

People versus Power: The Geopolitics of Kaptai Dam in Bangladesh

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ABSTRACT *This paper examines the impacts of the Kaptai dam, in the Chittagong Hill Tracts of Bangladesh, on the tribal communities of that area. Kaptai dam is the only hydropower source in Bangladesh, with an installed capacity of 230 MW; about 5% of the electricity consumed in the country is produced there. When the dam was built in 1962, some 100 000 people were displaced and few of them received adequate compensation. Recently, the Power Development Board (PDB) of Bangladesh has announced a plan to install two new 50 MW units that will bring the capacity of the dam to 330 MW. This plan will cause the reservoir water level to rise and may take away about 7500 ha of the fringe land, which the tribal people use for rice cultivation during the April–August period each year. As before, the PDB has not discussed this plan with the potentially affected tribal groups, who are concerned about losing the fringe land and an important source of income. The paper discusses the original displacement issue and this recent development in the light of the geopolitical history of this region. It attempts to present an objective analysis of these issues and views held by various concerned parties. It then proposes a scheme for managing the Kaptai reservoir based on a participatory approach that will ensure both economic efficiency and social equity.*

Introduction

Located in the scenic landscape of the Chittagong Hill Tracts (CHT), the Kaptai dam, on the River Karnafuli, is the only hydro-electric power source in Bangladesh (Figure 1). Commissioned on 30 March 1962, the dam initially had two hydropower units with a total capacity of 80 MW. Presently, the dam has five units with a total capacity of 230 MW and it produces approximately 5% of the electricity consumed in Bangladesh. Basic features of the dam are shown in Table 1 (PDB, 1985).

The Kaptai dam was supposed to provide benefits in terms of hydropower, flood control, irrigation and drainage, navigation and enhanced forest resource harvesting. Most of these objectives have been served in various degrees except irrigation and drainage. More recently, commercial fish culture and recreation activities have been introduced in the lake.

This, however, is part of the story. During construction, the dam flooded an area of some 655 km², which included about 22 000 ha of cultivable land—40% of all such land in the CHT. The lake took away the homes of 18 000 families and displaced 100 000 tribal people, of which 70% were Chakma (Government of

