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DEVELOPMENT
POLICY AND
PRACTICE

THE OPEN UNIVERSITY

**DEVELOPMENT OF THE RIVERS GANGES
AND BRAHMAPUTRA: THE DIFFICULTY OF
NEGOTIATING A NEW LINE**

**BEN CROW AND ALAN LINDQUIST
DPP WORKING PAPER No 19**

**DEVELOPMENT POLICY AND PRACTICE
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FEBRUARY 1990

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SUMMARY: Periodic floods making international news are only one symptom of the untamed state of the major rivers of South Asia. With the declaration of the 1989 Group of Seven Summit, and subsequent agreement on an Action Plan for Floods in Bangladesh, some taming is now planned. The slow development of irrigation and of hydroelectric power in the region nevertheless remains a major factor keeping living standards low in an area with perhaps the largest concentration of poverty in the world. Disagreement between the governments of India and Bangladesh constitutes a serious constraint contributing to that slow pace of development.

This paper examines the last major round of negotiations. New ideas on both sides and a thorough re-evaluation by a group in the Bangladesh government brought the negotiators close to agreement. Secrecy, lethargic diplomacy and outright internal opposition ultimately allowed two important opportunities to slip away. The paper indicates the need for interdisciplinary perspectives on international development negotiations. In this case, a grasp of the technical detail and of the institutional dynamics is required if the feasibility of alternative options is to be sensibly assessed.

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Development of the Rivers Ganges and Brahmaputra: the Difficulty of Negotiating a New Line

Ben Crow and Alan Lindquist¹

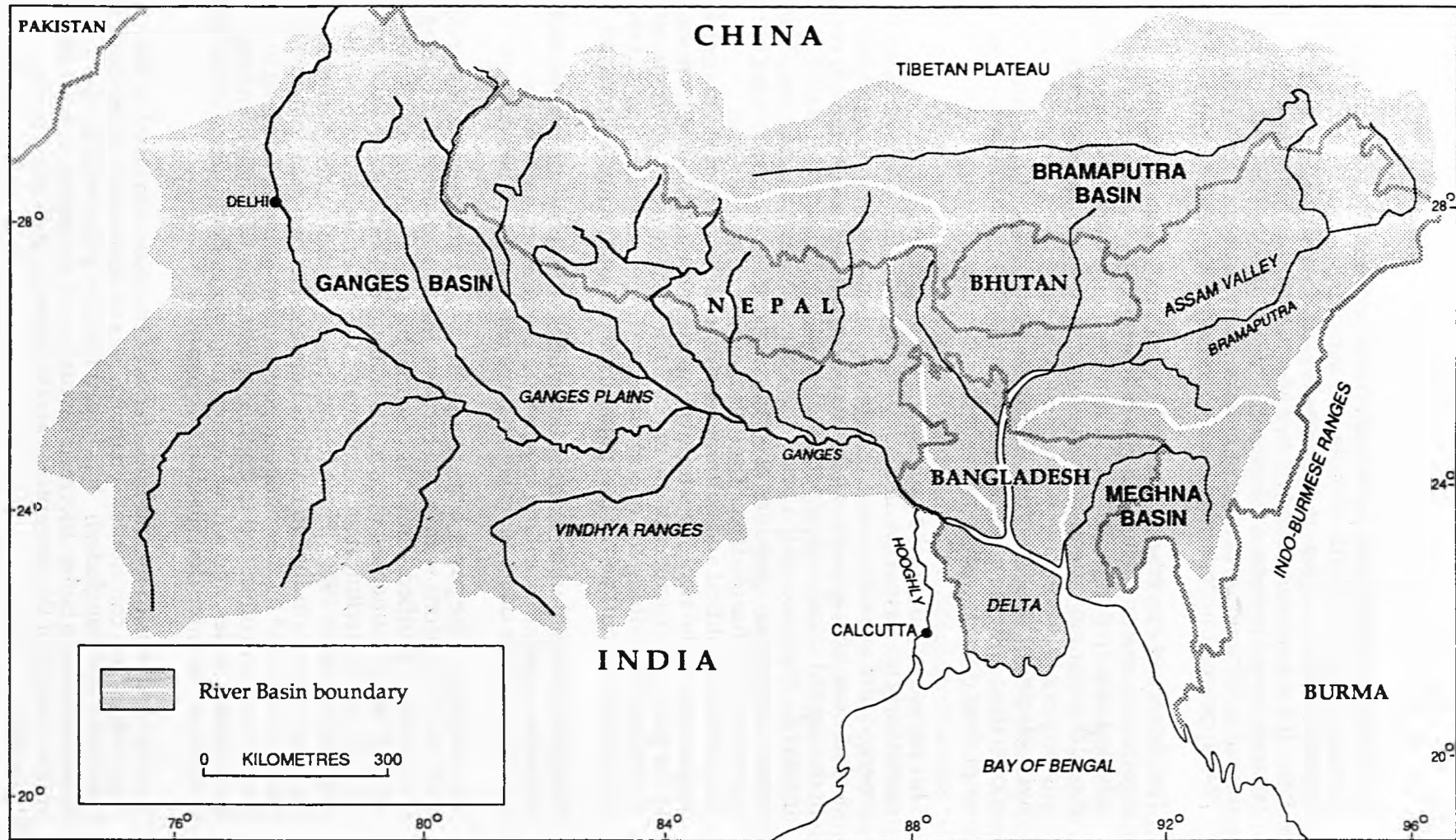
1 Introduction

Unprecedented floods in Bangladesh in 1988 renewed international concern for the taming and development of the two major international rivers of South Asia, the Ganges and Brahmaputra. That concern gained expression in the Communique of the 1989 Group of Seven Summit in Paris which stressed 'the urgent need for effective coordinated action by the international community' and has subsequently been translated into an Action Plan, coordinated by the World Bank, expected to cost \$10 billion over the next two decades (World Bank 1989, Financial Times 12/12/89).

The mitigation of floods and the development of the hydroelectric and irrigation potentials of these two rivers hold enormous promise for the roughly 500 million people living in the Ganges and Brahmaputra basins. At least 30% of the world's poorest 800 million people live in the catchment of the two rivers. The slow development of irrigation in the region is an important factor contributing to persistently low living standards and that slow development is in part explained by dispute over how the rivers should be developed. At the time of writing (January 1990), changes in the governments of India and Bangladesh and the momentum of the World Bank's Action Plan suggest it may be possible to resolve the dispute in the near future. This paper records why a round of earlier attempts failed (despite making some progress informally). It thus has some elements of a cautionary tale.

Negotiations have now been continuing in fits and starts for nearly forty years. The principal parties to the negotiations have been the governments of India and Bangladesh (and prior to 1971, the government of Pakistan). Recently the government of Nepal has been involved and at some stage the governments of China and Bhutan may also come into the picture because the rivers, or their tributaries, originate in, or pass through, those countries. Figure 1 shows the two river basins and national boundaries.

¹ Ben Crow is Lecturer in Development Studies and co-Chair of the Development Policy and Practice research group at the British Open University; Alan Lindquist is a consultant to the Open University. Funding for this research was provided by the Ford Foundation. The authors would particularly wish to acknowledge the encouragement and assistance of Charles Bailey, Ford Foundation Representative in Dhaka, and of Anthony Bottral and Shekhar Shah in the Foundation's Delhi office. Many others in India and Bangladesh have given up valuable time to entrust the authors with sensitive and complex information. Some did so at risk to their official positions. A further group have commented upon drafts of the paper. We wish to thank them all without implicating any in the views expounded in the paper.



A number of agreements have been made between the two principal parties, the governments of India and Bangladesh, most notably a treaty signed in 1977 known as the Ganges Waters Treaty. That expired in 1982. It has been succeeded by two Memoranda of Understanding. The latter of these Memoranda expired at the end of May 1988, and at the time of writing no agreement is in force and discussions up to the end of 1989 appeared unproductive.

The absence of agreement over the development of the two rivers places significant constraints upon large-scale water resource planning and development in Bangladesh because water flows cannot be guaranteed. No such constraint affects river development in India, and the Indian government is proceeding with many large scale irrigation and hydroelectric schemes within the Ganges basin, some of them in cooperation with the government of Nepal. These schemes may pre-empt river development options in Bangladesh.

This paper documents the progress of the negotiations, focussing particularly on the periods 1983-84 and 1985-87 when new initiatives emerged and were discussed. The technical and diplomatic thinking behind these new initiatives has not previously been documented, except in the limited circulation papers of the two governments primarily involved. The issues at the heart of the negotiations are sensitive. They relate to important questions of strategic planning, particularly for the government of Bangladesh. They also impinge upon issues of considerable political and cultural sensitivity arising from the material importance of the two rivers for livelihoods and the historical formation of the political structures of the region. For these reasons, government documents describing the negotiations are frequently classified and the new initiatives outlined in this paper have not been widely discussed.

The paper is based upon lengthy interviews with those diplomatic and technical negotiators willing to talk with the authors, and careful scrutiny of those documents which have reached the public domain.

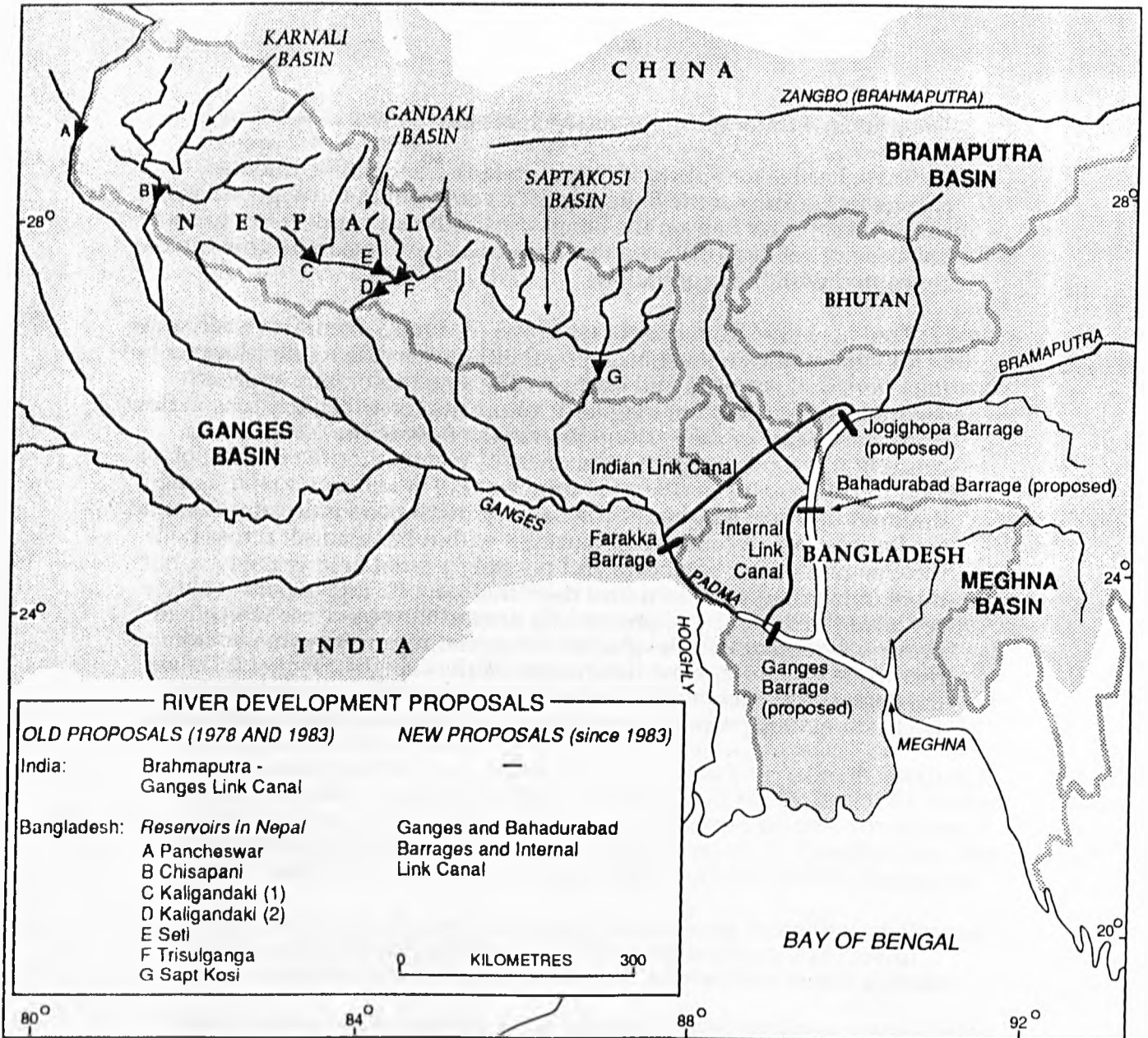
The purpose of the paper is to document the real progress made during complex discussions within and between the two governments during the periods identified. Previous research by one of the authors (Crow, 1980(a)) has documented the negotiations up to 1980. Lessons can be learnt from the technical and diplomatic successes and failures of the negotiations since 1980. These lessons are now particularly pertinent because a new 'window' in relations between the two principal parties has been initiated by the change of government in India, bringing in a Prime Minister committed to improving relations with neighbouring South Asian states, and a new foreign minister in Bangladesh, committed to the new initiative described in this paper.

