

Feature

Development

India Plans to Withdraw Waters of the Ganges and the Brahmaputra

by Amjad Hossain Khan

INDIA is planning to divert waters of the Ganges and of the Brahmaputra to water short areas in India for controlling flood and droughts. In order to utilize the surplus waters of these two rivers, India has finalized a Perspective Plan which comprises two main components: Himalayan river development and Peninsular river development.

The Indian plan for the Himalayan river development comprises construction of storage dams on the river Ganges and the Brahmaputra in order to conserve the monsoon water for flood control, hydropower generation and irrigation.

The Peninsular river development envisages plan to divert surplus water of the Ganges and Brahmaputra to water-short areas in the South Indian states of Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu for irrigation in the drought affected areas.

It is reported that the Government of India has completed the feasibility studies of transfer of link canals and studies of water balance, diversion points and reservoir construction.

The Indian plan would provide an additional irrigation potential for about 25 million hectares from surface water and another 10 million hectares from ground water. The plan would generate 30,000 MW of power to boost up new industrial activities.

The perspective plan of India will take 40 years and cost 47.8 billion dollars for interlinking and 25.5 billion dollars for hydropower generation.

A news item came in August 1994, where it was mentioned that India had finalized their perspective plan for distribution of water among their various states. The meeting of the Indian National Water Council was held on 26 July and presided over by Mr P.V. Narasimha Rao, Prime Minister of India. The Indian plan envisages diversion of Brahmaputra water through Indian territory to the Ganges above Farakka.

The Indian prospective plan is nothing new, Dr K.L. Rao taking advantage of the liberation of Bangladesh prepared a national plan showing diversion of Brahmaputra water to India through Bangladesh. When questioned by BSS in New Delhi, he evaded the question that he didn't consult Bangladesh. Mr Dastur prepared another fantasy project of Himalayan water resources development and taking water to south India. A Japan sponsored agency also prepared a plan for lifting water of Brahmaputra and taking water to Ganges through Indian territory.

The Indian proposal on 'Augmenting the dry season

flow of Ganges' exchanged on 25 March 1978 to Bangladesh stated that in the Ganges basin in India 22 storage schemes have been completed, 6 storage schemes were under construction and 5 storage schemes were proposed. With new identification of projects, the effective storage was 49,000 MCM. India during discussions with Bangladesh categorically stated that all the augmented water of the storage in the Ganges basin in India are committed and cannot be spared for Bangladesh.

India has proposed 3 reservoirs in Sabansari, Dihang and Tipaimukh with live storage of 5 million m³. In addition to this India has identified a few promising storage sites in Dihang (2 no.), Lohit (1 no.), Sabansari (1 no.) and Dia Bharel (1 no.). These sites were under investigation.

The power generation possibilities of dams in India of 30,000 MW is doubtful. If power generation of dams in Nepal in the Ganges basin is included it may be possible to generate that much of power. The hydropower potential of Nepal as estimated by Nepal is of the order of 36,600 MW. Nepal has identified 30 reservoir sites in Nepal of which more effective sites in terms of flow regulation are the Septa-Kosi, Tamur-1, Sun Kosi-2, Burhi-Gandaki, Marsuyandi, Seti-1, Kall-Gandaki 1 and 2, Andikola, Mainachuli, Bagmati, Bhalubang, Naumuri, Panchowar and all reservoir sites in the Karnali Basin. The

dry season flow (December to May) augmentation potential of these reservoirs taken together will be about 4950 m³/sec which constitute more than 170 per cent of the present dry season flows of the Ganges.

The total water holding capacities of 30 reservoirs in Nepal has been estimated at 77 billion m³. These contribute about 68 per cent of the total monsoon flow (July to September).

India considered the potential in Nepal as limited which contradicts with the studies conducted by Nepal. The Indian argument that the storage in Nepal are 300 to 800 miles away from Bangladesh will not of any benefit to Bangladesh does not hold good. India was eager to sign bilateral agreement with Nepal on rivers of Nepal in central and Western part.

India is keen on diversion of 100,000 cusec of Brahmaputra water to the Ganges on the basis of 1972 IBRD report which stated that "It has been estimated that some 100,000 cusec can probably be withdrawn from the major rivers without causing excessive salinity intrusion on the lower Meghna outlet". Although the IBRD report of 1992 has not been accepted by the Government of Bangladesh, India is still harping on the issue. It would have better if GOB would formally reject the IBRD report of 1972 and call explanation of IBRD for the damage done in suggesting some fictitious studies of water diversion without consideration of Bangladesh interests.

Since 1989, there is no water sharing agreement on the Ganges. India has reduced the flow of the Ganges to the minimum of 9000 cusecs in April, 1993. They have also closed the dry season flow of 25-30 rivers coming from India.

Mr Majid-ul-Haq, Irrigation Minister of Bangladesh in his statement to the Parliament said recently that Indian authorities have built various infrastructure like dams, barrages, cross-dams, control structures, grassy and spurs in 40 places on the upstream of 25 rivers. The Minister further stated that 105 thanas of the Ganges basin faced severe damage due to lack of irrigation, reduction of low moisture and increase of salinity.