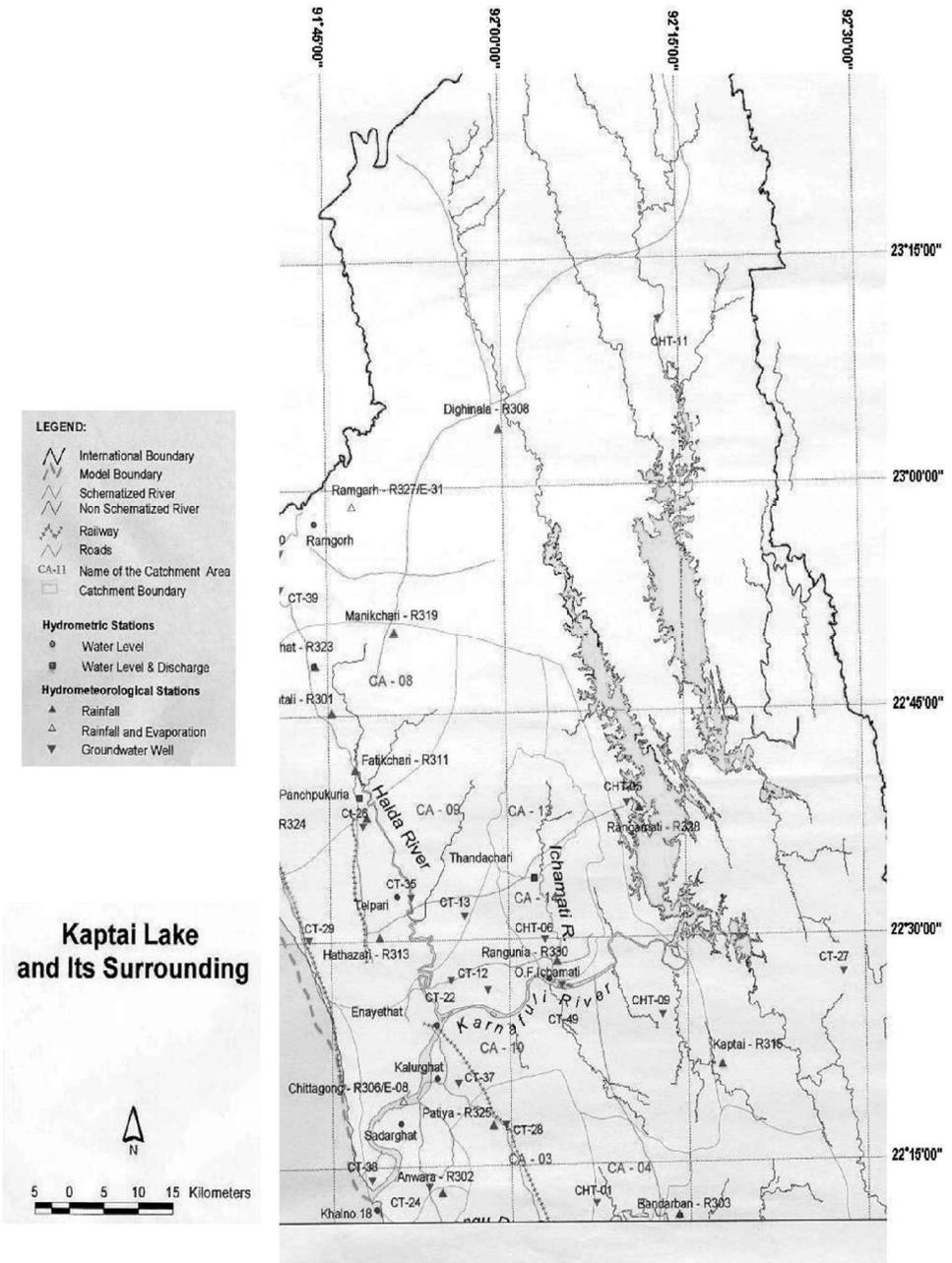


Figure 1. Location of the Kaptai dam in the CHT.

Bangladesh, 1975). The dam also flooded the original Rangamati town and the palace of the Chakma Raja (king).

A rather casual attempt was made to rehabilitate this large group of people—nearly 25% of the local population. Officially, the majority of the displaced people were rehabilitated on the upper reaches of the rivers Kasalong and Chengi during the early phase of the project (construction of the dam began in

Table 1. Basic features of the Kaptai dam

Feature	Size/type
Body of the dam	Earth
Length	670.6 m
Height	45.7 m
Crest width	7.6 m
Maximum water level	33.5 m (110 feet above mean sea level (MSL))
Minimum water level	20.1 m (66 feet MSL)
Capacity at 33 m MSL	$6477 \times 10^6 \text{ m}^3$
Reservoir at 33 m MSL	777 km ²
Spillway length	227 m
Maximum spillway discharge	16 000 cumecs
Installed capacity (five units)	230 MW

October 1957). In reality, the newly created 'environmental refugees' were resettled in the low-lying areas of Langdu, Barkal and Bhaghaichari as per the advice of the project officials. Much of this resettlement area had gone underwater by 1962 as the reservoir gradually filled up, causing many to be displaced for the second time. This had naturally aggrieved the tribal population as they received few if any of the benefits of the dam.

Many of the displaced people had left the country; some estimates say that 40 000 of them went to the sparsely populated states of Mizoram, Tripura, Assam and Arunachal in India. Another 20 000 may have gone to Burma (Samad, 1998). The Chakma people call this event *Bara Parang* or the Great Exodus, a detailed account of which may be found in Chakma *et al.* (1995).