The political sensitivity and importance of the issues involved in the negotiations has contributed a national bias to discussions of the issue in both India and Bangladesh. It is hoped that this paper will lay the foundations for a better informed discussion of the issues, and greater understanding of the perceptions and interests of both sides of the discussion.

The principal findings of this research are as follows:

(1) There has been a substantial, and so far largely undocumented, change in the aims of the Bangladesh government in the negotiations; it constitutes a 'new line' on the Bangladesh side but support for this new line has not yet been diffused throughout all sections of the government concerned with the negotiations.

(2) The 'new line' from Bangladesh rests on a fundamental re-evaluation of the diplomatic and technical possibilities constraining development of the rivers Brahmaputra and Ganges. The new diplomatic approach separates the question of long term augmentation of the dry season flow from the sharing of the existing dry season flow of the Ganges, and concentrates on achieving a permanent agreement for the sharing of all joint Indo-Bangladesh rivers (51 minor rivers in addition to the Ganges, Brahmaputra and Meghna). The new technical proposals centre around the long term development of barrages within Bangladesh across both the Ganges and Brahmaputra and possibly a canal linking the two, but more immediately the technical re-evaluation of Bangladesh's 'old line' revealed the difficulty of proceeding toward the objectives which had previously dominated Bangladesh's negotiating strategy: major storage reservoirs in the Nepalese headwaters of the Ganges. Figure 2 shows the engineering elements of the new line proposed by Bangladesh as well as previous proposals put forward by both Bangladesh and India.



RIVER DEVELOPMENT PROPOSALS	
OLD PROPOSALS (1978 AND 1983)	NEW PROPOSALS (since 1983)
India: Brahmaputra - Ganges Link Canal	—
Bangladesh: Reservoirs in Nepal	Ganges and Bahadurabad Barrages and Internal Link Canal
A Pancheswar	
B Chisapani	
C Kaligandaki (1)	
D Kaligandaki (2)	
E Seti	
F Trisulganga	
G Sapt Kosi	

(3) The emergence of the 'new line' within the Bangladesh government coincided with a new impetus for a settlement of the issue, from the Indian government, originating from the then recently-elected Prime Minister, Rajiv Gandhi. This new impetus from Rajiv led to a re-evaluation but his Congress government did not ultimately revise India's long-standing adherence to bilateral rather than multilateral negotiations with its smaller neighbours.

(4) Both the 'new line' on the Bangladesh side and the new impetus within the Indian government ran up against opposition within each government at ministerial level and from elements of the technical ministries (water resources and foreign affairs) adhering to the 'old persuasions' on each side. Even though the diplomatic and technical team dealing with the question in Bangladesh consisted of new appointments sympathetic to the new line (and was supported by foreign technical expertise, quietly funded by a \$1 million dollar loan from the World Bank) it met resistance.

(5) Most significantly, we find strong evidence that the then Foreign Minister of Bangladesh, Humayun Rashid Chowdhury, was an adherent of the old Bangladesh line, and that differences between him and the then Bangladesh water minister, Anisul Islam Mahmud², contributed to the downfall of the new line.

(8) In late 1983, and in late 1986, some participants in the negotiations perceive missed opportunities for progress. By the middle of 1987, however, the negotiations had effectively halted. The paper documents some of the factors, internal and external to the negotiations, which contributed to the closure of these two 'windows'.

The 1988 floods briefly renewed some momentum to the negotiations. President Ershad and Prime Minister Gandhi met and agreed more meetings should be held. In addition the flooding has forced both governments to accord flood control a higher priority within discussions about river development. Until the end of 1989, however, there had not been any evidence of a shift from the positions which led to stalemate in 1987. Instead, the discussions amongst donor agencies and the Bangladesh government to find a strategy to limit floods have largely excluded consideration of the potential for international cooperation. They have concentrated on measures possible within the boundaries of Bangladesh. To this extent the flood discussions reflect some of the perceptions which have led to the New Line.

This paper draws lessons for new rounds of negotiation in the case of the Ganges and Brahmaputra and lessons for international development negotiations more generally. In the former category, speed, openness and consensus seem to be watchwords for future progress. Rapid diplomacy is required if progress is to be realized in the brief windows of opportunity which arise in this situation. (Both of the initiatives,

² Humayun Rashid Chowdhury was encouraged to resign in December 1988. Some months later Anisul Islam Mahmud was appointed Foreign Minister, the position he holds at the time of writing.

described in this paper, were timed out.) A less secretive approach seems desirable in the light of the ambiguities and resistance which were encouraged by the attempt to negotiate under conditions of confidentiality. Further problems could have been avoided if a greater degree of consensus about the new initiatives had been achieved within the two governments.

A more general lesson relates to the need for interdisciplinary perspectives on international development negotiations. In this case, economic assessment of alternative technical options provides little guidance to the feasibility of development options and little insight into why economic development may be stalled. A grasp of the technical detail and of the institutional dynamics is required before the feasibility of alternative options can be sensibly assessed.

2 Issues in the dispute

The purpose of this paper is to describe the technical and diplomatic progress made in the negotiations over the development of the Ganges and Brahmaputra during the period 1980-88. Before we describe what happened in the 1980s, we have to start by outlining the historical context, specifically the sequence of issues which formed the focus of the negotiations up to the time with which this paper is concerned.³

Rivers can be developed for a number of different purposes. They can provide power, drainage, irrigation water, drinking water, industrial water, they can also be controlled to mitigate floods, provide navigational channels or to sustain fisheries and ecological diversity. Some of these uses consume water (most substantially irrigation) but several do not. The achievement of one goal, therefore, may not exclude others. The order in which these uses have been developed for any major river has been determined by the political and economic history of the area through which the river flows as well as by the technical possibilities and constraints of the river itself. The process by which development goals are ordered and competing objectives ruled

³ This section is based on Crow 1980a. Since that thesis was written three books have been published on the discussions over river waters. Abbas 1982 is an account by the longest serving negotiator on either side of the discussions. He was closely associated with the development of the Bangladesh proposals which the new line attempts to transcend. In July 1989, after a gap of several years, Abbas returned as adviser on water resources to President Ershad. His book is a partisan account. Then there are two theses which have been published: Begum 1988 and Islam 1987. Both are written with a greater understanding for the Bangladesh position than the Indian. We are not aware of any Indian theses or of books written from the Indian perspective.

The reports (US government 1989, France 1989, UNDP 1989, Japan 1989) produced by foreign or international agencies in response to the floods of 1987 and 1988 add to the stock of available information on river development. In particular the US study (by Rogers, Lydon and Seckler) provides a careful examination of the regional possibilities, with particular understanding of the Indian government's concerns. The four studies have contributed to the World Bank's Action Plan (1989).

out becomes particularly complex when a major river crosses an international boundary.

In the case of the river Ganges, the focus of intergovernmental discussions has changed as development priorities have shifted, as negotiating strategies have evolved and as new opportunities have emerged.

The story of the negotiations up to 1982 can, thus, be divided into three phases, with the period described in this paper constituting a fourth phase:

	Phase	Period	Issue focus
Farakka season flow Waters flow	Phase I	1951-1971	Discussion over the Barrage
	Phase II	1971-1977	Division of dry (leading to Ganges Treaty 1977-82)
	Phase III	1977-1982	Augmentation of the
	Phase IV	1983-present	New Line

Dispute and discussion first arose from the planning and then the construction by India of the Farakka Barrage. This 1.5 mile-long weir diverts water down a waning former course of the Ganges in a largely fruitless attempt to sustain deep water navigation between Calcutta Port and the sea⁴. The first phase of intergovernmental communication was dominated by the Pakistan Government's objection to the potential loss of dry season Ganges water which would otherwise have flowed into East Pakistan (as Bangladesh then was). This phase came to an end when the new government of Bangladesh accepted India's barrage and agreed to negotiate a basis for its operation⁵.

The second phase of discussions, from 1971 to 1977, focussed on the division of the dry season flow. After an interim 41-day experimental agreement, and a breakdown of negotiations, a five-year Ganges Waters Treaty was agreed when the President of Bangladesh over-ruled his chief negotiator [Crow, 1982]. The treaty settled the division of the dry season flow for five years and shifted the focus of discussions to the means by which more water could be made available, the question of augmenting

⁴ The long term tendency for the draught of international shipping to increase doomed the endeavour from the start.

⁵ From 1972, the existence of the barrage was accepted by the Bangladesh government. Agreements and understandings reached in 1972, 1973 and 1974 were concerned with issues of cooperative river development and the sharing of the dry season flow, not with the Farakka Barrage itself.

the dry season flow in the Ganges. This third focus dominated discussions from 1977 until 1982. Augmentation discussions continue as an important part of the present fourth phase, but they are gradually being supplanted by the new approach to the question from the Bangladesh side.

Throughout these discussions, the force driving both governments has been the inexorable rise in demand for irrigation water to sustain the growth of green revolution cereal varieties. This demand has been most apparent in the Indian North West where it has been associated with a considerable increase in wheat production, some evidence of its spread to Bangladesh can be discerned [Hossein, 1988] and it is expected that there will be demand from the Ganges plain in Eastern India.

Figure 2 shows the proposals put forward by the two governments during the third phase when discussions were focussed on the question of augmenting the flow in the Ganges.

