

Chapter 12

Chronology of Events

An account of the gradual deterioration of the Bhagirathi-Hooghly, the expert opinions as regards deterioration of this river and also the Calcutta Port activities, events leading to the disputes and misunderstandings between the two countries, India and Bangladesh (earlier East Pakistan) on the sharing of the Ganga waters from the beginning, the meetings at technical as well as political levels, the political and administrative changes in two countries and developments according to the passage of time etc. can now be brought out in statements for better understanding. The statements have been prepared on five different topics as noted below:

1. Deterioration of the Bhagirathi-Hooghly.
2. Suggestions for resuscitation of the Bhagirathi-Hooghly.
 - i) Before India's Independence.
 - ii) After India's Independence.
 - iii) Adverse views.
3. Construction of Farakka Barrage.
4. Negotiations on the sharing and augmentation of the Ganga water.
 - i) With Pakistan (1947–1971).
 - ii) With Bangladesh (1971–1977).
5. On the Agreement, Memorandum of Understandings (MOUs) and Treaty.

Deterioration of the Bhagirathi-Hooghly

Individual/Agency	Month/Year	Comments
Tavernier (Italian Traveller)	January 1666	Saw the mouth of the Bhagirathi by boat, closed by sand bank.
Halwell	1756	On way to Murshidabad by boat, was detained by shallows at Shantipur below the confluence of the Bhagirathi and the Jalangi.
Renell	1781	The Cossimbazar river (i.e. Bhagirathi) is almost dry from October to May and the Jalangi (although one of its streams runs the whole year) is, in some years, non-navigable in two or three of the driest months.

Individual/Agency	Month/Year	Comments
Colebrook	1801	The Gorai and the Chandni were the only navigable channels throughout the dry season, the Bhagirathi and the Jalangi could not be relied upon for navigation (the Chandni and the Churni may be the same river).
H. Piddington, Member, Hooghly Commission, 1853–1854	1853	Most strenuous efforts should be made and every means used and every experiment tried to ensure a copious supply of water for as many months in the year as possible at the heads and along the courses of the three main feeders of the Hooghly
The Bengal Chamber of Commerce	1853	The most difficult and dangerous state of the navigation of the Hooghly, which threatens at no distant period to render access to the port of Calcutta altogether impracticable for any vessels but those of smallest tonnage, is not far off.
Major Long	1948 and 1954	The mouths of the Bhagirathi and the Jalangi remained un-navigable.
Capt. Sherwill	1857	The Bhagirathi, the Mathabhanga and the Jalangi are not navigable. The Gorai is becoming broader every year, its fierce current is rapidly cutting its banks and in a few years, it is likely to absorb the greater portion, if not all, of the water from the Poddah (Padma).
Prestige Franklin	1861	Both the Bhagirathi and the Jalangi mouths are cut off from the parent river, the Ganga for most part of the year. The government is anxious to keep the Mathabhanga mouth open so as to have a good water communication between the Hooghly and the Ganga in all seasons of the year.
Ferguson	1863	There was a good chance that the action of the Brahmaputra would send the Ganga down the Gorai, the upper Kumar (i.e. Mathabhanga) and the Chandra (east of the Gorai).
H. Leonard (Superintending Engineer, Public works Dept.	1865	It is difficult to come to any other conclusion than that the Hooghly must deteriorate, however slowly, considering the agencies at work on the river.
G. Robertson	1872	The condition of the Hooghly has been gradually deteriorating, day by day.
Vernon Harcourt	1896	The Hooghly is a fairly stable river, undergoing indeed considerable fluctuations in depth at some places, according to the seasons and the volume of freshets but free from any general deterioration in its condition between Calcutta and the sea. Unless some unexpected change of the course of the Ganga should occur, so as to deprive the Nadia rivers of their annual supply and thereby materially reduce the discharge of the Hooghly, or unless the occurrence of some seismic, or cyclonic disturbance should alter the existing conditions unfavourably, there is every prospect that provided the two obstructions in the river can be removed and some improvements effected in the estuary, the Hooghly will provide in the future a considerably better waterway between Calcutta and the sea than it has done in the past.

Individual/Agency	Month/Year	Comments
Committee, appointed by the Port Commissioners	1902	The Bhagirathi-Hooghly has gradually deteriorated from its confluence with the river Padma to Calcutta.
Major Hirst	1914–1915	The present regime of the river is wholly insecure and the forces controlling it are so powerful that any artificial interference would be futile and that the river has deteriorated to such an extent as to be a menace to the port of Calcutta.
H. G. Reaks (River Surveyor)	1919	In spite of the trade in Calcutta Port increasing substantially since 1830 because of the replacement of sailing vessels by tugs and steamers, provision for greater facilities for navigation in the river in the way of plans, buoys, marks, good information network etc. and also greater frequency of surveys, the general deterioration of the Hooghly continued.
Man Singh Committee	1952	Condition in the Hooghly between Nabadweep and Calcutta has deteriorated.