This event and a series of administrative and legislative actions taken since the birth of Pakistan had ultimately led to the 22-year-long violent and armed confrontations between the Bangladesh government and the tribal people that began in the mid-1970s and lasted till the signing of the peace treaty in 1997. Some provisions of the treaty have not been implemented yet and these remain as the source of discord between the government of Bangladesh and the tribal people of the CHT.

In this backdrop, the Power Development Board (PDB) of Bangladesh is considering a plan to install two new 50 MW units at Kaptai. If materialized, more water will have to be stored in the reservoir, which may cause the lowest reservoir level to rise by as much as 6.5 m. As a result, approximately 7500 ha of the seasonal fringe land may become permanently inundated where rice is grown from mid-April to mid-August.¹ This plan has sparked the old debate and fear that the dam authority and the government are not sensitive to the needs of the local people in this region.

This issue has given rise to a series of questions that must be addressed. What are the arguments put forward by the PDB in support of this plan? Have the local people been consulted about this plan in advance? Is the government aware of the geopolitical implications of this potential impact? What actions, if any, are being considered by the government to address this concern? And finally, what approach should the government follow so that development of fresh contentions can be avoided in future?

Objectives and Methodology

The questions raised above will be critically examined in this paper in the light of the historic development of the geopolitical events in the CHT. The paper will specifically look at the human and environmental impacts of the dam created in the past as well as the potential impact of the proposed expansion plan (installing units 6 and 7). Views from both sides—the tribal communities and the PDB—will be presented in relation to the operation of the dam and its impacts on the local people and the environment. The paper will then suggest an approach that can help resolve this latest issue of dispute in a mutually agreeable way.

The study will be based on information collected from secondary sources in the form of papers, reports, books and academic publications and primary information collected through interviews with key informants.

Geopolitical Description of the CHT

The CHT is located in the south-east part of Bangladesh. The British created this region in 1860 under the 22nd Administrative Act. At that time, most of it was densely forested and inhabited by tribal people (less than 5% of the population were Bengalis from the plain lands). The district was created in recognition of its unique natural and cultural characteristics. At present, the CHT is comprised of three administrative districts, Rangamati, Khagrachari and Bandarban, which were created in 1983. The total area of the CHT is 13 148 km², which is about 10% of the land area of Bangladesh, although only 2% of the population lived in the CHT in 1991. Currently, the population of the CHT is evenly composed of Bengalis (50%) and tribal communities (50%). The Chakma are the largest tribal group, constituting about 24% of the CHT population. The other major tribes are the Marma and the Tripura, representing 14% and 6% of the population (Bangladesh Bureau of Statistics, 1995).

Geographically, the CHT can be divided into a number of river valleys: Chengi, Maini, Kasalong, Rankhiang and Sangu. All these rivers except the Sangu are tributaries to the Karnafuli River, on which the Kaptai dam is located. These river valleys are 30–80 km long and 3–10 km wide, surrounded by hills a few hundred to a thousand metres high. In some places the valleys may be 20–30 km wide. These valleys are very suitable for agriculture and horticulture. The rest of the CHT mostly comprises hills and forests where the tribal people practice *jhum* (shifting slash and burn) cultivation. It includes 1538 km² of reserved forest and another 5400 km² of unclassified state forest areas (Johnson & Ahmed, 1957; Rashid, 1991). The forests are of both evergreen and deciduous types and provide valuable resources such as wood (both timber and fuel), bamboo, cane and honey. Commercial tea and rubber plantations and horticulture have been introduced in the CHT in recent years.

