
Indus Water Treaty: the Negotiating Process

*by Asit K. Biswas, F. IWRA
76 Woodstock Close
Oxford OX2 8DD
United Kingdom*

ABSTRACT

For many arid and semiarid countries, international water bodies are the only new additional sources of water that could be economically developed to meet their ever increasing water requirements. Agreements between cobasin countries are necessary if such sources are to be developed promptly and properly. While some attempt is now being made to develop laws of nonnavigable uses of international watercourses, regrettably not enough attention has been paid thus far to review the negotiating processes that have led to successful water treaties. The present paper is an analysis of the negotiating process that resulted in the Indus River Treaty between India and Pakistan.

INTRODUCTION

It is increasingly being realized that water is one of the major constraints to development in arid and semiarid countries, where the availability of adequate quantity and quality of water for various uses has already become a very difficult problem. All the current trends indicate that the complexity and magnitude of this problem would increase significantly in the foreseeable future. Recent analyses indicate that only three countries in the Middle East — Turkey, Iran, and Sudan — could have per capita water consumption that would be higher than the currently accepted minimum because of supply constraints [1].

It is now evident that the water requirements in arid and semiarid countries would continue to increase in the foreseeable future, due to increases in both population and per capita water demand. Unfortunately, however, such countries are mostly unlikely to have very many new sources of water that could be developed economically. This is because nearly all the easily available sources of water have already been developed or are in the process of development [2].

Far many arid and semiarid countries, the only new sources of water that could be developed economically are the international water bodies. These water sources have not been developed in the past, primarily because of the political complexities associated with their utilization. However, as water scarcities in individual countries become more and more serious, a few countries may have no other alternative but to consider how best to use that resource, even

Development and management of international water bodies would become an increasingly critical issue

though it could mean resorting to a “beggar thy neighbour” attitude. Thus, development and management of international water bodies would become an increasingly critical issue in the 1990s and beyond.

After some three decades of comparative neglect, international water bodies have started to get more and more attention. However, the emphasis has often been on listing of treaties on various international watercourses, or on development of a possible framework convention under the aegis of the International Law Commission of the United Nations. Regrettably, very little, if any, attention has been paid to the negotiating processes used that have led to successful treaties on international watercourses. In order to fill this gap, the process used for negotiating one of the most successful treaties of the last four decades — the Indus River Treaty — is analyzed in this paper.

HISTORICAL BACKGROUND TO CONFLICT

Irrigation in the Indus Valley has been practised since prehistoric times. These, however, were small

scale projects, and the total extent of land irrigated, as to be expected, was somewhat limited.

The situation started to change dramatically from about the middle of the 19th century. A new era in irrigation was heralded in 1859, when the Upper Bari Doub Canal (UBDC) was completed. The canal irrigated about one million acres of land between the Ravi and Beas Rivers with the water from the Ravi. Sirhind Canal was completed in 1872. In addition to the construction of the new canals, many old canals were rehabilitated, extended and improved. Consequently, irrigated area in the Sind doubled from about 1.5 million acres to 3.0 million acres within a short period of 25 years, between 1875 and 1900.

Interstate rivalries over water were not a serious problem in the Indus Valley until after the First World War. For example, irrigation officers in Punjab recommended the concept of efficient utilization of water as early as in 1862 [3]:

“The best line for a canal is that from which the largest extent of country can be irrigated at the smallest cost, irrespective of the name or nature of the existing Government of the country in question.”

This concept was subsequently accepted by the Indian Government and the main recommendations of the Indian Irrigation Commission of 1901-1903 were based on this principle.

When new major irrigation projects like the Sutlej Valley, Sukkur Barrage, and Bhakra projects were proposed after the First World War to increase irrigated area in the Indus Basin, interstate concerns began to become an issue on the upstream-downstream water availability. The parties concerned in this dispute were the British-ruled provinces of Punjab and Bombay and the Indian states of Bahawalpur and Bikaner. It should be noted that Sind was a part of the Province of Bombay until 1935. Since at that time the Government of India and the Secretary of State for India in London had the authority to settle interstate water conflicts by an executive order, they did so by sanctioning Sutlej Valley and Sukkur Barrage Projects after discussions and consultations with the various parties concerned. The Bhakra Project could not be authorized because the reservoir would have inundated land in the princely state of Bilaspur, and the agreement of the ruler to the inundation was only obtained around 1945 [4].