Major river development projects usually have multiple purposes. In this case, although the two governmental proposals were primarily intended to increase the dry season flow of the Ganges, they both offered flood control and hydroelectricity generation. The Bangladesh project to build reservoirs in the Ganges headwaters offered significant flood mitigation on the Ganges as well as 5 000 MW of power generated in Nepal. The Indian proposal, for water transfer from the Brahmaputra to the Ganges, offered neither flood control nor power in its first phase, but both flood mitigation on the Brahmaputra and power generation in NE India once the two dams on the Brahmaputra channels were constructed. Neither proposal gave high priority to flood mitigation and, at least until 1988, that has not been a major focus of intergovernmental negotiations.

3 The new Bangladesh line and the arguments against the old

The new diplomatic and technical approach to the negotiations on the Bangladesh side emerged during the years 1983 to 1987. The chronology of its evolution and discussion with the Indian government will be described in a later section. This section outlines the main features of the new line.

Since 1974, both governments have been committed to the view that the short term problem of sharing the Ganges could be solved by the implementation of a long term approach to the augmentation of the river's dry season flow. On that both sides were agreed: augmentation offered the solution to the shortage of water during the dry season. The two sides disagreed, however, over the manner of augmentation. Since 1978 the two governments have been committed to mutually exclusive proposals for augmentation. Bangladesh wanted the solution to be found within the basin of the Ganges by building reservoirs in the river's headwaters, primarily in Nepal. India wanted to meet the shortage in the Ganges by transferring water from the Brahmaputra. The new approach on the Bangladesh side broke with both the overall conception of the problem and with its own technical proposal.

The new line separated the questions of augmentation and sharing and reconsidered alternative engineering approaches to the low dry season flows. Two aspects of the new approach deserve consideration: diplomatic assessments and political factors favouring the new approach; criticisms of technical aspects of the old line and a deepening understanding of new engineering possibilities.

The diplomatic assessments favouring the new approach included the realization that short term sharing arrangements with India could not provide the continuity required for development of water resources within Bangladesh. Specifically, any large scale development of the major rivers would need a period of about 50 years for design, construction and use. The short term agreements with India did not provide the basis for planning for more than 3 years, nor did they provide the security required for Bangladesh to seek external financial resources for project construction.

Bangladesh negotiators also realized that, in the words of one member of the Bangladesh negotiating team, 'sharing is a bilateral issue, augmentation is a trilateral issue'. In other words, a sharing agreement could be reached solely with India; an agreement on augmentation would require other states, notably Nepal. After at least ten years negotiating with India over the inclusion of other states, and some initial experience of tripartite negotiations, this insight provided a reason for preferring the new line.

The new approach offered the possibility of an independent strategy for water resource development. With assurance of water from India, Bangladesh could develop major irrigation schemes without concern for upstream development. Some Bangladesh negotiators also perceived the new line as providing a useful separation of technical and (international) political questions. Diplomats could seek the best negotiation of the question of sharing the water, without having to concern themselves with the design of water projects within Bangladesh.

These perceptions contributed to the decision to seek a permanent sharing formula, but the new approach was not limited to the Ganges. At the same time as shifting the emphasis to a permanent solution of the 'short-term issue', the Bangladesh negotiators decided to seek agreement on all joint rivers. There are two aspects to this change of approach: firstly, why include the large number of small rivers, and secondly, why bring in the Brahmaputra?

One reason for the inclusion of all border-crossing rivers in the sharing negotiations relates to the fact that India had started construction of barrages on several rivers entering Bangladesh. In 1977, when the first agreement was concluded only the Ganges barrage existed. By 1984, the completion of barrages on the rivers Teesta and Gumti was imminent, and construction or planning was underway for other rivers. Rather than negotiate separately on each river (or acquiesce in Indian use of the water), negotiation of a package agreement for all rivers seemed sensible.

The implicit strategy expressed in the old Bangladesh proposal, for headwater storage in Nepal, and in Bangladesh's interrelated insistence

that the augmentation question could and should be solved within the Ganges basin (excluding the Brahmaputra), was a strategy to lay a claim to the extra water available from storage in the Ganges. The new approach began to drop that claim and replace it with the claim for a share of all the rivers and particularly for an assured, substantial share of the Brahmaputra.

In part this was a recognition of changing reality. As time passed and irrigation projects came on stream, the dry season flow of the Ganges was falling and, in consequence, Bangladesh's plausible claim (under the alternative legal principles of historic rights and current usage) on that flow was also diminishing. It is also the case that the prospects for large scale consumptive use of Brahmaputra water within India are slight. For these reasons, a Bangladesh claim to the Brahmaputra might make more headway than a continued claim for a share of the augmented flow of the Ganges.

In other words, there were a variety of reasons for believing that discussions about all-river permanent sharing might be a higher priority for Bangladesh and in some respects more acceptable to the Indian government.

In addition to these diplomatic perceptions, there were technical factors contributing to the new approach. These included a critique of the feasibility of the Bangladesh proposal for headwater storage in the Ganges, and preliminary evaluations of water development options open to the Bangladesh government acting independently of India.

The essential engineering elements providing Bangladesh's independent option were a barrage across the Brahmaputra and a barrage across the Ganges, both of them to be situated within Bangladesh, and a link canal, connecting the two, allowing transfer of water from the Brahmaputra to the Ganges. Because of the political sensitivity of this scheme (in Bangladesh), these projects are seldom referred to in the public accounts or in the joint official reports of discussions between India and Bangladesh.⁶

Each of the three main elements had been subject to discussion and some preliminary investigation prior to their inclusion in the new approach. The Ganges Barrage had been contemplated in the early 1960's and all

⁶ A rare exception is a brief note issued at the end of discussions held in 1986. The report of the Technical Committee of the Joint Committee of Experts to a Ministerial Review meeting in November 1986 contains the following:

The technical members of the JCE [Joint Committee of Experts] agreed that it may be technically possible to divert water from the Brahmaputra to the Ganga/Ganges through construction of two barrage[s]: one across the Brahmaputra at Bahadurabad and the other across the Ganga/Ganges near about Hardinge Bridge with an interlinking gravity canal within Bangladesh.

The second sentence of this two-sentence final report details further studies required into this proposal.

three elements had been investigated in 1965 and 1971 (IECO 1965; World Bank 1971). During the 1970's some consideration had been given to these elements as a potential alternative to Bangladesh's headwater storage proposal. They were not seriously considered in this light, however, until the new diplomatic approach and criticisms of the old approach combined to force a reconsideration. It is to these criticisms which we now turn.

Criticism of the old line

In 1984, during a period of stagnation and frustration with the negotiations, the Bangladesh side of the Joint Rivers Commission published a document which candidly admitted the strength of criticisms to its own proposal as well as to the Indian proposal. It records that the Bangladesh Minister recommended to the 26th round of negotiations that the JRC should tell their governments 'that the two proposals for augmenting the dry season flows of the Ganges at Farakka were not implementable' (Bd JRC 1984). The substance of the criticisms is not recorded in this source.

The principal criticisms of the old approach were these:

- (i) it realistically offered a solution only in the distant future
- (ii) it would submerge a considerable area of Nepalese land
- (iii) it required construction of some of the largest dams in the world at a time when such constructions were subject to increasing question on social and environmental grounds
- (iv) it required cooperation from India and Nepal for the foreseeable future.

A key piece of evidence which swung opinions against the old line was a graph produced by Bangladesh's technical experts comparing the likely growth of irrigation offtake in India with the rate at which augmentation water could be made available from dams in Nepal. The growth of irrigation demand could be extrapolated from the rate of increase of water consumption by India in recent decades and substantiated by knowledge of Indian irrigation schemes either planned or under construction. Future augmentation of dry season flow could be estimated by sketching out a likely construction schedule for the Nepalese dams and calculating how much extra flow each dam would provide and when. The comparison showed that, even on optimistic assumptions about trilateral collaboration, start dates and construction times, Bangladesh could not expect to receive water from the Nepalese dams until well into the next century. This is because the rate of new water generation (augmentation) would only just keep pace with the expansion of Indian irrigation consumption until about the year 2015. At that point the expansion of Indian irrigation use might be expected to level off, and water could be made available to Bangladesh.

A second area of concern which told against the Bangladesh proposal of storage in Nepal, was the scale of inundation of land. Technical advisors to the government made estimates summarised in Table 2. The proposed reservoirs would add 30% to Nepal's existing area of water body and inundate significant areas of productive land: 203 square

kilometres of cultivable land and 417 square kilometres of forest. Although these areas are not a large proportion of Nepal's totals, representing 0.65% of total cultivable land and 1% of forests, they are, nevertheless, substantial areas of land. Bangladesh technical advisors estimated that lost production could be valued at \$89 million for agriculture and \$262 million for forests.

Table 2: Environmental Impacts of Proposed Storage reservoirs in Nepal

Proposed dam site	Area inundated km ²			No people affected
	Cult	Forest	Total	
Chisapani	55	192	340	17 000
Kaligandaki 1	9	18	71	14 700
Kaligandaki 2	15	2	92	8 500
Seti	26	21	83	10 000
Trisuli	41	61	242	22 100
Kosi	50	75	242	44 500
Pancheswar	7	48	120	11 800
Totals	203	417	1 190	128 600

Source: Technical reports to the Bangladesh government (1984).

The seven dams in Nepal proposed by Bangladesh would be amongst the largest in the world. The tallest, at 327m, would equal the world's largest dam now under construction in the USSR. The smallest would be a 180 m high dam. Opposition to such dams is now widespread in South Asia. Table 3 gives the main features of the dams.

Table 3: Main Features of Nepal Dams in Bangladesh Updated Proposal

Dam	Height m	Storage mcm	Power MW	Augmentation m ³ /sec
Chisapani	265	23 220	970	1548
Kaligandaki 1	288	3 869	765	
Kaligandaki 2	187	3 280	410	220
Trisulganga	284	15 080	750	1 053
Seti	180	4 130	160	168
Sapt Kosi	327	26 570	1 500	1 900
Pancheswar	232	7 130	500	205
Total		83 270	5 055	5 094

These two arguments were the principal reasons for seeking a new proposal: on the most optimistic assumptions the old line looked likely to deliver an increased flow in the Ganges only many years hence, if at all, and the scale of the social, economic and environmental disruption in Nepal made it seem plausible that the most optimistic assumptions were not the best assumptions.

Political sensitivity of the new line - and the official and unofficial positions

The presentation of the new line was not, however, straightforward. The proponents of the new line in the Bangladesh government decided that they could not openly espouse the new line. The hard fought positions evolved and publicised in the earlier stages of the dispute constrained them from publicly announcing the change of strategy.

In particular they decided that it was inadvisable to discuss one of the technical elements of the new line - the internal canal joining the Brahmaputra and the Ganges. This decision was taken because the new Bangladesh canal proposal bore a resemblance to the 1978 Indian proposal for a much larger canal with its control structures in India. The Indian proposal had been subjected to criticism by the Bangladesh government, and had come to be associated with a wider political perception of Indian hostility toward Bangladesh. Support for the Indian link canal could therefore be portrayed as akin to treachery. The proponents of the new line wanted to avoid giving easy political points to their opponents (within and without the government). They decided to keep the internal canal proposal quiet until such time as they could present an orchestrated case in its support.

An additional constraint arose from popular and governmental support for the old line. The idea of the augmentation of the Ganges flow from reservoirs in Nepal had gathered support through earlier stages of the dispute with India. A second set of easy political points could therefore be made against those who departed from this solution to the dispute. The proponents of the new line could be portrayed as pro-Indian and anti-Bangladeshi simply through their betrayal of the old proposals. As ministers or officials within a military regime attempting to make a transition to a government with some democratic legitimacy, they chose to keep the new line confidential until such time as support for the new line had been gathered.