Chronology of Events in the CHT and the Issue of Human Displacement

The tribal people have been living in the CHT for a long time but they are not the original settlers in that area. Most of the CHT was not inhabited or was barely inhabited by people till the large-scale in-migration in the 17th and 18th centuries. The Chakmas moved into the CHT with their king when the Marma

Table 2. Chronology of major events in the CHT (1860–1971)

Year	Event
1860	Formation of hill tracts under Lord Canning.
1900	The CHT manual was introduced as the basic framework for administration.
1935	The British government of India defined the hills as a 'totally excluded area', taking it out of Bengal's control.
1948	The CHT Police Regulation was annulled and the police force, which was manned by the tribal people, was disbanded.
1955	The CHT area was surveyed and legal measures for land registration were adopted.
1955	Muslim League leaders tried to designate the CHT as a regular district; this was resisted by Colonel Niblett, the last British-born Deputy Commissioner of the CHT and the Chakma Raja.
1956	The first constitution of Pakistan retained the special status of the CHT as the 'excluded area'. However, under Clause 51(I), only a Muslim could hold the position of the Head of the State of the Islamic Republic of Pakistan. Thus, all the tribal and non-Muslim people were effectively downgraded to second-class citizens.
1958	After the military takeover in Pakistan the 'opening up' of the CHT was accelerated.
1960	Government transferred all local indigenous employees in administration to other parts of East Pakistan.
1962	The constitution changed the status of the CHT from an 'excluded area' to a 'tribal area'.
1962	Construction of the Kaptai hydro-electric dam was completed, which submerged 22 000 ha of cultivable land and displaced 100 000 people without proper compensation and rehabilitation.
1964	By an act of parliament, the CHT ceased to be a tribal area from 10 January 1964. Accelerated influx of Bengalis had sown the seed of politicization of the CHT.
1971	Liberation war and independence of Bangladesh.

king of Arakan (most of Arakan lies in Myanmar now) drove him out. Later on, the Mughols drove the Marma people out of Arakan in 1756 (Hutchinson, 1906). Other tribes of the CHT have a similar history.

According to Thomas Herbert Lewin, a soldier-cum-administrator of British India's north-east frontier, "a greater proportion of the hill tribes at present living in the Chittagong Hill Tracts undoubtedly came about two generations ago from Arakan. This is asserted both by their own traditions and by records in Chittagong Collectorate" (Lewin, 1869). Accordingly, the claim often made by the tribal people that they are the 'sons of the soil' is not valid in the sense of being original settlers in the CHT. Bengali settlers lived in parts of the CHT long before that time, albeit in small numbers.

The different tribal communities of the CHT have lived separately from the beginning and have distinct linguistic, cultural and anthropological features. Over the course of about 300 years, these hill communities have gone through a series of interventions sometimes protecting and sometimes undermining their interests. These events have been summarized in Table 2 for the 1860–1971 period.

It is evident from the series of events that the displacement of 100 000 tribal people due to the Kaptai dam was almost inevitable, as their control over the region was gradually being curtailed, which culminated with the annulment of the tribal area status of the CHT in 1964.

The issue of resettlement of the displaced people was handled poorly for a number of reasons. There was a general lack of understanding of the tribal culture by the government of Pakistan and the donor agencies (the dam was

funded by USAID). They thought that these were 'nomadic' hill-people practising *jhum* cultivation and it was unnecessary to design a permanent resettlement programme for them. In reality, the tribal people did move from hill to hill but they had a long cycle of *jhum* cultivation. Before the inundation of the Karnafuli valley, the average cycle of *jhum* cultivation was 7–10 years, and in some cases 10–15 years. After inundation of the river valleys, which took away 40% of the fertile agricultural land, this cycle became reduced to only 3–5 years as thousands of local people were forced back to *jhum* cultivation. This pressure on land was further intensified by the rapid population growth that took place during the 1960s and 1970s in the entire CHT area. The collective outcome of these developments was intensive agriculture both in the remaining plain lands and in the hills, leading to soil erosion, productivity loss and water pollution caused by increased use of fertilizer and pesticides.

The other important reason for not having an adequate relocation scheme was simply the lack of adequate budgetary provision. Initially, some compensation was paid for the loss of land, trees and structures but there was little money available for rehabilitating 100 000 people. The majority of them were taken to the Kasalong valley, where a reserved forest was partly cleared to create land for these people. When the water level of the reservoir rose after completion of the dam in 1962, much of this land went underwater and the government simply gave up all efforts to resettle these people again, thus contributing to the *Bara Parang*.