The aforementioned authority by which the Government of India could resolve interstate conflicts by an executive order became invalid with the passage of the Government of India Act of 1935. This Act, which became effective from 1 April 1937, made water primarily a subject of provincial jurisdiction. Accordingly, provinces were empowered to develop their own water resources. Only when there was a dispute over an interstate river between two or more

provinces, and one province officially complained against the other, the Governor-General of India was empowered to intervene.

So far as the Indus River system was concerned, Sind became somewhat concerned over the potential impact of several new irrigation schemes that were being investigated for possible execution by Punjab. Subsequently, in October 1939, Sind formally requested the Governor-General of India to constitute a commission under the new 1935 Act referred to earlier to review their complaint that:

“the effect of Punjab’s new projects, when superimposed upon the full effects of its projects already approved or executed, would be to cause such lowering of water levels in the Indus River from May to October as would seriously affect the efficient working of Sind’s inundation canals; and

That the Thal and Haveli Projects would create a serious shortage of water at Sukkur in winter such as would interfere with the supplies required by the Sukkur Barrage Canals.”

The Indus Commission was set up in September 1941 under the chairmanship of Justice B.N. Rau. The Commission submitted its report in July 1942. The overall conclusion of the Indus Commission was that the withdrawals by Punjab were likely to cause material injury to the inundation canals in Sind, especially in the month of September. It also made some specific recommendations on the sharing of the Indus waters during the winter season. The findings of the Commission — not unexpectedly — were unacceptable to both the provinces. The stage was thus set to refer the dispute to the British Government in London for a solution.

As a last ditch effort, the Chief Engineers of the two provinces met informally between 1943 and 1945 to see if a mutually acceptable agreement could be reached by the two parties. In September 1945, the two Chief Engineers produced a draft agreement, but this could not be agreed to by the two provinces. Finally, in early 1947, it was decided to refer the dispute to the Secretary of State for India in London for a final decision.

The timing of the referral of the dispute to the British Government turned out to be inappropriate. On 15 August 1947, before any decision could be reached, creation of the two independent states of India and Pakistan made any further attempts to the conflict resolution by the British Government an irrelevant process. Furthermore, the Indian Independence Act of 1947 made conflict resolution more

The timing of the referral ... turned out to be inappropriate

difficult and complex since the eastern districts of Punjab became part of India whereas the western districts of Punjab and Sind became part of Pakistan. Prior to the partition of the Indus Basin in 1947, the conflict over the sharing of the waters of the Indus system was between two provinces of the same country. The partition of India meant that the two parties were no longer within one country, but parts of two new sovereign states, and not exactly on the most friendly terms with each other.

INDEPENDENCE AND THEREAFTER

Partition of India into two independent countries had to be carried out within a record period of only 73 days. In fact, when the Indian Independence Act was passed by the British Parliament on 18 July 1947, the boundary line that was to divide Punjab into two new countries was not even determined. Accordingly, the Punjab Boundary Commission was set up under the chairmanship of Sir Cyril Radcliffe to divide the province into East and West Punjab.

Drawing a boundary between two countries is a difficult task under the best of circumstances. In Punjab, the Commission found that the issue was:

“complicated by the existence of the canal systems, so vital to the life of Punjab but developed only under the conception of a single administration.”

Radcliffe contacted both the leaders of India and Pakistan, Nehru and Jinnah, with the idea that the “Punjab Water System should be a joint venture run by both countries” [5]. However, Radcliffe was:

“rewarded for his suggestion by a joint Hindu-Muslim rebuke. Jinnah told him to get on with his job and inferred that he would rather have Pakistan deserts than fertile fields watered by courtesy of Hindus. Nehru curtly informed him that what India did with India’s rivers was India’s affair. Both leaders were obviously furious with him and hinted that he was playing politics.”

Michel [6] later made an issue of this remark by Nehru. However, in a footnote Mosley added that: “It must in fairness be admitted that he (Nehru) modified this attitude later and subsequently became one of the prime movers in the agreement on River Waters which was signed between India and Pakistan in 1960.”

The Radcliffe Commission found it impossible to “preserve undivided the irrigation system of the Upper Bari Doab Canal,” the upper portion of which lay in India but the lower portion in Pakistan, and suggested that “a solution may be found by agreement between the two States for some joint control of what has hitherto been a valuable common service.” There was no immediate problem for the rest of the canal systems that supplied water to more than 95 per cent of the

total irrigated area [4]. Of these canal systems, 133 were in Pakistan and 12 in India.