Suggestions etc. for Resuscitation of the Bhagirathi-Hooghly

i) Before India's Independence

Organization agency/government	Year	Observations
Govt. of India	1831	Vessels coming to Calcutta Port could avoid the silting Hooghly and use a ship canal up to the head of the Matla river, as recommended of by two committees in 1853 and 1863. A new port was constructed at Canning on the Matla with railway connection with Calcutta. Construction of jetties was completed and of warehouses commenced. The port was opened and used by a few vessels but owing to various reasons, mainly financial, the scheme was abandoned in 1866.
Calcutta Port Commissioners	1860–1910	Undertook small schemes, such as, diversion of tributaries, spurs and bundelling, dredging etc. were drawn and some of them executed for increasing the draft in the Hooghly.
Sir Arthur Cotton, British Engineer	1858	If additional water is thrown into the Hooghly and kept flowing down during the dry season, it might make just the difference needed to prevent the Hooghly from silting.
Stevenson-Moore Committee	1916–1919	Headwaters of Nadia rivers were silting; this would decrease the navigability of the Hooghly. It recommended diversion of the Ganga water.

Organization agency/government	Year	Observations
H. G. Reaks	1919	The Hooghly channels are capable of considerable improvement, provided the river is kept in a healthy condition by maintaining fresh water supply from Nadia rivers and their tidal volumes; on these two factors depends the existence of a satisfactory waterway for deep-drafted vessels to and from Calcutta Port.
Sir William Willcocks, British Engineer, in 'Restoration of Ancient Irrigation of Bengal'	1928	Suggested building a barrage below the head of Boral river for heading up water and generating flow through the Bhagirathi, the Jalangi, the Mathabhanga, the Gorai and the Boral to ensure overflow irrigation in the adjoining land of Bengal.
T. M. Oag, Deputy River Surveyor, CPC	1930	Recommended additional supply of water at the head of the Hooghly to prevent silting of the bed.
A. Webster, Chief Engineer, Calcutta Port	1946	Recommended construction of a barrage across the Ganga for diversion of 10,000 cusecs of water as well as dredging and river-training in lower reaches.
M/s. Rendel, Palmer and Triton, Consulting Engineering Company	1946-1947	Proposed a ship canal to link Calcutta Port with Diamond Harbour, lower down the Hooghly. Its construction was a feasible feat and no difficulties were envisaged beyond those, normally associated with such projects.

ii) After India's Independence

Individual/Committee etc.	Year	Observation
Man Singh Committee	1952	Condition of the Hooghly river between Nabadwip and Calcutta has deteriorated. Suggested additional supply of water at the head of the Hooghly and favoured construction of a barrage at Farakka for diversion of water.
S. C. Majumder, Chief Engineer Central Water and Power Commission in 'Ganga Barrage and the Bhagirathi-Hooghly river problems'	1953	The Bhagirathi now remains cut off from the Ganga except during flood and would have remained so in normal time but for flows from the western tributaries and tidal flushing in the lower reaches, assisted by the conservancy measures of the Calcutta Port. The Ganga Barrage Project, conceived at an estimated cost of Rs. 39.87 crores (398.7 million), aims to supply water perennially from the Ganga to the order of about 20,000 cusecs through the Bhagirathi for the benefit of the Calcutta Port.

Individual/Committee etc.	Year	Observation
Dr. I. W. Hensen, German engineer, in 'A Review of the problems of the port of Calcutta'	1957	(a) Long-term inter-connected changes have taken place in the Bhagirathi and the lower Hooghly, which have adversely affected the development of tides, the capacity of the Bhagirathi and the Hooghly, salinity, bores and the like. The discharge from the Ganga has decreased with the passage of time and the scouring effect of high freshets has decreased with time and will go down even more with further reduction of flushing. (b) The best and only technical solution is construction of a barrage across the Ganga at Farakka, which would stop long-term deterioration in the Bhagirathi-Hooghly and possibly lead to gradual improvement.
K. K. Framji, Chief Engineer, Ganga Basin Organisation in 'The Farakka Barrage Project: The fulfilment of a dream'	1975	The over 100-year delay in taking up the project barrage was never on account of any doubt about its usefulness, or importance but of unreasonable fear. Sir Arthur Cotton's plan was thwarted by the then governor of Bengal, Sir George Campbell. 'I was perhaps a little afraid of once letting in Sir Arthur Cotton and his schemes, for I did not know when we should get them out again.' Similarly, baseless fears of the possible adverse consequence of the irrigation and flood control interests in the areas downstream of the barrage in the then East Pakistan led to indefinite stalling of the project since 1951.