In 1987, Bangladesh water minister Anisul Islam Mahmud told us that there were two parts to his re-orientation of the Bangladesh position: an official one, and an unofficial one, which had not been made public. The official reorientation had three main elements: 1) the government of Nepal had to be brought into the negotiations 2) the negotiations should cover all common rivers not just the river Ganges 3) the two issues of sharing and augmenting the dry season flow of the Ganges should be separated and priority should be given to the question of sharing.

The minister was not willing to describe the unofficial elements of the reorientation: 'If you discuss it in public you start taking public positions which you then cannot change.' He was trying to ride two horses: to pave the way for the new line without appearing to reject the old. That required a degree of confidentiality.

We shall see in sections 5 and 6 below that the unofficial reorientation (the expression of the new line in negotiations with India) included a downgrading of the importance of the inclusion of Nepal, and a verbal description and discussion of the new engineering proposals. The main

elements of the new line were never put in writing in any document submitted to the Indian government.

We shall see some of the implications of the decision to maintain an official and an unofficial position in the sections below. From time to time it delayed discussion of alternative development proposals, as we describe in section 4.3. The difference between the official and the unofficial positions also left space for opponents of the new line to create obstacles to its acceptance. We explore some indications of this opposition in section 7.

4 New Indian impetus

In international river disputes, the upper riparian state tends to have the upper hand. Physical development of the river in the downstream country only rarely influences conditions upstream. On the other hand, water consumption in the upstream country may have immediate physical effects on conditions downstream. The upstream state can therefore proceed with river development projects unencumbered by any agreement with the downstream state. That latter state, however, may be restricted both by the reduced flow arriving in the river and by fears that flows will reduce in the future making river development projects unviable. This point is recognised in the US government's study of the issue:

A fundamental of relations in the basin is the advantage enjoyed per se by an upstream country (upper riparian), a structural element that is particularly important to Bangladesh and to India...the upper riparian has first access to a scarce resource ...[and] can externalize a disadvantage and pass it down river. (US Government 1989; p 28).

In the discussions over the Ganges, this factor has been advantageous for the Indian government. Nothing has been lost to India through delay in achieving a settlement. The actual availability of dry season water and the strength of Bangladesh's negotiating position, on the other hand, have steadily been reduced by the offtake of water from the Ganges in India.

The only pressures on India to settle this dispute arise from Bangladesh's diplomatic claim for a settlement and the obligations of the wide and ambiguous formulations of international legal precedent in respect of rivers. As Bangladesh found when it took a case to the General Assembly of the United Nations in 1977, these factors were insufficient to generate either international consensus or compelling pressure upon India (Crow, 1980).

It is therefore perhaps surprising that new initiatives should emerge from India at all. Nevertheless, one did in 1985. It was not in the first instance a thorough reappraisal of the Indian approach to the waters question, comparable to the development of the new line in Bangladesh. It was however, a strong push from the new Prime Minister Rajiv Gandhi for a settlement of the dispute. This new impetus from India

happened to coincide with the emergence of the new line in Bangladesh.

The main evidence of the new impetus comes from the account of one of India's senior irrigation officials. He recalls being called in with others to see Rajiv in July 1985, and asked to find new initiatives. According to this senior official: 'Rajiv came in with good intentions, even if they weren't always very well thought out. He wanted new initiatives.' Prime Minister Rajiv asked them, 'Why can't we break this logjam' in water relations with Bangladesh? He also asked, 'Why are we resisting the trilateral approach?' of including Nepal in the water negotiations, as Bangladesh had long been pushing for. 'We have had long talks with Nepal, making very little progress. Wouldn't it help if Bangladesh came along?'

The reasons for India's longstanding adherence to bilateral negotiations with its neighbours were reiterated, and the specific danger in this case that trilateral negotiations might establish a precedent for Bangladesh to demand, as a right, a share of water stored in Nepal. According to this account, Rajiv eventually accepted many of their arguments, but he said, 'Isn't there any way we can get together on augmentation and water sharing?'

This account comes from an impeccable source whose recall of other aspects of the negotiations corroborates with official and independent accounts. If it were needed, further corroboration of the existence of a new approach on the part of the Indian government can be seen in the rapid acceleration of diplomatic initiatives and discussions in the summer of 1985.

5 The rise and decline of the new line

In this section we describe the key discussions which marked the progress of the new line on the development of South Asia's major rivers. On at least two occasions negotiators for the governments of India and Bangladesh came close to agreements which could have established the basis for development of the rivers. At the end of the period with which we are concerned, however, the new approach had not achieved recognition in the agreements or public statements of the two governments and the deterioration of relations between the governments gave strength to those on both sides who preferred the easy and long-established nostrums of confrontation.

Table 4 provides an outline chronology of the major events in the negotiations between 1982 and 1988. It indicates two 'windows' in the relations between the two governments, periods when progress on this issue was not overshadowed by other national or international issues:

(i) January 1983 to April 1984

(ii) May 1985 to mid-1987.

The start and end of each of these periods of potential progress is marked by similar events. In each case they are preceded by the accession to power of a new head of government, on one side or the

other, and the arrival on the Bangladesh side of a reforming minister to take charge of the negotiations. At the start of the first window, H. M. Ershad had just become head of government and had appointed Obaidullah Khan, for a long time the most senior official in the agriculture ministry, to direct the negotiations with India. In 1985, the beginning of the second window followed the election victory of Rajiv Gandhi in India, and made real progress when a liberal lawyer, Anisul Islam Mahmud, took over as chief Bangladesh negotiator. The closure of both windows is marked by the breakdown or stagnation of negotiations between the two governments on a range of issues, the rise of hostile comments in the newspapers, sporadic military hostilities, and the return of a hardliner to an influential position in the Bangladesh negotiating team.

Table 4 Outline Chronology 1983-88

Year	Month	Event
1982	Mar	President Ershad takes power in Bangladesh
	Oct	Ershad-Indira Gandhi summit leads to the 1982 Memorandum of Understanding (MOU)
First window: 1983 to April 1984		
1983	Jan	Ministers Mirdha and Obaidullah make progress
	Jul	Agreement to share River Tista till Jan 86
	Dec	Updated augmentation proposals exchanged
1984	Mar	26th Joint Rivers Commission meeting. Indian Minister Mirdha retreats
	Apr	Bangladesh Minister Obaidullah resigns, replaced by hard-liner AVM Aminul Islam
	Nov	Rajiv Gandhi becomes Indian PM
	Dec	Bd govt publishes Ganges Waters Issue reiterating Bd hard line
1985	Apr	Indian Minister Bhandari sent to Dhaka as special envoy
Second window: May 1985 to mid-1987		
	May	Rajiv and Ershad discuss issue when they meet after cyclone on Urir Char
	Jul	Rajiv initiates new impetus on Indian side
	Oct	Nassau Accords agreed by Ershad and Rajiv at Commonwealth summit
	Nov	2nd MoU
1986	Jul	Ershad and Rajiv agree on joint approach to Nepal
	Aug	Secretaries Meeting/ Ministerial review
	Oct	Joint Indo-Bangladesh visit to Nepal
1987	Jan	New Line discussed in Bangladesh Cabinet Paper on Nepal discussed by Indian Secretaries
	Feb-May	Indo-Bangladesh relations deteriorate

The key events in the rise and decline of the new line are these:

- * In 1983, two ministers came close to an agreement which would have established some elements of the new line.
- * In October 1985, the two heads of government signed accords which allowed the new line to be investigated.
- * In July 1986 there was agreement on a long-standing issue of discord, to approach Nepal.
- * In October 1986 a meeting notable for its constraints and fruitlessness took place with the government of Nepal.
- * In late 1986, two ministers again came close to agreement

Behind these key events, when progress was made or seemed attainable, there were occasionally strong directives from heads of government or key ministers, frequently long and difficult discussions amongst the officials of both governments, and sometimes longstanding tensions between different factions of government and bureaucracy. As is inevitable with sensitive issues of national significance, these directives, discussions and tensions are largely hidden from public view. We have, nevertheless, some information about them which throws light on processes influencing the negotiations.

In the section which follows we describe the key events, and some of the background to them, roughly in chronological sequence to show the progress of the new line and the pitfalls and setbacks which eventually contributed to its (temporary?) downfall. This is primarily a descriptive section but the underlying argument is about the interplay of technical, diplomatic and political issues.

5.1 The achievements of the first window 1983⁷

During the first window there were a series of discussions which foreshadowed the development of the new line. By the middle of 1983, India and Bangladesh were discussing the potential for a barrage across the Brahmaputra within Bangladesh, and the Bangladesh minister leading the negotiations believes there was a real possibility of an outline agreement. By the end of the year, however, those discussions had in his word 'floundered'.

⁷ In 1982 prior to this window, Ershad had shown the power of a new leader to get an agreement by rapidly negotiating an extension to the 1977 treaty, known as the 1982 Memorandum of Understanding. Haste and inexperience on the Bangladesh side and alert diplomacy by Indian negotiators led to an agreement which omitted an important 'guarantee clause'. This clause secured the major portion of the Ganges flow for Bangladesh in the event that flows fell below the minimum envisaged, and thus against the consequences of new upstream withdrawals by India. Subsequently an additional, less forceful clause requiring mutual agreement was appended (see also Crow 1982).

During this period the two key ideas making up the new line - a technical solution within Bangladesh and an all river permanent sharing accord - were discussed as separate issues. It was only later that they came to be connected as the technical and diplomatic halves of the new line. The possible agreement concerned

'agreement in principle for a pre-feasibility study of a barrage across the Brahmaputra and for an approach to the World Bank for finance. At that stage it was just a political hunch, thinking of connecting the river. We did not know if it could be done.'

Minister Obaidullah Khan describes the 1983-4 period as

'a period of ideas, also the period when India-Bangladesh relations were the best. With Zia [President of Bangladesh 1977-82], relations with India went bad. Zia tried to improve them before his death, and Ershad carried that forward.'

The Indian Irrigation Minister Mirdha was 'very responsive' when Obaidullah Khan discussed the proposal. Khan tried to complete an agreement at a meeting in Delhi, but had to get Presidential approval. When he got Ershad on the phone, the President was not willing to go ahead without further discussions: 'You discuss it with me when you get back.'

When Obaidullah Khan reported back, Ershad wanted a bigger meeting with some of the generals (at this stage Ershad headed a military government). When they were brought into the discussion, they thought the plan would not work, and that it was more in India's interest than Bangladesh's. Ershad let the proposal slide by - there was no pressure on him, the (interim sharing) agreement had another year to run.

The final demise of this initiative came some time later. The Indian Irrigation Ministry sent a letter to the Bangladesh government apparently attempting to formalise the progress that had been made in the negotiations. Up to that point the idea of internal solutions to water shortage in Bangladesh had only been discussed informally, nothing had been put in writing. In fact in late 1983, the two governments had exchanged updated technical proposals (India 1983, Bangladesh 1983) which did not mention the new proposals. These reports were no more than minor variants of the proposals exchanged in 1978 (India 1978, Bangladesh 1978). The letter said that the Indian government had heard about the proposal for an internal barrage and link and would like to see it in writing. Unfortunately, the letter went on to say that the Indian government was favourably disposed toward the proposal because of its similarity with the Indian government's link canal proposal. That finished the proposal politically within the Bangladesh government because it tarred the new line proposals with the same brush as the Indian link canal, which had been turned into a symbol of the hostile intent of the big neighbour.