With the rapidly deteriorating situation between the two new countries, the possibility of joint control of the Upper Bari Daab Canal (UBDC) was not a feasible solution. However, a temporary solution was found by each of the two Chief Engineers of West and East Punjab on 10 December 1947, to maintain the prepartition allocation on the UBDC and at Ferozepur. This “Standstill Agreement” was to continue until 31 March 1948, and it was stipulated that “a further agreement for any period subsequent to the aforesaid date” could be negotiated.

The “Standstill Agreement” worked satisfactorily for the duration it was negotiated. What precisely happened towards its end is hard to judge. Both Gulahti [4] and Rao [7] claim that either deliberately or accidentally West Punjab did not take any initiative until 31 March 1948, the date of expiry of the Agreement, to negotiate any further agreement. On 1 April 1948, India discontinued the delivery of water from the Ferozepur headworks to Dipalpur Canal and to main branches of the UBDC.

Chaudhuri Muhammad Ali [8], who was the Secretary-General of Pakistan at that time and who later became the Prime Minister, said of the event:

“On the side of East Punjab there was Machiavellian duplicity. On the part of West Punjab there was neglect of duty, complacency, and lack of common prudence — which had disastrous consequences on Pakistan.”

Michel [6], on the other hand, has suggested several other motives for the Indian action to discontinue delivery of irrigation water. Among the motives suggested were the following:

- i) put pressure on Pakistan to withdraw the “volunteers” from Kashmir;
- ii) certain Indian leaders wanted to “use every means at their disposal to wreck her (Pakistan’s) economy, to demonstrate that she could not succeed alone, and thus to bring her back to India,” and denial of irrigation water would expedite the process; and
- iii) retaliation by India for Pakistan’s imposition of an export duty on raw jute leaving East Bengal for processing in the jute mills of West Bengal.

Be that as it may, the incident of 1 April 1948 precipitated the formal dispute between the two countries over sharing the waters of the Indus System. Negotiations were soon under way, and on 30 April 1948 Prime Minister Nehru issued explicit orders to the East Punjab Government to resume water supply to the UBDC and to open the Dipalpur Canal.

It is difficult at present to identify the main reason or reasons for the 1 April 1948 incident. Since there were many actors involved, it is highly likely that

their motivations were not all the same. However, Gulahti [4] points out that some 17 months after the incident, Prime Minister Nehru took East Punjab Government and its engineers to task for “having taken the law in their own hands.”

An inter-Dominion Conference was held in New Delhi during 3-4 May 1948, and on 4 May, the two countries signed an Agreement, which assured Pakistan that India had no intention of suddenly withholding water from Pakistan without giving it time to develop alternate sources. Similarly Pakistan for its part recognized the natural anxiety of India to develop areas where water was scarce and that were underdeveloped when compared with parts of West Punjab.

There were some hard negotiations before the Delhi Agreement was signed. For example, India argued that since Pakistan had agreed to pay for water under the Standstill Agreement of December 1947, it meant Pakistan had recognized India’s proprietary right to water. Pakistan in its turn argued that payments were not for the water received, since it belonged to Pakistan anyway due to the right of prior allocation, but for the cost of operation and maintenance of the

It is highly likely that their motivations were not all the same

irrigation system. The Delhi Agreement did not specifically resolve this issue, but the West Punjab Government “agreed to deposit immediately in the Reserve Bank such ad hoc sum as may be specified by the Prime Minister of India.”

While Delhi Agreement temporarily solved the pressing issues, Pakistan was not happy with it. Consequently on 16 June 1949, Pakistan sent a note to India with the view that the “present modus vivendi (Delhi Agreement) is onerous and unsatisfactory to Pakistan,” and that another inter-Dominion Conference should be held early in order to make “an equitable apportionment of the flow of all waters common to Pakistan and India and resolving by agreement all disputes incidental to the use of these waters.” Furthermore, if “negotiations cannot accomplish such a practical solution, the International Court of Justice shall, upon application of either party, have jurisdiction to resolve the dispute.”