iii) Adverse Views

Expert/Agency	Year	Comments
Kapil Bhattacharya, Superintending Engineer, I & W Directorate Govt. of W. B. in 'Silting of Calcutta Port'	1961	The deterioration of the Hooghly was caused not by a natural decline of the river's headwater but after building dams on the Damodar and the Rupnarayan, the two of its western tributaries. He said, the Farakka Barrage, proposed on the Ganga under the pressure of misguided public opinion, will cause disaster in Bihar and West Bengal, because it was the wrong river to tackle to save Calcutta Port and resuscitate the Bhagirathi-Hooghly. It is the Rupnarayan which should be tackled. In spite of my warnings, the Damodar Valley Project has been implemented without taking into consideration flood-tides and tide-borne silts into the Runarayan and the lower Hooghly. As a result, the Calcutta Port has been killed and the main drainage channel (The Hooghly) . . . choked, causing repeated flood-havoc on an ever-increasing scale. If my warnings against Farakka Barrage are not heeded, people will have to suffer consequences.

Expert/Agency	Year	Comments
Prof. Arthur T. Ippen and Clarence F. Wicker (USA), engaged by Pakistan government in 'The Hooghly River Problem'	1962	They doubted, if flushing with fresh water will be beneficent and held that at least some of the observations, made of the Hooghly suggest the opposite. They thought, the sedimentation in the Hooghly was caused by a 'crucial variable', i.e., salinity. Some of their other conclusions were as under. Fresh water diversion into the Hooghly would not remove silt but is likely to attract more. The present dredging practices were contributing to silting in the Hooghly, requiring more dredging. It is unlikely that economic benefits would justify the cost of the barrage, whether siltation improved or not. The salinity intrusion in relation to fresh-water flow increased siltation in the Hooghly. The complex of problems for the preservation of Calcutta Port has not received adequate technical investigation by model studies, simulating mixing and penetration of salinity into fresh water.
S. R. Basu and S. C. Chakravorty, Geologists	1969	We are not suggesting that Farakka Barrage will, or will not solve the basic malady of the port economy of Calcutta. We only want to emphasise that there is no objective reason to believe that a project like Farakka can at all reverse the process of decay of the Bhagirathi, or at least hold it suspended. If we wish to resuscitate the Bhagirathi, then let us do it in a civilized way by first understanding the source of ailment and then by helping it to overcome the malady in the way it is capable of doing. We cannot let the ravages of soil erosion go unabated in all the thalwegs of the right-bank tributaries while expecting the Bhagirathi to clear the bed.

Construction of Farakka Barrage

Year	Events
1947	The West Bengal Government starts investigation for the Ganga Barrage Project. Field surveys conducted and a preliminary report prepared.
1949	Investigations are taken over by the Government of India.
1952	An Expert committee, headed by Man Singh, reviews model studies and recommends a barrage project.
1952–1958	Outcry in Lok Sabha (the lower house of India's Parliament) by West Bengal MPs.
1956	A separate cell created in the Central Water and Power Commission, New Delhi for investigation, planning and design of the Farakka Barrage Complex.
1957	Dr. Walter Hensen is invited by the Government of India to review the preliminary report; after review, he recommends that India can go ahead with the project.

Year	Events
1958–1960	Long debate in Indian Parliament on the deterioration of the Bhagirathi-Hooghly, Calcutta Port activities and on the need for a barrage. K. K. Framji joins the Ganga Barrage organization as its head and starts a scientific study of the problem by examining the reports of the past expert investigations and the recommendations thereon. He recommends that in 1960 that the construction of the Farakka Barrage may immediately be started.
1960	Prime Minister J. L. Nehru assures Dr. B. C. Roy, Chief Minister of West Bengal that the project would be included in the ongoing Five-Year Plan. Administrative approval and financial sanction of the project for about 590 million rupees given by the Government of India and green signal given for construction of the barrage and other allied works. Ganga Barrage Field Investigation Circle formed and field surveys started.
1961	National Development Council includes the Farakka Barrage Project in five-year plan. Pakistan is informed that the work on the project has started. A high-power control board is formed, headed by the Union Minister of Irrigation and Power, constituted with the Government of West Bengal Minister of Irrigation and Waterways as Deputy Chairman, the Union Ministers of Railways, Transport and Finance, the Calcutta Port Commissioners as members and the Chief Engineer of the Project as Member-Secretary. A Technical Advisory Committee (TAC) of the Project formed with experts from all over the country as chairman and members. R. B. Chakravarty, an engineer of repute from the irrigation department of the Government of West Bengal appointed Chief Engineer of the project.
1962	The Calcutta Port Commissioners set up a Hydraulic Study Department to carry out investigation and improvement works in the Hooghly and its estuary.
1963	The barrage site is selected by Dr. K. L. Rao, Union Irrigation and Power Minister. Debesh Mukherjee joins as Chief Engineer of the project in place of R. B. Chakravarty. The Farakka Barrage Project office starts functioning from Kolkata.
1964	The project office is shifted to Farakka. The construction of the barrage starts.
1965–1967	Three bays, No. 1 to 3 and the head regulator on the right bank and bays No. 109 to 101 from the left bank completed. M/s. Hindustan Construction Company (HCC) starts work from the left bank and the National Projects Construction Corporation (NPCC) starts work from the right bank. M/s. Jessop & Company is entrusted with all structural steel works, like gates, hoists etc. Excavation work of the feeder canal is started by M/s. Tarapore & Company and M/s. G. S. Atwal & Company. Navigation lock work started by the NPCC.
1966–1967	Bays No. 100 to 78 from left bank completed. Navigation lock work suspended. Works on Jangipur barrage.
1967–1968	Bays No. 77 to 53 from left bank and Bays No. 4 to 12 from right bank completed.
1968–1969	Bays No. 13 to 52 completed.
1967–1970	Erection of steel gates completed.
1964–1975	Feeder canal excavation including the bridge work at RD 62 (Pakur Road bridge) completed in April 1975.
1975	On 21st May, the barrage is dedicated to the nation by Jagjivan Ram, Union Ministry for Irrigation and Power.
1987	Navigation Lock commissioned by Rajiv Gandhi, Prime Minister of India.

