian States), the Ganges (India, Bangladesh and Nepal) and the Indus (India and Pakistan).

⁹⁹ The major conflicts within nation-states include: Sanmenxia and Three Gorges in China; Madur Oya and Mahavali Project in Sri Lanka; Kalabagh, Mangla, Bhasha and Chashma in Pakistan; Kaptai in Bangladesh; Arun in Nepal; Akasombo in Ghana; Kossou in Ivory Coast; Tana and Athi in Kenya; Itaparica and Tucurui in Brazil; Kainji and Niger Dams in Nigeria; Ataturk and Keban in Turkey; Lam Pao and Nam Pong in Thailand; Kedong Ombo and Batang Ai in Indonesia; Upper Pampanga in the Philippines; Manantali in Mali; Savajina in Colombia; Brokopondo in Suriname; Caracol and Netzahualcoyotl in Mexico; Nam Ngum in Laos and India, having sites of more than half of the world's existing large-scale dams, deserves a separate list of its own. In India some of the major hydro-projects that have recently led to protest movements by the displaced people are: Narmada Dam, Lower Manair Dam, Tehri Dam, Pong Dam, Subarnarekha Project, Nagarjunsager Project, Srisaillam Project, Upper Krishna Project and Ukai Reservoir Project. Similarly a number of water sharing issues in Pakistan are playing a critical role in provincial disharmony. The province of Punjab is being accused of having "sold out" its three rivers—the Ravi, Sutlej and Beas—to India under the Indus Waters Treaty of 1960. Under the Indus development plan Punjab diverted waters from western rivers—Jhelum and Chenab, tributaries to the Indus River—to irrigate its fertile lands, which were originally irrigated by the three eastern rivers, exclusively given to India under the Treaty. The province of NWFP and Sindh claim exclusive rights over the Indus River and also on its tributaries—the Jhelum and Chenab. Thus the Punjab province—being bigger in terms of population and powerful politically—has been accused of taking undue advantage of its upstream location and consuming most of the waters of the Indus River system through the help of barrages and dams without any concern for the downstream Sindh province.

¹⁰⁰ Conflicting groups in society emerge to protect their water share or to acquire that of others. The activation of groups takes place in accordance with existing religious, caste, class, linguistic, regional or other lines. Sometimes, local politicians or elites of a locality use water as a tool to instil group feelings, which introduces an "us/them" dichotomy into society. This inter-group conflict can evolve into a conflict with the state, when one party rightly or wrongly perceives the state as a collaborator with another, subsequently leading to secessionist movements.

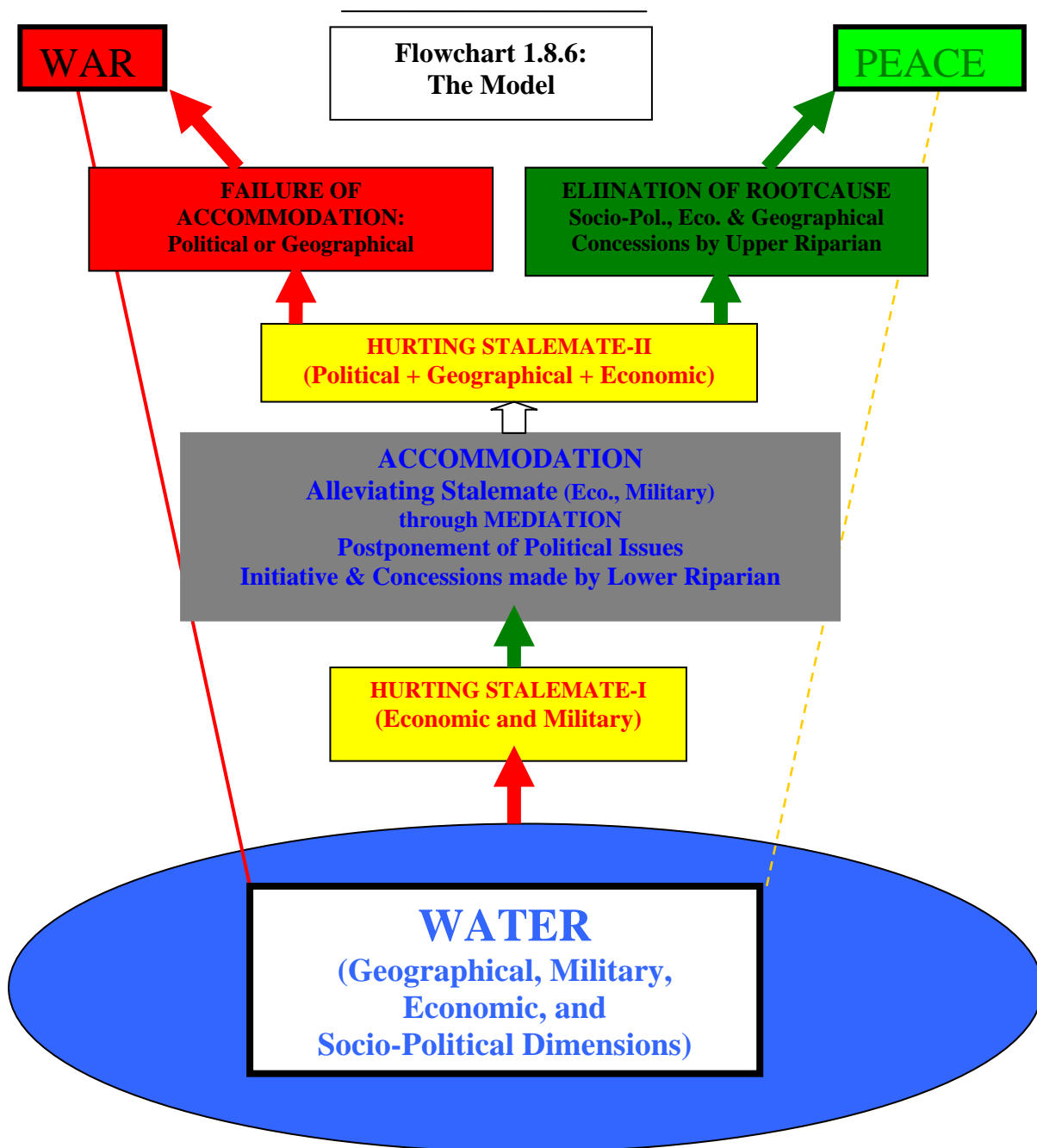


The model depicted below attempts to transform the above flowcharts into a cohesive form, bearing in mind the case under study: *the linkage of water with war and peace*. It presents an overall picture of the interaction between the independent and dependent variables identified in the framework.

1.9 Methodology

The qualitative interpretive methodology of explanation and pair comparison, outlined in detail below, is considered useful in identifying variables or factors that signify relationships between explanatory factors, and in investigating causal patterns that may not be found through quantitative analysis. It goes without saying that the identification of causal mechanisms does not preclude the investigation of causal effect, where the data and the existing theoretical framework allow. As Bennett has noted, the establishment of causal inferences should operate, to as great an extent as possible, by establishing both *causal mechanisms* and *causal effect*. The two methods are not mutually exclusive but should rather be viewed as complimentary.

The main challenge to the present research problem is the large number of possible causal or, in statistical terms, independent variables. Chapter two identifies more than half a dozen such factors, pertaining exclusively to international rivers. The limitation of the study to the non-identity dimension of conflict and a distinct geographical area—namely that resulting from the boundary award which divided British Punjab between India and Pakistan and its land-link to the hydro-strategic territory of Kashmir or the catchment areas of whole of the Indus basin—was instrumental in further reducing the number of conflict factors.



Estimating the explanatory value of one factor among others is, by necessity, a methodologically intricate matter. Particularly in the study of complex social phenomena such as war and accommodation among enduring rival riparians, the researcher is inevitably confronted by the problematic complexity of reality. Some researchers have attempted to simplify reality by claiming that “any social system is as complex as the theory developed to study it thereby denying any intrinsic complexity to social phenomena outside the control of

the researcher".¹⁰¹ As it is likely that events take place whether or not a researcher has designed a model to study them, and indeed that the researcher's theory may be flawed and unable to grasp the full context of the social phenomenon under study, one is forced to acknowledge that social phenomena have a number of possible causes that interrelate with one another in ways that are nearly always difficult to explain or grasp in their entirety.

The research methods used in the various case studies normally find their origin in the notion of agreement and difference as expounded by John Stuart Mill over a century and a half ago. These methods are weakened by intrinsic liabilities, which Mill himself was very aware of. The method of agreement is the most problematic: it assumes that if several factors show a similar outcome on a dependent variable, they are responsible for the outcome. In some social contexts, however, mono-causal explanations are satisfactory, though a specific outcome is seldom generated by one single factor irrespective of others. The method of agreement is incapable of accounting for multiple or conjectural causality. The method of difference goes further, being "a double application of the method of agreement."¹⁰² It focuses on different outcomes in a dependent variable in multiple cases, and seeks to find corresponding variance in an independent variable. The logic is that if two cases have different outcomes in terms of the dependent variable, but demonstrate identical values for a given independent variable, then the independent variable in question cannot be a sufficient cause of the outcome. However, as Mill himself noted, this method requires unrealistic assumptions in order to provide non-spurious inferences.¹⁰³ Also, as Bennett has noted, in the method of difference, "the causal relations being investigated must be deterministic regularities, involving conditions that are either necessary or sufficient for a specified outcome."¹⁰⁴ Such conditions are not always present: in the case of water conflicts, the multiple causal factors appear, individually, to be neither sufficient nor necessary to produce the outcome of conflict.

This raises the issue of multiple and conjectural causality. Conflicts seldom or never emerge as a result of one single easily identifiable causal factor. Rather, there is usually a complex of causes responsible for the occurrence of conflict. As has been shown in chapter three, theory assists in the quest to achieve some level of understanding of the relationship between various factors thought to be accountable for water conflict and chapter six explains the factors responsible for accommodation between rival riparians. In particular, the differentiation between background and catalyzing factors, and between factors relating either

¹⁰¹ Nils Petter Gleditsch, "Armed Conflict and the Environment," in Paul F. Diehl and Nils Petter Gleditsch, eds., *Environmental Conflict* (Boulder, Colorado: Westview Press, 2001), p. 392.

¹⁰² Charles Ragin, *The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies*, (Berkeley: University of California, 1987), p. 39.

¹⁰³ Andrew Bennett, "Causal Inference in Case Studies: From Mill's Method to Causal Mechanisms," paper Presented at the American Political Science Association Conference, Atlanta, Georgia, 1999, p. 17.

¹⁰⁴ Andrew Bennett and Alexander L. George, "Process Tracing in Case Study Research," paper presented at the *Macarthur Workshop for Case Study Methods*, Harvard University, Oct. 17-19, 1997, p. 11.

to capacity or incentives, are important in identifying the various factors which trigger conflict. Yet the problem remains of how the causal impact of one factor should be assessed in relation to others.

Individual case studies involving process-tracing is one possible solution, facilitating the detailed study of the causal mechanisms at work in each case. Following Mill's method of agreement, it is possible to outline a factor-driven or 'variable-oriented' study. Mill's method of difference identifies an independent variable thought to have causal effect on the dependent variable – that is, an explanatory factor thought to have produced a certain outcome. The next step is to identify cases of presence of the outcome (in this case conflict or accommodation), and match this with the concomitant presence of the explanatory factor thought to have caused this effect (location of water resource or mutually hurting stalemate).

The presence of a certain explanatory factor in cases of non-conflict should not be taken as evidence that this factor is of no consequence whatsoever in terms of the likelihood of conflict. It may nonetheless be a factor which increases the likelihood of conflict; in fact, it may theoretically even be a sufficient factor for conflict, not a necessary one.

The absence of a certain explanatory factor in cases of conflict is also possible, but should inspire greater doubt as to its explanatory value. Admittedly, there are different types of conflicts, discussion in chapter three about the role of geographical attributes (such as security and economic dimensions) highlights the fact that conflicts occur in both economically dependent (i.e. the dependency of an agrarian economy state on the upstream river resources) and security dependent areas (i.e. where the upper riparian captures the catchment areas of a river system and river corridors are open flanks for troop movement). As a whole, however, in a given universe of cases, one would expect to be able to discriminate between explanatory factors based on their 'correlation' with the outcome or lack of outcome, i.e. conflict. The word correlation is deliberately written in inverted commas, given that a small number of cases would question the statistical significance of the evidence in the study, and hence provide a basis on which to dismiss or confirm the explanatory power of a given explanatory factor. Nonetheless, studying each independent variable and its relationship with the outcome gives a good indication as to the explanatory value of the given factor.

Such an operation as the one undertaken in the study is expected to provide valuable insights into the most significant factor leading to water conflict and accommodation over water resources between enduring rivals. The exercise provides an opportunity to judge the explanatory value of geographical location (in terms of economic value and security imperatives) as compared to other factors. In order to deepen the understanding of the processes leading to conflict or accommodation, the chosen method, i.e. that of tracing and comparing these processes, is not entirely inductive but rather guided by the explanatory factors outlined in chapter one, and cognizant of the findings in chapter two and three concerning water-related war or conflict, and chapters four and five relating to accommodation.

1.10 Format of the Thesis

Taken as a whole, the study comprises seven chapters. Following an introduction, the first chapter evolves a conceptual framework culminating in the formation of a model to be followed in the study; based on the key concepts of water war, water peace, and accommodation between enduring rival riparians. The second chapter analyses the factors of conflict in the Indus Basin, ranks them as per their role in conflict generation in an effort to highlight the nature of the Kashmir territory. The third chapter establishes linkages between water and war in the context of Pakistan-India relations, especially in the initial years of their independence. In this regard, the inter-twined nature of the Indus River system and the Kashmir dispute is highlighted in order to demonstrate its impacts on political thinking, strategic planning and warfare between India and Pakistan. The fourth chapter provides a detailed description of the conflicting claims over water resources by precisely comprehending the pre-mediation negotiation and the nine-year long mediation process, focusing on the role of the World Bank as a 'self-interested' but successful mediator. The fifth chapter encompasses the dynamics of accommodation in the context of the signing of the Indus Waters Treaty and assesses the applicability of the concept of accommodation as a preferred security strategy between the rival riparian states. In this context accommodation over the Salal Dam, a post-treaty issue; is discussed in detail. The sixth chapter evaluates the losses and gains for the riparian states in the context of the Indus Waters Treaty, including the implications of accommodation in the context of the India-Pakistan conflict over Kashmir. The final chapter describes the other unsettled post-treaty water disputes, envisages possible emerging scenarios, examines the sustainability of the Indus Waters Treaty, and finally presents overall conclusions which test the hypothesis raised in the study. The study also provides fully practicable policy recommendations.

In order to implement the model formulated in this chapter the next logical step would be identifying the factors responsible for generating conflict over the Indus river resource and investigating the circumstances under which accommodation between the enduring rival riparians (India and Pakistan) became their preferred security strategy. The next section, tries to perform the first of these two tasks.

Chapter 2

CONFLICT FACTORS IN THE INDUS RIVER BASIN

This chapter is an illustration of characteristics of geographic factors which have played a role in conflict formation in the Indus Basin and also possess potential for a future conflict. Several other factors also contributed towards aggravation and continuation of the conflict. These factors included varied economic interests of the parties, domestic political apprehensions (specifically in Pakistan), ethnic ground realities, socio-psychological fabric of public and leadership alike and ideological and identity-related differences. However, the focused preference of this study lies in the role of factors not related to ideological or identity politics as a reference factor rather to the geo-politics, in the conflict formation and their effect on the economic security of the stake-holders in the Indus Basin region. It is argued that it was primarily the factor of conflicting perceptions of India and Pakistan based upon perceived respective economic and physical security concerns of the parties embedded in the realities of geo-politics of the Indus Basin region. It is argued that this equation of clashed interests which has roots in an incomplete chapter of the Partition agenda led to the Indus waters' dispute and the first Kashmir war in 1948 between India and Pakistan.

The geo-political and geo-economic factors of the Indus waters conflict can be grouped together in pairs as follows: relative locations and riparian claims, the unnatural patchwork pattern of political boundaries and surface features for agriculture and water availability, climate change and water supply, population density and patterns of settlement for the land utilisation, and internal pressures and foreign relations of the parties. During the early years of the Indus waters dispute, from 1947-51, these factors invariably played a role in conflict generation, whereas later, from 1952-60, some of these elements also contributed towards conflict transformation ultimately leading to an accommodation. Most particular among those was the changing domestic political and economic situation and nature of external relations. Each of these factors is connected to the economic and security interests of the riparians bounded in the control of the Kashmir territory. The relative conflict potential of these factors in generating an inter-state dispute over the control of the Indus rivers system has been assessed by using the pair comparison method. The question *whether the boundaries in the Indus basin were drawn on the basis of the location of water resource access or not*, is also dealt with in detail.

2.1 Geographical Location and Riparian Rights

The Indus is a multinational basin, shared by four nation states; China, India, Pakistan and Afghanistan (see Map 3). The Chinese territory of Tibet contains the origin of the Indus and the Sutlej rivers characterizing China as the upper-most riparian of the Indus basin. Afghanistan contributes the Kabul River, a tributary to the Indus River.¹ The other five

¹ The River Kabul is excluded, for most of the purposes of this study, because it neither crosses the Indus Plains nor was it a subject of the Indus Waters Dispute. It is not beyond the realm of possibility

tributaries to the Indus river system are the Jhelum, Chenab, Ravi, Sutlej and Beas which originate in Indian and Pakistani parts of Kashmir and the Himachel Pradesh of India. A major area of the basin is shared by the modern states of Pakistan and India and as a result, these two countries have been getting engaged in large-scale development programmes and, consequently, indulging into conflict of interest. India's portion of the basin, including the disputed territory of Jammu and Kashmir, contains the headwaters of all five rivers of the Punjab. The conflicts between the upper and lower riparian of the basin and the agreements that emerged from them have centred on the Punjab [East and West Punjab or Indian and Pakistani Punjab] and the territory of Jammu and Kashmir. It is largely this area that is under focus in this chapter.

The relative location of the riparian may be examined in the context of the principles stated in the previous chapter. If all the riparians are considered in a wholesome picture, India is the middle riparian and is supposed to adhere to the principle of 'community in resource utilisation' of international rivers. If exclusively India and Pakistan are considered, India enjoys an obvious advantage of being an upper riparian and is expected to invoke 'absolute territorial sovereignty' and Pakistan would favour 'absolute territorial integrity' principle.

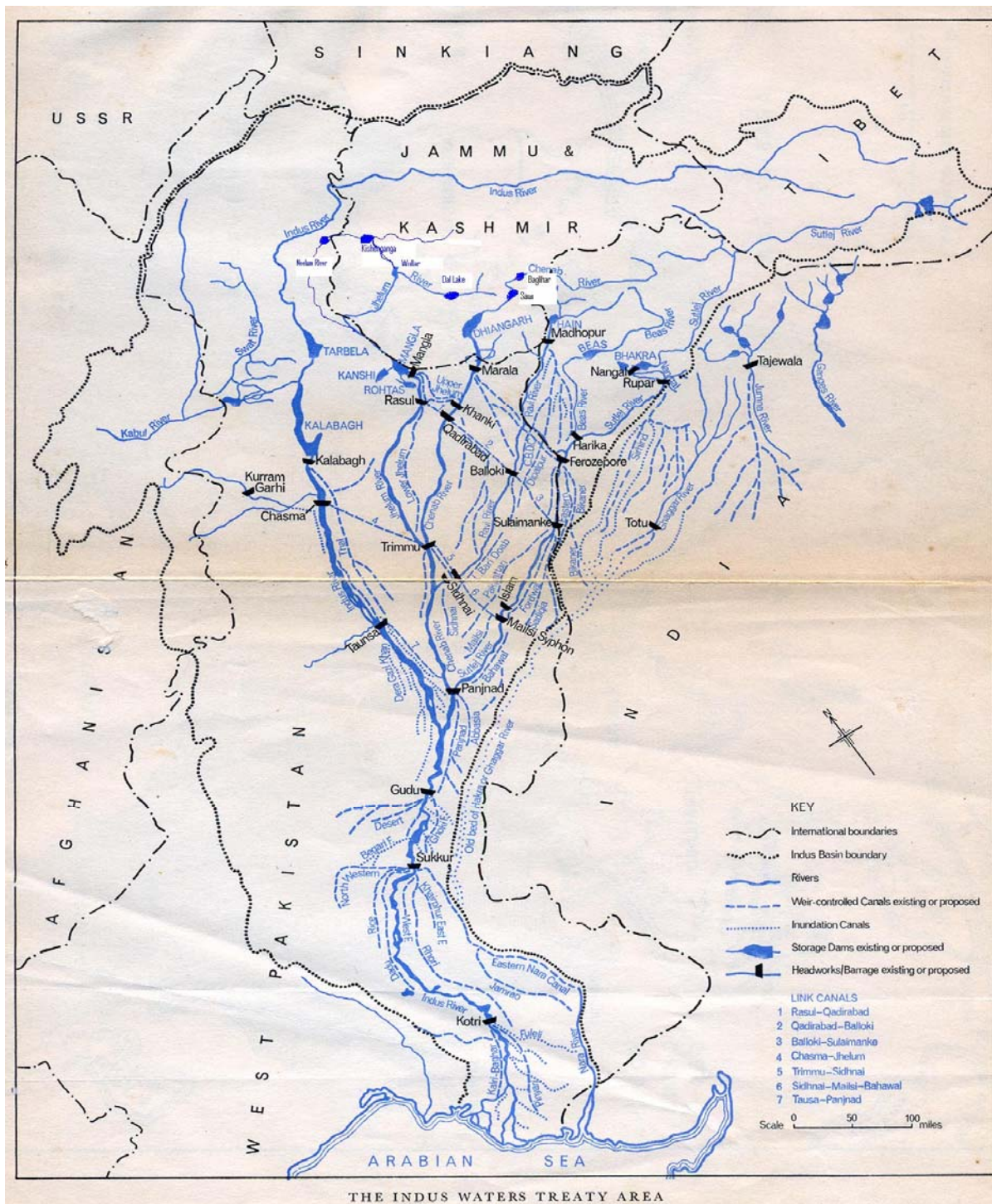
2.2 Surface Characteristics

The Indus river system which originates in Tibet constitutes its headwaters in the western Himalayas. Excluding the uppermost portions and its longest tributary (the Sutlej River), the Indus River flows through mountainous and difficult terrain until it emerges on to the Punjab plains. Given the nature of the terrain and the scant population in that region, the area contains a number of hydro-strategic sites for dam construction. Such projects would have inherent potential for the water-based conflicts. The likelihood of the conflict, however, depends upon the decisions made in the upper parts of the basin for resource development. One can thus safely say that the conflict potential is at best latent, and that its activation is contingent upon developments in the catchment areas (Indian-held Kashmir and the mountainous parts of the Indian Punjab) of the basin.²

that a dispute may someday arise between Pakistan and Afghanistan over the waters of the Kabul and its major affluent, the Chitral-Kunar. Thereafter it passes into Sindh (Pakistan) to pass out into the Arabian Sea. For the role of the Kabul River within Afghanistan, see Aloys Arthur Michel, *The Kabul, Kunduz, and Helmand Valleys and the National Economy of Afghanistan* (Washington, DC: National Academy of Sciences-National Research Council, 1959).

² Basheer Khalil Nijim, *The Indus, Nile and Jordan: International Rivers and Factors in Conflict Potential* (Thesis submitted to Indiana University, 1969), p. 25.

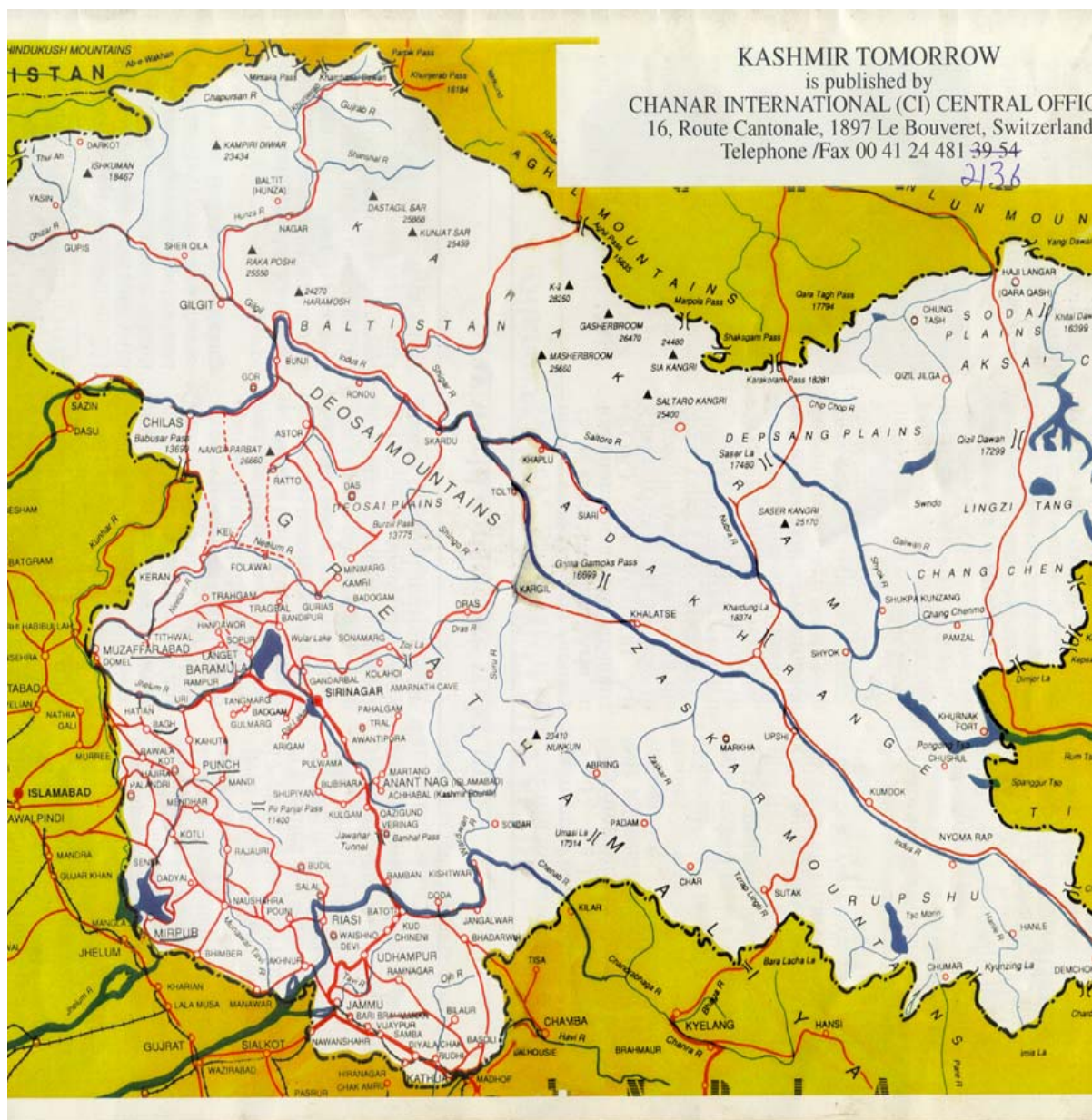
Map-3: The Indus Basin: Geographic Zone (Source: Mohammad Ayub Khan, *Friends Not Masters: A Political Autobiography* (Lahore, Karachi, Dacca: Oxford University Press, 1967).



Another aspect of the Indus system which is necessary to be mentioned here is the peculiar geographic nature of the Kashmiri territory. This beautiful landscape consists of high mountain ranges, snow-covered peaks and dense forests with heavy snow falls in winters and high precipitations in the rainy season. The enchanting scenery of the valley is bestowed with a number of streams, lakes and rivers which latterly join Indus River to formulate a gigantic

system with massive flow of waters. The melting of snows on the sky-scraping peaks in the summer season and the showering of the rains in the valleys during Monsoon provide a permanent natural source of waters flowing from Kashmiri terrain into the banks of Indus River. This system of six rivers gives life to the predominantly arid, agrarian economy of Pakistan and part of the Indian Punjab. The socio-economic life cycle of the agricultural civilization on the both sides of the border had flourished along the banks of river Indus. Having a glance over the map of Kashmir its geographic importance and hydro-strategic nature becomes obvious (see Map-4).

Map-4: Territory showing catchment areas of the Indus River system in princely state of Kashmir (Source *Kashmir Tomorrow*, a quarterly magazine *Chanar International* (August-October 1998), Switzerland).



Kashmir shares its borders with China, India, Afghanistan and Pakistan. The topography of the Kashmir territory can be divided into following mountain ranges, which enfold a number of valleys, lakes and rivers.

Karakorum Range: This snow-covered mountain range is situated to the north of the main Himalaya and Ladakh ranges leaving Aksai Chin and Depsang plains along Chinese border. Twelve peaks with an elevation above 7,000 meters, including the famous K2 (28,250 feet) and Rakaposhi (25,550 feet) are the hallmark of this range. The other peaks are: Saser Kangri (25,170 feet), Slataro Kangri (25,400 feet), Sia Kangri (24,480 feet), Masherbroom (25,660 feet), Gasherbroom (26,470 feet), Kunjat Sar (25,459 feet), Dastagil Sar (25,868 feet), Haramosh (24,270 feet), Kampiri Diwar (23,434 feet) and Ishkuman (18,467 feet). The Karakorum-range forms a part of trans-Himalaya. Its average elevation is over 3,000 meters.

The Karakorum-range has some of the biggest glaciers of the world, outside the polar region. Most prominent among them is the Siachen glacier which has a length of 72 and breadth of 10 kilometres.

Ladakh Range: The Ladakh range lies to the south of Karakorum and north of the main Himalaya ranges. It has an average elevation of over 3,500 meters. There are a number of prominent rivers in eastern Ladakh that drain into the Indus River and into the famous Salt Lake. Drainage of the Karakorum and Ladakh ranges forms the major source of water of the main Indus River originating in Tibet.

Great Himalaya: The great Himalaya—roof of the earth—passes through Bhutan, Sikkam, Nepal, Tibet, Himachal Pradesh, Jammu and Kashmir and touches its lower peak, Nunkun (23,410 feet). the mountain range of great Himalaya branches off at the Nanga Parbat massif (26,660 feet) and runs along an arc passing to the south of the Kashmir valley to Murree and Margalla hills encircling Islamabad valley (Pakistan's capital) from its north, west and south sides. The great Himalaya drains in Tibet and gives birth to the mighty Indus River which flows down towards west, passing through Kashmir territory along with Ladakh range. The river then turns to south near Gilgit and passing through the whole of Pakistan drains in Arabian Sea at Karachi.

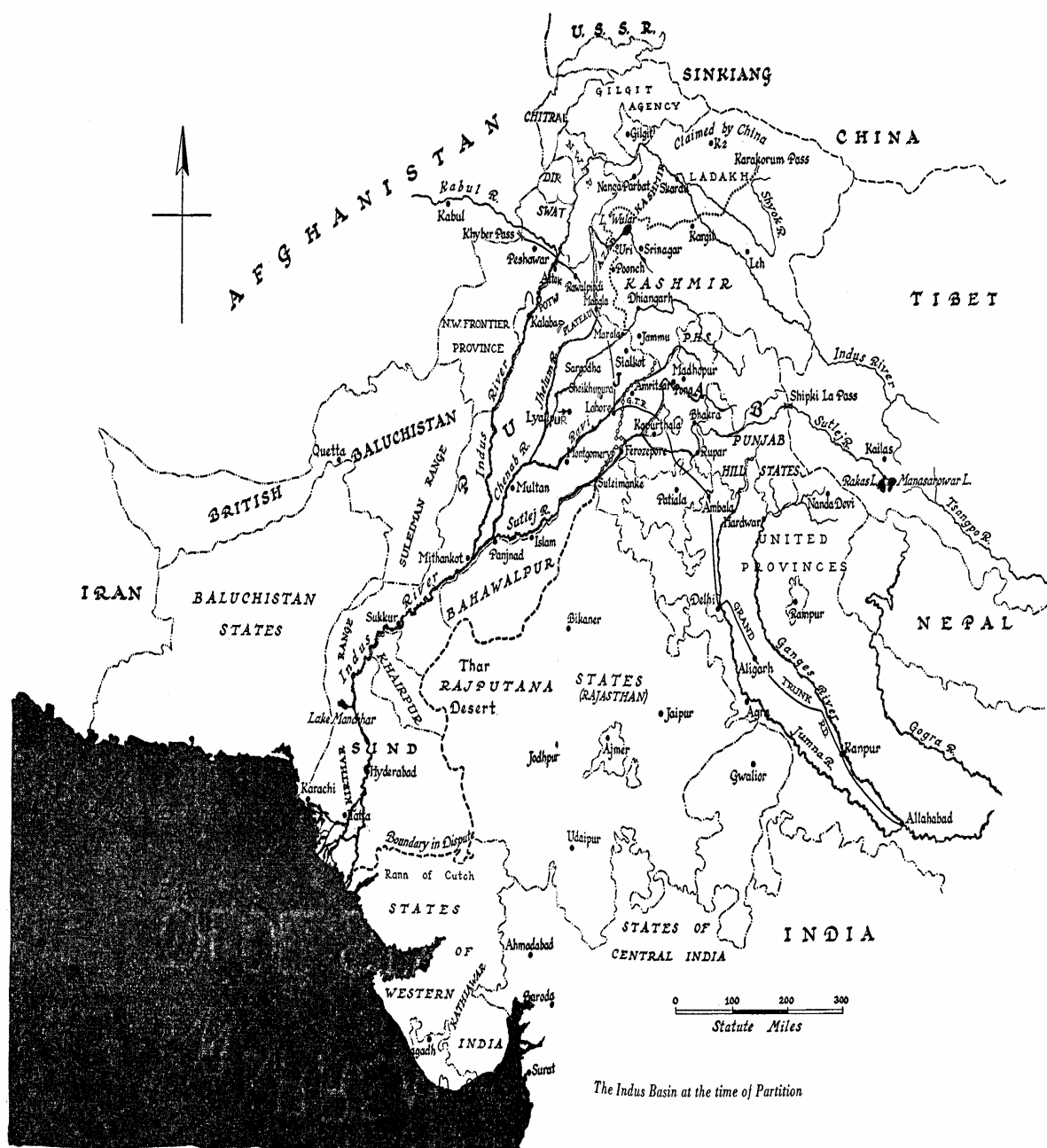
The Jammu and Kashmir valley bears origins of three out of five Punjab's rivers—Jhelum, Chenab and Ravi. While Beas and Sutlej collect drainage of the Indian territory of Himachal Pradesh (see Map-5) but both rivers were main source of irrigation in Pakistan's province Punjab, well before partition of the Subcontinent to the signing of the Indus Waters Treaty in September 1960 between India and Pakistan.

The Indus River System commands total area of 364,700 square miles (approx. 584,000 square kilometres).³ Of the total basin, some 160,400 square miles (264,660 sq km)

³ Hazara Report, "A Programme for Water and Power Development in West Pakistan, 1963-1975 (Lahore: Hazara Engineering Company International, 1963), p. 1-7; Water Taylor, "History, and Indus

lie in the highlands of Tibet, Kashmir, Northern Areas of Pakistan and Afghanistan. The rest comprises the Indus Plains, one of the most homogeneous physiographic regions on earth, mostly situated in Pakistan.⁴

Map-5: The Indus Basin at the time of the partition of the Subcontinent in 1947. (Source: Aloys Arthur Michel)



Plains,” *Natural History*, Vol. 74, No. 40 (April 1965), refers total drainage area of 350,000 square miles.

⁴ Aloys Arthur Michel, *The Indus Rivers: A Study of the Effects of Partition* (New Haven: Yale University Press, 1967), p. 29.

The data about elevation and flow of the Indus River provides interesting factual information. Michel states that the Indus river is found at an elevation of over 15,000 feet in the shadow of Kailas. Where it receives the Gartang, and turns northwest in the "structural trough" mentioned above, it has fallen less than 2,000 feet. Near Leh in Ladakh it crosses the 12,000-foot contour. Southwest of K2, it receives the Shyok and then, at Skardu, the Shigar rivers. Here the Indus is still 1,400 miles from its origin and 7,500 feet above the sea level. Twenty-five miles below Skardu, the River enters its 300-mile gorge, in the course of which it falls 6,000 feet for an average gradient of 20 feet per mile. In making this descent, the Indus reaches its northernmost point (virtually same latitude as of K2) at an elevation of about 4,500 feet. After receiving the Gilgit and Astor rivers in the vicinity of Bunji, the Indus turns west just north of Nanga Parbat and continues this trend up to Chilas and Sazin.⁵

At Tarbela, the Indus flows at a level of 1,300 feet above sea level, but it is still 1,100 miles from its origin. Although the river has now finished with the Himalayas, it still has the outliers of the Hindukush, represented by the Kuh-e-Safed (The White Mountain), the Suleiman Mountain and Salt ranges to contend with. These are met and breached in the 100 miles between Attock and Kalabagh.

At Attock Indus receives the Kabul River from the right, and between Attock and Kalabagh it meets the first barrage (Jinnah Barrage). The old minimum recorded level at the Kalabagh gauge (before the barrage covered it) was about 680 feet above sea level. Since the distance from the Jinnah Barrage to the Arabian Sea is about 950 miles, the average gradient of the Indus for approximately the lower half of its entire length is less than 9 inches per mile. From Mithankot, where the Panjnad (combined streams of the Punjab's five rivers) joins the Indus, the latter has an average gradient of less than 6 inches per mile.⁶

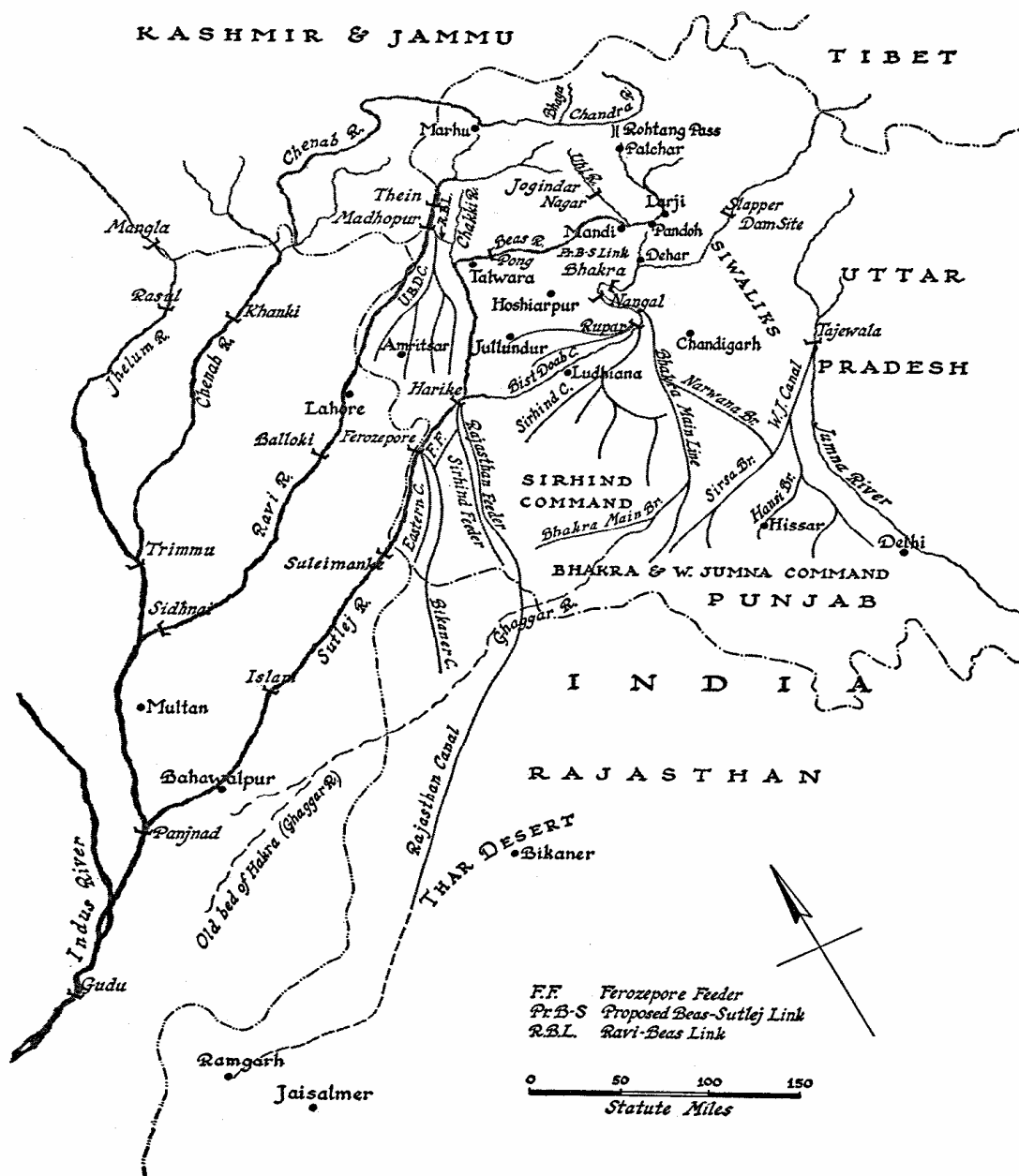
The geography of the Sutlej river is less complicated than that of the Indus. The Sutlej acts as a transverse Himalayan stream, apparently exploiting an ancient fault-line in its gorge below Shipki La. This course brings it to Inner Siwaliks at the Bhakra site (see Map-6) about 1,200 feet above the sea level. But the rim-station on the Sutlej is at Rupar, where it cuts through the last foothills and emerges onto the plains. From Rupar to Mithankot, Sutlej falls only 560 feet over a distance of almost 550 river miles, making an average gradient of one foot per mile.⁷

⁵ Ibid., p. 31

⁶ Ibid., pp. 31-32.

⁷ Ibid.

Map-6: The Bhakra-Beas-Rajasthan Project in Indian Punjab 1966. (Source: Aloys Arthur Michel)



The Bhakra-Beas-Rajasthan Project in India. (Note added in proof: The boundaries shown for the Indian Punjab are those which prevailed before November 1, 1966, when its territory was divided among Punjabi Suba, Haryana Pant, and Himachal Pradesh.)

The Sutlej River collects the drainage of the Beas between Rupar and Ferozepur. The Beas which is the shortest of the Punjnad Rivers (only 247 miles long) makes a substantial contribution in the Indus river system (see Table-1 below). Its headwaters are closely located to those of the Sutlej to the south and east and of the Ravi and the Chandra tributary of the Chenab to the west and north. The Beas draws, from relatively small catchment areas practically limited to the Lesser Himalayas and Siwaliks, but its runoff is

equivalent to Sutlej as it collects all the way from Lake Manasarowar.⁸

The Ravi does not penetrate the Main Himalayas like the Beas. Its catchment area is limited to the south-western slopes of the Pir Panjal Range (Lesser Himalayas), and it is also closely circumscribed by the Chandra-Chenab.⁹

Michel in his book, *The Indus Rivers*, makes reference to two dam sites on River Chenab and Jhelum: "The Chenab and the Jhelum each offers a dam site within Jammu-Kashmir."¹⁰ The Chenab site is at Dhaingarh to the north of Riasi, where India has constructed Salal dam in the late 1970s.¹¹ The dam is approximately 50 kilometres upstream from Pakistan's Maralla headworks. The second site on the River Jhelum where it leaves Lake Wullar and cuts through the Pir Panjal Rang¹² is an ongoing issue between India and Pakistan.¹³ Pakistan has constructed dam on the course of the Jhelum where the Salt Range meets the Siwaliks near Mangla. The Mangla Dam is built under the Indus Basin Project, after signing the Indus Waters Treaty with India in 1960. The dam, located at the rim-station, includes the Kishanganga and Kunhar tributaries of the Jhelum in its storage.

-----Table-1-----

Catchment Areas and Runoff of the Indus Rivers

River	Gauging Station	Catchment Area (Sq. Miles)	40-YearAverageRunoff (MAF)
Indus	Attock	102,000 (Kashmir & Northern Areas of Pakistan)	93.0
Kabul	Warsak	026,000 (Afghanistan and Pakistan)	17.4
Jhelum	Mangla	012,900 (Kashmir)	23.0
Chenab	Marala	011,400 (Kashmir)	26.0
Ravi	Madhopur	003,100 (Indian Punjab and Kashmir)	07.0
Beas	Mandi Plain	006,500 (Indian Punjab)	13.0
Sutlej	Rupar	018,550 (Himachal Pradesh, India)	14.0
Total			193.4

Sources: Hazara Report, pp. 1-12; S.S. Kirmani, "Sediment Problems in the Indus Basin, Part I: Sedimentation in Reservoirs," *Proceedings of the West Pakistan Engineering Congress 43, Paper No. 336* (Lahore: West Pakistan Engineering Congress, 1959), p. 9.

The Kabul River is another major effluent of Indus River aside from the five rivers of the Punjab. It rises in the 10,000-foot Unai Pass of the southern Hindukush and drains eastern Afghanistan into the Indus at Attock. Where it crosses the Pak-Afghan boundary, just north of the Khyber Pass, the Kabul River has catchments area of some 26,000 square

⁸ Michel, op. cit., pp. 33-34.

⁹ Ibid.

¹⁰ Ibid., p. 35.

¹¹ The issue is discussed in detail in ch. 5.

¹² Aloys Arthur Michel, op. cit., p. 35.

¹³ For details see Muhammad Nasrullah Mirza, "Wullar Barrage," *Pakistan Horizon*, Vol. 47, No.1 (Spring 1994).

miles.¹⁴ Kabul's contribution is as great to the Indus basin as that of the Jhelum, and is far greater than that of any other Indus tributary except the Chenab (see Table-1 above).

The above mentioned geographic details emphasize a remarkable feature of the Indus river system i.e., catchments area of the entire river system is found in the disputed territory of Jammu and Kashmir. Where water fall is above 20 feet per mile and when it leaves the Kashmir territory, at various rim-stations of its tributaries, the water fall reduces to one foot to only six inches per mile in the rest of the basin. These two amazing characteristics signify the hydro-strategic importance of the Kashmir territory for the riparians as the Kashmir is the only territory suitable to develop water resources for the benefit of the inhabitants of the entire Indus basin

2.3 The Nature of Political Boundaries

The administrative setup in the Subcontinent, during the British rule, substantially contributed to the formation of dispute over the Indus rivers between the newly-born states of India and Pakistan at the time of Partition of the Subcontinent. Some provinces were under direct administrative control of the United Kingdom (see Map-7: un-shaded area represents territories under direct British rule). The remaining states, ruled by numerous indigenous princes, were subject to the British advisors representing the Government of India. By the beginning of the twentieth century, the people of the Subcontinent had started organising themselves politically for the establishment of self-rule. Their movement culminated into All-India Congress Party and later All-India Muslim League too.

The demand for partition of the Subcontinent was based on the rationale of Two Nation Theory: Muslim Pakistan and Hindu India. The Muslims in the northwest and northeast of British India were strongly against to the possible Hindu rule in the wake of decolonization of the region. Thus the issue of delimitation of new boundaries emerged as a challenging task for the British rulers. Further complications arose as Pakistan was to be composed of two non-contiguous parts, East and West Pakistan, almost 1000 miles apart (this study is concerned only with the boundary between West Pakistan and India and more specifically division of Punjab).

At the time of Partition, a Boundary Commission, headed by Radcliffe, was assigned to decide the actual limits of the two states in the province of Punjab, called after division as East Punjab (India) and West Punjab (Pakistan). The division was based on majority equation of the districts. The province of Punjab was situated along the Beas and Sutlej rivers, except for an intrusion of East Punjab into the Bari Doab to include Amritsar. The district of Amritsar had a 53.5% non-Muslim majority in addition to being, the sacred city of the Sikhs. The Sikhs had sided with the Hindus and Amritsar acceded to India.¹⁵

¹⁴ Hazara Report, op. cit., pp. 1-12.

¹⁵ Oscar Spate, "The Boundary Award in the Punjab," *The Asiatic Review*, Vol. XLIV, No. 157 (Jan., 1948) p. 2.

Map-7: Princely States and Territories under Direct British Control before Partition (courtesy Prof. Richard Bonney); See also *Mushtaqur Rahman, Divided Kashmir: Old Problems, New Opportunities for India, Pakistan and the Kashmiri People*, (Boulder, London: Lynne Reinner Publishers, 1996), p. 50).



Radcliffe had worked out such a boundary in Punjab, which gave birth to a series of problems for Pakistan. Most crucial among those was the river waters' division. Although, Pakistan got fifteen and India twelve districts of Punjab, Radcliffe awarded those districts to India which had provided it control over the three out of the five rivers of the Indus system. More crucial was to render such territory to it which eventually enabled it to control all the five rivers, simply by annexing Kashmir.¹⁶ The expected happened, giving India a grip on Pakistani's jugular vein. "...which it keeps tightening as often as its politics requires, regardless of ethics, international norms, and unmindful of the misery to which millions of people will be subjected, if their smiling fields turn into deserts."¹⁷

Another 'wise' act of redrawing the boundaries was that Radcliffe cancelled the allocation of Gurdaspur and parts of Ferozepur districts to Pakistan at the eleventh hour because "...it would have secured Kashmir for Pakistan."¹⁸ Christopher Beaumont claimed that he had originally done so with regard to Ferozepur and Zira, but that the award was changed under Mountbatten's influence – though this accusation remains contentious.¹⁹ The immediate concern at the time was communal separation, coupled with the rivals' desire for maximum territorial gains. There was also an understandable tendency, notably in the Indian Congress, to demand more than could be reasonably expected, largely for bargaining purposes (see Map-8).²⁰

Michel notes that from the standpoint of the irrigation system, the boundary award was not the best line. The boundary, which was actually delimited, gave India control of the Ferozepur headworks which cuts across the Bari Doab, almost at right angles to the Ravi and Sutlej. Consequently India was placed in the bargaining position of being an upper riparian with respect to the Upper Bari Doab Canal (UBDC) and the canal systems originating from the Sutlej. This, though relatively short, stretch of some fifty miles contributed towards the creation of subsequent severe tensions which almost brought the two states into an armed conflict. It could not be termed surprising as the boundary was clearly a superimposed and was drawn by a person who knew least about the complex socio-economic ground-realities of the region. It traversed a region in which there already existed a population with a high density, and a settlement pattern of long standing.²¹

¹⁶ Zahur-ul-Haq, "Solution in Search of a Problem," *The Pakistan Times*, October 1, 1986.

¹⁷ Ibid.

¹⁸ Ibid.

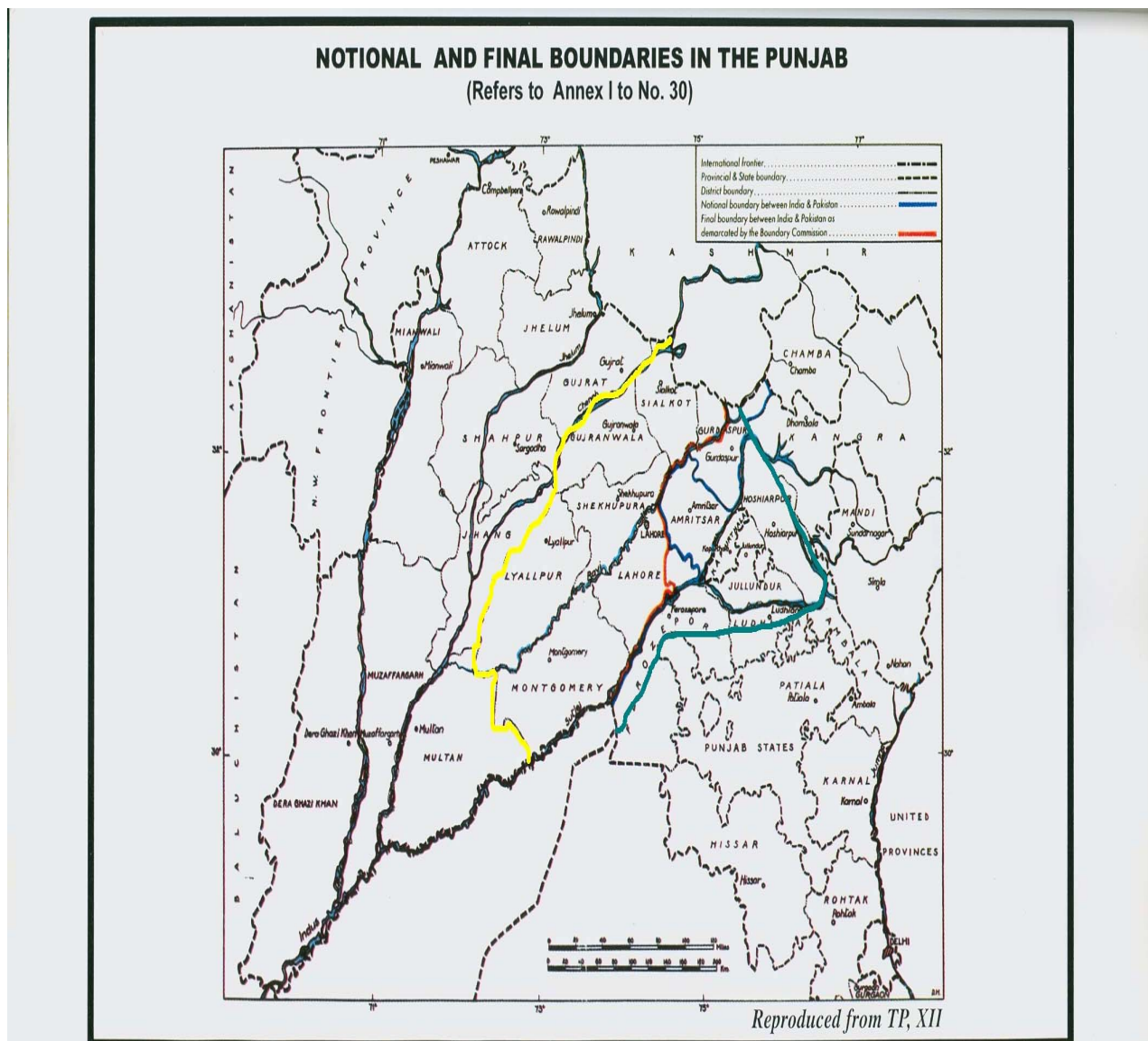
¹⁹ Prof. Richard Bonney, while referring to Beaumont's criticism on Radcliffe and Mountbatten, provides some documentary evidence stating that Radcliffe's claim about the decision to 'eliminate the salient' (that is, to alter the boundary with regard to Ferozepore) was the 'result of his own unfettered judgement' and not the result of Mountbatten's influence. The Maharaja of Bikaner had telegraphed Mountbatten that if the canal headworks at Ferozepore went to Pakistan, he would have to accede to Pakistan and not India. It seems probable that Mountbatten informed Radcliffe of this argument. For details please see Richard Bonney, *Three Giants of South Asia: Gandhi, Ambedkar and Jinnah on Self-Determination* (Leicester, 2003), doc. 46, 308–311. Reprinted (Delhi: Media House, 2004), 276–9.

²⁰ Ibid.

²¹ Aloys Arthur Michel, op. cit., pp. 176-194, esp. p. 193.

Map-8: Boundary Claimed by India and Pakistan and the Radcliffe Award.

Source: Courtesy Prof. Richard Bonney; See also Mushtaqur Rahman, *Divided Kashmir*, op. cit.



The Sikhs community was asking for a diagonal partition line running from the north-east to south-west of Punjab. Such borders would have given them possession of most of the canal colonies to which their fathers and grandfathers had moved at the invitation of the British colonisation officers after 1890. In their final calculus, they had written off the Chaj Doab and the Sidhna Project in the Multan District (currently a part of Khanewal district), but they still wanted to keep most of the lower Chenab Project especially the prosperous Lyallpur District (renamed as Faisalabad in 1980s), as well as most of the areas served by the Triple Canals Project, including the Montgomery District (renamed as Sahiwal in 1960s).²²

²² Ibid., p. 171.

The Sikh legislators presented the 1941 census data, instead of the 1931, on the Sikh percentage of population in the districts that lay, wholly or in part, south and east of the Chenab. It surprised Michel as they had attacked the reliability of the 1941 census. However, they did so probably because the proportion of Sikhs was higher in these districts than it had been in 1931, with only three significant exceptions: Sahiwal (Montgomery), Ludhiana, and Ambala.²³

-----**Table 2**-----

Percentage of the Muslims & Sikhs in Divisions and Districts of the British Punjab according to the Censuses of 1931, 1941

	<u>S i k h s</u>		<u>M u s l i m s</u>	
	1931	1941	1931	1941
Lahore Division	18.86	19.98	58.01	58.18
Lahore District	17.72	18.29	59.18	60.69
Gujranwala District	9.73	10.87	70.82	70.39
Sheikhupura Distt.	17.15	18.85	64.01	63.62
Sialkot District	9.69	11.70	62.23	62.10
Amritsar District	35.80	36.14	46.96	46.50
Gurdaspur District	18.30	19.18	50.80	50.23
Multan Division	08.10	08.15	76.23	75.43
Multan District	03.36	04.15	80.26	77.96
Muzaffargarh Dist.	00.90	00.83	86.79	86.52
Jhang District	01.28	01.49	83.16	82.58
Dera Ghazi Khan Dist.	00.15	00.17	88.80	88.90
Lyalpur District	18.36	18.81	66.62	62.82
Rawalpindi Division	04.76	04.98	85.88	85.52
Rawalpindi District	06.50	08.16	82.76	80.00
Gujrat District	06.42	06.35	85.24	85.60
Jhelum District	04.07	03.92	89.10	89.51
Mianwali District	01.03	01.36	86.77	86.17
Attock District	03.34	02.97	91.07	90.52
Shahpur District	04.88	04.81	82.72	83.67
Jullundur Division	24.45	24.32	33.41	34.53
Jullundar District	26.45	26.44	44.46	45.17
Ferozepur District	33.55	33.68	44.56	45.08
Hoshiarpur District	16.78	19.92	31.79	32.48
Karnaga District	00.30	00.57	05.05	05.09
Ludhiana District	46.52	41.69	35.03	36.92
Ambala Division	05.63	05.12	27.72	28.07
Ambala Dist	20.94	18.44	31.07	31.64
Simla District	02.07	02.67	15.79	18.20
Hissar District	06.13	06.03	28.21	28.33
Gurgoan District	00.07	00.07	32.74	33.49
Karnal District	01.99	02.00	30.46	30.58
Rohtak District	00.07	00.15	17.11	17.22

Sources: *Census of India, 1931, Vol. 17, Punjab (Lahore: Civil and Military Gazette Press), pp. 278-279; and Census of India, 1941, Vol. 6, Punjab (Delhi: The Manager of Publications, 1941), pp. 41-45, also cited by Michel, op. cit., p. 172.*

The figures given in the last column of the Table-2, 3 reflect the population strength of the Muslim community in 1941. The Sikhs were so "diluted" that under the terms of reference of the Boundary Commission, they could not rely even on the total non-Muslim population.

²³ Ibid.

Michel observes that non-Muslim communities (Christians plus Parsees) were not significant to affect matters one way or another. In all of the British Punjab, there was only one district, Gurdaspur, where either the Muslims or the non-Muslim majority was less than 3.5 percent above or below 50 percent.²⁴ On any calculus their argument was weak. Although their minimum demand—partition along the Chenab excluding the Multan and Jhang Districts—would have brought 95 percent of the 3,767,401 Sikhs of the British Punjab into India, but it would have placed 63.89 percent of the 10,360,454 Muslim population there too. Keeping these demographic realities in mind, a strict communal demarcation of the boundaries would obviously have gone against the Sikh interests. Realizing their weak argument the Sikh legislators urged for “other factors.”²⁵

The meaning and logic of “other factors” was explained nowhere. Although Baldev Singh had requested this,²⁶ but no parameters were determined about the weight, separately or combined, was to be given to the “other factors” relative to the communal majority factor. In fact, Radcliffe was advised to draw partition line on the basis of “contiguous majority areas of Muslims and non-Muslims,” although the general term “areas” rather than the specific term “districts” or “tehsils” left enough room for the adjustment to the satisfaction of the stakeholders.²⁷

-----**Table-3**-----
Muslims and the Sikhs Percentages in Certain Districts & Tehsils of the British Punjab: 1931, 1941 Censuses

	S i k h s		M u s l i m s	
	1931	1941	1931	1941
Jullundur District	26.45	26.44	44.46	45.17
Jullundur Tehsil	20.91	19.64	49.62	51.16
Nawan Shahar Tehsil	31.19	18.05	31.61	31.54
Phillaur Tehsil	125.83	36.35	33.13	33.19
Nakodar Tehsil	22.48	22.75	58.72	59.41
Ferozepur District	33.55	33.68	44.56	45.08
Amritsar District	35.80	36.14	46.97	46.50
Amritsar Tehsil	30.82	30.83	46.40	45.49
Tarn Taran Tehsil	50.01	51.48	40.55	40.69
Ajnala Tehsil	27.73	28.68	58.95	59.46
Gurdaspur District	18.38	19.18	50.80	50.23
Gurdaspur Tehsil	23.67	23.32	52.62	52.16
Batala Tehsil	29.75	30.62	54.07	55.07
Pathankot Tehsil	03.59	04.95	39.72	38.89
Shakargarh Tehsil	06.36	07.06	50.87	51.32
Kapurthala State	22.79	25.93	56.59	56.35

Source: *Census of India, 1941*, Vol. 6, Punjab, pp. 48-49, 52-55, 57-63, also cited by Michel, op. cit., p. 187.

²⁴ Aloys Arthur Michel, op. cit., pp. 173-174.

²⁵ Ibid.

²⁶ V.P. Menon, *The Transfer of Power in India*, (Princeton: Princeton University Press, 1957), pp. 376-377.

²⁷ Aloys Arthur Michel, op. cit., pp. 165-166.

Michel argues that taking the Sikhs' economic interests into consideration and owing to their contribution to the economy of the Lahore and Jullundur divisions and the Montgomery [Sahiwal] and Lyallpur [Faisalabad] districts, 'the Sikhs were on unassailable ground.' But partition along the lines proposed by the Sikh legislators would have been most disastrous for irrigation system and regional economy of the Punjab. The effects on the Triple Canals Project would have been worst. The integrated operation of the whole project was dependent upon the five headworks. Owing to the supposed adherence to the Sikh proposals, two headworks (Mangla and Rasul) would have gone to Pakistan, one (Balloki) to India, and two (Marala and Khanki) would have been split through the middle. Since, as has been explained, the entire Triple Canals Project operation ultimately depends on Mangla, the Sikh proposal would have left the key to the irrigation of their lands in Faisalabad and Sahiwal Districts under Pakistan's control.²⁸

Michel argues further that in the light of its effects on the irrigation system, the Sikh proposal would have created a far worse situation than that which actually resulted from the Partition. One should appreciate the bold step by Radcliffe: despite his rebuff by Nehru and Jinnah when he raised the question of irrigation in the Punjab, his Award did preserve intact its single most important system, the Triple Canals Project, but Ferozepur and Gurdaspur districts represented a test of whether the "contiguous majority area" principle or "other factors" were to prevail. Although the Ferozepur district as a whole was predominantly non-Muslim,²⁹ but the two northern tehsils, Ferozepur itself and Zira were clearly Muslim majority areas.³⁰ Thus the question arose, whether a district should be partitioned? Similar were the situation with respect to the Gurdaspur district north of Amritsar. Under the terms of the Boundary Commission, Radcliffe clearly had authority to partition Ferozepur district and to award the two Muslim majority tehsils to Pakistan on the "contiguous majority area" principle, as he done with Gurdaspur district. Awarding the Ferozepur tehsil to Pakistan would definitely have preserved the unity of the Sutlej Valley Project as far as headworks were concerned.³¹

But here "other factors" acquired importance in the calculus for accession. First, Ferozepur city was a majority cantonment area. Second, it was a major junction point where four railway lines and three highways met to cross on the barrage-cum-bridge towards Kasur and Lahore. The award of this area, south of the Sutlej, to Pakistan would have conferred a strategic advantage providing waters along with headworks and the Muslim-majority tehsils containing cantonment areas.³²

²⁸ Aloys Arthur Michel, *op. cit.*, p. 176.

²⁹ The Ferozepur District as a whole had 44.56 and 45.08 per cent Muslims in 1931 and 1941 respectively (see Table 3).

³⁰ The Tehsil Ferozepur had 52.20 and 55.25 per cent Muslim in 1931 and 1941, respectively. Zira Tehsil had 65.03 and 65.26 Muslim in 1931 and 1941 respectively. Figures for tehsils in 1941 calculated from the Census of India, 1941, Vol. 6 Punjab, Provincial Table II, pp. 58-63. For 1931 figures calculated from the respective District Gazettes Part-B, Table-16 issued in the mid-1930s.

³¹ Aloys Arthur Michel, *op. cit.*, p. 179.

³² Aloys Arthur Michel, *op. cit.*, p. 180.

Michel argues that in the context of post-partition developments, one may logically ask whether it would not have been preferable to have made the course of the Sutlej River as boundary at Ferozepur. In fact, this would have exchanged the Ferozepur district bridgehead north of the Sutlej for the Lahore district bridgehead south of it. Certainly, such an arrangement would have placed the boundary in the middle of the Ferozepur barrage. On the other hand Radcliffe was confident that the arguments regarding sharing of the water would be respected by the successor states, as he hoped:

I have taken the view that an interest of this sort cannot weigh directly in the question before us as to the division of the Punjab between the Indian Union and Pakistan since the territorial division of the province does not effect rights of private property, and I think I am entitled to assume with confidence that any agreement that either of those states has made with the Provincial Government as to the sharing of water from those canals or otherwise will be respected by whatever Government hereafter assumes jurisdiction over the headworks concerned.³³

Michel questions his argument on the basis of not providing this visible evidence of such trust? Since a headwork has to be run as a unit, would it not have been preferable to persuade the parties to cooperate by giving each of them half of it rather than to place one of them, that too the upper riparian, in a position to cut off supplies to the other? The counter argument is that Radcliffe lost trust after Jinnah's reaction to his suggestion of a counter Hindu-Muslim bulwark that, "I would rather have Pakistan deserts than fertile fields watered by courtesy of Hindus."³⁴ Jinnah's suspicions proved true when India cut off supplies to the Dipalpur canal as well as to the Lahore and main branches of the UBDC, on 1st April 1948. If Radcliffe would have suspected what actually happened in the spring of 1948, would it not be preferable to give the entire Ferozepur headworks to Pakistan to balance the award of the Madhopur headworks (of the UBDC in the Gurdaspur) to India? Thus each country would have held a position to counter-balance the unilateral closure by the other party.³⁵

According to Michel a logical solution has been to run the boundary between Lahore and Amritsar, but here the complication was that the contiguous majority principle could not be applied on a tehsil level. Muslim-majority tehsils plus the Muslim majority state of Kapurthala completely encircled the two non-Muslim tehsils of the Amritsar district (Amritsar and Tarn Taran) and one non-Muslim tehsil (Pathankot) of Gurdaspur district while other tehsils of districts Gurdaspur, and Amritsar were Muslim-majority areas. Across the Sutlej and between Sutlej and Beas rivers, Ferozepur district had two contiguous Muslim-majority tehsils and two tehsils of Jullundur district again contiguous to Muslim majority areas were Muslim-majority tehsils. If Radcliffe would have interpreted the "contiguous majority" principle to apply only to whole district level, then he could have awarded the entire Jullundur district to India,

³³ Gazette of India, Extraordinary, August 17, 1947, Annexure A, Section 5, p. 1,067.

³⁴ Aloys Arthur Michel, op. cit., p.164 (Michel's personal talk with Lord Radcliffe, March 28, 1965).

³⁵ Ibid., p. 181.

as he did with Ferozepur. But then logical consistency would have demanded that he awarded the Gurdaspur district in total to Pakistan.³⁶

If irrigation consideration were taken in combination with communal population, Radcliffe would have been amply justified in awarding both the Gurdaspur and Lahore districts to Pakistan. In essence one can argue that the irrigation standpoint would appear to have reinforced the population standpoint, and the principle of “contiguous majorities”, because if the same had been applied to district as a whole, then it would have been quite logical and quite consistent to award Ferozepur, Amritsar, and Jullundur to India, and Gurdaspur and Lahore to Pakistan.³⁷

The Radcliffe Award has been accused by majority of analysts on the charges that the Award was an exercise of double-standards between the Sutlej and the Ravi by partitioning of districts, which he had avoided in Ferozepur. The Gurdaspur district had three clear contiguous Muslim majority tehsils—Batala, Shakargarh and Tehsil Gurdaspur itself with 55.07, 51.322 and 52.16 percent Muslim population respectively (see Map-9). Radcliffe had awarded tehsil Pathankot with Madhopur headworks, and the two contiguous Muslim majority tehsils, Batala and Gurdaspur itself, to India. It not only ensured the Indian hold over Madhopur headworks and UBDC system but also on the Gurdaspur tehsil. The Madhopur headworks and UBDC system served above two-third of the total land in the Muslim-majority areas and was crucially important for the very survival of Lahore district. Moreover, the Gurdaspur tehsil included the only road linking to Eastern Punjab (hence to India) with Jammu and Kashmir, and the only bridge—the Madhopur Barrage, over the Ravi above Lahore. Here Radcliffe award, secured for India the strategically vital land communication between India and Jammu-Kashmir. While in the Lahore district, even a tehsil was partitioned: the eastern two-third of Kasur tehsil—predominantly Muslim-majority tehsil (above 70 percent Muslim population), was awarded to India, probably to abandon the possibilities of Pakistani claim over the use of UBDC.³⁸

Here arises a question, to which Radcliffe seems answerless, that why then the Gurdaspur award made as it was? In retrospect, the substance appears inconsistent. There does not seem any way to reconcile the Ferozepur award with that of Gurdaspur, on the basis either of contiguous communal majorities or the basis of irrigation considerations.

Michel points out that on the population basis, it was anomalous not only because the district as a whole had a Muslim majority but the Muslim-majority tehsil Shakargarh, awarded to Pakistan, was only slightly higher (1.32 per cent above 50) than in district as a whole (00.32) and somewhat lower than the Batala and Gurdaspur tehsils (5.07, 2.16 above 50 percent respectively), awarded to India. The Pathankot tehsil had a lower percentage of Muslim population (38.89 per cent) and may partially justify its disposition, but hardly that of

³⁶ Ibid., p. 187-88.

³⁷ Ibid., p. 189.

³⁸ Ibid., p. 190.

Batala and Gurdaspur tehsils. In Ferozepur, Radcliffe avoided the partition of the district (the contiguous Muslim majority tehsils Zira and Ferozepur with 65.3, 55.3 percent Muslim population—see Table-3), in order to award Ferozepur headworks to India.³⁹

The rationality principle demands that if the irrigation factor was strong enough at Gurdaspur to vitiate the “contiguous majority” principle to the extent of partitioning a Muslim-majority district and awarding not only the non-Muslim Pathankot tehsil but two clearly Muslim-majority tehsils to India, then logically the irrigation factor should also have prevailed at the Ferozepur, at least to the extent of giving Pakistan control of the right hand portion of the headworks with the intake of the Dipalpur Canals. Such a step would have saved Pakistan from paying heavy economic and political costs.

The Gurdaspur award assumed strategic importance for India when Kashmir’s Hindu Maharaja, Hari Singh, allegedly signed the instrument of accession to India at the end of October, 1947 and the Indian troops began moving into Kashmir through the Madhopur barrage-bridge via the Banihal Pass. “Possession of Gurdaspur and the Madhopur barrage-bridge did contributed decisively to the Indian occupation of Jammu itself, and even of Poonch,”⁴⁰ south of the Pir Panjal Range (see Map-9).