Further opposition to these proposals arose from official assessments that foreign aid would finance one major engineering project, but not

two. The project to bridge the Brahmaputra was accorded higher priority than the proposals for major new river development.

The opportunity to establish one part of the new line in an agreement between the two governments had passed by the end of the year and during 1984 the government of Bangladesh returned to public statements of the old line. Obaidullah Khan resigned from his post rather than join the President's civilianisation of the government. He was replaced by Air Vice Marshall Aminul Islam, who, in the words of a Bangladesh member of the Joint Rivers Commission, 'went back to the old approach of fighting with India. During his time no progress was made.' At the end of 1984, the Bangladesh government published *The Ganges Waters Issue* (Bangladesh JRC 1984), a restatement of earlier positions.

Behind the scenes, the Bangladesh government had obtained a World Bank loan to pay for international engineering consultants to investigate technical aspects of the new line. This contract was allowed to expire in mid 1984 and was not renewed until late 1985 when relations with India had improved and progress was again being made in the negotiations.

In June 1984 the Memorandum of Understanding governing the sharing of the dry season flow of the Ganges expired. For the remainder of that dry season and for the whole of the dry season in the following year, there was no agreement on the sharing of the waters.

Although no formal agreements were reached during this window, there were at least two achievements. Both sides had begun the process of rejecting their earlier proposals. On the Bangladesh side, Obaidullah Khan also left the main elements of the new line for a new minister to pick up.

5.2 The road to the Nassau accords

The second window in relations between India and Bangladesh came between 1985 and 1987 and can best be understood as three main phases:

I May to November 1985

The Nassau Accords in October 1985 were brought to fruition in the Memorandum of Understanding of the following month.

II November 1985 to December 1986

After the MoU, a Joint Committee of Experts started a series of meetings which were reviewed at ministerial level.

III Mid 1985 to mid 1987

In parallel with these intergovernmental negotiations, there were discussions within the two governments. These discussions come close to the public domain with the first cabinet meeting in Bangladesh to discuss the new line in January 1987 and India's failure to deliver a frequently-promised position paper on the involvement of Nepal in the issue.

The first indication that Rajiv Gandhi intended to take an initiative in this area came in April 1985 when newly-appointed Foreign Secretary Romesh Bhandari was sent to Dhaka to try to break the impasse with Bangladesh and get negotiations going again. This was the period when the Prime Minister was also beginning the introduction of his economic liberalisation initiative.

Bhandari told us that he met with Bangladesh President Ershad and suggested that they work out joint political and technical initiatives. Ershad was open to this. A few weeks later, when a cyclone struck Bangladesh, Rajiv visited the site of the disaster to offer Indian assistance. He met Ershad there and they agreed that they both wanted progress on the river waters issue.

In July, Rajiv followed up these initial diplomatic contacts with the beginning of a reconsideration of India's approach. He held the meeting with senior water officials described in section 3.

Rajiv then sent Foreign Secretary Bhandari back to Dhaka at the end of July along with a special envoy-Shiv Shankar to try to get things moving. With the formation of the South Asian Association for Regional Cooperation (SAARC), ideas of regional cooperation were developing and Rajiv is reported to have wanted to get matters such as the water question and the longstanding minor land dispute over Teen Bigha, out of the way. Between then and the Commonwealth Heads of State Conference in Nassau, Bahamas, held in October, 1985, the two sides worked out an agreement which Indian Prime Minister Rajiv Gandhi and Bangladesh President H.M. Ershad formalized at Nassau with a communique. The main elements were

the signing of a renewed Memorandum of Understanding and
the creation of a Joint Committee of Experts to investigate alternative options for developing the common rivers of the two countries.⁸

1985 Memorandum of Understanding - an agreement to investigate the new line

⁸ "Under an agreement arrived at by the two leaders, the Irrigation Ministers of the two countries will sign a Memorandum of Understanding for sharing the Ganga waters for a three-year period, commencing from the dry season of 1986, on the same terms as the 1982 Memorandum of Understanding. The Irrigation Ministers will set out the terms of reference of a joint study of available river water resources, with a view to identifying alternatives for the sharing of water resources to mutual benefit, including a long-term scheme for augmenting the flow of the Ganga at Farakka.' (Kumar ed 1988, pp19-20)

According to then Indian Foreign Secretary Romesh Bhandari, "Bangladesh wanted at that time to bring Nepal into tri-lateral negotiations, but we said that that was not necessary. We said 'We are the link between Nepal and Bangladesh. Let communications go through us.'"

On November 22, 1985 the Ministers of Irrigation and Water Resources of India and Bangladesh signed a Memorandum of Understanding. Unusually, it has not been published, but the main elements of the agreement can be reconstructed. It was to run for three years (rather than the 2 years of the 1982 agreement) and it followed the principles of sharing established in the 1982 Memorandum of Understanding. There were, we understand, variations in the quantities of flow to be given to each party, but these were not significant. The terms of reference for a joint investigation of water resources departed from previous agreements and practice in two more significant respects:

it provided for a joint study of alternatives for sharing and augmentation

and it covered 'river waters common to India and Bangladesh'.

In other words this was, although it was not publicized as such, an agreement to investigate the new line:

The focus was on alternatives for sharing (though the question of augmentation was also there)

the new formula - common river waters - sidestepped the old division between those who argued that there were two basins, the Ganges and Brahmaputra (Bangladesh - old persuasion) and those who argued there was only one (India), and widened the mandate of technical discussions.

The Joint Committee of Experts (JCE) was headed by the Secretaries of Irrigation or Water Resources of the two Governments and included the two technical members of the Joint Rivers Commission from each side. The Committee was assigned the task of completing the required studies within 12 months, with a Ministerial review prescribed at the end of 6 months. The terms of reference of the JCE reflect its principal rationale, the investigation of the new line.⁹

⁹Specifically, this section of the agreement said,

The study will cover the following:

(1) Sharing the available river water resources common to India and Bangladesh.

(a) Ascertaining the available river water resources common to both countries based on the collection, collation and analysis of available relevant hydro-meteorological data in both countries.

(b) Study of alternatives for sharing the available river water resources to mutual benefit.

(c) Identification of the locations of the points of sharing of the rivers, periods of sharing and schedule of sharing, where appropriate.

(2) Augmentation of the dry season flows of the Ganga/Ganges at Farakka.

An Indian Ministry of External Affairs spokesperson, in an interview with us, credited Bangladesh with the idea of forming the JCE. She said,

'On the Ganga waters, we wanted to start talking again about how we should approach the sharing arrangements...

Bangladesh proposed the JCE: 'Let us evolve a new forum in which we could consult de nouveau.'¹⁰

5.3 The meetings of the Joint Committee of Experts

It is easy to get lost in the bland official records of the 9 meetings of the Joint Committee of Experts, of the meetings of its subcommittee, 'the Technical Committee', and of the two ministerial reviews of those meetings (in August 1986 and May 1987). Even though these records were not intended to be given wide publicity (they are marked 'for official use only'), their contents were generally outlined in official statements to the press, and some skill was exerted to ensure that they would not raise sensitive issues on either side of the border.

Some of the achievements of the Joint Committee of Experts and the disagreements and frustrations of participants on both sides can, nevertheless, be reconstructed from the records and discussions with those who took part. The most important achievement of the JCE was agreement that the engineering aspects of the new line, the internal barrages and gravity link canal, appeared feasible (JCE Technical Committee 1986). Beyond that, the fact that the options were widened from the old proposals was itself an achievement.

These achievements tended to be overshadowed by the frustrations and disagreements which emerged during discussions. A senior official in the Indian irrigation ministry who participated in these discussions went so far as to say, 'The Joint Committee of Experts emerged out of the new approach, but once again fell into old positions.' (Interview May 1988) This characterisation reflects the fact (noted below in section 6) that many of the participants were indeed long-standing proponents of the old proposals who only became convinced of the merit of the new line whilst they took part in the discussions.

It may also reflect what we may call the politicisation of technical differences. Inconsistencies between the data presented by each side came to be read by the opposing side as evidence of duplicity or adherence to the old persuasion. The most frequently noted instances of a technical difference concerns the flow records of joint rivers, particularly the Brahmaputra.

Whilst some hardliners remained, the composition of the technical team Bangladesh sent to these discussions had changed markedly between

¹⁰ There had been an earlier attempt to form a Joint Committee of Experts (JCE) at the time of the signing of the 1982 MoU, because it was felt that the Joint Rivers Commission could not act fast enough. At that time, however, the JCE members could not agree on their terms of reference. This was principally because of the dispute over whether Nepal water storage was to be included in its brief.

1982 and 1985. Most notably, BM Abbas, closely associated with the conception of the old line and senior negotiator on the issue for more than two decades, was out of the government¹¹ and key diplomatic and technical positions were held by people who had contributed to the development of the new line. In addition, the World Bank-funded team of foreign engineers was again (after the cessation of their contract in 1984) testing the feasibility of alternative options and contributing to a growing confidence in the new line proposals.

The JCE discussions fall into three groups: initial procedural discussions and exchanges of data, some apparently serious discussions during the latter half of 1986, then less fruitful and increasingly intermittent meetings through into 1987.

I Exchange of data

Most of the first JCE meetings were taken up with working out procedural matters, exchanging hydrological data, defining river basins, setting up criteria for calculating the water needs of the two countries, and so forth. Bangladesh presented a list of 54 joint rivers, which India took some time to study. India suggested focussing on 8 or 10 of the most important.

In the data exchanged, there was general correspondence, with one major exception, which remains contentious. The figures shown by the two sides for their estimations of the historical flow of the Brahmaputra diverged widely after 1975, with the Indian records from their measuring station at Pangsua, in Assam, showing a large increase, from around 140,000 cusecs before 1975 up to around 250,000 cusecs ten years later, while those of Bangladesh from its station at Bahadurabad showed no such increase. The Bangladesh delegation challenged the Indian figures. The disagreement remains unresolved.

II The late 1986 Proposals

With a series of meetings in Dhaka in August, however, the two sides began to come to grips with new proposals for river development. As the official minutes of the technical experts meeting state, 'Discussions were then held on the possibilities of utilization of the waters of the Brahmaputra for augmentation of the dry season flows of the Ganga/Ganges at Farakka.'

The JCE minutes then note: "The Indian side indicated three possibilities of the utilisation of the Brahmaputra waters for augmenting the Ganges/Ganga flows and requested that they be considered further with a view to placing some concrete proposals before the Ministers. The Bangladesh members, however, felt that it was premature to consider the formulation of concrete proposals at this stage."

¹¹ He returned as Advisor on Water Resources in mid 1989. He now sits in a cabinet which also contains the most prominent proponent of the new line, Anisul Islam Mahmud, now Foreign Minister.

The three possibilities that the Indian side had suggested were

- a) the original Indian proposal of a barrage at Jogighopa, in Assam, with a link canal passing through northwest Bangladesh and coming out again in India, joining the Ganges above Farakka;
- b) a barrage at Bahadurabad in Bangladesh with a link canal flowing entirely within Bangladesh to join the Ganges within Bangladesh territory (that is, the technical elements of the new line); and
- c) utilising the waters of the Brahmaputra to meet some of the requirements of Bangladesh which were being met/to be met from the Ganges, without necessarily linking the two rivers through a canal.