Many notes were exchanged between the two countries, some of which were at the highest government level. Overall, however, India was not agreeable to third party adjudication. For example, on 8 October 1950, Prime Minister Nehru wrote to the Pakistani

Prime Minister Liaquat Ali Khan suggesting an International Commission consisting of equal number of judges from both the countries. Nehru said:

“It is true that there is always a possibility of a lack of agreement between the members of the Commission, but if they are judges of the highest standing, they will consider the issues before them in a judicial spirit and are highly likely to come to a unanimous or majority decision. Even if they fail to agree, the area of difference will have been narrowed down by the measure of agreement reached and only the outstanding point or points of difference will remain to be dealt with. The two Governments could then consider the matter afresh, including the question of reference to a third party. To think, *ab initio*, of a third party will lessen the sense of responsibility of the judges and will also be a confession of our continued dependence on others. That would hardly be becoming for proud and self-respecting independent nations.”

It was quite clear that by 1950 the two countries had reached almost a dead end so far as any further progress on the sharing of the water of the Indus system was concerned. Among the disputed issues were the following:

- i) Pakistan claimed that the Delhi Agreement on 4 May 1948 was accepted under “compulsion” and “signed under duress.” To this claim Nehru replied to Mohammed Ali on 29 September 1954: “A more extraordinary statement I do not remember to have come across at any time. . . . It took two years for your Government to discover that the Agreement was signed under duress.”
- ii) Pakistan wanted to refer the canal water dispute to the International Court of Justice, but India preferred an, *ad hoc* tribunal with an equal number of judges “of the highest judicial standing” selected by both the countries.
- iii) There were some difficulties with the *ad hoc* sum that the West Punjab Government had to deposit with the Reserve Bank of India under the Delhi Agreement mentioned earlier.

With the brief exceptions of the winter of 1953-54 when the U.S.-Pakistan arms agreement was being negotiated and during an impasse in the final Treaty negotiations, India scrupulously observed the Delhi Agreement until 1960, when the new Treaty became effective.

By 1950 the two countries had reached almost a dead end

EXTERNAL INTERVENTIONS

The stalemate in negotiations may have continued for a much longer time, except for the arrival in India in February 1951 of David E. Lilienthal, former Chairman of the Tennessee Valley Authority (TVA), to write some articles for *Colliers* magazine. Lilienthal was an influential person, and Indians were very much interested at that time in a TVA type of river basin development, so much so that Prime Minister Nehru had invited him to come to India as his personal guest. It was Walter Lippman who suggested to Lilienthal that he also should visit Pakistan since the core of the Kashmir problem stems from a “struggle over rivers, rivers with their headwaters in the Kashmir, flowing through Pakistan.” Lippman felt that Lilienthal, with his vast experience in river basin development might “even be able to produce some kind of practical answer” [9].

On his return, Lilienthal [10]. outlined some of his own ideas on the Indus Basin that are worth quoting:

“The starting point should be, then, to set to rest Pakistan’s fears of deprivation and a return to desert. Her present use of water should be confirmed by India, *provided* she works together with India (as I believe she would) in a joint use of this truly international river basin on an engineering basis that would also (as the facts make clear it can) assure India’s future use as well.

The urgent problem is how to store up now wasted waters, so they can be fed down and distributed by engineering works and canals, and used by both countries, rather than permitted to flow to the sea unused. This is not a religious or political problem, but a feasible engineering and business problem for which there is plenty of precedent and relevant experience.

This objective, however, cannot be achieved by the countries working separately; the river pays no attention to partition — the Indus, she ‘just keeps rolling along’ through Kashmir and India and Pakistan. The whole Indus system must be developed as a unit — designed, built and operated as a unit, as is the seven-state TVA system back in the U.S.

Jointly financed (perhaps with World Bank help) an Indus Engineering Corporation, with representation by technical men in India, Pakistan and the World Bank, can readily work out an operating scheme for storing water wherever dams can best store it, and for diverting and distributing water.”

Eugene R. Black, the then President of the World Bank and a close friend of Lilienthal read the article, and reacted enthusiastically. He called Lilienthal and asked his suggestions as to how to get the talk started. Lilienthal suggested that Black should write directly to the two Prime Ministers, Nehru and Liaquat Ali

Khan, which he did in September 1951. Both Nehru and Liaquat Ali Khan formally accepted the initiative in their letters of 25 September 1951.

Unfortunately Liaquat Ali Khan was assassinated on 16 October 1951. So on 8 November 1951, Black wrote to Nehru and Khawja Nazimuddin, the new Prime Minister of Pakistan, explicitly outlining the “essential principles” of the Lilienthal proposal as follows:

“The Indus basin water resources are sufficient to continue all existing uses and to meet the further needs of both countries for water from that source. The water resources of the Indus basin should be cooperatively developed and used in such a manner as most effectively to promote the economic development of the Indus basin viewed as a unit.