The Indian manoeuvres, immediately after partition, towards Jammu Kashmir made it clear to the “well-informed” Pakistanis that the Gurdaspur award was intentionally made to provide India with access to Jammu-Kashmir. A possible counter-argument may term this linking of Gurdaspur award to the Kashmir situation as a post-facto reasoning, but the Pakistani belief makes strategic sense when one analyses it in the light of Realpolitik. Pakistani perception that Radcliffe was influenced by the Viceroy Mountbatten who himself was miffed at Jinnah’s refusal to invite him to serve as Governor General of Pakistan draws strength from the deliberate delay in the announcement of the award⁴¹, which was clearly Mountbatten’s responsibility. It draws considerable strength further from the “statement of June 3,”⁴² and the 8 August 1947 “Sketch-map”⁴³ story, “The Indian Independence Act of 18 July 1947,”⁴⁴ and the posting of the Muslim members of the Indian Civil Service in Gurdaspur prior to the Independence Day.⁴⁵

³⁹ Ibid., p. 190.

⁴⁰ Aloys Arthur Michel, op. cit., p. 191.

⁴¹ The Award was made public on August 17, 1947.

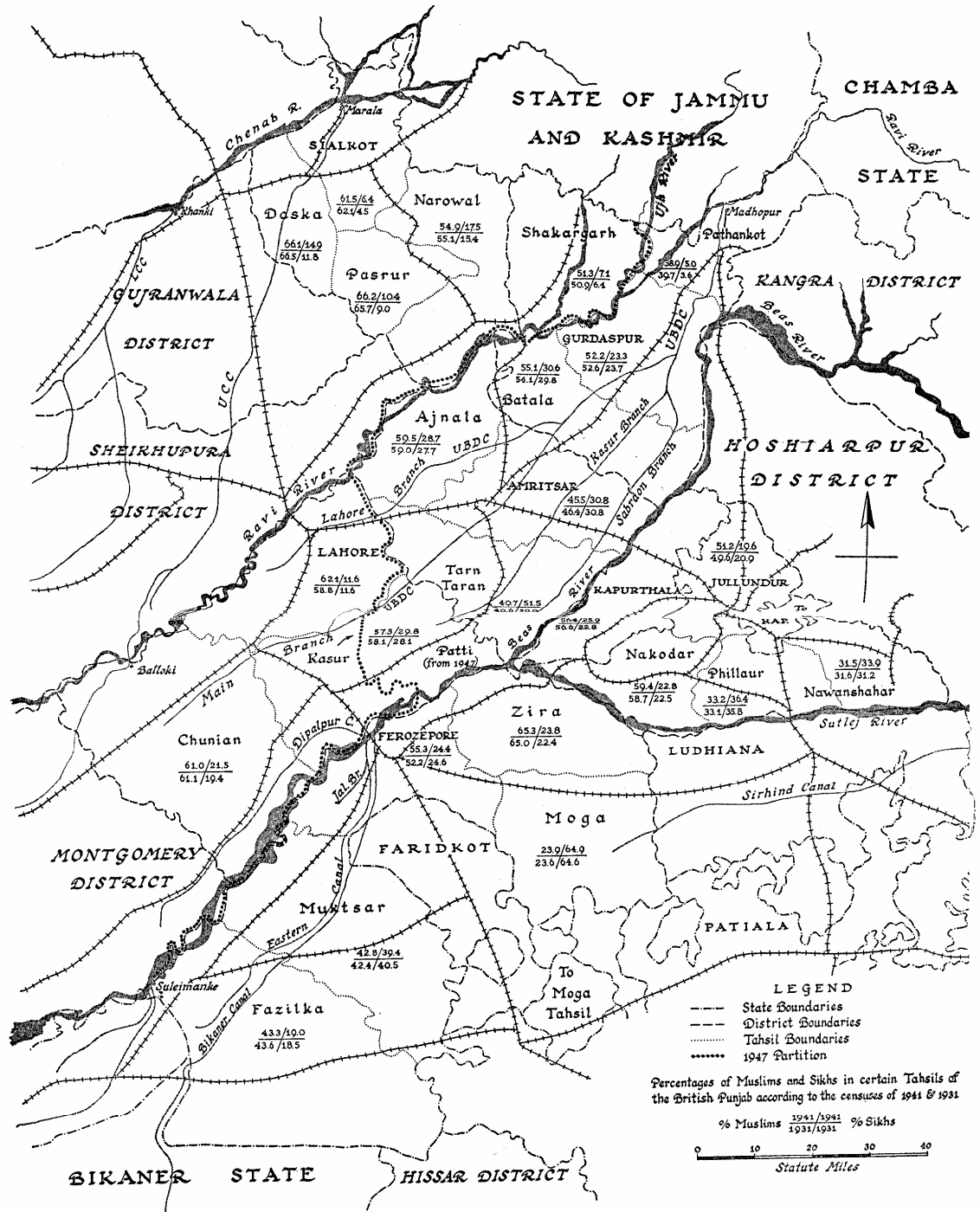
⁴² Gurdaspur was recognized as a Muslim-majority district in the June 3 statement “as preliminary step until the report of the Boundary Commission has been put into effect.” See Aloys Arthur Michel, op. cit., pp. 157, 192.

⁴³ Mosely recounts the story of the “rough sketch map” which was taken down over the telephone on August 8, 1947, and forwarded to Sir Evan Jenkins, showing not only the headworks but the towns of Ferozepur and Zira on the Pakistani side. See Mosley, Leonard, *The Last Days of the British Raj* (New York: Harcourt, Brace & World, and London, Widenfeld and Nicolson Limited, 1962), p. 230.

⁴⁴ Second schedule, “Districts-Gurdaspur & Ferozepur-provisionally included in the New Province of West Punjab,” quoted in Menon, V.P., *The Integration of the Indian States* (Calcutta: Orient Longmans, 1956), Appendix XI, p. 531.

⁴⁵ Aloys Arthur Michael, op. cit., p.192, states that the posting of Muslim civil servants may easily have been a well-intentioned administrative *faux pas* on the part of superior officers completely in

Map-9: The Central Punjab, showing the relation of the Partition Line to the Muslim and Sikh population by Tehsil and to irrigation and railways systems (Source: Aloys Arthur Michel)



The Central Punjab, showing the relation of the Partition Line to the Muslim and Sikh population by Tehsil and to the irrigation and railway systems

ignorance of the Radcliffe Award. But this explanation will hardly assuage the feelings of those civil servants of Pakistan who actually ran the new Pakistan flag in Gurdaspur on August 15, proceeded to take over the administration, and then on August 17, with the publication of the Award, were sent packing and scurrying for the new border along with thousands of Muslims not only from Gurdaspur but from Hushiarpur, Jullundur, Kapurthala, and Amritsar as well.

Michel argues that, “at any rate, under the Treaty both the Sutlej and the Ravi would have become Indian rivers, and the irrigation disadvantages of the Radcliffe Award, as far as Pakistan is concerned, will be submerged in the much larger operation of the Indus Basin Project.”⁴⁶ He based his observation to settle Kashmir dispute by partitioning of Jammu-Kashmir along communal lines, a reasonable solution⁴⁷ also suggested by Pervaiz Iqbal Cheema. Michel recommends: “In that event, India will have a legitimate need for the connection with Jammu—areas east of the Chenab River, via Madhupur, and the Radcliffe Award will turnout to be logical after all.”⁴⁸

Michel’s recommendations are convincing when one considers the post-partition developments and the present situation in Kashmir. But pre-partition scenario was completely different and we can’t term the Radcliffe Award as logical in the given circumstances of 1947. At that time, the partition of the Kashmir State on “contiguous-majority areas” principle was absolutely out of question, because at that time Kashmir was a princely state and was not under Radcliff’s jurisdiction. Michel argues that the Gurdaspur Award inveterate to be “gerrymandered”, giving India access to Kashmir (Realpolitik) and one should resort to the “special devil” theory of the history. It draws strength further as Radcliffe himself termed it “an award, not a judgement,” responsible to generate a situation of permanent discord and confrontation in Indo-Pakistan relations.⁴⁹

The above long but precise analysis confirms that boundaries in the Indus basin were drawn on the basis of access to water resources and control of water infrastructures—river headworks.

2.4 Population Density and Settlement Patterns

The social fabric of pre-partition Punjab was characterised by a predominantly rural, highly dense in the cities, and multi-religious population. The three major religious groups, namely, Muslims, Sikhs and Hindus had an ‘uneven juxtaposition’, and the former two had a life-style dependent directly upon agriculture. According to the 1941 Census of India, population density ranged from a low of 94 people per square mile in Mianwali district (northern Sindh Sagar Doab) to a high of 755 in Sialkot district (northern Rechna Doab), and in half the districts the density exceeded 350 people per square mile.⁵⁰ The density generally decreased from east to west and from north to south, so that the areas with the greatest concentration were those closest to and most immediately affected by the partition line. About

⁴⁶ Aloys Arthur Michel, op. cit., p. 193.

⁴⁷ Pervaiz Iqbal Cheema, “A Solution for Kashmir Dispute?” *Regional Studies*, Vol. IV, No. 4, 1986, pp. 9, 11.

⁴⁸ Aloys Arthur Michel, op. cit., p. 193.

⁴⁹ Ibid., p. 194.

⁵⁰ *Census of India, The Punjab, 1941*, Calcutta: Superintendent of Government Printing, cited by Rashid Ahmad Malik, *Irrigation Development and Land Occupance in the Upper Indus Basin* (Ph.D. thesis, Department of Geography, Indiana University, 1963), p. 144.

15 per cent of Punjab's population of 18,000,000 was urban and over one fourth of the latter or same three quarters of a million, lived in the old city of Lahore.⁵¹

From a communal yardstick, in 1941 the majority of the Punjab population was comprised of Muslim community. The Muslims accounted for 53 percent of the population of Punjab, while the Sikhs were only 14.3 percent. The Sikh concentration was centred in and around Amritsar and especially in the areas southeast of that city. The majority of the rest were Hindus and were located in the eastern part of the province. Historically, Amritsar was homeland of the Sikhs, however, it is noteworthy that in no district did the Sikhs form even half of the population.⁵²

At the time of partition, the socio-economic geography of Punjab was dominated by a life pattern in which priorities to water resources and irrigation system had evolved. For instance, the Upper Bari Doab Canal (UBDC) had first claim on the Ravi River, and the Sirhind Canal on the Sutlej.⁵³ The UBDC system taps the Ravi on the Indian side of the cease-fire line, in the extreme southeast of Kashmir, and irrigates areas on both sides of what has become an international boundary. Further downstream, the Lower Bari Doab Canal (LBDC) also uses Ravi water for areas, now included in Pakistan. The river Sutlej is tapped by the Sirhind Canal in East Punjab and is used entirely in India, to its downstream the Dipalpur and other canals carry Sutlej water to Pakistan.⁵⁴

2.5 Climate and Water Supply

The Indus basin is classified as arid or semi arid, except for its upper most area (see Map-10).⁵⁵ The per annum precipitation may exceed sixty inches along the south-facing slopes of the Himalaya, but it decreases rapidly south-westwards, so that Lahore, some 25 miles from the foothills, receives about twenty inches. The rainfall in the region of Pakistani Punjab is characteristically torrential and unreliable and this trend increases south-westwards.⁵⁶

The Climatic condition of the region does not provide any uniform delineation between the plains of upper and lower Indus basin. There are climatic changes over this vast region but the variation over the 63 miles from Karachi to Thatta, indicates beginning of the change from coastal to an inland station. This is despite the fact that the climatic change which still receives some maritime modification, is much greater than that over the 61 miles from Thatta to Sukkur or over the 251 miles from Thatta to Hyderabad. In fact, in any given season, differences in temperature between Hyderabad and Lahore (693 miles apart) are

⁵¹ Basheer Khalil Nijim, op. cit., p. 35-36.

⁵² John E. Brush, "The Distribution of Religious Communities in India," *Annals of the Association of American Geographers*, Vol. 39, 1949, pp. 81-89, cited by Aloys Arthur Michel, op. cit.

⁵³ F. J. Fowler, "Same Problems of Water Distribution between East and West Punjab," *The Geographical Review*, Vol. XL, No. 4 (October 1950) p. 592.

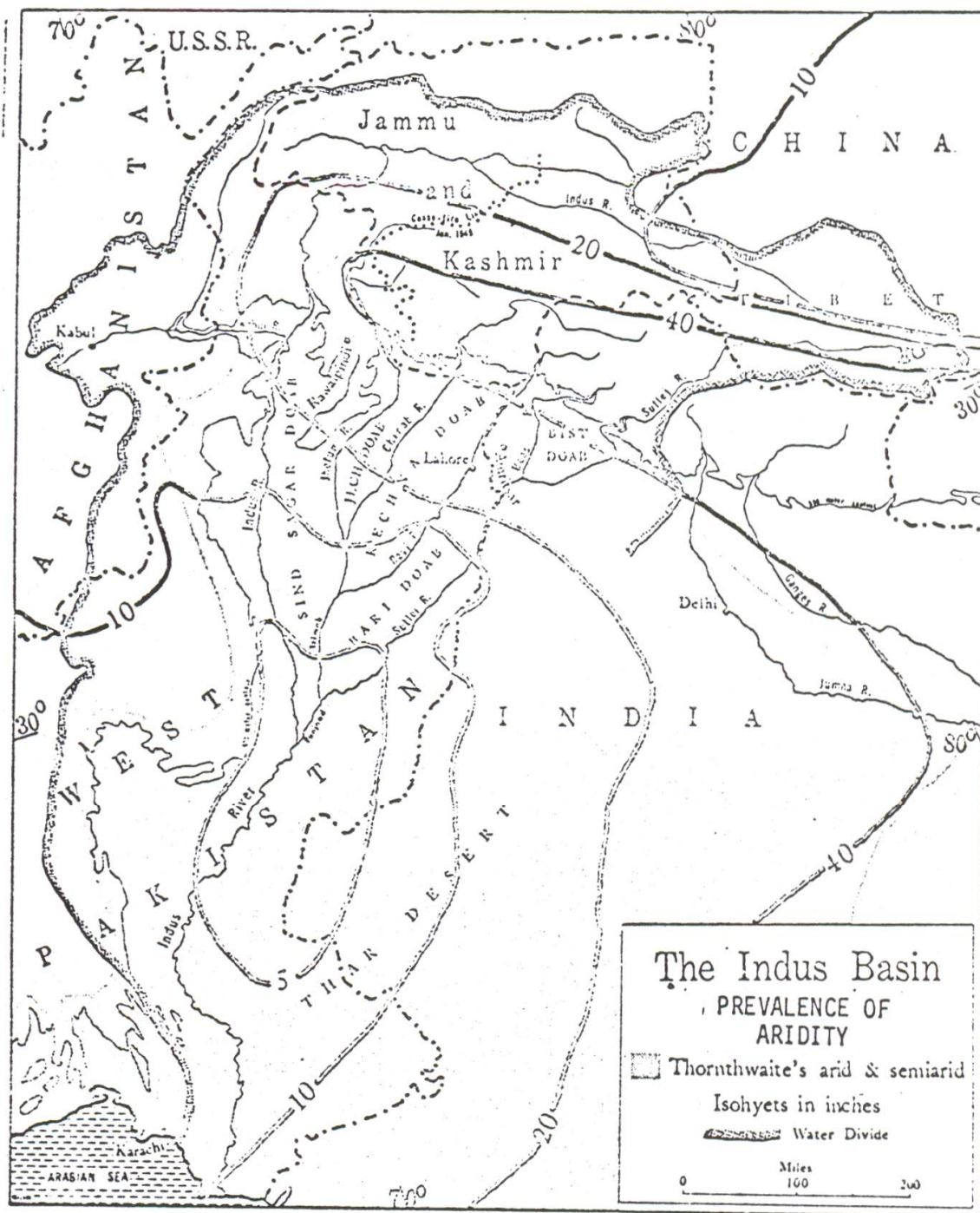
⁵⁴ Basheer Khalil Nijim, op. cit., p. 36.

⁵⁵ O. P. Bharadwaj, "The Arid Zone of India and Pakistan," in L. Dudley Stamp, ed., *A History of land Use in Arid Regions*, (Paris: UNESCO Arid Zone Research, 1961), Vol. XVII, No. 1, pp. 143-174.

⁵⁶ Basheer Khalil Nijim, op. cit., p. 28.

smaller than those between Thatta and Karachi.⁵⁷

Map-10: The Indus Basin: Prevalence of Aridity (Source: Michel, op. cit.)



In any monsoonal region, differences in elevation are more significant than latitude especially within the first 20 miles from the sea. The plains of Indus are pretty much a climatic unit except in the coastal and sub-mountainous zones, because the gradient of the Indus

⁵⁷ Michel, op. cit., p. 37.

plains is less than one foot per mile. Of the Indus plains meteorological stations, Jacobabad, northwest of Sukkur, experiences the highest temperatures and the lowest average annual rainfall. But on an afternoon in June, when it may be 120F in Jacobabad, it is likely to be 110F or even 115F in both Hyderabad and Multan, and not much cooler in Faisalabad or Lahore. On the other hand, the winter differentials are greater and are reflected to some degree in the natural vegetation and cropping patterns. Light frosts are experienced in Lahore and occasionally even in Multan, though never in Hyderabad or Karachi. Winter rainfall is not unknown in Jacobabad, though it gets at least 3 of its 4 inches in the months of June, July and August.⁵⁸

Concerning the water supply system in the Indus basin, the British rulers, soon after colonizing the Subcontinent in 1857, started a study of the possibilities to irrigate arid land of the Indus Plains through the 'Indus Rivers.'⁵⁹ They conducted a detailed survey to explore the possibilities for the construction of dams, barrages, weirs, link-canal, perennial and non-perennial canals, across the rivers, in order to divert water towards arid lands of Punjab—'British Punjab.' The first British canal on the Indus Rivers (the Upper Bari Doab Canal—UBDC henceforth), started irrigation in 1861. The UBDC proved to be a good initiative to demonstrate the interest and capability of new rulers to do a lot for the welfare of the Punjabis. Michel describes that the British were aiming at, to "do something for irrigation" in order to improve the agricultural value, and thus the revenue-generating capacity of the lands. They also aimed at proving the excellence of European science above everything done earlier. Though, neither of these motives appears to have been the decisive influence upon the development of irrigation system, rather, there were two other motives that took precedence: "One of these was the fear of famine."⁶⁰ The economic motive was to pre-empt famine like that of 1837-38 which compelled the British to improve the Western Jumna Canal, and its memory was fresh in the Punjab even ten years later. The political motive, "...no doubt decisive one, was to give employment to the Sikh army Veterans."⁶¹ This visible proof of the welfare of the Sikhs by the British, along with the relative ease of military movements along the new canal banks, undoubtedly contributed to the quiescence of the Punjab, especially of Sikhs during the war of independence 1857.⁶²

The Western Jumna Canal was producing severe water-logging and salinity. On the other, the UBDC was eroding its bed, so a proper distribution system became inevitable. To solve these problems Sirhind Canal was constructed and opened in 1882.

⁵⁸ Ibid., p. 38.

⁵⁹ The term "Indus Rivers," stands for all the contributory rivers to the Indus Basin and the Indus River itself. The other contributory rivers to the Indus Basin are, "The Jhelum," "The Chenab," "The Ravi," "The Beas," and, "The Sutlej."

⁶⁰ Aloys Arthur Michel, *op. cit.*, p. 66.

⁶¹ L. French, I.C.S., *The Punjab Colony Manual* (Lahore: Civil and Military Gazette Press, 1907), p. 1, cited in Michel, Ibid.

⁶² Aloys Arthur Michel, *op. cit.*, p. 65

In the meantime resulting from the improvements in living conditions, average rate of growth in population of the Punjab province had gone to 8.2 per cent.⁶³ Under these conditions, each passing year it increased the danger of famine unless the agricultural production could be increased at least as rapidly as growing rate of population. Thus the British had to develop the irrigation system of the fertile province of Punjab on priority basis, to pre-empt any adverse law and order situation. They installed Upper Sutlej Canal-USC, including Lower Sohag and Para Canals; Lower Chenab Canal-LCC; Sidhnai Canal and Lower Jhelum Canal-LJC, as Principal Productive Irrigation Works to the end of March 1903.⁶⁴ In this way, the British had achieved all the political, economic and the engineering breakthroughs.

The Mangla headworks did involve compromising any idea of complete British control because the intake and first 24 kms of the canal had to be placed in a princely-state Jammu-Kashmir. But the advantages of the Triple Canals Project [Upper Jhelum Canal (UJC), Upper Chenab Canal (UCC) and LBDC] were so great that the problem of political control was overlooked. The Triple Canal Project (TCP) was sanctioned in 1905 and the construction of UJC, UCC and LBDC was accomplished during 1907-14.⁶⁵

In the meantime, many personnel of the Irrigation Branch were called to serve in the wake of World War-I between the completion of the Triple Canal Project and the commencement of the next integrated project in the Indus Basin, on the Sutlej. Thus after the war a long discussions—among the Government of India (the Punjab Government), the state of Bikaner and Bahawalpur—led to an agreement at Delhi in 1919 generally known as "Tripartite Agreement."⁶⁶ The Sutlej Valley Project (SVP) was sanctioned under this agreement in 1921 which called for the construction of four barrages (headworks) namely Ferozepur, Suleimanki, Islam and Panjnad along with eleven canals.

The Sutlej Valley Project was the last huge engineering work done by the British Government in India before Partition of the Subcontinent.

Michel describes that the years 1933-35 marked another turning point in the irrigation of the Indus Basin, as the extension of irrigation in the Doabs between the Punjab Rivers, or in the land south of the Sutlej, would require either upstream storage or diversion from the Indus across the Sindh Sagar (Thal) Doab. Conversion from the Indus required the consent of Sindh Government. Sindh authorities in 1932 had just opened the first barrage—the Lloyd Barrage at Sukkur and its first perennial canal system. It was not in a mood to make any new commitment. Thus, Sindh, whose interests, at that time, were still represented by the Bombay

⁶³ Ibid., p. 74.

⁶⁴ Ibid., p. 81.

⁶⁵ Ibid., p. 90.

⁶⁶ The agreement envisaged that 62.2 per cent of the States and 50.7 per cent of the British culture-able lands by perennial and 50 per cent for both by non-perennial canals would be irrigated.

Government, took strong exception to any withdrawals, or any changes in the river regimes, that might affect its inundation canals above or below the Sukkur command.⁶⁷

Compelled by the adverse political developments in the subcontinent, the government of India was not interested to indulge in such a problem.⁶⁸ Michel explains that the Government of India Act of 1935, which took effect in 1937, made Sindh a separate province and greatly increased provincial autonomy. The departments of irrigation and electricity had come under provincial jurisdiction. The interference of the central Government was subject to the formal complaint by a province against any other province regarding interference with their water supplies.⁶⁹

The Punjab Government realised that the flowing water in the rivers goes unused as it flows down into the Arabian Sea before the maturing season of Rabi crops and the sowing season of Kharif crops. While shortage of water, on the other hand, was adversely affecting the agricultural production. The canals network was useless without proper upstream storage. The Punjab Government formally requested the Centre to locate sites for dams to store water for irrigation during lean months and to produce electricity as well. The British Government started locating probable dam sites on the river Indus and all its tributaries.⁷⁰

Under Mr. Foy, the first project circle was opened in Punjab which later was expanded to a High Dam Authority, with Chief Engineer Mr. Khosla as its Chairman. The project circle located a number of dam sites from the river Sutlej to the Indus, wherever the rivers crossed through narrow gorges and had a vast storage capacity upstream of the ravine.⁷¹

The first proposed dam had to be on the convergence of the rivers Indus and Soan. The High Dam Authority called it Makhed Dam—now famous as Kalabagh Dam, with a storage capacity of 15 MAF.⁷² The second dam on the Indus was proposed at Tarbela. It offered 9.3 MAF storage along with an off-channel storage capacity of 30 MAF.⁷³

Two more dam sites were located on the river Jhelum; first on the mouth of Wullar Lake; and second at Mangla near Mirpur. While on the river Chenab, the proposed dam site was located at Dhiangarh.⁷⁴ On the Sutlej a gorge had already been under study since 1907 at Rupar. The second dam site at Sutlej was proposed at Bhakra with 8 MAF storage capacities.⁷⁵ It was further decided to connect the waters of the Chenab and Ravi by

⁶⁷ Michel, *op. cit.*, pp. 97-98.

⁶⁸ UNECAFE, *Multiple Purpose River Basin Development, Part 2B*, p. 70.

⁶⁹ Michel, *op. cit.*, p. 98.

⁷⁰ *Ibid.*

⁷¹ *Ibid.*

⁷² Mian Muzaffar Ahmed, "The Controversy Over Dams," *The Pakistan Times*, July 16, 1986.

⁷³ Aloys Arthur Michel, *op. cit.*, pp. 274, 292.

⁷⁴ Aloys Arthur Michel, *op. cit.*, p. 9.

⁷⁵ Mian Muzaffar Ahmed, *op. cit.*

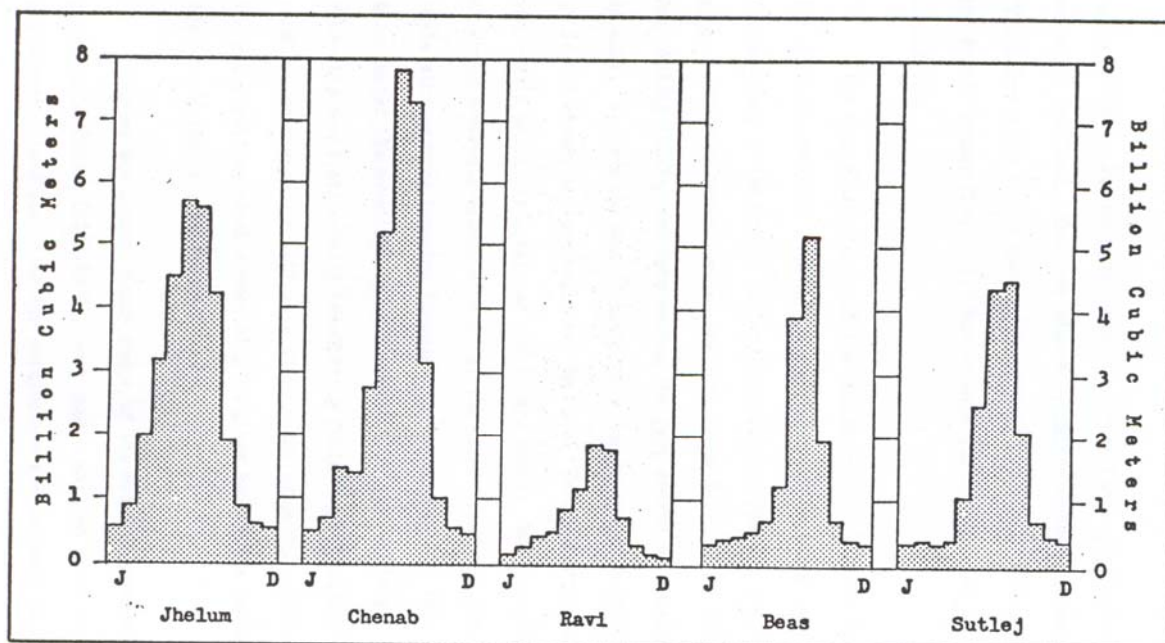
constructing a tunnel under Marhu Pass, from where it could be distributed to Sutlej Valley Canals through the construction of Madhapur-Beas link.⁷⁶

It was at this juncture of the history that Indian subcontinent was partitioned resulting in the splitting of Punjab into West and East Punjab. The proposals to meet the deficiency of Sutlej Valley Canals were being framed. The West Punjab was given to Pakistan while East Punjab was awarded to India. Kashmir was held by India. Almost all the catchment areas of the Indus Rivers were gone under the Indian control which threatened the Pakistan's interests.

The conflict factor related to climatic variation is shown in Figure-1 highlighting the seasonal variability of the discharges of the Punjab rivers as they leave the foothills, that is, before the withdrawal of water for irrigation. The marked seasonality reflects the monsoon precipitation pattern. In the case of the Jhelum the maximum monthly flow is ten times the minimum monthly flow, and the equivalent ratios for the other rivers are even larger: Ravi 12, Sutlej 13, Beas 15, and Chenab 16.

Figure-1: Punjab Rivers Discharges: Monthly Averages, average of 40 year before 1947

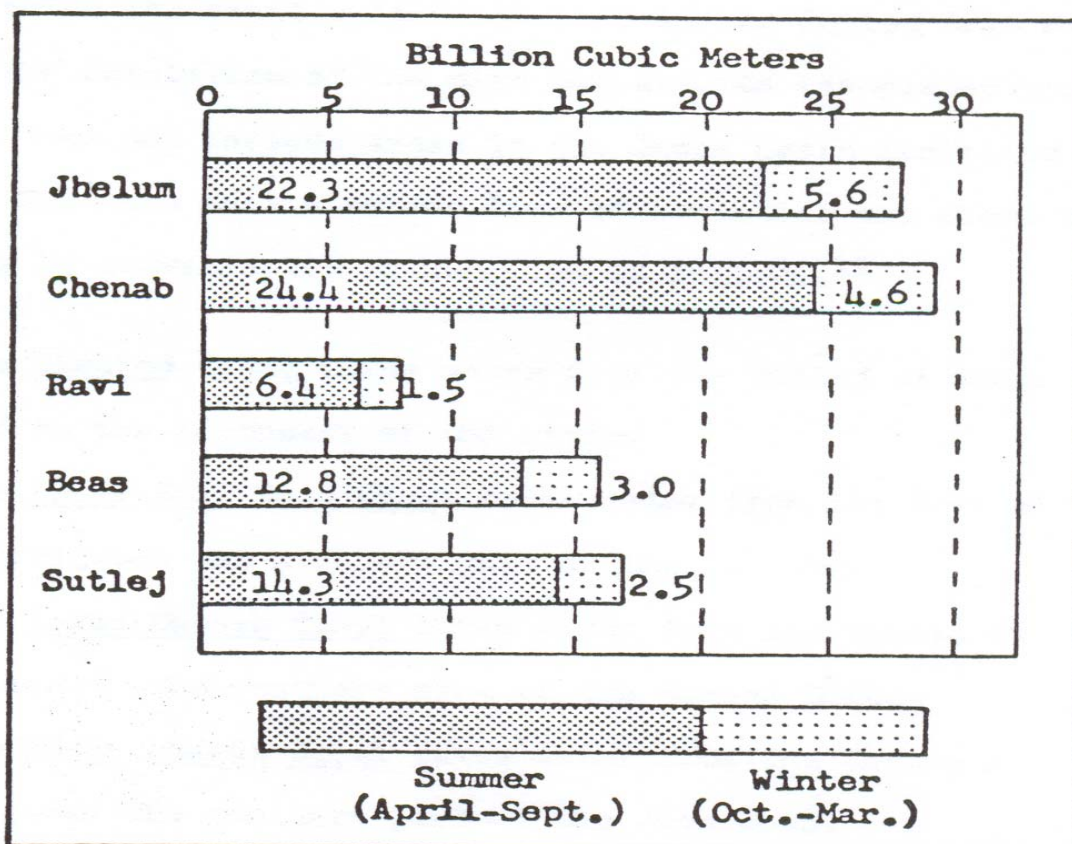
(Source: Fowler, op. cit.)



Melting of snow is the main source of water between the months of March and June, just prior to the first monsoon rains. The Figure-2 compares the annual and seasonal discharges, and the preponderance of summer flow is again evident. It should be noted that very large quantities of water are involved as annual discharge of the five rivers combined was about 97 billion cubic meters (bcm).

⁷⁶ Aloys Arthur Michel, *op. cit.*, pp. 200, 206, 207.

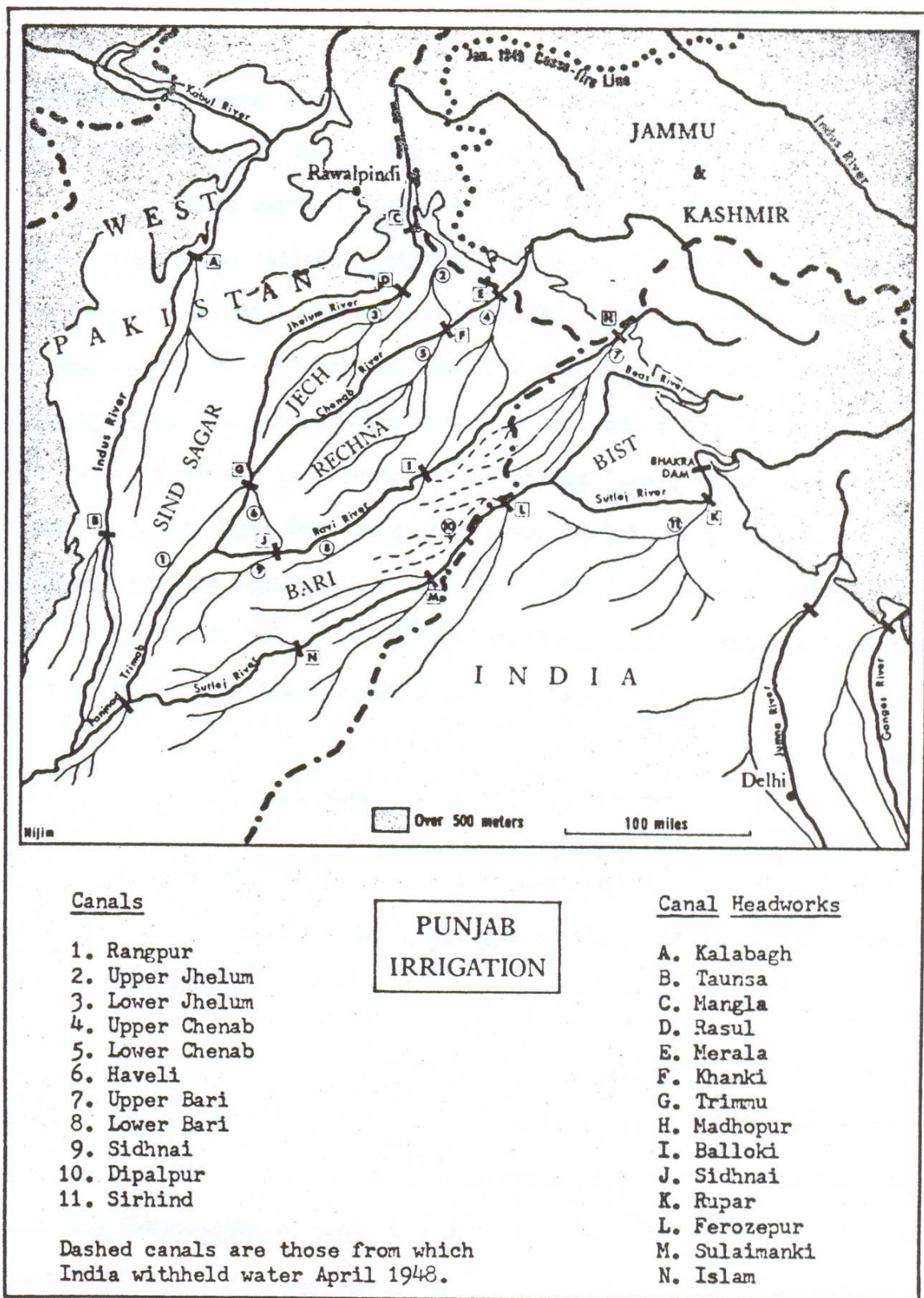
Figure-2: Indus Rivers Discharges: Annual and Seasonal Averages (data adopted from Fowler)



Malik points out that the major drawback faced by the Punjab regimes was the adverse timings of need and availability of the waters. The need for water was greatest from late August to early December because of the maturing of the *Kharif* (autumn-harvested) crops and the sowing of *Rabi* (spring-harvested) crops. Whereas the rivers were rapidly falling during this season and thus making the *Rabi* demand especially hard to meet. Towards the end of April the demand for water starts decreasing, while the rivers now start rising. Before partition, weirs and canals partially equalized supply and demand, but not entirely, since no reservoir canals existed at the time. There was a mounting need for the large-scale storage projects, and this need also accentuated the riparian conflict between India and Pakistan. Since the water conflict arose immediately following partition, a summary of the pre-partition canal system will be necessary before the other factors are considered. During the almost ninety years of the British government's presence in Punjab (1859-1947), some twelve million acres of previously unproductive land was brought under cultivation and was actively settled.⁷⁷

⁷⁷ Rashid Ahmad Malik, *Irrigation Development...*, op. cit., pp. 1, 64-110.

Map-11: Canal Network in Punjab at the time of Partition, 1947
 Source: Mushtaqur Rahman, *Divided Kashmir*, op. cit.



The main canals at the time of partition are shown in Map-11 above and may be conveniently categorized as follows.⁷⁸

1. The Sirhind Canal takes water from the Sutlej at Rupar and irrigates lands to the southeast of the river.
2. The Upper Bari Doab Canal takes water from the Ravi at Madhopur and irrigates the northern part of the Bari Doab.
3. The Lower Chenab Canal takes water from the Chenab at Khanki and irrigates the southern part of the Rechna Doab.
4. The Lower Jhelum Canal takes water from the Jhelum at Rasul and irrigates the southern part of the Jech Doab.
5. The Triple Canals Project involves the waters of three rivers. The Upper Chenab Canal takes water from the Chenab at Merala [sic] to parts of northern Rechna Doab. The main canal crosses the Ravi by an aqueduct at Balloki and becomes the Lower Bari Doab Canal. This was done because previous canals had virtually exhausted the Ravi and Sutlej waters, leaving the lower Bari Doab un-reclaimed. However, the Upper Chenab Canal would take so much water from the Chenab River that the supply of the already existing lower Chenab Canal would be seriously diminished. Hence the Upper Jhelum Canal was conceived to bring water from the Jhelum at Mangla to the Chenab at Khanki and thus replenish the Lower Chenab Canal. At the same time the Upper Jhelum Canal provides water for irrigating the upper Jech Doab.
6. Other canals including Headworks at Ferozepur, Sulaimanki, and Islam, all on the Sutlej, irrigate lands on both sides of that river. A barrage at Trimmu, just below the confluence of the Jhelum and Chenab, irrigates part of the south-eastern Sindh Sagar Doab to the west via Ranpur Canal plus the extreme southern portion of the Rechna Doab. The main function is performed by the Haveli Canal, which also carries water to the Sidhnai Barrage on the lower Ravi to help supply the Sidhnai Canal in south-western Bari Doab. There is also a barrage on the Panjnad, just below the Trimmu-Sutlej confluence, which irrigates a narrow strip along the Panjnad's eastern bank.

2.6 Domestic Scenario and External Relations

According to the Indian Independence Act 1947, legal understanding was that the treaty obligations relating to territories contained in the Dominion of India and Pakistan would be obligatory only in relation to a third state and did not include bilateral Indo-Pakistani relations. The question was whether two states which formerly were part of the same legal entity have obligations to each other? Nijim notes that Pakistan's membership to the UN was also a similar question. India's membership was kept continuing while Pakistan had to apply

⁷⁸ Eugene E. Black, "The Indus: A Model for Nations," *The New York Times Magazine* (Dec. 11, 1960), p. 24.

for the consideration.⁷⁹ Consequently, India invoked the principle of absolute territorial sovereignty relating to its claims over the international rivers flowing through its land. A new status quo had emerged. The relevant matter was the question of state succession.

Since the Indian Independence Act included nothing about the status of the rivers and canals, a standstill agreement was concluded between provincial governments of Indian and Pakistani Punjab on 18 December 1947, to be terminated on 31 March 1948 with the end of the fiscal year in both countries, subject to further extension. Meanwhile, bilateral relations were further strained as the ongoing conflict over Jammu and Kashmir took a new turn since India airlifted its troops there (detailed description is given in the next chapter) on 26 October 1947, in an effort to capture the princely state.⁸⁰

Consequently, no negotiations regarding water conflict were held or even attempted. India on 1 April 1948, cut-off the flow of water to Pakistan from the Upper Bari Doab and Dipalpur canals systems (see Map-11 above). The intended effect of this action was to 1) deprive the West Punjab of irrigation water at the critical time of sowing of the Kharif crops; 2) deny Lahore of its prime source of municipal water, and 3) assert propriety rights over the power supply from a hydroelectric plant on the upper Beas.⁸¹

The apparent reason attached to the termination of water flow was Indian urge to bring more lands, in East Punjab, under cultivation but at the same time it feared that if the status quo was maintained a precedent would be established which Pakistan might later invoke as a right. Another possible Indian intention might have been forcing Pakistan to withdraw its claims over Kashmir territory.

India's action brought quick results. On 24 April the Prime Minister of Pakistan proposed a conference to his Indian counterpart in order to address the issue and asked him to restore the flow of water which was accepted by the latter. On 1st May the Pakistani premier telegraphed his Indian counterpart: "...meanwhile thank you for all trouble you took in getting water supply restarted."⁸² Three days later, on 4 May 1948, an interim Agreement (see Appendix 1) was signed in New Delhi, which immediately became controversial as it was sufficiently ambiguous.

In the first paragraph, each side had interpreted the Arbitral Award to favour its respective argument. It was an understandable divergence since the Award was not specific in this respect. Somewhat vaguely but Pakistan cited "international law and equity" to strengthen its case. Even though Pakistan disputed India's "right to the levy of seigniorage charges for water" (transportation charges for the maintenance of canals, see paragraph 2), but implicitly gave sanction to this right by signing the Agreement. Similarly, Pakistan also

⁷⁹ Embassy of Pakistan, *Let the Reader Judge*, Washington, D. C., July 22, 1958; See Nijim, op. cit., p. 38.

⁸⁰ M.J. Akbar, *Nehru: The Making of India* (London: Penguin Group, 1988), pp. 443-444.

⁸¹ Aloys Arthur Michel, op. cit., p. 196.

⁸² K. Krishna Rao, "The Problem of the Indus and its Tributaries: An Alternative View," *The World Today*, Vol. 14, No. 6, June, 1958, p. 270.

agreed that India's rights in the matter "were not to be prejudiced by India's assurance not to terminate suddenly the flow of water" (paragraph 3). In the same paragraph, Pakistan recognized India's 'anxiety' to further develop East Punjab.

It is noteworthy that India's assurance of not interrupting the water flow without giving Pakistan time to tap 'alternative sources' did not specify a deadline by which Pakistan could do so. The paragraph 4 conspicuously ignored the legal aspect, here Pakistan conceded, "in a practical spirit," that India might eventually utilise all the waters in the canals, since neither a time limit nor a schedule was provided for the "progressively diminishing its supply." One could also query the meaning of a "reasonable time." It would be possible to understand by this paragraph that Pakistan might in the future raise "the question of law." By "immediately" paying East Punjab for the water, as described in paragraph 6, Pakistan permitted the interpretation it acknowledged that India's upper riparian position imposed no obligation on India towards Pakistan. This was of course an "ad hoc" arrangement which Pakistan might revoke in the future, though once more the time factor was indefinite. Paragraph 6 suggests that the Agreement was intended to mark time, with details, including legal implications, to be worked out later (for further details see Appendix 1).⁸³

In sum, there was hardly any declaration of riparian rights in favour of Pakistan notwithstanding later writings by Pakistani sympathizers. The Agreement needs to be evaluated in the context of prevailing conditions of that time. Being the lower riparian, Pakistan was forced to request for the restoration of water. Short of war declaration, Pakistan held an unfavourable bargaining position. This accounts for the haste with which the Agreement was signed and turned to be totally unfavourable for Pakistan. From Pakistan's point of view, there was no specific provision as to when negotiations should be resumed or for how long the Agreement was to be binding.

At this critical juncture, Pakistan also mobilised its forces in Kashmir and a formal India-Pakistan war started in May 1948. A detailed description has been provided in the next chapter while highlighting the linkages between water and war in India-Pakistan relations.

2.7 Summary: The Ranking of Factors by Pair Comparison

The Indus waters dispute arose from a combination of factors, which contributed invariably to the conflict potential. Table-4 below shows a ranking of the factors in relation to their contribution to the conflict. It is important to note that the variables are measured qualitatively as most of them are difficult to measure quantitatively.

The geographical factor of the *superimposed boundary* in Punjab, coupled with *surface features*, ranks as the highest. If India had not been awarded the Muslim-majority areas of Punjab, containing the Madhopur and Ferozepur headworks, a water dispute of such intensity would never have arisen between India and Pakistan.

⁸³ Nijim, op. cit., p. 41. See also *United Nations, Treaty Series*, Vol. 54, 1950, Treaty No. 794, pp. 45-48.

The *relative location* and *surface characteristics* of the Kashmir territory, containing the crucial catchment areas of all the rivers of the Indus system, coupled with the absolute dependence of Pakistan on the water resources, rank highly on the conflict potential scale, since they encouraged India to take control of the headwaters. In capturing the specific parts of the Kashmir territory (discussed in detail in the next chapter) India gained both upper riparian status, and a permanent means of conflict generation to browbeat Pakistan.

The domestic scenario is related, in part, to the factor of *population density*, and, in the case of Pakistan, ranks high as a conflict factor, since the settlement of Muslim migrants from East Punjab was an uphill task. The Indian action of cutting off the irrigation waters to Pakistan created a famine situation and disrupted the already fragile bilateral relations.

Land use patterns in the Indus Basin solely depend upon river water, owing to the predominantly arid nature of this agrarian region. Any development plans involving upstream water resources possess a high potential for conflict. The factor of *climate and water supply* does not rank particularly highly, since, at the time the dispute began in 1947, an extensive irrigation system had already been in place for a long and the river water supply was not deemed inadequate. However, this situation has changed over the time as water scarcity has increased in the system. The surface features in the Kashmir territory certainly provide an ease of use, thus one would expect this factor to rank far more highly.

External Pressures are low on this list; in fact, in this case, they may be regarded as a positive contributory factor towards conflict resolution / management continuum.

-----Table 4-----

The Indus Basin: Conflict Factor Ranking

1. Superimposed Boundaries and Surface Features
2. Relative Location and Land Use Patterns
3. Population Density/Settlement and Domestic Scenarios
4. Climate and Water Supply
5. External Relations

In conjunction with the ceasefire line, the surface features and location of the Kashmir territory, bounded in the catchment areas of the Indus River System, constitute a 'jugular vein' and 'life-line' to Pakistan. The jugular vein signifies the physical security of the state and the life-line alludes to the economic supply-line to the agrarian economy of Pakistan. In other words, the Kashmir and Indus waters disputes were/are closely interrelated due to the geographical characteristics of the Kashmir territory. Thus possess very clear linkages with political thinking, strategic planning and warfare between India and Pakistan. The next chapter focuses exclusively on this aspect of India-Pakistan conflict.

Chapter 3
WATER-WAR LINKAGES
IN THE INDUS BASIN

This chapter highlights the historical role of the Indus waters in political thinking, strategic planning, and warfare between India and Pakistan. The role of both superimposed boundaries and the surface features of the territory under dispute are analysed.

While emphasising the inter-twined nature of the Kashmir and Indus disputes and to highlight their role in the first war between India and Pakistan the following questions are addressed: (1) Have river waters ever been used as a military, political, or economic weapon by the upper riparian? (2) During wars between the rival riparian states, has territory been explicitly captured because of its access to water sources? (3) Is the occupation and retaining of Kashmir territory by India and Pakistan linked to the “hydro-strategic” nature of its geography and can the conflict be considered resource-based?

3.1 The Pre-Partition Planning of the Indian Leadership

The profound influence of Kautilya Chanakya on the Indian political thought has gained widespread recognition. There is a long list of works on Kautilya Chanakya¹ where he has been declared as Machiavelli of India. Jawaharlal Nehru, one of the founding fathers of India, in his autobiography “*Discovery of India*” states:

Chanakya has been called the Indian Machiavelli, and to some extent the comparison is justified. But he was a much bigger person in every way, greater in intellect and action.... Bold and scheming, proud and revengeful, never forgetting a slight, never forgetting his purpose, availing himself of every device in his hands...and accomplished his purpose...Brahmin-like, to a life of contemplation....There was hardly anything Chanakya would have refrained from doing to achieve his purpose; he was unscrupulous enough yet he was wise enough....Long before Clausewitz, he is reported to have said that war is only a continuation of state policy by other means. But, he adds, war must always serve the larger ends of policy and not become an end in itself; the statesman’s objective must always be the betterment of the state as a result of war.²

Nehru’s love for Kautilya was best stated by himself when he became president of the Indian National Congress, in an article published in *Modern Review Calcutta* he used his name as Chanakya.³

¹ For detailed list see *The Kautilya Arthashastra* (English and Urdu translation) by R. P. Kangle and Ismail Zabeeh, respectively (Karachi: Texas Printers, 1991) p. 31.

² *Ibid.*, p. 25. Also see the autobiography by Jawaharlal Nehru, *The Discovery of India* (Calcutta: The Signet Press, 1946) pp. 123-124 [also published by Nehru Memorial Fund and distributed by Oxford University Press, New Delhi, Bombay, Calcutta and Madras in 1981, 1983, 1985, 1986, 1988].

³ *The Kautilya Arthashastra*, op. cit., p. 26.

Appadorai, in his book, *Indian Political Thinking: Through the Ages*, highlights in particular the impact of Kautilian geopolitical guidelines on Indian political thinking. According to Kautilya, the following geopolitical aspects are of particular import to a state:

...strong positions in the centre and at the frontiers, capable of sustaining itself...easy to protect, providing excellent [means of] livelihood, malevolent towards enemies...endowed with agricultural land...not depending on rain water, provided with water-routes [*rivers*] and land-routes [*rail, roads*]...are the excellences of a country.⁴ (emphasis in original, italics mine).

The India's first prime minister, Jawaharlal Nehru, following the Kautilian geopolitical thinking pursued the strategies to secure for his country those river headworks and the catchment territories of the Indus river system that were located in predominantly Muslim majority areas and were believed to be part of newly emerging Pakistan.

Penderel Moon in his book *Divide and Quit* narrates an eye witness account highlighting intentions of the Indian leadership to acquire control of river headworks in the British Punjab. Referring to a meeting at the end of June 1947 at Lahore, he states:

The line of the river Beas was then discussed as a possible boundary. I pointed out that this would give Pakistan the whole of the Amritsar district, which was quite unjustified on a population basis. Moreover, it was hardly credible that the city of Amritsar, the main centre of Sikh pilgrimage, would be handed over to Pakistan. I suggested that our best course was to press for a boundary based on Muslim and non-Muslim majority areas with such minor adjustments as might be to our advantage and which we could reasonably claim. I mentioned particularly the importance of getting control of the Ferozepur headworks and the headworks at Madhopur near Pathankot.... I believe a decision was ultimately taken more or less on these lines.⁵

Nehru's biographer, M. J. Akbar, in his book, *Nehru: The Making of India*, describes, in the context of the first Pakistan-India war over Kashmir, Nehru's attachment to Kashmir's hills, valleys, glaciers, lakes and rivers and the political strategies and tactics he pursued to acquire control of them. Referring to his first visit to Kashmir in 1917, and the descriptions of Nehru's second stay as a guest of Sheikh Abdullah accompanying the *Frontier Gandhi*, Khan Abdul Ghaffar Khan, in the first fortnight of June 1940, the following passage was published in the *National Herald* in July 1940:

I wandered about like one possessed and drunk with beauty, and the intoxication of it filled my mind. Like some supremely beautiful woman, whose beauty is almost impersonal and above human desire, such was Kashmir in all its feminine beauty of river and valley and lake and graceful trees. And then another aspect of this magic beauty would come to view, a masculine one, of hard mountains and precipices, and snow-capped peaks and glaciers, and cruel and fierce torrents rushing down [life-giving Indus rivers flowing down-stream] to the valleys

⁴ Appadorai, A., *Indian Political Thinking: Through the Ages* (New Delhi: Khama Publishers, 1992), pp. 52-53.

⁵ Penderel Moon, *Divide and Quit: An Eyewitness Account of the Partition of India* (Oxford: Oxford University Press, reprint 1998), pp. 90-91.

below,⁶ (emphasis added).

M. J. Akbar relates how, as part of his political strategy, Jawaharlal Nehru further consolidated his friendship with an incumbent Kashmiri leader Sheikh Abdullah. Nehru took care to cultivate the relationship, since the Sheikh “had burst into prominence during a popular insurrection against the oppressive rule of Hari Sigh, the Dogra Maharaja of Kashmir, in July 1931 and was soon the dominant leader of the major local political party, the Muslim Conference.”⁷ Akbar claims further that the Sheikh’s main qualification was not that “...he stood up to this tyranny, but that he did so on a nationalist platform....when Muslim leaders began to edge towards the temptations of separatists politics....Nehru was most impressed by this and befriended the younger man, inviting him over to stay at Anand Bhavan.”⁸

Nehru publicly supported the Sheikh’s politics. In June 1936, for instance, he sent a message to the Sheikh (published in the *Hindustan Times* of 30 June 1936) saying that:

“I am very glad that you and other friends are trying to bring about unity amongst the Hindus and Mussalmans of Kashmir and spreading nationalistic ideas among them as well as the message of political, economic and social reform.... I wish your success in the work you are doing and through you I wish to convey my hearty greetings to the people of my homeland.”⁹

M. J. Akbar argues that Sheikh Abdullah’s decision to change the name of his party from the Muslim Conference to the All-India Jammu and Kashmir National Conference was a consequence of this support. Nehru noted this in his articles written for the *Herald*, following his Kashmir visit:

Sheikh Muhammad Abdullah was a real leader of the people, beloved of them, and with vision which looked ahead and did not lose itself in the petty conflicts of the moment. He was the founder and initiator of the movement. At first it began on communal lines and became entangled in many unfortunate occurrences. But Sheikh Abdullah pulled it out of these ruts and had the courage and statesmanship to steer it out of the narrow waters of communalism into the broad sea of nationalism It was a remarkable feat for any person to have brought about this political awakening among the poverty-stricken and helpless people of Kashmir.¹⁰

M.J. Akbar explains how Nehru was prescient enough to achieve his cherished goals. On 17 May 1947, when the final touches were being added to the draft announcement on the transfer of power, the founding father of Pakistan, Mohammad Ali Jinnah, repeated the well-known Rahmat Ali anagram to the Viceroy. The ‘K’ in PAKISTAN stood for Kashmir, he explained. Both Gandhi and Nehru were unwilling to surrender Kashmir to the Muslim League so easily. They believed that the accession of an overwhelmingly Muslim state to India would destroy the politics of the Muslim League and bring the Subcontinent back to the politics of secularism. In Nehru’s opinion, accession to India was technically possible if the Hindu Maharaja of Kashmir signed an agreement in India’s favour.

⁶ M.J. Akbar, *Nehru: The Making of India* (London: Penguin Group, 1988), p. 436.

⁷ Ibid.

⁸ Ibid., p. 437.

⁹ Ibid.

¹⁰ Ibid.

However, Gandhi firmly believed it was up to the *ryot* [peasant] to decide the future of the state, not the ruler. The key, then, was in the Sheikh's hands. While the Maharaja dithered and attempted to hold onto his rule in a post-British future, the man who dreamed of bringing Kashmir to India, Sheikh Abdullah, lay rotting in Hari Singh's gaol. "It was this more than anything else which frustrated Nehru in the critical months of June, July, August and September, 1947"¹¹ (*italics added*).

M.J. Akbar believes that "not only Nehru's mind was extremely clear about Kashmir but he had the foresight to plan far ahead. This foresight was to keep *strategic part of* Kashmir in India. During the discussions in Simla in May 1947, Nehru insisted (and got his way) that whatever the eventual nature of the post-partition boundaries might be, the road link to the Kashmir valley through Gurdaspur [*land link to Kashmir by a metalled road over the bridge of the Gurdaspur headworks*] would have been kept in Delhi's control (emphasis in original, *italics mine*)."¹² According to M. J. Akbar, "Gurdaspur was a district with overwhelmingly Muslim population which could easily have been awarded to Pakistan, in doing so India would have no land-link to Kashmir Valley, which was meant giving Kashmir to Pakistan."¹³ Nehru was also worried that the Maharaja might make a pre-emptive announcement and declare independence. He was in close contact with Abdullah and knew that the Sheikh would declare himself for accession to India *if given the necessary concessions*, and thus feared a rash move by the Maharaja might undermine this possibility. As a result, "on Nehru's and Gandhi's urging, Mountbatten sent instructions to the British Resident in Kashmir on 9 June 1947 to use his 'verbal influence' to ensure that Hari Singh did not say or do anything until Mountbatten had met him."¹⁴ Under the pretext of a long-standing personal invitation, the Mountbattens (Mr. and Mrs.) reached Srinagar on 18 June for a working holiday, scheduled to last until the morning of 23 June. Mountbatten's advice to Hari Singh was: "say nothing, sign the standstill agreement with both India and Pakistan and then join one of the two at least for the purpose of defence, communications and external affairs, basing this final choice on the will of the people."¹⁵

On 27 June, in his personal report to London, Mountbatten conveyed that Nehru was 'pathological' on the subject and demanded the immediate release of Sheikh Abdullah so that he could put a stop to the popular uprising in Kashmir. Sheikh Abdullah was freed and "Hari Singh kept his word given to Mountbatten".¹⁶ "Two days before Paramountcy lapsed the ruler of J&K [Jammu and Kashmir] sought a 'Standstill Agreement' with both India and Pakistan. Pakistan agreed while India sought this to be discussed before any commitment."¹⁷

Nehru wrote to Patel:

It is obvious to me the approach of winter is going to cut off Kashmir from the rest of India. The only normal route then is via the Jhelum valley. The Jammu route can hardly be used during

¹¹ Ibid.

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ibid., p. 441.

¹⁷ Jasjit Singh, *Kargil 1999: Pakistan's Fourth War for Kashmir* (New Delhi: Knowledge World, 1999), p. 10.

winter and air traffic is also suspended. Therefore, it is important that something should be done before these winter conditions set in. This means practically by the end of October or, at the latest, the beginning of November. Indeed, air traffic will be difficult even before that. I understand that the Pakistan strategy is to infiltrate into Kashmir now and to take some big action as soon as Kashmir is more or less isolated because of the coming winter. Whether this strategy succeeds or not depends upon the forces opposed to it. I rather doubt if the Maharaja and his state forces can meet the situation by themselves and without popular help. Obviously the only major group that can side with them is the National Conference under Sheikh Abdullah's leadership. If by any chance that is hostile or even passive, then the Maharaja and his Government become isolated and the Pakistani people will have a relatively free field.¹⁸

Nehru convinced Patel to pressurise Hari Singh into releasing Abdullah. M. J. Akbar quotes Nehru as saying:

I hope you will be able to take some action in this matter to force the pace and to turn events in the right direction. We have definitely a great asset in the National Conference provided it is properly handled. It would be a pity to lose this. Sheikh Abdullah has repeatedly given assurances of wishing to co-operate and of being opposed to Pakistan; also to abide by my advice. I would again add that time is [of] the essence of the business and things must be done in a way so as to bring about the accession of Kashmir to the Indian Union as rapidly as possible with the co-operation of Sheikh Abdullah.¹⁹

3.2 The Kashmir War and the Use of Water as a Weapon

The popular mass movement for the accession of Kashmir to Pakistan began in the Poonch and Mirpur areas immediately after the Partition Plan of 3 June 1947, and engulfed the whole of the Kashmir state within weeks. Maharaja Hari Singh let loose atrocities against the Muslims, resulting in a widespread loss of lives. On learning the details of the atrocities committed by the Maharaja forces against Muslims in the Poonch area, the tribal religious leaders of the NWFP (North West Frontier Province of Pakistan) proclaimed a holy war, and a *lashkar* (a war party) of roughly 2,000 men, consisting mainly of Afridis and Mahsuds tribes, set off for Kashmir on 19 October 1947.²⁰

Sir George Cunningham, then Governor of the NWFP, communicated in a private letter to the chief of the Indian Army General R. M. M. Lockhart that "some people up here have been acting very foolishly. You will know what I mean by the time this letter reaches you."²¹

M. J. Akbar confirms that "Nehru got news of this 'invasion' before Mountbatten. He was hosting a dinner for the Governor-General and Foreign Minister of Siam (now Thailand) on the evening of Friday 24 October when he took Mountbatten aside for a moment and told him. Consequently, Mountbatten summoned a meeting of the Defence Committee for eleven o'clock the

¹⁸ M.J. Akbar, *Nehru: The Making of India* (London: Penguin Group, 1988), pp. 441-436.

¹⁹ Ibid.

²⁰ Pervaiz Iqbal Cheema, *Pakistan's Defence Policy, 1947-58* (London: Macmillan Press, 1990), p. 86, quoted from J. R. Hartwell, "Kashmir Quiz," *Eastern World*, November 1947, p. 8.

²¹ M. J. Akbar, op. cit. p. 442.

next morning."²²

M. J. Akbar provides details of the emergency meeting which also gives an overview of the situation as:

Two historic decisions were taken that day. First, orders were issued to prepare an immediate airlift of Indian troops to Srinagar....On the political side, Nehru said, the immediate requirement was cooperation between Hari Singh and Abdullah and creation of a common resistance. Mountbatten suggested an immediate temporary accession to India to legitimize the presence of the army in Kashmir; would be ratified later by ascertaining the will of the people. Nehru and Patel both were firm that they would send the army into Kashmir whether the dithering Hari Singh formally requested it or not. No final decision on accession was taken, but V. P. Menon was directed to fly to Kashmir and talk to Hari Singh....When Menon reached the palace he found a panic-stricken Hari Singh preparing to flee. Hari Singh told Menon he would now do anything Delhi asked to save his family and throne.

On Sunday morning [25 Oct.] the Defence Committee took stock of the military and political situation. The commanders were worried about the price the troops would have to pay if the local population, which was Muslims, proved to be hostile. Nehru guaranteed that the troops would find them on their side, because the Sheikh was on their side.

At first light on the morning of Monday 27 October, Operation JAK commenced. One after another, more than a hundred aeroplanes, both civilian and of the Royal Indian Air Force, droned out of the Delhi airport, ferrying equipment, six days of rations and troops of the 1st Battalion of the Sikh regiment, which had been posted near Delhi at Gurgaon. By nightfall 329 men were in Srinagar under the command of Lieutenant Colonel Ranjit Rai. When the troops landed, the tardy and sated raiders were about two hours away. Two companies, led by Lieutenant-Colonel Rai himself, set off immediately towards Baramulla to hold them. While the rest set up the defences at the airport. The Indians established a bridgehead on the road about seventeen miles from the city, which halted the raiders and eventually saved Srinagar. In the meantime, a force of armoured car raced up through the Gurdaspur road, crossed the Ravi by a pontoon bridge, sped through the Banihal pass and linked up with Rai's units in remarkable time. By the end of October three more battalions had reached Srinagar. The initiative shifted; the raiders were now falling back.²³

By 8 November 1947 Baramulla was captured by the Indian troops and small pockets of tribals were pushed back to Muzaffarabad.²⁴

On the second front, near the Poonch, Mirpur and Jammu regions, the fighting continued for months. The Indian forces exerted great force in order to capture the Mangla Headworks in the Mirpur district over the Jhelum river and the Marala Headworks over the Chenab river. The tribal

²² Ibid.

²³ Ibid., pp. 442-44.

²⁴ Ibid., p. 447.

warriors contained them and stopped their march towards Mirpur. On failing to capture the headworks in the early hours of 1 April 1948, India cut off the river water supply to Pakistan from the Ferozepur and Madhopur headworks. In April 1948, Pakistan realised that India was planning to capture the headwaters of all crucial rivers flowing into Pakistan from Jammu and Kashmir, Himachal Pradesh, and the territory of East Punjab, and acknowledged its extreme vulnerability vis-à-vis India in terms of its irrigation life-line. As a result, Pakistan's trust in India evaporated once and for all, since April 1948 saw a time when Pakistan was already facing an acute shortage of food with millions of Muslim migrants streaming into Pakistan and food was growing acutely deficient. Moreover, the timing of the Indian action proved devastating, since the crops maturing in the fields were in dire need of a last round of watering, while irrigation water was also required for the sowing of the next crop. This loss of two crops in a year had enormous implications. The cutting-off of the river waters, which was never an issue at the time of Partition, thus left a traumatic legacy to the people of Pakistan.

In May 1948, Pakistan also mobilised its forces for defence and strengthened the positions of the tribals who were keeping the Indian troops at bay. India took the issue to the UN and both parties accepted the UNSC resolution to institute a plebiscite in Kashmir which would allow the people to decide their own destiny and join either India or Pakistan. The acceptance of the UNSC plebiscite portrayed the Kashmir issue to be purely political and a question of self-determination of the people of Kashmir. Obviously, the princely state of Kashmir was/is a Muslim majority state and the people of Kashmir were/are agitating against the Indian occupation and the atrocities being committed at that time by Indian troops.

Pervaiz Iqbal Cheema confirms in his book, *Pakistan's Defence Policy*, that although troubles had been going on in Kashmir ever since the Maharaja initiated a systematic campaign of Muslim persecution in 1947, Pakistani forces did not enter Kashmir territory until early May in 1948.²⁵ The decision to despatch Pakistani troops to Kashmir was necessitated by three major considerations. Firstly, the then Indian defence minister openly declared his intention to the Constituent Assembly that India would soon begin its spring offensive in clearing out what he referred to as 'raiders' from Kashmir.²⁶ Secondly, General Douglas Gracey, the Commander-in-Chief of the Pakistani forces (1947-49), submitted a report on 20 April 1948, in which he emphasised the urgent need to contain the Indian forces along the general line of Uri-Poonch-Noshera, for security reasons.²⁷ Thirdly, *the Pakistani government also seriously considered the threats India's military offensive could pose to the Mangla Headworks which controlled and supplied water from the river through the Upper Jhelum Canal.*²⁸ *Since India had already shut off the water from the headworks on Sutlej and Ravi on 1 April*

²⁵ Pervaiz Iqbal Cheema, *Pakistan's Defence Policy, 1947-58* (London: Macmillan Press, 1990), p. 85, while quoting G.W. Choudhury, *India, Pakistan, Bangladesh and the Major Powers* (New York: The Free Press, 1975), p. 112. Also see *Kashmir and Inter-Dominion Relations*, A Statement by Liaquat Ali Khan (Karachi: Government of Pakistan, 1951), p. 12. See also Aloys Arthur Michel, *The Indus Rivers: A Study of the Effects of Partition* (New Haven and London: Yale University Press, 1967), p. 8.

²⁶ Pervaiz Iqbal Cheema, op. cit., pp. 85-90, quoted from Chaudhri Muhammad Ali, *The Emergence of Pakistan* (New York: Columbia University Press, 1967), p. 305.

²⁷ Pervaiz Iqbal Cheema, op. cit., pp. 85-90, quoted from *The Security Council Official Records*, 8 February 1950 (Meeting No. 464), p. 36; and G. W. Choudhury, op. cit., p. 111; Chaudhry Muhammad Ali, op. cit., p. 305.

²⁸ Pervaiz Iqbal Cheema, op. cit., pp. 85-90, quoting Chaudhry Muhammad Ali, op. cit., p. 305.

1948, the perceived threat from the Mangla acquired alarming proportions²⁹.

Michel, in his book, *The Indus Rivers*, also revealed the same fact saying:

“Pakistan must have realised this from the start and, it may not be entirely a coincidence that the formal commitment of Pakistani forces to the Kashmir struggle came in May 1948, one month after India had cut off supplies from Madhopur and Ferozepur [*headworks*]. Of course, many other factors played a part, but the timing is suggestive of the degree to which the Kashmir Dispute and the Indus Waters Dispute were intertwined.”³⁰

Mushtaqur Rahman, referring to David E. Lilienthal’s (former head of the Tennessee Valley Authority of the United States and the US Atomic Energy Commission) visit to India in February 1951, has stated that: “To prepare for his trip, Lilienthal consulted a number of people, including the US Secretary of State, Dean Acheson, Nehru’s sister, India’s ambassador to the United States, Vijay Laxmi Pandit, and a friend, Walter Lippman. Walter Lippman advised Lilienthal to visit Pakistan as well. In Lippman’s opinion, the core of the Kashmir dispute was the struggle for the control of rivers flowing from the state [Kashmir] into Pakistan.”³¹

The Indian strategic thinker, Jasjit Singh in his recent book *Kargil 1999*, while referring to First Kashmir War between India and Pakistan, rightly pointed out that the mobilisation of the Pakistani army in Kashmir in May 1948 was more of a geo-economic necessity than out of ideological or communal logic.³² It is pertinent to quote Jasjit here *in extenso*:

According to Jasjit, Pakistan and its leadership, at the highest levels, have been stating that Kashmir is the “unfinished agenda of Partition” of the Indian Subcontinent in 1947. The argument claims that the Subcontinent was divided along communal lines into two independent sovereign states, and Pakistan was created out of what constituted the Muslim majority areas of India. Jammu and Kashmir (J&K) was a Muslim majority state. According to this logic, therefore, the state should have formed part of Pakistan. But, the argument continues, Indian perfidy resulted in the forcible occupation of the state, and India refused to honour the UN Resolution, which required a plebiscite to be held in the state. On the face of it, the argument seems plausible enough, leaving a large number of people across the world bewildered, and in Pakistan, many resentful. This is the basic rationalisation of Pakistan’s claim to both J&K and international support. Yet this also inevitably wards off any inquiries into the legitimacy of Pakistan’s aggression and the de facto annexation of nearly one-third of J&K.³³

Jasjit argues that this was not the only logic that dictated Pakistan’s attempts to acquire J&K immediately after the partition of the Subcontinent. The core rationale that emerges repeatedly from both the literature and articulation by responsible Pakistanis is that the accession of J&K to Pakistan

²⁹ Ibid.

³⁰ Aloys Arthur Michel, *The Indus Rivers: A Study of the Effects of Partition* (New Haven and London: Yale University Press, 1967), p. 8, italics added.

³¹ Mushtaqur Rahman, *Divided Kashmir: Old Problems, New Opportunities for India, Pakistan, and the Kashmiri People* (London, Boulder: Lynne Rienner Publishers, 1996), p. 171.

³² Jasjit Singh, *Kargil 1999: Pakistan’s Fourth War for Kashmir* (New Delhi: Knowledge World, 1999), pp. 1-3.

³³ Ibid.

was a critical need from a geo-economic or strategic point of view. This was perceived to be necessary because four out of the five [actually six] rivers in West Pakistan, that is, the Indus, Jhelum, Chenab and Ravi, originate from across or within the mountain reaches of J&K, and the fifth (the Sutlej and Beas combined) flow through the state of Himachal Pradesh, which borders J&K on its southern flank. It should be recalled that the primary economic activity was agriculture in West Pakistan in 1947.³⁴ The British had begun the construction of an extensive canal system in Punjab in the early 20th century. The process began in the north-western part of Punjab and progressively shifted south-eastwards. By the late 1940s, it had reached the region that now generally constitutes the border region between India and Pakistan. The newly created state of Pakistan had a natural stake in what they believed to be a new vulnerability. At the same time, it was clear that Kashmir's economy was also dependent on Pakistan, since the primary route of access into the Valley now would be from the new country.³⁵

Jasjit further argues that the importance of the geo-economic logic of the situation is perhaps best understood from the writings of man (Major General Akbar Khan) who claims to have planned the invasion of Kashmir in 1947. Jasjit quotes Akbar Khan as:

"From the economic point of view the position was equally clear. Our agricultural economy was dependent particularly upon rivers coming out of Kashmir. The Mangla headworks were actually in Kashmir and the Marala headworks were within a mile or so of the border. What then would be our position if Kashmir was to be in Indian hands?"³⁶

In Jasjit's opinion this view was also articulated by a British army officer, the military assistant to General Douglas Gracey, who saw events from the top of the military command structure and with a more objective approach than many Pakistanis. He believed that among the reasons for Mohammad Ali Jinnah, the Governor General of Pakistan, giving orders for the regular Pakistan Army to move troops into Kashmir on 26 October 1947, was the fact that "the mainly Muslim area of Kashmir, with Poonch at its centre, contained the headwaters of the rivers running into West Punjab, Pakistan's main agricultural province, and which was greatly dependent on irrigation for its prosperity,"³⁷

Similarly, this military-strategic logic was also built upon perceived geo-strategic compulsion. The 300km lines of road and rail communications between the key cities of Lahore and Rawalpindi (which also connected the intermediate cities of Sialkot, Jhelum, etc.) would be within a few miles of a hypothetical India-Pakistan border, if it were to lie along Kashmir's western border. Once again, the writings of Akbar Khan provide a clear indication of the situation: "One glance at the map was enough

³⁴ Ibid.