In the Ministerial Review of August 1986, Bangladesh Minister of Irrigation, Anisul Islam Mahmud, in response, indicated that of the three Indian alternatives Bangladesh would only be willing to consider the second--for an internal barrage and gravity canal purely within Bangladesh territory.

Mahmud told a senior Indian negotiator that all discussion of the internal link canal was going to have to be completely off the record. 'After the presidential election we'll be able to talk about it', he said, 'but until then it must be completely confidential.' He said that he could even put Bangladesh engineers to work on it, but this would have to be kept quiet. Both Nepal and the Brahmaputra link canal proposals were to be explored at the same time.

The Ministers nevertheless directed that concrete proposals should be developed for the review meeting in November, 1986. "The JCE directed its technical members to consider the technical possibility of a diversion canal from the Brahmaputra, with a barrage near Bahadurabad to an appropriate point near Hardinge Bridge within Bangladesh to the Ganga/Ganges on different assumptions with regard to canal capacities."

An attempt by Bangladesh to get an Indian commitment in principle on the sharing of the Brahmaputra held up progress for at least one meeting, possibly several. Bangladesh officials argued that concrete proposals could not be developed until the share of the Brahmaputra guaranteed to Bangladesh was at least estimated. Indian officials refused to be drawn into giving any figure. This minor stalemate was removed when ministers directed their officials that a range of alternative sharing figures be fed into the design and evaluation process. 'It was agreed that the technical experts would immediately undertake intensive studies assuming certain scenarios as discussed in the meeting towards accomplishing the objective of submission of concrete proposals to the next Ministerial Level Meeting scheduled before the Summit Level Meeting in November, 1986.'

III Discussions deteriorate after the Nepal meeting

After the Nepal meeting (which is described in the next section) the efficacy of the JCE discussions tailed off further. The issue of Bangladesh's share of the Brahmaputra returned to dog the discussions and little progress was made. Bangladesh officials again resisted Indian pressure to carry out joint analysis of transfer from the Brahmaputra until guaranteed a share of both rivers.

Senior water official in Bangladesh told us, India suggested during a JCE Meeting: 'Brahmaputra for you, Ganges for us.' And when Bangladesh tried to pin them down on a agreement for the Brahmaputra, they said 'Why do you need an agreement. It is for you. We won't take any water from it for 10 or 20 years.' This was not an acceptable commitment and the Bangladesh team did not want to acquiesce in the loss of the Ganges:

"We didn't accept, even as a theoretical exercise, India's inclusion of a 'zero option' [on the Ganges]."

The Indian perception of this period records similar frustrations. Our senior water ministry source says that after the Nepal visit was over (and after the Bangladesh presidential elections), Anisul Islam Mahmud told Indian negotiators that it was still not possible in Bangladesh to discuss augmentation from the Brahmaputra, because the issue was too sensitive, and proposed that they talk instead about permanent sharing of 54 common rivers. This diplomatic aspect of the 'new line' had been discussed in earlier JCE meetings. Mahmud now had a specific proposal. He proposed that Bangladesh be guaranteed a minimum dry season flow on the Ganges: 25,000 cusecs in the last 10 days of April, 75% of the Brahmaputra flow, and 50% of the flow of the other common rivers. He kept bringing this up, and kept asking for our response. The Indian negotiators gave no commitment.

The last substantial meeting between India and Bangladesh before this window closed was the Ministerial Review Meeting, held in New Delhi, May 10, 1987. After cordialities and formalities, and a brief review of the limited accomplishments of the JCE since the last review in November, 1986, the two Ministers proceeded to emphasize their different concerns. Shankaranand, Indian Water Resources Minister, said that the Nepal storage proposal was going nowhere and stressed the linkage between augmentation of the Ganges (from the Brahmaputra) and sharing of the other rivers:

'the issues of augmentation and sharing are closely inter-linked, and it might be better to avoid considering proposals on either of these issues in isolation. Our common aim should be to eventually arrive at a comprehensive understanding in relation to both.'

Bangladesh Minister Anisul Islam Mahmud in his speech emphasized sharing as opposed to augmentation:

'We have emphasized time and again the imperative need for a permanent sharing of flows of all the rivers common to India and Bangladesh.'

In other words, at this last meeting India is reiterating its rejection of the option of augmentation of the Ganges at Farakka through storage dams in Nepal and insisting on the linkage between augmentation from the Brahmaputra and making an agreement for long term sharing of the principal joint rivers. Bangladesh, for its part, is saying that sharing is an immediate bilateral problem between Bangladesh and India, while augmentation is a long-term problem requiring regional cooperation. It is also saying that it will not consider augmentation of the Ganges from the Brahmaputra unless India guarantees Bangladesh a share of the common rivers.

At this stage the position of the two sides can be summarised as follows: India will not consider sharing without augmentation from the Brahmaputra, and Bangladesh will not consider augmentation from the Brahmaputra without a guaranteed share of the principal joint rivers.

5.4 The Nepal meeting and the strange case of the undelivered paper

In July 1986, President Ershad and Prime Minister Gandhi agreed that their two governments should simultaneously ask Nepal for a meeting to discuss the water resources issue. This meeting took place in October of the same year. Subsequently, the Indian Foreign Minister promised to prepare a position paper on the question of how Nepal should be involved. Despite repetition of this promise at various levels, the paper has not at the time of writing been produced.

Whatever was agreed between the heads of government, the meeting with Nepal only went ahead after Indian ministers had received assurances from the Bangladesh negotiators that the approach to Nepal would be limited. Limits to the time the discussions could take, agreed pessimism about their outcome, and the agreement that it should not form a precedent for trilateral negotiations were described in a subsequent speech by the Indian Minister of Water Resources B Shankaranand:

Your excellency will recollect that during earlier discussions, formal and informal, on the subject, at various levels both at Dhaka and at New Delhi, it was anticipated that the approach to Nepal was not in fact likely to lead to any positive result, as large storages of the kind envisaged might not be techno-economically feasible, and even if they were, they were unlikely to add significantly to the flows of the Ganga at Farakka. However, as the possibility had been talked about several times in the past, it was agreed that the option should be explored very quickly within an informally agreed time-limit of three months. It was also agreed that we should not allow this exercise to become a

protracted or open-ended one, and further that it would be clearly a bilateral approach to Nepal and not a tripartite study.

(Speech to the Ministerial Review of the work of the JCE, November 1986)

The letters sent by the two governments to the government of Nepal further limited the meeting to seeking necessary information and data.¹² These limitations are important. They reveal the continuing concern of Indian negotiators to avoid breaching the principle of bilateral negotiations. They are also important, as we will describe in section 7 below, for the differences they reveal within the Bangladesh government. There can be little doubt that the Indian Minister's speech summarises the informal assurances he had been given; several independent sources within the Indian government have described essentially the same assurances.

The Nepal Meetings:

The Indian and Bangladesh delegations from the Joint Committee of Experts went to Kathmandu and met a team of Nepalese government Water and Foreign Ministry officials for three days at the end of October 1986. The official summary record of the discussions makes it quite clear what did and, in this case more importantly, what did not happen. What did happen is that the Nepalese Secretary of Water Resources kept inquiring how Nepal would benefit, and how the Nepalese government were to be included in the discussions. What did not happen, when Nepal failed to get a satisfactory answer, was the handing over of the information requested by India and Bangladesh. A representative section of the record reads as follows:

Mr. Dhakal [Secretary of Water Resources, Nepal] said in response that sharing of data could be easily done since Nepal had a very positive attitude towards regional cooperation for mutual benefits, but initially Nepal would have to be clear about what sort of role was envisaged for Nepal. He stated the view that involvement of the concerned party [that is, Nepal] from the very beginning was desirable for later success."

One of the Indian participants in these negotiations described the Nepalese insistence on a satisfactory answer as 'repeating "mutual benefit" like a mantra'. The term "mutual benefit" appears more than a dozen times in the four pages of the record. In response, India and Bangladesh said that they had only come to collect information for a preliminary inquiry, and although they accepted the principle of mutual

¹² The letters specified that the JCE studies included 'the possibility of augmenting the flows of the Ganga/Ganges at Farakka through storages in Nepal' and asked for 'the cooperation of HMG, Nepal in making available the necessary information and data and extending the necessary facilities, such as allowing the JCE to visit Nepal for this purpose and holding discussions with the authorities concerned. (Enclosures 13 and 14 in JCE Bangladesh 1986).

benefit, particulars could only come later after they had analyzed the data and decided whether they wanted to go ahead.

The Nepal meeting was a complete waste of time and money. Even the request for data was a formality. Virtually all of the data requested has already been obtained through informal bilateral discussions between India and Nepal and Bangladesh and Nepal. The government of Nepal was, nevertheless, not willing to acquiesce in the formality of exchanging data because that would have set a precedent of involvement in river development without formal representation in the decision making process.

The Nepal meeting marked the beginning of the end of the window, but it emphasised the need for India to undertake a reevaluation of its adherence to strict bilateralism. Shortly after the meeting Prime Minister Rajiv agreed to undertake that reevaluation with the preparation of the paper on Nepal.

Decision to prepare Nepal paper:

The joint India-Bangladesh trip to Nepal was followed immediately, a fortnight later, by the 2nd SAARC Summit Meeting in Bangalore, India. Indian Prime Minister Rajiv Gandhi, Bangladesh President Ershad, and Nepal King Birendra were all present. Bangladesh Minister of Irrigation, Anisul Islam Mahmud was there but the Indian Minister of Water Resources was not. Anisul Islam Mahmud arranged an informal meeting between himself, President Ershad, and Prime Minister Rajiv. When he returned from this meeting, Mahmud told his officials that Rajiv had agreed to include Nepal in future exploration of options to augment the dry season flow of the Ganges and develop their water resources. (After the meeting, however, when Bangladesh negotiators tried to follow up this agreement, the Indian water minister told them that he had not heard of any such agreement.)

Whilst that meeting was unbalanced by the absence of the minister principally responsible on the Indian side, it led to a meeting of the foreign ministers of India, Nepal and Bangladesh, in January 1987, at which the Indian foreign minister agreed to draft and circulate a position paper on Nepal's role in river development.¹³

This outline paper was to cover, 1. the logic of a joint approach, and, 2. the meaning of 'mutual benefit'. According to one senior Indian water official,

'This was difficult for India. We had an internal meeting in India, and decided that the issue must go to the cabinet--what does the cabinet want us to do?'

The Ministry of Water Resources prepared a comprehensive paper for the cabinet on the entire question. It dealt with the merits and demerits of bilateralism and trilateralism. If India was to move to tri-lateralism, what safeguards should be maintained. Views were changing, so the water ministry took a balanced approach, according to this participant, favouring neither one nor the other. They brought in the question of river sharing and the proposal from Bangladesh and how to approach it. According to this participant: "We wanted political direction from the government. We were not clear what the political thinking was." The paper went to the Indian Prime Minister's cabinet secretariat, probably in March, 1987. It was reportedly later recast by a committee of Secretaries of different ministries. Since then it has disappeared from view.