Negotiations on Sharing and Augmentation of the Ganga Water

i) With Pakistan (1961–1971)

Year	Events
1961	<p>Pakistan formally told by India that the Farakka Barrage Project was going ahead. A meeting between Ayub Khan, President of Pakistan and J. L. Nehru, Prime Minister of India is held in London.</p> <p>The 3rd expert-level meeting is held in Kolkata.</p> <p>Discussions are held in Indian Parliament about the Project. The <i>Lok Sabha</i> (Lower House) is told that the project would go ahead, in spite of objections by Pakistan.</p> <p>The 4th expert-level meeting is held in Dhaka.</p>
1962	Pakistan proposes a meeting at the ministers' level on the Farakka barrage.
1963–1964	<p>A joint survey is conducted for the river banks in the border area.</p> <p>Pakistan repeats proposal for a meeting at the ministers' level. J.L. Nehru, Prime Minister of India died.</p>
1965	<p>A war between India and Pakistan breaks out; Pakistan is defeated.</p> <p>Lal Bahadur Sastri, Prime Minister of India dies.</p>
1967	<p>Pakistan raises the dispute in 'Water for Peace' conference in the USA.</p> <p>Pakistan makes a request for an expert-level meeting on the Farakka Barrage.</p>
1968	<p>The 5th experts' meeting is held in New Delhi. Pakistan insists on a minister level meeting.</p> <p>Russia's Prime Minister, V. Kosygin writes to Indira Gandhi, urging an Indus-like settlement of the Ganga dispute.</p> <p>Pakistan raises the issue at the UN General Assembly meeting in New York.</p> <p>The 1st Secretary-level meeting is held in December in New Delhi.</p>
1969	<p>The 2nd Secretary-level meeting at Islamabad ends in deadlock.</p> <p>The 3rd Secretary-level meeting is held in New Delhi.</p> <p>President Ayub Khan of Pakistan toppled by General Yahya Khan.</p>
1970	<p>The 4th Secretary-level meeting is held in Islamabad.</p> <p>Jai Prakash Narayan, a Gandhian leader and others urge an Indus-like settlement.</p> <p>The 5th Secretary-level meeting is held in New Delhi.</p>

ii) With Bangladesh (1971–1977)

1971	<p>Independence movement starts in East Pakistan. India intervenes in the liberation struggle. After a 14-day war, Pakistan surrenders to India at Dhaka. East Pakistan is renamed as and the Republic of Bangladesh.</p> <p>Khandakar Moshtaque Ahmed assumes power as the acting President of Bangladesh.</p>
1972	<p>Liberation struggle leader, Sheikh Mujibar Rahman is sworn in as the first Prime Minister of Bangladesh on 12th January.</p> <p>The Indo-Bangladesh Treaty of Friendship, Co-operation & Peace is signed in New Delhi at the end of the meeting between Indira Gandhi and Mujibar Rahman in March. The Treaty, to remain valid for 25 years, specially provides for joint studies and action in flood control, development of the river basin, generation of hydro-electric power and irrigation.</p>