The problem of development and use of the Indus basin water resources should be solved on a functional and not a political plane, without relation to past negotiations and past claims and independently of political issues.”

Black then suggested the following process for negotiations that seemed “to afford the best prospects”: “India and Pakistan would each designate a qualified engineer of high standing to prepare, jointly with the designee of the other, a comprehensive long-range plan for the most effective utilisation of the water resources of the Indus basin in the development of the region. Each designee would be instructed to govern himself by the principles stated above ...

An engineer selected by the Bank would be continuously available during the planning stage to work with the designees of the two countries. He would keep himself informed of the planning in view of the Bank’s previously expressed readiness to consider financing proposals and would participate in the working party as an impartial adviser, free to express his views on any aspect of the matter. . . He could thus assist in solving problems without being in the position of an arbitrator. . .

The working party would hold an initial meeting for the purpose of determining the procedure to be followed in working out the plan, the steps needed to be taken, the order and manner in which those steps would be undertaken, and the persons by whom they would be undertaken, and would set target dates for completion of the various steps. On reaching agreement on these matters, the working party would promptly, without the need of any further authorization, put the agreed procedure into effect and begin work on the plan . . .”

In January and February 1952, Black held personal discussions with Nehru in Delhi and Nazimuddin in Karachi, and then he confirmed in his letter of 13 March 1952 to the two leaders that he found “common understanding as to the basis on which we can

go forward under the Lilienthal proposal.” In addition, he recorded the official agreement of both parties that “While the co-operative work continues with the participation of the Bank neither side will take any action to diminish the supplies available to the other side for existing uses.”

The first meeting of the Working Party consisting of three teams — Indian and Pakistani engineers and the Bank team — met in Washington in May 1952. They had specific technical terms of reference “to prepare an outline of program and lists of studies for possible technical measures to increase the supplies of water possible from the Indus System of rivers for purposes of economic development.”

After three weeks of intensive discussion, the Working Party agreed on the following outline for a programme:

“Determination of the total water supplies of the Indus Basin and their subdivision into such categories as either side requests.

Determination of the water requirements of the cultivable irrigable areas in each country, such areas to be specifically shown on an index map, and the subdivision of these requirements into such categories as either side requests.

Calculation of such derivative data and collection and compilation of such further basic data and making of such surveys and investigations as either side requests for working out a comprehensive plan. Preparation of a comprehensive plan.

Preparation of cost estimates and determination of a construction schedule of new engineering works including in the comprehensive plan.”

It was also noted that:

“The Working Party will collect and verify the engineering accuracy of all data whether expressly mentioned above, mutually agreed to or requested by either side but the acceptance of any data or the inclusion of any topic of study in the programme does not commit either side as to its relevance or materiality. If such data is not available, the matter will be discussed by the Working Party and agreement reached as to the time required for its collection and estimated cost thereof. When the time and cost in a particular case are unusual the Working Party will reconsider the advisability of collecting the data.”

During the next two meetings in Karachi in November 1952 and in Delhi in January 1953, the two countries were unable to agree on a common approach to developing the waters of the Indus System. The World Bank then suggested that the two countries prepare their own plans. These plans were submitted to the Bank on 6 October 1953.

The Bank summarized the two plans for water use and allocations in millions of acre-feet (maf) as follows:

	<u>For</u> <u>India</u>	<u>For</u> <u>Pakistan</u>	<u>Total</u> <u>Usable Water</u>
i) Indian plan	29	90	119
ii) Pakistani plan	15.5	102.5	118

Thus, even though the two plans came to somewhat similar estimates of total water available for irrigation development, they differed widely in terms of allocation to the two countries.

After some discussions and some concessions by the two parties, the Indian plan to allocate usable water supplies became:

To India: all of the Eastern rivers and seven per cent of the Western rivers

To Pakistan: none of the Eastern rivers and 93 per cent of the Western rivers.

In contrast, the Pakistani plan was:

To India: thirty per cent of the Eastern rivers and none of the Western rivers

To Pakistan: seventy per cent of the Eastern rivers and all of the Western rivers.