India repeatedly promised to deliver the outline paper to Bangladesh and Nepal, but repeatedly failed to do so. India was supposed to circulate this paper first to Nepal and Bangladesh by May, 1987, as noted in the speech by Anisul Islam Mahmud to the Ministerial Review in May 1987. India did not meet this deadline. India then indicated that it would have the paper ready for the June, 1987 Foreign Ministers meeting in New Delhi. At that meeting, however Indian representatives said the paper was still not ready. The third time was at the 3rd SAARC Summit meeting in Kathmandu, November 2-4, 1987. At this summit

¹³In his opening speech to the Ministerial Review in May, 1987 in New Delhi, Mahmud said:

"...the Leaders of our two countries during the Bangalore (Second SAARC Summit) meeting in November, 1986 agreed that Nepal may be involved in the study of the possibility of augmenting the flows of the Ganges through construction of storage reservoirs in Nepal. As mandated by the Heads of State/Government in Bangalore, the Foreign Ministers of India, Nepal and Bangladesh during their meeting at Kathmandu on the 17th January, 1987 discussed the issue of regional cooperation for development of common water resources. They agreed to explore the possibility of development of water resources with a perspective of multipurpose objectives and on the basis of mutual benefit to all the three countries concerned. On the basis of this India agreed to prepare an outline paper and circulate it to Bangladesh and Nepal by May, 1987. The concerned experts of the two countries are available here. They could join together and appraise the outline if it is made available".

meeting President Ershad met Prime Minister Rajiv and asked him about India's agreement to supply the paper. Rajiv reportedly replied to Ershad that 'within 7 to 10 days the outline paper will be distributed.' It wasn't. The fourth time was the JCE meeting November 20-21 in New Delhi. The Indians told Bangladesh representatives at this meeting that the paper was with the Cabinet Committee for Political Matters (CCPM) and needed to be revised. They said that they 'will do it soon.'

In February, 1988, the Bangladesh Foreign Ministry made a formal inquiry to the Indian High Commissioner about the status of the paper. The Indian High Commissioner is said to have replied that he had had the impression that Bangladesh was not really serious about including Nepal, but that 'now that we see that you are we will do something.' To date, however, the paper has still not been delivered by India.

The failure of the Indian government to supply the Nepal paper after repeated commitments, including at the highest level, is a symptom of uncertainty or conflict. The paper promised to reconsider the key issue of bilateralism which had dominated the meeting Rajiv Gandhi had called with water officials at the start of his new initiative in July 1985. At that time the Prime Minister was apparently persuaded that India should negotiate separately with each of his neighbours. Despite a small and limited step toward formal trilateral discussions, the advantages of bilateralism still seem to be persuasive to some sections of the Indian Government.

5.5 Bangladesh cabinet meeting

On January 4, 1987, Minister of Irrigation Anisul Islam Mahmud was to present for the first time the proposals for a New Line to the full Bangladesh cabinet, in advance of a visit two days later by the Indian Minister of External Relations, N.D. Tiwari, and the Indian Secretary of Water Resources, Ramaswamy Iyer. This involved giving up the long-standing Bangladesh proposal for augmentation of the Ganges through large storage dams in Nepal (the 'old persuasion'), and concentrating instead on what Bangladesh could do within its own territory by building barrages on the Brahmaputra and the Ganges, with an internal link canal between them (the 'new line'). In addition, he planned to present his proposal for a long-term sharing of the principal joint rivers between the two countries.

According to three Bangladeshi officials we have talked with who were present, Mahmud finished the first stage of his presentation, criticizing the 'old persuasion' saying that storage dams in Nepal would not benefit Bangladesh. He was then about to launch into his proposals for solution, which were the barrage proposal for development of the river system prepared by the Bangladesh government's Expert Study Group, and the "package proposal" for permanent sharing of the joint rivers, when President Ershad interrupted him to say that he wanted to hear from some of the other ministers. Anisul Islam Mahmud, was cut off in mid-sentence after he said 'And now I want to propose...' Two other ministers present--Salauddin Kader Chowdhury, the Minister of Health, and Anwar Hussein Monju, Minister of Education, leapt in to attack him

'on personal issues and on India-Bangladesh relations issues', as Anisul told us himself.

When this happened, President Ershad, cut off discussion, saying 'Today we could not finish. Let us do this another day.' That day never came. Most of the technical people involved considered this outcome to be a disastrous end to their hard work on the proposal. But Anisul Islam Mahmud himself does not. He told us that it was the first time the cabinet had been briefed on the issue, and the fact that the presentation had been curtailed was not a problem. The "basic framework [of the negotiations] had been explained", he said.

Anisul leaked the proposal for a permanent sharing of the rivers to the press, with President Ershad's approval, a day later but withheld details of the barrage proposal.

5.6 Closure: 'a change in the weather'

A senior Indian water official notes that sometime after February 1987, 'the atmosphere changed on both sides. Anisul Islam Mahmud was let down, and on our side enthusiasm gradually waned'. The Indian prime minister became preoccupied with other questions: In July, Indian troops were sent into Sri Lanka; in April, the Bofors affair surfaced; throughout 1987 initiatives were required on the crisis in the Punjab. Indian Irrigation Minister Shankaranand resigned to head the inquiry into the Bofors affair.

Relations between the two government also deteriorated. The migration of tens of thousands of Chakma refugees from the Hill Tracts of Bangladesh into India dominated discussions between the two governments from the early months of 1987. Historically, both governments have given support to insurgent factions amongst the 'tribal' groups on the borders of the other state. The Chakma migrations, responding to a wave of Bengali settlement supported by army action in the Bangladesh Hill Tracts, led to new rounds of accusation between the two foreign ministries. In June, Bangladesh papers reported that Indian soldiers killed 11 Bangladeshi civilians and 7 Bangladesh soldiers.

6 Indications of internal opposition - the 'old persuasion'

There are indications of confusion, and disagreement between ministries, on both sides of the negotiations. It is clear that the sensitivity of the issues and the decision by Bangladesh to pursue the new line in conditions of secrecy provided fertile ground for ambiguity and resistance to new initiative on both sides. One of the most plausible overviews of this situation comes from a senior Indian water official who believes the prime movers on both sides failed to carry their officials and cabinets with them:

'To some extent, the Prime Minister [Rajiv Gandhi] was in the position of Anisul Islam - he had not carried the cabinet with him'

(Interview May 1988)

Bangladesh

It was inevitable that a shift from a hard fought line would meet opposition from within the Bangladesh government. Evidence that it did comes from both sides. Indian negotiators note that the Bangladesh foreign minister and Bangladesh water minister seemed to be following different policies. This gave opportunities for conservatives on the Indian side to consolidate their opposition to new positions. Within the Bangladesh negotiating team, senior engineers are willing to admit that they too were reluctant to accept the new ideas at first. The innovating ministers, Obaidullah Khan and Anisul Islam Mahmud, therefore faced resistance within their own ministry, as well as from the highest level of their foreign ministry. When it came to negotiating full government backing, there was difficulty within the Cabinet too. We will focus here on the strong evidence that the Foreign Minister of Bangladesh was himself an unreconstructed adherent of the old persuasion.

A number of sources on the Indian side note the disparity between the positions put by the Bangladesh Water Minister Anisul Islam Mahmud and by the Foreign Minister Humayun Rashid Chowdhury. One senior Indian negotiator notes that the Foreign Minister 'spoke with a different voice'. A more junior member of the Indian negotiating team notes that Chowdhury 'took a different line' to Mahmud - the Foreign Minister wanted not only the sharing arrangements that Mahmud was proposing, but also to keep the Nepal option open too. As noted already, Mahmud was unofficially willing to cede any potential claim Bangladesh might have to the augmented flow of the Ganges arising from Nepalese reservoirs in order to get a permanent sharing agreement. The Foreign Minister was not willing to go that far. This could have been part of a coordinated negotiating position (but we will see below that it was not). To Indian negotiators it appeared as disagreement on the Bangladesh side.

Another perspective on these differences comes from the Indian journalist George Verghese,

One reason that India was a bit cautious in taking up [Anisul Islam Mahmud's proposal on permanent sharing] was that there seemed to be two views being communicated. One by Anis, the other perhaps by the Bangladesh Foreign Office. There was some wariness about whether this was the [Bangladesh] government seriously making this proposal or just some minister flying a kite...

(Interview)

One of the authors of this paper talked with Humayun Rashid Chowdhury immediately after his resignation as Bangladesh Foreign Minister in December 1988. It is clear from this interview that he remains an advocate of 'the old persuasion'. He believes Bangladesh's water needs can only be met from reservoirs in Nepal, and that Bangladesh's initial mistake was to agree to sharing of the Ganges at all:

We made an initial mistake, we agreed to the sharing of the waters in the lower reaches of the Ganges. In 1974, we abandoned our traditional claim, that we were entitled to all the waters of the Ganges...Before that we had said that diversion was not on using the Farakka Barrage...If I had been negotiating at that time, we would only have agreed if it was in perpetuity.

This is a very retrograde position restating the Pakistan claim prior to the creation of Bangladesh, and the long-discredited Harmon doctrine on the application of law to international rivers. The Foreign Minister's position attempts to go back at least two stages in the negotiations to refocus upon the issues resolved at the end of Phase I of the dispute. He is not only denigrating the achievements of the 1977 Ganges Waters Treaty but also questioning all agreements since the creation of Bangladesh which have accepted the existence of the Farakka Barrage.

We can find further evidence of the differences between the Foreign Minister and the Water Minister in the Foreign Minister's interpretation of the visit to Nepal. For Humayun Rashid Chowdhury, India's agreement to the visit to Nepal was a great achievement which promised progress toward the construction of reservoirs in Nepal. He is therefore confused by the constraints agreed prior to the meeting and fears (correctly) that informal discussions between Ershad, Mahmud and the Indian foreign minister constitute prior agreement that the Nepal meeting will not lead to trilateral or regional river development:

‘Natwar Singh [Indian Foreign Secretary] told me that the President [Ershad] had told Narasimha Rao, when he was Special Envoy to Dhaka, that Nepal was just one of those political things, it was not necessary to bring Nepal in.

We had agreed that India, Bangladesh and Nepal would work on this together, [but] the President and the Irrigation Minister told him [Natwar Singh] Nepal is just a political thing. When I checked with them both, both the President and Anisul Islam Mahmud denied it.

Humayun Rashid Chowdhury thinks ‘there is duplicity involved’. To the extent that prior limits had been set for the discussions in Nepal, he is correct. These limits have been described in section 6.3 above. Further than that, the informal conversation with the Indian foreign minister is also plausible: we can imagine that President Ershad and Anisul Islam Mahmud did say that the joint visit to Nepal could satisfy political pressure within Bangladesh for progress on the old line, without foreclosing progress on the new line, and it was, in other words, just ‘a political thing’. The Bangladesh Minister of Irrigation, certainly told a senior official in the Indian irrigation ministry that Nepal was not the answer:

Anisul Islam Mahmud, then told us that he recognized that Nepal wasn't really going to be the solution, and that the Brahmaputra was going to have to be the answer to Bangladesh's need for additional water.

(Interview May 1988)

Roughly the same point is made by Indian minister Shankaranand in his speech (quoted above) to the Ministerial Review of the work of the Joint Committee of Experts: '...it was anticipated that the approach to Nepal was not in fact likely to lead to any positive result...'

The essential point of this internal disagreement is that it confirms the Foreign Minister's adherence to the old persuasion. The fact that the President and Water Minister saw fit to deny their informal understandings with India about the Nepal meeting suggests that they recognised that their foreign minister was still an adherent of the old line.