Year	Events
1973	<p>A Joint Rivers Commission (JRC) is formed in April and the Water Resources Ministers of India and Bangladesh, Dr. K. L. Rao and Khondakar Moshtaque Ahmed, respectively, sign the statute of the JRC in November. It includes joint efforts in maximizing the benefits from common rivers and joint studies of flood control and irrigation projects.</p> <p>The first JRC meeting is held in June and the 2nd in December.</p> <p>A meeting between Sardar Swaran Singh, India's Minister of External Affairs and Khondakar Moshtaque Ahmed, President of Bangladesh in July in New Delhi decides that the final decision on the sharing of the Ganga water would be taken by the Prime Ministers of the two countries. In a press release, India promises not to operate the Farakka Barrage unilaterally, without agreement.</p>
1974	<p>The Foreign Secretaries of the two countries meet in Dhaka twice, in January and February.</p> <p>A tripartite meeting of India, Bangladesh and Pakistan in Simla in April resolves many sub-continental problems but not the Farakka issue. The Prime Ministers issued a joint Declaration that there would not be enough water to meet the needs of the two countries.</p> <p>The two Prime Ministers took note of the fact that the Farakka Barrage Project would be commissioned before the end of 1974. They recognized that during the periods of minimum flow, there might not be enough water to resuscitate Calcutta Port and meet the requirements of Bangladesh. Therefore, the fair weather flow of the Ganga in the lean months would have to be augmented to meet the requirements of the two countries.</p> <p>Indira Gandhi and Sheikh Mujibar Rahman meet in New Delhi in May and give a mandate to the JRC to discuss augmentation of the Ganga flow.</p> <p>Six meetings of JRC, held between June and December, discuss alternative ways of augmenting the lean-season flow in the Ganga.</p>
1975	<p>Jagjivan Ram, India's Minister for Agriculture and Irrigation and Abdur Rab Serniabat Bangladesh's Minister for Water and Power meet in New Delhi in February to discuss the water-sharing issue. They meet again in April and reach an interim understanding that India could divert small quantities of water for 40 days until the end of May.</p> <p>The Farakka barrage is commissioned on 21st May.</p> <p>Sheikh Mujibur Rahman is assassinated along with many of his family members on 15th August in a military coup.</p> <p>Sheikh Zia-ur-Rahman becomes the President through another coup in November.</p>
1976	<p>Bangladesh protests to India in its continued withdrawal of water at Farakka; exchange of protests continues. The relation between the two countries goes under strain after the assassination of Prime Minister Mujibar Rahman. The spirit of co-operation and trust which developed during Mujib's regime changes to suspicion and mistrust after the change of government in Dhaka.</p> <p>Maulana Bhasani, a peasant leader of Bangladesh, asks India to dismantle the Farakka barrage and organizes a protest march with more than a 100 thousand people within Bangladesh territory in May but withdraws it at the last moment.</p> <p>Bangladesh tries to muster international support against withdrawal of water by India through the barrage, unsuccessfully; only China and Pakistan back it.</p> <p>Bangladesh tries to raise the issue in the United Nations General Assembly in August.</p> <p>Rear Admiral M. H. Khan of Bangladesh meets Indira Gandhi in September but they reach no conclusion.</p> <p>Bangladesh places the Farakka issue in the agenda of the 31st session of the General Assembly on 21st August and again in a modified form on 8th September.</p>

Year	Events
	<p>No elaborate discussion on the Bangladesh allegation is held on 24th November in the General Assembly, because of lack of consensus among the members. Bangladesh and India agree to abide by a consensus text, to be worked out by a group of non-aligned countries.</p> <p>The General Assembly adopts the final text which recognizes the urgency of the situation and agrees to facilitate an atmosphere, conducive to the successful outcome of the negotiation between the two countries. It also offers to both the countries the option to again raise the issue at the 32nd session.</p> <p>The meeting between the two governments in Dhaka and New Delhi remain inconclusive.</p>
1977	<p>The Congress Party led by Mrs. Indira Gandhi is defeated in the General Election of India in March and Janata Party, led by Morarji Desai comes to power.</p> <p>Jagjivan Ram, Defence Minister of India and Rear Admiral M. H. Khan of Bangladesh meet in Dhaka in April, where an understanding is reached on sharing of water.</p> <p>Mutual confidence, which went low after Mujibar Rahman's death, is restored, when Morarji Desai and General Zia-ur Rahman meet in London during the Commonwealth Conference. Many outstanding bilateral disputes, including the sharing of the Ganga water are resolved.</p> <p>A draft agreement for sharing of the Ganga water is initiated in September and signed on 5th November by Surjit Singh Barnala, India's Minister for Agriculture and Irrigation and M. H. Khan of Bangladesh.</p>