³⁵ Ibid.

³⁶ Jasjit Singh, *Kargil 1999*, p. 3, quoting Akbar Khan, *Raiders in Kashmir* (Delhi: Army Publishers, 1970), p. 10.

³⁷ Jasjit Singh, *Kargil 1999*, pp. 2-3, quoting S. N. Prasad and Dhram Pal, *History of Operations in Jammu and Kashmir 1947-48* (New Delhi: History Division, Ministry of Defence, Govt. of India, 1987). See also Lt. Gen. Sir James Wilson, "Jammu and Kashmir Problem: The Truth-Part I" (with introduction by Lt. Gen. M. L. Chibber) in *Journal of the United Services Institute of India*, Vol. CXXVII, No. 528, (April-June 1997), p. 253. See also Part II in the following issue, p. 359.

to show that Pakistan's military security would be seriously jeopardised if Indian troops came to be stationed along Kashmir's western borders."³⁸

Jasjit clearly states that he is not suggesting that the issue of religion was insignificant in deciding Pakistan's attitude towards Kashmir, since Pakistan was, after all, came into being on the basis of the two-nation theory claiming Muslims majority areas of the Subcontinent to constitute a separate nation, require a separate state, and, as a result, include the princely state of Kashmir.³⁹

3.3 The Movement of Troops and the Indus Rivers

Pervaiz Iqbal Cheema quoting Prithvi N. K. Bamzi states that, the Indian military offensive began on 8 April 1948 almost simultaneously in both the Jammu and Kashmir areas. In Jammu, the initial objective was to capture Rajauri and get as close to the Pakistan border as possible, and in the Kashmir area the main objective was to recapture Muzaffarabad.⁴⁰ At the time of the spring offensive, India had already moved two divisions of the Regular Indian Army to Jammu and another two divisions were already in Kashmir.⁴¹ With such a large force, the Indian army began to push the tribesmen and Azad Kashmir (AK) forces towards Pakistan's border. The advance of Indian troops threatening Muzafferabad, Uri, Titwal and Poonch areas compelled the Pakistanis to send their combat troops into Kashmir. Consequently, in May 1948, Pakistan sent a full division of its army to back up the tribesmen and AK forces in their efforts to halt the Indian advance. Thus began the first limited war over Kashmir between the two new nations.

The Indian forces launched a three-pronged offensive against the tribesmen and AK forces in the spring of 1948. Prior to the offensive, India utilised the winter of 1947-48 to improve existing tracks and to build new roads for logistic purposes, especially land routes approaching the Jammu area.⁴² The Indian offensive began with a vigorous drive towards Mirpur but confronted tough resistance, mainly from the AK forces.

The second prong of the offensive was directed towards Poonch, via Uri, along the Jhelum River.⁴³ Stiff opposition from the tribesmen, now organised and led by Pakistani army officers, deprived the Indians of their quick gains.⁴⁴ This meant that India was divested of these gains mainly because of the harassing tactics employed by the tribesmen and Azad Kashmir Forces. Such tactics compelled the Indians to divert some of their forces away from the road.⁴⁵

The third prong of the Indian offensive was towards Titwal along the Kishenganga River

³⁸ Jasjit Singh, *Kargil 1999*, p. 3.

³⁹ Jasjit Singh, *Kargil 1999*, p. 3.

⁴⁰ Pervaiz Iqbal Cheema, *Pakistan's Defence Policy 1947-58* (London: Macmillan, 1990), p. 87, quoted by Prithvi Nath Kaul Bamzi, *Kashmir and Power Politics: From Lake Success to Tashkent* (Delhi: Metropolitan Book Co., 1966); See also *FRUS*, 1948, Vol. V. Every inch of the battle field of First Kashmir War 1948-49 has been covered by numerous historians, for limitation of space I have avoided heavy referencing. For details see Pervaiz Iqbal Cheema, *op. cit.*

⁴¹ *Ibid.*, Pervaiz Iqbal Cheema quoting Johnston (p. 316).

⁴² Pervaiz Iqbal Cheema, quoting William C. Johnston (p. 320) in his book on *Pakistan's Defence Policy 1947-58* (London: Macmillan, 1990), p. 87.

⁴³ *Ibid.*

⁴⁴ *Ibid.*

⁴⁵ Akbar Khan, *Raiders in Kashmir*, pp. 99-123.

(called Neelum River on Pakistani side of Kashmir). Here the Indians achieved rapid successes. Compared to one Indian brigade consisting of four battalions, the resisting forces were no more than one rifle company.⁴⁶ However, the organised tribesmen and Azad forces, backed by the Pakistani army, were later able to not only block their advances but also to dislodge them from some strategic positions. Initially, Pakistan sent one division of its regular troops, but as they spread, the Pakistanis realised that such a small force could not cater to such a long front, from the Bhimber Sector all the way to Baltistan, and consequently another division was ordered to move to Abbottabad and allocated the specific responsibility of looking after the Titwal, Uri and Bagh Sectors.⁴⁷ Since Pakistani troops were sent primarily for defensive purposes, the officers refrained from undertaking any major offensive activities. Occasional tactical actions aimed at dislodging the Indians from some strategic positions were undertaken with the utmost of caution. While the number of Pakistani troops was small compared to the Indian regular forces, the number of Azad forces gradually swelled during the war to an impressive level.⁴⁸ The Indian troops were, of course, backed by the state troops. One of the major advantages the Indians enjoyed was the high level of organisation and discipline of their entire forces, both in terms of their state troops as well as the Indian army. On the Pakistani side, the most problematic group of fighters were the disorganised and independently-minded tribesmen.

By the end of December 1948, the military situation was such that the Indian troops had managed to relieve the long beleaguered Poonch town and strengthen their positions around Zoji La in the North, which at one time was seriously threatened by the Gilgit Scouts. In addition, they had already pushed the tribesmen out of Baramula. However, they were unable to push them beyond the Uri-Titwal line. Pakistani forces were able to consolidate their position in the areas that now form Azad Kashmir.

In many ways, the First Kashmir War was an interesting war. The UN Security Council, in its resolution of 21 April 1948, had specifically asked both Pakistan and India to do their utmost to bring about a cessation of all fighting. Implicitly, the Resolution emphasised that the belligerents must refrain from aggravating the situation any further, while the UN was engaged in securing a peaceful solution to the dispute. Yet neither India nor Pakistan took any serious note of the underlying spirit of the Resolution. Ignoring the efforts of the UN to resolve the dispute, India carried on with its spring offensive as originally planned. Pakistan's decision to commit its forces in May 1948 was in many

⁴⁶ Ibid., p. 117.

⁴⁷ Initially 7th Division (Commanded by Maj. Gen. F. L. Loftus-Titenham) was ordered to move into Kashmir; later the 9th Frontier Division (led by Maj. Gen. Nazir Ajmed) was moved. See Ayub Khan, *Friends Not Masters*, op. cit.

⁴⁸ Akbar Khan (pp. 124-142) states that the capture of Pandu was a well planned action. The importance of Pandu which overlooked the Pakistani position along Muzaffarabad-Uri could be judged from the fact that the Indian had given the village the codename of 'Karachi' while Pakistani troops named it 'Delhi'. See Ayub Khan, op. cit., p. 109. Ayub Khan mentions that when he took over as Adjutant General he realised that there were some 50,000 soldiers of varying quality in the Azad forces. Similarly Sardar Ibrahim Khan also mentions in his book that his government was supported roughly by 30,000 voluntary men and the number kept on rising. See Mohammad Ayub Khan, op. cit., p. 31; Sardar Ibrahim Khan, *The Kashmir Saga* (Lahore: Rippon Press, 1965), pp. 86-100.

ways a reactionary move.⁴⁹

Another aspect of the war that adds to its uniqueness was that the Pakistani troops were given express orders to avoid, as far as possible, direct contact with the Indians. A war in which one side is specifically subjected to orders of avoiding direct engagement certainly engenders an aura of peculiarity. Perhaps because of these rather strange orders, the Pakistanis decided to opt for a strategy described as 'plugging the holes', and employed guerrilla tactics. The Pakistani troops deployed Azad forces for direct contact and meticulously avoided taking on the Indian forces directly, with few exceptions. This equally seems to be true of the Indian troops, who refrained from provoking the unlimited war.⁵⁰

During the war, both sides made sufficient political capital out of the atrocities committed by the opposite side. Propaganda based on the other side's atrocities was perhaps required as a means to cope with the morale problem. The Indians repeatedly publicised atrocities committed by the tribesmen, particularly in areas such as Baramula and Rajauri, whereas the Pakistanis highlighted atrocities committed by State troops in areas such as Poonch and Mirpur. However, it should be mentioned here that apart from the Sikh battalions, who demonstrated communalism, most Indian and the Pakistani soldiers refrained from committing atrocities.⁵¹

Another interesting aspect of the first Kashmir War was that both the Pakistani and Indian armies were commanded by British generals. Throughout the war, the two British commanders-in-chief maintained almost daily contact by telephone in an effort to avoid a deterioration of the situation, and both continued to press their respective governments into accepting a ceasefire. General Gracey attempted to convince General Boucher to use the old-boy network in order to prevent the fighting from becoming too harsh.⁵²

As mentioned in the previous chapter that the Indus and Kashmir disputes proved to be intertwined in nature (see note 31 above), the question of whether or not the Pakistani leadership committed a blunder by not sending the troops along with tribesmen when the initial thrust (26 Oct. 1947) took place requires examination here. Some believe it was a major mistake on the part of the Pakistanis not to send regular troops at a time when the tribesmen were making rapid advances.⁵³ According to a senior officer who visited various fronts in Kashmir immediately after the tribal invasion, the tribesmen were held at the fourth milestone from Srinagar by a road block with machine guns and the road block could have been overcome if Pakistan had agreed to supply a few armoured cars.⁵⁴ Despite the efforts of the senior officers involved, and the willingness of some officers to enter into Kashmir with three armoured cars as volunteers in plain clothes, the requisite permission to use

⁴⁹ Pervaiz Iqbal Cheema, op. cit., p. 89.

⁵⁰ Ibid.

⁵¹ Ibid., pp. 90-91.

⁵² *The Sunday Times*, September, 12, 1965 quoted in Pervaiz Iqbal Cheema, op. cit., p. 91.

⁵³ Grant S. McClellan (ed.) *India*, The Reference Shelf, Vol. 32, No. 1 (New York: The Wilson Company, 1960), p. 105; Brig. A. R. Siddiqui, an interview with General Akbar Khan, cited in *Defence Journal*, Vol. XI, No. 6-7 (1985), pp. 15-21.

⁵⁴ General Akbar Khan, *Raiders in Kashmir*, op. cit., p. 103, quoted by Pervaiz Iqbal Cheema in *Pakistan's Defence Policy*, op. cit., p. 91.

the Pakistan Army's armoured cars was not granted by the Pakistani authorities.⁵⁵ Unable to overcome the road block, the tribesmen decided to withdraw after approximately two weeks.

This meant that the cautious approach of the Pakistani cabinet was the product of three major factors. Firstly, there was a general fear that the despatch of regular Pakistani forces at this early stage would have provoked a general war with India.⁵⁶ Secondly, the Pakistani armed forces were still in the process of regrouping and reorganizing and not many extra units were available to be sent to Kashmir. The third factor was Pakistan's strong belief in the ability of the UN to resolve the dispute. A strong man of the Pakistani cabinet, Mr. Ghulam Mohammad, categorically told Sardar Ibrahim Khan (the President of the Azad Kashmir government) that Pakistan would certainly acquire Kashmir through a plebiscite.⁵⁷ Pakistani decision-makers strongly believed in the ability of the UN to hold the desired plebiscite.

What is even more intriguing is that despite the above-mentioned persuasive and operative factors that caused the cabinet's cautious line, the same cabinet, a few months later, took the bold step of not only sending out a full division to Kashmir but also of withdrawing a large number of troops out of Lahore, leaving it virtually undefended. These were positioned 'at a point just West of Jammu city within easy distance of the improved road to Poonch.'⁵⁸ The troops remained at this location, poised for an attack which could have easily trapped two Indian divisions.⁵⁹ On the one hand, the attack never took place, and on the other, Lahore remained exposed during this period. Since Pakistan had taken a bold decision in withdrawing troops from Lahore, the logical course of action should have been to launch an attack on Jammu that would have surrounded the Indian troops. The lack of a clear-cut policy direction and strategy, coupled with the difficult days following Partition, produced a policy of *ad hocism* which, in turn, was responsible for such ostensible vicissitudes in policy direction.

Based on the above facts, one can conveniently argue that the first Pakistan-India war over Kashmir, in 1948, qualifies as a resource war on the following grounds:

Pundit Jawaharlal Nehru had planned, much before the partition of the Subcontinent, to control the "cruel and fierce torrents rushing down [life-giving rivers flowing down-stream into Indus plains] to the valleys below (emphasis added)."⁶⁰ Partition was not acceptable to Nehru if the Gurdaspur and Ferozepur districts, possessing both river headworks and a land-link to Kashmir, were to be awarded to Pakistan. Efforts to acquire Ferozepur district testifies the fact that it was not only a question of having a land-link with Kashmir through Madhopur district, but control of the rivers was also a prime objective, a fact obvious from Michel's questioning of the Radcliff award, whereby he

⁵⁵ Pervaiz Iqbal Cheema, *Pakistan's Defence Policy*, op. cit., p. 209, reference no. 164, quotes that according to Akbar Khan, Col. Masood of the cavalry offered to go as a volunteer in plain clothes in order to clear the road block but the necessary permission was not given.

⁵⁶ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (New York: Columbia University Press, 1967), p. 308.

⁵⁷ Quoted by Mir Abdul Aziz, "Why We Lost Kashmir"? *The Muslim*, May 8, 1986.

⁵⁸ Pervaiz Iqbal Cheema, quoting William C. Johnston in his book on *Pakistan's Defence Policy 1947-58* (London: Macmillan, 1990).

⁵⁹ Ibid.

⁶⁰ M.J. Akbar, *Nehru: The Making of India* (London: Penguin Group, 1988), p. 436.

asked: "...would it not be preferable to give the entire Ferozepur headworks to Pakistan to balance the award of the Madhopur headworks (of the UBDC in the Gurdaspur) to India? Thus each country would have held position to counter-balance the unilateral closure by the other party".⁶¹ This would have been in accordance with both the principles of Partition and the geographical reality.

Quaid-i-Azam Mohammad Ali Jinnah unwillingly accepted the award, saying, as cited by Michel in a personal communication to Mountbatten, "I would rather have barren Pakistan than fertile fields watered on the curtsy of Hindus."⁶² This testifies that the water factor was not even in the back of Mr. Jinnah's mind. On the other hand, the seizure of all the catchment areas and man-made infrastructures across the Indus river system proved to be a strategy well thought out by the Indian leadership.

Quaid-i-Azam Mohammad Ali Jinnah never imposed any condition on Maharaja Hari Singh to accede to Pakistan. Pakistan's acceptance of the "Standstill Agreement" with the Maharaja of Kashmir on 14 December 1947 and its refusal by India testifies that an independent or autonomous Kashmir was acceptable to Pakistan but not to India. It was the people of Kashmir who stood against the Maharaja's oppressive rule and attempted to counter Indian aggression in Kashmir.

India invaded Kashmir on 26 Oct. 1947, but Pakistan mobilised its forces in May 1948 after realising the Indian intention of capturing all the river headworks, and thereby the life-line to the agrarian economy of Pakistan. The direction of the movement of Indian troops in Kashmir testifies its intention to capture the hydro-strategic territory of Kashmir as a means of exerting pressure on Pakistan through the erosion of its agrarian base simply by withholding water supplies. Pakistan's defensive mobilisation of its forces is suggestive of the "geo-economic logic" of Kashmir propounded by Jasjit Singh and General Akbar. It does not mean that the factor of religion or the Muslim population of Kashmir were not important in determining Pakistan's policy towards Kashmir. In fact, the accepted principles of the partition of the Indian Subcontinent, on the basis of contiguous Muslim majority areas, underpinned Pakistan's claims over Kashmir and the districts of Punjab containing the Gurdaspur and Ferozepur river headworks. Pakistan, at the time of Partition, desired a political solution to the Kashmir issue. It was Indian military intervention which necessitated the defensive deployment of troops by Pakistan in Kashmir in order to safeguard the river headworks, which are extremely vital to its survival.

With the occupation of south eastern Jammu-Kashmir, India obtained control of both sides of the Ravi river in the reaches where it formed the boundary between the pre-Partition Punjab Province and the Punjab Hill states to the south, and Jammu and Kashmir to the north.⁶³ Through Jammu-Kashmir, up to the cease-fire line above the Marala headworks, "India also attained the control of the Chenab river".⁶⁴ Since the Jhelum river originates inside Kashmir, "India's occupation of the Vale gave her control of the Jhelum's headwaters and its course through *Lake Wullar* down to a point

⁶¹ Aloys Arthur Michel, op. cit.

⁶² Ibid.

⁶³ Aloys Arthur Michel, op. cit., p. 7.

⁶⁴ Ibid.

beyond Uri.”⁶⁵ Finally, in Ladakh, “India acquired the head-reaches of the Indus River itself from the point where it crosses the Tibetan border (between China and India) to a point near Kargil, where it flows into Azad Kashmir.”⁶⁶

Pakistan, however, by occupying Azad Kashmir (i.e. the Muzaffarabad and Neelum valleys) and the Gilgit Agency, secured both the remainder of the Indus course and the vital reaches of the Jhelum,-Neelum and Kunhar rivers, leading to the Mangla Dam.

If India had captured the Mangla and Marala headworks in 1948, the only option for Pakistan would have been either to perish in the face of a militarily powerful opponent or to merge into the Indian union. The UN intervention, although on the Indian initiative, saved the situation by bringing about a stalemate.

Moreover, the first Kashmir war was a peculiar war in which the armies attempted to avoid facing one another while consolidating their positions along the river infrastructure. The geographical location of the territory and its surface features, constituting the catchment area of the mighty Indus river system, played an important role in military adventurism aimed at capturing the vital water resources bound in Kashmir. The war also qualifies as a resource war. Pandit Jawaharlal Nehru’s claim that the annexation of the Muslim majority state of Jammu and Kashmir to India would destroy the very rationale of the creation of Pakistan and the basis of the two-nation theory, proved to be an ideal ploy to keep control of the vital resources. The prime objective of India’s military manoeuvres was to capture the control-structures and catchment areas of all major rivers flowing into Pakistan.

The mobilisation of troops by Pakistan in May 1948, a month after India cut off the water supply, was not a coincidence rather a defensive attempt at securing its river headworks and preventing them from falling under Indian control.⁶⁷ This act of aggression by India left an indelible imprint on the hearts and minds of the peoples and the leadership of Pakistan and they lost their capacity for trust in their neighbour who created an issue of extreme insecurity for them which they never thought of.

3.4 SUMMARY

India used river water as an economic and military weapon against Pakistan in an effort to obtain maximum control over river resources. Thus the combination of the partition boundary and the Kashmir cease-fire line (i.e. the superimposed or armistice border), one *de jure* and the other *de facto*, provided India with the control of the head-reaches of the entire Indus river system, including five of its tributaries, plus the complete course of the Beas river. “This situation produced by the partition line, demarcated by Radcliffe, in itself was enough to cause trouble, for Pakistan.”⁶⁸ In addition, the capture of “Jammu-Kashmir by India enormously complicated the problem by giving

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Aloys Arthur Michel, op. cit., p. 7. For more details see Pervaiz Iqbal Cheema, *Pakistan’s Defence Policy, 1947-58* (London: Macmillan Press, 1990), p. 85; G.W. Choudhury, *India, Pakistan, Bangladesh and the Major Powers* (New York: The Free Press, 1975), p. 112 and *Kashmir and Inter-Dominion Relations, A Statement by Liaquat Ali Khan* (Karachi: Government of Pakistan, 1951), p. 12.

⁶⁸ Aloys Arthur Michel, op. cit., p. 7.

India control over the Chenab and Jhelum rivers, which provide no irrigation in India, and very little in Jammu-Kashmir, but upon which the West Punjab [*Punjab henceforth*] the largest fertile province of Pakistan, and indeed all of West Pakistan [*present Pakistan*] are heavily dependent.”⁶⁹

Both Indian and Pakistani manoeuvres in Kashmir verify the model underpinning this study, by testifying how states, in their capacity as rational actors, maximise power and security vis-à-vis their adversaries: India attempted to capture and control more and more resources in a quest for power maximisation, and Pakistan responded by securing its vital resources as a means of security maximisation. The Indian policy to acquire control over Muslim majority state of Jammu and Kashmir (catchment area feeding entire Indus river system), apparently in an attempt to consolidate its secular national outlook and to undermine Pakistan’s two nations theory, is an ideal ploy to keep control over the real resource on the one hand and keep alive the conflict as a justification to attract international support on the other hand. On the contrary the same is true for Pakistan too. Keeping the issue of Kashmir alive both are pursuing their rational policy objectives to maximise their security and power vis-à-vis each other and in the international system.

Moreover, the occupation and retaining of Kashmir territory by India is strongly linked to its hydro-strategic nature. India is reluctant to relinquish its control, since in doing so it would lose upper riparian status and much of its political clout in determining the politics and future of the Indus basin region. Thus, the capture and retaining of vital water resources located in the territory of Kashmir by India and Pakistan has very strong linkages with political thinking, strategic planning and warfare in the region. The conflict over Kashmir is not merely ideological but is also a question of the control of vital water resources.

The UN intervention in the Kashmir dispute brought about a situation of stalemate in December 1948. Yet it was the Indian measure of cutting off irrigation water to Pakistan which became an issue of survival for the latter, making it realise its vulnerabilities and helplessness that it immediately requested negotiation with India.

The next chapter discusses the water dispute in detail, highlighting the conflicting claims of the two states, in terms of relative location and riparian rights, and attempts by the upper-riparian to exploit the weaknesses—resource-dependency of the lower-riparian, disadvantageous relative location due to superimposed or armistice boundaries and favourable surface features for the upper riparian.

⁶⁹ Ibid., p. 8. italics added.

Chapter 4

THE WATER DISPUTE:

EVOLUTION AND THE MEDIATION PROCESS

This chapter provides a short but comprehensive description of the Indus waters' dispute. Notwithstanding the excessive details of the dynamics of the dispute, chapter refers to the role of the mediator in facilitating accommodation.¹ It has been divided into two sections.

First section explores the origin of the dispute embedded in the partition of the British Punjab and the initiation of the bilateral negotiations which reached a deadlock in 1951. This duly underscored the need for involving a third party to break the impasse. The question, when do adversaries decide to negotiate and who starts peace initiative, is dealt with reference to Indus waters dispute. The purpose is to comprehend the scenario which compels the lower riparian to initiate peace process and to understand the response of an upper riparian state.

Second section answers the question, when and why the disputants accept mediation, how it is conducted and made successful. The chapter also highlights the role of a mediator, in context of an interested third party, to engage disputants in prolonged negotiations. It also dilates upon the aspect of third party's influential control over the mediation process. It answers the question: What was the proper political timing when the World Bank intervened into the Indus dispute and how did it remove the impasse between the disputants? The assumption here is that the disputants welcome an influential third party for mediation when they reach a 'stalemate' and the finding of the solution becomes a 'necessity'.

4.1 ORIGIN OF THE DISPUTE AND PRE-MEDIATION SCENARIO

During the British rule the Indus basin was developed as integrated unit "under the conception of a single administration".² Prior to the Partition of Subcontinent, the Government of India appointed a commission in 1941, under the chairmanship of Sir B. N. Rau. The Rau Commission determined the riparian rights of various states and provinces about all the rivers of the Indus system on the basis of universally recognised principle of "equitable apportionment." According to the principle the upper riparian was barred to take any action that can disturb the existing irrigation in the Indus basin or impair the supplies of the lower riparian states and provinces.

¹ The narrative relating to Indus water dispute, its dynamics and mediation process is based on author's earlier work; unpublished M.Phil [Magister] Thesis entitled *Wullar Barrage Issue: An Analysis* (submitted in the Department of International Relations, Quaid-i-Azam University, Islamabad, 1991), pp. 59-88.

² Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, No. 65 (May 1958), pp. 65-67. See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 59.

The integrated nature of the Indus river system in British Punjab, which was divided at the time of Partition of the Subcontinent between India (East Punjab) and Pakistan (West Punjab) gave birth to a number of problems. The partition line drawn by the Radcliffe left both the headworks (Madhopur and Ferozepur) in the Indian part of the Punjab [East Punjab] and the canals, being fed by these headworks along with irrigated lands, in Pakistani Punjab [West Punjab]. Consequently, the Upper Bari Doab Canals (UBDC), upon which the Central Bari Doab Canals (CBDC) in West Punjab was dependent, left to the Indian control.³

All these canals were the sole source of transferring waters of the eastern rivers to a number of other canals in West Punjab. "The [eastern] rivers Sutlej, Beas and Ravi, whose waters flowed into these canals, originated and ran for a long distances in Indian territory before they entered into Pakistan."⁴

"Vast area of the irrigated lands in West Pakistan was left on the mercy of Indian benevolence. Moreover, India being an upper riparian claimed its sovereign right to use waters of all the rivers of the Indus system originating and flowing through its territory."⁵

The Punjab Partition Committee (PPC), looking after the partition matters, had appointed a two-member sub-committee (Committee B) to determine the provision of water to each canal in divided Punjab. The Committee B submitted its report on 28 July 1947 prescribing to maintain the pre-partition water supplies in Punjab. The PPC endorsed the decision of the Committee B. The Government of Pakistan remained content even though the Radcliffe Award had given control of the headworks with India. The apparent reasons could be the assurances of Committee B and the PPC that pre-partition supplies of water would continue. No instrument was signed, which could specify the sharing costs between the East and West Punjab.⁶

Disagreements arose over the value of the canal system and crown waste lands, lying in the other parts of the Punjab. It was agreed, therefore, to submit the other matters arising directly out of partition to the Arbitral Tribunal to be appointed under the Indian Independence Act.⁷

The Tribunal was set up on 12 August 1947 and it came into effect on 14th August 1947. Disputes arising out of the partition could be presented before the Tribunal until 1

³ Berber, "The Indus Water Dispute," *Indian Year Book of International Affairs*, 1957, pp. 46, 48 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 59.

⁴ Mohammad Ayub Khan, *Friends Not Masters: A Political Autobiography* (Lahore, Karachi, Dacca: Oxford University Press, 1967), p. 108, quoted by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 59-60.

⁵ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 60.

⁶ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 60, based on Report of the Chairman, Punjab Boundary Commission (August 17, 1947) in *Select Documents on Asian Affairs-I*, India 1947-50.

⁷ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (New York and London: Columbia University Press, 1967), p. 318 [Chaudhri Muhammad Ali served as Prime Minister of Pakistan from 1955 to 1956]; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 60-61.

December 1947 or at the chairman's discretion until 1 January 1948.⁸ Only five matters were referred to the Arbitral Tribunal by 30th November 1947. All five issues were related to financial adjustments needed for: (i) the crown waste lands (ii) the irrigation system (iii) irrigated forest plantations (iv) seigniorage charges (contribution for maintenance of canals) for transporting water within the Indus Basin, and (v) devising a financial adjustment formula.⁹

No issue relating to apportionment of water between India and Pakistan was submitted to the Tribunal because there had been none¹⁰ by then as maintenance of pre-partition irrigation water supplies was agreed upon.¹¹

On 20 December 1947, Chief Engineers from East and West Punjab also signed a Standstill Agreement under which the status quo was to be maintained on the Central and Upper Bari Doab Canals (CBDC/UBDC) and the Dipalpur canals. The PPC unanimously approved it on the same day. The West Punjab submitted its claim to Mandi Hydro-electric power plant on 22 December 1947.¹²

The Arbitral Tribunal decided all the matters on 17 March 1948, and its term expired on the midnight of 31st March 1948. In the early hours of 1 April 1948 India stopped the flow of water passing through the Ferozepur headworks to Dipalpur canal and Bahawalpur state distributary and through Madhopur headworks to the Pakistani portions of Lahore and Main branches of the CBDC.¹³

The closure of canal water to west Punjab perceived as open aggression by the upper riparian India against Pakistan. In Chaudhri Muhammad Ali's words:

“...the East Punjab ministers and officials were planning a deadly blow against Pakistan and were lulling the West Punjab government to sleep with sweet words. They were waiting for the day when the life of the Arbitral Tribunal would come to an end on March 31, 1948. On the part of East Punjab there was Machiavellian duplicity. On part of West Punjab there was neglect of duty, complacency, and lack of common

⁸ Niranjana D. Gulhati, *Indus Waters Treaty: An Exercise in International Mediation* (Bombay: Allied Publishers, 1973), p. 49 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 61.

⁹ Ibid.

¹⁰ Kazi S. Ahmad, “Canal Water Problem,” *Oriental Geographer*, Vol. 2 (1958), p. 34; See also Report of the Committee B, para 15 (July 1947) in Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, No. 65 (May 1958), p. 44; Please see also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 61.

¹¹ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 318; see also Report of the Chairman, Punjab Boundary Commission (August 17, 1947), in *Select Documents on Asian Affairs-1, India 1947-50*, pp. 66-67; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 61.

¹² Gulhati, *Indus Waters Treaty* (1973), op. cit. p. 49; Please also see Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 61-62.

¹³ Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, No. 65 (May 1958), p. 44-45; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 62.

prudence—which has disastrous consequences for Pakistan.”¹⁴

Sir Patrick Spens’, Chairman of the Arbitral Tribunal, was also perturbed on the Indian betrayal and reacted immediately in the following strong words:

“I remember very well.... We were invited by both the Attorney Generals [of India and Pakistan] to come to our decision on the basis that there would be no interference whatsoever with the then existing flow of water, and the award which my colleagues made, in which I had no part, they made on that basis. Our awards were published at the end of March 1948. I am going to say nothing more about it except that I was very much upset that almost within a day or two there was a grave interference with the flow of water on the basis of which our awards had been made.”¹⁵

For Pakistan, the matter of prime importance was that the water flowing through these canals had been the lifeline for the fertile parts of the West Punjab, while India had many rivers to support its agriculture and much of its territory received enough rain, making it less dependent on the irrigation water from the Punjab rivers. Moreover, the city of Lahore was deprived not only of main source of municipal water rather electric supply was also cut off from Mandi hydroelectric power plant.¹⁶

Pakistan realised its helplessness and extreme vulnerability as the headwaters of all these rivers were in Indian territory thus the “consequences of possible aggressive intentions on India’s part soon loomed large before Pakistan.”¹⁷

Pakistan immediately requested for negotiation. A delegation led by Ghulam Muhammad, the then federal finance minister and two ministers from Punjab—Shoukat Hayat Khan and Mumtaz Doltana, was sent to Delhi in the beginning of May 1948. India insisted that it would not restore flow of water until Pakistan acknowledged that it had no right to the waters originating from the Indian territories.¹⁸

4.1.1 The Delhi Agreement, 1948

On 4 May 1948, an ‘interim’ agreement known as the Inter-Dominion Agreement or the Delhi Agreement, temporarily restored water to the CBDC and the Dipalpur canals, permitting the East Punjab government to gradually reduce the supply to *these canals*, thereby giving the West Punjab government time to find *alternative sources*. East Punjab also demanded seigniorage charges to which West Punjab government agreed in principle

¹⁴ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 318- 319 also quoted by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 62.

¹⁵ Sir Patrick Spens stated before the joint meeting in London of the East India Association and the Overseas League on February 23, 1955, quoted by Chaudhri (1967), p. 320 also quoted by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 62-63.

¹⁶ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 63.

¹⁷ Gulhati, *Indus Waters Treaty* (1973), p. 60; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 63.

¹⁸ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 320 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 63.

but the dispute over the calculation of these charges remained unresolved and Pakistan requested to refer the case to the International Court of Justice (ICJ) for arbitration.¹⁹

Pakistan claimed that the agreement was temporary in the first place and subject to further negotiation too. With India's refusal to submit the disagreement to the ICJ, an impasse had arisen. Ghulam Mohammad, the then finance minister of Pakistan, had appealed to Lord Mountbatten, the then India's Governor-General, who consulted Prime Minister Pandit Jawaharlal Nehru.²⁰ Consequently, "a statement was then placed before Ghulam Mohammad, and he was asked to sign it without changing a word or a comma—a condition for restoring the flow of water".²¹ The statement was signed by Ghulam Muhammad and two West Punjab ministers from Pakistani side and Pandit Jawaharlal Nehru and two East Punjab ministers from the Indian side.

The Agreement did not contain an expiry date rather it did call for further bilateral discussion for final settlement of the issue. Secondly, India regarded it as an 'international agreement,' and refuted Pakistan's claim that it was temporary, invalid and signed 'under compulsion' or duress.²² Thirdly, the agreement referring to only some canals, as understood by Pakistan, unfortunately deprived Pakistan of its rights to international waters of three Eastern rivers and established India's right to these waters.²³ Obviously, the urgency of the situation created much confusion in the minds of Pakistani negotiators.²⁴ They drew wrong interpretation of the word 'canals' and thought that India only demanded transportation charges and sharing costs for the maintenance of these canals till Pakistan searched for alternative sources (construct new headworks and link canals) to meet shortfall in the river Ravi and Sutlej. Nevertheless, the Delhi Agreement created a situation having long-term consequences for Pakistan.²⁵

4.1.2 Problems, Worries and Hopes

Gulhati believes that fearful of Indian intentions, in the wake of the Delhi Agreement, Pakistan had begun digging a channel from the right bank of the River Sutlej to circumvent Ferozepur headworks. The plan was to ensure water supply to Dipalpur canals in the wake of Indian closure, to which India protested promptly. Pakistan responded to take the issue up

¹⁹ The term seigniorage charges stands for the funds required for maintenance of the canals. Ibid., p. 321; See also Note by the Pakistani Delegation (21 July 1948), Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, No. 65 (May 1958), p. 129; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 63-64.

²⁰ Ibid.; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 64.

²¹ Note by the Pakistani Delegation (21 July 1948), Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, No. 65 (May 1958), p. 129; also quoted by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 64.

²² Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 321; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 64.

²³ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 64-65.

²⁴ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 321.

²⁵ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 65.

at the state level thus wanted to reopen the Delhi Agreement.²⁶

On 4 June 1948, Pakistan lodged a complaint that water was not being supplied from India's Eastern canals. India's reaction was that it had made no such commitment with Pakistan. However, on 15 June 1948, India agreed supplying the water, subject to payment of transportation charges by Pakistan under the Delhi Agreement and stoppage of work on the channel upstream of the Ferozepur headworks. On 6 July 1948, Pakistan communicated to India that it had stopped the work.²⁷

Since Pakistan wanted the water supply to continue for *rabi* 1948-49, it requested India to immediately provide confirmation of the interpretation drawn out of the Delhi Agreement and for the Indian Prime Minister to fix the seigniorage charges which the West Punjab had to pay for three to six months in advance to the *rabi* sowing season, starting from the month of October.²⁸

Since there was no expiry date put on the Delhi Agreement Pakistan justifiably regarded it as temporary. India did not comment upon the interpretation but assured Pakistan, on 26 September 1948, that it would continue supplying the water as per request.²⁹

Jawaharlal Nehru, in a telegram sent on 18th October 1948, demanded that the "May 4 arrangements be interpreted as recognising the rights of the East Punjab Government to progressively diminish supply of water to West Punjab," and added that "any further meeting between the representatives of the two governments should be on the basis of this recognition by West Punjab." He warned: "If there was an unreasonable delay on the part of one side, it is open to the other party to put an end to the agreement by giving reasonable notice."³⁰

Perceiving the above stated Jawaharlal Nehru's warning as an open threat Chaudhri notes that:

"[U]nless Pakistan accepted the Indian contention quickly, India would end the arrangement and once again cut-off supplies of water. For Pakistan to accept the Indian interpretation would have been a permanent renunciation of Pakistan's legal

²⁶ Gulhati, *Indus Waters Treaty* (1973), p. 71; Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 65.

²⁷ Pakistan, Telegram No. 2520, Zafrullah Khan to Jawaharlal Nehru (6 July 1948), Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, No. 65 (May 1958), p. 127; please see Gulhati, *Indus Waters Treaty* (1973), p. 72; Please also see Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 65-66.

²⁸ *Ibid.*

²⁹ Gulhati, *Indus Waters Treaty* (1973), p. 73; Please also see Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 66.

³⁰ India, Telegram No. 1681, 18 October 1948, Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, No. 65 (May 1958), p. 141; also quoted by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 66-67.

right. Pakistan offered to refer the legal issues in dispute to the International Court of Justice. India denied.”³¹

In April 1949, the Government of India linked continuation of water-supply strictly to the terms and conditions stipulated in the Delhi Agreement. Later, in June 1949, Pakistan recommended to widen the dispute and include waters of all common rivers for apportionment. It requested another meeting in August 1949. Pakistan further suggested that if agreement was not possible then the matter should be referred to the ICJ. The Indian officials instantaneously responded by refusing once more, the option of referring the case to the ICJ.³²

Meanwhile, the Indian government set up an organisation to look into the Indus basin problem; aimed at collecting data for the future planning. To chair this organisation, a post of Deputy Secretary (Special) in the Ministry of Works, Mines and Power was created, to which N.D. Gulhati was duly appointed at the end of June 1949. B. R. Ambekdar and N. V. Gadgil, ministers of the Government of India, also participated. The organisation comprised some government officials from East Punjab including: Vidya Ratna, an ex-engineer; Dr. J.K. Malhotra, Statistical Officer; and S.M. Sikri, Assistant Advocate-General. The first task of the organisation was to conduct homework for the forthcoming Inter-Dominion meeting to be held in New Delhi during August 1949.³³

No progress was made in the next meeting (August 4-6), the only “agreement reached” was to meet again.³⁴ Finally both agreed to meet in Karachi on 27-29 March 1950.³⁵ On 1 November 1949, Pakistan’s foreign minister wrote to his Indian counterpart, offering not to press for prior recognition of the terms and conditions of the Delhi Agreement and whether it was agreed that the interim period under the Delhi Agreement had expired.³⁶ Gulhati claimed that it was a condition in Pakistan’s offer to withdraw its demand for prior recognition, and the stance it had taken over a year before in the telegram of September 1948.³⁷

Pakistan also proposed functions and powers for the joint technical committee: First, to negotiate new interim arrangements pending a final settlement; second, to appoint a commission comprising non-engineers headed by a neutral chairman; third, the commission would, however, retain the authority to employ technical advisers if necessary, from India,

³¹ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 322; also quoted by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 67.

³² Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), pp. 322-323 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 67.

³³ Gulhati, *Indus Waters Treaty* (1973), p. 74; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 68.

³⁴ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 322; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 68.

³⁵ Gulhati, *Indus Waters Treaty* (1973), p. 76; see Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 68.

³⁶ *Ibid.*

³⁷ *Ibid.*

Pakistan and a neutral agency; fourth, the commission's responsibility would be limited to making recommendations only and not to arbitrating between the two countries; and finally, if agreement was not reached, then, India would be obliged to allow the dispute to be referred to the ICJ. Obviously, Pakistan's intentions were to involve a neutral commission or tribunal in the dispute. India refused to tolerate any change in the terms of the Delhi Agreement and insisted that a bilateral fact-finding commission could be the first step towards resolution.³⁸

The next meeting was held as per schedule on 27-29 March 1950 in Karachi. The focus was to explore the idea of joint development and management of the entire Indus basin. The six-member committee, equally representing both the parties, was made-up the preliminary negotiating committee. India was represented by B.K. Gokhale, Secretary in the Ministry of Works, Mines and Power; A.N. Khosla, Consulting Engineer to the Indian government and Chairman of the Central Power, Irrigation and Navigation Commission; M.R. Sachdev, Chief Secretary of East Punjab, who was assisted by N.D. Gulhati and Dr. J.K. Malhotra. Pakistan was represented by Chaudhri Mohammad Ali, Secretary-General to the Pakistani government who headed the delegation; H.A. Majid, Chief Secretary of West Punjab and Pir Muhammad Ibrahim, Chief Engineer of the West Punjab's irrigation department.³⁹

During the March 1950 meeting both sides somehow seriously explored options on a technical level. Pakistan proposed that: (i) the existing uses be met by existing sources (ii) new supplies be met by building storage facilities on the Sutlej, Ravi, Beas and Chenab rivers and (iii) the cost of construction be shared proportionate to the benefit derived and the waters be allocated equitably. India proposed that: (i) the Sutlej River, upon which it was building the Bhakra Dam, should exclusively be appropriated by India (ii) the Beas, Ravi and Chenab be made available for Pakistan to maintain existing uses, subject to certain adjustments favouring India; and (iii) a link canal from the Chenab river be built to meet any shortfall in Pakistan's supply. India further proposed that (iv) if there was still a deficit, then a dam be constructed on river Chenab to meet this shortfall, and to supply water for the new irrigation developments schemes. It was agreed that the Indian and Pakistani engineers would study the proposals, collect relevant data and present it before the next meeting in May 1950.⁴⁰

Unfortunately, by May 1950, the atmosphere was changed completely. India not only deviated from its agreed stance but also demanded the exclusive use of all the waters of the three Eastern rivers—Sutlej, Beas and Ravi—and divert 10,000 cusecs from the

³⁸ Gulhati, *Indus Waters Treaty* (1973), p. 76-77; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 68-69.

³⁹ Gulhati, *Indus Waters Treaty* (1973), p. 76; Chaudhri, *The Emergence of Pakistan* (1967), p. 322; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 69-70.

⁴⁰ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), pp. 322-323; Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 70.

Chenab via a tunnel at Marhu.⁴¹ The Indian demand was totally shocking and unacceptable to Pakistan as the waters of three rivers were irrigating millions of acres of land in West Punjab.⁴²

Gulhati notes that after failing to convince Jawaharlal Nehru Pakistan had started efforts to make 'interim' Delhi Agreement invalid by saying that the agreement was signed under duress, because a shadow of national calamity threatened by the sudden stoppage of all supplies of water to Pakistani canals. Pakistan issued a notice of its expiry in a communication to the Indian government on 23 August 1950. Contrary to the facts, Jawaharlal Nehru replied to Liaquat Ali Khan on 12 September 1950, that India had not pressured Pakistan to sign, and there was no question of any compulsion or duress.⁴³

4.1.3 The Issue of Seigniorage Charges

Under the Delhi Agreement, Pakistan had agreed to pay India seigniorage charges, however, the amount remained disputed. Therefore, it was decided that specified money would be deposited in the Reserve Bank of India by Pakistan from which the undisputed amount would be transferred to East Punjab but the remaining money would be held until the final agreement was reached on this matter. Moreover, on Pakistan's request the arrangement of water transfer for *kharif* (summer) 1948 was extended to *rabi* (winter) 1948-49 and then to *kharif* 1949 too. Thereafter, India unilaterally arranged to transfer water for each crop and charged Pakistan as agreed.⁴⁴

Meanwhile, in September 1949, the Sterling Bloc countries led by the United Kingdom devalued their currencies. Pakistan refused to follow the suit. Its refusal was interpreted by India as aggression and it imposed economic embargo against Pakistan.⁴⁵ On 1 November 1949, Pakistan informed India that although it regarded the Delhi Agreement as null and void but would continue to deposit money as a goodwill gesture, nevertheless, it reserved the right to withhold these deposits.⁴⁶

India's immediate and categorical response was that not only the Delhi Agreement was still binding upon all its signatories but also the seigniorage charges were an integral part of the agreement. Pakistan continued depositing money till July 1950, and later it

⁴¹ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 323; Muhammad Nasrullah, *Wullar Barrage Issue*, pp. 70-71; See also Government of Pakistan, *The Indus Basin Irrigation Water Dispute*, No. 5 (November 1953), pp. 17-18.

⁴² Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 71.

⁴³ Gulhati, *Indus Waters Treaty* (1973), p. 79 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 71.

⁴⁴ Gulhati, *Indus Waters Treaty* (1973), p. 82 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 71.

⁴⁵ Pervaiz Iqbal Cheema, *Pakistan's Defence Policy, 1947-58* (London: Macmillan Press, 1990) as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 72.

⁴⁶ Gulhati, *Indus Waters Treaty* (1973), p. 83 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 72.

stopped paying the disputed portion of the amount.⁴⁷

The issue of disputed seigniorage charges badly damaged the negotiation process thus India-Pakistan ties were reached a deadlock when the World Bank offered its Good Offices in 1951. Pakistan informed the World Bank of the disputed and unpaid amount kept in 'escrow'.⁴⁸ The matter persisted throughout the mediation process and was resolved in 1960 in the final stages of the Indus Waters Treaty.⁴⁹ Interestingly enough, in the meantime, both countries continued to construct works that could safeguard their water supply, either existing or planned.⁵⁰

Chaudhri states that India steadily increased its forcible appropriation of water at the expense of Pakistan at very critical times when crops were being sowed or were maturing. A headwork at Harike, at the confluence of the Sutlej and Beas rivers, was constructed along with a network of new canals. Especially, the height and storage capacity of the Bhakara Dam were greatly raised above the pre-partition design and its capacity was doubled from 4 to 8 million acre-feet.⁵¹

4.1.4 Indian River Diversion Plans and the World Bank

Indian engineers were assigned the task of irrigation development immediately after independence. In April 1949, Indian Central Government asked the East Punjab government to submit the proposal for the construction of the Harike barrage. Eventually, India prepared a plan to safeguard its supply from the Ferozepur headworks to the Eastern and Bikaner canals. Its plan was to confine the Sutlej River's flow to the Indian territory and link Eastern and Bikaner canals from a barrage that had already been proposed at Harike.⁵²

India decided to complete Harike Project, in December 1949, for twin purposes: to safeguard any Pakistani upstream diversions; and to utilise water that would be "set free by progressive diminution" to Pakistan's supplies.⁵³ India claimed that the latter arrangement was written into the Delhi Agreement of May 1948. India planned to build a tunnel at Marhu on the Chenab River to divert the water, and, in due course of time, wanted to take, the entire flow of the Beas River also into the Sutlej river and thereof to all canals off-taking upstream of the Ferozepur headworks.⁵⁴

⁴⁷ Gulhati, *Indus Waters Treaty* (1973), pp. 83-84 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 72.

⁴⁸ The term escrow means an amount of money or property granted to somebody but held by a third party and only released after a condition has been met. Please see Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 72.

⁴⁹ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 72.

⁵⁰ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 73.

⁵¹ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 324 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 73.

⁵² Gulhati, *Indus Waters Treaty* (1973), p. 85 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 73.

⁵³ Gulhati, *Indus Waters Treaty* (1973), p. 85; see also IBRD (World Bank), August 26, 1960; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 73.

⁵⁴ Gulhati, *Indus Waters Treaty* (1973), p. 85.

Gulhati explains that the Harike Project envisaged construction of control infrastructure to regulate the Ferozepur and Sirhind feeders of 11,000 cubic feet per second (cusecs/cfs) capacity, and for the proposed Rajasthan canal of 15,000 cusecs. Plans were also made to replace an old canal, off-taking from the Sutlej river, with a new and efficient canal. East Punjab was also asked to prepare details for a proposed link canal between Madhopur on the Ravi to the Beas River with an initial capacity of 6,000 cusecs later to be increased to 13,000 cusecs after the Marhu Tunnel had been constructed on the Chenab river. In April 1950, the Rajasthan government was asked to undertake surveys the areas possibly can be brought under canals from Harike⁵⁵

In East Punjab India built some new distributaries from the UBDC and opened first of these channels for the *kharif* (summer) crop of 1950.⁵⁶ Since these canals only received water after meeting the needs of Pakistan from CBDC, there was not enough water to fulfil the needs of the *kharif* season. Under these circumstances, East Punjab government expedited its efforts to build the Bhakra dam.⁵⁷

Gulhati notes that when the project was placed before the Indian Planning Commission for consideration, it was conceived that if the Bhakra canal and the Nangal project could be completed at the same time then it would be possible to operate it without affecting the existing supplies off-taking from the Sutlej and Beas. The Nangal barrage and canal project had been started in 1946, and was expected to be completed in 1952. Therefore, the Bhakra-Nangal project was re-oriented to prioritise the Bhakra canal, with the hope of starting operation in *kharif* 1954. Pakistan perceived the Indian plan as an attempt to prolong negotiations aimed at building the Bhakra dam and the Rajasthan canal amongst other engineering works and deprive it of vital water supplies.⁵⁸ According to Chaudhri this change envisaged to enhance the capacity of the dam to store entire flow of the Sutlej river.⁵⁹

4.1.5 Pakistan's Efforts to Secure Supplies

The weakness of the Delhi Agreement propelled Pakistan to protect its uses on the Sutlej River upstream of the Ferozepur headworks. Pakistan was undertaking construction works to ensure supplies to the CBDC and Dipalpur canals from the River Chenab, and to ward off against any future threats to its water supply from India.⁶⁰

Pakistan's plans included: (i) construction of the Bambanwala-Ravi-Bedian link

⁵⁵ Gulhati, *Indus Waters Treaty* (1973), p. 85 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 73-74.

⁵⁶ Gulhati, *Indus Waters Treaty* (1973), pp. 85-86 and Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 74.

⁵⁷ Gulhati, *Indus Waters Treaty* (1973), pp. 85-86.

⁵⁸ Gulhati, *Indus Waters Treaty* (1973), p. 86 as cited in Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 74.

⁵⁹ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 324 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 74.

⁶⁰ Gulhati, *Indus Waters Treaty* (1973), p. 84.

(BRB) to supply the CBDC from the Chenab; (ii) examining the possibility of a link between Balloki, on the River Ravi, and Suleimanke on the River Sutlej; (iii) construction of the Kotri barrage capable of feeding canals in Lower Sindh; (iv) to prepare feasibility for the construction of two barrages, at Taunsa and Gudu, on the River Indus aimed at improving supplies to inundation canals off-taking from the Indus in West Punjab and Upper Sindh; and (v) continuation of the West Punjab's tube-well scheme with power supply from the Rasul hydroelectric project, working since 1946.⁶¹

All the above-mentioned Pakistani plans for additional irrigation called for the storage facilities in the basin. Engineers were asked to explore suitable sites for dams on the rivers Jhelum and Indus. A site was found and work started at Mangla on river Jhelum without foreign aid which was withheld because of the dispute with India. On river Indus, initially a place was found at Darband but later was replaced by the site at Tarbela.⁶²

4.1.6 The Issue of ICJ Involvement

Prime Minister, Jawaharlal Nehru, in January 1950, wrote to his Pakistani counterpart, Liaquat Ali Khan, proposing a joint declaration not to wage war over any bilateral dispute and seek peaceful means to resolve their differences. This offer also contained an affirmation for the inclusion of third party intervention in the form of mediation by an international body recognised by both countries. Liaquat Ali Khan agreed in February 1950 but called for a clear timetable for peaceful resolution of disputes.⁶³

In February 1950 a meeting was held in Karachi in which the parties showed their willingness to divide the rivers: Pakistan was ready to let India use all of the waters of the Ravi and Beas. The proposal was acceptable to India, but it wanted the right to divert river Chenab through Marhu tunnel. Interestingly, India suggested construction of a storage dam at Dhiangarh to regulate supplies to Pakistan. But Pakistan refused India any right to build dam on the Chenab, and the proposal was dumped.⁶⁴

The subsequent bilateral talks were failed and India filed the Delhi Agreement with the UN as Treaty No. 794 in May 1950.⁶⁵ Pakistan promptly registered a 'disclaimer' with the UN in December 1950 and "explained the true nature of the statement to the UN and certified that it had been terminated."⁶⁶ India challenged the Pakistani claim and registered

⁶¹ Gulhati, *Indus Waters Treaty* (1973), pp. 86-87.

⁶² Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 325.

⁶³ Gulhati, *Indus Waters Treaty* (1973), p. 77 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 75.

⁶⁴ Gulhati, *Indus Waters Treaty* (1973), pp. 81-82 and Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 75.

⁶⁵ Government of Pakistan, *Pakistan: The Struggle for Irrigation Water and Existence*, 1953, p.12; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 75.

⁶⁶ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 323 as quoted by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 75-76.

another disclaimer with the UN Secretariat in November 1951.⁶⁷

Although the UN Charter permits consideration of any international legal dispute amongst the members to be placed before the ICJ, but members of the British Commonwealth were denied such remedy and were bound to resolve mutual disputes at the Commonwealth forum.⁶⁸ Chaudhri states that:

“The assumption was that such disputes would be settled within the family of nations comprising the Commonwealth.... Although the Commonwealth had shown itself powerless to resolve disputes between its members, yet, by virtue of the old proviso, the canal waters dispute could not be referred to the International Court of Justice by Pakistan unless India agreed. And India, knowing that its stand was invalid in international law, would not agree.”⁶⁹

The Sutlej dispute got no attention from the Commonwealth and India continued refusing to submit the matter to the ICJ. However, in September 1950, India proposed referring the case to a tribunal comprising four judges, two from each country. Pakistan rejected the proposal on the plea that since the tribunal did not have an impartial chairman, the forum could be used by India to prolong the resolution.⁷⁰ “It was clear that India’s purpose was to prolong negotiations until the Bhakra Dam, the Rajasthan Canal, and other engineering works were completed, the effect of which would be to deprive Pakistan of vital water supplies”.⁷¹

Pakistan was determined to secure some form of arbitration, therefore, tried to involve International Court of Justice (ICJ). Meanwhile, India proposed to have some local judges to settle the issue.⁷² In Gulhati’s words: “Whatever the outcome, Pakistan would not be satisfied unless a third party could somehow be brought into the picture”.⁷³

4.1.7 The Dispute Fixed

In the wake of ongoing war in Kashmir, the crucial water dispute further damaged India-Pakistan relations. In Gulhati words these issues were paraded not only in an unending exchange of communications between the two Governments but also in public by both sides.⁷⁴

⁶⁷ Shivananda, S., *Political and Legal Aspects*, p. 20 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 76.

⁶⁸ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 76.

⁶⁹ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 324 as quoted by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 76.

⁷⁰ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 324; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 76.

⁷¹ Chaudhri Muhammad Ali, *The Emergence of Pakistan* (1967), p. 324 as quoted by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 76-77.

⁷² See Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 77.

⁷³ Gulhati, *Indus Waters Treaty* (1973), p. 89 as quoted by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 77.

⁷⁴ Gulhati, *Indus Waters Treaty* (1973), p. 87.

India was concerned about developing lands surrounding the Sutlej river in the East Punjab. Pakistan was worried for its existing uses from the River Sutlej to secure the food-basket becoming increasingly crucial because of the influx of millions of Muslim immigrants from India. India was accused of misusing its upstream position and attempting to damage Pakistan's economy by withholding water. The construction of Bhakra Dam on the River Sutlej by India was certainly detrimental to Pakistan's interests. Pakistan, apparently in retaliation, stopped depositing the seigniorage charges in the summer of 1950.⁷⁵ Moreover, failing to bring about a modification in the Agreement, Pakistan unilaterally declared it null and void. "Notice to this effect was given...on 23 August 1950."⁷⁶ This statement was registered with the UN on 6 April 1951.⁷⁷ India, in turn, registered a certified statement with the UN on 1 May 1952.

The Indian delegate, referring to the registered statement of Pakistan, stated that the information contained in was "incorrect, in as much as the Government of India did not receive any notice prior to 19 May 1950, or even prior to 23 August 1950, that the Instrument of 4 May 1948, if it had ever been binding upon Pakistan, has long ceased to be effective."⁷⁸

Indo-Pakistan relations deteriorated further, armies were put on red alert. Although, other matters also intensified the discord (like the non-payment of financial assets and non-transfer of military and industrial shares agreed before Partition for Pakistan, migration across the borders, disposition of evacuee properties, and occasional border incidents along with the Kashmir dispute) but the water dispute became acute and acquired extreme urgency.⁷⁹

Meanwhile, an article by David E. Lilienthal brought the IBRD [renamed in the early 1950s as World Bank] into the picture, and this situation internationalised the issue. Lilienthal was former chairman of the Tennessee Valley Authority. In his article "Another 'Korea' in the Making?" he cogently emphasized Pakistan's dependence on water, two-thirds of which originated in Kashmir. He called the canal water dispute "pure dynamite, a Punjab powder keg" and warned that "peace in the Indo-Pakistan sub-continent is not insight with these inflammables around."⁸⁰ He continued in the following words:

"With no *water for irrigation* [West Pakistan] would be desert, 20,000,000 acres would dry up in a week, tens of millions would starve. No army, with bombs and shellfire, could devastate a land as thoroughly as Pakistan could be devastated by the simple expedient of India's permanently shutting off the sources of water that keep the fields

⁷⁵ Gulhati, *Indus Waters Treaty* (1973), p. 87-88.

⁷⁶ *United Nations, Treaty Series*, Vol. 85, 1951, Treaty No. 794, Annex A, p. 356.

⁷⁷ *Ibid.*, p. 356.

⁷⁸ *United Nations, Treaty Series*, Vol. 128, (1952), p. 300.

⁷⁹ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 77.

⁸⁰ David E. Lilienthal, "Another 'Korea' in the Making?" *Collier's*, Vol. 128, (August 4, 1951), p. 21-22 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 77.

and people of Pakistan alive."⁸¹

He argued that the problem was more of a technical nature and an engineering solution was possible. He maintained that if the issue was not exploited as a political but considered as developmental both countries would benefit from it amply, especially when more than 80 per cent of the water of the Indus river system was flowing down into the Arabian Sea unutilised. In his opinion Pakistan might have won the legal battle, if ever referred to the International Court of Justice, but such legal judgement would not solve the food problems of India nor it prevent the waste of the waters. He suggested that for optimal utilisation of the unused water some suitable irrigation projects could be materialised with the help of the World Bank, since the Bank was an international financial institution, and also had expertise to address technical and engineering problems.⁸²

Endorsing the Lilienthal's proposal the president of the World Bank, Mr. Eugene Black, expressed his desire to 'recommend that the Bank lend its good offices' to find out a solution of the Indus waters dispute.⁸³ Both parties accepted the mediation of the Bank consecutively. However, India unlinked Kashmir and Indus disputes but agreed to supply Pakistan as per the then current water uses as long as talks continued.

4.2 MEDIATION PROCESS: THE ROLE OF THE WORLD BANK

The World Bank was established in late 1940's under the name of International Bank for Reconstruction and Development [IBRD]. It turned out a good omen for both India and Pakistan as both were separately approached to the bank for their respective water development projects. Fortunately, the bank was looking for such economic ventures which could establish and later enhance its reputation, in order to ensure that it could raise capital in the international financial markets

4.2.1 The US Interests and the Lilienthal's Proposal

The state of Indo-Pakistan relations and the Lilienthal Proposal attracted US involvement. The rationale for American interest in mediation was embedded in its urge to search for international cooperation to pursue its policy of containment of communism and was searching for allies. Its intermediary, David E. Lilienthal, projected India as offering for "the United States and democracy an opportunity".⁸⁴ The Indian premier, Jawaharlal Nehru, had already invited Lilienthal to visit India in October 1949. David Lilienthal, paid a visit to

⁸¹ David E. Lilienthal, "Another 'Korea' in the Making?" *Collier's*, Vol. 128, (August 4, 1951), p. 22.

⁸² Government of Pakistan, *Canal Waters Dispute: Documents relating to the Negotiation under the Good Offices of the IBRD* [World Bank], June 1958.

⁸³ *Ibid.*; see also the World Bank letter by its President Mr. Eugene Black, dated Sept. 6, 1951 addressed to prime ministers of India and Pakistan, Jawaharlal Nehru and Liaquat Ali Khan respectively, annexed as Appendix 2.

⁸⁴ David Eli Lilienthal, *The Journals of David E. Lilienthal: Volume III, Venturesome Years 1950-1955* (New York and London: Harper and Row Publishers, 1966), p. 51 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 78.

India and Pakistan in February 1951.⁸⁵

Lilienthal observed that the water dispute had to be resolved first so that relations may get calm for initiation of discussions on Kashmir issue. He pointed out that Pakistan may win legal battle against India but such judgement would not solve food problem of subcontinent nor it would prevent the waste of the Indus waters falling unused into the Indian Ocean. Nevertheless, he also warned that disputants were then close to wage a war. He urged that the question of water rights can be better addressed by the engineers of the two countries on functional grounds with the technical and most likely financial help of the World Bank.⁸⁶

He urged that whole Indus rivers system must be developed as a unit like seven-state Tennessee Valley Authority system back in the US and considered three principles essential to the Indus dispute's resolution: (i) the disputants should recognise that there was enough water in the Indus Basin for their existing and future uses; (ii) the flow of Sutlej river alone would not be sufficient for resolution of the dispute, therefore, the waters of all six rivers of the Indus system should be appropriated; (iii) functional perspective should be the best approach for settlement.⁸⁷

4.2.2 Indian Pre-Condition for World Bank's Involvement

Though, the World Bank was initially involved in the dispute over the river Sutlej in 1949, it adopted the Lilienthal principles in 1951, and formally offered its good offices on 6 September the same year.⁸⁸ The Pakistani premier, Liaquat Ali Khan, accepted the World Bank's (WB) mediation offer on 25 September 1951.⁸⁹

India also followed the suit but Jawaharlal Nehru specified the nature of this intervention and promptly disassociated the water dispute from Kashmir, saying: "I might make one point clear. The Canal Waters dispute between India and Pakistan has nothing to do with the Kashmir issue; it started with and has been confined to the irrigation systems of

⁸⁵ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 78.

⁸⁶ David Eli Lilienthal, *The Journals of David E. Lilienthal: Volume III....*, pp. 54-65; Chaudhri Muhammad Ali, *The Emergence of Pakistan* (New York and London: Columbia University Press, 1967), p. 325 (reproduced by Wajidalis (Pvt.), Lahore, Research Society of Pakistan, University of the Punjab for Services Book Club, 1988); See also John C. Perham, "Storm along the Indus: Hindu and Moslem Fight over Life-Giving Water," 1952; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 78.

⁸⁷ Ibid.; David Eli Lilienthal, "Another Korea in the Making?," *Colliers*, August 4, 1951 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 78-79.

⁸⁸ World Bank dated Sept. 6, 1951 to India and Pakistan, letter from President Black to prime ministers Jawaharlal Nehru and Liaquat Ali Khan, see Appendix-2 for full text. See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 79.

⁸⁹ Pakistan, letter from Prime Minister Liaquat Ali Khan to World Bank President Mr. Black, dated Sept. 25, 1951, in Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development I* (June 1958), p. 13; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 79.

East and West Punjab”.⁹⁰

Though the Kashmir dispute was of prime importance, it remained secondary to the dispute over Indus waters. Pakistani premier also agreed saying that the parties should “refrain from using the negotiations in one dispute to delay progress in solving any other”.⁹¹

4.2.3 Political Timings and Aptness of Proposal

Interestingly, not only the timing of intervention was suitable, but also the proposal put forward was appropriate to the stage of the dispute’s evolution.⁹²

Two major issues were raised:

Riparian Rights: India proclaimed to invoke principle of absolute territorial sovereignty, envisaging total denial of waters of three eastern rivers to Pakistan, while Pakistan advocated the principle of historic uses. Interestingly, both relied upon the international water law to justify their demands and actions.⁹³

Insufficient Water Availability: The bank recognized the inadequacy of water supply based on the existing storage potentialities for irrigation needs in the basin. It was considered as the most serious difficulty to assimilate divergent claims of India and Pakistan. Each side asserted its right to the available water.⁹⁴

The Bank encouraged both parties to address the primary need for water rather than repeating their respective legal positions and claims. It outlined its position comprising three points. Firstly, the approach to dispute resolution should be engineering or technical, without any reference to political matters. Secondly, the Bank would only facilitate the process and not arbitrate. Thirdly, neither disputant would act to deteriorate the existing water supplies during the Bank’s involvement. The Bank’s approach established status quo and prevented further escalation of the conflict.⁹⁵ Nasrullah observed that:

“Though, all points were important but the third was crucially essential and urgent for the lower riparian Pakistan. Continuation of the existing supplies was a question of life and death for farmers of West Punjab and was vital for the maintenance of already fragile, national food supplies in the wake of millions of incoming Muslim immigrants from India.”⁹⁶

⁹⁰ India, letter from the prime minister Jawaharlal Nehru to World Bank President Mr. Black, dated Sept. 25, 1951.

⁹¹ Pakistan, letter from Prime Minister Liaquat Ali Khan to World Bank President Mr. Black, dated Sept. 25, 1951.

⁹² Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 79.

⁹³ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 79.

⁹⁴ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 79-80.

⁹⁵ Government of Pakistan, *Memorandum on the Indus Water Dispute*, April 10, 1959, p. 22; See also

Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 80.

⁹⁶ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 80.

4.2.4 Searching for Solutions

The World Bank encouraged both the disputants to work out a joint solution that would satisfy their needs but the ensuing differences forced it to ask the Indian and Pakistani delegates to draw up separate plans. However, when these separate plans also failed to bridge the differences, the Bank presented its own plan in 1954.⁹⁷

4.2.5 The Indian and Pakistani Plans of 1953

India and Pakistan submitted their plans in October 1953. The Indian Plan allotted to India all the three eastern rivers (Ravi, Beas, Sutlej) plus 7 per cent of the three western rivers (Indus, Jhelum, Chenab). The Pakistani Plan allotted to Pakistan all the three western rivers plus 70 per cent of the eastern rivers.⁹⁸

Nasrullah observed that:

“Despite differences, interestingly, the plans had a couple of common points too: (i) each party had favoured its own uses above the others; (ii) water availability estimates made by them were nearly similar; (iii) both rejected an integrated approach to share the waters between them; (iv) both appeared to recognise that India’s use of the Indus basin could only come from the eastern rivers; and (v) neither side endorsed each others’ allocations for planned uses and future development.”⁹⁹

4.2.6 World Bank Plan of 1954

The Bank realised that “the problem could not be solved solely by technicians.... The Bank representative feels that he has the responsibility to put forward a proposal for the consideration of both sides to serve as the basis of the comprehensive plan.”¹⁰⁰ Therefore, the Bank decided to present its own proposal on 5 February 1954 based on general principle that with the exception of local uses in Kashmir, the three western rivers would be reserved exclusively for the use and benefit of Pakistan and the three eastern rivers would be reserved entirely for India.¹⁰¹

The following table and subsequent figure compare the amounts allotted by the Bank along with the Indian and Pakistani plans.¹⁰²

⁹⁷ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 80-81.

⁹⁸ Aloys Arthur Michel, *The Indus Rivers: A Study of the Effects of Partition* (New Haven and London: Yale University Press, 1967), p. 230; see also Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development 1* (June 1958), p. 48; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 81.

⁹⁹ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 81.

¹⁰⁰ *World Bank’s* Press Release No. 380, December 10, 1954; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 81-82.

¹⁰¹ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 82.

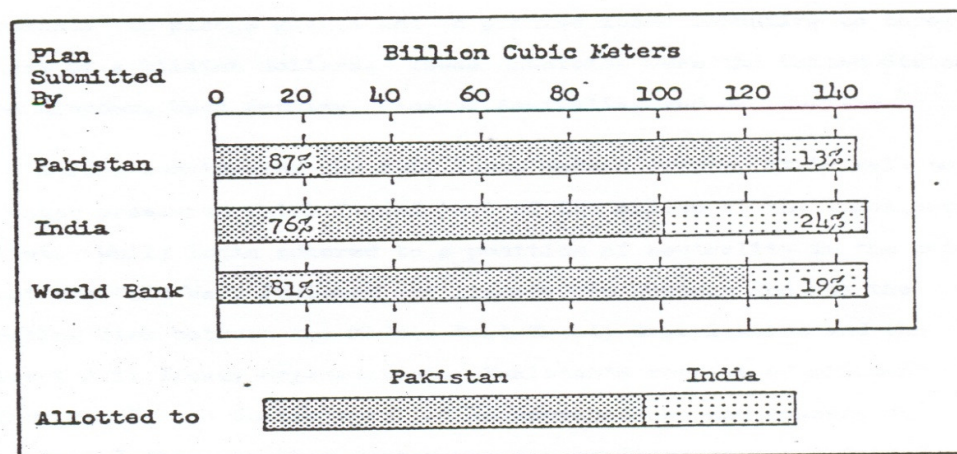
¹⁰² *World Bank’s* Press Release No. 380, December 10, 1954, Appendix 1, February 5, 1954, pp. 2, 10; cited in Michel (in millions of acre feet [MAF], additional calculations are made by the author, key

-----Table-5-----

	Pakistan's Plan	India's Plan	Bank's Plan
Total Usable			
Million acre-feet	118.00	119.00	119.00
Billion cubic meters	145.14	146.37	146.37
For Pakistan			
Million acre-feet	102.50	090.00	097.00
Billion cubic meters	126.07	110.70	119.31
Percent of total	087.00	076.00	081.00
For India			
Million acre-feet	015.50	029.00	022.00
Billion cubic meters	019.06	035.67	027.06
Percent of total	013.00	024.00	019.00

Figure-3: Indus Basin Water Allocation According to Various Plans

(Source: F. J. Fowler, "Same Problems of Water Distribution between East and West Punjab," *The Geographical Review*, Vol. XL, No. 4 (October 1955).



Nasrullah states that:

"There were disagreements especially concerning 'customary' or 'historical' uses. India agreed only what was actually in use, whereas Pakistan urged for the inclusion of plans envisaged before Partition, especially projects for safeguarding and improving water supply in the Sindh province. The only convergent aspect was the premise that the water dispute was independent of the Kashmir issue, and that the current negotiations should not alter the *status quo*."¹⁰³

adopted from Gulhati, p. 448: 1 MAF = 1,000,000 * 4,840 * 9 = 43,560,000,000 cubic feet = 1,230,000,000 cubic metres = 1.23 billion cubic metres), pp. 231, 239; Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development I* (June 1958), p. 48; see also A. N. Khosla, "Development of the Indus River System," *India Quarterly*, Vol. XIV, No. 3, (July-Sept., 1958), p. 245; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 83.

¹⁰³ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 82.

4.2.7 Re-engaging in Negotiations

The World Bank proposed division of the Indus rivers system. After a month and half, India was the first to accept the plan in March 1954.¹⁰⁴

Pakistan did not respond promptly because it wanted secure and sustained alternative arrangements for the replacement of water lost to India from the three eastern rivers.

“Further discussions with the Bank indicated that in reaching the engineering conclusion that such a diversion of the rivers would be consistent with the principles of the proposal, the Bank engineer had made no detailed engineering study but had rather compared broadly the aggregate seasonal supplies of water on the Western rivers ... than average year (1936-37) with the aggregate seasonal withdrawals or the Pakistan canals in the same year.”¹⁰⁵

Pakistan was sceptical; it requested an American irrigation consultant, Mr. Royce J. Tipton, to make an independent appraisal of the Bank’s proposal.

“Pakistan asked Mr. Royce J. Tipton, an eminent consultant engineer, to make an independent appraisal of the Bank proposal to determine whether it accomplished the results which it said it did. Mr. Tipton and his staff made a detailed 10-year study by 10-day periods. His report has been made available to the Bank and discussed with them.”¹⁰⁶

Pakistan also arranged discussions with the Bank on the objections of the Bank’s proposal as to the irrigation areas in Pakistan to be met with flow supplies.

“Under the interpretation of the bank engineer, all of Pakistan’s historic irrigation uses ... were to be set with flow supplies under the plan. Mr. Tipton tested the results of the proposal on this basis. It became clear even before the Tipton study was completed that the proposal did not work out the way the Bank’s engineer had said it did. The Bank engineer then modified his interpretation of the proposal so as to reduce certain of Pakistan’s sanctioned and planned uses to be set with flow supplies. This led to considerable confusion. Talks between the Pakistan Foreign Minister and the Bank Management in June 1954, however, resulted in a

¹⁰⁴ Indian letter dated March 22, 1954 to the World Bank, from Prime Minister Nehru to President Black and Indian letter dated March 25, 1954 to the World Bank, from Khosla to General Wheeler; see also Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development 1* (June 1958); See also documents relating to official correspondence between World Banks and India and World Bank and Pakistan available in *National Documentation Wing, Cabinet Division, Government of Pakistan*, Islamabad; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 82.