Interviews with the local people as well as senior government officials indicate several inadequacies of the resettlement programme. The government could not keep its promise to compensate for the lost arable land with similar land elsewhere. First, not enough arable land was available in the region; each family was given a maximum of 10 acres (4 ha) of land even though they owned more land in the project area. Secondly, fertile land in the river valley was compensated by hilly lands, which was of no immediate use to the people, who had got accustomed to the plain land farming introduced in the CHT by the British from the early 20th century. Thirdly, when monetary compensation was made, it was too small: for example, the displaced people received only Taka 500–700 per hectare as compensation whereas they had to pay Taka 5000 per hectare to buy similar arable plain land in other areas where some of them eventually settled (Chakma *et al.*, 1995).

The government of Pakistan had made a rather late attempt in 1968–69 to rehabilitate some 11 000 families in 51 *moujas* surrounding the lake.² A total of 66 000 ha of land was allocated for this purpose. As per the plan, each family received on average 2.4 ha of land for growing fruits, in addition to fruit saplings, fertilizer and pesticides. Extension officers arranged training in horticulture and initially the resettled people participated in the programme enthusiastically. Unfortunately, the plan did not work well in the end because little or no attention was paid to the storage and marketing aspects of the produce. People grew mango, jackfruit, pineapple and lemon but did not receive a fair price for the products. In fact they fell prey to exploitation by the middlemen. Moreover, over the years the productivity of the land has fallen significantly, rendering the programme less effective now.

The large-scale displacement of the tribal people caused by the Kaptai dam is certainly one of the important factors that have contributed to the worsening of the relationship between the tribal and Bengali populations in the CHT. In the

latter part of the 1960s, the rate of influx of the Bengalis increased due to the setting up of some major industrial infrastructures such as the Karnafuli pulp and paper mill and administrative offices of various departments of the government.

Events after Independence

During the independence war of Bangladesh in 1971, the CHT population supported the *Mukti Bahini* (freedom fighters) against the Pakistani army. The following year, Manobendra Larma, a leading figure from the tribal people, became a member of the first national parliament of Bangladesh. He formed the Parbattya Chattagram Jana Sanghati Samiti (PCJSS, or the Chittagong Hill Tribal People's Co-ordination Association) on 24 June 1972 in a convention of tribal leaders held in Rangamati. At the same time the tribal students formed an association called the Pahari Chatra Samity (PCS).

Initially, both the PCJSS and the PCS tried to establish their claims through democratic and non-violent ways. First, Larma called on Sheikh Mujibur Rahman, the Prime Minister of Bangladesh, to protest the fact that the ethnic minorities were designated as Bengalis in the first constitution of Bangladesh. Larma, with a delegation of the tribal people, also demanded autonomy for the CHT region, which was denied on grounds of territorial integrity and sovereignty of the country. Other issues taken up by the PCJSS included: legal protection from attacks by the Bengali settlers and illegal dispossession of property; ending the migration of Bengalis from plain lands; the recovery of lost property; and tolerance of tribal culture and religion.

In 1975, the Mujib government was overthrown by a military coup and the relationship between the PCJSS and the military government worsened. During this time (1975–76), the PCJSS formed its secret armed wing, the Santi Bahini (Peace Force). It received shelter and training in the neighbouring Indian states of Tripura and Mizoram, and began to engage in guerilla warfare with the Bangladeshi police and army. As a result, a large contingent of the Bangladesh army remained deployed in the CHT after then and both sides suffered major casualties, although reliable statistics are hard to come by. In the early 1980s, the Bangladesh government brought a large number of landless people from the districts of Chittagong, Sylhet, Comilla and Noakhali into the CHT.³ This action contributed to the rapid change in the population composition in the CHT (Figure 2) and intensified the number of conflicts with and the resentment of the tribal people.