The significance of the foreign minister's position is emphasised in the analysis of a senior Indian negotiator who believes an agreement was within reach:

My personal view is that we could have done something if Anisul Islam Mahmud had been backed politically and if Humayun Rashid Chowdhury had not taken a different line. I think a long term agreement could have been negotiated. Not on Anisul Islam Mahmud's figures but we could have compromised.

(Interview)

7. The effects of the 1988 floods on river development proposals

In 1987 and 1988, the annual monsoon floods were unusually severe. In 1988, the extent of the floods, and the international coverage given to them, generated widespread concern and led to the preparation of several technical reports (noted in footnote 2) on the flood problem. At the same time, the expressions of concern and the immediate material response of the Indian government, created new opportunities for negotiation about river development between the governments of India and Bangladesh. The President of Bangladesh also used the occasion of the floods to visit all the riparian states, including China, for talks about river cooperation.

At the time of writing (January 1990), concern about floods has transcended most other water development objectives in Bangladesh. Whilst the need to reach agreement with India on the sharing and development of joint rivers remains one of the principal concerns of Bangladesh foreign policy, the issue of flood control has been the focus of governmental activity in this sector since October 1988.

Both the New Line and the Old Persuasion gain expression in discussions about flood policy. In this context, the proponents of the

New Line argue that feasible flood control remedies must primarily be sought within the borders of Bangladesh. Whilst the headwater reservoirs of the old proposal may have some part to play in the future, the delays of international diplomacy and a careful consideration of the contributions from reservoirs under plausible management policies suggest that their role in flood control will be slight for the foreseeable future. The proponents of the New Line therefore concentrate on engineering and social measures within Bangladesh.

The Old Persuasion is reflected in statements that flood control can only be achieved through regional cooperation and the construction of headwater reservoirs. Newsweek (1989) reported the insistence of a senior Bangladesh diplomat:

"any long-term, real solution to the problem here has to be regionwide. That mean's India's got to be involved".

This old line is also widely expressed through blaming India and the management of the Farakka Barrage for the floods. Statements of the President, government Ministers, newspapers and widespread popular beliefs all contribute to this explanation of the floods. It states that India has caused or increased the flooding in Bangladesh by releasing water stored by the barrage. This explanation rests on a misunderstanding about the nature of the control over river flow exerted by a barrage. Unlike a dam built in a steep-sided valley, the storage potential of the pool behind a barrage (built across the rivers course through plain lands) is slight. During the flood season, the Indian government has no option but to open almost all of the 105 gates of the Farakka Barrage. To do otherwise would threaten almost immediate flooding of West Bengal. The myth of the malign impact of Farakka, nevertheless, persists.

The focus of the New Line on measures to be implemented within Bangladesh is reflected in the international technical reports on flood policy. The three main proposals can be most simply understood as positions on a continuum between complete control of flooding and measures of adaptation allowing the population of Bangladesh to "live with floods". The report of the French Consortium (1989) is closest to the complete control of flooding end, with a plan to build embankments along the Ganges and Brahmaputra throughout most of their length in Bangladesh. The report of US consultants (ISPAN, 1989) gives best expression to the other end of the continuum. The report of UNDP (1989) and the government of Bangladesh falls somewhere in the middle of the continuum. None of the reports favours the project of the Old Persuasion, headwater reservoirs and regional cooperation.

The impetus for international assistance to flood management in Bangladesh given by the meeting of the Group of Seven industrialised nations in Paris in July has propelled evaluation of alternative flood schemes. A World Bank - coordinated assessment of alternatives has helped establish a consensus around the potential contribution to be made by the portfolio of schemes for "controlled flooding" proposed by the joint UNDP, government of Bangladesh report. This approach combines flood plain zoning with judicious flood protection (and controlled flooding) for some areas and river-training measures. In the

combination of flood plain zoning and controlled flooding, the UNDP and government of Bangladesh team proposed an innovative solution which built on Chinese experience.

Whilst these international technical discussions were taking place, there have been negotiations with India about flood control. These talks have proved more modest in their scope and achievements than the initial objectives discussed by the heads of government in the immediate aftermath of the 1988 floods. No progress has been made on headwater reservoirs or regional cooperation. Even attempts to improve the warning time given by joint flood forecasting have made little progress (foundering on the objection of Indian technicians that longer lead-time flood warnings will be of inadequate reliability). Progress has been made on provision of real-time flood warning data, coordination of embankments for minor joint rivers and making arrangements for India to sell stone (for river training) to Bangladesh.

The World Bank's coordinator on this issue, summed up the consensus of aid donors to Newsweek:

"This is a very delicate matter, but there's an awful lot Bangladesh can do on its own in the next five years, so let's get on with it".

8 Conclusions

This paper has described some of the difficulties arising from attempts to change from one package of diplomatic and technical ideas to another. In this case, the New Line coming from Bangladesh offered significant advantages for both sides. For the Bangladesh government, the New Line promised a favourable resolution of its most important foreign policy dilemma. For the Indian government too, there were significant advantages to settling on those terms. Why then did the initiative fail?

On at least two occasions, the principal negotiators believe they came close to agreement. In mid-1983 Bangladesh minister Obaidullah Khan came close to an agreement which would have recognised the engineering proposals of the new line. The President was cautious and a meeting of generals failed to back the new line. In late 1986 and early 1987 both the Bangladesh water minister and a senior negotiator for the Indian government believe they were close to agreement.

In late 1986 the Technical Committee of the Joint Committee of Experts did agree that the engineering proposals of the new line were feasible. On the Bangladesh side this agreement was backed up by the substantial pre-feasibility studies of the Expert Studies Group and its international advisers. Substantial technical investigations were also mobilised by the Indian government. This low-level intergovernmental agreement on the engineering part of the new line was not, however, matched by diplomatic agreement even though senior negotiators on both sides believe they were close to agreement. The factors which hampered agreement suggest lessons for the future.

In neither of the two 'windows' did the Bangladesh minister promoting the new line succeed in gaining support for his proposal within the Bangladesh cabinet. Both Obaidullah Khan and Anisul Islam Mahmud thought they had the support of the President. When it came to wider discussions, they did not carry the cabinet. In 1983, Obaidullah Khan found his proposals blocked in part by the perception of key generals that the proposals played into the hands of the Indian government. Similarly, in 1987, Anisul Islam Mahmud failed to carry the cabinet even to the point of gaining a full hearing for the new line. Mahmud may be correct in his perception that this failure was not fatal for the new line. It is, however, symptomatic of the very narrow circle to which discussions of the new line had been confined.

Two further factors within the Bangladesh government may have contributed to the fragility of the new line. One is the opposition of the foreign minister, the other, opposition from technical (i.e. water ministry) officials. The opposition of technical officials during the time Obaidullah Khan was leading the Bangladesh negotiating team was such that he suggests technical experts be excluded from future negotiations. A similar implication can be drawn from the senior Indian water official's frustration that the newly formed Joint Committee of Experts 'arose out of the new approach, but once again fell into the old positions'. There can be no doubt, indeed some of the key officials will informally confirm, that the attempt to negotiate a new approach through institutions composed of individuals closely associated with old positions, hampered the progress of the new line. By 1986, however, the technical team on the Bangladesh side was dominated either by proponents of the new line or by converts, and it was the foreign minister and others outside the government sustaining the old line.

Perhaps the most important weakness of the new line strategy arose from Anisul Islam Mahmud's decision to sustain an 'official' line concurrently with the informal new line. We have seen that this created confusion and space for opposition on both sides of the discussion. This decision to maintain a level of secrecy about the new line contributed to delays in the discussion and ultimately allowed discussion to founder. Impeccable sources suggest that Mahmud considered that this secrecy was necessary to protect the president from blame should a high risk political strategy fail.

When the leaders of both governments were forced to turn their attention to other pressing issues, the informality and ambiguity of discussions over the new line proved too fragile a base for sustained discussion. It may be possible for progress toward a settlement to be resumed when the legitimacy of both governments is renewed, immediate irritants in inter-state relations are removed and when key figures in both governments attempt bold initiatives. On the Indian side, some of these conditions were met at the end of 1989 by the election of the VP Singh government. For new initiatives to proceed on stronger foundations, however, discussion of the complex issues and possibilities of river development needs to be extended to a wider community on both sides of the border.

These experiences emphasise the role of democratic support in the making of international agreements. As Rehman Sobhan has written:

"...In its present social configuration the very weakness of the smaller countries [in the South Asian region] make them reluctant to make concessions in bilateral negotiations with stronger neighbours lest this be interpreted by domestic opponents as a sign of weakness. Regimes with weak democratic credentials are particularly sensitive to accusations at home, of succumbing to the pressures of a 'big brother'.

(Sobhan pp50 - 1)

References

Abbas BM 1982 The Ganges Waters Dispute, University Press, Dhaka

Bangladesh 1978 Proposal for the Augmentation of the Dry Season Flow of the Ganges. Ministry of Flood Control and Water Resources, Dhaka.

Bangladesh 1983 Updated proposal

Bangladesh JRC 1984 The Ganges Waters Issue, Ministry of Water Resources, Dhaka.

Begum, Kurshida 1988 Tension over the Farakka Barrage: A techno-political tangle in South Asia Steiner Verlag Wiesbaden GMBH.

Crow 1980a 'The politics and technology of sharing the Ganges' PhD thesis, University of Edinburgh.

Crow 1980b 'Why are the Ganges and Brahmaputra undeveloped?' Journal of Concerned Asian Scholars

Crow 1982 'Appropriating the Ganga: the advance of India's rich peasants' Economic and Political Weekly

Crow 1985 'The making and the breaking of agreement on the Ganga' in J Lundqvist et al Strategies for River Basin Management. D. Reidel. Dordrecht, Holland.

French Engineering Consortium, Prefeasibility Study for Flood Control in Bangladesh. 1989

India, 1978 Proposal for Augmentating Dry Season Flow of Ganga, Ministry of Agriculture and Irrigation, Delhi,

India, 1983 Updated proposal

International Engineering Company (IECO) 1964. Master Plan East Pakistan Water and Power Development Authority.

Islam, M Rafiqul 1987 Ganges Waters Dispute: its international legal aspects, University Press, Dhaka.

JCE (Indo-Bangladesh Joint Committee of Experts) Technical Committee 1986 Report of the Technical Committee 12th November 1986.

JCE Bangladesh 1986 'Record of the discussion of the ministerial level meeting held in New Delhi on 13th November 1986' photocopy, Dhaka.

Kumar, Satish 1988 'India and the world - trends and events' in Kumar, Satish (ed) Yearbook on India's Foreign Policy 1985-6 Sage, New Delhi.

Newsweek 1989 "Bailing out Bangladesh - will the world's wealthy nations stem the floods?" 28 August 1989

Sobhan, Rehman "Political Dimensions of South Asian Cooperation: The Perspective for Bangladesh", BIDS Research Report No. 75, Dhaka.

UNDP (Government of Bangladesh and UNDP), 1989. Flood Policy Study: Draft Final Report to the Government of Bangladesh and the UNDP.

US government 1989 Eastern Waters Study: Report to Congress (Rogers, Lydon and Seckler) ISPAN, Arlington, Virginia.

World Bank 1972 Land and Water Resources Sector Study, (9 volumes), Washington DC.

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