With this stalemate between the two parties, the World Bank concluded on 5 February 1954, that unless there is some new development “there is no

The two plans ... differed widely in terms of allocation

prospect of further progress in the Working Party.” The Bank then went on to make its own proposal that had the “concurrence of the engineering consultants to the Bank Representative and is put forward with the full support of the management of the Bank.”

The Bank proposal was as follows:

“The entire flow of the Western rivers (Indus, Jhelum and Chenab) would be available for the exclusive use and benefit of Pakistan, except for the insignificant volume of Jhelum flow presently used in Kashmir.

The entire flow of the Eastern rivers (Ravi, Beas and Sutlej) would be available for the exclusive use and benefit of India, and for development by India, except that for a specified transition period India would continue to supply from these rivers, in accordance with an agreed schedule, the historic withdrawals from these rivers in Pakistan.

The transition period would be calculated on the basis of the time estimated to be required to complete the link canals needed in Pakistan to make transfers for the purpose of replacing supplies from India. A temporary cooperative administration would be needed to supervise the carrying out of the transitional arrangements. Each country would

construct the works located on its own territories which are planned for the development of the supplies. The costs of such works would be borne by the country to be benefitted thereby. Although no works are planned for joint construction by the two countries, certain link canals in Pakistan will, as stated above, be needed to replace supplies from India. India would bear the costs of such works to the extent of the benefits to be received by her therefrom. An appropriate procedure would be established for adjudicating or arbitrating disputes concerning the allocation of costs under this principle."

The Bank proposal was given to both the parties and was simultaneously transmitted to Nehru and Muhammad Ali, who was by then the new Pakistani Prime Minister. In his notes to the two Prime Ministers, Black said that the "submission of the proposal had my full approval" and urged them to "examine the proposal thoroughly and give it your approval."

On 25 March 1954, India formally accepted the "principles of the Bank proposal as the basis of agreement." Pakistan, however, had some difficulty with the proposal. According to Lilienthal [9], the proposal "hit the Karachi Government like a bombshell." Muhammad Ah later wrote:

"The Bank plan confronted Pakistan with an intolerable situation. Vigorous representations were made to the Bank that the flow supply of the Western Rivers was totally inadequate to replace Pakistan's existing uses of the water from the Eastern rivers. The construction of storage dams that would be necessary to make up for the shortage would be a costly and lengthy affair; and the Bank plan made no provision for them. Even with such a provision, Pakistan's limited storage capacity would be used merely to maintain her existing position and could not be utilized for the developing needs of her growing population. Like Alice in Wonderland, Pakistan would have to run as hard as she could in order to remain where she was."

On 8 July 1954, India commissioned the Bhakra Canals. Nehru called the Bhakra-Nangal project "a gigantic achievement and a symbol of the nation's energy and enterprise," and not surprisingly the Pakistani Prime Minister considered it a "potential threat to peace between the two countries."

On 28 July 1954, Pakistan made a qualified acceptance of the Bank plan. After discussions with both parties, Black proposed some specific terms of reference and procedure on 13 August 1954. Even with the new terms of reference, it was not possible to make any progress till 21 May 1956, when the Bank submitted an Aide Memoire pointing out the need for storage on the Western Rivers for Pakistan for her irrigation needs and the basis for India's financial liability for storage facilities and the enlarged

link canals. With the issuing of the Aide Memoire and some clarifications, Pakistan accepted in principle the Bank's plan to allocate the Indus water as amended by the Aide Memoire. In retrospect, this ended another important phase of the Indus negotiation.

THE FINAL STAGE

The tempo of negotiations, however, did not increase noticeably. On 24 April 1957, Nehru wrote to Black expressing his concern "at the absence of any progress during this period." He went on to say:

"It was envisaged in the Bank Proposal that, after. . . about five years, it would not be necessary to continue any supplies to Pakistan from the Eastern rivers. Three of these five years have already elapsed. . . . The Bhakra canals were opened in kharif 1954, the Bhakra Dam and the Sirhind Feeder will soon come into operation and work has been taken in hand on the construction of a canal from the Headworks at Harike to feed the arid areas of Rajasthan. These schemes form part of an integrated development plan and you will appreciate that they cannot be held up. . . ."

The two countries then met in Rome in May 1958. The Bank team managed to convince Pakistan that storages on the Jhelum River should be used for replacement, and not primarily on the Indus as Pakistan had been insisting until then. The Indus water could be used for development purposes. The main reason for taking this approach was that it would substantially reduce the cost of replacement works, which was the only expense India was willing to pay. Pakistan could build other development works as long as they had the financial capability to do so.