¹⁰⁵ Government of Pakistan, Case No. 467/54, Clarification/explanation of Bank Plan and other Studies, Vol. II.

¹⁰⁶ Ibid.

considerable clarification of the Bank's position."¹⁰⁷

Based on Tipton report representations were made to the Bank that the waters of western rivers was inadequate to fulfil the irrigation needs of cultivated land in Pakistan, without storage dams.¹⁰⁸

The Bank representatives persuaded and reminded Pakistani delegates of the advantages implicit in its proposal. Firstly, that India would not interfere with the waters of the River Chenab; secondly, India would pay for the costs incurred in constructing the replacement works in Pakistan; and thirdly, Pakistan's existing uses would be protected for the duration of the transition period.¹⁰⁹

Pakistan made its concerns explicit and its foreign minister outlined the concerns that the existing and planned uses, at Sukkur and Gudu, should be met from the western rivers.¹¹⁰ Nasrullah observed that:

"It [Pakistan] expressed apprehensions and also referred to the ambiguity about the implications of "relatively insignificant consumptive uses of western rivers by India", a phrase used in the Bank's proposal. If Pakistan had accepted it as such, the Bank proposal would have opened the way for India establishing future claims on Jammu and Kashmir waters."¹¹¹

The Bank gave assurances that supplies from the western rivers could compensate historic uses from the eastern rivers and bring most of the Sutlej Valley Canals up to an amount equivalent to allocation, and that this could be achieved without drawing down on the supplies needed to maintain historic uses depending upon the western rivers and to feed the projects under construction and without sacrificing waters for the planned requirements of Gudu and Sukkur.¹¹²

In January 1955, talks on the interim or *ad hoc* agreements started in which a series of agreements was signed: 1 April 1955 to 30 September 1955; 1 October 1955 to 31 March 1956; 1 April 1956 to 30 September 1956; and 1 April 1959 to 31 March 1960. The only

¹⁰⁷ Ibid.

¹⁰⁸ Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development I* (June 1958), p. 57; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 82-83.

¹⁰⁹ IBRD, May 20, 1954; See also documents relating to official correspondence between World Banks and India and World Bank and Pakistan available in *National Documentation Wing, Cabinet Division, Government of Pakistan*, Islamabad.

¹¹⁰ Pakistan's letter dated Aug. 24, 1954 to World Bank, from Foreign Minister Zafrulla Khan to President Black; Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development I* (June 1958). See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 83-84.

¹¹¹ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 84.

¹¹² Letter from WB President Black to Minister of Foreign Affairs of Pakistan, 13 August 1954, See also documents relating to official correspondence between World Banks and India and World Bank and Pakistan available in *Government of Pakistan, National Documentation Wing, Cabinet Division, Government of Pakistan*, Islamabad; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 84.

period for which the parties were unable to agree was from 1 October 1957 to 30 September 1958.¹¹³

4.2.8 The 1956 Aide-Memoire

Throughout 1955 and 1956 Pakistan made it clear to the World Bank that its 1954 plan had allocated insufficient water as compared to Pakistan's irrigation needs, during critical times in late *kharif* (summer crops) and early *rabi* (winter crops), and without storage facilities it would not be possible to meet even replacement uses of water. After more than eighteen months' study of its experts the Bank accepted Pakistan's argument and issued an "*Aide Memoire on May 21, 1956*, recognising that the 'flow surplus' in the Western rivers would not be sufficient to meet even the replacement needs in early and late *Kharif* unless storage was provided."¹¹⁴

"It called for an adjustment in its February 1954 plan, to assure timely water supply to Pakistan. This adjustment could be managed in two possible ways: firstly, in the form of water delivery to Pakistan on continuous basis from eastern rivers; secondly, construction of storage facilities on the western rivers with India's contribution. The Bank preferred the later course of adjustment."¹¹⁵

India, though had accepted the principle of division in 1954, demanding the same from the very beginning, was reluctant to accept the specific works the *Aide Memoire* was suggesting under the principle of 'beneficiary-pays the costs'.¹¹⁶

"Under the Bank proposal, as clarified by the management of the Bank, and to work out the adjustments in the division of supplies proposed which are deemed to be required in order to accomplish the objectives envisaged in the proposal. The ... issue as to the apportionment of water supplies is: How much, if any, water (by periods) should Pakistan continue to receive from the Eastern rivers?"¹¹⁷

4.2.9 The 1958 Pakistani Plan

In the light of *aide memoire* Pakistan agreed to work out a plan:

"The plan to be prepared will include transfers of supplies from the Western rivers to

¹¹³ Government of Pakistan documents relating to official correspondence between World Banks and India and World Bank and Pakistan available in *National Documentation Wing, Cabinet Division*, Islamabad; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 84.

¹¹⁴ The term *Aide Memoire* stands for a prompt official reminder / communication or memorandum. See personal communication from R. J. Tipton, President, Tipton and Kalmbach, Inc., Denver, Colorado, September 30, 1965. Mr. Tipton served as a consultant to the Pakistan delegation during the Indus Waters Treaty negotiations, quoted by Aloys Arthur Michel, *The Indus Rivers*, p. 244; See also *Hundred Years of P.W.D.*, ed. Mubashar Hasan (Lahore: Publication Committee of P.W.D., 1963), p. 63; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 84-85.

¹¹⁵ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 85.

¹¹⁶ Michel, *The Indus Rivers*, op. cit., p. 244; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 85.

¹¹⁷ Government of Pakistan, Case No. 467/54, Clarification/explanation of Bank Plan and other Studies, Vol. II.

replace to the extent possible the supplies historically used by Pakistan from Eastern rivers. It is apparent that available supplies in the Western rivers during July and August surplus to Pakistan's historic uses and the requirements of projects in progress are sufficient to meet the full requirement of Pakistan's existing uses on the Eastern rivers during these months. This fact alone will determine to a large extent the capacities and the alignment of the necessary link channels, working out the aspect of the problem can, therefore, proceed immediately even before the ultimate apportionment of supplies is finally determined."¹¹⁸

The Pakistani plan further states:

"Assuming that India agrees that supplies from the Western rivers should be transferred to meet the full requirements of Pakistan's existing uses on the Eastern rivers during July and August (and to pay the cost of link channels and other works of necessary capacity), the volume of deliveries required from Eastern rivers will be substantially reduced."¹¹⁹

In working out the ultimate division of water to be provided under the comprehensive plan, there are some major problems to be resolved. Pakistan expressed its four concerns:¹²⁰

1. What supplies are to be provided for Pakistan's historic uses and projects in progress on the Western rivers?
2. What new engineering works are to be constructed?
3. What supplies are to be assumed to be available to meet Pakistan's requirements?
4. What adjustments are to be made if the dependable flow supplies available are insufficient to provide for Pakistan's historic uses and projects in progress on the Western rivers?

The Bank further explained:

"The Bank proposal...provides that historic (pre-Partition, actual) withdrawal of all canals should be... from flow supplies, while there may be differences of opinion as to what constitutes appropriate protection of these supplies, there will be no dispute as to what the pre-Partition, actual pattern was."¹²¹

¹¹⁸ Government of Pakistan, Case No. 467/54, Clarification/explanation of Bank Plan and other Studies, Vol. II.

¹¹⁹ Government of Pakistan, Case No. 467/54, Clarification/explanation of Bank Plan and other Studies, Vol. II.

¹²⁰ Government of Pakistan, Case No. 467/54, Clarification/explanation of Bank Plan and other Studies, Vol. II.

¹²¹ Government of Pakistan, Case No. 467/54, Clarification/explanation of Bank Plan and other Studies, Vol. II.

For the purpose of data it was agreed that:

“The actual withdrawal for all canals as published in the Punjab Gauge and Discharge registers for the period 16 October 1921 to 15 October 1946 were accepted as correct basic data at the second meeting of the Working Party. These data are summarized by canals by 10-day periods for each year of the 25-year period in the Working Party study withdrawal from the Indus River System.”¹²²

Considering all the factors and explanations, Pakistan presented its cost-effective alternative London Plan to the Bank and India in a meeting held in July 1958. It proposed construction of dams on the rivers Indus and Jhelum and ten link canals instead of the Upper Indus Link canal, construction of which would have been too expensive. The Tarbela Dam on Indus River envisaged providing water reservoir for development in Sindh, and replacement in Punjab and Bahawalpur via two trans-Thal link canals transferring water from Kalabagh to Jhelum, and Taunsa to Panjnad. The Mangla Dam on the Jhelum River, in Pakistani-held Kashmir, planned supplying replacement water to Punjab. On the tributaries of rivers Indus and Jhelum three additional subsidiary dams were also proposed to transfer the stored water to the upper parts of Punjab and Bahawalpur via a series of link canals.¹²³

4.2.10 The 1958 Indian and Pakistani Plans

In December 1958, the Indian delegation proposed using a number of sites on the Chenab River in Indian-held Jammu-Kashmir and Himachal Pradesh.¹²⁴

The plan was to build two diversion tunnels transferring water from the Chenab to other rivers, thereof to the canal command areas. India suggested that if a storage dam was still needed then one would be built at Dhiangarh on the Chenab, where India constructed Salal Dam during 1970s. India promised that if Pakistan would authorise use of these sites, it could guarantee delivery of half of its replacement needs. According to the Indian estimates Pakistan would need 10 MAF, thus 5 MAF should be supplied from within Pakistan by the MR, BRBD and BS link canals.¹²⁵

“Pakistani plan persuaded the Bank to look into its real concerns. Because without some storage facilities, the flow supply of western rivers was totally inadequate to replace Pakistan’s existing uses of the waters from the eastern rivers; and Pakistan with limited

¹²² Government of Pakistan, Case No. 467/54, Clarification/explanation of Bank Plan and other Studies, Vol. II.

¹²³ Michel, *The Indus Rivers*, op. cit., p. 246; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 86.

¹²⁴ A N Khosla in, *India Quarterly*, Vol. XIV, No 3 (July-Sept 1958); See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 86.

¹²⁵ Michel, *The Indus Rivers*, op. cit., p. 246. Pakistan was building MR [Marala-Ravi] canal linking river Chenab at Marala to river Ravi, BRBD [Bombawala-Ravi-Bedian-Dipalpur] canal linking river Ravi with Sutlej and BS [Beas-Sutlej] canal linking river Beas with Sutlej; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 86-87.

resources could not construct any dam.”¹²⁶

Eugene Black himself later pointed out that “the Bank’s plan would have left much of Pakistan’s irrigation system without water.”¹²⁷ To solve this, an independent engineering appraisal of Bank plan was undertaken for Pakistan by R. J. Tipton, a consulting engineer of Denver, Colorado. It revealed that the Bank proposal did not meet the standard of fairness under International Law, that it failed to distribute equitably the water of the Indus rivers system, and that it would be violation of the principle of utilizing water resources in such a manner as to promote development most effectively.¹²⁸

After some further consultation, the Bank reached the conclusions contained in its aide-memoir of May 21, 1956. The aide-memoir concluded that: There would be consistent shortage in *rabi*, occasionally beginning in late September or extending into early April...of a degree, duration and frequency which the Bank could not regard as tolerable.¹²⁹

The Bank, therefore, felt that an adjustment in its proposal of February 1954 (was) called for. This adjustment should, in the Bank’s view, assured Pakistan timely supply of water sufficient to eliminate the shortages. The adjustment could take the form of continued deliveries of “timely” water from the eastern rivers, or construction of storage dams on the western rivers. The Bank preferred the later course, and suggested for this purpose that flows of the western rivers should be exploited to the maximum possible extent.¹³⁰

The basic issue was solved, but it took four years of hard negotiations to work out a concrete solution. The difficulties did not arise merely from differences in approach between India and Pakistan. There were big problems of finance. It had become apparent that the cost of the construction required for a settlement on the lines of the World Bank proposal was beyond the capacity of India and Pakistan.¹³¹

The final agreement was made possible by the steadfast perseverance and “economic diplomacy,” to use the phrase of President Black of the World’s Bank, and through the friendly assistance of the United States, the United Kingdom, Canada, Australia, New Zealand and West Germany. The Indus Waters Treaty, ultimately, was signed at Karachi on

¹²⁶ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 87

¹²⁷ G. W. Chaudhri, *Pakistan’s Relations with India: 1947-1966* (London: Pall Mall Publishers, 1973), p. 162; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 87.

¹²⁸ Tipton and Kalmbach, Inc., *Feasibility Report On Salinity Control and Reclamation Project No. 3, Lower Thal Doab*, WAPDA, April 1963 as cited by Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 87.

¹²⁹ *IBRD Press Release No. 380*, Appendix 3, p. 1; See Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development 1* (June 1958); See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), pp. 87-88.

¹³⁰ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 88; See also Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development 1* (June 1958).

¹³¹ Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 88; See also Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development 1* (June 1958).

September 19, 1960.¹³²

4.3 SUMMARY

The overview of the Indus waters dispute highlights that the conflicting claims (riparian rights based on relative geographic location) and the attempts of the upper-riparian (because of superimposed/armistice boundaries and favourable surface features) in exploiting weaknesses (relative location and dependency on resources) of the lower-riparian, brought a deadlock in India-Pakistan dialogue. The Indian action to cut-off water supply to Pakistan generated sense of insecurity for the latter and conferred permanency to the ongoing distrust between them.

Bilateral negotiations pursued to settle the dispute intensified the acrimony between India and Pakistan. The Delhi Agreement proved to be an obstacle for any bilateral settlement. Both countries persistently asserted that their demands and rights are legally justified.

The resultant deadlock and aggravating tensions made intervention of a third party inevitable. Pakistan repeatedly demanded ICJ arbitration but India, with equal frequency, rejected the request. The separation of the Kashmir and the Indus waters disputes and the undertaking by India to the Bank that existing supplies to Pakistan would continue till the final agreement is reached marked the start of nine-year long process of international mediation between the enduring rivals.

The section on mediation process argues that timing of intervention by a mediator is very pivotal and it also influences the outcome. The greater the deteriorating relations between disputants the higher would be need to search for an intermediary. A conflict is considered as 'ripe' for resolution when the disputants reach a 'mutually hurting stalemate', to use Zartman's terminology. Generally, the influence of a mediator emanates from its institutional credibility in terms of financial independence and soundness. Moreover, an efficient and timely communication is essential between the mediator and the disputants. The mediator should not impose a given solution but persuasion is vital in terms of economic gains and incentives. These factors not only determine success but also suitability of the mediator to the nature of the dispute.

The Bank assumed its role as facilitator promoting communication between India and Pakistan. It repeatedly provided opportunities to the disputants to project their own points of view; a feature which persisted throughout the mediation process. Nevertheless, the Bank gradually strengthened its control over the mediation process and presented its own resolve to break the impasses. It controlled the physical and psychological environment within the mediating room but also encouraged the disputants to take the final decision. The bargaining

¹³² Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 88; See also Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development 1* (June 1958).

lever with the Bank was the dependency of the disputants for financial assistance. The mediator effectively used this tool to keep the disputing parties in negotiation.

It is also important to note the specific nature of the Indus Waters Treaty. The accommodation became possible with the postponement of vexing political issues. For example, the dispute over Kashmir still remained, and may even have been intensified because the rivers Pakistan was still dependent flowed through this disputed state. Here question arises: why then Pakistan accepted an 'inferior' solution? Postponement of political dimensions of the issue, nature of the disputed resource, suitability of a mediator and accommodation as preferred security strategy, on the part of lower riparian, offer the explanation.

Chapter 5

THE STRATEGY OF ACCOMMODATION OVER INDUS RIVERS

This chapter categorically deals with the question of preferring accommodation as a security strategy and postponement of political issues in face of vital economic issues in certain situations. Focus of the study is to explore, what factors compel the riparian for seeking accommodation, which party initiates it and why it becomes a preferred security strategy even amid enduring rivalries. The initiation of accommodation by the lower riparian, Pakistan, and acceptance by the upper riparian, India, is the main thrust of this section. The core hypothesis of study: *If enduring rivals reach a mutually hurting-stalemate then they prefer accommodation on critical concerns and postpone political issues*, is tested in this chapter.

For this purpose the chapter is divided into three sections. The first section analyses the factors behind the initiation of accommodation by Pakistan. There were series of initiatives for accommodation. The lack of culture of negotiation and complex nature of the water dispute led to a virtual breakdown of negotiations on various occasions. Every time a new initiative was proposed by the third party mediator, to save the negotiation process, which continued for about nine years until the Treaty was concluded in 1960. Here, the focus is on two principal initiatives: first, the initiative at the onset of the conflict in 1948 when India clogged the water supply to Pakistan; and second, the initiative of 1958 when negotiations were made successful by the military regime in Pakistan with the unconditional acceptance of the World Bank's Proposal.

The second section identifies the techniques that facilitated the process of accommodation, specifically engaging the disputants in decade-long negotiations under the auspices of the World Bank with a promise to make available financial resources if they reached a settlement.

The third section delves on a post-treaty event of accommodation, where both parties accommodated each other's concerns for the construction of a dam by the upper riparian on the River Chenab, commonly known as the Salal Dam. India created the issue in early 1970s, used it as a political tool and kept this issue lingering, until Pakistan recognised separation of East Pakistan as an independent state of Bangladesh. Consequently, India accommodated all Pakistani concerns related to the design of the dam.

5.1 Initiation of Accommodation

For an explanation of the motivations of Pakistan in 1948 and 1958, in initiation of bilateral dialogue and then accommodating the Indian demands by yielding to its legitimate claims to the "historic uses" of waters from the eastern rivers, the following three factors are analysed: (1) efforts of various governments in Pakistan to minimize losses, (2) the commitment to domestic economic and political reforms, and (3) the involvement of an influential third party mediator.

5.1.1 Efforts to Minimise Losses

As stated earlier, on 1 April 1948, India cut off water supplies to Pakistan using the headworks of the eastern rivers that were situated in its territory as a result of the Partition of Punjab. Overnight, this action gave birth to another crisis (beside the ongoing war between Indian regular army and the tribals of northern Kashmir and the peoples of Jammu and Kashmir) between India and Pakistan. Prior to the description of the compelling circumstances under which Pakistan initiated accommodation with India, the external politico-military dimension should be dilated upon, in addition, to the domestic economic situation. Indian action produced a prompt and devastating impact on the domestic economy of Pakistan. Although, it was a well thought-out strategy of India but interestingly, the only explanation it could state for its action was that East Punjab was anxious to establish its exclusive ownership of the waters flowing through its territory and it did not want West Punjab to acquire any legal rights through its continued use of these waters.¹

One of the major reasons behind Pakistan's initiative for accommodation with India in 1948 was its desire to minimise losses in the external military, political and internal economic spheres.²

To estimate the acuteness of the situation, as perceived by the Pakistani leaders at that time, one has to realise the importance of river water for Pakistan's predominantly agrarian society and national economy, especially in the provinces of Punjab and Sindh. In fact the five tributaries (the Jhelum, Chenab, Ravi, Beas and Sutlej) of the Indus river system in Pakistan provide the largest integrated irrigation system in the world, irrigating about 30 million acres. The extended system of canals originating from their headworks in the upper part of the Basin (East Punjab) was irrigating about 90 per cent of crop lands and supporting a population of about 40 million in Pakistan (West Punjab), more than half of the country's total population at that time.³

Obviously, the absolute dependence of the West Punjab's agrarian economy and society on irrigated agriculture made it extremely vulnerable to any fluctuation in river water supplies.

Prime Minister of Pakistan, Liaquat Ali Khan, expressed his concerns to his Indian counterpart, Jawaharlal Nehru:

"The view of the West Punjab Government is that the water supply cannot be stopped on any account whatsoever and we fully endorse this view. Such stoppage is a most serious matter and affects nearly a million of acres of land. It will cause distress to

¹ Naranjan D. Gulhati, *Indus Waters Treaty: An Exercise in International Mediation* (Bombay: Allied Publishers, 1973), p. 63.

² Haroon Haider Bhatti, *Pakistan's Accommodative Moves vis-à-vis India: A Case Study of the Dynamics of Accommodation in the Developing World* (MA thesis submitted to the McGill University, Montreal, Canada, 1999), pp. 1-54.

³ Muhammad Ayub Khan, *Friends Not Masters* (London: Oxford University Press, 1967), p. 108.

millions and will result in calamitous reduction in production of foodgrains, etc.”⁴

The gravity and extent of major losses which motivated Pakistan to initiate accommodation with India were also projected in one of Pakistan's official publications:

“The economy of West Punjab is agricultural.... The flow of water in rivers and canals is the life-blood of the country. Yet in April 1948,... India cut off this flow in every canal crossing the border....In an area as arid and densely populated as the Indus basin, the appropriation of one community of water of another is an act, with tragic and far-reaching consequences.... Such an act can be more devastating than an armed attack....”⁵

Although, the water supply was restored after five weeks, but this period coincided with the critical summer sowing time when there was an acute need for irrigation water. Obviously, late availability of water was useless, and an entire season was lost. Under such circumstances, minimising such losses to possible extent was among the top priorities of the Pakistani government as it was a question of survival of Pakistan.⁶

The fact immediately attracted attention of the world community when an independent study conducted by David E. Lilienthal, former chairman of the Tennessee Valley Authority of the United States, was made to public in 1951. He warned that: "No army, with bombs and shellfire, could devastate a land so thoroughly as Pakistan could be devastated by the simple expedient of India's permanently shutting off the sources of water that keep the fields and people of Pakistan alive.”⁷

For Pakistan the situation was appallingly worrisome because India not only was aware of its pre-planned power potential against Pakistan but also considered it legitimate to use to its advantage.⁸ Moreover, the Indian future intentions were also surfaced soon. In an article published in *Vigil* (New Delhi) on 8 August 1951 under the heading, "How Strong is Pakistan?" the Indian leadership challenged the national power and sovereignty of Pakistan saying:

“...though Pakistan has one of the largest irrigation systems in the world, she is entirely dependent for water on the rivers of East Punjab and Kashmir. If India were to cut off the waters, it is bound to impair Pakistan's strength considerably. Even her very existence could be in danger. Whether India would adopt such a perfectly legitimate but ruthless attitude without grave provocations is another matter. Pakistan produces plenty of food but that production depends on canal water which in a sense

⁴ Pakistan, telegram 1361, April 15, 1948. See Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, (May 1958), p. 85.

⁵ *Government of Pakistan*, “The Indus Basin Irrigation Water Dispute,” November 1953, p. 1.

⁶ Bhatti, op. cit., p. 39-40.

⁷ David E. Lilienthal, “Another Korea in the Making,” *Colliers* (August 1951). Lilienthal later persuaded the World Bank to mediate in the Indus waters dispute.

⁸ Bhatti, op. cit., p. 40.

is a gift of India and is in her power to stop.”⁹

In addition to it in 1948, Pakistan’s vulnerability vis-à-vis India was enormous because of the ongoing war in Kashmir and the expressed desire of the Indian leadership to absorb Pakistan back into India.¹⁰

It had experienced massive human losses and sufferings of Partition. Its meagre resources were already exploited to the maximum extent in an effort to address host of problems: the settlement of millions of refugees was underway and fierce fighting was going on with India in Jammu and Kashmir. Use of force to capture strategic headworks was unthinkable for Pakistan. Because, pursuit of any major armed conflict would have provided India a justification to keep water supply shut-off for an extended period, inflicting unaffordable economic losses and social costs. Under such circumstances, accommodation with India on the Indus waters dispute appeared to be the most prudent and pragmatic security strategy.¹¹

Pakistan immediately asked for negotiation with India but this first Pakistani initiative merely succeeded in producing an interim agreement. The subsequent bilateral talks and later facilitations by the mediator were prolonged for a number of years, reaching more procedural or transitional agreements but nothing was agreed that could be called as substantial.

One of the important procedural agreements negotiated under the good offices of the World Bank was India’s undertaking not to divert water from its eastern rivers till the time any acceptable solution had been worked out between the two states. This was a condition which provided Pakistan time to search for alternative sources.

Ayub Khan points out that:

“India was trying to appropriate for her own use all the waters of the Sutlej, the Beas, and the Ravi; and, perhaps, some waters of the Chenab. As an upper riparian, she was in a position to deprive us of all this water which flowed through her territory. Tempted by the prospects of quick economic development by utilizing easily available water India started on huge engineering works which could only result in the complete desolation of vast areas of land in Pakistan.”¹²

When in 1954 India opened new network of canals including Bhakara-Nagal Link, Pakistan expressed its strong resentment and the national press also projected its posture very strongly. The precise and focused reports highlighted that, “the supply of water in the

⁹ G. W. Choudhury, *Pakistan’s Relations with India, 1947-1966* (New York: Frederick A. Praeger Publishers, 1968), p. 158.

¹⁰ Many prominent leaders of the Congress Party, such as Sardar Patel and Maulana Azad, had hinted at merging Pakistan into India. For detailed discussion on this topic and the relevant statements made by the Congress leaders please see Choudhury, op. cit., p. 83-89.

¹¹ Bhatti, op. cit., p. 40-41.

¹² Ayub Khan, op. cit., p. 108.

Sutlej canals [Pakistan] registered a steep drop of 12,000 cusec in the last 24 hours as a result of India's action in letting go her Bhakra-Nagal Canals."¹³

The Prime Minister of Pakistan called it "the most serious and most recent violation of the [transitional] agreement of March 13, 1952"¹⁴ and the national feeling was projected in an editorial, which said: "today our independence, our sovereignty is in danger. Have we totally lost the will to defend freedom?"¹⁵ The *Zamindar* (newspaper) termed it an act of aggression and added: "There are now two ways open to Pakistan—either to submit to India and let her economy be ruined, or to resort to direct action to secure her just rights."¹⁶

Bhatti argues that the opening of the huge Bhakra-Nagal canals was the beginning of a "mutually hurting stalemate" for India and Pakistan. Indian undertaking to the World Bank, at the time of accepting its Good Offices, not to work on any further projects in East Punjab, which could impair the existing supplies to Pakistan, proved to be very effective. This meant that economic development would remain arrested in East Punjab until the final settlement was reached. Therefore, the stalemate was hurting India in two major ways: first, India could not economically benefit by developing mass irrigation projects in East Punjab; second, the opportunity cost of time (i.e. the level of development India could have attained in that time) was increasing with the passage of time.¹⁷

On the other hand, Pakistan's situation was even worse. It wanted a resolution but domestic political concerns prevented leaders from yielding its claim over "historic uses" of waters from the eastern rivers. The dilemma was that Pakistan could not keep India indefinitely in negotiations. Possibilities were high that either India would unilaterally withdraw from the negotiations or the stalemate would force the World Bank to quit as a mediator. Pakistan's worry was to win a solution which could provide it an adequate replacement for the three eastern rivers, which of course was not possible without provision of storage facilities.¹⁸

India, on the other hand, was not only in hurry to develop water resources but was also asserting its upper riparian status. In March 1958, Sardar Patel, a senior minister of the Indian government, stated in the parliament:

"We shall not wait a day longer than 1962. When our [Rajasthan] canal and the Sirhind Feeder are ready we shall withdraw the water that now goes to Pakistan. I shall implore Pakistan that they should not regard this as any kind of threat...."¹⁹

In Pakistan, Patel's statement was understood as a deadline. Later, in the same year (1958), civilian government was overthrown and General Ayub Khan imposed Martial Law in

¹³ *The Pakistan Times*, (Lahore), July 9, 1954, quoted by Aloys Arthur Michel, *The Indus Rivers: A Study of the Effects of Partition* (New Haven and London: Yale University Press, 1967).

¹⁴ Gulhati, *Indus Waters Treaty*, op. cit., p. 163.

¹⁵ *The Evening Star* (Karachi), July 9, 1954, quoted by Gulhati, *Indus Waters Treaty*, op. cit., p. 162.

¹⁶ Quoted by Gulhati, *Ibid.*

¹⁷ Bhatti, op. cit., pp. 41-42.

¹⁸ *Ibid.*

¹⁹ Gulhati, *Indus Waters Treaty*, op. cit., p. 234.

Pakistan. Soon after a radical shift came in Pakistan's previous stance of not yielding its historic uses, when it unconditionally accepted the Bank's proposal of 1954 and agreed not only to the surgical divide of the geographically integrated Indus river system but also implicitly relinquished propriety rights of these rivers to India.

Why did military leadership decided to accommodate Indian demands? In his autobiography, General Ayub Khan stated:

"Soon after Partition, India chose to take the drastic action of withholding water supplies to our certain canals and created a grave crisis for us. Water was released only under certain conditions to which we had no option but to agree, for the alternative was the physical devastation of vast fertile areas. The problem was made more complex because, until then, the Indus Basin irrigation system had been developed entirely from river flow and without reservoir storage. Water supplies were governed not only by seasonal variations, but also by the yearly variations in the flow of the rivers depending on rainfall in the upper reaches of the Himalayas."²⁰

"My main worry was the vulnerability of Pakistan. The sources of the rivers were in India along with the headworks. India had made all arrangements to divert the waters and the Indian Army was three times the size of our army. I felt that if negotiations with India broke down, and the Indians did decide to divert the waters, we should be facing a situation of war. Every factor was against us. The only sensible thing to do was to try and get a settlement even though it might be the second-best, because if we did not, we stood to lose everything."²¹

General Ayub Khan had been Commander-in-Chief of the Pakistani armed forces since 1951. Prior to the Partition, he had served in the British Indian Army for 18 years. "When I was Commander-in-Chief, there was a great deal of talk in the Press about the Indus Basin dispute. The Indian seemed determined to cut off water supplies to our canals. If that had happened, the country might well have found itself involved in an armed conflict with India."²²

Ayub Khan also faced confrontation from the technical experts as well as administration of Pakistan. He points out that:

"I should like to describe the confrontation I had with our own technical experts and administration, I sensed that they did not fully realize the gravity of the situation and were asking for moon when we were in a position of weakness all along the line. They were also trying to dictate policy and were taking up extreme positions. Some thirty or forty of them were assembled in Government House, Lahore, where I addressed them. I said: 'Gentlemen, this problem is far-reaching consequences to us.

²⁰ Ayub Khan, *op. cit.*, p. 108.

²¹ *Ibid.*, p. 109.

²² *Ibid.*, p. 108.

Let me tell you that every factor is against Pakistan. I am not saying that we should surrender our rights but, at the same time, I will say this that: if we can get a solution which we can live with, we shall be very foolish not to accept it. Now when I say that, I am in fact saying it to myself because I shall have to take the responsibility for the solution. 'The responsibility does not lie on any one of you, so let me tell you very plainly that the policy is going to be mine, I shall consult you whenever I am in doubt regarding technical details, but if any one of you interferes with the policy, I shall deal with him myself.'²³

Bhatti argues that Ayub Khan was fully acquainted with the inherited sound military infrastructure of India and the power asymmetry that existed between Pakistan and India. Furthermore, Pakistan neither had the "strategic depth" necessary for effective defence nor any strategic military alliances within the major powers that could offset its various weaknesses. To shore up Pakistan's defences, General Ayub Khan convinced the leaders to join military alliances with the West which Pakistan signed as SEATO on 8 September 1954 and CENTO (earlier named Baghdad Pact) on 23 September 1955. During this period, Pakistan also received substantial military aid from USA for the modernisation of its defence forces.²⁴

By the year 1958, Pakistan had achieved a credible defensive capability vis-à-vis India but this capacity was not enough to go on offensive against India. In terms of strength of armed forces, weapons and ammunition Pakistan was lagging behind India. General Ayub Khan in his book mentioned the 3 to 1 numerical inferiority of the Pakistan Army in comparison to its Indian counterpart. Apparently, Pakistan was unable to counter Indian predominance in military power if India ever decided to sever water supplies to Pakistan.²⁵

Soon after military coup realism and prudence was followed by the Pakistani military leadership, as Ayub Khan states:

"When one is dealing with a sensitive problem of this nature, one has to be realistic and judge the situation dispassionately in order to formulate a rational approach. Very often the best is the enemy of the good. We abandoned the chase of the ideal and accepted what was good after a careful and realistic appreciation of the overall situation.... Emotions had no place in it, nor could they be allowed to have any place where the future and safety of the millions of people depended on a solution."²⁶

Under such circumstances, the accommodative initiative of the Ayub regime was, in part, driven by the motivation to minimise expected losses in the domestic economic and the external politico-military spheres.

²³ Ibid., p. 109.

²⁴ Bhatti, op. cit., p. 42.

²⁵ Bhatti, op. cit., p. 43.

²⁶ Ayub Khan, op. cit., p. 112.

5.1.2 The Commitment to Domestic Political and Economic Reforms

This section explores the magnitude and pace of domestic economic, political, and administrative reforms in Pakistan at two points in time: in 1948 and then in 1958. The objective is to illustrate how these reforms facilitated the decision of the civil and military leadership of Pakistan to launch an accommodation process with its arch rival India.

In 1948, when the Indus waters dispute was created by India, the leaders of Pakistan were not only in the midst of introducing various reforms in the country rather they were committed to implement them. The reforms were being carried out at two levels: 1) at the procedural level, the leaders were trying to build administrative, political and economic systems that could not only fill the gap left by the British colonial rule but would also work more effectively for Pakistan; 2) the most dear to the leaders, on a broader scale, were their efforts to realise the vision of Pakistan that they had envisaged and promised to the Muslims of the Subcontinent during the independence movement.²⁷

These procedural reforms were affected very deeply due to the lack of availability of resources with Pakistan because neither the share promised to Pakistan at the time of Partition was judicious nor did India fulfil the commitments. For example, Pakistan inherited 96 ICS (Indian Civil Service) officers in comparison to India's 418. Literally speaking, Pakistan had to build its administrative system from a scratch.²⁸

President Ayub Khan states in his autobiography that when he took over as General Officer Commanding in East Pakistan in 1947 he found that the provincial government was 'poorly staffed,' "worse still, it was politically weak and unstable. There was no army....We had very poor accommodation; at Headquarters there was no table, no chair, no stationery—we had virtually nothing at all; not even any maps of East Pakistan."²⁹

To improve administrative performance the government initiated a major drive to recruit able Pakistanis from around the globe, especially students studying Britain and North America. The government was anxious to train these young men and employ them to solve the grave problems, such as rehabilitation of more than six million refugees who had crossed over from the Indian Punjab, resolve evacuee property issues and other revenue matters. Efforts were made to form basic organisation and the provision of office space and furniture for the government officials. However, limited resources remained a major constraint on the government's ability to carry out various reforms.³⁰

Fresh recruitment was also carried out in the Pakistan Army. At the time of Partition, India received the lion's share of military assets. In personnel, Pakistan received one-third of

²⁷ Bhatti, op. cit., p. 44.

²⁸ For detailed picture of Pakistan's feeble situation in administrative and military spheres please see Pervaiz Iqbal Cheema, *Pakistan's Defence Policy, 1947-58* (Hampshire, London: The Macmillan Press Ltd., 1990), especially ch. 1 & 2.

²⁹ Ayub Khan, op. cit., p. 22.

³⁰ Pervaiz Iqbal Cheema, *Pakistan's Defence Policy: 1947-58* (London: Macmillan Press Ltd., 1990), ch. 2.

the Royal Indian Army, one-fourth of the Royal Indian Navy and one-fifth of the Royal Indian Air Force. Moreover, all of the sixteen ordinance factories and major training centres went to India, with the notable exception of Quetta Staff College. Pakistan received approximately one-fifth of the military hardware (including jeeps, tanks, etc.).³¹ Moreover, defence of East Pakistan was a logistical nightmare while both parts of Pakistan were separated apart by more than 1,000 miles (1,565 km) of Indian territory. Immediate reforms undertaken in 1948 were included the retention of British officers, organisation of personnel from the Royal Indian Forces into new units, recruitment and training of new personnel and procurement of military hardware.³²

On political front, various reforms were also carried out: Firstly, the government was trying to regulate its relations with various autonomous units within West Pakistan, such as the princely states (of Bahawalpur, Kalat, Swat and Dir), tribal agencies in the Northwest (previously under the direct control of the Viceroy of India) and the fully autonomous tribal areas. Secondly, the government had initiated a debate in the Constituent Assembly on the future Constitution of Pakistan. At that time, constitution making was perhaps one of the gravest issues confronting the government. The leaders, since 1948 were aware of the significance of framing a new constitution, at the earliest. This document was supposed to deliver a stable, independent homeland for the people who had struggled relentlessly for years to have their own separate country. Guiding principle was to create and establish political institutions, preferably based on Islamic thought and ideology.³³

The situation in the domestic economic sphere was worst comparative to the other sectors. "Partition gave India most of the industry of undivided India, and because many of the entrepreneurial and trading classes migrated to Pakistan at Partition, India also had a more skilled labour force than Pakistan."³⁴

The following table provides a clear picture of the industrial imbalance between the two states.

----- **TABLE-6** -----

The Division of Industrial Assets between India and Pakistan in 1947

Type of Industry	India	Pakistan
Cotton	857	15
Sugar	176	15
Jute	111	00
Cement, Lime-work and Potteries	057	08
Iron and Steel	036	00
Glasswork	112	05

Source: O.H.K. Spate, "The Partition of India and the Prospects of Pakistan," Geographical Review, No.38 (1948), p. 22.

³¹ Pervaiz Iqbal Cheema, *Pakistan's Defence Policy: 1947-58* (London: Macmillan Press Ltd., 1990), ch. 2; See also Sarbjit Johal, *Conflict and Integration in Indo-Pakistan Relations* (Berkeley: University of California, 1989), pp. 29-31.

³² Ibid.

³³ Bhatti, op. cit., p. 45.

³⁴ Sarbjit, op. cit., p. 25.

Bhatti believes that the only area where Pakistan was better off than India was the extensive and well-integrated irrigation network that the British had built in West Punjab, which fortunately happened to form part of West Pakistan. These irrigation channels were the lifeline for the sustenance of its socio-economic system. Pakistan's total dependence on India for irrigation supplies compelled it to negotiate the issue immediately. It did not have the will and mandatory resources to fight over the Indus waters dispute with India. Mohammad Ali Jinnah, died in 1948—a year after the Partition. His successor, Liaquat Ali Khan, was assassinated in 1951. The early and untimely disappearance of these two popular leaders from the political scene of Pakistan has rightly been attributed as the cause of the political crisis that gripped the state in its formative years. Between 1951 and 1958 Pakistan had seven prime ministers. The politicians at national level, totally disregarded to the political ethics, social morality and principles of conscience, kept continually changing their party's loyalty. Another characteristic of this period was the acute and unending tussle between the federal and the provincial governments. Much before the imposition of the 1958 Martial Law, it had become a routine for the Governor General and then President to dismiss provincial chief ministers who did not toe the official line.³⁵

Economic development in Pakistan was put on the back burner during this era. The politicians were busy looting the meagre national treasury as if there was no tomorrow. "Suffice it to say that the public had become disenchanted with the politicians and many quarters of the society looked towards the Army to salvage the country from its pathetic state of affairs."³⁶ President Ayub Khan described his martial law regime as 'revolution': "the immediate objective was to rehabilitate the civil and constitutional organs of the state. They had become ineffective and oppressive through misuse and exploitation."³⁷ Bhatti highlights that the reforms in land acquisition, the settlement of refugees along with economic measures to control price-hike and prevent smuggled goods from entering the market, and establishment of education and judicial systems were Ayub's foremost priorities at domestic front. However, his ambitions for Pakistan were quite grandiose, to say the least.³⁸ According to him,

"...among the long-term objectives of the revolution was the introduction of major reforms designed to remove the confusion and imbalance in the social and economic life in the country. These reforms were to culminate in the introduction of a proper Constitution and restoration of constitutional life...[Furthermore] what the country needed was a positive effort to move forward to build itself and the economy into a dynamic and progressive force."³⁹

Thus, military leadership's commitment to major domestic reforms was a significant

³⁵ Bhatti, *op. cit.*, p. 46-47.

³⁶ *Ibid.*

³⁷ Ayub Khan, *op. cit.*, p. 77.

³⁸ Bhatti, *op. cit.*, p. 47.

³⁹ Ayub Khan, *op. cit.*, p. 77.

factor in Pakistan's acceptance, in 1958, of the Bank's Proposal pending since 1954. This was a new initiative for accommodation with India after the protracted negotiations had almost reached a stage of deadlock in 1957. Though the perception of loss prevention in the external politico-military sphere was the motivating factor for accommodation initiative in 1958, the regime was well aware of the fact that "peaceful co-existence" (in President Ayub's words) with India would free-up resources that would help the regime in the domestic agenda.⁴⁰

In addition to the above circumstances, three additional factors played a significant role: (1) Fear of losing external military and political support from the US and the West if Pakistan ever refused to accept the US and World Bank's advice; (2) Signing of the Treaty under international mediation was a formal acceptance of Pakistan's sovereignty by India; (3) The Bank's plan for the construction of link-canals for diversion of water from western rivers to the eastern rivers, within Pakistan's territory, had an inherent military advantage to defend the country against future ground offensive from India. Each of these points is elaborated below.

Pakistan was totally banking upon the US and its Western allies for any needful political support on the Kashmir issue. It's joining to the US-sponsored alliances, such as SEATO and CENTO and keeping Commonwealth membership was purposefully geared to secure, political support on Kashmir issue. Notwithstanding the fact and knowingly well, that these alliances only had a military utility against Communist aggression.

The conclusion of the Indus Waters Treaty under the auspices of the World Bank ended the long-standing Indian moves and aspirations to compel Pakistan to join back the Indian Union. The Treaty was a declared acceptance of Pakistan's sovereignty by its archrival India. As an illustration, the Article IX of the Indus Waters Treaty guaranteed Pakistan's sovereignty and independence as a separate nation state.

The Indian military presence in Kashmir was a sword of Damocles hanging over Pakistan's head. The river corridors were wide open and were totally vulnerable to all types of military manoeuvres and threats of deep penetration into its territory. The construction of canals, linking western rivers with the eastern rivers, provided a flank protection against any mechanized military manoeuvrability. For, crossing of canals was a nightmare for even a highly modern mechanized army during that period. The Indian objective to capture major city of Lahore in 1965 War was frustrated only because its mechanized troops failed to cross by the BRB link canal, which provided sufficient reaction time to Pakistan army to check the Indian massive onslaught aimed at capturing Lahore—the capital of Punjab province. Had it eventuated, India would have secured a golden opportunity to bargain Kashmir.

5.1.3 Involvement of an Influential Mediator

One can't say with confidence that Pakistan's first initiative in 1948 for accommodation was influenced by any third party. Nor one can blame an absence of culture of negotiation from Pakistani side in 1948. Rather Pakistan was eager to settle water dispute

⁴⁰ Bhatti, op. cit., p. 47.

with India because of compulsions of geography—the water of the Ravi and Sutlej rivers was a life-line for the 'food-basket' of Pakistan (West Punjab). However, the presence of the World Bank as mediator, over the Indus waters dispute, since 1951 did have a momentous impact on Pakistan army precipitating into General Ayub Khan's decision to accommodate the Indian demands in 1958.

Mediators from the World Bank considering the charged political environment of non-cooperation between India and Pakistan reached the decision that the only way to resolve the stalemate was to persuade Pakistan to accept the division of rivers in the wake of the offer to build storage dams on two of the three western rivers that Pakistan would have received exclusively for appropriation and development. This offer was in addition to the construction of link canals that would transfer waters from the western rivers to the areas of the West Punjab, previously irrigated by the eastern rivers. India remained obstinate that it would only pay for the link canals and not for the proposed dams. The Indian intransigence provided an opportunity for the Bank to take up the financial issue with some friendly countries (including USA., UK, Canada, Australia and New Zealand) regarding funds for irrigation projects in Pakistan.

Military government realised the vulnerabilities of Pakistan vis-à-vis the upper-riparian India. President Ayub Khan fully comprehended the situation that the problem "if not tackled properly, may well mean the end of the country." He was fully acquainted with the Bank's offer too and knew that if Pakistan did not reach a settlement with India in the near future, the golden opportunity to develop the water resources with the help of friendly governments along with the waters of the three eastern rivers would be lost for ever.

There was another genuine problem in Banks' offer. The Bank promised 600 million dollars for the construction of two dams at river Jhelum—Mangla and Rohtas. Rohtas was a small dam and there was no facility to store surplus water, especially during rainy season. Pakistan wanted a dam at Tarbela (on the Indus River) instead of the much smaller, Rohtas dam, proposed by the Bank. The difference in the costs of these two projects was about \$200 million. President Ayub Khan explained how he tried to convince the Bank's President, Mr. Eugene Black:

"I knew that when Eugene heard it [the staggering difference in the costs of two projects] he would hit the roof. And so he did. But I told him, and I quote the words as I recall using then: 'I have been around these areas which are going to be affected by the withdrawal of waters by India. People have told me very plainly that if they have to die through drought and hunger they would prefer to die in battle and they expect me to give them that chance. Our jawans [troops] and the rest of the people feel the same way. So this country is on the point of blowing up if you don't lend a helping hand. This is a human problem of a grave nature and cannot be blinked away. What we are being called upon to do is to barter away naturally-flowing waters into our canals, for storage water, and the history of storage is that it begins to silt the moment

it is completed. Besides, we are going to be put back by about ten years or so by building these storages and link-canal. All this effort could have been put to more constructive effort. So, we are making great sacrifices.”⁴¹

Bhatti argues that Pakistan was not able to raise the finances needed for the construction of these dams and link canals. Had the Bank not been present on the scene or had it not offered to raise funds for development projects in Pakistan, Ayub Khan's initiative would not have come about. The ‘carrot’ extended by the Bank played a significant role in facilitating Pakistan's initiative for accommodation in 1958.⁴²

5.2 Process of Accommodation

In this section, various techniques that the negotiator employed in order to facilitate the process of accommodation over the Indus waters dispute are dealt with precisely. The factors instrumental in accommodation between India and Pakistan were: (1) successful pre-negotiation, (2) involvement of an influential third party, (3) quiet or secret diplomacy, (4) postponement of political issues, and (5) reminiscent wording of the agreement.

5.2.1 Successful Pre-Mediation Negotiations

The accommodation over the Indus waters dispute took about twelve years long negotiation and mediation process. Initially, the chief engineers of the East and West Punjab involved in negotiations, later, the dispute was taken over by the central governments of India and Pakistan. Moreover, the Bank also favoured another round of formal pre-mediation negotiation which was held under its auspices from 1951 to 1952.

Bhatti describes that the successful pre-mediation negotiation paved the way towards accommodation and achieved the following four objectives⁴³:

First, the parties were able to define the boundaries of the Indus waters dispute. Pakistan made several attempts to interlink water and Kashmir dispute. It argued that a peaceful resolution of Kashmir dispute would confer its control over the source of three out of the five main rivers of Punjab—a lifeline of Pakistan. Only in that case, India would never be able to divert or sever water supplies to Pakistan. On the other hand, as long as India controlled the Kashmir territory, there would always be a threat to Pakistan's territorial and economic interests, most pertinent of which was water supply. The Indian position was that Kashmir should not be discussed at this forum and both the issues should be tackled separately. The Lilienthal's proposal which was convincingly sound for a professional engineer and credited by the acceptance of the World Bank as base line, also argued that the Indus water dispute was a technical one and should be handled by professional engineers as politicians were ill-equipped in resolving it. The Bank management also endorsed the Indian

⁴¹ Ayub Khan, *op. cit.*, p. 110.

⁴² Bhatti, *op. cit.*, p. 49.

⁴³ Bhatti, *op. cit.*, p. 50.

line of thinking that water issue be tackled first then it could pave the way for the resolution of the intractable Kashmir dispute.

Second, pre-mediation negotiation identified the actors and defined their roles. To address the India's initial reservations about the Bank's role as a mediator, it was made clear to both sides that the it would try to facilitate the negotiation process and mediate the issue but under no circumstances will accept the responsibility of arbitration.

Third, pre-mediation negotiations defined the agenda for talks. Both the parties were asked to submit their respective plans. It provided an opportunity for the disputants in conducting research and comprehending the hydrology of the Indus river system and chalk-out developmental possibilities to cater for their present and future needs. Logically, it also facilitated the Bank to comprehend the viewpoints of the disputants and provided an opportunity for the Banks' professionals to formulate their comprehensive proposal.

Fourth, pre-mediation negotiations helped establish a satisfactory degree of understanding between the negotiating parties. Joint studies provided an opportunity for each side to learn about the negotiating style of the other. The parties knew exactly what was at dispute, whom they were dealing with and what agenda they were supposed to follow. This clarity facilitated the first few stages of the accommodation process.

5.2.2 Mediation by the Influential Third Party

The influential World Bank played a pivotal role in the entire process of mediation. The most important dimension of the third party mediation in the context of this study was its role as financier in the river development infrastructure. The Bank accorded to this status, possessing both resources and expertise required for the development of water resources. It served as best possible communicator, formulator and also manipulator in the entire process of mediation.⁴⁴

From the very beginning of its involvement, Bank maintained vital communication links between the disputant parties. It was mostly through the Bank that the two sides clarified each other's real position.

Second, the Bank's involvement also proved useful in extending certain constructive and innovative proposals to break deadlocks. At the time, when India refused to contribute to the construction of replacement infrastructure i.e. link canals and especially two storage reservoirs, the Bank suggested to raise capital from the other states for the purpose.

The Bank also tried its best to maintain neutrality throughout the process consequently it had gained enormous respect and trust of India and Pakistan. Nevertheless, its financial clout gave it unequivocal leverage which helped it to play pivotal role in salvaging the process of accommodation from virtual breakdown.

⁴⁴ Bhatti, op. cit., p. 51-52.

5.2.3 Secret Diplomacy

Another technique that helped to conclude the process of accommodation was the employment of secret diplomacy. The publics in both India and Pakistan were generally aware of the fact that some sort of talks were ongoing regarding the Indus waters dispute but they did not have any real-time, factual or instant information (through radio, television or other modern channels of communications) about the precise nature and the stage of the negotiations. This strategy of the Bank shielded the negotiators from domestic pressures and politicisation of the issue. Domestic environment, journalists and local politicians in both countries, particularly in Pakistan, often demanded top leaders to disclose the contents and make impassionate comments on the dispute but the top leadership remained tight lipped.

Bhatti argues that the Indus waters dispute could have become a convenient tool for local and national politicians for gaining cheap popularity. This fact was well captured by a national daily editorial which stated: "Having merely exhausted the possibilities offered by Kashmir issue, the forces out to exploit the complications of the Indo-Pakistan relationship as a short cut to electoral success have turned to the canal waters question"⁴⁵ but nothing was ever disclosed by the top leadership of both states.

Gulhati points out that the selection of venue for negotiation was another important measure for the success. Barring a couple of discussions almost all meetings were held either in Washington DC, or in London and Rome. Once, the Indian Prime Minister, Jawaharlal Nehru, insisted that the venue be shifted to the Subcontinent, the Indian principal negotiator politely advised that India and Pakistan could not expect the World Bank's management to leave its regular duties and move to the Subcontinent for an indefinite period. Maintaining the venue of negotiations outside the Subcontinent proved, to be major decisive feature of keeping the parley out of the reach of local as well as international press.⁴⁶

5.2.4 Postponement of Political Issues

The placement of major intractable issue of Kashmir on backburner was a success of the World Bank's mediation skills. Although Kashmir and Indus river system were very much intertwined, the separation of the issue of Kashmir from the Indus dispute facilitated the settlement of water issue on purely functional and technical lines. Nature proved to be of great help as it was the peculiar geography of the Indus rivers system that diversion of rivers became possible and such proposal also deemed fit for the geo-political interests of the upper riparian. For lower riparian, Pakistan, the immediate supply of the irrigation water for existing uses, was a question of survival of the state in its formative phase. Although, the Kashmir dispute already had become a hot political issue since India had taken it to the United Nations immediately after the Partition but at the same time it had reached a stalemate with the acceptance of the ceasefire by the parties.

⁴⁵ *The Pakistan Times* (editorial), Lahore, July 12, 1958.

⁴⁶ Gulhati, *Indus Waters Treaty*, op. cit., p. 335-36.

Bhatti makes an interesting observation relating to the postponement of political issue to reach an agreement on substantial matter. The wish to settle the Indus dispute compelled Pakistan to negotiate various transitional agreements, almost on a yearly basis, for the supply of irrigation waters from the eastern rivers. Thus negotiating transitional matters had some merits too. India always tried to use these occasions to squeeze major benefits towards the final settlement of the Indus dispute. When India opened its Bhakra-Nagar canal and diverted a portion of the water from the eastern rivers into the land of East Punjab, some Indian circles argued that such incremental diversion of the water every year would eventually force Pakistan to negotiate on their terms. However, to save the negotiations from a complete failure the Bank proposed to postpone substantive issues for later review. This forced Pakistan to sign transitional agreements on Indian terms and conditions and wait till the final settlement of the Indus dispute was reached. This phenomenon raises an interesting question: Is it better to negotiate transitional or procedural agreements before tackling the substantive issue? Could such a technique further help the process of accommodation in other cases?⁴⁷

In other words, would it be more rational to search solutions for other procedural issues between India and Pakistan before tackling the dispute of Kashmir? This approach may not be acceptable to Pakistan any more.

5.2.5 Wording of the Agreement

Drafting of the Indus Waters Treaty (IWT) was an uphill task and was profoundly debated, as each party wanted to secure its future rights and uses at the expense of the other. The foremost concern of each side was that the treaty should not change the nature of its claim over Kashmir territory. The fear of the lower riparian about Indian interference with the rivers flowing through the territory of Jammu and Kashmir remained persistent throughout the negotiation and also during drafting of the treaty. Each party tried to incorporate terms and phrases defining rights and obligations to prevent other misinterpreting it. It necessitated inclusion of a number of annexes with the main treaty almost ten times larger than the original text of the agreement.⁴⁸

Language, in terms of the wording of the agreement is crucially important that can help the process of accommodation in different ways in which the agreements are written. Parties to the dispute always sought to use tentative and multi-meaning words, while negotiating a procedural agreement, and comprehensive terminology, while negotiating a substantive agreement. The former kind of agreement is meant to be vague so that the parties can proclaim victory at home by interpreting the agreement as they wish.⁴⁹ The glaring example is the Delhi Agreement 1948 (see Appendix 1). The wording of the agreement was so tentative and subject to various explanations that both parties have been interpreting it

⁴⁷ Bhatti, op. cit., p. 53.

⁴⁸ See full text of the Indus Waters Treaty at: <http://www.worldbank.org>.

⁴⁹ Bhatti, op. cit., p. 95-96.

differently. Although, it was an interim agreement as no expiry date was fixed but India claimed it as an international as well as a permanent agreement. It reads at Para 5-7 as:

“The West Punjab Government has agreed to deposit immediately in the Reserve Bank such ad hoc sum as may be specified by the Prime Minister of India. Out of this sum, that Government agrees to the immediate transfer to East Punjab of sums over which there is no dispute.”

“After an examination by each party of the legal issues, of the method of estimating the cost of water to be supplied by the East Punjab Government and of the technical survey of water resources and the means of using them for supply to these canals, the two Governments agree that further meetings between their representatives should take place.”

The Dominion Governments of India and Pakistan accept the above terms and express the hope that a friendly solution will be reached.

India projected it as an international agreement and got it registered with the UN Secretariat, but for Pakistan it was purely an interim agreement, awaiting further negotiations for the final resolve. The agreement proved to be a pretext for the Indian negotiators to assert their claims over eastern rivers. They manipulated it against Pakistan at every forum, charging that Pakistan had recognised the Indian propriety rights on these rivers: though, the phrase used was “supply to these canals”. In this way, Pakistan ultimately lost three eastern rivers for ever.

A substantive agreement, on the other hand, cannot have the liberty of being open to various interpretations. The Indus Waters Treaty was written with extreme care and precision leaving no ambiguity regarding implementation. The Treaty, which “reads like a masterpiece of legal and technical drafting,”⁵⁰ contains eight main annexure, countless appendices and continues over more than two hundred pages. Actually, the prevailing nature of the relationship between the parties demanded extreme care in articulating the treaty text. Although, there are numerous instances of different interpretations but due to clarity of the wordings, the Treaty has managed to survive three subsequent wars and many crises.

Moreover, the specific nature and clearly defined boundaries of the treaty regarding “rights and obligations” made it more focused to the water problem only but is “still pregnant with meaning”.⁵¹ The Article XI of the treaty states in part:⁵²

(1) It is expressly understood that:

(a) This Treaty governs rights and obligations of each Party in relation to the other with respect only to the use of the waters of the Rivers and matters incidental thereto; and

⁵⁰ “Six Rivers, One Purpose,” *The Statesman*, New Delhi, September 21, 1960, quoted by Bhatti, op. cit., p. 53-54.

⁵¹ Aloys Arthur Michel, op. cit., p. 261.

⁵² See full text of the Indus Waters Treaty at: <http://www.worldbank.org>.

- (b) nothing contained in the Treaty, and nothing arising out of the execution thereof, shall be construed as constituting a recognition or waiver (whether tacit, by implication or otherwise) of any rights or claims whatsoever of either of the Parties other than; those rights or claims which are expressly recognized or waived in this Treaty.
- (c) Each of the Parties agrees that it will not invoke this Treaty, anything contained therein, or anything arising out of the execution thereof, in support of any of its own rights or claims whatsoever of the other Party, other than those rights or claims which are expressly recognised or waived in this Treaty.

By this provision the status of other disputes, especially that of Kashmir, was clearly and absolutely not to be affected. Thus, the resolution of the riparian dispute became possible only by isolating it from all other matters.

5.3 Post-Treaty Accommodation on Salal Dam

In 1970, India started to construct a huge dam on the Chenab River at a place called Salal, capable of diverting water of Chenab River and resulting in severe fluctuation in the downstream flow. The Salal Dam⁵³ project was perceived by many analysts aiming at first, to divert Pakistan's attention from then East Pakistan crisis. India held it hanging until Pakistan had recognised Bangladesh. The other objective was to generate electricity. Thirdly, to collect political benefits by controlling river Chenab flows as and when desired.

5.3.1 Implications for Pakistan

By constructing Salal Dam, in the late 1970's on the Chenab at Dhiangarh, along with diversion structure by completing Marhu Tunnel to divert Chenab water into the Ravi, Ravi to Beas and Beas to Sutlej and thereof, India is capable of converting the fertile lands of Punjab totally barren or destroying crops by opening flood gates of the headworks, affecting lives of millions of farmers along with their belongings in the core cities of Punjab. In both the ways, it would be a lethal "powder keg" more than a nuclear bomb.⁵⁴

The Salal Dam site, near Dhiangarh on the River 'Chenab Main',⁵⁵ is approximately 50 kilometres upstream from Pakistan's Maralla headworks. Apparently, it was meant to harness the waters at a village called Salal. The construction of the dam could cause total or partial stoppage of water to Pakistan for a certain period. It could have an adverse impact on

⁵³ For detailed description on Salal Dam issue see Nasrullah Mirza, "Salal Dam Issue in Retrospect," *Margalla Papers*, No. 1, Vol. 1 (1997), pp. 41-52.

⁵⁴ David E. Lilienthal, "Another Korea in the Making," *Colliers* (August 1951). Lilienthal later persuaded the World Bank to mediate in the Indus waters dispute. Lilienthal argued that no bomb sells can destroy Pakistan so thoroughly than just shutting off water supply by India.

⁵⁵ The term 'Main' added after the rivers Indus, Jhelum, Chenab, Sutlej, Beas and Ravi means the main stem of the named river excluding its Tributaries, but including all channels and creeks of the main stem of that river and such Connecting Lakes as form part of the main stem itself. The Jhelum Mian shall be deemed to extend up to Verinag, and the Chenab up to the confluence of the river Chandra and the river Bhaga. The term Connecting Lakes means any lake which receives water from, or yields water to, any of the Rivers; but any lake occasionally and irregularly receives only the spill of any of the Rivers and returns only the whole or part of that spill is not a Connecting Lake.

Pakistan's socio-economic security and well-being, as a number of canals running close to the Indo-Pakistan border originate from Maralla headworks and could be dried up in reaction to any conflict or tension between India and Pakistan. During any military operation, the water could be stopped for 25 days—rendering the water obstacles along border-crossing between the two countries ineffective, and making crossing of the canals much easier.

The economic implications were alone far-reaching. The River Chenab, the second largest river of Pakistan's three western rivers: the Indus, Jhelum and Chenab, irrigates about 70 per cent the fertile lands of the province of the Punjab. There are three canal systems built on river Chenab. The first canal system, Upper Chenab Link Canal, originating from Marala headworks falls into River Ravi at Balloki headworks. It carries irrigated water for 1.4 million acres of fertile land. The second canal system, Lower Chenab Canal, originating from Khanki headworks, irrigates about 270,000 acres of fertile lands in Rachna Doab area. While a number of canals originating from Trimo headworks irrigate about one million acres of fertile lands. In total, the River Chenab is source of water for irrigation of about 2.7 million acres of the lands of province Punjab—these areas fall in the districts of Sialkot, Gujranwala, Sheikhupura, Faisalabad, Okara, Sahiwal, Jhang and Multan. These districts constitute the privilege 'food basket' and hence backbone of Pakistan's agrarian economy.⁵⁶

5.3.2 Pakistan's Objections

Pakistan raised the following five objections regarding the design of the Salal Hydro-electric Plant and the diversion programme during construction on the basis of the criterion specified in the Indus Waters Treaty 1960. (1) Works as proposed will be capable of artificially raising the water level in the Operating Pool⁵⁷ and will, therefore, have the capability of causing fluctuations in the river flows [Criterion (a) of Paragraph 8 of Annexure D to the Indus Waters Treaty, 1960]; (2) A gated spillway has been provided although the site permits the use of an un-gated spillway. A gated spillway can be utilized for temporary storage of water contrary to the provisions of the Treaty [Criterion (e)]; (3) Outlets have been provided below the dead-storage level which can be operated to deplete the reservoir and on being shut again can cause the temporary stoppage of river flows [Criterion (d)]; (4) The intakes for the turbines are proposed to be located at a low level which could enable the hydro-electric plant to be used for peaking and thereby fluctuations could be caused in the flows of the river [Criterion (f)]; and (5) The diversion programme during construction would cause fluctuations in the supplies downstream, which is not permitted under the Treaty.

In the wake of Salal Dam, Pakistan's perceived security implications were also

⁵⁶ Muhammad Aslam Jan, "Salal Dam: Background and Implications," *Nawa-i-Waqt* (Lahore) Feb. 6, 1978.

⁵⁷The term 'Operating Pool' means the storage capacity between Dead Storage level and Full Pondage Level. Where the term 'Dead Storage' stands for the portion of the storage which is not used for operational purposes and the 'Dead Storage Level' means the level corresponding to 'Dead Storage'. The term 'Full Pondage' stands for the level corresponding to the maximum Pondage provided in the design in accordance with Paragraph 8(c), which reads: "The maximum Pondage in Operating Pool shall not exceed twice the Pondage required for Firm Power of a *Run-of-River Plant* [Italics mine]".

substantive. India can stop flow of Chenab river for up to 25 days to facilitate its offensive operations in Ravi-Chenab corridor for capturing strategic cities of Gujranwala, Wazirabad on the GT Road and secure major military advantage by cutting off GT Road, linking Lahore to Islamabad. It was the only highway, linking the whole of Pakistan. To avoid the contravention to the Treaty in completely closing of the Chenab river, India may keep open the low level outlets of Salal Dam which will significantly reduce the obstacle value of Marala Ravi Link (MRL), Bambanwala Ravi Badin Link (BRBL) and Upper Chenab Canal (UCC) emanating from Marala. Neutralisation of these canals will facilitate the Indian military operations.

Flooding of the river with large quantities of water exceeding 100,000 cusecs could saturate the river bed within the flood banks and beyond resulting in: a) Activation of multi-channels. b) Rise in water table with massive deterioration of road infrastructure resulting in poor traffic-ability necessitating heavy expedient treatment. c) Damage to communication infra-structure. d) Non-availability of crossing sites. e) Fluctuation of water discharge will increase / decrease the river span either submerging the approaches / exits or grounding the bridging equipment. The crossing sites once inundated will become saturated / boggy requiring expedient treatment and the bridge design will have to be altered suspending the traffic. f) Gradual increase of water flow will put the bridging equipment afloat. g) Reduction in water level will ground the floating bridges. h) Sudden release of large quantity of water may wash away bridging equipment. i) Indian action of flooding the battlefields either north of Sotlej inside India or South of it up to the Ghaggar depression, or combined, provides a flank protection to Indian operations in Southern Punjab and Sindh. However, India will have to time these actions in conjunction with its operational strategy.

5.3.3 Settlement of the Issue

The issue was formally taken up between the two countries, in several rounds of a technical meeting held in 1975, culminating in, a meeting at the secretaries' level in October 1976. Both the states formulated a draft of an accord, and finally, on 14 April 1978 the issue was settled to the satisfaction of both parties.

The agreement states that without prejudice to the provisions of the Indus Waters Treaty 1960, or to the rights and obligations the parties have agreed as follows: The Full POUNDAGE level will not be higher than EL 1600 feet, Dead Storage Capacity will not exceed 230-303 acres-feet and there will be no Operating Pool as such. The Spillway will not be more than 30 feet below the full-POUNDAGE Level. Spillway gates will be 12 in numbers with length not exceeding 50 feet and height at 30 feet. While the level of power intake will not be lower than 27.5 feet below the full-POUNDAGE level. The Outlet Works six in numbers with level not below that EL 1365 feet. These shall be permanently closed with concrete plugs within one year of the date of the first filling of the reservoir up to the Full POUNDAGE level or within three years of the date of the first filling of the reservoir up to the crest of the spillway, whichever is earlier. The Dead Storage shall not be depleted except in an unforeseen emergency endangering the safety of the dam. In that event, India shall give immediate information to the

Government of Pakistan of the nature of emergency and may simultaneously undertake such action as may be necessary. In case the removal of concrete plugs becomes necessary, India shall hold immediate consultations with the representatives of the Pakistan Government including site inspection of the plant.

Moreover, India shall not make any further alterations in the features of the design of the hydro-electric plant except by mutual agreement. Any question which arises between the parties concerning the interpretation or application of this Agreement or the existence of any fact which, if established, might constitute a breach of this Agreement and shall be dealt with under the provisions of Article IX of the Indus Waters Treaty 1960. Matters not expressly provided shall be governed by the provisions of the Treaty.

5.4 Summary

The discussion leads us to conclude that the enduring rivals prefer accommodation over vital economic and security concerns of immediate nature and postpone political issues when they reach a mutually hurting stalemate situation. This stage comes in with the realisation that no military solution would bring forth the desired outcome. Conclusion of the Indus Waters Treaty amid enduring rivalry between India and Pakistan testifies the core hypothesis formulated in the study. Obviously, lower riparian, having disadvantageous locale and militarily weak infrastructure, comparative to the upper riparian, initiates process of accommodation. The upper riparian reciprocates the accommodative initiatives of the lower riparian but tries to settle the issue on its own terms and conditions and manipulates lower riparian vulnerabilities. The lower riparian initiate(s) peace overtures in an effort to minimise perceived losses. Moreover, a government committed to the domestic reforms, generally, prefers accommodation as a part of security strategy.

An influential third party not only facilitates the process but has a strong mediatory role to skilfully play (sometimes by accelerating the process of mutually hurting stalemate). Besides, a third party, having leverage of financial support, accords special status in the settlement of water issues involving resource development infrastructures necessary to fulfil the needs of the disputants.

Moreover, in the presence of a treaty, the riparian may prefer bilateral settlement of a water sharing issue like Salal Dam, signed in 1978. Although the Salal Dam issue also refers to the same type of environment for the lower riparian Pakistan—militarily weaker in the wake of the 1971 War and recovering from the shock of separation of East Pakistan. There was the desire to minimise losses and to implement internal institutional reforms. Hence, the nature of accommodation was different from the environment of 1950s as Pakistan was entitled to invoke the Treaty provisions. Nevertheless, in the 1970s India used water more or less as a political tool than a military weapon, but could not succeed to settle the issue on its terms and conditions. Rather, all Pakistani objections, relating to design of the dam, were removed by India before any accommodation became possible. Also notable here, is that the accommodation on Salal Dam was the first and last after the signing of the Indus Waters

Treaty in 1960 and completion of all related developmental infrastructures in the late 1970s by both the riparian. The water-related issues that emerged later are not only lingering, but have also become a major irritant in India-Pakistan relations.

The subsequent chapters describe in detail the post-treaty implications, the emerging scenarios and their linkages in further hardening the positions of both states on the Kashmir dispute. They provide a comprehensive view of the ongoing process of hurting stalemate underpinning the intertwined nature of the Indus and Kashmir disputes in India-Pakistan conflict.

Chapter 6

INDUS WATERS TREATY: IMPLICATIONS

This chapter focuses on the post-treaty implications for the riparians and highlights the repercussions¹ of an accommodation, in disregard to natural geographic and political imperatives, between enduring rivals in general and India-Pakistan in particular. It addresses the questions: What role has the accommodation over Indus waters played in India-Pakistan relations? Has the Treaty overemphasised the political status of Kashmir, promoted divisive politics in the region and paved no way towards promoting mutual cooperation between the parties?

6.1 Gains for India

Gains for India far exceeded than one could envisage when the 'canals dispute' arose in 1948. Initially, Indian demand was an exclusive right over water of the river Sutlej alone but as the negotiations proceeded, it demanded total diversion of three eastern international rivers originating from its territory and also claimed share from three western international rivers of the Indus system originating from the disputed territory of Jammu and Kashmir (J&K).

Under the provisions of the Treaty, it secured full freedom to put to use, in the first instance, all the waters of the three eastern rivers (The Ravi, Beas and Sutlej) that it was not using prior to the Partition of the Subcontinent. Before Partition India was utilizing hardly one-fifth of two out of the three eastern rivers.²

The Treaty multiplied many times the availability of water to India. India was free to develop the water courses of eastern rivers in any manner deemed fit to her requirements and was also allowed to construct, under conditions specified in the Treaty, infrastructures for the generation of hydro-electric power and also substantially increase its irrigated areas in the upper catchment areas of the three western rivers (The Indus, Jhelum and Chenab) bounded in disputed territory of Jammu and Kashmir under its control.³

Before the signing of interim Agreement of May 1948, India worked out schemes to utilize the waters of the Central Bari Doab Canal (CBDC) and the Dipalpur Canal to be withheld from Pakistan. Since India was free to utilize the entire flow of the Sutlej, steps were taken to enlarge the scope of the old Sirhind Canal and of the Bhakra-Nangal project. During British rule these plans were formulated to make available river supplies to the Sutlej Valley Canals, now mostly in Pakistan. The principal works carried out between 1948 and 1954 included: 1) Construction of several new distributaries on the Upper Bari Boab Canal

¹ The narrative about Gains and Losses for riparian has been taken from author's previous work for details see Muhammad Nasrullah, *Wullar Barrage Issue: An Analysis* (MPhil Thesis submitted in the Department of International Relations, Quaid-i-Azam University, Islamabad, 1991), pp. 93-110 and 152-162.

² Ibid., p. 93.

³ Ibid., p. 93.

(UBDC)—first time put into operation in 1950-51. Furthermore, the capacity of the canal was enlarged many times; 2) A barrage at Harike, at the confluence of the Beas and Sutlej, was constructed in 1950-52, providing head regulators for the proposed Rajasthan Canal and Ferozepur Feeder; 3) The capacity of Sirhind Canal was increased; the Sidhwan Branch and four new distributaries were added to the canal in 1949-52; and 4) Priority was given, in the First Five-Year Plan, to the Nangal and Bhakra Canals and construction was completed by 1954.⁴

From the Eastern rivers, a required quantity of water was withheld from Pakistan, in early and late *kharif*, to the extent additional use had been developed on the Ganga and other eastern canals. During 1947 to 1954 the area irrigated in India, from the eastern rivers, was increased by about 700,000 acres from 3.84 to 4.54 million acres.⁵ In July 1954, the Bhakra Canal was opened for operation, on the basis of surplus water available during the monsoon season. From 1958, India started utilising the waters stored at the Bhakra Dam for irrigation with the irrigated acreage increasing to 6.2 million acres by 1960.⁶ In 1965-66, the area irrigated from the eastern rivers in India rose to 8 million acres.⁷ In other words, through works constructed between 1948 and 1960, “as much new irrigation had been developed in the Indian part of the Indus basin as in about 100 years preceding Independence.”⁸

In the autumn of 1954, steps were taken to assess the quantity of utilizable water available for development in India under the Bank’s proposal. As a first step, it became necessary to distribute the supplies to be developed between the Indian states, viz., Punjab, PEPSU⁹, Rajasthan and Jammu and Kashmir. “This was necessary to bring home to the visiting Bank and Pakistan groups [delegates] the need for, and the importance we attached to, the full utilization in India of the waters of the Eastern rivers.”¹⁰

Before the end of January 1955, an inter-state agreement was concluded under which 15.85 MAF waters of the Ravi and Beas was allocated between the states concerned: Jammu and Kashmir—0.65 MAF: PEPSU—1.30 M.A.F.: Punjab—5.90 MAF: and Rajasthan—8.00 MAF. The waters of the Sutlej were to be used entirely for the Sirhind-Bhakra-Nangal complex and divided between the states concerned in accordance with

⁴ Ibid., p. 94.