Signing of Agreement, MOUs and Treaty, 1977–2000

Year	Event
1977	<p>An Agreement on sharing of water of the Ganga at Farakka between India and Bangladesh is signed on 5th November.</p> <p>The meeting between Morarji Desai and Zia-ur Rahman takes place in New Delhi on 19th December to discuss follow-up action on the Ganga Water Agreement.</p> <p>The JRC is upgraded to the ministerial level.</p>
1978	<p>Jimmy Carter, the President of the USA, while addressing Indian Parliament on 2nd January refers to the development of the waters of the eastern region and assures co-operation of the USA.</p> <p>James Callaghan, the British Prime Minister, offers his country's assistance in the development of the common rivers of India, Bangladesh and Nepal in a press conference in New Delhi on 9th January.</p> <p>The 14th meeting of the JRC held in Dhaka on 21st January, to discuss the best means of augmentation of the dry-season flow of the Ganga.</p> <p>The 15th meeting of the JRC is held in New Delhi on 5th July, attended by S. S. Barnala, India's Minister for Irrigation and Power. Bangladesh suggests associating Nepal in the augmentation scheme, which is rejected by India, as the JRC is a bilateral body.</p> <p>The 16th meeting of the JRC is held in Dhaka on 6th November and from 8th to 10th December in two sessions.</p>

Year	Event
1979	<p>India's Prime Minister, Morarji Desai visits Dhaka on 16th April and holds discussions on the Farakka issue and the augmentation schemes with Bangladesh authorities.</p> <p>The 17th meeting of the JRC is held in New Delhi from 8th to 12th May and in Dhaka from 16th to 20th November. India is represented by S. S. Barnala in New Delhi and by Chaudhury Brahm Prakash in Dhaka sessions and Bangladesh by Moudad Ahmed, Deputy Prime Minister. It sets up a committee to recommend formulation of draft terms of reference, jointly by the governments of India and Bangladesh to the Government of Nepal to identify specific areas where co-operation of Nepal is necessary and to recommend the method and manner of approach, keeping in view the Ganga Water Agreement of 1977.</p>
1980	<p>The 18th meeting of the JRC is held in New Delhi from 27th to 29th February and from 26th to 28th April. The Indian side is led by A. B. A. Gani Khan Choudhury, Minister for Energy and Irrigation and Bangladesh by Kazi Anwarul Haq, Minister for Flood Control. Jamaluddin Ahmed, Deputy Prime Minister of Bangladesh, attends the meeting in the second phase. The meeting is inconclusive.</p> <p>The 19th meeting of the JRC is held in Dhaka from 9th to 11th July. The Indian side is led by Kedar Pandey, Minister for Irrigation and Bangladesh by Kazi Anwarul Haq. This meeting is also inconclusive.</p> <p>The 20th meeting of the JRC is held in New Delhi on 30th and 31st August. The Indian side is led by Rao Birendra Singh, Minister for Irrigation and Bangladesh by Kazi Anwarul Haq. This meeting also fails to be conclusive.</p> <p>The first review meeting of 1977 agreement is held in Dhaka on 7th November where the two sides are led by Rao Birendra Singh and Kazi Anwarul Haq.</p>
1981	<p>The second review meeting is held in New Delhi from 7th to 9th January, led by the same ministers of two countries.</p> <p>The 3rd Review meeting is held in Dhaka from 2nd to 4th April under the same leadership. The impact of the sharing of the Ganga water at Farakka on the two countries and the reasons for the JRC's inability to recommend any long-term scheme are discussed but no agreement emerges.</p> <p>President Zia-ur-Rahman of Bangladesh assassinated on 30th May in a military coup. Justice Abdus Sattar assumes the charge of President.</p>
1982	<p>General Ershad takes charge of President of Bangladesh.</p> <p>The validity of the water-sharing agreement of 1977 expires on 4th November after the dry season.</p> <p>Bangladesh President, H. M. Ershad visits New Delhi in October and discusses the matter with Indira Gandhi, which led to the signing of a Memorandum of Understanding (MOU) of two years' validity.</p>
1983	<p>India's Irrigation Minister, Ram Nivas Mridha and Obaidullah Khan, Minister of Flood Control of Bangladesh discuss the proposal for all-river permanent water-sharing accord and makes some progress.</p> <p>In December, the two governments exchange updated technical proposals on the augmentation schemes.</p>