The armed confrontation slowed down in the early 1990s. After the general election of 1991, the newly formed government formed a special committee on the CHT region to arrive at political solutions for issues raised by the PCJSS. The first meeting of this committee with the PCJSS was held on 5 November 1992. This marked the beginning of the peace-making process, which led to an agreement between the two parties regarding the repatriation of the tribal refugees from India. Accordingly, the first batch of the refugees returned home on 15 February 1994. The peace process continued, which culminated in signing the peace treaty between the government of Bangladesh and the PCJSS in December 1997.

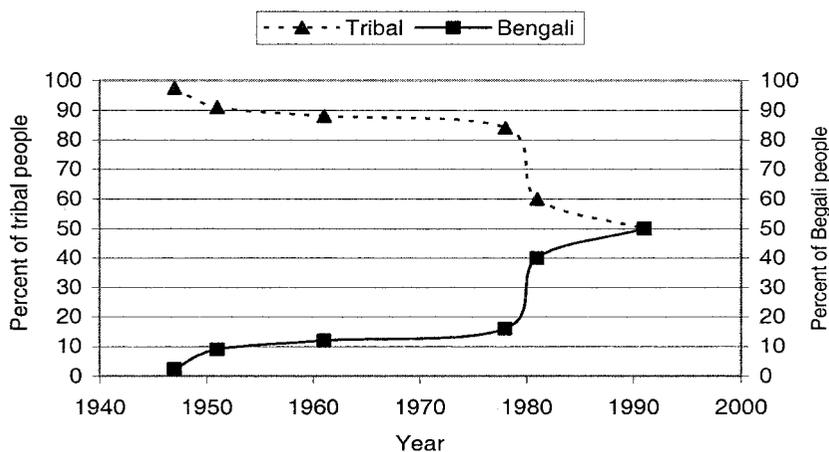


Figure 2. Changing composition of the population in the CHT. *Source:* Bangladesh Bureau of Statistics (1995).

The Debate over the Proposed Expansion Plan

In the backdrop of all this turmoil, the PDB has recently announced its plan to install two new hydropower units, 50 MW each, in the dam. These units are to be installed with financial assistance from the Japan Bank of Investment Corporation (JBIC) in the form of a 30-year soft loan with a grace period of 10 years. However, how these extra units will be run has not been clearly spelled out.

PDB officials have made statements that these units will be operated using the excess water that is released through the spillway. This excess water will be stored during the storage period (July–November) and released gradually over the drawdown period (December–July) as per the rule curve (Figure 3). It should be mentioned that this rule curve was last revised in 1981 before installing the third unit. Since then three more units have been added and two more are being considered and, therefore, the rule curve needs updating. The PDB officials have said that installation of the two new units will change the rule curve and raise the lowest reservoir water level from 76 feet above mean sea level (MSL) (24.93 m MSL) to 90 feet MSL (29.52 m MSL). However, the reservoir level will be maintained at 90 feet MSL or lower throughout the April–August period, during which rice is grown in the fringe land, as per the instruction of a government circular.

However, there are doubts as to whether the reservoir level can be maintained at or below the 90 feet MSL limit during the fringe land cultivation period. The economic analysis done by the consulting agency, the Tokyo Electric Power Services Company (TEPSCO), indicated that the project internal rate of return (IRR) is most favourable if the lowest reservoir level is kept at 96 feet MSL (31.5 m MSL). This will cause permanent flooding of about 7500 ha of fringe land, which is at the heart of the new debate. The tribal community of Kaptai, based on their long and bitter experience with the authorities in the past, are understandably apprehensive about the possibility of losing their income from the fringe land should the water level exceeds the 90 feet MSL limit. The issue has already been raised at various forums by the PCJSS including with the project sponsor JBIC.