⁵ IBRD Note dated 15 January 1960, prepared in response to a request from Gen. Wheeler. See also Muhammad Nasrullah, *Wullar Barrage* (1991), p. 93, 94.

⁶ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 95.

⁷ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 95.

⁸ Niranjana D. Gulhati, *Indus Waters Treaty: An Exercise in International Mediation* (Lahore, New York, New Delhi: Allied Publishers, 1973), p. 358; See also Muhammad Nasrullah, *Wullar Barrage* (1991), p. 95.

⁹ PEPSU (Patiala and East Punjab States Union) was merged with Punjab in November 1956. Ten years later, the combined state was split into Haryana and Punjab in November 1966, with the upper hilly areas transferred to Himachal Pradesh; See also Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 95-96; See also www.globalsikhstudies.net/pdf/Fundamental_Issues_in%20_SikhStudies.pdf.

¹⁰ Niranjana D. Gulhati, *Indus Waters Treaty* (1973), p. 358; See also Muhammad Nasrullah, *Wullar Barrage* (1991), p. 96; See also www.worldbank.org/html/dec/Publications/Workpapers/wps2000series/wps2045/wps2045.pdf.

agreements already reached. This led to the sanction of the Madhopur-Beas Link (constructed in 1954-55); the Sirhind Feeder¹¹ (constructed in 1954-58); and the Rajasthan canal; and prompt investigations were started to find sites for storage dams on the Ravi and the Beas rivers.¹²

The revised Sirhind-Bhakra-Nangal complex, as re-planned in 1954 on the basis of the Bank's proposal and since it was constructed, was much bigger in scope and overall benefits than the Bhakra and Nangal projects on the basis of which work had been started in 1945. The live-storage capacity of the Bhakra reservoir was almost doubled, the anticipated annual irrigation was increased from 1.4 to 4.0 million acres and hydro-power generation from 920 to 2,339 MW annually.¹³

In January 1960, in response to a request from the Bank the Indian officials reported that excluding the developments on the UBDC, undertaken after 1947, the total cost of new works already planned on the three eastern rivers in India would be of Rs. 3,330 million.¹⁴ On completion, these works irrigated annually about 6.2 million acres and produced hydro-electric power about 744,000 KW (excluding additional power units to be installed at Bhakra in the Right Power House).¹⁵

The Rajasthan Canal, the construction of which was inaugurated in March 1958, had a capacity of 18,500 cusec and was about 300 miles (450 KM) long, not counting 134 miles of the Rajasthan Feeder, a lined supply channel from Harike running for 111 miles (178.5 KM) in Punjab and Haryana areas. The canal has about 6,000 KM of branches and distributaries to command 3.69 million acres of the Rajasthan desert.¹⁶

Writing about the canal, Arnold J. Toynbee said in 1961:

“...within a few years from now, the western most and thirstiest fringe of Rajasthan, along the Indo-Pakistani border, is going to be brought to life by the digging of what will be the longest irrigation canal in the world up to date. Though the climate is torrid, the soil, here too, is good. When the water reaches it, it will grow wheat, maize, oil plants, citrus fruit, and even grapes. Two million people will live by agriculture in an

¹¹ This Sirhind Feeder takes off the Ferozepur Feeder at mile 11 (16.5 KM) of the latter. It is 89 miles (133.5 KM) long link-canal, having capacity at head of 4,762 cusec and provides a new source of water supply from the river Beas to the lower part of the old Sirhind Canal system which could be commanded from Harike, thus setting free equivalent water supply of river Sutlej at Bhakra. Please see Muhammad Nasrullah, *Wullar Barrage* (1991), p. 96-97.

¹² Muhammad Nasrullah, *Wullar Barrage* (1991), p. 97.

¹³ Niranjana D. Gulhati, *Indus Waters Treaty* (1973), pp. 358-359; See also Muhammad Nasrullah, *Wullar Barrage* (1991), p. 97.

¹⁴ Bhakra-Nangal Project of costing Rs. 1,700 million included: Sirhind Feeder, Rs. 60 million; Beas Dam, Rs. 873 million; Modhopur-Beas Link, Rs. 24 million; Harike Barrage, Rs. 58 million; and Rajasthan Canal, Rs. 615 million. See Niranjana D. Gulhati, *Indus Waters Treaty* (1973), p. 359; See also Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 97-98.

¹⁵ *Ibid.*

¹⁶ Niranjana D. Gulhati, *Indus Waters Treaty* (1973), p. 360; See also Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 98-99.

area which at present maintains no more than 100,000 pastoralists....”¹⁷

The Rajasthan Canal was inaugurated by Govind Ballabh Pant, the then Indian home minister, on 11 October, 1961.¹⁸ “Water from Rajasthan Canal” was “first” released for irrigation only. An area of 90,000 acres was irrigated in 1965-66 and of 240,000 acres in 1968-69. In 1971-72, 450,000 acres were irrigated.¹⁹

Several agreements relating to *ad hoc*, transitional arrangements state that, India was enabled to withhold progressively increasing supplies of water from Pakistan from about mid-April to September.²⁰ With these and the surplus waters available during the flood months, India could fully meet from 1954 onwards the requirements in *Kharif* of such new irrigation channels as were completed and were fit for operation, including the Bhakra Dam which started storing water in 1958.²¹

Soon after the Treaty was signed in September 1960, the supplies available during different periods of the year, as at Ferozepur, for direct use by canals or for the storage at Bhakra and Pong are shown in the following table in comparison to the actual use in India prior to Partition:²²

-----TABLE-7-----

	Oct.-Mar.	Apr.-June (Million Acre Feet-MAF)	July-Sep.	Annual
Pre-Partition use	2.7	2.3	03.0	08.0
Supplies available from April 1960	3.1	5.8	16.0	24.9
Supplies available during 2nd phase ²³	3.1	6.3	17.9	27.3

With the completion of the Mangla Dam in Pakistan in November 1967, the Indian were able to withhold *Rabi* waters from Pakistan, in addition to those shown above, nominal supplies during *Rabi* 1967-68, 1.8 MAF during *Rabi* 1968-69 and 2.0 MAF during *Rabi* 1969-

¹⁷ Arnold J. Toynbee: *Between Oxus and Jammu* (New York: Oxford University Press, 1961), as quoted by Muhammad Nasrullah, *Wullar Barrage* (1991), p. 99.

¹⁸ Work on the Rajasthan Feeder in Punjab had been started much earlier. Please see Muhammad Nasrullah, *Wullar Barrage* (1991), p. 100.

¹⁹ See Niranjana D. Gulhati, *Indus Waters Treaty* (1973), p. 360.

²⁰ It should be noted that the period April-June is a period of short supply in the Eastern rivers but important for the sowing of *Kharif* crops, particularly cotton. Please see Muhammad Nasrullah, *Wullar Barrage* (1991), p. 102

²¹ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 103.

²² Government of Pakistan, National Documentation Wing, Cabinet Division, Islamabad, Post IWT Studies, Vol. I; Please also see Muhammad Nasrullah, *Wullar Barrage* (1991), p. 103.

²³ The second phase of the Transition period was to begin from April 1965 or under certain conditions from April 1966 and was to continue till March 1970. It could be extended at Pakistan's request for one, two or three years, but no such request was made. Government of Pakistan, National Documentation Wing, Cabinet Division, Islamabad, Post IWT Studies, Vol. I; Please also see Muhammad Nasrullah, *Wullar Barrage* (1991), p. 104.

70 were made.²⁴ With effect from 1 April 1970 when the Transition Period came to an end, India was entitled to use the entire flow of the Eastern rivers.²⁵

Article 11(9) of the Treaty provides:

After the end of the Transition Period Pakistan shall have no claim or right to releases by India of any of the waters of the Eastern rivers. In case there are any releases, Pakistan shall enjoy the...use of the waters so released.... Provided that in the event that Pakistan makes any use of these waters, Pakistan shall not acquire any right whatsoever, by prescription or otherwise, to a continuance of such releases or such use.²⁶

India utilized every drop of these waters by constructing a network of dams and link canals on Eastern rivers and also on the Western rivers allegedly in violation to the Indus Waters Treaty (See Map-12 below).

It can be noticed that from a total pre-Partition use of 8.0 MAF Indian withdrawals were increased to 13.3 MAF in 1960-61, to 16.05 MAF in 1961-62 and to 27.3 MAF in 1968-69. On full development, after the Beas Project and a storage infrastructure on the Ravi have been built, and the Rajasthan Canal completed the Indian withdrawals increased to about 30 MAF. Indian at that time took some advantages secured by the Treaty and there was tremendous potential for future development too.²⁷

From the upper reaches of the Western rivers; the Indus, the Jhelum and the Chenab, India is entitled to develop in its territory, in terms of Annexure C to the Treaty, an "irrigated cropped area" of about 700,000 acres over and above that developed as on 1 April 1960. Information was not readily available about the extent to which irrigation use has been developed from the western rivers by India (in Jammu and Kashmir) after the conclusion of the Treaty—presumably such development has not been substantial. Apart from this, the Treaty assures to India an enormous potential of hydro-electric power on the western rivers in the Kashmir territory under its control. With the provisions made in the Treaty, on the Chenab alone, India has a potential of about 3,000,000 KW or more.²⁸

²⁴ Government of Pakistan, National Documentation Wing, Cabinet Division, Islamabad, Post IWT Studies, Vol. I; Please see also Muhammad Nasrullah, *Wullar Barrage* (1991), p. 104.

²⁵ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 105.

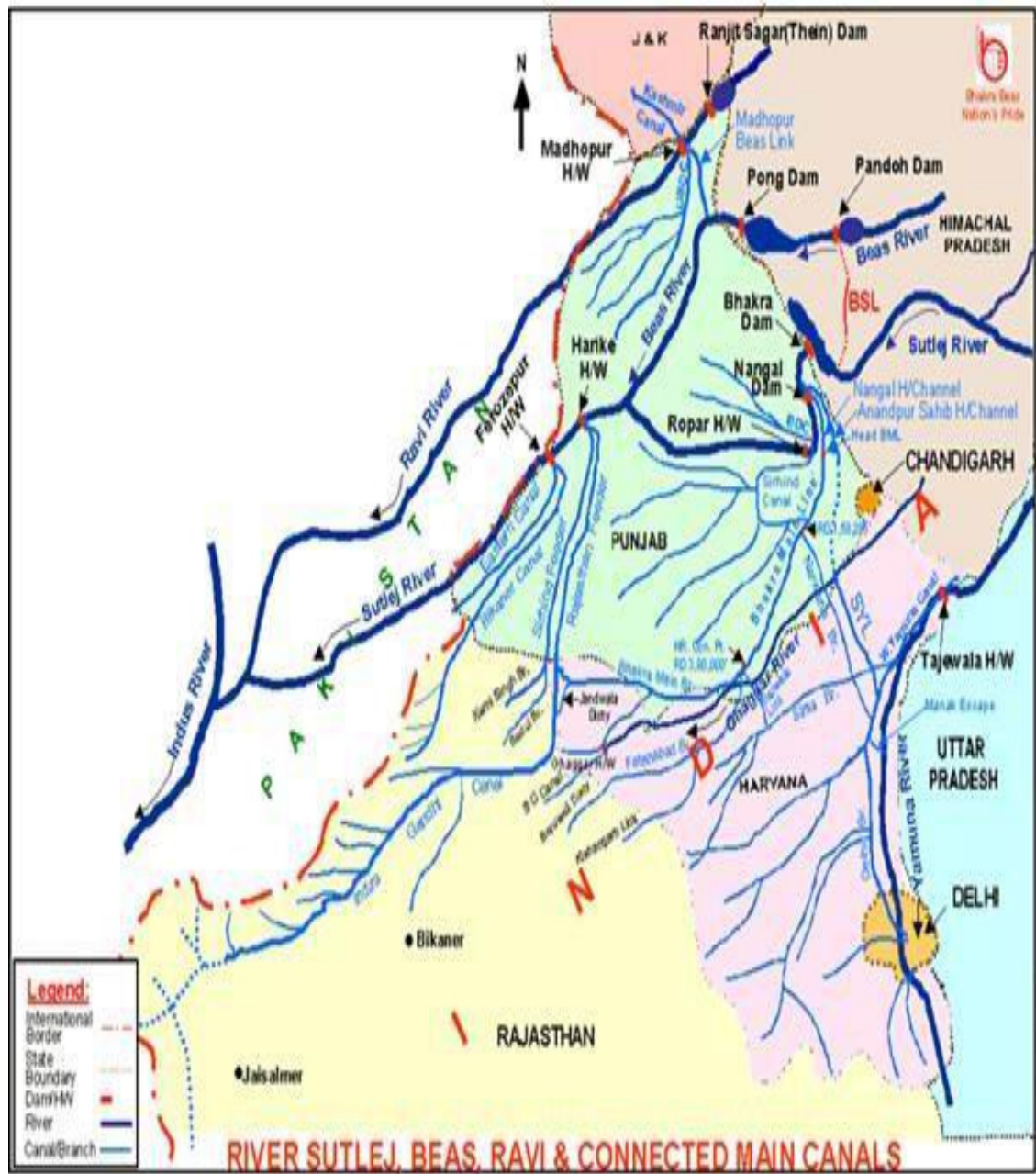
²⁶ Indus Waters Treaty 1960, Article 11(9) attached as Annexure-7as quoted by Muhammad Nasrullah, *Wullar Barrage* (1991), p. 106.

²⁷ Government of Pakistan, National Documentation Wing, Cabinet Division, Islamabad, Post IWT Studies, Vol. I; Please see also Muhammad Nasrullah, *Wullar Barrage* (1991), p. 106.

²⁸ Gulhati in a letter from Washington, in March 1960, urged that a special organisation be set up immediately in consent with the Indus Basin States in India, for the early development of power on the Western rivers. He observed that nothing so far has been done in this direction. Please see Niranjana D. Gulhati, *Indus Waters Treaty* (1973), p. 365; See also Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 106-107.

Map-12: Post-treaty Development of the Three Eastern Rivers by India

Source: Subrahmanyam Sridhar, "The Indus Water Treaty," *Security Research Review*, 2005



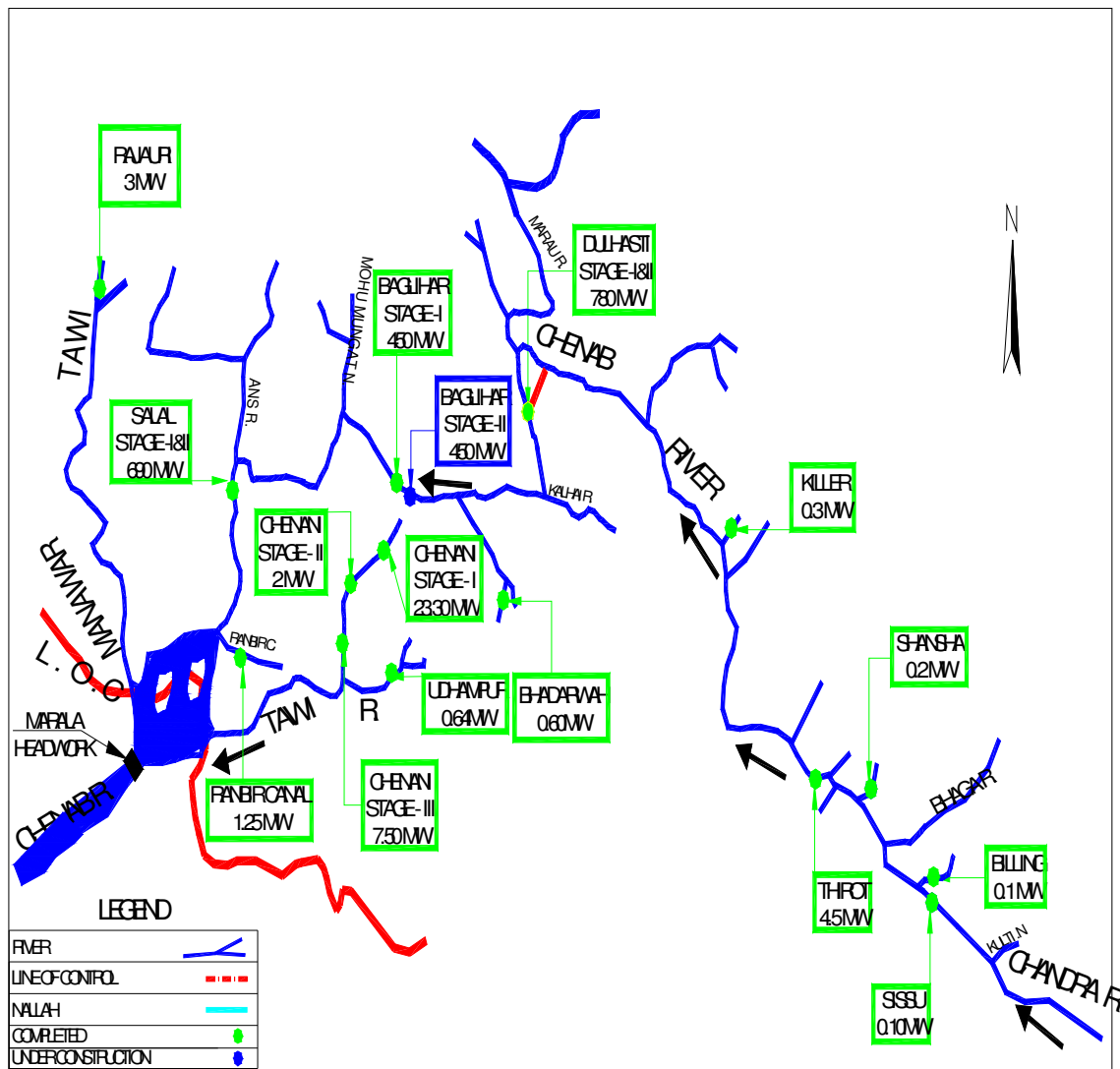
Recently, extensive hydro-electric development has been made on the Jhelum river and India is trying to exploit all such potentials on the Indus river too. In addition to the existing dams and projects shown in the below, (Map 13 a, b, c) there are reports that India

plans to construct 3-4 more dams on river Jhelum and 16-17 on river Chenab²⁹ and also a number of dams on River Indus.

Map-13a, b, c: Disputed river projects being built by India on Western Rivers

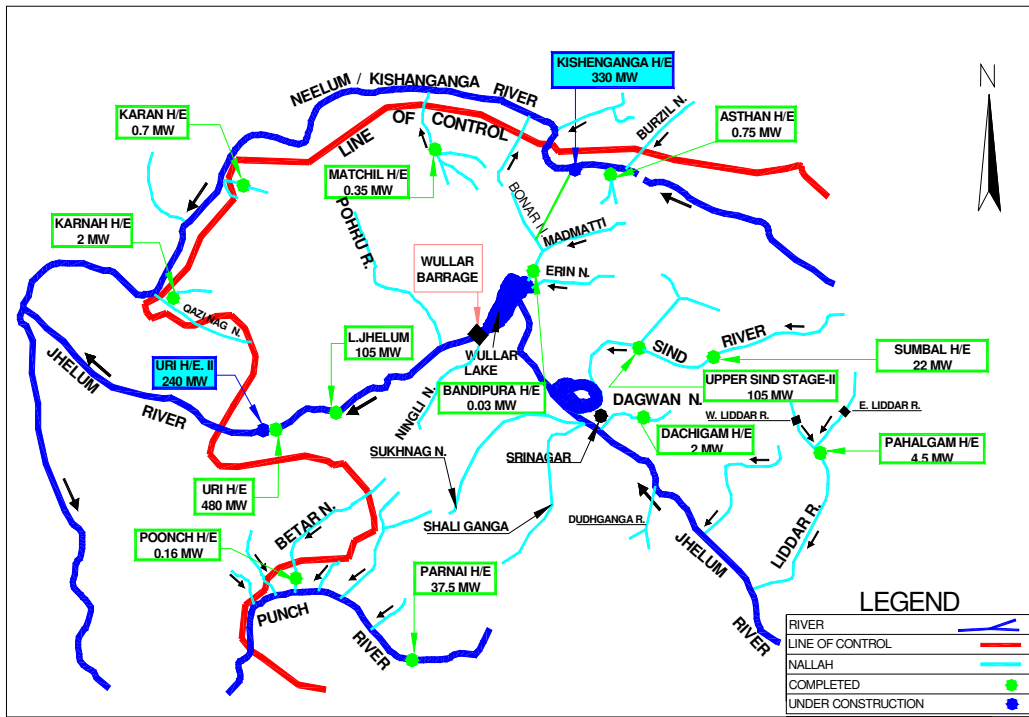
Source: Indus Waters Commissioner Pakistan January 2011. Maps are drawn free hand. The aim is merely to give an idea of the location of the projects.

LOCATION OF COMMISSIONED PROJECTS ON RIVER CHENAB

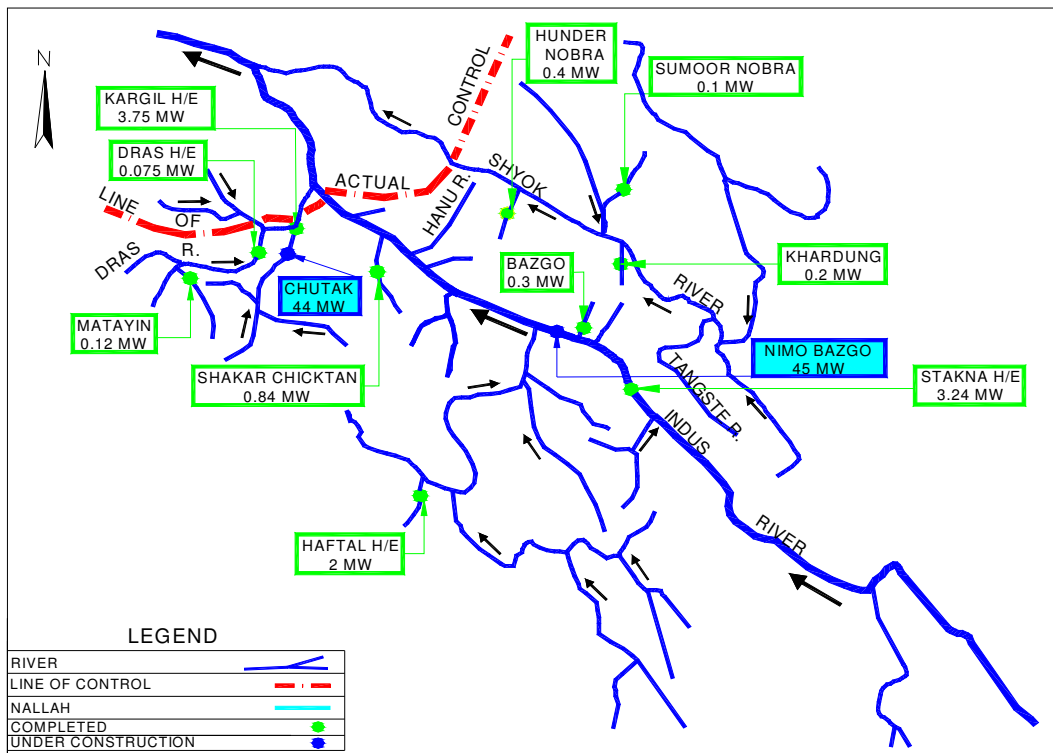


²⁹ Roberts J. Wirsing & Christopher Jaspardo, "River Rivalry: Water Disputes, Resource Insecurity, & Diplomatic Deadlock in South Asia," Asia-Pacific Center for Security Studies Honolulu, Hawaii, 2005. See also "Thumbing Nose at Pak, India Unveils Five More Projects on Chenab," *India Daily* online edition, 1 June 2005.

COMMISSIONED PROJECTS ON RIVER JHELUM



LOCATION OF PROJECTS ON RIVER INDUS



Summarising the discussion about developments in India, Pakistani policymakers should admit that they had entered the negotiations without doing proper home-work, and that the Indians were far ahead of them. The clear proof is the steps taken by the Indian government before the signing of the Indus Waters Treaty in 1960. As to the signing of the Treaty, India had already developed the diversion infrastructure on the Chenab, Ravi, Beas and Sutlej rivers and there-off to Rajasthan canal.³⁰

Situation would have been worst for Pakistan if refused to sign the Treaty. It was because that at the time of signing of the Treaty in September 1960 India had gained the bargaining lever having capacity of withholding entire water supplies through the eastern rivers, rendering the blooming fields of the Pakistani Punjab [West Punjab] to severe droughts, or destroying them by flooding as and when required. India has been exploiting the latter factor most often even after signing of the Indus Waters Treaty, especially in lean periods and monsoon seasons.³¹

6.2 Gains versus Losses for Pakistan

The material benefits emanating from the Treaty for Pakistan have not been real and great as imagined and highlighted by the World Bank's experts. Although the Treaty has assured to Pakistan the unrestricted use of three out of six international rivers, but, in addition to three Eastern rivers given to India, the provisions for 'specified uses' of Western rivers by India became continuous headache for Pakistan. The world's greatest system of hydraulic works in Pakistan "the grandest ever conceived by man" has been losing its capacity day by day and now almost has lost its meanings and effectiveness due to huge siltation in the dams reducing their storage capacity.³² There is a growing realization, world over, that man can interfere with natural river systems only up to a certain point and that the long-term consequences of dams or major river diversion schemes often outweigh the short-term benefits. Already the country has to reserve more than half its GNP in foreign debt servicing, largely from international loans required to develop the water storage and irrigation schemes developed under IWT.³³

Moreover, the right of specified uses on Western rivers to India and ever increasing problem of water-logging and salinity as a result of huge infrastructure for the diversion of waters from natural courses in Pakistan (the links canals system), one *de facto* and the other *de jure* has been equivalent to rescuing Pakistan from becoming a desert to putting it into

³⁰ Eastern Rajasthan, including Jaipur, is definitely in the Jumna-Ganges Basin. Now Rajasthan canal is supplying water to this area from the Indus river system beyond the Indus Basin as cited by Muhammad Nasrullah, *Wullar Barrage* (1991), p. 107.

³¹ Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 107-108.

³² Muhammad Nasrullah, *Wullar Barrage* (1991), p. 109

³³ Tom Roberts, "The Indus—Life Blood of Pakistan", *Asian Affairs*, Vol. XXXVI, No. 1 (March 2005), p. 8, also available at

<http://www.ingentaconnect.com/content/routledg/raaf/2005/00000036/00000001/art00001;jsessionid=fpg801oeon4g7.alice>

boiling waters and vice versa.³⁴

Pakistan has mainly suffered three losses³⁵:

1. It lost forever three out of its six rivers.
2. By diverting water from natural courses, the gigantic problem of water-logging and salinity was aggravated to beyond the extent of controls the latest technology can offer.
3. By giving 'specified rights' of using waters of Western rivers to India under the Treaty, Pakistan itself has invented a perpetual problem-generating mechanism.

The water closures of 1 April 1948 were an assertion of India's claim to waters of all the international rivers that flowed through its territory. It obviously implemented the sentiment attributed by Mosley to Nehru, "that what India did with India's rivers was India's affair."³⁶ In fact, the question can be posed: Were these (three eastern rivers) "India's rivers"?³⁷

After 14 August 1947, the international system of acquisition of surface-water use which also has retained different legal regimes, as the system is being practiced by most of the western countries, was also applicable in the Indus river basin.³⁸ Some analysts think that Pakistan and India have signed the Treaty in isolation from the provisions of international law as well as system of acquisition of surface-water use rights, which is neither division nor sharing of natural assets. But prior to the Partition these principles have governed the development of irrigation in the Indus Basin.³⁹ As in 1942, they were expressly confirmed by

³⁴ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 109.

³⁵ Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 109-110.

³⁶ Leonard Mosley, *The Last Days of the British Raj* (New York: Harcourt Brace, and World, 1962), pp. 198-199; also quoted in Muhammad Nasrullah, *Wullar Barrage* (1991), p. 110.

³⁷ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 110.

³⁸ Uniformity in methods of acquiring water use rights has been embodied in comparatively few modern water codes (e.g., Alaska, United States of America, 1966), and many countries, for various reasons (tradition, politics, economics), have retained specific legal regimes for different types of waters. There are currently four major systems of acquisition of surface water use rights: (1) the riparian rights system, based chiefly on customary or common law, but codified in some countries; (2) the prior appropriation system, which has been transformed, in most instances, into a prior appropriation-permit system and which is prevalent mainly in the western part of the United States of America. The prior appropriation-permit system is only one of many variants of the administrative disposition system, but its distinctive features and history, and its grouping, chiefly, in one geographical area, warrant treatment as a separate system; (3) the system of administrative disposition of water use rights, in which the administration has a varying degree of power to grant or withhold such rights; and (4) International law relating to international rivers. See Ludwik A. Teclaf, *The River Basin in History and Law* (The Hague: Martinus Nijhoff, 1967), p. 77; James Kent, *Commentaries on American Law, Vol. III* (New York: O. Holsted, 1829), p. 440; and Story's opinion in *Tyler v. Wilkinson*, 24 F. Case 472, 474 (No. 14312) (CCDRI 1827); Samuel C. Wiel, "Origin and comparative development of the law of watercourses in the common law and in the civil law", *California Law Review, Vol. VI* (1918), pp. 245 and 342. For the common-law origins of the riparian doctrine, see Arthur Mass and Hiller B. Zobel, "Anglo-American water law: who appropriated the riparian doctrine?", *Public Policy, Vol. X* (1960), p. 109; and T. E. Lauer, "The common law background of the riparian doctrine", *Missouri Law Review, Vol. XXVIII* (1963), p. 60; See also Muhammad Nasrullah, *Wullar Barrage* (1991), p. 110.

³⁹ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 110.

the Indus (Rau) Commission as governing principles for the apportionment of the waters of the Indus rivers among the several states and provinces through which they were flowing.⁴⁰

In applying the principle of equitable apportionment to the case before it, the Rau Commission affirmed that new withdrawals by the upstream province of the Punjab (East Punjab in undivided Punjab) must be so regulated as not to cause material damage to the canals of the downstream province of Sindh.⁴¹ The Commission advised further that the parties might agree that such damage could be prevented through the construction of two barrages across the Indus downstream, in such situation the lower Punjab should make a substantial financial contribution toward their cost.⁴²

Thus the distribution of river water for irrigation canals has been determined by several principles. There is, for example, the law of riparian rights, by which the owner of land contiguous to a stream has proprietary rights. In India this law has not been upheld in practice, or there could have been no large-scale prior appropriation, by which the first user of water acquires a priority right, whether or not his land is contiguous to the state. Finally, there is the principle of equitable distribution, which regards a river as an indivisible unit to be developed for the benefit of the maximum number of people regardless of territorial boundaries. In India, this principle was recognized in the early days of British administration, and it has been adopted under numerous international treaties the world over but was disregarded after the Partition.⁴³

Under the Indian Act of 1935, which came into force in April 1937, irrigation became a purely provincial matter, though provision was made for the appointment of commissions to investigate complaints relating to water rights and irrigation needs. This did nothing to facilitate the settlement of disputes among the states and provinces and frequent deadlocks and frustrations indicated the desirability of a centralized, all-India, policy that nevertheless permitted local freedom of action in constructing irrigation works.⁴⁴

This problem was aggravated in both sovereign states but in Pakistan it became alarming since Partition. First, because of the Radcliffe's, 'illogical' partition line in dividing the Punjab province between the two new sovereign states (India and Pakistan, discussed in detail in chapter 2 and 3), and, second, the occupation of princely state of Jammu and Kashmir enormously complicated the problem, giving India not only control over the main Chenab and Jhelum rivers but also their entire catchment areas, which supply no irrigation in India and very little in Jammu-Kashmir, but upon which Pakistan is heavily dependent. Third, since the signing of the Indus Waters Treaty, 1960 [West] Punjab had lost its three Eastern

⁴⁰ The portions of the *Report of the Indus (Rau) Commission* containing the statement of principles and the acceptance of them by all concerned are set forth in *Indus Waters Treaty 1960*, Appendix I to its annexure; See also Muhammad Nasrullah, *Wullar Barrage* (1991), p. 110.

⁴¹ *Ibid.*, *Indus Waters Treaty 1960*, Appendix I, para 89 and App. IV.

⁴² *Ibid.*, *Indus Waters Treaty 1960*, Appendix I, para 81, Vol. II, Part V.

⁴³ Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 152-153.

⁴⁴ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 153.

rivers and became fully dependent on Western rivers which had been furnishing irrigation in other provinces as well as in NWFP and Sindh. Interestingly, the Sindh province claims its exclusive rights on the river Indus to whom Chenab and Jhelum are tributaries.⁴⁵

Thus the Indian Act of 1935 which established high degree of provincial autonomy (as envisaged in the Cabinet Mission Plan) was found unsuitable both in India and Pakistan. Since 1955 Pakistan has tried to ignore regionalism by centralisation of power, first, in West Pakistan with Karachi [Sindh] as the capital and now in Islamabad [Punjab]. Pakistan, like other developing countries, found it necessary to introduce central controls on economic life, including river development projects, public and private spending, and the allocation of vital foreign exchange. Needless to say that it did not prove beneficial rather it aggravated the sense of deprivation amongst the provinces. The other provinces have been often accusing Punjab of monopolising all benefits being a majority in the central administration of the country while depriving them of due shares. The ever-increasing demands of greater provincial autonomy led to the strengthening of ethno-national movements in the country is a concomitant of reactionary responses to such controls. It gave rise to many disputes among the provinces like the one on the construction of Kalabagh Dam between Sindh and Punjab.⁴⁶

The Sindh-Punjab water dispute has its roots in the history of the Subcontinent. The UBDC was not included in the water-sharing programme of the five link-canals but India continued to draw, by prior appropriation⁴⁷ or “prior allocation,” all the water it could use from the Ravi.⁴⁸ Similarly Sindh after 1923, made persistent efforts to outguess and forestall Punjab lest a prior allocation to that province diminish the share that Sindh would enjoy under equitable distribution.⁴⁹

When the Indo-Pakistan dispute over river waters developed, it also became a question whether a prior allocation has to be an actual use or whether an agreement or project sanctioned was sufficient to constitute such an allocation? It is correct to say that equitable distribution was the guiding principle in the Indus Basin under British rule, but it must also be said that, because the irrigation system grew piecemeal rather than single fiat, prior allocation played an important modifying role.⁵⁰

But what India was asserting, in April 1948, at least by implication, was neither of

⁴⁵ Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 154-155

⁴⁶ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 155.

⁴⁷ The Prior Appropriation Doctrine refers that “the person who first made a valid appropriation of water has a superior right to all subsequent appropriations”. For details see *Oklahoma Statutes(USA), Annotated (1970)*, title 82, sec. 1-A (3) (Irrigation and water rights, general provisions); See also Muhammad Nasrullah, *Wullar Barrage* (1991), p. 130.

⁴⁸ In the literature on the Indus Waters Dispute, the terms “prior allocation” and “prior appropriation” are used interchangeably. “Prior appropriation” is sounder from the legal standpoint, but it seems to convey that use has actually been made of the water. “Prior allocation” conveys that use has actually been allotted, whether or not use has actually been made of it. Please see Muhammad Nasrullah, *Wullar Barrage* (1991), p. 156.

⁴⁹ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 156.

⁵⁰ Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 156-157.

these doctrines. On the other hand, in total disregard to these doctrines, it invented and exploited the absolute territorial sovereignty principle which had no historical basis. In effect, it was saying that Partition and Independence had created a new situation, and that it could proceed from any prior basis of its choice.⁵¹

This Indian position was for the East Punjab in 1948 may be well seen from a short analysis of the situation. Although the recommendations of the Indus (Rau) Commission had not been put into effect, and the 1945 agreement between the Chief Engineers of Punjab and Sindh had never been formalized, the pre-Partition Punjab would hardly have been allowed to proceed with the Bhakra Project without paying to Sindh at least some of the costs of one or two new barrages (at Gudu and Kotri-Hyderabad) on the lower Indus.⁵²

The pre-partition Punjab would have been subject to limitations on the size of Bhakra and on its operation-limitations reflecting the requirements not only of Sindh but of the Sutlej Valley Project below Ferozepur. After Partition, East Punjab was relieved of such obligations. Furthermore, since no additional supplies had to be allocated to West Punjab or Bahawalpur, the Bhakra Project could be redesigned yet another time and Sutlej water allocated to new areas in Rajasthan (India).⁵³

Michel writes: nor, in the Indian view, could Pakistan prevent her from proceeding with any of a series of proposed schemes to divert Beas water into the Sutlej (above Bhakra), Ravi water into the Beas (at Madhopur), or Chenab water (via the proposed Marhu Tunnel) into the Ravi. There would, of course, be no point in proceeding with the Wullar Lake scheme in Kashmir since a dam of any size would inundate more land (possibly including Srinagar) than could be commanded above the point where the Jhelum passed into "Azad" Kashmir. Yet possession of the site was another means of intimidating Pakistan, since a dam there could ruin the entire Triple Canals Project.⁵⁴ Similarly, a dam constructed on the Chenab at Dhiangarh, north of Jammu, would enable India to withhold water from Marala. It was an extremely advantageous position as later summed up by one of the chief Pakistani negotiators of the Indus Waters Treaty: "India held all the cards."⁵⁵

No doubt India holds all the cards. Till the time the Kashmir dispute is not resolved to the satisfaction of the parties and the Jammu and Kashmir remains under Indian control, India can create extreme security crises for Pakistan many times greater than it created in 1948. Water weapon is more lethal than a nuclear bomb as was observed by Lilienthal in 1951, in his article "Another Korea in the Making". The accommodation in the form of the Treaty provided Pakistan a safety valve but provisions relating to specified uses by India in Jammu and Kashmir are in no way less than permitted by International Law but for Pakistan any

⁵¹ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 157.

⁵² Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 157-158.

⁵³ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 158.

⁵⁴ Aloys Arthur Michel, *The Indus Rivers: A Study of the Effects of Partition* (New Haven and London: Yale University Press, 1967), p. 238; Please see Muhammad Nasrullah, *Wullar Barrage* (1991), p. 158.

⁵⁵ Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 158-159.

further change in water supply is a question of extreme insecurity.⁵⁶

The Treaty provisions in Article III and Annexure C and D give India some specified rights to use waters of Western rivers. These provisions relate to the areas in Jammu irrigated by the Ranbia and Pratap inundation canals off-taking from the Chenab river above Marala, and Jhelum river above Srinagar-Verinag and they even allow India to build barrages, but not dams, to control water. India can maintain continuous withdrawal for irrigation of those areas that were irrigated on the effective date of the Treaty (1 April 1960), and may even enlarge the irrigated cropped acreage (counted twice if cropped twice a year) by 70,000 acres in the Indus valley, 400,000 in the Jhelum Valley, and 225,000 (of which not more than 100,000 in Jammu District) in the Chenab Valley, plus 6,000 acres from the Chenab but outside its basin. For this purpose India may construct barrages of storage capacities of up to 250,000 acres feet (AF) on the upper Indus, 500,000 AF on the Jhelum above Verinag, and 500,000 AF on the Bhaga and Chandra tributaries of Chenab, plus some additional capacity for power generation and incidental storage for flood control up to 10,000 AF on the river Jhelum only. Moreover, with the acquiescence of Pakistan and subject to the Treaty provisions (Article IX) for settlement of disputes, India can build new run of the river hydroelectric plants.⁵⁷

These “specified rights” of using western rivers to India are not less, in any way, than any international covenant provides to any upper riparian in addition to the three Eastern rivers whose unfettered use was awarded to India under IWT after the transition period.⁵⁸

Indian has got what it wanted with only two exceptions: i) It has to relinquish her claim to the Chenab with its Marhu Tunnel diversion possibility, and accordingly ii) It have slowed down the Rajasthan Project until additional storage on the Beas (at Pong) and Ravi (at Thein) was available to Bhakra. But this delay and continued supplies to Pakistan over a period of less than five years, “was a small price to pay for the three rivers, especially since her contributions to the link canal was limited to her benefits.”⁵⁹

The simplicity of Pakistani decision makers in accepting the Bank plan and its execution was of the great merits of the plan. Once the transition period was over, the two countries could go their separate ways. The problem for the negotiators was that, neither India nor Pakistan wanted an integrated irrigation system, even if the World Bank could be persuaded to lend much of the cost. Pakistan did not want it because her entire experience from the Cabinet Mission and Mountbatten-Menon negotiations, through the Partition holocaust, to Kashmir and the canal closures of April 1948, had proved that it could not trust India with its life-giving supply of irrigation water. India did not want it because it could go

⁵⁶ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 159.

⁵⁷ *The Indus Waters Treaty 1960*, provisions in Article III and Annexure C and D also cited by Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 159-160.

⁵⁸ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 160.

⁵⁹ See Muhammad Nasrullah, *Wullar Barrage* (1991), p. 160 as cited from Aloys Arthur Michel, *The Indus Rivers: A Study of the Effects of Partition* (New Haven and London: Yale University Press, 1967), p. 238-240.

ahead, at considerably less cost to itself, with the Bhakra-Beas-Rajasthan Project, nor did Indians want to accept partition as a final and permanent thing. Pakistani decision makers should have been aware of this Indian attitude, but they would have been taking to India's word that it would not interfere with the Chenab and Jhelum supplies. India, eventually obtained the rights of "specified uses" of the Western rivers in the Himalayas and in Jammu and Kashmir.⁶⁰

Of course Pakistan welcomed Indian promise (not to interfere with Chenab and Jhelum flows) by considering three factors: First, as long as Southern Jammu-Kashmir remained in Indian hands, Pakistan could not use Dhiangarh dam site on the Chenab or the Wullar Lake site on the Jhelum. Second, it believed in General Wheeler's estimates that the net loss of the Dhiangarh site to Pakistan is only about 2.5 million acre feet per year and his argument that the advantage of the Wullar Lake site was restricted by the danger of flooding the entire Kashmir Valley—Pakistani administered Kashmir—"Azad Kashmir" and Srinagar. Third, these dam sites were not included in the Bank's Indus Basin Development Plan for any financial arrangement.⁶¹

From the engineers' standpoint, the Marhu plan had the great advantage. It was obvious that it could never be acceptable to Pakistan. The only way out of the impasse for the Bank was to divorce it from the two basic issues, the scheme of works necessary for replacement and the cost of such a scheme from its plan.⁶²

In this way, Pakistan lost its unfettered right of use of the three Eastern international rivers and India gained a strong and real political tool under the IWT clause of "specified uses" to intimidate Pakistan, strangulate it economically and threatens its security whenever required so.⁶³

6.2.1 Domestic Political Losses: Provincial Disharmony

The policies of the British in United India for the development of Punjab on the criterion of irrigation-based agriculture in the Indus Basin had created deep tensions between Sindh and Punjab provinces over the distribution of the available surface water. Punjab saw itself as the country's breadbasket and naturally expected preferential treatment in the use and development of the water resources of the Indus river system. Sindh, in contrast, felt neglected after decades of British policies focused on the development of upper Indus Basin. Sindh not only had to lobby hard to convince the British to consider its needs seriously, but also had to defend against Punjab's efforts to secure as much water as possible for own irrigation schemes. When the British finally started trying to lessen water-related tensions between Sindh and Punjab, they failed to persuade both the provinces for cooperation.

The water dispute between Sindh and Punjab exacerbated from 1947 to 1960. The

⁶⁰ Ibid.; See also Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 160-161.

⁶¹ Ibid.; See also Muhammad Nasrullah, *Wullar Barrage* (1991), pp. 161-162.

⁶² Ibid.; See also Muhammad Nasrullah, *Wullar Barrage* (1991), p. 162.

⁶³ Muhammad Nasrullah, *Wullar Barrage* (1991), p. 162.

Indian action of 1948 and its subsequent demand of exclusive rights to the waters of three eastern rivers, which culminated into signing of the Treaty, remained an issue of hot debate among the political elite for a decade but further worsened after relinquishing by Pakistan the waters of three eastern rivers of Punjab to India. Consequently, in the post-Treaty environment the shortfall was to be met by diverting waters from the western rivers. The other provinces of Pakistan blamed Punjab for selling-out of its rivers to India and developing on the behest of the resources of other provinces. Thus, it fuelled political and ethnic tensions which persistently troubled post-colonial Pakistan. Mainly because of the Treaty and partly due to inequitable distribution of economic and political power between ethnic groups, elites from the non-dominant groups increasingly viewed major decisions and policies over water distribution and other issues in purely ethnic terms. To mobilize support against the central state [Punjab], non-Punjabi, non-Muhajir elites in the smaller provinces emphasized ethnic differences between the provinces and highlighted the ethnic component of economic and political issues. Sindhi elites were quick in portraying the water dispute as an ethnic issue. Their appeals soon resonated with the local population, for whom the Indus waters were a question of survival of vital agrarian economy. Many people in the smaller provinces were already resentful of the Punjabi-dominated central state for not upholding promises of democracy and provincial autonomy. Debates over water allocation began to echo grievances over Punjabi domination, encroachment of provincial autonomy, and unfulfilled promises of political liberalization.⁶⁴

The Indus waters issue was vital to Sindh and Punjab, later NWFP and Baluchistan also aired their grievances, because they were the principal beneficiaries of the Indus river system and as they had the capacity for developing canal irrigation systems. The British “favouritism of Punjab” in irrigating the Indus Basin had already caused feelings of resentment and neglect in Sindh in United India. After Independence, Sindhis feared that the pre-eminence of Punjabis in the military and bureaucracy would culminate in state policies which would entrench Punjab interests at their expense.⁶⁵

Although Sindhi nationalist leaders have played a major role in stirring up emotion on the water dispute, the issue is not important just because they have used it to arouse public discontent. The water dispute is both an economic and symbolic issue to Sindhis and their concern about possible reductions in the water supply should not simply be attributed to manipulation by politicians or ethnic elites. A reduction in the flow of the Indus would have serious repercussions for Sindhis as most of them depend on the river Indus—virtually the only source of water for their agricultural, industrial and drinking needs. Sindh’s position as the downstream riparian and its long-standing mistrust of Punjab further crystallised these

⁶⁴ For further details see Humaira Linda Afzal, *Settling Disputes between Ethno-regional Groups in Young Democracies* (Ph.D. Dissertation, submitted to the Department of Political Science, University of Michigan, 1995). Ms. Linda has provided an excellent exposition of ethnic factor in aggravating the water problem between provinces of Pakistan, especially after the signing of the Indus Waters Treaty in 1960.

⁶⁵ Humaira Linda Afzal, *Settling Disputes between Ethno-regional Groups in Young Democracies* (Ph.D. Dissertation, submitted to the Department of Political Science, University of Michigan, 1995).

concerns. To the extent that while the Indian threat to Pakistan's water supply loomed in the early years of independence, Sindhis worried about Punjab's water-related activities. In the early 1950s, for example, Sindhi members of the central legislature complained that Punjab was undertaking projects detrimental to the water supply downstream. The central government tried to allay their apprehension by affirming that no schemes outside the scope of the 1945 Sindh-Punjab Draft Agreement would be sanctioned without consulting Sindh. Sindh was also concerned that the case which Pakistan presented in negotiations with India could be detrimental to it when the matter of provincial water rights was addressed. In 1954, the central government assured the provinces that what took place regarding the international dispute would not affect their positions in the domestic water disagreement and that, if necessary, it would appoint an impartial commission to resolve points of contention.⁶⁶

The imposition of One Unit government in western Pakistan in 1955 ended debate over provincial water allocation by technically rendering it a non-issue and eliminating Sindh's voice as a separate entity.⁶⁷ After One Unit government ended in 1970, the provincial distribution of almost anything became very controversial and the water dispute immediately re-emerged as a major source of tension between the provinces. Debates over the water issue in the provincial and national assemblies and in the press were particularly heated as the rhetoric tapped into the inter-ethnic tensions. As both mainstream politicians and ethnic nationalists exploited the issue for political gains, technical details became muddled and misperceptions and misinformation abounded. The emotion aroused by the dispute also affected engineers in the provincial irrigation departments and they could not agree on even basic technical matters. Public pressure, especially in Sindh and Punjab, discouraged compromise and hardened the provinces' positions. For politicians, appearing weak on the water issue was politically unacceptable: no one wanted to be accused of giving water away.⁶⁸

Arguments over water allocation were frequently couched in terms of provincial versus national interests. These arguments have echoed the feeling in the smaller provinces that Punjab has imposed its will under the guise of Pakistan's "national interest". In their view, policies beneficial to Punjab are equated with the needs of Pakistan while those which looked after the smaller provinces are condemned as selfish, parochial and "anti-Pakistan". Punjab has contended that, as Pakistan's "breadbasket," it is in the national interest for the province to develop agriculture to the maximum extent possible. The province should thus receive enough water to irrigate all its cultivable land. This position is reflected in the province's earlier arguments against the British decision to expand irrigation in the Lower Indus Basin. Punjab

⁶⁶ Ibid.

⁶⁷ See Linda Ibid. Sindhis still find some low-key expression in government forums. In late 1962, for instance, a Sindhi member of the Provincial Assembly of West Pakistan [now Pakistan] voiced concern that the federal Water and Power Development Authority (WAPDA) was implementing schemes in areas of former Punjab, but not in former Sindh. *Provincial Assembly of West Pakistan Debates II, 1* (1 December 1962), pp. 4-35.

⁶⁸ Ibid.

has further accused Sindh of wanting to sacrifice the interests of Pakistan to “selfish provincialism.” Sindh on the contrary has countered that agricultural expansion being pursued by Punjab was against the national interest as it would hurt Sindh’s development by decreasing the quality and quantity of water flowing downstream. Moreover, Sindh has resented what it perceives as Punjab’s claim to a disproportionate share of water under the guise of the national interest; to many Sindhis, Punjabis are the ones pursuing provincial interests.⁶⁹ The issue of Kalabagh Dam is a vivid example of Sindh-Punjab row over water allocation and development of the Indus river.⁷⁰

6.2.1.1 The Gulf between East and West Pakistan

Ben Crow et al state in their book, *Sharing the Ganges*, that the signing of the Indus Waters Treaty overshadowed the Ganges issue. The decision to go ahead with the Ganges project received a boost after the departure of the British from India and the partition of the lower Ganges delta into bitter political rival in the form of Indian West Bengal and East Bengal (former East Pakistan). The main forces at work lobbying for the Barrage project were commercial and industrial interests in West Bengal who saw it a technical panacea for the political and economic decline of the state. The chronology of events in its construction reflects the nature of the forces that guided this resolve. Though the project was in the mind of the Indian Government from very early on, yet the decision to go ahead with it was announced only in 1960 and Pakistan was informed of this only in 1961, four months after the September 1960 signing of the Indus Treaty.

The government of West Bengal exerted consistent pressures to secure central government’s support to expedite implementation of the barrage. In 1958, when progress was delayed, S. K. Patel, Minister of Transport in Government of India told the Indian Parliament that there was a reason for the delay but that he could not tell the House what it was. Before the conclusion of Indus agreement, in a letter dated 12 March 1960, Prime Minister Jawaharlal Nehru wrote to BC Roy the Chief Minister of west Bengal:

“I can assure you that we are anxious to go ahead with the scheme [Farakka barrage]. In fact, work to that end is being done in various ways. We did feel, however, that we might not make public announcement about this for two or three months while the canal water [Indus Waters] discussions are going on. We hope they will be completed in about two month’s time. But this does not mean any delay and this project is certainly being included in our plans (emphasis in original).”⁷¹

⁶⁹ Ibid.

⁷⁰ The plan to construct dam at Kalabagh was finalized in early 1970s, despite satisfactory feasibilities and fund raising the plan is in doldrums. No government, democratic or military, was able to develop consensus on Kalabagh Dam issue.

⁷¹ Parthasarathi, G., (ed.) *Jawaharlal Nehru: Letters to Chief Ministers, 1947-1964*, 5 vols. London: Oxford University Press, 1985-1989; See also Ben Crow, Alan Lindquist and David Wilson, *Sharing the Ganges: The Politics and Technology of River Development* (Dhaka: University Press Limited,

According to Arun, the authors summarised the period of 1961-1971 as one marked by conflict and disagreement between East and West Pakistan as well as between West Bengal and the Indian Government. The Indian government resorted to a strategy of procrastination, adhering to the position of absolute territorial sovereignty over the Ganges waters. It evaded high-level discussions promised by the Nehru-Ayub Khan agreement. The Pakistani government's response to the Farakka project, on the other hand, is interpreted as a response in five stages: (i) cooperation, (ii) technical exchanges, (iii) pressure to hold high-level talks, (iv) attempts to involve third parties, and (v) threat of retaliation.⁷²

This was the time when Nepal also sought to re-negotiate with India the agreements on the Kosi and the Gandak projects, upstream tributaries of the Ganges river. Arun points out that *Sharing the Ganges* misses this broader dimension of the region's international politics and its relevance to the Farakka issue.⁷³

Although the authors are silent whether there was any trade-off made by Pakistan on Ganges issue but the leadership and the public of East Pakistan was of the view that "trade-offs were made" during the negotiations on the Indus waters issue. This factor certainly played a significant role in widening the political divide between East and West Pakistan as the former struggled and gained independence in 1972.

The complexity and intertwined nature of the Indus rivers question together with all water-related issues in South Asia are occasionally highlighted by technical experts. The water resource negotiations in South Asia have been referring to the assessment of complex natural processes and evaluating the outcome of the large-scale engineering ventures. The uncertainties inherent in such assessments lead to debates in which technical expertise plays an important role. Some of these debates would remain difficult to resolve in whatever context they arose. In the highly charged context of conflicting interests, and the information-restricted atmosphere in which international diplomacy is pursued, resolution is more elusive. Technical ambiguities and uncertainties remain despite the large teams of highly competent experts. These uncertainties, the alternative 'facts' which can be constructed around them and, to a certain extent, the experts who comment on the uncertainties—all get drawn into the negotiation as resources, and are used (consciously and unconsciously) in partisan ways.

Within the negotiations, technical ambiguities and uncertainties sometimes spawn intractable debates. For example, would the Farakka diversions improve navigation in the Hooghly River? How much ground-water recharge should be expected where the Ganges River crosses into Bangladesh? Some ambiguities were intentionally leaked-out of the negotiations to encourage widely-believed ideas about how natural processes, engineering projects and other governments are affecting people's lives. Widely-disseminated, these

1995). The quotation taken from a review of the book by Arun Dhoj Adhikary published in *WaterNepal*, Vol. 5, No. 1 (1997), pp. 144-147.

⁷² Ibid.

⁷³ Ibid.

myths may take on a life of their own thus constraining subsequent discussions.

The most prominent of the myths encouraged by technical ambiguity says India's intentions in the building of the Farakka Barrage were malignant. An articulate expression of this myth of malign intent is contained in a contribution to an electronic bulletin board made by in 1993 by a Bangladeshi student studying in the US. In the course of a discussion about water sharing negotiations, he wrote the following:

Jyoti Basu [Chief Minister of West Bengal] has admitted that the Farakka [Barrage] hasn't solved any problem that [it] was originally intended for (most of the Indian scientists that I have met admitted to this fact; the reference of Jyoti Basu's assertion in an interview published in a Bangladeshi Newsweekly Bichitra in 1994). Now the reason for such a failure lies in the lack of scientific feasibility of the project. I don't think the Indian scientists didn't know that the Farakka [Barrage] wouldn't solve the problem of siltation on riverbeds. They, especially the geoscientists, must have known that. Their geoscience, by the way, is very good. The reason the government [decided] not to go far any scientific reasoning is obvious: the project was never meant to solve any physical problem, it was originally designed as a political tool to teach Pakistan (in the 1960s) a lesson. ...hypothetically speaking, if Bangladesh were a state of India, then under no circumstances India would plan to build the Farakka Barrage because there is no scientific reason or validity to such an unnecessary undertaking (emphasis in original).⁷⁴

In fact, one of the criticisms which can be sustained is that the technical ambiguity was explicitly used to give legitimacy to a political belief. "It was originally designed as a political tool to teach Pakistan...a lesson"⁷⁵, but it also served as catalyst for widening the gulf between East and West Pakistan.

6.2.1.2 Alienation of Kashmiris

Neither Pakistan nor Indian leadership consulted Kashmiris on the issue of signing of the Indus Waters Treaty in 1960. The whole process of negotiation and mediation, encompassing more than nine years, was kept secret from the public of Kashmir as well as the peoples of both states. Effigies of both leaders were put on fire in their states immediately after the signing of the Indus Waters Treaty in 1960. Public pressures were mounting on the side of Pakistan to resolve Kashmir issue rather the demands were made to 'capture' Kashmir. Meanwhile, the revival of talks in continuation of the Indus Waters Treaty between India and Pakistan brought a lull in public pressure in Pakistan. The talks continued during 1962-63 and diplomats, including Shamshad Ahmad, the former foreign secretary of Pakistan, who raised the hopes that Kashmir dispute was near to be resolved in the same spirit of the Indus Basin Treaty.

⁷⁴ Ben Crow, Alan Lindquist and David Building, *Sharing the Ganges: The Politics and Technology of River Development* (Dhaka: The University Press Ltd., 1995), p. 227.

⁷⁵ *Ibid.*, pp. 227-235.

According to Shamshad Ahmad, the Bhutto-Swaran Singh talks in 1962-63 were the only high-level India-Pakistan negotiations dedicated to exploring 'a political solution' of the Kashmir dispute, which, as both sides agreed, was to be 'honourable, equitable and final', taking into consideration: i) delineation of international boundary in Jammu and Kashmir; and ii) disengagement of the forces of India and Pakistan in and around Kashmir, and iii) the removal of all elements of tension.⁷⁶

Shamshad Ahmad further states that:

"During those talks, Pakistan accepted the partition of the state but urged that territorial division should take into account the composition of the population of the State, control of rivers, requirements of defence and other considerations relevant to the determination of an international boundary and acceptable to the Kashmiri people. India was also ready to accept the partition of Kashmir while urging that the division should take into account geographic, administrative and other considerations, and that the settlement should involve the least disturbance to the life and welfare of the people."⁷⁷

The 'Chenab Formula'⁷⁸ has its origin in Bhutto-Swarn Singh talks. The Chenab riverbank as boundary was acceptable to both governments but Ayub Khan was afraid of that the people of Pakistan might not endorse it. Pakistanis, mainly Punjab and NWFP provinces, wanted the whole of Kashmir to join with Pakistan. The untimely, death of Jawaharlal Nehru dissipated hopes of Kashmir settlement on the basis of the Chenab formula. Securing of Kashmir along Chenab line was a latent wish of Ayub Khan. He states in his book that "the very fact that Pakistan had to be content with the waters of the three western rivers underlined the importance for us of having physical control over the upper reaches of these rivers to secure their maximum utilization for the growing needs of West Pakistan."⁷⁹

The growing public pressures and development of strong military muscle of Pakistan through American assistance under the SEATO and CENTO pacts encouraged the military government of Ayub Khan to exploit the opportunity and to settle the Kashmir even by force. Pakistan then launched an operation named 'Operation Gibraltar' in the Indian-held Kashmir. The planning was to ignite a peoples' uprising in the Indian-held Kashmir and later with the support of Kashmiris 'liberate Kashmir' by cutting off the Indian line of communication to Kashmir at Akhnoor, by a limited military action. The Pakistani military strategists laboured under the misconception that India would not cross the international border. Unfortunately,

⁷⁶ Shamshad Ahmad, former foreign secretary of Pakistan and Ambassador to India "Reversing the Tide of History: Kashmir Policy - an overview-II," *Dawn*, Aug. 6, 2004.

⁷⁷ Ibid.

⁷⁸ The Chenab formula refers to division /partitioning of Jammu and Kashmir along the river Chenab bank, in other words, extension of the Indus Waters Treaty as new boundary between India and Pakistan in Kashmir. For details see Mushtaqur Rahman, *Divided Kashmir: Old Problems, New Opportunities for India, Pakistan, and the Kashmiri People* (Boulder: Lynne Rienner Publishers), 1996.

⁷⁹ Muhammad Ayub Khan, *Friends Not Masters* (London: Oxford University Press, 1967), p. 113.

their calculations proved wrong and India retaliated with full military might and attacked across the international border along Lahore and Sialkot cities. In this way, the 'Operation Gibraltar' culminated into full-fledged war on Kashmir between India and Pakistan in September 1965.

The support of Pakistani public was unprecedented as they contributed wholeheartedly to National Defence Fund and the public of Lahore have not only been supplying home-made food to their troops fighting on the borders, but also extended all possible physical support in terms of war material, for example shot guns, kitchen knives and sticks etc. As the war resulted in a drawn match between India and Pakistan and the Russian-brokered Tashkent Declaration called for withdrawal of troops to pre-war positions, the hopes to liberate Kashmir by force also dissipated in 1965.

From the signing of the Tashkent Declaration to the uprising of Kashmiris in Indian-held Kashmir in 1989, no serious efforts have been made by Pakistan towards the resolution of the Kashmir dispute. Various governments have been justifying non-pro-active Kashmir policy because of their involvement in the US 'proxy war' in Afghanistan, which started some years after they faced the East Pakistan crisis. This policy alienated the Kashmiris from Pakistan that it had solved the issue of vital concerns (Indus water question) but paid no heed to Kashmiris cause, the Kashmiris demand for independence is a glaring consequence. However, the Kashmiris uprising in 1989 encouraged Pakistan to extend 'moral and political support' and keep on raising the level of violence in Kashmir. The Kargil episode of 1999-2001 is a glaring example of this policy.

6.2.2 Long-Term Domestic Economic Costs

The huge infrastructure of dams and link canals for the transfer of water from western rivers to eastern rivers under the Indus Waters Treaty 1960, to compensate for the shortfall created by the total diversion of three eastern rivers by India, has exacted tremendous economic costs on Pakistan because of huge bills for maintenance of the canal infrastructure and is also hindering effective water management in the basin.

Pakistan's agricultural sector, which remains very dependent on the canal irrigation system, reflects the problems with water management which is not only remained disputed in fragile political environment but also it is unaffordable financially and unsustainable technically. The centrality of agriculture to the national economy makes the issue especially critical, the expansion of irrigation in the Indus Basin continued in the post-colonial period, and Pakistan now has three major storage reservoirs, 19 barrages and headworks, 43 main canals, 12 inter-river link canals, over 36,000 miles (59,400 sq km) of irrigation canals, and over a million miles of watercourses and field channels—the world largest integrated canal irrigation system. About 80% of the 51 million acres of cropped land are under canal irrigation,

and irrigated land produces over 90% of the value of national agricultural production and caters for 70 percent of workforce of Pakistan.⁸⁰

The water dispute began to reflect the political tensions between Pakistan's provinces and ethnic groups. As one government appointed committee after another but all failed to settle the water issue. In the absence of a permanent arrangement for distributing the waters of the Indus river system, the federal government's Water Distribution Committee was required to decide the allocations twice (once each for the Winter and Summer growing seasons) every year.⁸¹ Either the Prime Minister or President must have to approve the allocation before it becomes effective. With each *ad hoc* decision, the Government of Pakistan has emphasized that the arrangements are without prejudice to the rights and claims of the provinces and that they will not become a precedent for permanent water allocations in the future. Provinces were seldom satisfied with the shares which they receive under the seasonal *ad hoc* arrangements.⁸²

The *ad hoc* process of water distribution has sharply constrained efforts to improve water management by encouraging inefficient and often destructive water use and diverting money and attention from other water-related problems.⁸³ Uncertainty about long-term provincial water rights also discourages farmers from making on-farm investments which could increase production, while the frequent delays on decisions about *ad hoc* water allocation have hindered efficient use of the available water. For decades, the provinces have viewed it as desirable to establish "existing uses"—often by irrigating as much land as possible regardless of whether it is optimal use of the water—so that historical rights can be claimed in water negotiations.

In the Province of Punjab, the problem has become uncontrollable despite huge expenditures on numerous salinity control and reclamation projects (SCARPs), details have been given in the following section. Provincial irrigation departments have been reluctant to acknowledge the high-rate of water losses in their canal systems because of apprehension that this would support other provinces' claims that they are demanding too much water.

⁸⁰ *Planning Cell, Government of Pakistan, "Water Sector Investment Planning Study", Volume I: Main Report (Lahore: Federal Planning Cell, Government of Pakistan, 1991).*

⁸¹ The Water Distribution Committee, which is headed by the Secretary of the Ministry of Water and Power, is comprised of the Secretary of the Ministry of Food and Agriculture, the Chief Engineering Advisor to the WAPDA-Water and Power Development Authority, Government of Pakistan, Member (Water) of the Water and Power Development Authority (WAPDA) and the secretaries of the provincial agriculture departments and power and irrigation departments. Various subcommittees headed by the Chief Engineering Advisor meet as needed to ensure that the allocation is implemented as approved.

⁸² *Planning Cell, Government of Pakistan, "Water Sector Investment Planning Study" (WSIPS), Volume I: Main Report (Lahore: Federal Planning Cell, Government of Pakistan, 1991), pp. 3-18.*

⁸³ Masood Ahmad and Gary P. Kutcher, *Irrigation Planning with Environmental Considerations: A Case Study of Pakistan's Indus Basin* (Washington, D.C.: The World Bank, 1992), pp. 92-94; Asit K. Biswas, "Environmental Concerns in Pakistan, with Special Reference to Water and Forests," *Environmental Conservation*, Vol. 14, No. 4 (Winter 1987), pp. 320-22.

Similarly, the controversy surrounding water allocation between provinces deflects attention from the problem of suboptimal water allocation within provinces.⁸⁴

The non-existence of any water-sharing agreement has also impeded the federal government from pursuing major new irrigation projects. This happened because without a water-sharing agreement their water requirements cannot be guaranteed. Therefore, they oppose any such plan of the federal government. Water stored at Tarbela Dam, a replacement work built as a result of the Indus Waters Treaty 1960 agreement, has not been efficiently used either. Because of inter-provincial contention over the allocation of storage water, water released from Tarbela has been passed on to the existing system. By sending excessive water to some areas where it is not needed aggravates the problem of water-logging and salinity.⁸⁵ Meanwhile, precious water flows down unused into sea.⁸⁶

The water dispute has also hindered efforts to implement a system of basin-wide water management, which experts have argued, could spawn significant increases in agricultural production. Despite the vast canal irrigation system and the importance of agriculture to the economy, Pakistan's overall agricultural sector has not done well since the 1960s, when Green Revolution technology helped generate a 6 per cent growth rate in the agricultural sector. In the 1970s, the average annual rate of growth in agriculture fell to 2 per cent. It rose to about 4 per cent in the 1980s, but this was largely attributable to a 10 per cent increase in cotton, which benefited from higher yielding varieties and better plant protection. Yields for other crops are among the lowest in developing countries. Given the region's climate and soils, one acre foot of irrigation water should produce between \$500 and \$1,000 of crop output; actual crop output per acre foot of water is less than \$100.2. In the 1980s, increases in the production of all food crops (2.4%) failed to keep pace with the rapid population growth (3.1%) in the same period. "If this trend continues, Pakistan will face a 40 per cent deficit in food-grains, an 80 per cent deficit in edible oils, and a 30 per cent deficit in sugar by the year 2000."⁸⁷ Pakistan has crossed all these projected limits and the situation is going bad to worse.

The water dispute is obviously not the only factor for Pakistan's difficulties with agricultural production but certainly it is the major one. Other interrelated problems, ranging from irrational pricing policies to inadequate agricultural support services, contribute to the

⁸⁴ Disclosed in an interview by an engineering consultant, basing his information on an unpublished UNDP-assisted benefits optimization study of the 1991 Water Accord, the study found net water-deficit areas within the provinces of Punjab and Sindh.

⁸⁵ Badruddin, *Accord on Sharing of the River Waters in Pakistan and Its Implications*, (Lahore: International Irrigation Management Institute, April 1991)

⁸⁶ Although, certain amount of water must flow into the sea in order to check saltwater intrusion and to maintain the mangrove forests which are critical to the ecosystem of southern Sindh. The minimum amount of water that must be left to flow into the sea has been a major point of contention between Sindh and Punjab.

⁸⁷ Muhammad Afzal, in a report on "Managing Water Resources of the Indus Basin for Sustained Development of Irrigated Agriculture in Pakistan," (Islamabad: Pakistan Association of Agricultural Social Scientists, Pakistan Agricultural Research Council, n.d), pp. 2-7.

sector's sluggishness. Moreover, settling the water dispute may not end difficulties with water management because it is only one of many reasons why barely half of the surface water in the irrigation system makes it to the fields.⁸⁸ Still, even the lower estimates of the financial loss incurred primarily because of the water dispute are staggering. The World Bank estimates that Pakistan could gain \$50 to 100 million annually by ending the dispute. According to the Government of Pakistan, the national economy forfeits about \$1.7 billion annually in direct and indirect benefits because of the lack of a water-sharing agreement.⁸⁹

Overcoming problems with water management which the water dispute has created or exacerbated requires the successful implementation of a water agreement which the provincial governments, their irrigation department personnel, and farmers perceive as both fair and permanent. If water users or provincial irrigation departments view a decision on water distribution as unjust or apt to be changed by subsequent governments, they will continue detrimental practices and policies. For instance, landowners who think that their water allocation might change significantly in the near future will remain reluctant to make long-term investments which are needed to increase production. Similarly, provincial irrigation departments will persist in encouraging the use of as much water as possible in an effort to establish historical rights in future negotiations. They will also avoid using the prescribed allocation in long-term planning out of concern that it would serve to legitimize or reinforce a water decision which they consider unfair.

Why has it been so difficult for Pakistan to resolve the issue of inter-provincial water distribution? The water dispute was already very intense before 1947 and, in the post-colonial period, Indian refusal to accept historic uses from the eastern rivers by Pakistan and the diversion of three international rivers got entangled in the tensions between the provinces' major ethnic groups made it such a sensitive issue that even authoritarian rulers were unable to settle it. Even if they imposed a decision on the water issue, it would not foster the kinds of changes in behaviour which were necessary to improve water management practices.

During Pakistan's longest periods of authoritarian rule, Field Marshal Ayub Khan (1958-1969) and General Zia-ul-Haq (1977-1988) created commissions to deliberate the water issue, but neither could isolate the proceedings from the broader ethnic and political tensions that troubled the country. Arrangements reached under the auspices of authoritarian rulers are always handicapped because they will be popularly viewed as imposed, not freely negotiated. General Zia, in fact, tried to use his presidential and martial law powers to put pressure on the provinces to reach a consensus, but he only got the commission members from three provinces to fully accept the proposed arrangement. Provincial irrigation

⁸⁸ Government of Pakistan concedes that only a little over 50% of the surface water in the system ever makes it to the irrigation outlets in the fields. Ministry of Food and Agriculture, Government of Pakistan, Report of the National Commission on Agriculture, (Islamabad: Government of Pakistan, 1988), p. 290. Poor maintenance at all levels of the canal system accounts for much of the water loss.

⁸⁹ 'Government of Pakistan, Report of the Inter Provincial Committee on the Apportionment of the Indus Waters [Report of the 1991 Indus Waters Committee] (Islamabad: Printing Corporation of Pakistan, 20 March 1991).

department personnel from at least two of the provinces also sharply criticized the commission's recommendations for water distribution. Ultimately, Zia not only did not try to implement the proposal but his government explicitly refused to even disclose the contents of the commission's report.