Year	Event
1984	<p>The validity of the MOU on the sharing of the Ganga water in the dry season expires in June.</p> <p>The 26th JRC meeting is held in March in Dhaka but finds no solution of the augmentation problem. The Bangladesh side of the JRC publishes a document which candidly admits the strength of criticism to its own as well as of the India's proposals.</p> <p>Mrs. Indira Gandhi, Prime Minister of India assassinated on 20th October and Rajiv Gandhi takes charge.</p> <p>Obaidullah Khan resigns from his post and is replaced by Air Vice Marshal Aminul Islam, a hard-liner against the Indian approach on the issue.</p> <p>The Bangladesh government publishes 'The Ganges Water Issue' in December in a strongly-worded re-statement of its earlier positions.</p>
1985	<p>Ramesh Bhandari, India's Foreign Secretary, goes to Dhaka in April to break the impasse with Bangladesh and get negotiations going again.</p> <p>Rajiv Gandhi visits the cyclone-affected site of Urir Char in Bangladesh and meets President Ershad there; both want progress on the river-water issue.</p> <p>New Delhi sends Ramesh Bhandari to Dhaka again along with a special envoy, Shiv Shankar in July to proceed further of the issue.</p> <p>The Commonwealth Heads of State conference is held in Nassau, Bahamas in October, where India and Bangladesh work out an agreement; Prime Minister Rajiv Gandhi and President Ershad formalize it with a communiqué.</p> <p>The 2nd Memorandum of Understanding (MOU) is signed on 22nd November by the Ministers for Irrigation and Water Resources of both countries to be valid for three years. It follows, by and large, the same principles of sharing of the Ganga water as the first MOU in 1982.</p>
1986, 1987	<p>A Joint Committee of Experts (JCE) is formed with the task of completing a joint study of alternatives for sharing and augmentation of water of rivers, common to India and Bangladesh.</p> <p>As many as nine meetings of the JCE along with some meetings of the technical sub-committee and two ministerial review meetings are held between August 1986 and May 1987, but they remain too inconclusive. However, a new approach emerges for construction of internal barrages and gravity link canals within Bangladesh.</p> <p>Prime Minister Rajiv Gandhi and President H. M. Ershad agree in July 1986 that the two governments should simultaneously approach Nepal for holding a meeting to discuss the water resources issue.</p> <p>Delegates of both the countries from the JCE go to Kathmandu and meet a team of Nepal government's Water and Foreign Ministry officials for three days in end-October 1986. The discussions are inconclusive on the questions of how Nepal would be benefited and how the Nepalese government would be included in the discussion.</p> <p>The India's Foreign Minister agrees to prepare a draft position paper of Nepal's role in river development in a meeting with the Foreign Ministers of Bangladesh and Nepal, which could lay down the logic behind 'joint approach' and the true meaning of 'mutual benefit', but the position paper never comes out.</p> <p>Anisul Islam Mahmud, Irrigation Minister of Bangladesh wants to discuss the entire proposal before the Bangladesh cabinet on 4th January, 1987 but it concluded mid-way.</p>

Year	Event
1988	<p>The Position Paper on Nepal was discussed by Indian Secretaries in March 1987, but remains inconclusive.</p> <p>The Water Resources Ministers of both countries are changed; no further development takes place.</p> <p>Indo-Bangladesh relation deteriorates.</p> <p>The validity of the JCE expires in November, 1987.</p> <p>Severe flood in Bangladesh in monsoon months.</p> <p>The validity of 1985 MOU comes to an end after the lean season.</p> <p>Two countries show no initiative to make any progress on the issue.</p> <p>Severe flood occurs again in monsoon months in Bangladesh. Two severe consecutive floods compel Bangladesh government to prepare several technical reports on flood problems.</p> <p>The Government of India responds favourably to expression of concern in Bangladesh which reopens the door for negotiation on river development between the two governments.</p> <p>President H. M. Ershad visits India, Nepal, China and Bhutan to discuss cooperation on river issues and flood control with their governments.</p> <p>Bangladesh media blame India and the management of the Farakka barrage and give extensive coverage to blames and allegations by politicians and the people of Bangladesh.</p> <p>None of the technical reports, prepared by a French consortium, the US consultants and the UNDP supports construction of head-water reservoirs and dams in Bangladesh; they stress regional co-operation for solving the flood problem in Bangladesh.</p>
1989	<p>President H. M. Ershad meets Prime Minister Rajiv Gandhi in New Delhi in October, where they agree on raising a joint task force on flood control. He also visits Nepal and China to discuss the same issue.</p> <p>The Congress Party, led by Rajiv Gandhi defeated in election and V. P. Singh takes charge of Prime Minister of India.</p> <p>There being no further development on sharing of the Ganga water, the relations between the two countries deteriorate further.</p> <p>India continues to release Bangladesh's share of water from Farakka barrage as per 1985 MOU.</p>
1990	<p>The JRC meets in April after three years.</p> <p>H. M. Ershad defeated in General Election of Bangladesh and Begum Khaleda Zia takes charge of Prime Minister.</p> <p>General Election held in India and Rajiv Gandhi assassinated during election process.</p> <p>The Congress Party back in power and P. V. Narsingha Rao assumes charge of Prime Minister of India.</p> <p>India continues to release water to Bangladesh from Farakka in the lean season too.</p>
1991	<p>The two governments are so preoccupied with many domestic problems that they give scant attention to the issue of sharing the Ganga water.</p> <p>The Prime Ministers of India and Nepal meet New Delhi in February to set up an Indo-Nepalese task force on economic co-operation.</p> <p>India continues releasing water from Farakka to Bangladesh in the lean season.</p>