At the subsequent meeting in London, Pakistan proposed a development plan with two major storage dams, one on the Jhelum at Mangla and the other on the Indus at Tarabela, as well as three smaller dams on the Indus and Jhelum tributaries. New link canals were also proposed. The total cost of this plan was estimated at \$1.12 billion.

Not unexpectedly, India objected to the extent and cost of such replacement works. In turn, India presented an alternative plan in November 1958. India claimed that their plan was not only more economical but also would take much less time for execution than the Pakistani plan. Furthermore, since a major part of the replacement works would have to be carried out by India, she would guarantee the supplies and the time schedule under the Treaty.

The Indian plan was not acceptable to Pakistan since she had no intention of being dependent on India for irrigation water, especially after her experience immediately after the independence.

By this time, it was clear to the Bank team that a

treaty would be possible provided the following conditions are met:

For India

- i) India received the rights to waters of the Eastern Rivers;
- ii) cost of replacement works to be borne by India is manageable.

For Pakistan

- i) replacement and development works had become inseparable, and thus it was necessary to agree on a proposed set of works, and then procure funds for their development.

In May 1959, Black visited India and Pakistan. In his discussion with Nehru, he suggested that India's contribution to the replacement works be fixed at a specific figure, irrespective of the final cost. He also agreed to provide financial assistance to India for the construction of the Beas Dam. With these two conditions, Nehru was agreeable to a 10-year transition period during which water to Pakistan would be provided. In Pakistan, Black met with President Ayub Khan and agreed to look favourably at a realistic replacement-cum-development plan, including Mangla and Tarabela Dams.

With these developments, Black was able to make a statement to the press on 18 May 1959:

... I think I can now say that we have succeeded in establishing certain general principles acceptable to both governments, that afford a firm basis for negotiating a final settlement. I am now returning to firm up with the Friendly Governments the amount of financial aid they will be prepared to extend; and I am hopeful that within the next two months it will be possible for the Bank to invite representatives of India and Pakistan to meet with the Bank for the purpose of working out Heads of Agreement for an International Water Treaty."

By August 1959, Black managed to put together a consortium of countries — the United States, Canada, the United Kingdom, the Federal Republic of Germany, Australia, and New Zealand — to underwrite an Indus Basin development programme. When the Indus Basin Development Fund Agreement was completed in September 1960, the total cost of works in Pakistan was specified to be \$893.5 million. The Consortium provided \$541 million to Pakistan as grants. The Indian contribution was fixed at \$174 million, and in addition Pakistan received \$150 million in loans. In a supplemental agreement, the Consortium provided an additional \$3 15 million in foreign exchange to Pakistan.

On 19 September 1960, the Indus Water Treaty was signed in Karachi by Prime Minister Jawaharlal Nehru of India and Field Marshal Mohammad Ayub Khan, President of Pakistan. The Treaty was subsequently ratified by the two governments, and the

The Indus Water Treaty was signed in Karachi by ... Nehru ... and ... Ayub Khan

ratifications were exchanged in Delhi in January 1961. The Treaty was retroactive from 1 April 1960.

INDUS WATERS TREATY

The Indus Waters Treaty contains twelve articles covering 79 paragraphs. It has eight detailed annexes that cover 102 pages. Under the Treaty, all the waters of the Eastern Rivers — Sutlej, Beas, and Ravi — were allocated to India for unrestricted use, except during the transition period of 1 April 1960 to 31 March 1970, during which water had to be supplied to Pakistan according to the detailed specifications laid out under Annexure H. The ten-year transition period was the time allowed to Pakistan to construct replacement works for water that was being received earlier from the Eastern Rivers. India agreed to make a fixed contribution of 62 million towards the cost of the replacement works in 10 equal annual installments, starting from 1960, payable on the first of November of each year.

Pakistan received unrestricted use of the Western Rivers — Indus, Jhelum, and Chenab — which India is "under obligation to let flow" and "shall not permit any interference with these waters," except for irrigating existing areas and to develop a further 70 1,000 acres of irrigation from these rivers subject to certain specific conditions.