Intuitively, it seems that authoritarian rulers could have just imposed a permanent arrangement for apportioning water among the provinces when negotiations had failed. However, a closer examination of the water issue reveals that this was not a practical option, or at least not an option which would generate any benefits. Just as civilian leaders face major political constraints in attempting to end the dispute, so do the authoritarian rulers. Historically, one of the biggest challenges to Pakistan's authoritarian regimes emanated from discontent in the smaller provinces over Punjabi alleged domination of the central state. Already faced with serious ethnic discontent and ethno-nationalist groups which were rapidly gaining support, the authoritarian rulers were averse to further inspiring opposition by issuing proclamation on water distribution.

Even if Ayub or Zia had forced a permanent arrangement for apportioning the Indus waters on the provinces, it would not have led to significant improvement in water management practices because of the decision's association with authoritarian rule. Since rectifying problems with water management in Pakistan ultimately requires altering behaviour, not just changing the way water is distributed, popular perceptions play a critical role in determining the success or failure of a new arrangement for distributing the Indus waters. If a decision on water apportionment is to generate positive change in Pakistan agricultural sector, it must be based on a broad consensus of all provinces. An arrangement widely perceived as an edict from the central state—not an agreement freely negotiated among the provinces, will remain ineffective at fostering necessary changes in behaviour at the level of the provincial irrigation departments or individual agricultural producers.

Like authoritarian counterparts, democratically-elected leaders, too, face substantial political obstacles in attempting to end ethno-regional disputes, but they have a distinct advantage over authoritarian rulers in that agreements which they broker are much more likely to be accepted as negotiated rather than imposed. However, having an elected, civilian government is certainly not a sufficient condition for allowing a central leader to settle ethno-regional disputes: For instance, Zulfikar Ali Bhutto, Benazir Bhutto and Nawaz Sharif all attempted to bring the provinces into agreement on a water-sharing arrangement, but only Nawaz Sharif succeeded in 1991, though it also turned controversial soon.

6.2.2.1 Salinity and Water Logging

The problems of salinity and water-logging are the biggest environmental hazards faced by Pakistan. Since the building of link-canals system to transfer irrigation water from western rivers to eastern rivers, for the purpose of compensating the shortfall in eastern rivers after being diverted by India under the Indus Waters Treaty arrangements, it has become very severe. Because of the diversion of rivers water away from its normal flow and beds the

problem of drainage becomes an uphill task and has substantially drained Pakistan's economy.⁹⁰

The dilemma is that salinity and water-logging are reinforcing phenomenon. Applying more water for irrigation than the requirement of crops is making land water-logged by raising water-table in irrigated areas. High water-table brings more and more salts from the subsurface soil to surface. For reclamation of water-logged fields, more fresh water is required which further enhances water-logging and later salinity.⁹¹

Pakistan is facing both the problems in the province of Punjab—the major base of agricultural production of the state. On the other hand, diversion of water from western rivers reduces water supply in the coastal areas—required to flush away sea water intrusion. Thus more land is becoming saline due to intrusion of the sea water in coastal areas of Sindh and the problem has become colossal. Sindh province is accusing Punjab for the problem as the latter has to divert water from western rivers to compensate shortfall in eastern rivers. Thus it has hampered any development of water resources in Pakistan since the infrastructures was completed under the Indus Treaty in the mid-1970s.

Numerous studies on the Indus Basin irrigation system refer to the gigantic problem of salinity and water-logging.⁹² Almost all indicate the major cause as the seepage from the link-canal and poor drainage system while some refer to the mismanagement of river water. The aim of this study is not to pinpoint the causes of salinity and water-logging; rather, existence

⁹⁰ International Rivers Network, Press Release, October 25, 2006. available at: http://www.irn.org/programs/india/index.php?id=/programs/pakistan/archive/061025drainage_pr.html

⁹¹ "Salinity" is the accumulation of salts in a given amount of water or soil, primarily due to over-irrigation and a lack of adequate drainage. See Peter Collin, *Dictionary of Ecology and the Environment* (London: P. Collin Publishers, 1988), p. 158; and Andy Crump, *Dictionary of Environment and Development* (London: Earthscan, 1991), pp. 219-20. "Sodicity" refers to the impact of high concentrations of sodium on soil. While saline soils generally have normal properties, sodic soils undergo physicochemical reactions which cause the slaking of aggregates and the swelling and dispersion of clay materials, leading to reduced permeability and poor tilth. The loss of permeability may so restrict water infiltration into the root zone that plants become stressed from lack of water. Crusting can also impede seedling emergence and reduce crop stand. For an extended discussion, see Kenneth K. Tanji, ed., *Agricultural Salinity Assessment and Management* (New York: American Society of Civil Engineers, 1990), pp. 18-28.

⁹² Peter Gizewki, Thomas Homer-Dixon (1996), "Environmental Scarcity and Violent Conflict: The Case of Pakistan," *Occasional Paper Project on Environment, Population and Security*, Washington, DC; Norman Myers, "Environmental Security: The Case of South Asia," *International Environmental Affairs*, 1, no. 2 (spring, 1989): 138-154; Parvez Hassan, "The Growth of Environmental Consciousness in Pakistan," in *Beyond Shifting Sands: The Environment in India and Pakistan*, ed. The World Conservation Union (New Delhi: Centre for Science and the Environment and IUCN, May 1994), 7; Khawar Mumtaz and Mehjabeen Abidi-Habib, *Pakistan's Environment: A Historical Perspective and Selected Bibliography with Annotations* (Karachi: Joint Research Council-International Union for the Conservation of Nature Pakistan, 1989), 9-10; Government of Pakistan, *The Pakistan National Conservation Strategy* (Karachi: Government of Pakistan/Joint Research Council-International Union for the Conservation of Nature Pakistan, 1992), 68; Arif Hasan and Amenah Azam Ali, *Environmental Repercussions of Development in Pakistan* (Karachi: OPP-RTI, March 1993), 35; Tahir Zubair and Z. Habib, "Water and Land Productivity; Trends across Punjab Canal Commands", Pakistan Country Series, Working Paper 14, no.3, International Water Management Institute, 2001. Muhammad Hanif, "Management of Water-Resources in South Asia," The COMSATS 1st Meeting on Water-Resources in the South Asia: Present Scenario and Future Trends, Islamabad, 2002.

of the phenomena and gravity of the problem itself which is eroding the production-base of Pakistan in the fertile provinces of Pakistan [Punjab and Sindh] and its linkages with conflict and peace in the region.

In a recent article, an irrigation expert and former chairman of IRSA (Indus River System Authority, Pakistan), Fateh-Ullah Khan states that the colossal wastage of about 52 MAF (million acre-feet) of water due to seepage from the unlined and supply-based canal irrigation system has created a drainage dilemma in the Indus basin. This is because the Indus Basin Irrigation System (IBIS) has been without a drainage system for removing excess water from the fields. Thus harmful saline drainage effluent has been accumulating in the Indus Basin from the wasteful seepage from the link-canals and the supply-based canal system in the form of groundwater.⁹³

About 45 MAF of harmful saline drainage effluent is indiscriminately pumped through about 700,000 tube wells of small farmers for use as irrigation water in Punjab. The pumped effluent contains about 150 million tons of injurious salts that are added to the land each year. The saline drainage effluent of 45 MAF has now become the second source of irrigation in Punjab besides its own share of 55.96 MAF of the canal water allocated under the 1991 Water Accord.⁹⁴

The use of saline drainage effluent and the absence of sub-surface tile drainage of land at the root-zone level of crops to evacuate salinity have affected about 60 per cent of land in the Indus Basin. About 7-10 per cent of the land has become a disaster zone. Some 70 per cent of the drainage effluent pumped is saline and saline-sodic. As a consequence, the crop yield per acre in the Indus Basin is one of the lowest in the world. All these problems are created due to lack of drainage and the large-scale misuse of saline drainage effluent.⁹⁵

In order to tackle the deteriorating situation of land because of salinity and water-logging in the Indus Basin, two mega-drainage projects of SCARP (Salinity Control and Reclamation Project) and NDP (National Drainage Programme) were executed since the early sixties at a cost of Rs. 250 billion and Rs. 500 billion respectively.⁹⁶ Both of these tube-well based mega-drainage projects have failed, as tube-wells cannot eradicate salinity, which is not their function. On the contrary, they circulate groundwater salinity between the topsoil and the sub-soil. Altogether, the two failed drainage projects have led to wastage of Rs. 750 billion and 40 years time.⁹⁷ The situation is growing from bad to worse as the following two maps highlight.

Today, the dilemma faced is deciding whether to abandon the use of 45 MAF of the injurious saline drainage effluent that has become the second source of irrigation in Punjab or

⁹³ Fatehullah Khan, *The News* (Islamabad), Friday, April 7, 2006.

⁹⁴ *Ibid.*

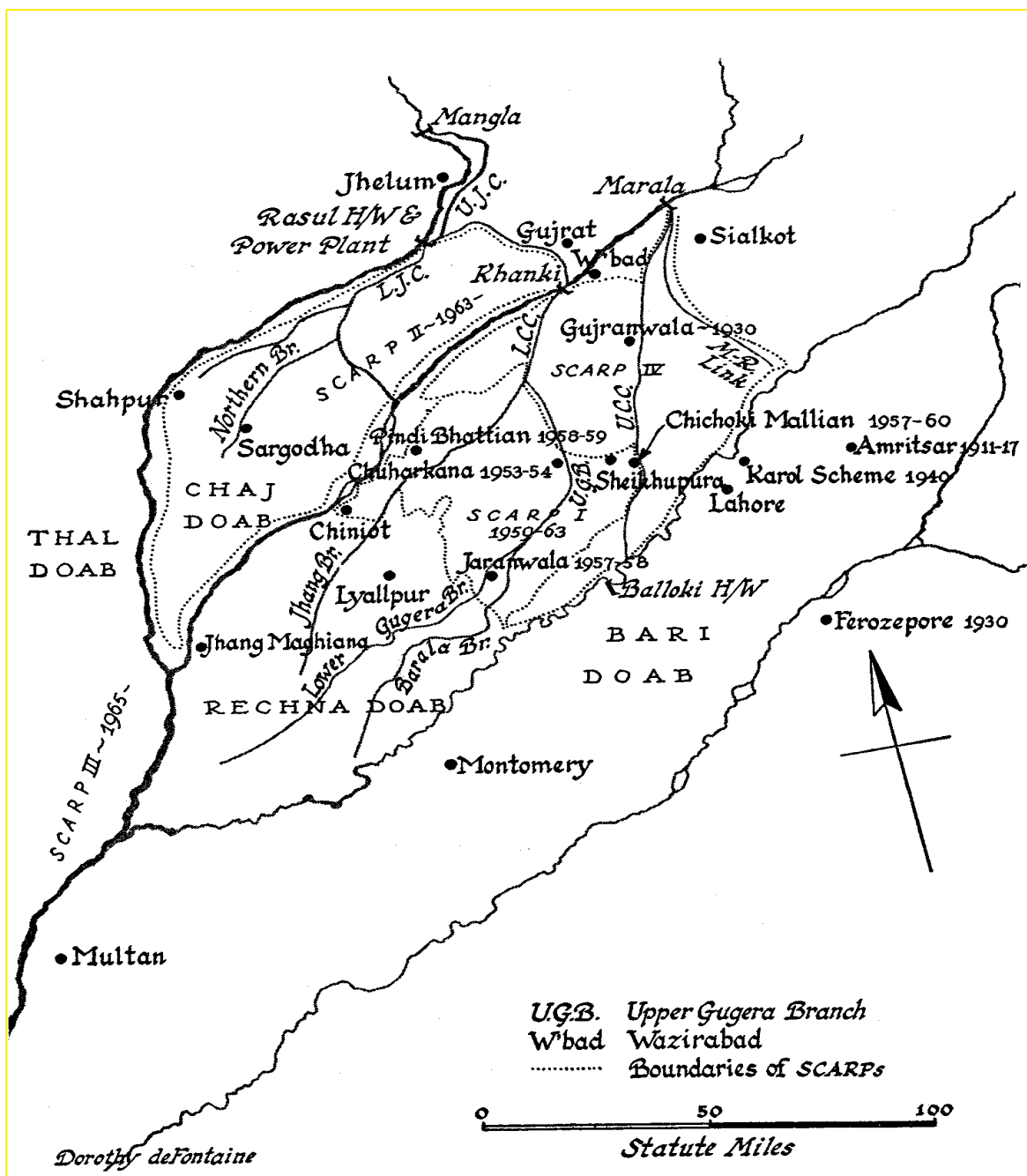
⁹⁵ *Ibid.*

⁹⁶ *Ibid.*

⁹⁷ *Ibid.*

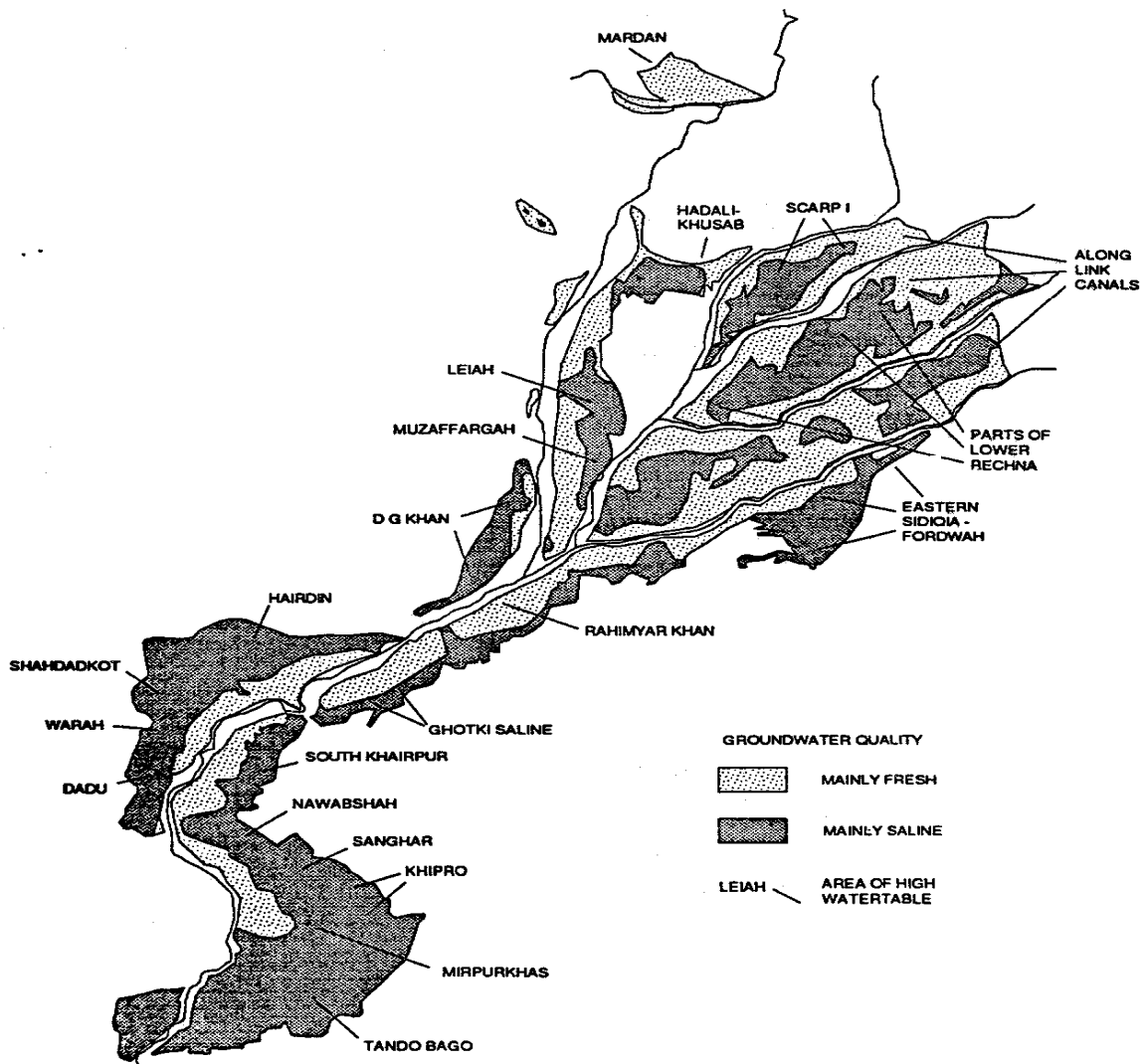
to have sub-surface tile drainage to evacuate saline drainage effluents out of the area to reclaim saline lands, control salinity and maintain salt and water balance.⁹⁸ The drainage of land to remove and control salinity by a proper method of 'sub-surface tile drainage' is recognized and practiced all over the world. If no sub-surface tile drainage were provided then salinity and sodicity would destroy the fertile lands of the Indus Basin by the year 2030.⁹⁹

Map-14& 15: Salinity and water-logging in the Indus Basin and the SCARP projects launched by Pakistan since 1960. (Source: Michel, Indus Rivers, op. cit., p. 441)



⁹⁸ Ibid.
⁹⁹ Ibid.

Areas of Saline and High Watertable



Source. WATER Sector Investment Planning Study.

6.3 Summary

The Indus Waters Treaty, though admittedly brought substantial gains for both parties but in the long-run it has engendered more complexities for Pakistan-India relations. The development infrastructure envisaged under the treaty lessened the 'hurting stalemate' for the time being, but the permanent division/diversion of an integrated river system has given permanency to the distrust between both the states by minimising chances of interaction as envisaged in various annexure of the IWT. Moreover, it has highlighted the

vulnerability of lower riparian, Pakistan, till the time the physical control of sources of its life-giving water supply [catchment areas of Chenab, Jehlum and Indus rivers] remained with rival upper riparian, India.

Staggering economic costs for the maintenance of river diversion and link-canals infrastructure along with ecological un-sustainability in Pakistan, political losses in terms of alienation of Kashmiris, provincial disharmony because of water sharing issue being obstacles for river development in Pakistan and Jammu and Kashmir—all proved to be counter-productive.

The separation of Kashmir from the Indus rivers' issue by India has labelled the Kashmir Dispute as only a political. This has also given both India and Pakistan enough time to consolidate control and harden their respective attitudes on Kashmir territory. Moreover, it has paved no way towards promoting mutual understanding or cooperation between the riparian as was expected and assumed by the mediator, World Bank, at the time of the signing of the Indus Waters Treaty in September 1960.

Chapter 7

EMERGING SCENARIOS:

Water Disputes and Diplomatic Deadlock

This chapter focuses on the major ongoing water disputes—Wullar Barrage, Baglihar and Kishenganga dams—and their role in bringing diplomatic deadlock to Indo-Pakistan relations. It addresses in detail the nature of the emerging scenarios in the region and the likely role of river water resources in Indo-Pakistan relations. The main contention is that a ‘final settlement’ on the Kashmir issue, or long-term peace in the region, is inconceivable without giving due consideration to realities on the ground, namely the geographical imperatives of the Indus river system.

Four major issues have surfaced since the signing of the Indus Waters Treaty (IWT) in 1960, three of which, namely the Wullar, Baglihar and Kishenganga issues, are not only enduring but have been responsible for diplomatic deadlock in Indo-Pakistan relations.

7.1 THE WULLAR BARRAGE ISSUE

Focusing on the Wullar Barrage (referred to by India as the Tulbal Navigation Project), this section highlights the geo-strategic importance of the Wullar Lake, Pakistan’s objections to the project, Indian justifications of it, and a brief account of the bilateral negotiations over this issue.¹

In order to understand the geo-strategic significance of the Wullar Lake it is necessary to note that “The river ‘Jhelum Main’ starts from Verinag.”² Passing through Srinagar and the district of Baramulla, it enters into Azad Kashmir at Muzafarabad³ (see Map 16). “Here the rivers Nilum and Kunhar fall in it simultaneously and then it turns towards south and enter into Mangla Dam near Mirpur.”⁴

The Wullar Lake is located approximately 25 kilometres north of Srinagar (in Indian held Kashmir) on the river Jhelum Main, 5187.24 feet above sea level.⁵ The river Jhelum

¹ The narrative in this section is taken from author’s previous works: Mirza M. Nasrullah, “Wular Barrage,” (Jan. 1994), *Pakistan Horizon*, Vol. 47, No. 1, (Jan. 1994), pp. 47-66; For further details see also Muhammad Nasrullah, *Wullar Barrage Issue: An Analysis* (unpublished MPhil [Magister] Thesis submitted in the Department of International Relations, Quaid-i-Azam University, Islamabad, 1991), pp. 165-202; Please see also Mirza, M. Nasrullah, “Wullar Barrage: Device to Throttle Pakistan”, *The Nation* (Lahore), in 2 vols. January 4 and 11, 1991.

² *The Indus Waters Treaty 1960*, Article I (4); See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 165; See also Mirza M. Nasrullah, “Wular Barrage,” (Jan. 1994), (Jan. 1994), p. 49.

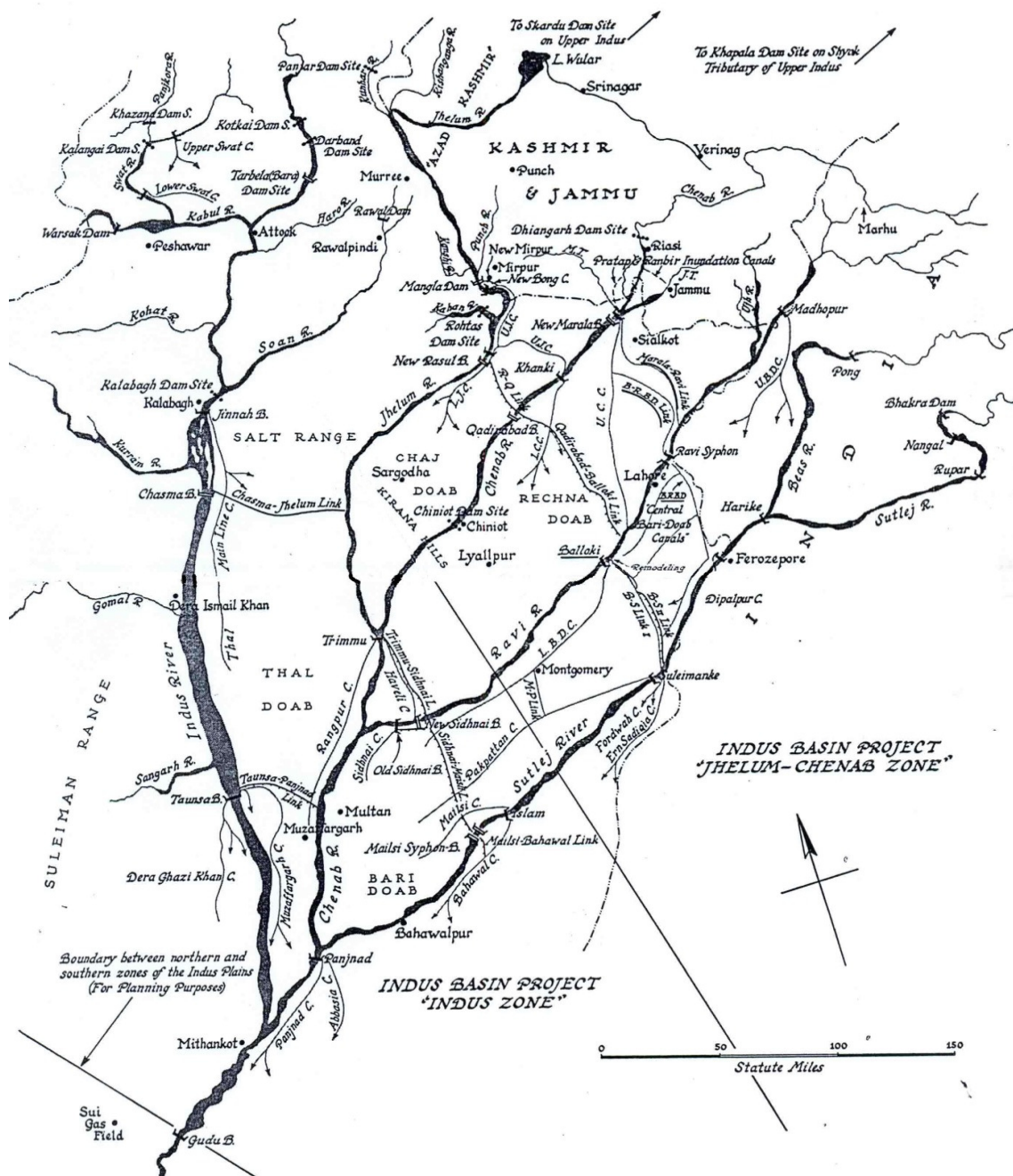
³ Government of Pakistan *Location Map Indus Basin Plan*, Water & Power Development Authority; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 165; See also Mirza M. Nasrullah, “Wular Barrage,” (Jan. 1994), (Jan. 1994), p. 49.

⁴ Kalim Akhtar, “Indian Plan to build a Barrage on the River Jhelum,” *Nawa-i-Waqt*, Sept. 27, 1986; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 166; See also Mirza M. Nasrullah, “Wular Barrage,” (Jan. 1994), p. 49.

⁵ Shah Nawaz Niazi, “Wullar Dam,” *The Nation*, October, 1989; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 166; See also Mirza M. Nasrullah, “Wular Barrage,” (Jan. 1994), p. 49.

flows into the lake from the south and flows out of it in the west.⁶ The lake is “an impediment in the way of the river Jhelum Main.”⁷

Map-16: The Development Plan, showing dams and canals network. (Source: Michel, *The Indus Rivers*, p. 266)



⁶ Ijaz Hussain, "Pakistan and the Wullar Barrage Project," *Regional Studies*, Vol. VI, No. 2 (Spring 1988), p. 47; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 166; See also Mirza M. Nasrullah, "Wullar Barrage," (Jan. 1994), p. 49.

⁷ Mr. Abdul Aziz, "Wullar and the proposed Barrage," *The Muslim*, Islamabad, October 24, 1986; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 166.

The geo-strategic significance of the site lies in the fact that any type of water-control structure enables India to intimidate Pakistan, as it has the potential to ruin the entire system of Triple Canals Project⁸ (namely, the Upper Jhelum Canal, the Upper Chenab Canal and the Lower Bari Doab Canal—see Map 16).

Experts are of the opinion that the control of the flow of the river Jhelum would amount to a crippling blow to the economies of Pakistan and Azad Kashmir. It would, for instance, lay waste hundreds of thousands acres of fertile land in the Punjab and Sindh provinces. Furthermore, it would magnify the risk of floods and droughts, since the control of the Jhelum at its source, along with the colossal reservoir of water in the Wullar Lake, would provide India with the potential to release or obstruct the river's flow any time, causing either a deluge or drought in the land of this region.⁹

Since the Mangla Dam near Mirpur is fed by river Jhelum, development of the Wullar Barrage would put its survival at stake.¹⁰ The Dam produces half of the total hydro-power used in Pakistan, and interference in its functioning would cause a severe power shortage in Azad Kashmir and half of Pakistan, affecting Pakistan's economy by reducing its industrial activity and agricultural production.¹¹ Moreover, "...construction of the Barrage would jeopardize irrigation of two third of the cultivated area of the Punjab, and also...give India the power to flood 13 million acres whenever it wished."¹²

The Wullar barrage would also be detrimental to Pakistan's defence infrastructure. The control of Jhelum river by India, coupled with the river Chenab through the Salal Dam (constructed by it during the 1970s) and the three eastern rivers (whose control is with it under the IWT) would give with further military advantages vis-à-vis Pakistan. Should a conflict situation arise between the two states, India would be able to control the mobility of Pakistani troops by flooding the battlefield or canals, and could equally enhance manoeuvrability of its own troops by closing the barrage gates, rendering the canal system dry and easy to traverse.¹³ It is a proven fact that during the 1965 war, the Indian army failed to cross the BRB (Bombarwala-Ravi-Bedian-Dipalpur) link canal because it was in full flow.¹⁴

⁸ Aloys Arthur Michel, *The Indus Rivers: A Study of the Effects of Partition* (London & New Haven: Yale University Press, 1967), pp.201, 239-240; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 167.

⁹ A. A. Salaria, "Wullar Barrage: An explosive Issue," *Dawn*, (Karachi), April 9, 1989; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 167.

¹⁰ *Ibid.*; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 167.

¹¹ Asghar Ali Abdi, Sitara-e-Khidmat, General Manager, Mangla Dam, Statement passed by him during briefing to Water and Power officers at Mangla, November 24, 1970; See also Mirza M. Nasrullah, "Wular Barrage," (Jan. 1994), p. 50; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 167.

¹² Nasrullah Dareshak, Irrigation Minister Punjab, "Punjab to rise against Wullar Barrage," *The Nation*, (Lahore) November 25, 1989; See also Mirza M. Nasrullah, "Wular Barrage," (Jan. 1994), p. 50; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 169.

¹³ *Ibid.*

¹⁴ Ch. Muhammad Anwar Ali Sarya, "Wullar Barrage", *The Nation*, November 17, 1989; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 168.

To India, the Wullar Barrage would be of enormous significance, since the Wullar Lake could serve as a transportation infrastructure linking Baramulla with Srinagar.¹⁵ It would facilitate the transportation of 0.5 million tons of apples and other fruits from the orchards adjacent to Baramulla along with a huge quantity of timber from Baramulla forests to Srinagar.¹⁶ The adjacent land's topography hardly permits the construction of a metalled road or railway line,¹⁷ and furthermore, the construction cost of the road would be many times greater than the Barrage construction.¹⁸ India claims that the Tulbal Navigation Project would be 90 per cent beneficial to Pakistan, as it would regulate the water supply to the Mangla Dam, increase the capacity for power generation, and regulate the supply to its triple canals system for greater irrigation in the Punjab.¹⁹ They also contend that the project could not be used for any purpose other than navigation as any type of significant storage would not only submerge Srinagar but also cause salinity and water-logging in a vast tract of land.²⁰

An analyst has observed that, "the lay of land around Wullar lake is such that there is a little possibility of the stored water being put to agricultural use."²¹ India has argued that the barrage would in fact be beneficial to Pakistan, since it would reduce the velocity of the flow in the river Jhelum, which, during the flood season, rises as high as 67 km per hour, compared to the lean season's flow of 32 km per hour.²² According to another analyst India has not been able to create an infrastructure for the last thirty years with which to maintain the general storage of 0.3 million acre-feet.²³

These explanations appear remarkable when juxtaposed with a careful analysis of the impact of the Wullar Lake on the adjacent land, taking into account the general physical geography of the area and the topography of the Jhelum catchment area, including recent man-made structures.²⁴ An analyst has claimed: "I have seen the lake and it presents a spectacle of an inland sea."²⁵ Moreover, "India is already using the water from the Jhelum Main for their 105-110 megawatt power station, on lower Jhelum and a 6-megawatt plant, run-of-river at Mohora."²⁶ The "Tulbal Navigation Project" is a two-phase project: a barrage at the

¹⁵ M. G. Srinath, "India denies Pak Charge on Jhelum," *The Hindustan Times*, September 27, 1986; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 170.

¹⁶ Author's personal discussion with an expert from water and power ministry, Government of Pakistan, on November 22, 1989.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Altaf A. Shaikh, "Wullar Barrage" *The Muslim*, Islamabad, March 25, 1989; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 171.

²² Salamat Ali, "Propaganda barrage," *Far Eastern Economic Review* (December 21, 1989); See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 172.

²³ Shah Nawaz Niazi, *op. cit.*

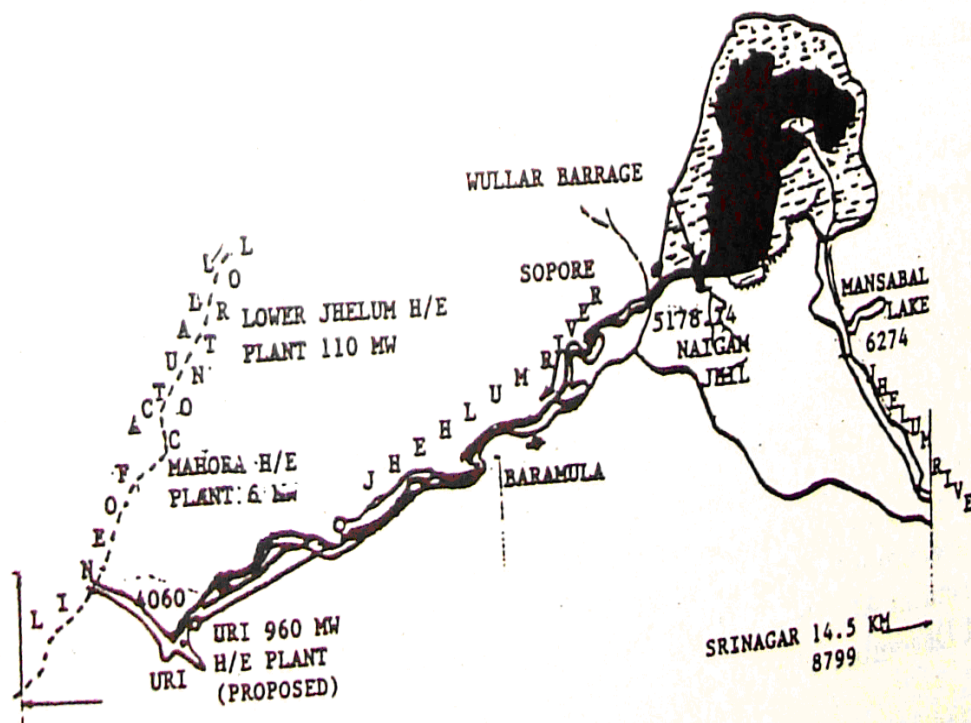
²⁴ See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 173.

²⁵ Shah Nawaz Niazi, *op. cit.*

²⁶ "True Story of Wullar Barrage," *Pakistan Times*, December 20, 1989; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 173; Author's personal discussion with some technical experts from Pakistan Indus Waters Commissioner, Lahore, on 10 January 1990.

mouth of Wullar lake at Ningali...and; a 960-megawatt hydroelectric power station at Uri, close to the Line of Actual Control in Kashmir²⁷ (see Map 17).

Map-17: Location of Wullar Barrage



7.1.1 The Dispute

The Indian Government began the construction of the Wullar Barrage in 1984.²⁸ The Government of Pakistan, through its Commissioner, conveyed its objections to the proposed project and sought details in the spring of 1985.²⁹ The Indian Government then supplied the required information, vaguely in spring 1986.³⁰ On the basis of the provisions of the IWT, the Government of Pakistan strongly objected to the proposed plan.

According to the meagre engineering details made available, "the project comprises barrage of 439.33 feet in length located at the outfall of the lake with two under-sluices of 39.37 feet each and six gated weir of 39.37 feet each, and a 12 meters wide navigational lock. The barrage on completion would create a storage of 0.3 million acre-feet (MAF); it would have a discharge capacity of 50,000 cusecs and would enable point level in the lake to

²⁷ *Ibid.*

²⁸ Editorial, *Daily Jang* (Rawalpindi), November 24, 1989; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 174.

²⁹ Ijaz Hussain, "Pakistan and the Wullar Barrage Project," *op. cit.*; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 174.

³⁰ *Ibid.*

be raised and maintained at an elevation of 5,178.24 feet above sea level” (for details see Table-8 below).³¹

The work on the project began in December 1984. The foundations of the navigation lock under-sluices, the adjoining lay of the barrage had been excavated, and work on the iron sheet piling was nearing completion.³² However, in November 1987 India agreed to suspend construction until a settlement could be reached.³³

1.	Type of Structure	Barrage
2.	Designed Flood Discharge	50,000 cusecs
3.	Pond Level (Max. Operating Level)	5178.24 ft
4.	Width between Abutments	439.33 ft
5.	Navigational Lock	39.37 ft
	a) Floor Level Upstream	5158.39 ft
	b) Floor Level Downstream	5152.81 ft
6.	Under Sluices (Overflow Portion 1):	
	Two Spans of	39.37 ft
	Crest Level	5165.81 ft
	Upstream Floor Level	5158.39 ft
7.	Estimated Cost: Indian Rs. 380 million (1990 estimates)	
8.	STORAGE CAPACITY OF WULLAR LAKE	
	Elevation	Surface Area
	5167 ft	14172 sq km
	5170 ft	22874 sq km
	5174 ft	32365 sq km
	5180 ft	48031 sq km
		Volume (Acre-Feet)
		055569
		110478
		247235
		347235
CAPACITY AT MAXIMUM OPERATING LEVEL (5178.24 ft) =		0.328 MAF

7.1.2 Pakistani Objections and Indian Justifications

Pakistan contends that the provisions of the IWT cannot be read in isolation and that the document must be interpreted in the light of its object and purpose. As an upper riparian, according to IWT, India is under an unambiguous obligation to allow the water to flow downstream unhindered. If the barrage were to be completed, India would be in a position to release or withhold water. India is entitled to construct an incidental storage work on river Jhelum if it does not exceed 10,000 acre-feet of water. The Indian plan to store 300,000 acre-feet is thirty times larger than the volume permitted under the IWT.³⁴

³¹ Altaf A. Shaikh, “Wullar Barrage,” *The Nation*, Lahore: October 5, 1989. See also Aslam Sheikh, “India Told to Stop Work on Jhelum Barrage,” *The Muslim*, September 29, 1986; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 175.

³² *Ibid.*

³³ Spokesman, Government of India, *Daily Jang*, January 1989. See also Dixit, “India Stopped Wullar Barrage Construction in 87” Staff Report, *The Nation*, December 5, 1989; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 175.

³⁴ Dr. Ijaz Hussain, *op. cit.*, p. 49; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 177-178.

India rebuts the Pakistani charge that “the structure she is building is not a ‘storage work’ but only a control structure envisaging use of natural storage.”³⁵ India also justifies building the barrage on the ground that it is meant for navigational purposes during the winter months which, in its view, draws support from the “non-consumptive use” clause of IWT.³⁶

India contends that it is permitted four distinct kinds of uses of the western rivers: domestic use, for drinking, washing etc.; agricultural use, for irrigation; restricted use, for the generation of hydro-electric power in “run-of-river” plants; and what is called “non-consumptive use”. Thus, according to India, it is allowed such “non-consumptive use” of the western rivers, including the Jhelum Main and its “connecting lake,” the Wullar Lake³⁷. However, the central issue under dispute is whether the Wullar Barrage is essentially a project for the “control or use of water for navigation” or whether it constitutes a “storage work”.³⁸

The term ‘storage work’ is defined as a work constructed “...for the purpose of impounding the waters of a stream”.³⁹ Is the barrage being constructed would be for “the purpose of impounding” i.e. the collection or confinement of the waters of the Jhelum or as a “control of water for navigation?” The Indian standpoint is that the “water will indeed be ‘confined’ for some time in order to raise the level of the lake, and then to regulate supply by ‘control’ of the water for navigation or construct any storage works on, the western rivers.”⁴⁰ One such exception is for ‘run-of-river’ hydro-electric projects. The other, pertinent to the dispute, takes the form of limited permission for the storage of the waters of the western rivers, as spelt out in Annexure E to the IWT. India is allowed “any natural storage in connecting lake,” unlike the Wullar Lake which is a lake in the bed of the river ‘Jhelum main’, but it must be “storage not resulting from any man-made works”.⁴¹

Some Indian sources state that the Wullar Lake is in a pathetic state—a “patient on the death bed,”⁴² has “halved in its size over the past five decades,”⁴³ and become “flatter and

³⁵ M. G. Srinath, *op. cit.*; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 176.

³⁶ Article 1(11) of the IWT, 1960 defines the term “Non-consumptive use” that “any control or use of water for navigations, floating of timber or other property, flood protecting or flood control..., provided that, exclusive of seepage and evaporation of water incidental to the control or use, the water (undiminished in volume within the practical range of measurement) includes agricultural use or use for generation of hydro-electric power”; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 176, footnote No. 41.

³⁷ M. G. Srinath, *op. cit.*; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 179.

³⁸ Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 179.

³⁹ Indus Waters Treaty, 1960, Annexure E Paragraph 2(a); See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 179.

⁴⁰ “Indian Defends Jhelum Project,” *Telegraph*, New Delhi, October 27, 1986. “Wullar Barrage not to be shelved,” *The Hindu*, Madras, October 29, 1987; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 179.

⁴¹ Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 180.

⁴² *The Kashmir Times*, February 24, 1989; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 180.

⁴³ *Ibid.*

shallower.”⁴⁴ The Wullar impedes navigation, especially during the winter, from late October to mid-February. The Barrage is not intended to add to storage as such, but to regulate depletion in order to ensure navigability all year round.⁴⁵ This is sought by the Tulbal Navigation Project, which would see the construction of a 440 foot long barrage, with a navigation lock, at the mouth of the Wullar Lake.⁴⁶

India offered three assurances:⁴⁷ 1) the “Tulbal Navigation Project is to control and regulate the depletion from Wullar Lake to provide the requisite flow in the Jhelum; 2) the volume of water that flows into the Jhelum as it enters Pakistan will not be diminished nor will be any material change in the flow in any channel;” and 3) “these precautions envisaged in the project will be in the interests of Pakistan as well.”

Pakistan strongly objects that it is not a work for navigational “control,” but of “storage”. It will affect the volume of water flowing into the Jhelum and apprehends that under the cover of a navigation project, India is in fact attempting to gain control of the water of the “Jhelum Main” for hydroelectric power production.⁴⁸

7.1.3 The Process of Negotiations

The IWT contains a self-executing procedure for resolving the differences and disputes relating to the interpretation and application of its provisions. Procedures are agreed upon under Article IX.⁴⁹

Pakistan became aware of the Tulbal Navigation Project through a tender notice submitted by the Indian government in February 1985. The then military government under Ziaul Haq treated the matter urgently. Later, in May 1986, during an annual meeting between the Indus Waters Commissioners, India argued that the Wullar Barrage was being constructed for “non-consumptive uses” and, under the IWT, such a barrage could be built on the Wullar Lake for navigational purposes. India further attempted to clarify the issue by adding that the water stored at the barrage would not be used for the purposes of power generation.⁵⁰

In the second round of discussions in December 1987, India adopted another stance, saying that the Wullar Lake was not a part of the river Jhelum and as such it had every right

⁴⁴ A. G. Noorani, “The Wullar Barrage Dispute,” *The Muslim*, May 20, 1989; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 180.

⁴⁵ Indian government stand as reflected by A. G. Noorani, *op.cit.* See also M. G. Srinath, *op. cit.*; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 181.

⁴⁶ *Ibid.* See also *The Times of India*, *op. cit.*; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 181.

⁴⁷ *Ibid.* Also confirmed by VOA as quoted in UNI, *The Muslim*, Islamabad, October 2, 1986 and “Indo-Pak Talks on Wullar Lake soon,” *Amrita Bazar Patrika*, Calcutta, May 25, 1987; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 182.

⁴⁸ Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 182.

⁴⁹ The Indus Waters Treaty 1960, Article IX; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 188.

⁵⁰ Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 189.

to construct a “dam” or “barrage” on it. Islamabad reacted quite sharply to this assertion. Meanwhile, in October 1987, a committee contacted by the Junejo government, including some British and American experts, strongly recommended that Pakistan approach the International Court of Justice. The matter was under consideration when the Indian government agreed to discuss the issue directly and abandoned the construction work until an accord was reached.⁵¹ Later, the Indian ambassador contacted Prime Minister Benazir Bhutto, requesting negotiations in February 1989. Pakistan accepted and the first round of bilateral talks was held between Pakistan’s envoy in New Delhi and the then Indian Government in March 1989.⁵²

During these negotiations, Islamabad expressed its apprehensions about the 350 million rupee “Tulbal Navigation Project”, better known as the Wullar Barrage. Pakistani experts were also convinced that India planned to divert water from river Kishenganga into the Wullar Barrage.⁵³ Consequently, as a result of the non-availability of water, the Neelum valley would be seriously affected, where Pakistan had designs of constructing a 969 MW hydroelectric plant.⁵⁴

The Indian Commissioner for the Indus gave an assurance that the barrage water would not be used for the generation of electricity, but instead stored water would be used only for navigation purposes. The Indian government had already completed feasibility reports for the setting up of a power plant in the vicinity of the Wullar Lake and two other Indian power plants were already working at Mohra and lower Jhelum, a few kilometres downstream of the lake.⁵⁵

Nonetheless, India made the offer to Pakistan that in lieu of the barrage, it would forgo its IWT rights to use the three million acre feet “General Storage” from the tributaries of Jhelum river.⁵⁶

In March 1989, the Government of Pakistan sent a delegation to New Delhi. A draft was reportedly presented to Indian officials.⁵⁷ Following these inconclusive talks Federal Minister for Water and Power, Sardar Farooq Leghari, denied that Pakistan had presented a draft to India and stated that the government would approach the International Court in the case of a complete failure of negotiations.⁵⁸

⁵¹ Author’s personal discussion with a legal expert on December 12, 1989; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 190-191; See also Altaf Shaikh, *op. cit.*

⁵² Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 191.

⁵³ Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 191-192.

⁵⁴ *The News* (Islamabad) July 14, 2006.

⁵⁵ Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 192.

⁵⁶ Special Correspondent, *op. cit.* See also, Salamat Ali, “Propaganda Barrage,” *For Eastern Economic Review*, December 21, 1989; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 192.

⁵⁷ Munir Ahmed, “Wullar Barrage: Pakistan’s Case,” *The Nation*, February 26, 1990; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 195.

⁵⁸ Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 195.

The then Punjab government, however, lodged a protest with the Federal government in April 1989 and asked the government not to negotiate any further. A committee was entrusted the task of revising the said “draft” and submit it to the Ministry of Water and Power by 31 August 1989.⁵⁹

On 18 August 1989, the Federal government wrote a letter to the Punjab government that an agreement would be signed between Pakistan and India on 31 October 1989. The Punjab government refused to support the agreement.⁶⁰

On 11 October 1989, the Chief Minister of Punjab, Mian Nawaz Sharif, wrote a letter to President Ghulam Ishaq Khan, requesting him to intervene in the Wullar issue, as the PPP government wanted to sign an agreement which was against the national interests.⁶¹

Meanwhile, a mass uprising in Indian-occupied Kashmir took place and the issue faded into the background. On 6 August 1990, the Bhutto government lost its legitimacy under the presidential order and Pakistan underwent a process of new elections. In India, V.P. Singh was removed in a no-confidence.⁶²

The new governments of Prime Minister Nawaz Sharif and Mr. Chandra Shekhar paid no attention to the issue, mainly due to Kashmiri uprising, the Gulf crisis and internal turmoil in both states. The issue remained unattended and was taken up again in January 2004 under the ongoing Composite Dialogue. However, no meaningful progress has been reported so far.⁶³

7.2 THE BAGLIHAR DAM ISSUE

The planned Baglihar Dam is located in the Doda district, approximately 110 kilometres within the Indian-held Jammu and Kashmir valley. The construction of this hydro-electric power plant is underway. The dam after completion would acquire a height of 144.5 meters having huge storage capacity sufficient to produce 900 MW hydro-electric power.⁶⁴ The Baglihar is one of eleven reported major hydroelectric projects that India has identified in Jammu and Kashmir, with nine of them on the Chenab.⁶⁵

Since June 2004 two rounds of bilateral talks were held on the issue but the parties failed to resolve differences in the light of the IWT. In January 2005, Pakistan for the first time invoked the arbitration provisions of the IWT and requested the World Bank to appoint a neutral expert. A Swiss hydrologist, Raymond Lafitte, was appointed in May 2005. He paid

⁵⁹ Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 196.

⁶⁰ Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 197.

⁶¹ Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 197.

⁶² Muhammad Nasrullah, Wullar Barrage Issue (1991), pp. 197-198.

⁶³ Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 198.

⁶⁴ Robert Wirsing and Christopher Jaspardo, “Spotlight on Indus River Diplomacy: India, Pakistan and the Baglihar Dam Dispute,” Asia-Pacific Center for Security Studies, May 2006. Available at: <http://www.apcss.org/Publications/APSSS/IndusRiverDiplomacy.Wirsing.Jaspardo.pdf#search=%22wirsing%20baglihar%22>.

⁶⁵ Sundeep Waslekar, *The Final Settlement: Restructuring India-Pakistan Relations* (Mumbai: Strategic Foresight Group, 2005), p. 58.

visits to the site and submitted his report after two years in 2007 which did not satisfy the lower riparian. Since then there is diplomatic deadlock and Pakistan is reportedly looking for the feasibility to take this issue to the International Court of Justice for arbitration / adjudication.

7.2.1 Pakistani Objections and Indian Justifications

Pakistan has not questioned the Indian plan as such but raised three key sets of technical objections to the design of the dam. One set of objections relates to its *storage* capacity, the second to the *power intake tunnels*, and the third to the *spillways*.⁶⁶

Pakistani officials maintain that the Baglihar's design equips India with the means, on the one hand, to economically squeeze, starve or strangulate Pakistan, or, on the other hand, to flood Pakistan, perhaps for military purposes. They argue, moreover, that the Baglihar dam has huge precedent-setting significance: if Pakistan were to compromise on the IWT, or rather on Jammu and Kashmir, it would set a precedent that India could invoke whenever it liked elsewhere on the Chenab or Jhelum rivers. A trickle of Pakistani deviations from the IWT today, said one senior foreign ministry official, could become a flood of them tomorrow.⁶⁷

Prof. Wirsing reports that Pakistani officials also cite the political importance of the Baglihar issue. It is, they concede, an extremely sensitive domestic political issue. The government's political foes demand to know why it took so long for them to contest the matter before the World Bank. "Baglihar is a politically painful matter for Islamabad," admitted one Pakistani official. Baglihar and other Indian hydroelectric projects, say the Pakistanis, are also extremely useful tools New Delhi exploits to win the political support of the energy-deficit Kashmiris—and to drive a wedge between Kashmiris and Pakistanis.⁶⁸

The Indian officials, as stated by Wirsing, naturally have a rather different "take" on the Baglihar. Its design, they contend, is fully in compliance with the IWT. Notwithstanding Pakistani objections, Baglihar, according to them, is a 'run of the river dam.' India has built nearly 20 such dams, they point out, and neither the Baglihar's height nor its storage capacity disqualifies it for designation in this category. The Indians accuse Pakistani officials of being deliberately obstructionist and wilfully interpreting the IWT in an excessively restrictive manner. The Pakistani objection to the positioning of the power intake tunnels, for instance, ignores the IWT provision, specifying that they should be constructed at the highest level *consistent with sound engineering*. Likewise, the Pakistani opposition to the gated spillways was "absurd". Himalayan rivers, a senior Indian official pointed out, carry enormous quantities of silt, far more than one generally finds in rivers in the West. Gated spillways, lower positioned gated spillways in particular, are essential in order to flush the silt-laden waters through the dam. Otherwise, the silt bombards the wall of the dam, falls to the bottom and

⁶⁶ Robert Wirsing and Christopher Jaspardo, "Spotlight on Indus River Diplomacy," op. cit.

⁶⁷ Ibid.

⁶⁸ Ibid.

swiftly builds up sediment on the river floor—a development that modern dam builders seek to thwart in order to prolong the useful life of the dam. In the view of Indian officials, the IWT authors could not possibly have intended that hydropower projects built in 2005 should be designed to conform to technologies in use in the 1950s. The Indians also argue that Pakistani anxieties about the latter's potential ability, to shut off the flow of water downstream, posing a threat to the vital farmlands of Punjab, have no basis in reality. Whereas Pakistanis claim that it would take a full 28 days to refill the Baglihar in the dry season.⁶⁹

Experts are of the opinion that the Baglihar Dam will have major security and economic implications for Pakistan, owing to increased Indian control over its share of water supplies. India can stop full flow of the river Chenab for about 28 days and cause a loss of 6,000 to 7,000 cusecs of water every day, equal to a 27 per cent decrease in the Chenab river.⁷⁰

The dam will provide India with the capability to manipulate the flow of water to Pakistan's disadvantage, the complete stoppage of flow for a continuous period of 28 days during the lean period of December, January and February would adversely affect agriculture and other requirements at Marala headworks and the project could also lead to a deluge in the area above Marala headworks, due to the sudden synchronized releases from the Baglihar along with Dulhasti and Salal reservoirs located in Indian-held Kashmir.

India has already constructed the Salal Dam on this river and has further plans to construct 16 to 17 dams on the river Chenab and 6 to 7 on river Jhelum. Pakistan has already sacrificed 27 MAF to India under the IWT.⁷¹ This confirms Pakistan's apprehensions regarding India's intentions on its storage potential.

Reports are appearing in the press that India, together with the state of Jammu and Kashmir (J&K), is deficit in power, and it seems that the Indian government has taken the policy decision to increase power production. Even if the government of Pakistan is crying wolf over India's Baglihar, Wullar and Kishenganga hydroelectric power projects, the Indian government is reportedly planning to construct another three projects in J&K with about 15,000 MW of power potential. In the past two decades, Indians have been invested Rs. 40 billion alone in the power sector of the state.⁷²

India seems to be determined to proceed with its plan and create a fait accompli similar to the Israeli settlements in the West Bank and other Palestinian territories. Unfortunately, nothing can force India to accept the terms of the IWT except moral force. As

⁶⁹ "Region: Dam Plans Shaken by Quake Claims," *Asian Economic Intelligence Review*, *AsiaInt.com* online service, 19 October 2005.

⁷⁰ For details see at www.dams.org

⁷¹ Bilal Hussain, *Dawn*, February 14, 2005.

⁷² *DailyTimes*, January 17, 2005.

the future unfolds, water in the region will grow ever scarcer, and once goodwill is lost, the resolution of the issues would be difficult.⁷³

Wirsing pinpoints three reasons for the dissatisfaction with the IWT—firstly, that, as a postscript to the region’s territorial partition, it offers very thin support to the integrated or joint development of the Indus river basin; secondly, that the IWT, in practice, favours either one side or the other. In the case of the Baglihar Dam, for instance, Indians have ineluctably been led to view the IWT mainly as an impediment to be artfully bypassed in the drive for increased hydroelectric power; thirdly, it offers only a very frail defence against heightened conflict over river resources between India and Pakistan, and that it is only a matter of time before water war becomes a virtually unavoidable feature of the region’s political environment. Citing a chapter entitled “Water” and with the subtitle “The Secret”, of a report *The Final Settlement* he highlights the argument that water has been central to the Kashmir dispute from the very beginning, that the public debate over Kashmir—focused on lofty goals of self-determination and human rights (and not on Islamabad’s self-interest in water security)—has always been discreetly steered away from this fundamental fact.⁷⁴

The report cites as evidence frequent unofficial Pakistani expressions of interest in recent years in a so-called Chenab formula of conflict resolution, according to which Jammu and Kashmir would be further partitioned, with Pakistan being granted the Kashmir Valley *and* a substantial (and Muslim majority) portion of Jammu, enough to give it command of the Chenab river. This, according to the report, has in recent years been the latent objective of Pakistani diplomatic and political activity relating to Kashmir.⁷⁵ From *The Final Settlement’s* perspective, “The IWT” has engendered a vicious cycle. This would aggravate the mistrust and hostility between the two countries. This vicious cycle of depleting resources spawning unemployment and fuelling terrorism is feared to intensify in the near future.⁷⁶

Wirsing doubts the oversimplified linkage between water availability and terrorism in *The Final Settlement’s* analysis in the words that “it is not alone, however, in calling attention to the potentially severe security implications of the region’s water resource rivalry”, and quoted a senior Pakistani diplomat as saying: “Water has become *the* core issue between India and Pakistan.... [As a result,] India-Pakistan relations will retain [in future] the same level of tension [as they now have] (emphasis in original).”⁷⁷ However, using words reminiscent of the appeals by Verghese and others for greater Indo-Pakistan collaboration in the development of the Indus basin’s water resources, Wirsing refers the report finally ending

⁷³ Wirsing and Christopher Jasparro, in “Spotlight on Indus River Diplomacy, op. cit.

⁷⁴ Wirsing, op. cit. quoting Sundeep Waslekar, *The Final Settlement*, op. cit., p. 59.

⁷⁵ Sundeep Waslekar, *The Final Settlement*, pp. 47-53, 73-78.

⁷⁶ *Ibid.*, p. 68.

⁷⁷ Interview, Islamabad, 7 April 2005, quoted by Professor Wirsing and Christopher Jasparro in “Spotlight on Indus River Diplomacy, op. cit.

on a positive note by evolving a plan to be jointly developed by India and Pakistan, would involve a creative solution to the political dimension of the conflict in Jammu & Kashmir.⁷⁸

7.3 THE KISHENGANGA DAM ISSUE

The river Neelum is a tributary of the Jhelum River over which Pakistan has exclusive rights under the IWT. The part of the river Neelum in Indian-held Jammu and Kashmir (J&K) is known as the Kishenganga. India plans to construct a 330 megawatt hydro-electric power plant on the river Kishenganga by damming the Neelum and diverting its water through a 27 kilometre tunnel to the river Jhelum in the Wullar Lake, about 25 kilometres from Muzaffarabad, inside Indian-held Jammu and Kashmir. Where India is developing Wullar lake to a fullfledged dam of storage capacity of 0.3 MAF and power plant of 960 MW. Downstream of the Indian Kishenganga project Pakistan has already planned a 969 megawatt Neelum-Jhelum hydropower project in Azad Kashmir. The diversion of the Kishenganga by India will enormously reduce the flow of water and badly affect the proposed Pakistani project.⁷⁹

The river originates and flows through a valley situated in the central area of Jammu & Kashmir, intersected by the "Line-of-Control" that divides the Pakistani and Indian administered parts of J&K. The Kishenganga Valley is separated from the wide Kashmir Valley by the north Kashmir mountain range which runs west from Zoji La Pass. The Kishenganga catchment in the north is delimited by the Great Himalayan range as some of its tributaries flow down the slopes of the high peak Nanga Parbat (8,126 meters). Rising in the mountain complex to the west of Dras and to the south of the Deosai plateau, the Kishenganga river receives the waters of a number of tiny tributaries, including a stream flowing from a place known as Koubal. At a place Shardi, it makes a sharp bend proceeding southwest until finally merging with the Jhelum River near Muzafarabad. The Kishenganga has a narrow and elongated basin, the width in many places spanning only twenty feet.⁸⁰

There are reports that India has established a Kishenganga Group of Contractors which consists of a Swedish consortium, Skanska International, and Indian companies, including the Power Development Corporation. The project aims to construct a 103 metre-high dam on the Kishenganga River in the Gurez Valley. Once completed, the lake of the Kishenganga dam will inundate the entire Gurez Valley with water, destroying its ecology and driving out more than 25,000 Dard Shin people, a unique and virtually unexposed culture, from their ancient homeland. The project plans to dam the Kishenganga in the Gurez Valley, creating a large reservoir from which a channel and about 22-27 km tunnel dug south through the North Kashmir mountain range will re-direct the Kishenganga waters to the Wullar Lake at

⁷⁸ Sundeep Waslekar, *The Final Settlement*, p. 79.

⁷⁹ Subrahmanyam Sridhar, "The Indus Water Treaty," *Security Research Review*, 2005, available at <http://gurais.wetpaint.com/page/Save+Gurez+Valley>

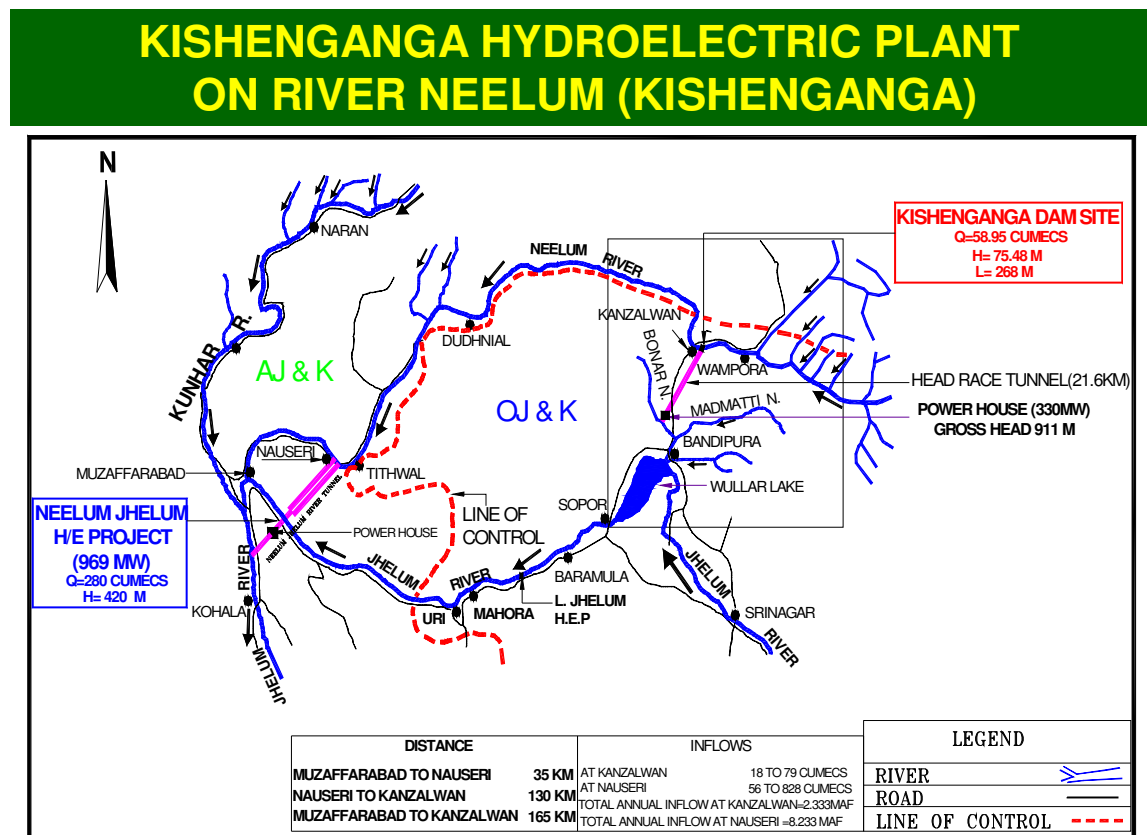
⁸⁰ Ibid.

Bandipur, where a 960-MW hydro-electric power plant will be installed at the Wullar barrage. The total distance by which the river will be diverted is 100 km.⁸¹

In addition to destroying the entire Gurez Valley, such a project would reduce the river Kishenganga's flow below the dam to a mere trickle, negatively affecting the environment of the lush green valleys from Neelum to Muzafarabad. Also, the diversion of the river Kishenganga would increase the level of the Wullar Lake, forcing the displacement of the inhabitants from the Muslim majority areas of the Kashmir valley.

There are reports that the \$500 million project is to be completed with the assistance of 85 per cent international funding. The building contractors, such as Skanska International of Sweden, have pledged to arrange 85 per cent of the costs of the project from international financial institutions at nominal five to six per cent interest rates. The debt will be paid over a twelve-year period. The balance of fifteen per cent is to be contributed by the Jammu and Kashmir government from its internal resources.

Map 18: The Location of the Kishenganga Project and the Diversion Tunnel to Wullar
 (Source: Pakistan Indus Waters Commissioner, 2011; See also Subrahmanyam Sridhar, "The Indus Water Treaty," *Security Research Review*, 2005.)



⁸¹ Ibid.

The inhabitants of the Gurez Valley are protesting that they were not once consulted before the Indian government entered into the deal with the Swedish consortium, The project is in its early stages.

The Dard Shin locals have been given two options: to leave on their own or to evacuate through a government plan which will settle the people into concrete housing projects in an urban setting. Twenty-five villages, 6 summer high-altitude habitats for shepherds, and 8 camping sites will be consumed by the dam construction project. With the completion of the project, approximately 25,000 Dard Shin people will be forced to quit the Gurez valley.⁸²

7.4 The Indian Intentions

India has clandestine motives in the guise of water resource development in Jammu and Kashmir. First and foremost, its aim is to convert Indo-Kashmir hostility into Pakistan-Kashmir confrontation. It is exploiting this issue by defaming Pakistan among the inhabitants of Indian-held Kashmir by propagating that it is interested in their welfare, but Pakistan is creating hurdles. This fact can be observed by the Indian Strategic Foresight's report that Indo-Pakistan rivalry over Kashmir would be story of the past but Pakistan and Kashmiris would soon fight over the Indus rivers.⁸³

The second hidden objective is forcing Kashmiris to leave the valleys, with the Kishenganga and Wullar Barrage issues constituting as vivid examples. By constructing a diversion infrastructure in the shape of the Kinshenganga dam, thousands of Kashmiri Muslims would have no option but to migrate. As Michel points out that the huge storage reserves of the Wullar Lake would inundate the entire Kashmir valley,⁸⁴ the main areas of Muslim population. Deprived of source of livelihood the Kashmiri people would not be able to resist the Indian occupation, thus 'dissolve' Kashmir issue in the name of development.

The third overriding objective is to keep under control Pakistan's life-line of water resource upstream for military, political and economic purposes. The upper riparian status possesses all potentials, and in asserting them, India can browbeat Pakistan on all the bilateral issues, especially Kashmir.

The rivers Jhelum and Chenab are crucial to the agrarian economy of Pakistan and are a matter of life and death for the farming communities of Punjab. These rivers constitute the main source to compensate the shortfall of the three eastern rivers Pakistan relinquished to India under the IWT. Any upstream control structure would be detrimental to Pakistan's economy and security. Pakistan is already building a 969 MW hydroelectric power station on

⁸² Ibid.

⁸³ Sundeep Waslekar, *Final Settlement*, op. cit.

⁸⁴ Aloys Arthur Michel, *The Indus Rivers*, op. cit., p. 35.

the river Neelum (known as the Kishenganga upstream of the LOC) and raising the height of the Mangla Dam; both of these projects would become useless before their completion.

The Indian objective of 'solving the navigation problem' between Baramullah and Srinagar by constructing the "Tulbal Navigation Project" is most likely a cover up. The Project is not merely a "barrage" but a proper "storage work" for a complete "dam". "India would be able to stop the water flow of river Jhelum for 20-30 days completely."⁸⁵ This could greatly reduce the production of electricity at Mangla and thereby adversely affect agricultural productivity in the Punjab province. Since the river Jhelum is an important tributary of the Indus,⁸⁶ any reduction in its flow would automatically reduce the flow of water in river, and thereby not only inflict damage upon the agricultural sector in the Sindh but also exacerbate Punjab-Sindh tensions.⁸⁷

7.5 The Looming Water Scarcity

Since 1990 an alarming scarcity of water is the catch-word in nearly all studies and research.⁸⁸ Numerous studies have projected the looming scenario in Pakistan.⁸⁹ At the end of the 20th century, the International Water Management Institute, Colombo, Sri Lanka, conducted a world-wide study on the availability of fresh water and projected emerging trends for the first quarter of the 21st century. The water scarce countries identified those located in the arid regions of the world: Africa, the Middle East, South Asia and Central Asia. In South Asia, the whole of Indus River Basin, comprising the total cultivable territory of Pakistan is projected as an 'absolute water scarce' area (see maps below). A number of causes of growing fresh water scarcity have been identified by academics, such as Homer-Dixon, Paul F. Diehl et al.

⁸⁵ Muhammad Anwar Sanga, "Wullar Barrage," *The Nation*, readers column, November 22, 1989; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 185.

⁸⁶ Asghar Ali Abdi, Sitara-e-Khadmat, *op. cit.*; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 186.

⁸⁷ Muhammad Anwar Sanga, *op. cit.*; See also Muhammad Nasrullah, Wullar Barrage Issue (1991), p. 186.

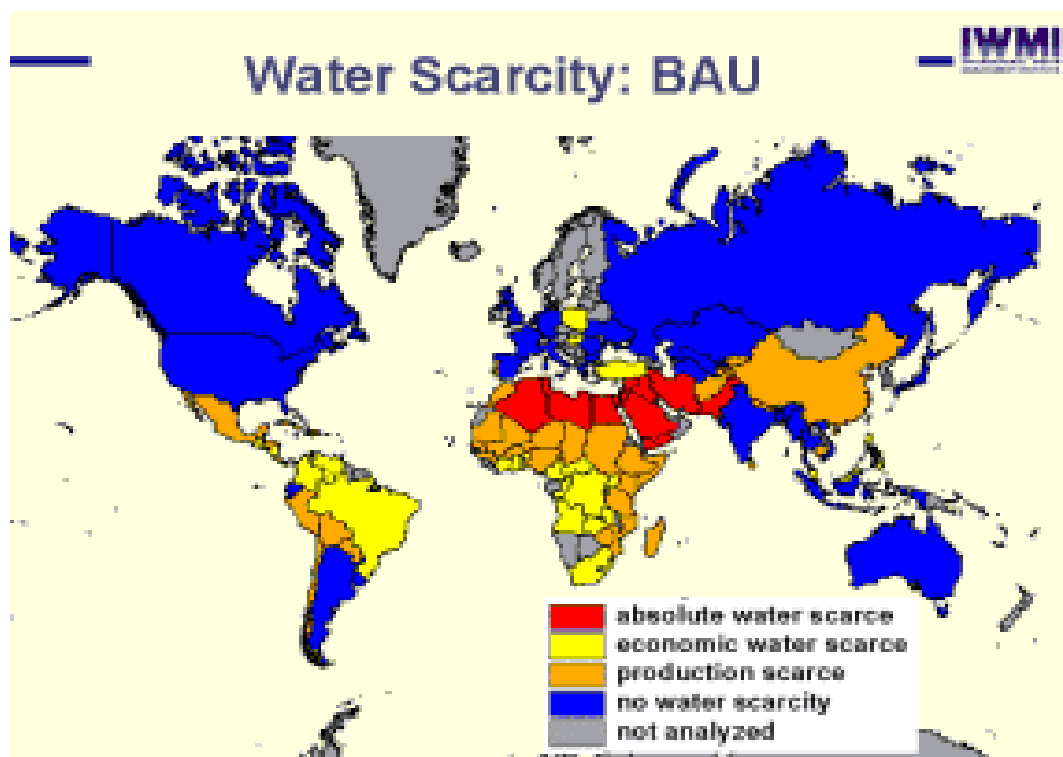
⁸⁸ P.H. Gleick, *The World's Water 1998-1999* (Washington, DC: Island Press, 1998).
<http://www.worldwater.org/table1.html>

⁸⁹ Economic Adviser's Wing, Finance Division, Government of Pakistan 1994; Economic survey 1993-94, Islamabad, Pakistan; Federal Planning Cell 1990, Water sector investment planning study, report prepared in cooperation with Sir M. MacDonald and Partners, National engineering services Pakistan Lt. Harza Engineering Co International LP, Associated consulting engineers ACE Ltd. for WAPDA, UNDP and the World Bank, Lahore, Pakistan; John Mellor Associates, Inc. and Asianics Agro-development International (Pvt.) Ltd. 1995. Institutional reforms to accelerate irrigated agriculture, 2 volumes, Islamabad, Pakistan; Ministry of Food, Agriculture and Cooperatives, 1993; Agricultural statistics of Pakistan 1991-92, Islamabad, Pakistan; Pakistan National Committee of ICID, 1991, Irrigation and drainage development in Pakistan, Islamabad, Pakistan; Planning commission, Government of Pakistan, 1994, Eighth Five-Year Plan (1993-98), Islamabad, Pakistan; The World Bank, 1994a, Pakistan, Irrigation and Drainage: Issues and Options, report 11884-PAK, Washington DC, USA; The World Bank, 1994b, Pakistan, A Strategy for Sustainable Agricultural Growth, report 13092-PAK. Washington DC, USA, and The World Bank, 1995, Pakistan, Balochistan community irrigation and agriculture project report 13597-PAK. Washington DC, USA and Imtiaz Ahmad, *Water Futures in South Asia*. Special Issue of *Futures: the journal of policy, planning and futures studies*, Elsevier Science, Exeter, UK, Volume 33, Number 8/9 (October/November 2001).

The International Water Management Institute measured the emerging trends in fresh water by projecting three scenarios: 1) Business as usual (BAU), with a 5 to 10 per cent increase in irrigated areas, 2) Technology, Economy and the Private Sector involvement (TEC), combining all the technology the states have at their disposal and support of their domestic economy, including the involvement of the private sector in the water development infrastructures and 3) Values and Lifestyles (VAL), i.e. the respective state practice in terms of water use and national life-style. In all the three scenarios, it is predicted that Pakistan could become an absolute water-scarce state in the first quarter of the 21st century (for details see Map19 and Figures 4-5 below).