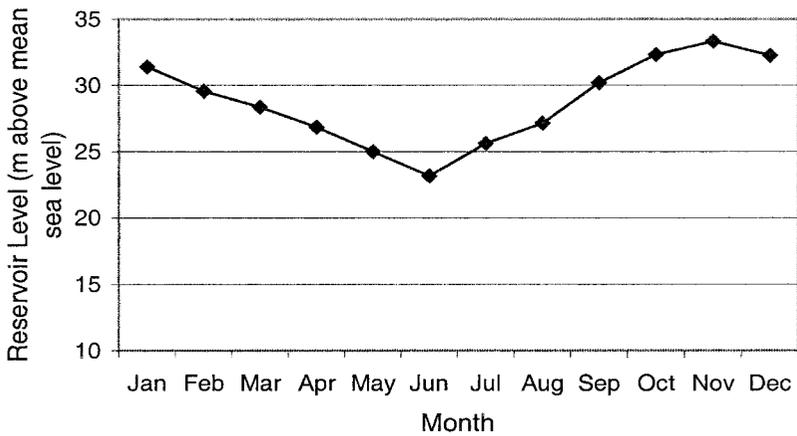


Figure 3. Rule curve for the Kaptai hydropower station. *Source:* Noman (1997).

The Future Course of Action

The root of the problems emanating from the Kaptai dam lies in not recognizing the rights of the indigenous people and in the lack of willingness on the part of the authorities to communicate with them. There was virtually no consultation with the tribal people in the 1960s during construction of the Kaptai dam. Now the consequences can be seen: both the Bengalis and the tribal people have paid a high price for the problems created by the dam and the displacement of 100 000 people.

In relation to the recent expansion plan, the tribal people, through the PCJSS, have made three specific demands. First, the benefit of the dam—electricity—should be made available to the hill communities. The PDB, on principle, is in agreement with this demand. However, the question here is of economic feasibility. The hill communities are small and dispersed, and extending power lines to those communities may be a very expensive undertaking. The PDB is also concerned that once the service is provided it will be very difficult or impossible to collect bills from these remote locations. This is an issue that the PDB and the PCJSS have to discuss in detail and come to an agreeable solution.

The second issue raised by the PCJSS is that the PDB must compensate for any loss of crop grown in the fringe land that may be caused by the rise of the reservoir water level after installation of the proposed units. There is a government circular according to which the PDB is supposed to maintain the reservoir level below 90 feet (27.43 m) MSL during the rice-growing season. However, the government or the PDB is not legally obligated to compensate for any loss of crop in the fringe land should the water level rise above this limit. According to the PDB, all displaced people who used to reside within the area below 120 feet (36.57 m) MSL have been relocated and compensated by the then East Pakistan Water and Power Development Authority (EPWAPDA) during or after completion of the dam. Therefore, the PDB may try to minimize the potential loss of crop, but it is not required to compensate for such losses.

The PDB further mentions that even without the new units, it is not possible to maintain the reservoir level below 90 feet MSL every year. In years with more than usual rainfall, more water is stored in the reservoir for protecting the downstream areas from flooding. In those years, fringe land cultivation is

affected due to natural reasons and compensation is neither demanded nor paid by any side. Here, the argument put forward by the PDB seems reasonable. However, its position should be explained to the potentially affected group clearly and honestly. The extent of loss in economic terms should also be quantified and compared with the benefit of power generation to get a better perspective on the issue. The PDB may set aside some funds to gradually train the affected group in alternative income generation means so that this issue becomes inconsequential over time. Due to the volatile and sensitive sociopolitical situation in the CHT, this issue has received a lot of local and international attention. As a result, the PDB has been asked by the sponsor JBIC to carry out a social impact study with the following specific objectives as mentioned in the terms of reference of the study: (1) develop a rule curve for reservoir operation; (2) assessment of social impact due to the proposed expansion of the Kaptai power plant for the sixth and seventh units, including the existing units; and (3) recommendation of impact mitigation measures, including assessment of needs for rehabilitation of affected people. Once the study is completed as per the terms of reference, the issue will be adequately addressed and this should be acceptable to the PDB and the PCJSS.

The third demand of the PCJSS was to involve tribal labour in the dam-related maintenance and extension works. The PDB is not opposed to this idea but security issues may prevent the implementation of this proposal immediately. Besides, such activities are carried out only occasionally. However, this may be a politically important issue for the PCJSS and should be given serious consideration by the dam authority.