Under Article VI, specific provisions were made for regular exchange of river and canal data between the two countries, and Article VII referred to future cooperation. Under Article VIII, both countries undertook to establish a permanent post of Commissioner of Indus Waters, who should be "a high-ranking engineer competent in the field of hydrology and water reuse." The two Commissioners will constitute the Permanent Indus Commission, which will meet at least once a year alternately in India and Pakistan. Among the purpose and functions of the Commission are to:

- i) establish and promote cooperative arrangements for the Treaty implementation;
- ii) promote cooperation between the Parties in the development of the waters of the Indus system;
- iii) examine and resolve by agreement any question that may arise between the Parties concerning interpretation or implementation of the Treaty; and

iv) submit an annual report before the first of June every year to the two Governments.

Article IX of the Treaty deals with the settlement of differences and disputes. If the Commission is unable to resolve a specific problem, provisions have been made for reference to a Neutral Expert under Article IX and Annexure E. If the Neutral Expert fails to solve the problem, a Court of Arbitration can be convened under Article IX and Annexure G.

Concurrent to the signing of the Indus Waters Treaty, Pakistan and the World Bank also signed the Indus Basin Development Fund Agreement and the Loan Agreement in Karachi on 19 September 1960. This completed more than a decade of negotiations between India and Pakistan to allocate peacefully the waters of the Indus System for their development.

CONCLUDING REMARKS

An analysis of the negotiating process of the Indus River Treaty clearly indicates the critical role of a

This completed more than a decade of negotiations ... to allocate peacefully

third party in facilitating such an agreement, provided it can play an impartial but active and constructive role, and supplement it with potential significant financial aid on successful completion of the negotiation. Eugene Black, the President of the World Bank, showed his leadership by taking a personal interest in attempting to resolve a difficult problem. The risk he took by putting his personal reputation at stake is clearly an indication of his foresight as well as concern for the development of the Third World countries. Without this leadership and the assistance of the World Bank, the Indus River Treaty could not have been signed within such a short period. His interest undoubtedly contributed to the signing of probably the most successful treaty on international watercourses anywhere in the Third World during the past four decades.

Unfortunately the leadership shown by Black has been basically missing during the post-1960 period, except for Mostafa Tolba, Executive Director of the United Nations Environment Programme, who again

has made important contributions to this area in recent years. Regrettably the attitudes of the international organizations during the post-1960 period have been to adopt a cautious "softly, softly" approach. This has meant that either they indicated to the countries to resolve their problems on international watercourses before they would consider any financial assistance, or supported uncontroversial activities like data collection, exchange of information and organizing seminars and workshops. The leadership basically became "risk averse."

Clearly major international organizations and bilateral aid agencies could play an important role on possible resolution of conflicts in many watercourses in developing countries. They need to play a more direct and catalytic role than has been witnessed in recent decades. Otherwise Mark Twain's perceptive comment that whisky is for drinking but water is for fighting might come true.

REFERENCES

1. Biswas, Asit K., "Management of International Waters: Problems and Perspective," Report to the United Nations Environment Programme, Nairobi, Kenya, 1992, 36 pp.
2. Biswas, Asit K., "Water for Sustainable Development in the 21st Century: a Global Perspective," Presidential Address to the International Water Resources Association, *Water International*, Vol. 16, No. 4, December 1991, pp. 219-224.
3. Dyas, J.H., "Memorandum on Captain Crofton's Preliminary Report on the Sutlej Canal Project," in *Agricultural Proceedings*, No. 3, Govt. of Punjab, 22 Oct. 1962, p. 82.
4. Gulahti, N.D., *Indus Waters Treaty*, Allied Publishers, Bombay, India, 1973, 472 pp.
5. Mosley, L., *The Last Days of the British Raj*, Harcourt, Brace, and World, New York, New York, U.S.A., 1962, pp. 198-199.
6. Michel, A.A., *The Indus Rivers*, Yale University Press, New Haven, Connecticut, U.S.A., 1967.
7. Rao, K.L., *India's Water Wealth*, Orient Longman, New Delhi, India, 1975, pp. 203-205.
8. Ali, Chaudhri Muhammad, *The Emergence of Pakistan*, Columbia University Press, New York, New York, U.S.A., 1967, p. 319.
9. Lilienthal, D.E., *The Journals of David E. Lilienthal, Vol. 3, Venturesome Years, 1950-1955*, Harper & Row, New York, New York, U.S.A., 1966.
10. Lilienthal, D.E., "Another 'Korea' in the Making?" *Collier's*, 128, 4 August 1951, pp. 56-57.