A further aspect is related to the perception of scarcity in the Indus Basin. This differs as it is not limited to the environmental scarcity projected by the International Water Management Institute, Toronto group, headed by Homer-Dixon et al., or by the Bern group, headed by Kurt Spillmann and Gunther Bachler, but includes potential scarcity arising as a product of the control of critical resources, as defined by Lipschutz⁹⁰ and Micheal Klare.⁹¹ It refers to the longstanding perception of scarcity in the Indus Basin until such time that a settlement on the Kashmir issue is sought between India and Pakistan.

Map 19 a, b and c: IWMI World Water Scenarios—Pakistan facing Absolute Scarcity



⁹⁰ Ronnie D. Lipschutz, "Damming Troubled Waters: Conflict over the Danube: 1950-2000," paper presented at Environment and Security Conference, *Institute of War and Peace Studies*, Columbia University, New York, Oct. 24, 1997.

⁹¹ Micheal Klare, *Resource Wars: The New Landscape of Global Conflict* (New York: Henry Holt and Company, 2000), p. 182.

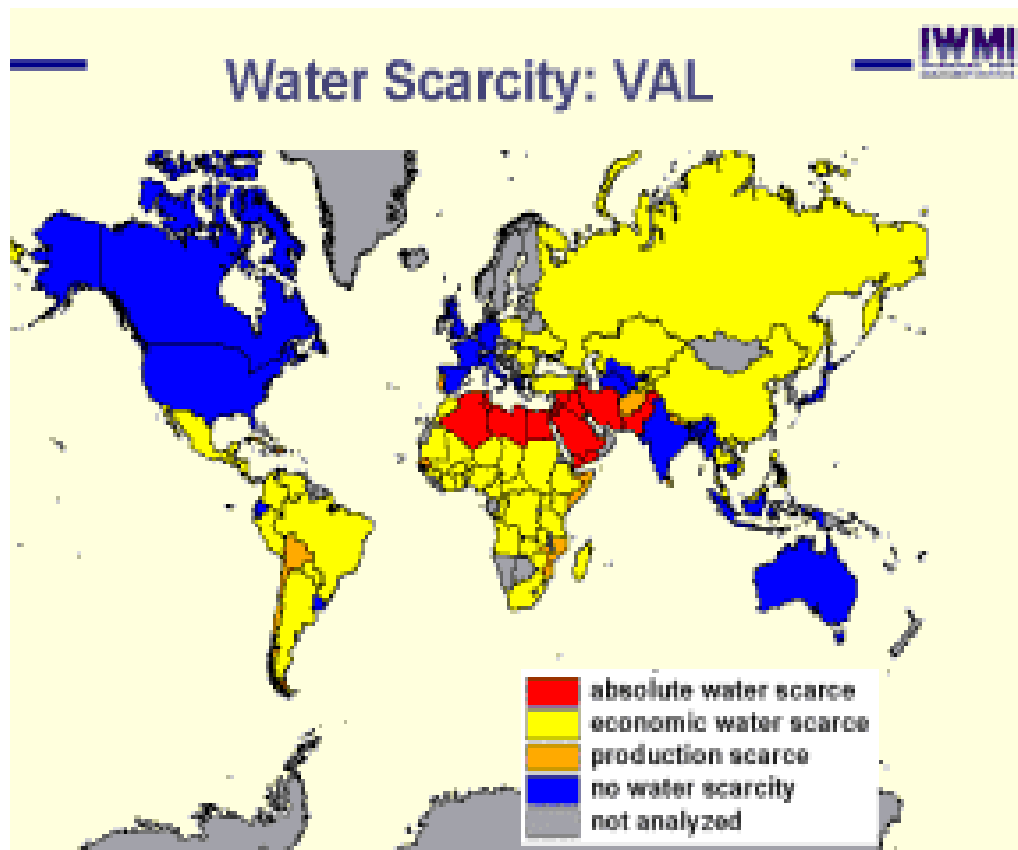
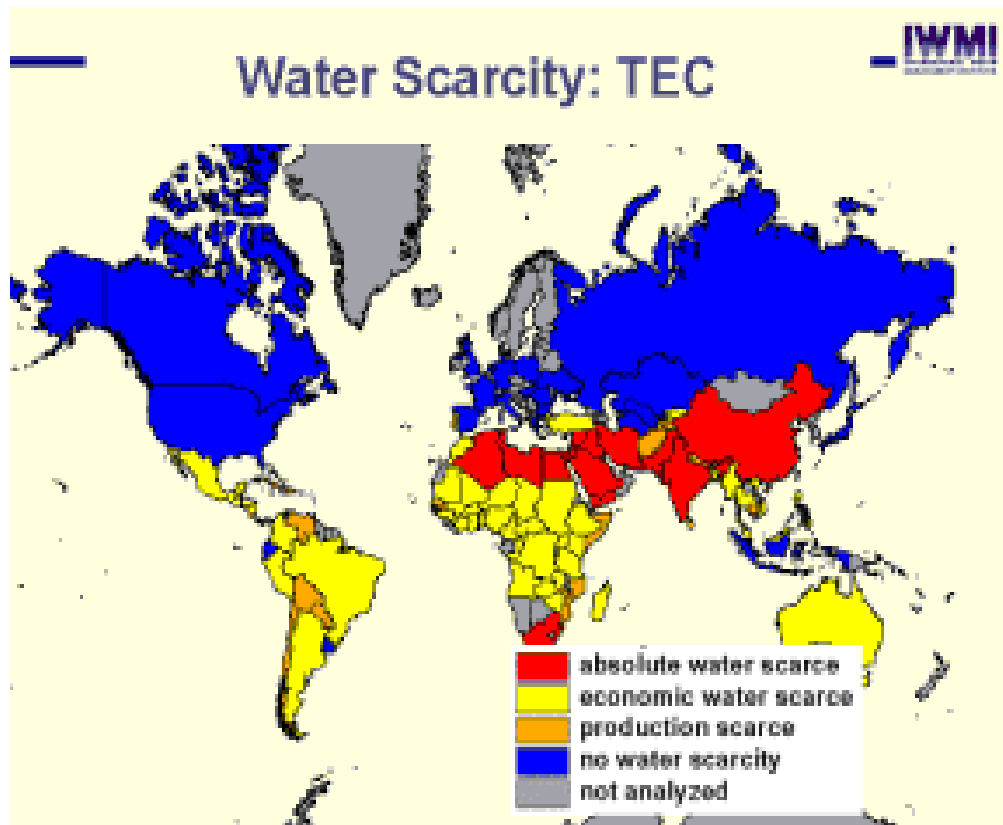
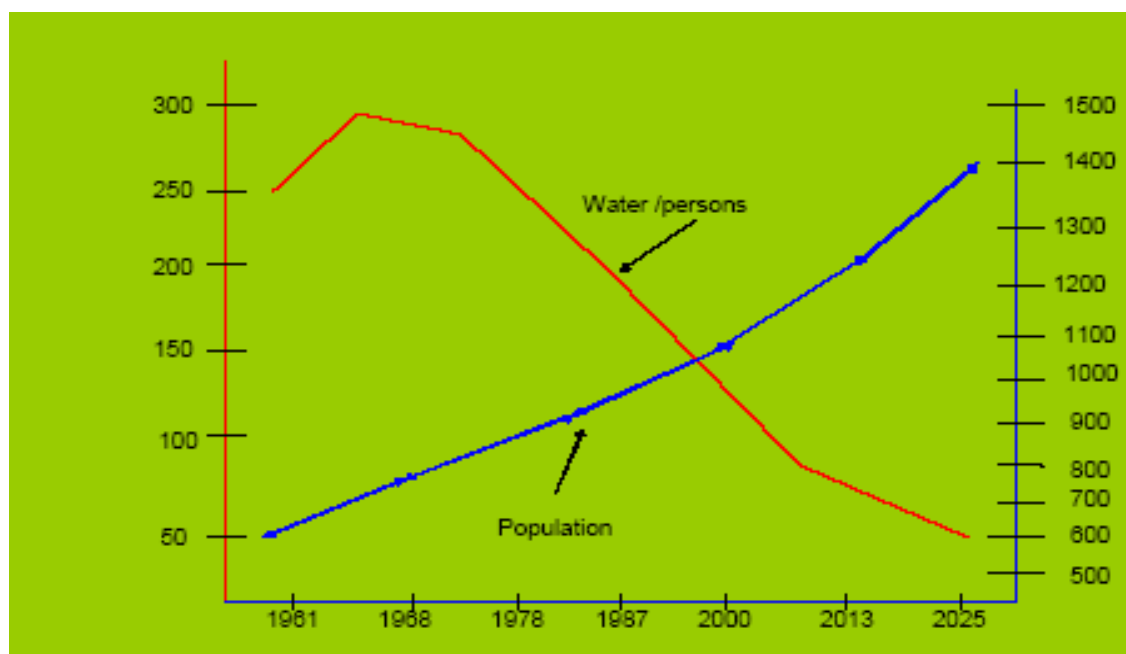


Figure 4: Population Growth in Pakistan and per capita Water Availability

(Source: Pakistan Planning Commission, Water Sector Investment Planning Study 2000.)

**Figure 5: Future Water Requirements and Availability**

(Source: Pakistan Planning Commission, Water Sector Investment Planning Study 2000.)

Year	2000	2013	2025
Population in millions	148	207	267
Water (Bm ³) requirements (irrigational)	177MAF	255MAF	-
Water requirements non irrigational	7.3MAF	10.7MAF	-
Total requirements	184MAF	266MAF	324MAF
Availability as surface and ground water (water course head)	134.2MAF	132.5MAF	156MAF
Shortfall	49.7MAF	133.7MAF	186.2MAF

7.6 Climate Change and the Water Supply

In Pakistan's part of Indus River System about 141 MAF water comes from melting of glaciers and snow melt of three mountain ranges of the region namely Himalaya, Karakoram and Hindukush. While, rainfall produces about 50 MAF mainly during monsoon season. Climate change can affect the availability of water supply, consequently Pakistan will not only face food and energy security but also in long-run it will jeopardize general security and stability of the region.⁹²

The growing mismanagement of water resources including inefficient use as well as changing land utilisation patterns are already aggravating the problems of deforestation and soil degradation but in the wake of climate change it will certainly further reduce water supply in the Basin. Moreover, inadequate and poor water supply systems in the cities will also be affected badly. Above all the inadequate knowledge, outdated technology and budgetary constraints to harness groundwater resources and lack of any general agreement about water rights and the value of water as economic commodity will certainly add fuel to the fire.

"In Pakistan future water needs would be substantially greater than the total potential supply, and therefore, there is a need to reduce the water losses from the supply systems, to improve the overall irrigation efficiency, to construct water reservoirs on potential sites along with the adaptation of artificial ground water recharge techniques to integrate the rain and excess flood water to supplement the depleting water aquifers."⁹³

The Ministry of Environment, Government of Pakistan, recently has identified some critical areas for integrated water management in the wake of climate change⁹⁴ which are summarised below:

1. While making water allocation to various sectors in the medium and long-term, due consideration should be given to the changes in sectoral demands invariably caused by climate change;
2. For the protection of ground-water aquifers through management and technical measures like regulatory mechanism and frameworks, water licencing, delay dams, artificial recharge of ground aquifers in threatened areas should be incorporated in integrated water resources management concepts;
3. Rational ground water extraction and mining by imposing restrictions on excessive pumping;
4. Recycling of waste-water through state of the art water treatment techniques and use of recycled water in irrigation and other industrial purposes;

⁹² Government of Pakistan, Planning Commission, "Task Force on Climate Change," February 2010, p. 13.

⁹³ Hussain Sufi and Tariq Sultan, "Integrated Water Resource Management in Pakistan", Paper No. 286, *Water Resources Planning Organisation, Lahore*, 2010, p. 13.

⁹⁴ *Government of Pakistan, Ministry of Environment*, draft paper on "National Climate Change Policy," April 2011.

5. Measure to protect rivers 'catchment' areas, reservoirs and irrigation contamination through forestation, de-siltation of dams and avoiding excessive use of pesticides;
6. By introducing active and participatory irrigation management reforms by encouraging farmers and end users of irrigation water to take part in the campaign;
7. In distribution of irrigation water among the provinces the crop sowing timings in the respective provinces be kept in mind;
8. To check the intrusion of saline water into Indus Deltaic Region a required flow of fresh water downstream of Kotri is mandatory;
9. Appropriate measures be taken to preserve the ecology of dry river reaches of the three eastern rivers diverted by India under the IWT 1960;
10. Short-term contingency plans be adopted to help mitigate water shortages and droughts;
11. Possibilities be explored for joint water-shed management of trans-boundary catchment areas with neighbouring countries;
12. International norms and conventions be followed to safeguard Pakistan's rights on trans-boundary water inflows;
13. Pakistan should explore the possibility of signing a water treaty with Afghanistan ;
14. Ecological conservation practices should be followed to promote integrated watershed management upstream.

The draft paper on water policy indicates the emerging scenarios in the wake of climate change and highlights the need being felt in Pakistan for a fresh and integrated watershed management approach to meet future challenges.

7.7 Solutions to the Kashmir Dispute and the Indus Rivers

In the last sixty years, a number of solutions for Kashmir issue have been suggested, based on the assumption that the Kashmir dispute is a political or ideological issue or a question of human rights or self-determination.⁹⁵ But hardly any reference is made to the Kashmir dispute as an economic security or territorial issue based on hard geographical realities. This may be because of the fact that both parties to the dispute attempted to manage the water issue by separating it from the Kashmir dispute, resulting in the signing of the IWT in 1960. The prior resolve, envisioned by the UNSC, was the institution of a

⁹⁵ Fifty-two options were put on table for the resolution of Kashmir Dispute, for details see SDPI (Sustainable Development Policy Institute, Islamabad), Research and News Bulletin, Special Bulletin, Vol. 11, No. 6 (November-December, 2004) available at: www.sdpi.org/help/research_and_news_bulletin/Nov_Dec_2004/exploring_the_south_asian_security_dimensions.htm - 10k -; Pervez Musharraf proposal, 2+5 regional formula for details see www.alternatives.ca/article1538.html - 65k; *Ghayoor Ahmed*, Kashmir Options: An Appraisal *The Dawn*, 25 November 2004, available at: www.jammu-kashmir.com/archives/archives2004/kashmir20041125a.html - 15k; see Rifaat Hussain, "Resolving the Kashmir Dispute," *Pakistan Institute of Legislative Development and Transparency (PILDAT), Briefing Paper No. 19* (June 2005).

plebiscite. Thus, in the mid-1950s, both states were expecting to either lose or gain the whole of Kashmir, with the division of the Indus river system serving as a suitable option for both in anticipation of the outcome of the plebiscite. The intentional de-linking of the issue from Jammu and Kashmir by the then Indian Prime Minister, Jawaharlal Nehru and the benign neglect by his Pakistani counterpart, Liaquat Ali Khan, led to accommodation as the preferred security strategy.⁹⁶ If the Kashmir dispute had been resolved in the early 1960s, the nature of Indo-Pakistan relations would have been different. On the other hand, one can deduce that the Indian intentional dissociation of the Kashmir dispute from the Indus waters dispute was a well-calculated strategy as India wished to maintain the Kashmir dispute as a symbol of its secular outlook. However, fifty years on, the emerging scenarios are alarming, and the linkage of Kashmir with the Indus river system has acquired prominence whereby the intertwined nature of the two disputes cannot be neglected in any resolution of the water issues. In other words, peace between India and Pakistan is inconceivable without giving due consideration to the geographical imperatives of the Indus river system.⁹⁷

The Indian control over “Azad Kashmir” would bring Mangla Dam into its possession and would help it to control some of the upper storage sites on the Indus.

Pakistan’s control over Jammu and southern Kashmir would give it the control over the Salal Dam on the Chenab and the Monawar and Tavi affluent. It would also bring the right abutments of the Madhopur headworks and the dam on river Ravi into Pakistan’s possession.

The third possibility would be the revival of the independent status of Kashmir. In such a scenario, the IWT would no more stand valid. The possible new state would have to solve this issue on its own terms and conditions.

A suitable solution, although rejected by India, could be the partitioning of Kashmir more or less along communal lines. It would allow the drawing of the boundary along the river Chenab in the Dhiangarh reach. In such a situation, the IWT might acquire permanency, as it

⁹⁶ The Pakistani Prime Minister concurred with this opinion, stating that the parties should “refrain from using the negotiations in one dispute to delay progress in solving any other”; Please see Pakistan’s letter from Prime Minister Liaquat Ali Khan to World Bank President Mr. Black, dated Sept. 25, 1951, in Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development 1* (June 1958), p. 13; See also Muhammad Nasrullah, *Wullar Barrage Issue* (1991), p. 79.

⁹⁷ This aspect has been predicted by the author since 2003 in conferences and seminar presentations during his stay in the US in 2003 as a Fulbright Scholar at the University of Illinois Urbana-Champaign (UIUC) Program in Arms Control Disarmament and International Security (ACDIS). For details see International Conference on “South Asia: Energy Security and Environment”, Organised by ACDIS and Carnegie Mellon University, June 6-7, 2003 Washington D.C.; Trans-national Seminar on “Understanding Kashmir Dispute,” Department of Sociology, UIUC, Oct. 17, 2003, available at: www.soc.uiuc.edu/people/papers/NasrullahMirza.doc, www.soc.uiuc.edu/about/Transnational/trans_seminar_fa03.asp - 26k; International Seminar on “Strategic Significance of Kashmir,” organised by Centre for Islamic Studies Urbana, Illinois, USA on Oct. 17, 2003 available at <http://cimic.prairienet.org/seminars.html>; An Interview with David Inge on “Kashmir Conflict,” live broadcast by World Illinois (WILL) Radio programme Focus580, on Nov. 3, 2003, available at <http://www.will.uiuc.edu/am/focus/archives/03/031103.htm>

would eliminate the causes of insecurity for the lower riparian and may provide an incentive for future cooperation between the riparian states as envisaged in the IWT.

The highly intertwined nature of the Kashmir dispute and the Indus water issues between India and Pakistan have been highlighted in recent writings on Kashmir.⁹⁸ A provocative example is a report by Sundeep Waslekar.⁹⁹

The author agrees with Waslekar's observations to the extent that water has been central to the Indo-Pakistan dispute over Kashmir and: "If India and Pakistan take a political decision to restructure their relations, they will have to ensure that water serves as a flow to bring them together, rather than taking them further on the course of conflict".¹⁰⁰ However, Waslekar has overlooked the fact that it was India who demanded exclusive rights to the three eastern rivers on the basis of absolute territorial sovereignty, in total disregard to lower riparian rights established in International Law and customary water codes and universal practices. The Indian stubbornness compelled Pakistan to accept division of the Indus river system in 1960. Pakistan, throughout the negotiation process, has been insisting on the continuation of the river water supply on the basis of its "historical uses" from the eastern rivers. It started considering the division of the Indus river system only when the World Bank agreed to include storage facilities in the Bank proposal: only "after the Aide Memoire was proposed in 1956 and was agreed in principle in 1957, did Pakistan accept the division of the Indus river system."¹⁰¹

It is clear that the Indus waters are the key to cooperation and durable peace between Pakistan and India. The ongoing proposals for 'making boundaries irrelevant' and 'joint management of Kashmir' have opened-up a window of opportunity, However, the author believes that its possibility depends on India's acknowledgement of Pakistan's right to the waters of the three eastern rivers and renunciation of its traditional absolutist position. Only then, the joint management of Kashmir and the water resources of the Indus system could be made possible. In this way, the waters of the Indus rivers can become a 'catalyst for peace' between the enduring rivals. If Waslekar believes that only the water of the three western rivers will 'serve as a flow to bring together' India and Pakistan, he seems to be fully mistaken.

⁹⁸ Jasjit Singh, *Kargil 1999: Pakistan's Fourth War for Kashmir* (New Delhi: Knowledge World, 1999), pp. 1-3; Robert G. Wirsing, Asia-Pacific Center for Security Studies Honolulu, Hawaii in a Round-table on: *Kashmir: Exploring Possible Options*, on 15 July 2005, at Capitol Hills, Washington DC.; Robert G. Wirsing and Christopher Jaspardo, "Spotlight on Indus River Diplomacy: India, Pakistan and the Baglihar Dam Dispute," Asia-Pacific Center for Security Studies, May 2006 available at www.apcss.org/Publications/APSSS/IndusRiverDiplomacy.Wirsing.Jaspardo.pdf; www.jammu-kashmir.com/archives/archives2005/kashmir20050714d.html - 9k; Naser I. Faruqui, "Responding to the Water Crisis in Pakistan," *Water Resources Development*, v. 20, n. 2 (June 2004), pp. 177-92.

⁹⁹ Sundeep Waslekar, *The Final Settlement*, <http://www.strategicforesight.com/finalsettlement/index.htm>

¹⁰⁰ Sundeep Waslekar, *The Final Settlement*, see Executive Summary under subtitle "Water".

¹⁰¹ Michel, A. Arthur, *The Indus Rivers*, op. cit., p. 244.

Nevertheless, if India adamantly pursues its planned construction of the disputed dams and development infrastructures in violation of the IWT on the western rivers, it may compel Pakistan to use force in order to implement its treaty rights. International law entitles a nation to undertake reprisals for the enforcement of treaty rights. In such a situation, Pakistan may destroy such infrastructures built by India on the western rivers through limited pre-emptive strikes, whose likelihood depends on careful calculations of costs and benefits. It can't be ruled out, however.

7.8 Summary

The water issue has always remained central to Indo-Pakistan relations. The dissociation of Kashmir from the Indus water dispute has led to the portrayal of Kashmir as a purely political issue. The signing of the IWT has alleviated the hurting stalemate economically, and to some extent militarily, but it has not eradicated the cause of conflict over Kashmir. The intertwined nature of Kashmir and the Indus waters is becoming ever clearer and crucial with the passage of time, and need for the further development of water resources is becoming urgency. All of the water-related issues which have emerged since the late 1970s are still simmering and have finally created a diplomatic deadlock between India and Pakistan. Further accommodation on the water resources is difficult until and unless the Kashmir dispute is resolved, and no solution to the Kashmir issue can avoid giving due consideration to dictates of geography.

The looming water scarcity in the Indus Basin will further intensify competition between the riparian states in the acquisition of control over Kashmir territory.

Climate change is a current and important dimension being added to the concept of water management. The growing mismanagement of water resources including inefficient use as well as changing land utilisation patterns are already aggravating the problems of deforestation and soil degradation but in the wake of climate change it will certainly further reduce water supply in the Basin.

The integrated management of the Indus river system resource and joint control of the Kashmir territory offers one solution, and if achieved, it could enhance chances of further cooperation and possibility of a 'final settlement' over Kashmir.

CONCLUSION

The discovery of a new dimension of the Kashmir conflict, based on the neo-realistic interests of riparian states in controlling vital water resources, is the hallmark of the study. It made a theory-driven case of India-Pakistan conflict and claimed with substantive empirical evidence that the control of the Indus resource has played a significant role in political thinking, strategic planning and warfare in the region. It brings to light the competition for the control of vital water resources as an issue of high-politics in the field of international relations and explains when enduring rival nations compromise on vital concerns and why they put politico-ideological issues on the backburner.

The study argues that water is a cause of conflict or war, and can also be a catalyst for cooperation or peace, depending on the geography of the resource in conflict and the nature of relations between riparian states. Both dimensions of the Indus Basin's water resources have been identified in Indo-Pakistan relations.

This reinforces the neo-realist belief that states, as rational actors, pursue policies for the maximisation of power (by acquiring control of more and more vital resources) and security (by securing vital resources and minimising perceived losses) vis-à-vis their adversaries, as well as in the international political system. These twin goals constitute their uppermost national interests, and in order to achieve them, states opt for accommodation as a security strategy when reaching a mutually hurting stalemate in their relations. The rivalry between India and Pakistan is no exception to this reality: India attempted to capture and control vital resources in Kashmir, and Pakistan responded in order to secure its resources. On reaching a mutually hurting stalemate, they accommodated each other on vital concerns and postponed the political dimension of the Kashmir issue in an effort to achieve their topmost national objectives. Nevertheless, accommodation did not act as a catalyst for peace, as the states waged a number of wars and their enduring rivalry remained intact. The conclusion is thus, that accommodation may not - and did not - resolve or heal all the wounds existing between the disputants. The dispute over Kashmir still remains, and may even have intensified, since the rivers Pakistan still depends on flow through the Indian-controlled part of the disputed territory. Moreover, the infrastructure built under the IWT proved to be politically unacceptable, economically unfeasible and environmentally unsustainable.

Plans to acquire control over the water resources in the region have their roots in the pre-Partition manoeuvres of the Indian leadership. Partition of the Subcontinent would not have been acceptable to the Indian leadership if the river-water control infrastructures, also containing a road link to the princely state of Kashmir, had not been placed under Indian jurisdiction. Pandit Jawaharlal Nehru's biographer, M.J. Akbar testified this fact that during a meeting at Simla in May 1947 *Nehru*, "insisted that whatever the eventual nature of the post-partition boundaries might be, the road link to the Kashmir valley through Gurdaspur would have been kept in Delhi's control".

Access to water resources played a significant role in the division of British Punjab—a superimposed boundary—which enabled India to capture Jammu and Kashmir on the one hand and use water as strategic, economic and socio-psychological weapon, in the 1948 Indo-Pakistan war over Kashmir, on the other. India acquired territorial control over all the river headworks in Punjab, thereby depriving Pakistan of a vital resource and disregarding the principles of the Partition of the Subcontinent. If India had not succeeded in acquiring the Madhopur and Ferozepur headworks—the former also constituting the only land-link from the Indian side to Jammu and Kashmir—the crucial linkage of water and the Kashmir dispute would not have ensued. Even if the Radcliffe boundary award had been able to maintain a balance in allocating the control of the river headworks to both India and Pakistan, the chances of a water dispute would have been minimal, since each country would have been in a position to counter-balance a unilateral closure of the headworks undertaken by the other party.

The Indo-Pakistan conflict over the Kashmir territory also qualifies as being termed a resource war, as defined by Michael Klare. In combination with other factors, the superimposed boundaries in Punjab coupled with the *surface features* and the *relative location* of the Kashmir territory, home to the catchment areas of all the rivers of the Indus system, encouraged India to annex Jammu and Kashmir in October 1947. Retaliation by Pakistan in May 1948 was not a coincidence, but was aimed at safeguarding its freshwater life-line. In other words, the intertwined nature of the Kashmir and Indus disputes is rooted in the geographical characteristics of the territory. In the First Kashmir War the armies avoided facing each other while trying to consolidate their positions along river infrastructures. The Indian obduracy in maintaining control over Kashmir, and Pakistan's efforts to 'liberate' the area, are intimately connected with the nature of its territory. The claims by the Indian leadership that the annexure of the Muslim majority state of Kashmir would destroy the very rationale of Pakistan and thus the basis of the two-nation theory have proved an ideal ploy with which to maintain control over the real resource.

Control of the Indus resource has played a significant role in political thinking, strategic planning and warfare between India and Pakistan. The decision of the Indian leadership, in referring the Kashmir dispute to the UNSC for a peaceful resolution after capturing specific parts of the state, and the later acceptance of UN proposed plebiscite by both the parties, resulted in its portrayal as an ideological and political issue. This strategy worked very well for India, since its objective was firstly, never to resolve the issue but to keep it alive as a symbol of secularism and a disproof of the two nation theory, and secondly, to consolidate its control over real resources. Pakistan's claims to the Kashmir territory only stood to gain legitimacy through the UN resolutions, thus it had no other option but to pursue this policy, which endorsed the Kashmir conflict as an issue of identity politics. Both states have accommodated each other on vital concerns in the shape of the Indus waters treaty, and both have pursued their national interests of security and power maximisation being rational actors in international system.

Realities on the ground have changed with the passage of time and the centrality of the control over vital water resources is emerging. Since 1989, Kashmiris have been in revolt against Indian rule. Opinion among the Kashmiri leadership is divided, with certain parts of it demanding a return to the independent Kashmir of pre-1947. Pakistan has extended 'moral support' to their cause but formally denies the provision of any material support. The conversion of the ceasefire line into an international boundary would be acceptable to India, while a further partitioning of Jammu and Kashmir would seem acceptable to Pakistan. The present standpoints of both parties are thus incompatible with the thesis of identity-politics. Since January 2004, both sides have agreed upon a number of CBMs without making any progress on the Kashmir issue, yet the matters over which both reach a diplomatic deadlock revolve around the ongoing water disputes, namely Indian plans to construct dams in the disputed territory of Jammu and Kashmir. This testifies that the Kashmir conflict and the water disputes are intertwined in nature and the Indo-Pakistan conflict is not exclusively ideological. This fact had been overshadowed by India's unlinking of the Indus and Kashmir disputes as a precondition of accepting mediation by the World Bank, and Pakistan's conscious neglect of the linkage issue in order to secure its survival, reduce its vulnerabilities and minimise its perceived losses.

Nevertheless, the Indus river resource also offers enormous potential to act as a catalyst for peace. Yet the permanent dissection and diversion of a single and geographically integrated river system under the Indus Waters Treaty 1960 has intensified divisive politics in the region and conferred permanency upon the existing distrust between the two parties. Mediation does play a major role in smooth running of the relations between nations but any settlement which disregards natural geographical and political realities will likely lack sustainability and endurance. This constitutes a major flaw in the field of mediation and accommodation between enduring rivals and limits the viability of the science of water management and resource development.

The study answers the core question, accepts the core hypothesis based on the empirical evidence, and thus achieves the research objectives. A model has been developed aimed at explaining the Pakistan-India conflict over the IRS and its linkage with the Kashmir dispute. At a more general level, the model examines the relationship between freshwater resources and war and peace between riparian states, and investigates the circumstances under which rival riparian prefer accommodation on vital concerns, thereby postponing political issues.

The framework utilizes a single case-study method to analyze Pakistan's initiation of accommodative moves vis-à-vis the upper riparian, India, but is equally suited to explaining a number of other cases where Pakistan has initiated accommodation and India has reciprocated, or vice versa, both with or without third-party mediation. Examples include the Tashkent Declaration (1966), brokered by Soviet Russia following the 1965 India-Pakistan war; the Simla Accord (1972), a bilateral pact following the 1971 war; and the Salal Dam

issue, which erupted in 1974 and was settled in 1978. In addition, the ongoing Composite Dialogue process, initiated in 2004, and in fact almost all of the issues that have arisen between India and Pakistan, can be studied with the help of this framework. The framework is equally suited to investigating the phenomenon of accommodation as a preferred security strategy in international relations.

It is concluded that the geographical dimensions of superimposed boundaries and disputed territories (such as surface features or relative locations) have played a major role in triggering water-related conflicts between India and Pakistan. If India had not succeeded in acquiring the Madhopur and Ferozepur headworks—the former also constituting the only land-link (from Indian side) to J&K—the crucial linkage of water and the Kashmir dispute would not have ensued. It argues that the Kashmir conflict is a product of many factors, but that the hydro-strategic nature of its territory can be identified as a major cause. Access to water resources played a significant role in the division of British Punjab and enabled India to use water as strategic, economic and socio-psychological weapon in the 1948 Indo-Pakistan war over Kashmir. India's actions instilled enormous fear into the Pakistani public, as did its statement that it perceives itself vulnerable until the J&K territory is firmly in Indian hands. This has been of great detriment to the trust Pakistan can ever have towards India regarding its river water life-line, should it ever opt to relinquish its claims over Kashmir territory. India's abandonment of Kashmir would result in the loss of its upper riparian status and its enormous real-political capacity to intimidate, economically strangulate and threaten the very survival of Pakistan.

The Kashmir tangle is explored in terms of its linkage with competition over natural resources. It concludes that, in combination with other factors, the *surface features* and the *relative location* of the Kashmir territory, home to the catchment areas of all the rivers in the IRS, encouraged India to capture Kashmir in October 1947. It reemphasises that the retaliation by Pakistan in May 1948 was not a coincidence, but was aimed at safeguarding its life-line. In other words, the complex nature of the Kashmir and Indus disputes is rooted in the geographic characteristics of the territory. The Indian obduracy in maintaining control over Kashmir, and Pakistan's efforts to 'liberate' the area, are intimately connected with the nature of its territory. The anticipation of the Indian leadership that the annexure of the Muslim majority state of Kashmir would destroy the very rationale of Pakistan and the basis of two-nation theory has proved an ideal ploy to maintain control of the real resource.

The rival riparian, Pakistan and India, agree to negotiate only once they have exhausted military options, and that the peace initiative is generally taken by the lower riparian. Bilateral negotiations between the rivals, who are asymmetric in military terms, may not succeed since the more powerful upper-riparian often tries to take advantage of the situation. The Delhi Agreement of May 1948, although temporary, did more harm to the lower riparian. India used the agreement against Pakistan as proof that the former had acknowledged latter's property rights over the three international rivers originating from its

territory. In reality, however, the agreement did nothing more than acknowledge that there was a dispute in which both sides had legal claims. Successive negotiations between India and Pakistan failed to mark any progress on the issue.

Another finding has been that a bilateral deadlock between the disputants necessitated the involvement of a mediator. Interestingly, during this period, both India and Pakistan had applied to the WB for loans with which to complete their planned irrigation projects. Fortunately, the Bank, while refusing to fund projects related to the disputed river, was willing to assist the parties in resolving their dispute. The presence of the WB enhanced the likelihood of accommodation since it accelerated the mutually-hurting stalemate. The WB managed to commit India to not undertaking any new projects and to continuing to supply Pakistan with water for irrigation until a final settlement was reached. It also linked the availability of funding with compliance. The opening of the Bhakra-Nangal Canal brought a mutually hurting stalemate for India and Pakistan. The stalemate was "hurting" or detrimental to India in two ways: firstly, India was unable to benefit despite developing huge irrigation projects in East Punjab; and secondly, the "opportunity cost of time" (i.e. the level of development India could have attained during that period) was soaring every year. Pakistan's situation, on the other hand, was even worse. It was desirous of a settlement without yielding to its legitimate claims over the "historic uses" of the eastern rivers.

The stalemate was equally hurting India and Pakistan when the WB offered its mediation. Pakistan accepted immediately. India though followed the suit but promptly disassociated the Kashmir issue from the water dispute.

The postponement of the Kashmir issue amounted to an inferior bargain for Pakistan, who preferred conscious neglect of the issue in favour of addressing the matter of prime concern, thereby attempting to minimize its losses. Because it was becoming evident that either India would unilaterally withdraw from negotiations or the WB would quit as a mediator. A solution which can assure Pakistan an adequate replacement for the perceived loss of three eastern rivers was need of the hour. Pakistan did not have the requisite resources to fight over the IRS with India. Moreover, Ayub Khan's commitment to economic reforms, minimise losses in external military and in domestic economic spheres played significant role in Pakistan's initiative for accommodation.

The presence of the WB as a mediator towards the end of 1951, coupled with the blessing of the USA and some major powers (UK, West Germany, Canada, Australia and New Zealand as loan and funds providers), ensured that India would be restrained from using water as a military weapon against Pakistan. Although armies were deployed on both sides, primed to deal with any military eventuality, and India also attempted to infuriate Pakistan with periodic cross-border firing, Pakistan did not respond militarily. Although India took complete advantage of its upper riparian position by securing full rights to the three eastern rivers and "holding all the cards" on the western rivers, it did not bring about the destruction described in Lilienthal's article.

It is found that the assumption of mediators' impartiality is not always true because they "are best seen as self-interested actors". Actors mediating in international arenas generally pursue and work for their own set agendas. The WB's interest in mediating over the Indus waters dispute was rooted in establishing its credibility as an international financial institution. However, the nature of the dispute also accords specific significance: although the mediation resulted in an agreement, it only became possible in the face of the adjournment of the political dimension of the Kashmir issue. The involvement of a third party provided a technical solution to the water problem in the shape of the IWT. Despite the inherent flaws in the treaty and their repercussions, it has served as a safety valve for Pakistan's survival at times when the country's very existence was at stake. Nevertheless, the IWT did not eliminate the root-cause of Indo-Pakistan conflict over Kashmir: the issue of control over the hydro-strategic territory.

The settlement of the Salal Dam issue can also be viewed within a similar context for the lower riparian, Pakistan, which was militarily weak after the 1971 War and recovering from the shock of separation of former East Pakistan. There was a strong desire to minimize losses and to achieve internal stability. The nature of accommodation was different from that of the 1950s since Pakistan was entitled to invoke the IWT provisions. Nevertheless, in the 1970s India used the water issue more as a political tool than a military or economic weapon. It is noteworthy that the Salal was the first and last issue settled since the signing of the IWT, all the later disputes are not only still simmering but have grown to be a major irritant in Indo-Pakistan relations.

The IWT, although having delivered substantial gains for both parties, has, in the long-run, engendered more complexities for Pakistan-India relations. The division of an integrated river system has given permanency to the distrust between the two states by minimizing opportunities for their interaction. It has also established the vulnerability of the lower riparian as long as the physical control of the water resources remain with India. The development infrastructure envisaged under the IWT, while temporarily alleviating the 'hurting stalemate', has proved to be unsustainable. Moreover, neither the political leadership nor the public were taken into confidence at the time of signing the IWT, giving rise to one of the major causes of Kashmiri alienation on the one hand, and inter-provincial disharmony in Pakistan on the other.

Thus, the staggering economic costs of maintaining the river diversion and the infrastructure of the link-canals, together with an increasing lack of ecological sustainability in Pakistan, political losses in terms of Kashmiri alienation, and provincial dissonance over water-sharing, hindered river development in Pakistan and J&K. Moreover, the separation of the Kashmir issue from the IRS rendered the dispute purely political or ideological and also equipped India and Pakistan with enough time to consolidate their respective territorial control and harden their attitudes on the Kashmir question. As a result, accommodation may not – and, in this case, did not – resolve or alleviate the animosity felt between the rival riparian.

The Kashmir dispute remains, and is likely to intensify, because the rivers Pakistan still depends on are located in, and flow downstream through, the Indian-controlled part of J&K.

In the last sixty years, a number of solutions to the Kashmir dispute have been suggested which portray the Kashmir issue as political, ideological, a question of human rights or a case for self-determination. Barring one or two recent opinions, no reference to the Kashmir dispute based on geographic realities has been found to be available. The dispute arose because the resolution envisaged by the UNSC was the holding of a plebiscite, therefore in the mid 1950s; each party anticipated either the gain or loss of the whole of Kashmir. The division of the IRS was an apposite option available for both in the face of an unknown outcome.

The accommodation reached over the issue of the Indus waters has delayed the resolution of the Kashmir dispute. India's intentional disassociation of the Kashmir dispute from the Indus issue proved to be a well-calculated policy aimed at keeping the dispute alive as symbol of its secular out-look, however, with the passage of time, the nature of its inherent strategy is becoming apparent.

The emerging scenarios are alarming. The linkage of Kashmir and the IRS has acquired prominence. In other words, peace between India and Pakistan is inconceivable without giving due consideration to the geographical imperatives of the IRS. The growing water scarcity will add fuel to the fire and intensify competition over Kashmir, until such time as the disputants once again realize they have reached a "mutually hurting-stalemate" which necessitates further accommodation or an enduring settlement of the Kashmir question.

Some conditions of a mutually hurting-stalemate are partially met. Most prominent is the futility of war. With the nuclearisation of South Asia, a military solution to Kashmir is not only irrational but would be unthinkable in terms of its consequences. In other words, no geographical change is possible through the use of force, which was considered the rational policy instrument until the mid-1970s. Secondly, economic constraints mean that the cost of conflict is detrimental to both states. The Kashmir conflict is engaging a significant proportion of resources and has become a bleeding wound for both India and Pakistan.

It is a fact that development in Kashmir is mainly dependent upon the exploitation of water resources for agriculture development and employment opportunities, in addition to the tourism industry, which is suffering tremendously both in Indian-held Kashmir as well as in Pakistan. Since the 1970s, both states have been unable to undertake any major project in the Indus Basin. The IWT checks any unilateral development by India on the western rivers in Kashmir and also hampers development in the Basin by Pakistan. Distrust of the Punjab among the smaller provinces of Pakistan is a legacy of the IWT.

Any further deterioration of the water supply in the Jhelum and Chenab rivers will necessitate the diversion of more water from the Indus in order to compensate for the shortfall in the Punjab, and, as a consequence, will further fuel the fiery debate over Kashmir and

increase internal dissonance in Pakistan. The situation is even more alarming given Indian plans to interlink the peninsular rivers, which involve controlling of the Jhelum and diverting water from the Chenab into the eastern rivers and onwards.

Overall, the study concludes that water is a cause of conflict and/or war but can also be a catalyst for peace. Upon reaching a mutually hurting-stalemate, states accommodate each other on vital concerns and postpone political issues. The rivalry between India and Pakistan is no exception to this reality. Hence the corollary of the findings is that a compromise on the issue of Kashmir is inconceivable unless a “mutually hurting-stalemate” is reached. Nevertheless, the Indus river resource also offers enormous potential as a catalyst for peace. Yet the dissection and diversion of a single and geographically integrated river system under the IWT has intensified divisive politics in the region and conferred permanency upon the distrust between the two parties. Mediation does play a major role in the relations between nations but any settlement which disregards natural geographic and political realities will likely lack sustainability and endurance. This constitutes a major flaw both in the field of mediation and in the accommodation.

Contribution of the Study

The substantial contribution of this study is the formulation of a theoretical model which explains the dual phenomena of conflict and accommodation between rival riparian states. At a more general level, the model examines the relationship between freshwater resources and war and peace between riparian states, and investigates the circumstances under which riparian prefer accommodation on vital concerns, thereby postponing political issues.

The study claims that neo-realistic interests between rival neighbouring states are the cause of conflict and accommodation, and brings to light an issue of high-politics in the field of international relations, namely the competition for the control of vital water resources. It explains when rival nations compromise on vital concerns and why they postpone political issues. It reinforces the belief of geo-politicians that competition over, and control of, vital resources—be they oil, materials for warfare, or minerals—is the main cause of conflict between states, and adds substance to that belief by attributing equal significance to the territorial control of freshwater resources between riparian nations.

The study explains how the rival nations pursue accommodation as a preferred strategy in order to secure their foremost national interests of security and power maximization, bilaterally as well as in the international political system, when the conflict “hurts” both of them. Given that the literature on the neo-realistic security dimensions of the Kashmir conflict is practically non-existent, a further contribution of the study is to bridge this theoretical gap and open up new vistas for research. This comprehensive study is the first effort in this direction. It addresses the question of linkage between the Indus waters and the Kashmir dispute and highlights its role in political thinking, strategic planning and warfare between India and Pakistan.

The framework is equally suitable for investigating the phenomenon of accommodation as a preferred security strategy in international relations in general and India-Pakistan relations in particular. The study also highlights the pitfalls in the field of mediation and exposes the role of self-interested mediators in providing unsustainable solutions. It claims that the sustainable development of water resources is the key to development and peace in the region and argues that traditional and strictly realistic approaches to accommodation based on mediation by self-interested powerful parties (as identified by Zartman and Bercovitch) may not work in the long run and advocates that economically liberal-constructivist and culturally-sensitive approaches (Galtung and Cohen) in negotiation/mediation is the key to achieve durable and sustainable solutions for the regional conflicts.

The model formulated in this study is suitable for studying role of international rivers in inter-state relations worldwide. The widely discussed major flash-points for inter-state water conflicts are the Jordan, Litani, Orontes and Yarmuk Rivers (Israel and Arab nations), the Nile (Egypt, Sudan and Ethiopia), the Euphrates (Turkey, Syria and Iraq), the Danube (Hungary and Slovakia), the Han (North and South Korea), the Amu and Syre Darya (Central Asian States), the Ganges (India, Bangladesh and Nepal) and the Kabul (Pakistan and Afghanistan).

The model is equally useful to analyse water sharing conflicts within nation-states or intra-state and inter-group relations world-wide. Conflicting groups in society emerge to protect their water share or to acquire that of others. The activation of groups takes place in accordance with the existing religious, caste, class, linguistic, regional or other lines. Sometimes, local politicians or elites of a locality use water as a tool to instil group feelings, which introduces an "us/them" dichotomy into society. This inter-group conflict can evolve into a conflict with the state, when one party rightly or wrongly perceives the state as a collaborator with another, subsequently leading to secessionist movements.

Some such major conflicts within nation-states which can be studied under this framework include: Sanmenxia and Three Gorges in China; Akasombo in Ghana; Kossou in Ivory Coast; Tana and Athi in Kenya; Itaparica and Tucurui in Brazil; Kainji and Niger Dams in Nigeria; Ataturk and Keban in Turkey; Lam Pao and Nam Pong in Thailand; Kedong Ombo and Batang Ai in Indonesia; Upper Pampang in the Philippines; Manantali in Mali; Savajina in Colombia; Brokopondo in Suriname; Caracol and Netzahualcoyotl in Mexico and Nam Ngum in Laos.

South Asia is particularly prone to such conflicts like, to name some of them, Madur Oya and Mahavali Project in Sri Lanka; Kalabagh, Mangla, Bhasha and Chashma in Pakistan; Kaptai in Bangladesh; Arun in Nepal; and Narmada Dam, Lower Manair Dam, Tehri Dam, Pong Dam, Subarnarekha Project, Nagarjunsager Project, Srisailam Project, Upper Krishna Project and Ukai Reservoir Project in India. The study claims that the mismanagement of water resources, because of the unnatural diversion of rivers in pursuit of the policy of absolute territorial sovereignty, has created an environment of uncertainty and chaos among

the stakeholders in the region. Nevertheless, it provides fully practicable policy recommendations for the resolution of India-Pakistan conflict.

Policy Recommendations

The desire to resolve the Kashmir issue is not yet two-sided. The most realistic approach would be to allow the issue to remain simmering until such time as the disputants reach a “mutually hurting-stalemate”, thereby necessitating any compromise on the Kashmir issue.

A second, also realistic but more rational and pragmatic approach would be to realize that Kashmir can promise a prosperous future for the Indus Basin riparian. It serves as a life-line to their agrarian economies and possesses enormous potential for the generation of hydro-power, sufficient in fact to cater for the energy needs of the region. In order to achieve this goal, the involvement of a third party to engage and convince the disputants to adopt an integrated approach to the development of the Indus water resources and the resolution of the Kashmir dispute, is the need of the hour. A promising investment opportunity in the water sector of the Indus Basin would act as an incentive to an interested mediator.

Last but not least, the issue could be resolved bilaterally, although the requirement for such a resolution would be to institutionalize the accommodative initiatives. The present Composite Dialogue provides a framework for this purpose, but now a proper institutionalization of bilateral cooperation is called for. The Indus water resource issue and the Kashmir dispute demand urgent attention.

As far as water resources are concerned, the Permanent Indus Commission, established in both countries under the IWT, is the only model of accommodative interaction between the two states. It requires further institutionalization, expansion and consolidation.¹ It should be accompanied by a substantial change in the Commission’s charter and its functioning. Equal representation and the involvement of Kashmiri experts, from both the Indian and Pakistani-held parts of Kashmir, is vital. The Commission should be given a broad mandate to foster the cooperative development of the Indus Basin’s water resources. It should be autonomous in all spheres and should function to restore the Indus river system’s co-riparian status in their original beds and streams.

Similarly, but not intended as a permanent measure, a Kashmir Commission should be established with an equal representation of Kashmiris from both sides of Indian and Pakistani-administered Kashmir.

The status of the proposed Commissions should be recommendatory only. The Commissions should be assigned the task of joint research and planning, and come up with joint recommendations for a Basin-wide integrated development of the Indus water resources, along with a solution to the Kashmir dispute. The proposed Commissions would thus lay the

¹ Also proposed by Robert Wirsing and Christopher Jasparro, “Spotlight on Indus River Diplomacy: India, Pakistan and the Baglihar Dam Dispute,” *Asia-Pacific Center for Security Studies*, May 2006.

foundation for the consolidated institutionalization of bilateral cooperation by providing immensely urgent, fully practicable and sustainable resource utilization measures and guiding the two states towards a resolution of the Kashmir dispute.

Further subjects addressed in the ongoing Composite Dialogue will not offer the same level of urgency and opportunity inherent in the Kashmir and the Indus disputes, however, commerce, nuclear and energy resource sectors also qualify for permanent Commission-like bodies.

Appendix 1¹

INTERDOMINION AGREEMENT, BETWEEN THE GOVERNMENT OF INDIA AND THE GOVERNMENT OF PAKISTAN, ON THE CANAL WATER DISPUTE BETWEEN EAST AND WEST PUNJAB

1. A dispute has arisen between the East and West Punjab Governments regarding the supply by East Punjab of water to the Central Bari Doab and the Dipalpur canals in West Punjab. The contention of the East Punjab Government is that under the Punjab Partition (Apportionment of Assets and Liabilities) Order, 1947, and the Arbitral Award the proprietary rights in the waters of the rivers in East Punjab vest wholly in the East Punjab Government and that the West Punjab Government cannot claim any share of these waters as a right. The West Punjab Government disputes this contention, its view being that the point has conclusively been decided in its favour by implication by the Arbitral Award and that in accordance with international law and equity, West Punjab has a right to the waters of the East Punjab Rivers.
2. The East Punjab Government has revived the flow of water into these canals on certain conditions of which two are disputed by West Punjab. One, which arises out of the contention in paragraph 1, is the right to the levy of seignorage charges for water and the other is the question of the Madhavpur [sic] Head Works and carrier channels to be taken into account.
3. The East and West Punjab Governments are anxious that this question should be settled in a spirit of goodwill and friendship. Without prejudice to its legal rights in the matter the East Punjab Government has assured the West Punjab Government that it has no intention suddenly to withhold water from West Punjab without giving it time to tap alternative sources. The West Punjab Government on its part recognises the natural anxiety of the East Punjab Government to discharge the obligation to develop areas where water is scarce and which were underdeveloped in relation to parts of West Punjab.
4. Apart, therefore, from the question of law involved, the Governments are anxious to approach the problem in a practical spirit on the basis of the East Punjab Government progressively diminishing its supply to these canals in order to give reasonable time to enable the West Punjab Government to tap alternative sources.
5. The West Punjab Government has agreed to deposit immediately in the Reserve Bank such ad hoc sum as may be specified by the Prime Minister of India. Out of this sum, that Government agrees to the immediate transfer to East Punjab of sums over which there is no dispute.
6. After an examination by each party of the legal issues, of the method of estimating the cost of water to be supplied by the East Punjab Government and of the technical survey of water resources and the means of using them for supply to these canals, the two Governments agree that further meetings between their representatives should take place.
7. The Dominion Governments of India and Pakistan accept the above terms and express the hope that a friendly solution will be reached.

(Signed)
Jawaharlal Nehru
Swaran Singh
N. V. Gadgil
New Delhi, May 4, 1948

(Signed)
Ghulam Mohammad
Shaukat Hyat Khan
Mumtaz Daultana

¹ Government of Pakistan, National Documentation Wing, Cabinet Division, Islamabad; Government of Pakistan, *The Indus Basin Irrigation Water Dispute*, No. 5 (November 1953); and Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, (May 1958); and Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development* (June 1958).

APPENDIX 2²

**Letter from the World Bank President, Eugene Black
to the Prime Minister of Pakistan, Liaquat Ali Khan: 6 September 1951.**
[A similar letter was sent to the Prime Minister of India, Jawaharlal Nehru.]

There appeared in the popular American magazine "Colliers" of August 4, 1951, an article by Mr. David E. Lilienthal proposing a cooperative regional approach to the development of the water resources of the Indus Basin. Because of the wide circulation of this magazine and Mr. Lilienthal's reputation as an authority in the field of regional development, this article has attracted a great deal of interest in the United States. I assume that copies of Mr. Lilienthal's article have been brought to the notice of the Government of Pakistan.

Mr. Lilienthal's proposal contemplates meeting the requirements of both countries for expanded irrigation through the cooperative construction and operation of storage dams and other facilities to be financed in part perhaps by this Bank. It is the essence of the proposal, as I read it, that the development of the Indus water resources should be dealt with on an engineering basis and it appears to be Mr. Lilienthal's belief, after visiting both countries and talking with the highest personalities in the governments, that it is within the realm of practicability to treat water development as a common project that is functional, and not political, in nature and that could therefore be undertaken separately from the political issues with which Pakistan and India are confronted.

As you may be aware, both Pakistan and India have from time to time raised with the Bank the possibility of financing irrigation and hydroelectric works in the Indus Basin and in each case the international water-rights problem has been an obstacle. A constructive programme for the effective use of the water resources would, moreover, have important implications for the economic development of both countries in other fields. Since the matter is therefore of interest to the Bank and since the Bank's name has now been publicly mentioned in this connection, I should like to ask you whether you are disposed to look with favour upon Mr. Lilienthal's proposal. If so, I can assure you that, if your Government and the Government of India desired to approach the development of the Indus water resources along the lines suggested by Mr. Lilienthal, I should be most happy to recommend that the Bank lend its good offices in such directions as might be considered appropriate by the two governments, make available qualified members of its staff and consider any financing proposals that might develop as a result of joint planning.

I am sending a letter in similar terms to the Prime Minister of India.

² Government of Pakistan, National Documentation Wing, Cabinet Division, Islamabad; Government of Pakistan, *The Indus Basin Irrigation Water Dispute*, No. 5 (November 1953); and Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, (May 1958); and Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development* (June 1958).

APPENDIX 3³

**Letter from the World Bank President, Eugene Black,
to the Prime Minister of Pakistan, Khwaja Nazimuddin; 8 November 1951.**

[A similar letter was sent to the Prime Minister of India, Jawaharlal Nehru.]

I have previously expressed my profound regrets on learning of the death of Mr. Liaquat Ali Khan. I must now revert to the subject of my correspondence with him which was interrupted by that tragic event.

I was much gratified to receive, in Mr. Liaquat Ali Khan's reply of September 25, 1951, to my letter of September 6, 1951, assurance that the Pakistan Government favours looking at the Indus basin water resources from a regional viewpoint with the objective of cooperative development and that he welcomed my proposal along the lines indicated in his letter, which I have carefully studied. The Prime Minister of India has also sent a favourable reply.

These two letters have convinced me that a solution to the problem of using the water resources of the Indus basin in such a way was to make a maximum contribution to the development of both countries is well within the bounds of practicability. I am therefore encouraged to suggest to the two Governments a procedure which seems to me to afford the best prospects of accomplishing that objective.

I shall base my suggestions on the essential principles of Mr. Lilienthal's proposal which are, as I understand them, the following:

(a) The Indus basin water resources are sufficient to continue all existing uses and to meet the further needs of both countries for water from that source.

(b) The water resources of the Indus basin should be cooperatively developed and used in such manner as most effectively to promote the economic development of the Indus basin viewed as a unit.

(c) The problem of development and use of the Indus basin water resources should be solved on a functional and not a political plane, without relation to past negotiations and past claims and independently of political issues.

I assume that, in indicating their willingness to proceed on the basis of Mr. Lilienthal's proposals, the two Governments have accepted these principles. My suggestions as to procedure, which I believe faithfully reflect these principles, are based on that assumption. I should perhaps add that, through its contacts with the two countries, the Bank is convinced that the engineers and other technicians of Pakistan and India are fully qualified to provide the principal technical and planning skills needed to develop, for submission to the two Governments, a comprehensive program for the utilization of the Indus basin water resources. That has been a major consideration in my formulation of a suggested procedure.

My proposal is as follows:

(a) Pakistan and India would each delegate a qualified engineer of high standing to prepare, jointly with the designee of the other, a comprehensive long-range plan for the most effective utilisation of the water resources of the Indus basin in the development of the region. Each designee would be instructed to govern himself by the principles stated above and to approach the problem on its merits in the interest of economic development of the Indus basin viewed as a unit. Each designee would have such technical assistants as he might desire and as might be available, and the two together would be authorized to retain the services of such engineers, agricultural technicians, economists and other experts, from either or both of the two countries or from other countries, as they might mutually find desirable.

(b) An engineer selected by the Bank would be continuously available during the planning stage to work with the designees of the two countries. He would keep himself informed of the planning in view of the Bank's previously expressed readiness to consider financing proposals and would participate in the working party as an impartial adviser, free to express his views on any aspects of the matter and available to perform such other services as might be mutually determined to be appropriate. He could thus assist in solving problems without being in the position of an arbitrator. Before selecting its representative, the Bank would ascertain that he would be acceptable to the two Governments. There

³ Government of Pakistan, National Documentation Wing, Cabinet Division, Islamabad; Government of Pakistan, *The Indus Basin Irrigation Water Dispute*, No. 5 (November 1953); and Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, (May 1958); and Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development* (June 1958).

would be available to him and through him to the entire working party, such technical assistance furnished by the Bank as might be needed to supplement the resources otherwise available.

(c) The working party would hold an initial meeting for the purpose of determining the procedure to be followed in working out the plan, the steps needed to be taken, the order and manner in which those steps would be undertaken and the persons by whom they would be undertaken, and would set target dates for completion of the various steps. On reaching agreement on these matters, the working party would promptly, without the need of any further authorization, put the agreed procedure into effect and begin work on the plan. I suggest that this initial meeting take place on January 3, 1952, at the Bank's Washington Office.

I feel strongly that publicity should be avoided at least until an agreement on procedure has been reached by the working party at the initial meeting. Whether any public statement should be made after a working procedure has been decided upon would be a matter for discussion between the two Governments and the Bank.

If I assume, the Governments of Pakistan and India are in agreement on the principles underlying Mr. Lilienthal's proposal, as I have set them forth above, I anticipate fruitful results from this suggested procedure. At the present stage I have not felt free to bring this matter before the Executive Directors of the Bank but I believe that I can assure you that if the two Governments are prepared to proceed, the Executive Directors, as well as the management and staff, will be happy to cooperate with them in facilitating a solution to this vital development problem.

APPENDIX 4⁴

**Letter from the World Bank President, Eugene Black
to the Prime Minister of Pakistan, Khwaja Nazimuddin; 13 March 1952.**

[A similar letter was sent to the Prime Minister of India, Jawaharlal Nehru.]

I refer to the conversation we have had about the Indus Basin water problem and to similar conversations I have had with the Prime Minister of India. I am happy to say that I have found common understanding as to the bases on which we can go forward under the Lilienthal proposal.

We all agree that the function of the working party is to work out, and the ultimate objective is to carry out, specific engineering measures by which the supplies effectively available to each country will be increased substantially beyond what they have ever been. Except as the two sides may hereafter agree, legal rights will not be affected and each side will be free to withdraw at any time; but while the cooperative work continues with the participation of the Bank neither side will take any action to diminish the supplies available to the other side for existing uses.

It should be understood that the three main principles set forth in my letter of November 8, 1951 provide the broad basis on which the engineers will meet but are not intended as rigidly fixed terms of reference. Within the broad outline of the basic framework the engineers should be free to put forward or consider proposals in pursuance of the general objective.

With these clarifications both Governments are ready to go forward in accordance with my letter of November 8, 1951, the first meeting of the working party to be held on April 7, 1952 [April is crossed out, replaced by May]. I am therefore happy to invite the designee of your Government, and his technical assistants, to be present at the Bank's Washington office on that date.

I am sending an identical letter to the Prime Minister of India.

⁴ Government of Pakistan, National Documentation Wing, Cabinet Division, Islamabad; Government of Pakistan, *The Indus Basin Irrigation Water Dispute*, No. 5 (November 1953); and Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, (May 1958); and Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development* (June 1958).

APPENDIX 5⁵
Proposal by the WB Representative for a Plan to
Develop and use of the
Indus Basin Waters, 5 February 1954

Introduction

The Indus Basin Working Party, consisting of engineers designated by India and Pakistan and their advisors assisted by the Bank Representative and consultants, have for almost two years worked at their task of preparing a comprehensive plan for the utilization of the waters of the Indus system, in accordance with the suggestion made by Mr David E Lilienthal in August, 1951. Over a year was spent in compiling and analyzing data in a field trip of more than 9000 miles in the basin. Efforts to agree in advance on a common approach having proved fruitless, the two Designees, at the suggestion of the Bank Representative, each proposed a comprehensive plan.

As presented above the plans differed widely in concept and in substance. Subsequent discussions have produced substantial concessions, but these have not been enough to bring about an agreement and the margin of difference between the two plans remains wide. In rough approximation, the two plans (as modified by recent concessions) provide for the following division of usable supplies of water:

Indian Plan:	Usable supplies allocated to:		
	India	- all of the Eastern rivers and 7% of the Western rivers	
	Pakistan	- none of the Eastern rivers and 93% of the Western rivers	
Pakistan Plan:	Usable supplies allocated to:		
	India	-30% of the Eastern rivers and none of the Western rivers	
	Pakistan	- 70% of the Eastern rivers and all of the Western rivers	

In quantitative terms, the division of the usable supplies of water may be approximately shown as follows (in millions of acre-feet):

Total uses excluding losses and unusable supplies			
	For India	For Pakistan	Total Usable
India	29	90	119
Pakistan	15.5	102.5	118

The present status is that it has not yet been possible to reach agreement and that, in the absence of some new development, there is no prospect of further progress in the Working Party. Before considering what step should next be taken, it will be useful to analyze the reasons that have so far prevented agreement.

Essential Elements of the Problem

The inability to agree in the Working Party has not been due to the technical difficulties or inability to devise appropriate engineering works and measures to make the most effective use of the waters. If this were the whole problem, a solution would doubtless have been found before now. The available technical resources are impressive.

The proficiency of the Indian and Pakistani engineers in canal irrigation techniques is unsurpassed, and perhaps unequalled, anywhere in the world.

Abundant technical data is at hand. It is doubtful whether such complete recorded flow data exists for the Indus system of rivers and canals could be duplicated for any comparable river system in any other country.

⁵ Government of Pakistan, National Documentation Wing, Cabinet Division, Islamabad; Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, (May 1958); and Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development* (June 1958).

Moreover, there is a large measure of accord between the two Designees on certain fundamentals:

1. The Working Party are in agreement that the average annual flow is not sufficiently dependable to be taken as a basis for planning and that some more conservative figures must be used.
2. For the most practical purposes, they are in agreement on the amount of unusable supplies in the rivers, on the amount that can be developed through storage, on the sites and capacities of possible storage facilities and on the technical feasibility of proposed engineering works.
3. They agree that existing uses of water must be respected (although they differ as to the meaning of "existing uses").
4. They agree that surplus usable supplies, including supplies that can be developed through storage, must be equitably apportioned among the potential new uses in the interests of the economic development of the basin as a unit (though they differ in defining the boundaries of the basin).
5. They agree that existing inundation canals should be replaced by weir-controlled canals.
6. Finally both sides appear to accept the concept that the cost of the new works should be allocated to the two countries in the proportion in which they derive benefit there-from.
7. The extensive compilation of data and the large area of agreement that already exists provide firm foundations for a settlement, and thus represent most valuable contributions by the Working Party to an ultimate solution. Unfortunately, they are not enough in themselves to bring about an agreement. What hampers further progress in the Working Party is no matter of engineering complexity, but rather a combination of three basic difficulties which have so far prevented the Working Party from reaching the heart of the problem - a fair division of the waters between the two countries.
8. The first difficulty lies in the fact that water supplies and storage potentialities are inadequate to the needs of the basin. The Indus is one of the world's greatest river systems. With proper development by engineering works, it is capable of providing substantially more irrigation to each country than has ever been enjoyed. But even after full development, there will not be enough water to supply all the needs of the water. This means that there can be no ideal plan which will fully satisfy both sides. Any plan must involve a large element of compromise under which each country will have to forego some of the irrigation uses that it would wish to develop if adequate supplies and storage were available.
9. The second difficulty is that although the Working Party is planning on the basis of the development of the Indus Basin as an economic unit, two sovereign states are involved. This greatly limits the practical potentialities of planning. A comprehensive plan can achieve maximum efficiency, economy and usefulness when it is developed and administered by a single authority. Under such an authority, decisions can be made promptly; plans can be readily changed to meet new circumstances and accommodations made to meet emergencies.
10. When two sovereign authorities are concerned, it is difficult to use resources to the greatest advantage. Problems must be solved by negotiation and agreement rather than by decision. Minor questions of planning and operational detail must be referred to high authority and dealt with, perhaps, through diplomatic channels. Moreover the two countries may follow different development policies, or may have unequal resources available for development. They may also (as has been evident in the present discussions) be reluctant to have works regulating water supplies on which they depend constructed in territory controlled by another country. All these factors make agreement difficult.
11. In the present case, it would be unrealistic to ignore this difficulty. The prospects of being able to establish an efficient and smooth-running joint administration are not favourable. At present, any comprehensive plan must be framed with this limitation in mind.
12. The third difficulty, the most serious of all, has arisen in the course of discussions. The plans put forward by the two sides differ fundamentally in concept. An essential part of the Pakistan concept is that existing uses of water must be continued from existing sources. Moreover "existing uses", in the Pakistan plan, include not only the amounts of water that have actually been put to use in the past, but also the allocations of water which have been sanctioned prior to partition, even though the necessary supplies have not been available for use. This concept protects Pakistan's actual and potential uses on the Eastern rivers and reserves most of the water in the Western rivers for use in Pakistan.
13. The corresponding concept of the Indian plan, on the other hand, is that although existing uses (here defined to include only actual historic withdrawals) must be continued, they need not

necessarily be continued from existing sources. This concept permits the water in the Eastern rivers which is now used in Pakistan to be released for use in India and replaced by water from the Western rivers.

14. The basic divergence of concept, together with the other two difficulties mentioned above, effectively blocks progress towards a settlement. As long as it persists, there is no prospect that further discussions will prove fruitful.

The Bank Proposal

Both sides have repeatedly stated that they sincerely desire a settlement and that in this they reflect the desires of their Governments. It is vital that a settlement be reached. Moreover, after two years' concern with the problem, the Bank is convinced that, despite the difficulties mentioned above, no insurmountable obstacle exists to a settlement which will benefit both countries. On the contrary, there is no doubt that this dispute can be settled on terms by which 'the supplies effectively available to each country will be increased substantially beyond what they have ever been.'⁶

In the circumstances, the Bank Representative feels that he has the responsibility to put forward a proposal for the consideration of both sides to serve as the basis of a comprehensive plan. The proposal has the concurrence of the engineering consultants to the Bank Representative and is put forward with the full support of the management of the Bank.

This proposal has been framed in complete realisation of the nature of the Bank's role in these discussions. Though the Bank Representative is 'free to express his views on any aspect of the matter,'⁷ neither he nor the Bank is in the position of a judge or arbitrator. The Bank cannot, therefore, pass upon any of the legal contentions that have been put forward by the parties in the past. The proposal here made does not express, and is not intended to imply, any opinion on those contentions.

The Bank proposal is no arbitrary compromise arrived at by mathematically splitting the differences between the two sides. It is a plan based on concepts of its own, which produce a fair and economic result.

In the formulation of the Bank proposal, the divergence of concept in the Working Party as to treatment of existing uses had to be faced at the outset. The Bank proposal embodies the principle that historic withdrawals of water must be continued, but not necessarily from existing sources. This principle allows water to be used so as most effectively to promote development. A requirement that existing uses must be supplied from existing sources would unduly limit the flexibility of operation needed for the efficient use of waters. In fact, no fair and adequate comprehensive plan could, in the opinion of the Bank Representative, be devised under such a requirement.

The Bank proposal also embodies the principle that, in view of existing circumstances, allocation of supplies to the two countries should be such as to afford the greatest possible freedom of action by each country in the operation, maintenance and future development of its irrigation facilities. It is desirable, so far as practicable, to avoid control by India over waters on which Pakistan will be dependent, and to enable each country to control the works supplying the water allocated to it and determine in its own interests the apportionment of waters within its own territories. This principle has not merely the negative advantage of minimizing friction between the two countries (a matter of some significance in view of the disputes that have arisen from sharing waters from the same river) and of avoiding the necessity of a costly and perhaps ineffective permanent joint administration. It also has a positive advantage. There is every reason to believe that leaving each country free to develop its own water resources in the light of its own needs and resources, and without having to obtain the agreement of the other at each point, will in the long run mostly effectively promote the efficient development of the whole system.

This does not mean that the Bank proposal places any obstacle in the way of cooperation between the two countries. On the contrary, it encourages cooperation and permits full advantage to be taken of any willingness to cooperate. But it is capable of bringing benefits even if a full degree of cooperation does not develop as rapidly as might be hoped.

Statement of Bank Proposal

The Bank proposal is that there be taken as a basis for agreement between India and Pakistan a plan under which the waters of the Western rivers would be reserved to Pakistan and the waters of the

⁶ Letters of President Black to the Prime Ministers of India and Pakistan, March 13, 1952.

⁷ Letters of President Black to the Prime Ministers of India and Pakistan, November 8, 1951.

Eastern rivers would, subject to a relatively short transition period, be reserved to India. The plan may be summarized as follows:

The entire flow of the Western rivers (Indus, Jhelum and Chenab) would be available for the exclusive use and benefit of Pakistan, and for development by Pakistan, except for the insignificant volume of Jhelum flow presently used in Kashmir.

The entire flow of the Eastern rivers (Ravi, Beas and Sutlej) would be available for the exclusive use and benefit of India, and for development by India, except that for a specified transition period India would continue to supply from these rivers, in accordance with an agreed schedule, the historic withdrawals from these rivers in Pakistan.

The transition period would be calculated on the basis of the time estimated to be required to complete the link canals needed in Pakistan to make transfers for the purpose of replacing supplies from India. A temporary cooperative administration would be needed to supervise the carrying out of the transitional arrangements.

Each country would construct the works located on its territories which are planned for the development of the supplies. The costs of such works would be borne by the country to be benefited thereby. Although no works are planned for joint construction by the two countries, certain link canals in Pakistan will, as stated above, be needed to replace supplies from India. India would bear the costs of such works to the extent of the benefits to be received by her therefrom. An appropriate procedure would be established for adjudicating or arbitrating disputes concerning the allocation of costs under this principle.

Some additional explanation may be helpful to a consideration of the Bank proposal.

The entire flow of the Indus, Jhelum and Chenab Rivers (Western rivers) would be allocated to Pakistan. These rivers are now used within Pakistan, except for the insignificant volume of the Jhelum that is used in Kashmir. Although the Indus River has its source outside Pakistan in Tibet and flows for a considerable length before entering Pakistan, the mountainous topography is unfavourable for irrigation development. Therefore, unhindered use by Pakistan of its waters seems assured. The Jhelum River rises and flows for some distance in Kashmir and, although here also reasons of topography limit the opportunities for irrigation diversion, there should be agreement that the flow will not be disturbed. The Chenab River rises in India and before it enters Kashmir, provides a substantial flow that could be diverted for use in India. Assurance by India that the flow of this river will not be disturbed is essential.

The entire flow of the Sutlej, Beas and Ravi Rivers (Eastern rivers) would be allocated to India when the necessary works have been completed to permit transfers of supplies from the Western rivers to replace historic withdrawals in Pakistan from the Eastern rivers. At present, India is not receiving the entire flow of these rivers but is supplying therefrom a substantial amount for canals in Pakistan, principally in the Sutlej Valley.

The works that are necessary to replace supplies from India consist of link canals connecting the Western to the Eastern rivers. Several such link canals have already been constructed by Pakistan, one is nearing completion and some additional canals will undoubtedly be necessary. As the necessary link canals are to be constructed in Pakistan, their integration with present planning there must be determined by Pakistan. Since any plan for transfer of supplies is susceptible of various modifications, accurate determination of costs must await completion of engineering studies.

It is proposed that the costs of these works will be borne by the two countries in proportion to the benefits. Thus, the cost of a canal in Pakistan of the capacity required to replace supplies from India would be borne by India; but if Pakistan decides, in its own interests, to increase the capacity beyond what is needed for such replacement, the cost would be shared proportionately by the two countries.

It will be necessary, under the Bank proposal, for India to continue to supply the Pakistan canals until the necessary works are completed by Pakistan for transfer of supplies from the Western rivers. This will involve preparation of a construction time schedule and of a time schedule for actual transfer of supplies.