Year	Event
1992	<p>New Bangladesh premier, Begum Khaleda Zia and Indian Prime Minister P. V. Narasimha Rao, meeting in New Delhi, agree to evolve a comprehensive and permanent plan on developing resources in all common rivers, including sharing and augmentation of the Ganga water at Farakka within a stipulated period. Indian premier promises not to cause hardship, or pose political problems to Bangladesh.</p> <p>A New Joint Committee of Experts (JCE) is formed at a ministerial-level meeting at Dhaka in August.</p> <p>The 1st meeting of JCE is held in New Delhi in November.</p> <p>India continues releasing water to Bangladesh during the lean season from Farakka.</p>
1993	<p>The 2nd meeting of the JCE, held in Dhaka in March, also makes no progress, causing great disappointment to Bangladesh Irrigation Secretary.</p> <p>India's Water Resources Minister and Bangladesh's Communication Minister meet in New Delhi in May and decide to high-level talks on the issue for an early solution. Bangladesh suggests involving Nepal in the discussions.</p> <p>Bangladesh's Jamaat-i-Islam party organises a huge rally in the dry bed of the Ganga near Hardinge Bridge in April.</p> <p>In the SAARC summit, held in April in Dacca, two Prime Ministers discuss the problems of sharing the Ganga water and press for an early solution. Both want short and long-term solutions.</p> <p>Both sides again discuss the issue in the NAM summit in Jakarta in September.</p> <p>In December, the Foreign Minister of India visits Dhaka and assures Bangladesh government for an early solution of the problem.</p> <p>India continues releasing lean-season flow to Bangladesh from Farakka.</p>
1994–1995	<p>In 1994, several high-level meetings are held between the two governments, but reach no solution. Both sides remain rigid on their respective stands.</p> <p>In the 8th SAARC Summit, held in April, 1995, the two Prime Ministers again discuss the problem of sharing the Ganga water at Farakka.</p> <p>The Foreign Secretaries of the two countries hold two meetings in New Delhi and Dhaka and discuss the issue.</p> <p>India continues to release water to Bangladesh at Farakka during the lean season.</p>
1996	<p>General Election held in both the countries. In India the Congress Party is defeated and the United Front led by H. D. Deve Gowda assumes power as Prime Minister.</p> <p>In Bangladesh, Begum Khaleda Zia's Bengal National Party is defeated and Sheikh Hasina Wazed of Awami League assumes power as Prime Minister.</p> <p>India continues to release water to Bangladesh from Farakka in the lean season.</p> <p>Indian Foreign Secretary Salman Hyder visits Bangladesh in July and hands over a letter from the Prime Minister to Bangladesh premier.</p> <p>Indian Foreign Minister visits Dhaka in July and discusses the issue of water-sharing of all common rivers with the Foreign Minister of Bangladesh.</p> <p>Both sides want a permanent solution before the next lean season.</p> <p>Bangladesh Foreign Minister visits Kolkata and New Delhi in September and discusses the issues with Jyoti Basu, Chief Minister of West Bengal and with the Foreign Minister of India in New Delhi.</p> <p>Jyoti Basu visits Bangladesh and discusses sharing of the Ganga water at Farakka.</p>

Year	Event
1997	<p>A 30-year Treaty on sharing of the Ganga water at Farakka is signed in New Delhi by Prime Ministers H. D. Deve Gowda and Sheikh Hasina Wazed, putting an end to the strained relations between the two countries on the issue.</p> <p>Sharing of water as per the formula in the new treaty starts from January in the presence of two observation teams of both countries at Farakka and at Bheramara (Bangladesh).</p>
1998–2000	<p>Very low lean-season discharge in the river results in severe bank-slips in the feeder Canal. The matter is reported to the Government of India.</p> <p>The NTPC Power plant, located at Farakka, is shut down for several days in the last week because of very low water-level in the feeder Canal.</p> <p>Sharing of water continues as per formula in the Treaty.</p> <p>Problem of low lean season discharge plagues the functioning of the NTPC in April 1998 and 1999.</p>
2001–2002	<p>Feeder canal bank-slips occur at some places, but no such problem is faced in the lean season of 2000, as low discharge in the river was just enough.</p> <p>Sharing of water continues as per formula in the Treaty.</p>
2003	<p>Meetings between the two countries and exchange of information continue.</p> <p>Mr. Hafizuddin Ahmed, Minister for Water Resources of Bangladesh attends JRC meeting in New Delhi. He visits Kolkata and Farakka Barrage which he considers as a bone of contention between the two countries as far as water distribution is concerned.</p>
2004–2008	<p>Sharing of water continues as per formula in the Treaty.</p> <p>Meetings between the two countries and exchange of information continue.</p> <p>Sharing of water continues as per formula in the Treaty.</p>