In fact, taking a more holistic view, the government and the PCJSS need to work closely on developing an institutional framework that will allow them to discuss and deal with all dam-related issues in a systematic and democratic way. At present, there is a body called the Reservoir Operation Committee (ROC), which is supposed to provide general guidelines on reservoir operation.⁴ This is a high-level committee consisting of 18 members, who include the Divisional Commissioner of Chittagong, the Manager of Kaptai power station, District Commissioners of the CHT and representatives from various government agencies, including one from the army. There is no member in the ROC who directly represents the interest of the tribal community. Moreover, due to its too high a profile, it has not been able to meet even once since the commissioning of the dam in 1962. This clearly has to change: the ROC must be made smaller and it must include one or more representatives from the PCJSS so that it begins to operate as an efficient, effective and fair management body for the Kaptai reservoir.

The issue of the dam related rehabilitation and loss of fringe-land cannot be separated from the general issue of dealing with the ethnic minorities in an equitable manner. In this regard important progress has been made by the government by enacting the Local Government Council Act 1989. This Act provides for a number of legal safeguards for the tribal population for preserving their rights and culture and for arbitration of social disputes. Another important milestone along this direction is the peace treaty of 1997. After signing the peace treaty, the people of the CHT—both the Bengali settlers and the tribal communities—have been hoping for a peaceful and prosperous future in this region and the government should avoid any attempt to disrupt this process.

The World Commission on Dams (WCD) has already prepared the road map to a better planning approach when it comes to planning, constructing and managing a dam. According to the WCD, issues pertaining to dams should be examined in the light of a few key criteria: efficiency, equity, accountability, participatory decision making and sustainability. In the case of the Kaptai dam, the principles of equity, accountability and participatory decision making have not been followed from the beginning. The time has come to incorporate these at the earliest opportunity, not only to avoid fresh contentions in this region but also to let the tribal people have their say and reap some of the benefits that the dam has to offer.

Concluding Remarks

All over the world, there are more than 15 000 large and numerous other small dams that have displaced some 60 million people from their homelands. In the recent past, Turkey has built the Ataturk dam in the Kurdish region, where some 60 000 people were displaced. Another project in this region, the Illisu dam, will affect about 75 000 people of the Kurdish region. Such encroachments on the resources and rights of the people of the land are not isolated—the Narmada in India, the Three Gorges in China, the Nam Theun II in Laos and the Itoiz in Spain are just a few examples of such violations.

Unfortunately, a large part of the population displaced by dams has come from the underclass and the tribal communities. In India, about 40% of the people displaced by dams have been low castes or tribal people, even though they make up less than 6% of the Indian population. The story looks very similar in Bangladesh. It is about time that the government and the affected groups worked out a peaceful and mutually agreeable solution in a democratic way and through a properly designed institutional framework. This would go a long way in ensuring the security and prosperity of the CHT region in the new millennium.

Notes

1. This estimate is based on the data provided by the Agricultural Extension Department of Rangamati via memo. no. 65(A) to the PDB office at Kaptai.
2. A *mouja* is a cluster of villages; several *moujas* make a union and several unions make a *thana*, which is the smallest administrative unit in Bangladesh.
3. The resettlement programme was carried out under government instructions issued through confidential letters from the Commissioner of the Chittagong Division to the Deputy Commissioner of the CHT district dated 4 September 1980, Ref. No. 66(a), and from the Deputy Commissioner of the CHT district to his counterparts of the other districts dated 10 September 1980, Ref. No. 1055(a). In the letters, Bengali families from other districts were promised 2 ha of high land, 1.6 ha of mixed land and 1 ha of paddy land if they migrated to the CHT region (Chakma *et al.*, 1995).
4. The latest composition of this committee has been specified in a circular of the Ministry of Power, Energy and Mineral Resources dated 25 February 2001, Ref. No. 2/B:/PG-88/251 (part)/88.

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