These schedules would allow the actual transfers of supplies to come into effect progressively and the deliveries by India to diminish accordingly. They must be prepared cooperatively and agreed to by both countries. The period required for completion of the necessary link canals is roughly estimated to be about 5 years.

As indicated in the summary, temporary cooperative administrative machinery would be needed in the transition period to facilitate the carrying of the time schedules. There would be exchange of data on river discharges and withdrawals and on construction of interest to both countries. Joint observations would be provided for. Arrangements for settling disputes concerning allocations of cost by arbitration or adjudication would also be needed.

The Bank proposal contemplates that no reservoir storage (aside from the Bhakra dam which should be completed by the end of the transition period) will be required to supplement flow water in continuing the historic withdrawals. The inter-connected system which the link canals would provide could be so operated as to meet the existing requirements of the Sutlej Valley lands except, perhaps, in small amounts in a few canals in exceptional years.

Even without further storage construction, the Bank plan would permit the following uses after the transition period:

Pakistan could supply her historic withdrawals and could bring most of the Sutlej Valley Canals up to allocation. She could also meet the requirements of projects in progress on the Indus. India could supply her historic withdrawals and meet the requirements of projects in progress except that some modifications of the Rajasthan Canal project would be required, at least until further reservoir capacity is available.

There can be no doubt, however, that additional reservoir storage is necessary for the full development of the system and such storage is contemplated by the Bank plan. Any further storage capacity would greatly reduce the possibility of shortages and would support substantial new irrigation uses.

As far as is now known the potential storage capacities which could be developed by the two countries under the Bank plan would be about equal. However, no thorough engineering studies have been made and accordingly storage capacity (except for Bhakra) cannot be definitely determined. Further studies may well disclose additional reservoir possibilities not now known. Costs can obviously not be estimated at present and construction time can be only approximated.

The following table gives a rough quantitative comparison (in millions of acre-feet of usable supplies) between the Indian and Pakistan plans, as modified by recent concessions, and the Bank plan:

Plan	Total Uses Excluding Losses and Unusable Supplies		
	For India	For Pakistan	Total Usable
Indian	29	90	119
Pakistan	15.5	102.5	118
Bank	22	97	119

Comments on Bank Proposal

An essential test of a comprehensive plan is its fairness. The Bank proposal provides a fair division of the waters. It protect existing irrigation uses from disturbance and allocates surplus supplies, those already developed and those that may be developed, in accordance with the principle of equitable apportionment.

The Bank Representative is aware that certain minor adjustments would make the plan more economic if there were a sufficient assurance of cooperation between the parties to permit these measures to be planned and carried out.

At the present time, however, no such adjustments are recommended. If in the course of the transition period the prospects for long-term cooperation appear favourable enough, there will then be ample opportunity to agree on adjustments. But in present circumstances, their disadvantages appear to be greater than their benefits. Most such adjustments would require the establishment of a permanent joint commission. Administrative arrangements of that kind are costly, and the costs recur annually. More significantly, joint commissions are likely to be inefficient except in extremely favourable conditions.

One of the merits of the Bank proposal is that, unlike the plans of the two Designees, it avoids the complexities that would require the establishment of a permanent joint commission.

A further advantage of the Bank proposal lies in the fact that, after transfer works are completed, each country will be independent of the other in the operation of its supplies.

Each country will be responsible for planning, constructing and administering its own facilities in its own territories as it sees fit. This should provide strong incentives to each country to make the most effective use of water, since any efficiency accomplished by works undertaken by either country for storage, transfer, reduction of losses and the like will accrue directly to the benefit of that country. The same will be true of efficiency achieved in operations. Pakistan, for instance, will be able to take full advantage of the flexibility afforded by an inter-connecting system. As the flow of the rivers varies with the seasons, and from year to year, supplies that are surplus in one river can be transferred to a river in which supplies are low. Likewise India will be able to operate Bhakra so as to meet the varying requirements of different areas. By contrast, if the supplies from particular rivers were shared by the two countries, the administrative complexity of arranging necessary adjustments to meet variations in flow and scheduling for crop needs would be formidable.

The mutual independence afforded by the Bank proposal would also bring benefits of a different kind. The location of works serving each country on territories under its control, and the assurances against interference by either country with the supplies on which the other depends, should reduce the chances of disputes and tension and contribute to improved relations.

All these factors should serve to promote the development of the entire basin.

A number of contentions have been made in the Working Party discussions which need not be resolved by agreement if the Bank proposal is adopted. There has been discussion about the location of the easterly boundary of the Indus Basin, a question which is difficult to settle since the area is a desert with no discernible watershed. Under the Bank proposal, the question need not be settled by agreement. Each country will be free to use the waters allocated to it as it sees fit.

There has also been discussion about the proper allowance for gains and losses, for salinity repulsion and for tube-well supply. It is not possible to answer these questions precisely at this time; nor will it be possible for some years until upstream storage and use permits much less wastage to the sea. The best method of dealing with these questions is to let each country make such provision out of supplies allotted to it, or take such engineering measures, as it deems wise.

It might perhaps be said that the allocation of the waters of a river to lands far removed from its banks, rather than to adjacent lands, is abnormal. But the practice is not new; it was well known in the Indus Basin before partition and has been followed since partition. Besides, recent history of the Indus Basin has not been normal. It is unusual, to say the least, to find an elaborate irrigation system, originally planned and operated under a single political regime, suddenly cut in two by a new political boundary.

It might also be said that the Bank proposal differs from pre-partition plans in that it contemplates irrigation of lands for which irrigation was not formerly planned. There would be substance in such a statement. The justification is that social and economic conditions have changed. Political developments have shifted large masses of population to new homes and these people now need irrigated land. No comprehensive plan would be realistic that failed to take account of the changed situation.

Conclusion

The Bank proposal is simple, workable and fair. It will effectively promote the economic development of the Indus Basin and will benefit both countries by substantially increasing the amount of usable water available to each of them. The Bank Representative recommends its acceptance as the basis of agreement.

APPENDIX 6⁸
Aide Memoire, 21 May 1956

1. Cooperative work on the Indus Basin question was resumed in November 1954 on the basis of "Terms of Reference and Procedure" proposed by the Bank and accepted by the Government of India and the Government of Pakistan. The objective of this latest phase of the cooperative work has been to prepare 'a comprehensive plan for the consideration of Governments, on the basis of the Bank proposal of February 5, 1954, taking as a starting point the division of waters envisaged therein.'
2. The Delegations of India and Pakistan, together with the Bank Group, have now been at work for almost 18 months. During this time a series of studies have been carried out by both Delegations and numerous memoranda have been submitted by each side bearing on the various issues arising out of Paragraphs 2 and 3 of the Terms of Reference. The Bank has also arranged for the Bank Consultants (TAMS) to carry out a series of independent studies of the same nature.
3. The present status of the discussions can be summarized as follows:
 - [a] It has not been possible to secure full agreement between the two Delegations on:-
 - [i] the quantitative aspects of certain of the uses specified in Paragraph 2 and in Paragraph 3 of the Terms of Reference.
 - [ii] certain technical considerations involved (e.g. the effect of the proposed changed regime of the rivers on "Gains and Losses")
 - [b] In the absence of agreement on the points mentioned in [a] above, it has not been possible to secure a common approach to the actual engineering features of a "Comprehensive Plan."
4. The Bank continues to hold the view that the "division of the waters" contemplated by the Bank Proposal of February 1954 affords the best prospects for a settlement of the Indus Waters question; that out of the flow-cum-storage potential of the rivers allocated to them, India and Pakistan could each develop very substantial irrigation uses, additional to those that they now enjoy; and that no insuperable engineering difficulties are likely to arise in either country in constructing the physical works necessary to develop these additional supplies. The works would, however, be costly; and their financing would present a serious financial problem.
5. The Bank is of the opinion that no useful purpose is likely to be served by continuing to devote the cooperative work to an attempt to obtain agreement of the two Delegations on the issues arising out of Paragraph 2 and Paragraph 3 of the Terms of Reference. The Bank, however, feels it desirable, at the stage which the discussions have now reached, that the Bank should consider, in the light of the studies made by the consultants, whether any "adjustment" in the Bank Proposal of February 1954 is called for; and also to make proposals to the two Governments with regard to future Bank participation.

Paragraph 2 Uses and Surplus

6. [a] The Bank's consultants have studied the extent to which the flow of the Western Rivers will meet the uses envisaged in Paragraph 2 of the Terms of Reference, and the nature and extent of any surplus.
 - [b] For this purpose, the Bank asked its Consultants to adopt the following quantum of uses:-
 - [i] Historic withdrawals of all canals (except the Pakistan Sutlej Valley Canals);
 - [ii] Allocations for the Pakistan Sutlej Valley Canals (11.1 MAF)*;
 - [iii] 3.6 MAF for Thal*;
 - [iv] 9.5 MAF for Kotri.*
 (* With distribution shown in Appendix A).
 - [c] These studies have led the Bank Group to the conclusion that, after taking into account the possibilities of the transfer of flow supplies of the Indus, Jhelum and Chenab by a system of link canals:-
 - [i] There would be no shortages in Kharif, except for occasional 10-day periods in April and September in occasional years.

⁸ Government of Pakistan, National Documentation Wing, Cabinet Division, Islamabad; and Government of Pakistan, *Canal Waters Dispute: Correspondence between the Government of Pakistan and the Government of India and Partition Documents*, (May 1958); and Government of Pakistan, *Canal Waters Dispute: Documents relating to Negotiations under the Good Offices of the International Bank for Reconstruction and Development* (June 1958).

[ii] There would be consistent surpluses in Kharif, significant in quantity, duration and frequency.

[iii] There would be consistent shortages in Rabi, occasionally beginning in late September of extending into early April (see [i] above), of a degree, duration and frequency which the Bank Group could not regard as "tolerable".

Paragraph 3 Uses

7. [a] Additional Requirements of Sukkur and Gudu Pakistan has claimed for Sukkur substantial additional uses both in Rabi and in Kharif, and for Gudu substantial additional uses during Kharif only. If the pre-partition regime of the six rivers were to continue undisturbed, no significant additional Rabi irrigation at Sukkur could be developed on any dependable basis, from flow alone. Consequently, none could be developed only from the flow of the Western Rivers. So far as Kharif uses at Sukkur and at Gudu are concerned, the Kharif surplus referred to in Paragraph 6[c] [ii] above is available to allocate to new Kharif uses at these two projects, and to employ as a substitute for "Sailab."

[b] Future Development in the State of Jammu and Kashmir India has claimed that some part of the flow of the Jhelum and Chenab should be reserved for future development in the State of Jammu and Kashmir. It has been stated by India that this development would involve "relatively insignificant consumptive uses." This question should, in the Bank's view, be postponed until the point has been reached when the provisions of an international water treaty might be under consideration.

"Adjustments" to the Bank Proposal

8. [a] In the light of the conclusions at which the Bank has arrived, as set out in Paragraphs 6 and 7 above, the Bank feels that an adjustment in its Proposal of February 1954 is called for. This adjustment should, in the Bank's view, assure to Pakistan "timely" water sufficient to eliminate the shortage referred to in Paragraph 6[c] [iii].

[b] The adjustment referred to in [a] above might take any of the following forms, or a combination of any two or all of them:-

[i] Supplies from tubewells.

[ii] Continued deliveries to Pakistan of "timely" water from the Eastern Rivers.

[iii] Construction of storage on the Western Rivers.

[c] When the Bank made its proposal of February 1954, the possibility, both in India and in Pakistan, of supplementing flow by supplies from tube-wells, was realized. But this source of supply is not, in the Bank's view, an appropriate means, over the long term, of eliminating any part of the disclosed shortage. Accordingly, and if the Division of Waters contemplated by the Bank Proposal is maintained, the adjustment should be in the form of storage on the Western Rivers.

9. The system of works to implement the Bank Proposal, as adjusted, should, therefore, in the Bank's view, be based on the principle that, for the purpose of meeting the "Paragraph 2 Uses," flow of the Western Rivers (Indus, as well as Jhelum and Chenab) should be exploited to the maximum possible extent, and that the minimum inroads should be made on Pakistan's limited storage capacity. In the Bank's view, the cost of this system of works should be the basis of the calculation of India's financial liability.

10. The Bank now wishes to propose to the two Governments the following course of action:-

[a] The completion of negotiations with the two Delegations of ad hoc amounts for Indian withdrawals from the Eastern Rivers during the period 1st April 1956 to 31st March 1957.

[b] A continuance of the period of the cooperative work until 31st March 1957.

[c] After the two Governments had agreed to [b] above, the conclusion of an inter-Governmental Agreement to cover [a] above.

[d] That the Bank should then proceed to use its good offices to bring about acceptance of an appropriate adjustment of the Bank Proposal of February 1954, along the lines indicated.

11. The Bank feels that if, by 31st March 1957, the Bank should see no reasonable prospects for a settlement on the basis of the Bank Proposal, with an appropriate adjustment, the Bank would have to consider whether the employment of its good offices could make any further contribution to a solution.

APPENDIX 7⁹
The Indus Waters Treaty, 1960

Preamble

The Government of India and the Government of Pakistan, being equally desirous of attaining the most complete and satisfactory utilisation of the waters of the Indus system of rivers and recognising the need, therefore, of fixing and delimiting, in a spirit of goodwill and friendship, the rights and obligations of each in relation to the other concerning the use of these waters and of making provision for the settlement, in a cooperative spirit, of all such questions as may hereafter arise in regard to the interpretation or application of the provisions agreed upon herein, have resolved to conclude a Treaty in furtherance of these objectives, and for this purpose have named as their plenipotentiaries:

The Government of India:

Shri Jawaharlal Nehru,
Prime Minister of India,
 and

The Government of Pakistan:

Field Marshal Mohammad Ayub Khan, HP., H.J.,
President of Pakistan;

who, having communicated to each other their respective Full Powers and having found them in good and due form, have agreed upon the following Articles and Annexures:-

Article I
Definitions

As used in this Treaty:

[1] The terms 'Article' and 'Annexure' mean respectively an Article of, and an Annexure to, this Treaty. Except as otherwise indicated, references to Paragraphs are to the paragraphs in the Article or in the Annexure in which the reference is made.

[2] The term 'Tributary' of a river means any surface channel, whether in continuous or intermittent flow and by whatever name called, whose waters in the natural course would fall into that river, e.g. a tributary, a torrent, a natural drainage, an artificial drainage, a *nadi*, a *nallah*, a *nai*, a *khad*, a *cho*. The term also includes any sub-tributary or branch or subsidiary channel, by whatever name called, whose waters, in the natural course, would directly or otherwise flow into that surface channel.

[3] The term 'The Indus', 'The Jhelum', 'The Chenab', 'The Ravi', 'The Beas' or 'The Sutlej' means the named river (including Connecting Lakes, if any) and all its Tributaries: Provided however that

[i] none of the rivers named above shall be deemed to be a Tributary;

[ii] The Chenab shall be deemed to include the river Panjnad; and

[iii] the river Chandra and the river Bhaga shall be deemed to be Tributaries of The Chenab.

[4] The term 'Main' added after Indus, Jhelum, Chenab, Sutlej, Beas or Ravi means the main stem of the named river excluding its Tributaries, but including all channels and creeks of the main stem of that river and such Connecting Lakes as form part of the main stem itself. The Jhelum Main shall be deemed to extend up to Verinag and the Chenab Main up to the confluence of the river Chandra and the river Bhaga.

[5] The term 'Eastern Rivers' means The Sutlej, The Beas and The Ravi taken together.

[6] The term 'Western Rivers' means The Indus, The Jhelum and The Chenab taken together.

[7] The term 'the Rivers' means all the rivers, The Sutlej, The Beas, The Ravi, The Indus, The Jhelum and The Chenab.

[8] The term 'Connecting Lakes' means any lake which receives water from, or yields water to, any of the Rivers; but any lake which occasionally and irregularly receives only the spill of any the Rivers and returns only the whole or part of that spill is not a Connecting Lake.

[9] The term 'Agricultural Use' means the use of water for irrigation, except for irrigation of household gardens and public recreational gardens.

[10] The term 'Domestic Use' means the use of water for:

[a] drinking, washing, bathing, recreation, sanitation (including the conveyance and dilution of sewage and of industrial and other wastes), stock and poultry, and other like purposes:

[b] household and municipal purposes (including use for household gardens and public recreational gardens); and

[c] industrial purposes (including mining, milling and other like purposes); but the term does not include Agricultural Use or use for generation of hydroelectric power.

⁹ Government of Pakistan, *Text of the IWT 1960*.

[11] The term 'Non-Consumptive Use' means any control or use of water for navigation, floating of timber or other property, flood protection or flood control, fishing or fish culture, wild life or other like beneficial purposes, provided that, exclusive of seepage and evaporation of water incidental to the control or use, the water (undiminished in volume within the practical range of measurement) remains in, or is returned to, the same river or its Tributaries; but the term does not include Agricultural Use or use for the generation of hydroelectric power.

[12] The term 'Transitional Period' means the period beginning and ending as provided in Article II [6].

[13] The term 'Bank' means the International Bank for Reconstruction and Development.

[14] The term 'Commissioner' means either of the Commissioners appointed under the provisions of Article VIII [1] and the term 'Commission' means the Permanent Indus Commission constituted in accordance with Article VIII [3].

[15] The term 'interference with the waters' means:

[a] Any act of withdrawal therefrom; or

[b] Any man-made obstruction to their flow which causes a change in the volume (within the practical range of measurement) of the daily flow of the waters: Provided however that an obstruction which involves only an insignificant and incidental change in the volume of the daily flow, for example, fluctuations due to afflux caused by bridge piers or a temporary by-pass, etc., shall not be deemed to be an interference with the waters.

[16] The term 'Effective Date' means the date on which this Treaty takes effect in accordance with the provisions of Article XII, that is, the first of April 1960.

Article II

Provisions Regarding Eastern Rivers

[1] All the waters of the Eastern Rivers shall be available for the unrestricted use of India, except as otherwise expressly provided in this Article.

[2] 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 yet finally crossed into Pakistan. The points of final crossing are the following: [a] near the new Hasta Bund upstream of Suleimanke in the case of the Sutlej Main, and [b] about one and a half miles upstream of the syphon for the B-R-BD Link in the case of the Ravi Main.

[3] 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 rivers have finally crossed into Pakistan.

[4] All the waters, while flowing in Pakistan, of any Tributary which, in its natural course, joins the Sutlej Main or the Ravi Main after these rivers have finally crossed into Pakistan shall be available for the unrestricted use of Pakistan: Provided however that this provision shall not be construed as giving Pakistan any claim or right to any releases by India in any such Tributary. If Pakistan should deliver any of the waters of any such Tributary, which on the Effective Date joins the Ravi Main after this river has finally crossed into Pakistan, into a reach of the Ravi Main upstream of this crossing, India shall not make use of these waters; each Party agrees to establish such discharge observation stations and make such observations as may be necessary for the determination of the component of water available for the use of Pakistan on account of the aforesaid deliveries by Pakistan, and Pakistan agrees to meet the cost of establishing the aforesaid discharge observation stations and making the aforesaid observations.

[5] There shall be a Transition Period during which, to the extent specified in Annexure H, India shall

[i] limit its withdrawal for Agricultural Use,

[ii] limit abstractions for storages, and

[iii] make deliveries to Pakistan from the Eastern Rivers.

[6] The Transition Period shall begin on 1st April 1960 and it shall end on 31st March 1970, or, if extended under the provisions of Part 8 of Annexure H, on the date up to which it has been extended. In any event, whether or not the replacement referred to in Article IV [1] has been accomplished, the Transition Period shall end not later than 31st March 1973.

[7] If the Transition Period is extended beyond 31st March 1970, the provisions of Article V [5] shall apply.

[8] If the Transition Period is extended beyond 31st March 1970, the provisions of Article V [5] shall apply during the period of extension beyond 31st March 1970.

[9] 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 shall have no claim or right to releases by India of any of the waters of the Eastern Rivers. In case there are any releases, Pakistan shall enjoy the unrestricted use of the waters so released after they have finally crossed into Pakistan: Provided that in the event that Pakistan makes any use of these waters, Pakistan shall not acquire any right whatsoever, by prescription or otherwise, to a continuance of such releases of such use.

Article III

Provisions Regarding Western Rivers

[1] Pakistan shall receive for unrestricted use all those waters of the Western Rivers which India is under obligation to let flow under the provisions of Paragraph [2].

[2] India shall be under an obligation to let flow all the waters of the Western Rivers, and shall not permit any interference with these waters, except for the following uses, restricted (except as provided in item [c] [ii] of Paragraph 5 of Annexure C) in the case of each of the rivers, The Indus, The Jhelum and The Chenab, to the drainage basin thereof:

- [a] Domestic Use;
- [b] Non-Consumptive Use;
- [c] Agricultural Use, as set out in Annexure C; and
- [d] Generation of hydro-electric power, as set out in Annexure D.

[3] Pakistan shall have the unrestricted use of all waters originating from sources other than the Eastern Rivers which are delivered by Pakistan into The Ravi or The Sutlej, and India shall not make use of these waters. Each Party agrees to establish such discharge observation stations and make such observations as may be considered necessary by the Commission for the determination of the component of water available for the use of Pakistan on account of the aforesaid deliveries by Pakistan.

[4] Except as provided in Annexures D and E, India shall not store any water of, or construct any storage works on, the Western Rivers.

Article IV

Provisions Regarding Eastern Rivers and Western Rivers

[1] 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.

[2] Each Party agrees that any Non-Consumptive Use made by it shall be so made as not to materially change, on account of such use, the flow in any channel to the prejudice of the uses on that channel by the other Party under the provisions of this Treaty. In executing any scheme of flood protection or flood control each Party will avoid, as far as practicable, any material damage to the other Party, and any such scheme carried out by India on the Western Rivers shall not involve any use of water or any storage in addition to that provided under Article III.

[3] Nothing in this Treaty shall be construed as having the effect of preventing either Party from undertaking schemes of drainage, river training, conservation of soil against erosion and dredging, or from removal stones, gravel or sand from the beds of the Rivers: Provided that

[a] in executing any of the schemes mentioned above, each Party will avoid, as far as practicable, any material damage to the other Party;

[b] any such scheme carried out by India on the Western Rivers shall not involve any use of water or any storage in addition to that provided under Article III;

[c] except as provided in Paragraph [5] and Article VII [1] [b], India shall not take any action to increase the catchment area, beyond the area on the Effective Date, of any natural or artificial drainage or drain which crosses into Pakistan, and shall not undertake such construction or remodelling of any drainage or drain which crosses or falls into a drainage or drain which crosses as might cause material damage in Pakistan or entail the construction of a new drain or enlargement of an existing drainage or drain in Pakistan; and

[d] should Pakistan desire to increase the catchment area, beyond the area on the Effective Date, of any natural or artificial drainage or drain, which receives drainage waters from India, or, except in an emergency, to pour any waters into it in excess of the quantities received by it as on the Effective Date, Pakistan shall, before undertaking any work for these purposes, increase the capacity of that drainage or drain to the extent necessary so as not to impair its efficacy for dealing with drainage waters received from India as on the Effective Date.

[4] Pakistan shall maintain in good order its portions of the drainage mentioned below with capacities not less than the capacities as on the Effective Date:-

- [i] Hudiara Drain

- [ii] Kasur Nala
- [iii] Salimshah Drain
- [iv] Fazilka Drain.

[5] If India finds it necessary that any of the drainages mentioned in Paragraph [4] should be deepened or widened in Pakistan, Pakistan agrees to undertake to do so as a work of public interest, provided India agrees to pay the cost of the deepening or widening.

[6] Each Party will use its best endeavours to maintain the natural channels of the Rivers, as on the Effective Date, in such conditions as will avoid, as far as practicable, any obstruction to the flow in these channels likely to cause material damage to the other Party.

[7] Neither Party will take any action which would have the effect of diverting the Ravi Main between Madhopur and Lahore, or the Sutlej Main between Harike and Sueimanke, from its natural channel between high banks.

[8] The use of the natural channels of the Rivers for the discharge of flood or other excess waters shall be free and not subject to limitation by either Party, and neither Part shall have any claim against the other in respect of any damage caused by such use. Each Party agrees to communicate to the other Party, as far in advance as practicable, any information it may have in regard to such extraordinary discharges of water from reservoirs and flood flows as may affect the other Party.

[9] Each Party declares its intention to operate its storage dams, barrages and irrigation canals in such manner, consistent with the normal operations of its hydraulic systems, as to avoid, as far as feasible, material damage to the other Party.

[10] Each Party declares its intention to prevent, as far as practicable, undue pollution of the waters of the Rivers which might affect adversely uses similar in nature to those to which the waters were put on the Effective Date, and agrees to take all reasonable measures to ensure that, before any sewage or industrial waste is allowed to flow into the Rivers, it will be treated, where necessary, in such manner as not materially to affect those uses: Provided that the criterion of reasonableness shall be the customary practice in similar situations on the Rivers.

[11] The Parties agree to adopt, as far as feasible, appropriate measures for the recovery, and restoration to owners, of timber and other property floated or floating down the Rivers, subject to appropriate charges being paid by the owners.

[12] The use of water for industrial purposes under Articles II [2], II [3] and III [2] shall not exceed:

[a] in the case of an industrial process known on the Effective Date, such quantum of use as was customary in that process on the Effective Date;

[b] in the case of an industrial process not known on the Effective Date:

[i] such quantum of use as was customary on the Effective Date in similar or in any way comparable industrial processes; or

[ii] if there was no industrial process on the Effective Date similar of in any way comparable to the new process, such quantum of use as would not have a substantially adverse effect on the other Party.

[13] Such part of any water withdrawn for Domestic Use under the provisions of Articles II [3] and III [2] as is subsequently applied to Agricultural Use shall be accounted for as part of the Agricultural Use specified in Annexure B and Annexure C respectively; each Party will use its best endeavours to return the same river (directly or through one of its Tributaries) all water withdrawn therefrom for industrial purposes and not consumed either in the industrial processes for which it was withdrawn or in some other Domestic Use.

[14] In the event that either Party should develop a use of the waters of the Rivers which is not in accordance with the provisions of this Treaty, that Party shall not acquire by reason of such use any right, by prescription or otherwise, to a continuance of such use.

[15] Except as otherwise required by the express provisions of this Treaty, nothing in this Treaty shall be construed as affecting existing territorial rights over the waters of any of the Rivers or the beds or banks thereof, or as affecting existing property rights under municipal law over such waters or beds or banks.

Article IV

Financial Provisions

[1] In consideration of the fact that the purpose of part 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 agree to make a fixed contribution of Pounds Sterling 62,060,000 towards the costs of these works. The amount in Pounds Sterling of this contribution shall remain unchanged irrespective of any alteration in the par value of any currency.

[2] The sum of Pounds Sterling 62,060,000 specified in Paragraph [1] shall be paid in ten equal annual instalments on the 1st of November of each year. The first of such annual instalments shall be paid on 1st November 1960, or if the Treaty has not entered into force by that date, then within one month after the Treaty enters into force.

[3] Each of the instalments specified in Paragraph [2] shall be paid to the Bank for the credit of the Indus Basin Development Fund to be established and administered by the Bank, and payment shall 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.

[4] The payments provided for under the provisions of Paragraph [3] shall be made without deductions or set-off on account of any financial claims of India on Pakistan arising otherwise than under the provisions of this Treaty: Provided that this provision shall in no way absolve Pakistan from the necessity of paying in other ways debts to India which may be outstanding against Pakistan.

[5] If, at the request of Pakistan, the Transition Period is extended in accordance with the provisions of Article II [6] and of Part 8 of Annexure H, the Bank shall thereupon pay to India out of the Indus Basin Development Fund the appropriate amount specified in the Table below:-

Table

<i>Period of Aggregate Extension of Transition Period</i>	<i>Payment to India</i>
One year	£Stg. 3,125,000
Two years	£Stg. 6,406,250
Three years	£Stg. 9,850,000

[6] The provisions of Article IV [1] and Article V [1] shall not be construed as conferring upon India any right to participate in the decisions as to the system of works which Pakistan constructs pursuant to Article IV [1] or as constituting an assumption of any responsibility by India or as an agreement by India in regard to such works.

[7] Except for such payments as are specifically provided for in this Treaty, neither Party shall be entitled to claim any payment for observance of the provisions of this Treaty or to make any charge for water received from it by the other Party.

Article VI ***Exchange of Data***

[1] The following data with respect to the flow in, and utilisation of the waters of, the Rivers shall be exchanged regularly between the Parties:-

[a] Daily (or as observed or estimated less frequently) gauge and discharge data relating to flow of the Rivers at all observations sites.

[b] Daily extractions for or releases from reservoirs.

[c] Daily withdrawals at the heads of all canals operated by government or by a government agency (hereinafter in this Article called canals), including link canals.

[d] Daily escapages from all canals, including link canals.

[e] Daily deliveries from link canals. These data shall be transmitted monthly by each Party to the other as soon as the data for a calendar month have been collected and tabulated, but not later than three months after the end of the month to which they relate: Provided that such of the data specified above as are considered by either Party to be necessary for operational purposes shall be supplied daily or at less frequent intervals, as may be requested. Should one Party request the supply of any of these data by telegram, telephone, or wireless, it shall reimburse the other Party for the cost of transmission.

[2] If, in addition to the data specified in Paragraph [1] of this Article, either Party requests the supply of any data relating to the hydrology of the Rivers, or to canal or reservoir operation connected with the Rivers, or to any provision of this Treaty, such data shall be supplied by the other Party to the extent that these are available.

Article VII ***Future Co-operation***

[1] The two Parties recognize that they have a common interest in the optimum development of the Rivers, and, to that end, they declare their intention to co-operate, by mutual agreement, to the fullest possible extent. In particular:-

[a] Each Party, to the extent it considers practicable and on agreement by the other Party to pay the costs to be incurred, will, at the request of the other Party, set up or install such hydrologic observation stations within the drainage basins of the Rivers, and set up or install such meteorological

observation stations relating thereto and carry out such observations thereat, as may be requested, and will supply the data so obtained.

[b] Each Party, to the extent it considers practicable and on agreement by the other Party to pay costs to be incurred, will, at the request of the other Party, carry out such new drainage works as may be required in connection with new drainage works of the other Party.

[c] At the request of either Party, the two Parties may, by mutual agreement, cooperate in undertaking engineering works on the Rivers. The formal arrangements, in each case, shall be as agreed upon between the Parties.

[2] If either Party plans to construct any engineering work which would cause interference with the waters of any of the Rivers and which, in its opinion, would affect the other Party materially, it shall notify the other Party of its plans and shall supply such data relating to the work as may be available and as would enable the other Party to inform itself of the nature, magnitude and effect of the work. If a work would cause interference with the waters of any of the Rivers but would not, in the opinion of the Party planning it, affect the other Party materially, nevertheless the Party planning the work shall, on request, supply the other Party with such data regarding the nature, magnitude and effect, if any, of the work as may be available.

Article VIII

Permanent Indus Commission

[1] India and Pakistan shall each create a permanent post of Commissioner for Indus Waters, and shall appoint to this post, as often a vacancy occurs, a person who should ordinarily be a high-ranking engineer competent in the field of hydrology and wateruse. Unless either Government should decide to take up any particular question directly with the other Government, each Commissioner will be the representative of his Government for all matters arising out of this Treaty, and will serve as the regular channel of communication on all matters relating to the implementation of the Treaty, and, in particular, with respect to

[a] the furnishing or exchange of information or data provided for in the Treaty, and

[b] the giving of any notice provided for in the Treaty.

[2] The status of each Commissioner and his duties and responsibilities towards his Government will be determined by that Government.

[3] The two Commissioners shall together form the Permanent Indus Commission.

[4] The purpose and maintain co-operative arrangements for the implementation of this Treaty, to promote co-operation between the Parties in the development of the waters of the Rivers and, in particular,

[a] to study and report to the two Governments on any problem relating to the development of the waters of the Rivers which may be jointly referred to the Commission by the two Governments: in the event that a reference is made by one Government alone, the Commissioner of the other Government shall obtain the authorization of his Government before he proceeds to act on the reference;

[b] to make every effort to settle promptly, in accordance with the provisions of Article IX [1], any question arising thereunder;

[c] to undertake, once in every five years, a general tour of inspection of the Rivers for ascertaining the facts connected with various developments and works on the Rivers;

[d] to undertake promptly, at the request of either Commissioner, a tour of inspection of such works or sites on the Rivers as may be considered necessary by him for ascertaining the facts connected with those works

[e] to take, during the Transition Period, such steps as may be necessary or sites; and for the implementation of the provisions of Annexure H.

[5] The Commission shall meet regularly at least once a year, alternately in India and Pakistan. This regular annual meeting shall be held in November or in such other month as may agreed upon between the Commissioners. The Commission shall also meet when requested by either Commissioner.

[6] To enable the Commissioners to perform their functions in the Commission, each Government agrees to accord to the Commissioner of the other Government the same privileges and immunities as are accorded to representatives of member States to the principal and subsidiary organs of the United Nations under Sections 11, 12 and 13 of Article IV of the Convention on the Privileges and Immunities of the United Nations (dated 13th February, 1946) during the periods specified in those Sections. It is understood and agreed that these privileges and immunities are accorded to the Commissioners not for the personal benefit of the individuals themselves but in order to safeguard the independent exercise of their functions in connection with the Commission; consequently, the Government appointing the Commissioner not only has the right but is under a duty to waive the immunity of its Commissioner in any case where, in the opinion of the appointing Government, the immunity would impede the course of justice and can be waived without prejudice to the purpose for which the immunity is accorded.

[7] For the purposes of the inspections specified in Paragraph [4] [c] and [d], each Commissioner may be accompanied by two advisers or assistants to whom appropriate facilities will be accorded.

[8] The Commission shall submit to the Government of India and to the Government of Pakistan, before the first of June of every year, a report on its work for the year ended on the preceding 31st March, and may submit to the two Governments other reports at such times as it may think desirable.

[9] Each Government shall bear the expenses of its Commissioner and his ordinary staff. The cost of any special staff required in connection with the work mentioned in Article VII [1] shall be borne as provided therein.

[10] The Commission shall determine its own procedures.

Article IX

Settlement of Differences and Disputes

[1] Any question which arises between the Parties concerning the interpretation or application of this Treaty or the existence of any fact which, if established, might constitute a breach of this Treaty shall first be examined by the Commission, which will endeavour to resolve the question by agreement.

[2] If the Commission does not reach agreement on any of the questions mentioned in Paragraph [1], then a difference will be deemed to have arisen, which shall be dealt with as follows:

[a] Any difference which, in the opinion of either Commissioner, falls within the provisions of Part 1 of Annexure F shall, at the request of either Commissioner, be dealt with by a Neutral Expert in accordance with the provisions of Part 2 of Annexure F;

[b] If the difference does not come within the provisions of Paragraph [2] [a], or if a Neutral Expert, in accordance with the provisions of Paragraph 7 of Annexure F, has informed the Commission that, in his opinion, the difference, or a part thereof, should be treated as a dispute, then a dispute will be deemed to have arisen which shall be settled in accordance with the provisions of Paragraph [3], [4] and [5]: Provided that, at the discretion of the Commission, any difference may either be dealt with by a Neutral Expert in accordance with the provisions of Part 2 of Annexure F or be deemed to be a dispute to be settled in accordance with the provisions of Paragraphs [3], [4] and [5], or may be settled in any other way agreed upon by the Commission.

[3] As soon as a dispute to be settled in accordance with this and the succeeding paragraphs of this Article has arisen, the Commission shall, at the request of either Commissioner, report the fact to the two Governments, as early as practicable, stating in its report the points on which the Commission is in agreement and the issues in dispute, the views of each Commissioner on these issues and his reasons therefore.

[4] Either Government may, following receipt of the report referred to in Paragraph [3], or if it comes to the conclusion that this report is being unduly delayed in the Commission, invite the other Government to resolve the dispute by agreement. In doing so it shall state the names of its negotiators and their readiness to meet with the negotiators to be appointed by the other Government at a time and place to be indicated by the other Government. To assist in these negotiations, the two Governments may agree to enlist the services of one or more mediators acceptable to them.

[5] A Court of Arbitration shall be established to resolve the dispute in the manner provided by Annexure G

[a] upon agreement between the Parties to do so; or

[b] at the request of either Party, if, after negotiations have begun pursuant to Paragraph [4], in its opinion the dispute is not likely to be resolved by negotiation or mediation; or

[c] at the request of either Party, if, after the expiry of one month following receipt by the other Government of the invitation referred to in Paragraph [4], that Party comes to the conclusion that the other Government is unduly delaying the negotiations.

[6] The provisions of Paragraphs [3], [4] and [5] shall not apply to any difference while it is being dealt with by a Neutral Expert.

Article X

Emergency Provision

If, any time prior to 31st March 1965, Pakistan should represent to the Bank that, because of the outbreak of large-scale international hostilities arising out of causes beyond the control of Pakistan, it is unable to obtain from abroad the materials and equipment necessary for the completion, by 31st March 1973, of that part of the system of works referred to in Article IV [1] which relates to the replacement referred to therein, (hereinafter referred to as the "replacement element"), and if, after consideration of this representation in consultation with India, the Bank is of the opinion that [a] these hostilities are on a scale of which the consequences is that Pakistan is unable to obtain in time such materials and equipment as must be procured from abroad for the completion, by 31st March 1973, of

the replacement element, and [b] since the Effective Date, Pakistan has taken all reasonable steps to obtain the said materials and equipment and, with such resources of materials and equipment as have been available to Pakistan both from within Pakistan and from abroad, has carried forward the construction of the replacement element with due diligence and all reasonable expedition, the Bank shall immediately notify each of the Parties accordingly. The Parties undertake, without prejudice to the provisions of Article XII [3] and [4], that, on being so notified, they will forthwith consult together and enlist the good offices of the Bank in their consultation, with a view to reaching mutual agreement as to whether or not, in the light of all the circumstances then prevailing, any modifications of the provisions of this Treaty are appropriate and advisable and, if so, the nature and the extent of the modifications.

Article XI
General Provisions

[1] It is expressly understood that

[a] this Treaty governs the rights and obligations of each Party in relation to the other with respect only to the use of the waters of the Rivers and matters incidental thereto; and

[b] nothing contained in this Treaty, and nothing arising out of the execution thereof, shall be construed as constituting a recognition or waiver (whether tacit, by implication or otherwise) of any rights or claims whatsoever of either of the Parties other than those rights or claims which are expressly recognized or waived in this Treaty. Each of the Parties agrees that it will not invoke this Treaty, anything contained therein, or anything arising out of the execution thereof, in support of any of its own rights or claims whatsoever or in disputing any of the rights or claims whatsoever of the other Party, other than those rights or claims which are expressly recognized or waived in this Treaty.

[2] Nothing in this Treaty shall be construed by the Parties as in any way establishing any general principle of law or any precedent.

[3] The rights and obligations of each Party under this Treaty shall remain unaffected by any provisions contained in, or by anything arising out of the execution of, any agreement establishing the Indus Basin Development Fund.

Article XII
Final Provisions

[1] This Treaty consists of the Preamble, the Articles hereof and Annexures A to H hereto, and may be cited as "The Indus Waters Treaty 1960."

[2] This Treaty shall be ratified and the ratifications thereof shall be exchanged in New Delhi. It shall enter into force upon the exchange of ratifications, and will then effect retrospectively from the first of April 1960.

[3] The provisions of this Treaty may from time to time be modified by a duly ratified treaty concluded for that purpose between the two Governments.

[4] The provisions of this Treaty, or the provisions of this Treaty as modified under the provisions of Paragraph [3], shall continue in force until terminated by a duly ratified treaty concluded for that purpose between the two Governments.

IN WITNESS WHEREOF the respective Plenipotentiaries have signed this Treaty and have hereunto affixed their seals.

Done in triplicate in English at Karachi on this Nineteenth day of September 1960.

FOR THE GOVERNMENT OF INDIA:

(Sd) Jawaharlal Nehru

FOR THE GOVERNMENT OF PAKISTAN:

(Sd) Mohammad Ayub Khan

Field Marshall, H.P., H.J.

FOR THE INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT for the purposes specified in Articles V and X and Annexures F, G and H:

Sd) W. A. B. Iliff

Annexure-8¹⁰

Chronology: Negotiating the Indus Basin Disputes

1947

Aug. 14: Pakistan got independence and the Arbitral Tribunal, dealing with the Partition of the Punjab, came into effect.

Aug. 15: India got independence and also automatically inherited from British India membership of all international organisations. Indian states were obliged to accede to one dominion or the other by this date.

Aug. 17: Radcliffe's Boundary Awards were published for the provinces of Punjab and Bengal, delineating the international boundary between India and Pakistan.

Sept.: Pakistan became member of the United Nations.

Oct. 26: Jammu and Kashmir was claimed acceded to India.

Oct. 27: An undeclared war started on the issue of accession of Kashmir.

Nov.: The province of Junagadh after having first acceded to Pakistan, joined India.

Nov. 30: Five references were made to the Arbitral Tribunal to make financial adjustments arising out of Punjab's partition.

Dec. 20: A Standstill Agreement was signed by the Chief Engineers of divided Punjab. They agreed to continue the supply of water to UBDC and Dipalpur canals from Ferozepur Headworks, at per pre-partition levels. (The Agreement was due to expire on 31 March 1948, the same day the Arbitral Tribunal also expired)

Dec. 22: A sixth reference was made to the Arbitral Tribunal regarding West Punjab's (Pakistan) claim to the Mandi hydroelectric scheme.

1948

March 17: Arbitral Tribunal announced its awards regarding all 6 referrals.

March 29: East Punjab (India) notified to West Punjab (Pakistan) the expiry of Standstill Agreement on 31 March 48.

March 31: Arbitral Tribunal and Standstill Agreement cease to exist.

April 1: East Punjab (India) stopped supply of water from the Ferozepur Headworks to the Dipalpur and Upper Bari Doab canals.

April 15: Chief Engineers of West and East Punjab met in Simla to resolve the water problem. The Prime Minister of Pakistan, Liaquat Ali Khan, sent a telegram to the Prime Minister of India, Jawaharlal Nehru, requesting immediate action to restore the water supply; and expressed his regret that before India and Pakistan have had the time to settle their existing problems East Punjab has created new ones.

April 16: Prime Minister Nehru sent a telegram to Prime Minister Liaquat Ali Khan, to say that he trusts the Simla conference between the Chief Engineers will reach a solution.

April 17: In the meantime the West Punjab Government suspended the issuing of permits to remove valuables from bank lockers, and instructed the bank managers to stop any transfer of securities from West Punjab to India.

April 18: Two Simla Agreements signed by the Chief Engineers of West and East Punjab, on the Dipalpur canals and CBDC. But the agreements were not ratified by West Punjab.

April 24: Prime Minister Liaquat Ali Khan sent a telegram to Prime Minister Nehru saying that an Inter-Dominion conference was needed to discuss the Simla Agreements; so that he could fix a date and place as soon as possible.

April 30: Prime Minister of India ordered the East Punjab Government to resume the supply of water to West Punjab on the basis of the Simla Agreements, subject to variations from the forthcoming Inter-Dominion conference was to be held on 3 May 1948.

May 3-4: Inter-Dominion Conference held in New Delhi. On May 4 Inter-Dominion Agreement was signed by Pakistan and India.

July 21: Lahore Conference was held in which delegates of India and Pakistan met again to discuss water issue.

¹⁰ The Chronology is an updated version of author's previous work published by the *National Documentation Wing (previously known as National Documentation Cell), Cabinet Division, Government of Pakistan, Islamabad*; Document No. 8069, dated 24 May 1997.

Sept.: The State of Hyderabad joined India after its decision to accede to Pakistan was thwarted by India.

1949

Jan. 1: UN ceasefire from midnight in Jammu and Kashmir.

June 16: Pakistan wrote to India saying it was unhappy with the Delhi Agreement and wanted another Inter-Dominion Conference. If this conference fails to get agreement, then Pakistan would prefer to take the Sutlej water dispute to the International Court of Justice. India refused to countenance submitting the case to the ICJ.

Aug. 4-6: The Indian proposed Inter-Dominion conference was held in New Delhi.

1950

Jan. 9: The World Bank told India that without resolving its water dispute with Pakistan over River Sutlej the Bank will not finance the Bhakra and Nangal dam projects.

Feb. 14: The Prime Minister of Pakistan wrote to the Prime Minister of India stating that they have to settle the Canal Waters dispute (over use of water from the River Sutlej) before anything else could be done.

March 27-29: The Inter-Dominion Conference which was proposed for August 1949, was held in Karachi.

May 29-31: A second Inter-Dominion Conference which was proposed for August 1949, was held in New Delhi.

May 10: India got registered the Delhi Agreement with the Secretariat of the United Nations, as Treaty No. 794. Pakistan objected to the Indian move by registering a certified statement disclaiming this treaty's validity.

June-July: Pakistan stopped paying disputed seignorage charges to India.

Oct. 8: The Prime Minister of India wrote to the Prime Minister of Pakistan offering to set up a tribunal to settle the Canal Waters dispute comprising international tribunal of four judges, two each from Pakistan and India. Pakistan rejected the Indian proposal saying that it would only lead to stalemate and was a delaying tactics to gain time.

1951

Feb.: David Lilienthal visited the Indian Subcontinent.

March 23: Pakistan indicated that it would take the Canal Waters dispute to UN's Security Council.

Aug. 4: Lilienthal's article published in *Colliers*, entitled: "Another Korea in the Making?"

Aug. 8: Lilienthal met with members of the World Bank Management: President Black, General Counsel Sommers and Assistant to the President Iliff.

Sept. 6: The President of the World Bank wrote to the Prime Ministers of India and Pakistan offering its good offices in settling the Canal Waters dispute.

Sept. 25: The Prime Ministers of India and Pakistan accepted the World Bank's good offices, writing separately to President Black.

Oct. 8: Lilienthal met again with members of the World Bank Management: Vice-President Garner, General Counsel Sommers and the Bank's engineer General Wheeler. Lilienthal warned the Management against taking an engineering approach to the dispute before there as clear political agreement upon the principles to settle the dispute.

Nov. 8: President Black wrote again to the Prime Ministers of India and Pakistan suggesting setting up a Working Party to suggest the procedure to start creating a comprehensive plan based on Lilienthal's principles. These principles, as Mr. Black outlined them were:

[i] there is enough water for all existing and future needs in the Indus basin for both countries;

[ii] unitary development is needed, therefore all the rivers in the basin are to be considered in finding a solution and not just the Sutlej alone;

[iii] talks will be conducted on a functional plane in which past claims and disputes will be avoided.

Black's Working Party was to have indigenous engineers from India and Pakistan who would be assisted by the World Bank's Designee engineer. This latter engineer would only be available to advise the parties, not to arbitrate between them. Furthermore, the Bank's engineer was also to ensure that the plans being suggested were financially viable. Once the Working Party had decided upon the initial procedures, it would implement them to start creating the comprehensive plan without the need for further authorization from the Indian and Pakistani Governments.

1952

India completed the Harike Barrage.

Jan-Feb.: President Black visited India and Pakistan, and tried to get complete commitment to the method outlined by the Bank.

March 13: President Black wrote to the Prime Ministers of India and Pakistan outlining terms under which the agreed Working Party would proceed. Mr. Black also requested that for the duration of the Bank's good offices, neither side would diminish supplies to existing uses. It was agreed that the shared objective would be to increase water to both countries substantially. Mr. Black invited India and Pakistan to send their Designee engineer and party to start discussions in Washington DC in May 1952.

May 7: The Working Party held its first meeting in the World Bank's headquarters in Washington DC.

Nov.: The Working Party met again in Washington DC.

Dec. 16: The Pakistani Foreign Minister and representative to the UN's Security Council, Mohammad Zafrulla Khan, pointed out the Canal Waters dispute (Indus Basin Dispute) in the Security Council.

1953

Jan.: The Working Party met again in Washington DC.

April 17: Pakistan's Governor General, Ghulam Mohammad, sacked Khwaja Nazimuddin and appointed Mohammad Ali Bogra as Prime Minister.

April: India appointed GR Garg to ensure compliance with President Black's stipulation in his letter of 13 March 1952, not to diminish supplies to Pakistan. However, the initial title of this appointment causes some controversy with Pakistan as it referred to ensuring compliance with the disputed Delhi Agreement. The World Bank refused to endorse this appointment until India changed the title. The Bank explained that though the appointment was a good idea, the effect of this action was lost through reference to the disputed agreement. India changed the title to the "Special Commissioner for Canal Waters".

May 13: Pakistan confirmed to the World Bank that it has appointed KA Ghafoor as its Irrigation Commissioner to partner India's Special Commissioner, and ensure compliance with President Black's letter of 13 March 1952.

May 21: India opened a new distributary system near the towns of Mudki and Golewala, drawing water from the Sutlej River above Ferozepur. The Pakistani Irrigation Commissioner protested against this to the Indian Special Commissioner for Canal Waters.

June 27: ND Gulhati replaced Dr. Khosla as Indian Designee Engineer to the Working Party.

Oct. 6: India and Pakistan submitted their proposals for the comprehensive plan to the World Bank. The Indian Plan calculated the total water supply in the Indus Basin to be 119 MAF and out of that allocated to Pakistan 90 MAF (93% of the western rivers), and to India 29 MAF (all of the eastern rivers and 7% of the western rivers). The Pakistani Plan calculated the total water to be 118 MAF and Pakistan allocated itself 102.5 MAF (all the western rivers and 30% of the eastern rivers), and to India 15.5 MAF (70% of the eastern rivers). Neither party accepted the other's plan.

1954

Feb. 5: The World Bank presented its own proposal in which the division of the Indus Basin that was implicit in the Indian and Pakistani plans was made explicit: Pakistan would get the entire Western rivers except for small uses in Jammu and Kashmir and India would get all the water in the Eastern rivers. Since India was the principle beneficiary, it would pay for the link canals taking water from the Western rivers to areas previously dependent upon the Eastern rivers. A transitional period was envisaged during which India could progressively withdraw water from the Eastern rivers as long as Pakistani existing uses were not reduced and the link canals were built according to the schedule. The World Bank was giving India its historical withdrawals, and surplus water for future development. Pakistan was getting its historic withdrawals; the Sutlej Valley Canals would be brought up to allocation in all but unusually bad years; enough water would be available to meet the planned Thal and Kotri projects off-taking the River Indus; and in an average year Pakistan would have enough surplus water to meet additional needs planned on the Indus at Sukkur and Gudu.

Feb. 8: President Black wrote to the Prime Ministers of India and Pakistan putting forward the World Bank proposal.

March 22-25: India accepted the World Bank proposal, and emphasised the need to protect existing uses within the State of Jammu and Kashmir, and future development which would probably involve small consumptive uses. Pakistan did not give a clear commitment to the Proposal. Pakistan demanded that the Sukkur and Gudu irrigation schemes should be taken into account, which would then show the Proposal to have significant shortages, unless Pakistan was guaranteed a substantial portion of the Eastern rivers.

April 2: Pakistan opened the Balloki-Suleimanke Link canal.

May 10: India informed to Pakistan and the World Bank that it intended to open the Bhakra Main Line Canal in June 1954.

May 14: The Prime Minister of Pakistan criticized the World Bank proposal as unfair, and sent Pakistani representatives to negotiate the necessary adjustments. Indian representatives interpreted this as Pakistan rejecting the Bank's Proposal, whereas the Bank itself awaited for the clarification of Pakistan's message before passing judgment.

May 21: The World Bank informed the Pakistani Government that its message has not been seen as acceptance of the Bank's Proposal, nor can it be regarded as the basis for further joint discussion. It emphasized that Pakistan must accept the division of rivers as the starting point. If then during negotiations it become clear that Pakistan's envisaged irrigation uses would not be met by such division, then the World Bank would offer its good offices to bring about acceptable adjustments.

May 27: The Pakistani Government proposed to hold discussions with the World Bank.

June: Pakistan's new team arrived in Washington DC headed by Ghulam Mueenuddin and included Mohammad Shoaib (the World Bank Executive Director for Pakistan, and later the Minister of Finance under Ayub Khan).

June 15: The World Bank started discussions with the Pakistani Foreign Minister Sir Zafrulla Khan who was visiting Washington DC, regarding Pakistan's acceptance of the World Bank proposal.

July 28: The Pakistani Foreign Minister accepted the World Bank proposal in principle, as long as the plan that is worked out so that Pakistan's uses can be met from the Western rivers.

Aug. 8: The Prime Minister of India wrote to the World Bank expressing reservations regarding Pakistan's acceptance of the Proposal, and wanted to hold clarificatory talks with the Bank's representatives, in a meeting to be held in the Indian Subcontinent.

Aug. 13: President Black wrote to the Prime Minister of India and the Pakistani Foreign Minister suggesting that instead of holding clarificatory talks with either side in the Indian Subcontinent, their representatives should meet in Washington DC to resume work on creating a comprehensive plan. The starting point though should be the division of the rivers. And if Pakistani needs were not met by the Western rivers alone, then other means may be introduced.

Aug. 19: The Prime Minister of India accepted President Black's proposal with some qualifications but still wanted to hold talks, on transitional arrangements, in India.

Aug. 24: The Pakistani Foreign Minister agreed to President Black's proposal but also with some qualifications.

Sept. 1-16: World Bank representatives, General Wheeler and General Counsel Sommers, went to India and Pakistan for discussions.

Oct. 4: World Bank representatives held discussions with Indian representatives in Washington DC.

Oct. 7: President Black wrote to the Prime Ministers of India and Pakistan that the Bank has taken note of the Indian and Pakistani comments. The bank will not consider either side to be bound by them, and is willing to resume cooperative work under the terms of reference already suggested. Mr. Black invited the Indian and Pakistani representatives back to Washington DC on that basis. Both Governments accepted the invitation.

Dec. 6: Talks resumed to workout a comprehensive plan.

1955

June 2: The World Bank made interim arrangements to keep the situation in the Indus Basin under control while work to create a comprehensive plan continued. Pakistan and India entered *ad hoc* transitional agreement for 1 April-30 Sept 1955. The agreement allowed Pakistan to withdraw *ad hoc* amounts from the Eastern rivers during the agreed period, after that Pakistan has to transfer whatever amount of water it could from the Western rivers. Efforts in 1954 had failed to arrange such an agreement despite prolonged negotiations.

Oct. 31: Another *ad hoc* transitional agreement covering the period 1 Oct 1955-31 March 1956, was signed by India and Pakistan.

1956

Discussions continue between the Indians and Pakistanis under the good offices of the World Bank. The issues involved were studied but no agreement reached on two points: [i] the amount of water needed for some uses specified in the terms of reference prescribed by the Bank; and [ii] certain technical considerations especially the effect of dividing the Basin's water upon the gains and losses experienced in the rivers. The absence of agreement implied that the disputants still do not have a common approach to the actual engineering features of a comprehensive plan.

May 21: Consultants, employed by the World Bank, decided that the Western rivers were not inadequate to meet Pakistan's needs envisaged under the Bank's Proposal of February 1954. The Bank,

based upon these studies, drawn up an Aide-Memoire. This amendment envisaged constructing storage facilities on the Western rivers to make up any deficit. The Aide Memoire also offers the Bank's good offices to get agreement upon any adjustments to the original proposal that might be required.

June 1: The World Bank proposed the continuance of cooperative work until 31 March 1957.

June 18: India agreed to the continuance, but asked Pakistan to accept the principle of division without any qualification before proceeding with negotiations.

June 27: Pakistan agreed to continue cooperative work, but with provisions of any ultimate plan.

June 30: The World Bank did not regard the Indian and Pakistani replies as adequate to continuing the cooperative work but recommended continuing work based upon the Bank's 1954 Proposal and Aide Memoire.

Sept.: India and Pakistan agreed to continue cooperative work on the proposed basis.

Sept. 24: Another *ad hoc* transitional agreement, 1 April 1956-31 March 1957, was signed by India and Pakistan.

Sept 56-March 57: Talks continued and the plans that emerged were vastly different in concept and cost. The Indian plan was too 'tight', since their main concern was the size of their financial liability to Pakistan to cover

cost of the replacement works. By contrast the Pakistani plan was too grandiose, prompting the World Bank to urge Pakistan to look, seriously, into its irrigation planning.

1957

April 11: President Black wrote to the Prime Ministers of India and Pakistan proposing a formal extension of cooperative work until 30 Sept 1957. The Indian and Pakistani delegates were not needed in Washington DC for the duration. In the meantime, the World Bank reviewed the progress to date and determine what future action was needed. This proposal was agreed to by the two countries.

May 13: The World Bank gave the delegations a draft of the "Heads of Agreement" as a basis to resolve the dispute on the international waters. The Agreement reiterated the division of rivers, a transitional period, and setting up a commission with responsibilities that include preparing the plan that was needed to implement the proposed water division.

May 27: Vice-President Iliff discussed the Heads of Agreement with the Indian delegates.

June 10: Vice-President Iliff held further discussions regarding the Heads of Agreement, in New Delhi, with representatives of the Indian Government.

June 11-14: Iliff discussed with representatives of the Pakistani Government in Lahore, the Heads of Agreement. No tangible progress was made as Pakistan's main objections were based upon the absence of any agreed plan to implement the works arising out of the division of water, and the unsettled matter of financial liability for the works.

June 24: The World Bank made the Heads of Agreement more general, and asked the delegates whether it was acceptable as the basis for further discussions.

July 13: Pakistan submitted its view.

July 25: India submitted its view.

Aug. 21: Vice-President Iliff met separately with the representatives of the Indian and Pakistani Government. He suggested that each country should submit in writing its opinion on the Heads of Agreement and then to meet separately with the World Bank for oral discussions, and to give its opinion on the written views of the other Government. The purpose of this exercise was to allow the World Bank to make up its mind regarding its future involvement, if any, in the dispute. Iliff, also, suggested that the disputants attempt to negotiate another *ad hoc* agreement for the period from 1 October 1957-30 September 1958.

Nov-Dec.: Negotiations in Karachi and New Delhi failed to reach an *ad hoc* agreement.

1958

West Pakistan's Water and Power Development Authority (WAPDA) was established. India proposed Marhu Tunnel Plan: diverted water from Chenab for use in India and offered equivalent amount of water in fixed deliveries to Pakistan from the eastern rivers. Pakistan rejected plan because of: (i) Indian interference in Chenab waters; (ii) increase Pakistani dependence on India for water. Pakistan declared to present its own plan soon preserving its independence from India.

April: The Marhu Tunnel Plan was discussed in Rome. No Pakistani alternative plan was discussed, but using information given by Pakistan for storage possibilities on Jhelum, the World Bank suggested using such storage to replace SVC supplies, this would be cheaper than link canal replacement from Indus. Pakistan agreed to the idea and prepared plan on this basis.

July: Pakistan presented London Plan, in London. Proposing series of dams (i) Tarbela at Indus with 600,000 kw power plant (ii) Mangla at Jhelum in Azad Kashmir with 300,000 kw power plant (iii) 3

subsidiary dams on Jhelum and 10 link canals. Discussions adjourned to allow India to study plan in detail.

Oct.: The World Bank discussed with India the policy decisions needed to get agreement.

Dec.: The World Bank held discussions with India and Pakistan in Washington, DC on the Pakistan's London Plan, and the Indian Plan (which was in fact a revised Marhu Tunnel Plan). Pakistan rejected the Indian Plan, and India rejected the London Plan saying it was too big, too costly, and the transitional period was too long.

Dec. 22: Pakistan accepted the World Bank's 1954 Proposal and Aide Memoire, unconditionally, as the basis upon which to continue cooperative work.

1959

March 26: The World Bank presented its Settlement Plan incorporating the principles of the 1954 Proposal and Aide Memoire. The Plan provided for irrigation replacement in Pakistan and the development of irrigation and power in India and Pakistan. Regarding the financing of the Plan, the World Bank suggested the following guidelines to workout each country's liability:

[a] the replacement works should not be a financial burden upon Pakistan;

[b] but the Indian contribution should reflect the real cost of implementation and its ability to pay; and

[c] the country benefiting from a particular scheme should pay for its construction through loans. The Plan's implementation would see an international water treaty being signed by India and Pakistan. This treaty would in turn set up an Indus Development Commission which would exist for, at least, the transitional period.

April 17: Another year long *ad hoc* agreement was signed for the period 1 April 1959-31 March 1960.

May 13: President Black and Vice-President Iliff met the Prime Minister of India and other governmental representatives in New Delhi. Discussion focused upon India's possible financial contribution, the arrangements for the transitional period and the Indian Government's opinion regarding the inclusion of a reservoir at Mangla as part of the replacement plan. Understanding was reached that the Indian liability to Pakistan would be limited to \$175 million, the transitional period would last for 10 years, and Pakistan would incur financial penalties if it went beyond this time, though a 3-year extension had been envisaged. India would also get the foreign exchange costs of building the Beas dam in India. This dam and a 200,000 kw power plant would be part of the Settlement Plan's projects in India. And finally Indian claim over Jammu and Kashmir would be protected by a suitable formula.

May 18: World Bank representatives won Pakistan's consent to amended works in Pakistan under the Bank's Settlement Plan. New works include 2 reservoirs at Tarbela and Mangla; 8 link canals transferring water from the Western rivers to the Sutlej Valley canals; a 300,000 kw hydroelectric power station at Mangla and tubewells to promote drainage. Pakistan agreed to absorb costs already incurred in constructing the existing link canals, and withdrawn any claims for compensation for operation and maintenance of these replacement works. The World Bank promised to seek funds from friendly Governments, to finance the amended works' system in Pakistan. Further negotiations were still needed for Indian uses on the Western rivers regarding additional consumptive uses, and hydroelectric uses.

June: Pakistan established its Indus Basin Advisory Board (IBAB) and its first meeting held in Lahore.

Aug. 5: Talks were held between the Bank, India and Pakistan in London regarding the transitional arrangements; Indian rights on the Western rivers; and drafting the Heads of Agreement for the international water treaty. These talks and others during September reached an agreement on the Heads of Agreement:

[i] division of the Indus rivers' water;

[ii] transitional arrangements;

[iii] Indian hydro-electric and non-consumptive uses on the Western rivers; [iv] financial provisions involving the Indian and Pakistani Governments;

[v] exchange of hydrological data regarding the rivers;

[vi] future cooperation;

[vii] further discussion of proposals to establish a routine to resolve future disputes; and

[viii] some general matters.

Sept: IBAB's second meeting held in London.

Oct.: Discussions were held in Washington DC regarding detailed transitional period arrangements, and Indian consumptive uses on western rivers. Drafting of the water treaty's text was initiated.

Dec. 9: The water treaty's main text was drafted. The more important articles provided for:

[a] allocation of the Eastern rivers to India after the transitional period; [b] Western rivers allocation to Pakistan with provision for Indian hydroelectric and non-consumptive uses;

- [c] Indian payment into the Indus Basin Development Fund for the replacement works;
- [d] the exchange of hydrological data between India and Pakistan;
- [e] future cooperation between India and Pakistan;
- [f] the establishment of the Permanent Indus Commission whose purpose and function was to establish and maintain a cooperative implementation of the Treaty, and promote cooperative development of rivers;
- [g] establish a procedure to resolve future differences and disputes. Still to be resolved were the annexes regarding the transitional period, and Indian consumptive uses on western rivers. Draft copies of the text were sent to the Indian and Pakistani Governments.

1960

Jan. 6: The Indus Basin Development Fund draft was completed, and copies were sent to the Pakistani Government and the contributing 'friendly' Governments. The Fund was to be administered by the World Bank, and all contributions will first be paid into the Fund from which the Bank would disburse upon receiving the receipts.

Jan. 18-20: Engineering consultants met in Washington DC regarding the implementation of the Settlement Plan in Pakistan.

Sept. 19: The Indus Water Treaty was signed in Karachi by the Pakistani President, Ayub Khan, the Indian Prime Minister, Jawaharlal Nehru, and the World Bank Vice-President, Iliff.

1961

Jan.: The Indus Waters Treaty was ratified by both countries, bringing into effect the Indus Basin Development Fund.

Salal Dam Issue

1974

April 1974: Pakistan gets information through its intelligence agencies that India is constructing a dam at Dhinagarh site on River Chenab; India did not supply design data six months prior to the start of the plan, obligatory under the IWT.

May 1974: Pakistan formally requests Indian government for providing detail design of the project.

1975

Jan. 1975: India supplies design data of Salal Dam project.

April 1975: Pakistan raises four major objections to the design of the Salal Hydro-electric Plant.

April 1975 to Sep. 1976: Several rounds of talks held between technical experts from both the states.

1976

Oct. 1976: Both the states discuss the issue at secretaries' level and hold a number of meetings culminating into a draft accord in 1978.

1978

April 14, 1978: Both the states sign the Salal Dam accord stating that without prejudice to the provisions of the Indus Waters Treaty 1960 or to the rights and obligations of the parties, they have agreed that: "The Full Pondage level will not be higher than EL 1600 feet, Dead Storage Capacity not exceeding 230-303 acre feet and there will be no Operating Pool as such. The Spillway will not be more than 30 feet below the Full Pondage level, spillway gates will be 12 in numbers with length not exceeding 50 feet and height at 30 feet. While the level of power intake will not be lower than 27.5 feet below the Full Pondage level. The Outlet Works six in numbers with sill level not below EL 1365 feet. These shall be permanently closed with concrete plugs within one year of the date of the first filling of the reservoir up to the Full Pondage level or within three years of the date of the first filling of the reservoir up to the crest of the spillway, whichever is earlier."

Wullar Barrage Issue

1985

Feb. 1985: Pakistan got information about the Indian plan through a tender notice published in the Indian press.

President Ziaul Haq directed the Foreign Office to take up the issue immediately with India.

Mar. 1985: Pakistan's Ambassador in New Delhi lodged a formal protest to the Indian Government.

A number of Secretary level talks were held without any result.

1986

May 1986: Indian Indus Waters Commissioner argued that “Tulbul Navigational Project” was for “non-consumptive” uses which are allowed under the IWT 1960.

1987

Oct. 1987: A committee of British and American experts recommended to Prime Minister Mohammad Khan Junejo that Pakistan should approach ICJ. Meanwhile, the Indian government agreed to discuss the issue directly and suspended the construction work until an accord is reached.

Dec. 1987: India changed its stance arguing that Wullar Lake was not a part of the river Jhelum thus India has every right to construct a “dam” or “barrage” on it.

1988

Jan. 6, 1988: Pakistan took up the issue at ministerial level and Minister for Water and Power wrote a letter to its counterpart in New Delhi stating that “The River ‘Jhelum Main’ starts from Verinag as clearly stated in the Treaty; India has no right to build any storage capacity, barrage or dam on the ‘Jhelum Main’”.

1989

Feb. 1989: Indian Ambassador in Islamabad called on Prime Minister Benazir Bhutto and made a formal request for negotiation.

Mar. 1989: First bilateral talks held between Pakistan’s envoy in New Delhi and the Indian representative but talks remain inconclusive.

Mar. 1989 Pakistan’s delegation reportedly presented a draft agreement to the Indian government permitting construction of Tulbul Navigation Project but with a number of restrictions. Indian government disagreed to the contents of the draft saying it will soon inform about its position to Pakistan.

Aug. 16, 1989: Pakistan’s government constituted a committee to review the “draft agreement”.

Aug. 18, 1989: Punjab Chief Minister, Mian Nawaz Sharif, wrote letter to President Ghulam Ishaq Khan requesting him to “intercede in the Wullar Barrage issue”. Meanwhile, uprising started in Indian-Occupied Kashmir overshadowing the issue.

1991

Oct. 1991: Both sides finalised draft agreement in Islamabad; Indian delegation wanted to visit Islamabad in Feb. 1994 “to conclude the agreement”.

1992

Aug. 1992: Efforts were made to break the impasse but both the parties reiterated their positions only.

1994

Jan. 1994: India resorted to informal diplomacy and circulated a Non-Paper No. 4, asking for resumption of talks.

Composite and Integrated Dialogues**1997**

June 23, 1997: Agenda for Composite and Integrated Dialogue was finalised and Working Groups were formed to investigate and discuss all the outstanding bilateral issues including the Wullar and Baglihar.

1998

Nov. 5, 1998: All the Working Groups met in New Delhi. Unfortunately, meeting scheduled for four hours ended just in 15 minutes. Parties reiterated to continue dialogue. Issued a joint statement saying to “finding a solution to the issue consistent with the provisions of the IWT”.

Baglihar Dam Issue

May 1999: Pakistan logged a formal objection to the design of Baglihar project: a two phased 450MW hydro-electric plant was conceived by India in 1992, approved in 1996, first phase to be completed by 2004 and second in 2008.

2000: Baglihar Dam issue become a topic of heated public debate.

Aug. 7, 2003: India sent a Note Verbal requesting to discuss the issue at the government level, under Article IV of the IWT. In response Pakistan imposed preconditions: immediate suspension of work, allow on-site inspection by 30 September 2003 and resolve the issue by 31 December 2003.

Composite Dialogues (Jan. 2004–Aug. 2007) and the Water Disputes

Jan. 2004: Composite Dialogue started after both the heads of governments agreed to discuss all the outstanding issues including Kashmir.

June 21, 2004: Pakistan delegation called on Shri Priyaranjan Dasmunsi, Indian Minister of water Resources in New Delhi.

June 26, 2004: First round of Secretary level talks between India and Pakistan held at New Delhi with good progress on other issues but could not produce any resolve of water issues.

Jul. 29-30, 2004: 10th round of talks on Wullar issue: non-viability of Indian “Tulbal Navigational” project was realised highlighting the need to seek alternative solution for navigational problem.

Nov. 29, 2004: Pakistan decided to send a reference to the World Bank on Baglihar issue.

Jan. 4-6, 2005: Second secretary-level meeting under Composite Dialogue with progress on other issues but nothing agreed regarding water disputes.

Jan. 11, 2005: Spokesman of Indian Ministry of External Affairs (MEA) said, 'If Pakistan still chooses to go the World Bank, then we will respond appropriately.

Jan. 18, 2005 Pakistan referred the dispute of Baglihar Dam to the World Bank. Pakistan has raised three key sets of technical objections to the design of the dam: storage capacity, power intake tunnels and the spillways. Spokesman of Indian Ministry of External Affairs said: “we do not believe that the reference to the World Bank was justified.”

Jan. 31, 2005, Indian-held Kashmir (J&K) assembly passed a resolution requesting “New Delhi to reconsider the Indus Water Treaty so as to safeguard the interest of the state”.

April 20, 2005: World Bank shortlisted panel of experts to act one of them as Neutral Expert on Baglihar.

May 12, 2005: World Bank appointed A Swiss Engineer, Professor Raymond Lafitte, as Neutral Expert.

June 28-29, 2005: Third round of Secretary-Level Composite Dialogue was held, record of discussions were signed by the parties first time.

Oct. 5, 2005: Prof. Lafitte visited the dam site and asked some technical questions on a performa to both the parties.

April 2006: World Bank neutral expert called Indian and Pakistani officials to London to discuss the Baglihar dam issue.

June 22-23, 2006: Fourth round of Secretary-Level Composite Dialogue was held.

Feb. 12, 2007: Neutral Expert declared his verdict suggesting some changes in dam design, though in line Pakistan’s objections, but his verdict did not allay, even partially, Pakistan’s apprehensions. India created another issue, Kishenganga Dam: capable of producing 330-MW and diverting about 27 per cent of the river Neelum water through a 22-KM long tunnel into Wullar lake.

June 30-31, 2007: Fifth round of Secretary-Level Composite Dialogue was held.

Aug. 30-31, 2007: Delegations led by Mrs. Gauri Chatterji and Mr. Muhammad Ismail Qureshi, from India and Pakistan respectively produced and signed a Joint Statement saying nothing more than reiterating their respective positions and emphasizing “the need for an early and amicable resolution of the issue in accordance with the provisions of the Indus Waters Treaty of 1960 for the socio-economic development of the peoples of the two countries.”

Nothing came out of the last 13 rounds of talks on water disputes. Virtually parties arrived at a diplomatic deadlock on all the outstanding water issues: Wullar, Baglihar and the Kishenganga. Pakistan started thinking to seek appropriate international arbitration preferably referring the Indus basin disputes to ICJ in order to secure its treaty rights.

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