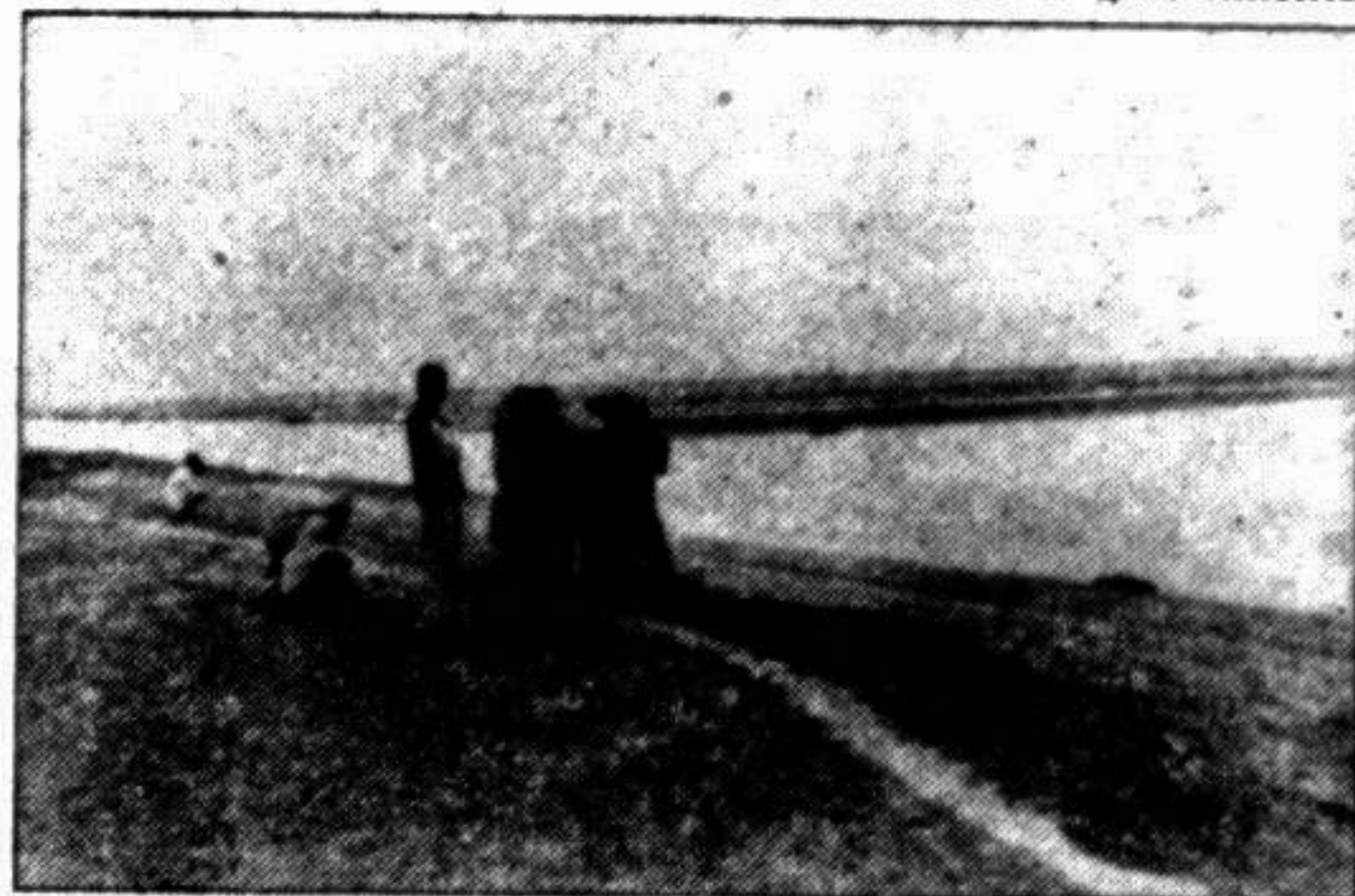
The water resources Minister told in the Parliament that the country suffered some Tk 113 billion in direct loss for the unilateral withdrawal of the Ganges water by India after construction of the Farakka barrage.

The drought of 1994 in North Western part of Bangladesh is not unusual due to diversion of large quantity of water of the Ganges, Teesta, Dharia, Dhudhkumar and many streams of that area.

The Government of Bangladesh formed a Task Force to prepare recommendation to

offset the adverse impacts of drought and a Tk 159.72 crore special agriculture rehabilitation plan has been proposed to help farmers to get relief. The report stated that 36 districts have been affected by the drought and 11.15 lakh acres of boro cultivation land is affected due to shortage of water. The report stated that 83 per cent of the manual tubewells, 21 per cent of low lift pumps and 41 per cent of the shallow tubewells in 36 districts have been affected by fall in the surface and ground water levels. The report stated that the ground water level has, dropped by 7-15 meter in the 32 drought affected areas.

According to recent available information regarding irrigation equipments in the country, there are 1 lakh 22 thousand pumps out of order



Time is running out and with it the water.

the business of Bangladesh. Regarding the issue raised in UN in 1976, the facts are well known. Bangladesh agreed to India's request to test run the feeder canal of the Farakka Barrage. A memorandum of understanding for 41 days were signed for India to withdraw 11000 to 16000 cusec only. The MOU expired on 31 May 1976. But India continued to withdraw water unilaterally for the dry season of 1976 and 1977.

During this period all attempts by Bangladesh to discuss the issue with India failed. As a result Bangladesh was compelled to go to UN in 1976. According to the consensus statement, dialogue between Bangladesh and India resumed and Ganges Water Agreement was signed in 1997 for 5 years. The agreement was replaced by MOU in 1981 for 2 years and again extension for 3 years after a gap of one year.

Since 1989 there is no water sharing agreement with India. India was reluctant to give second extension. The matter had to be brought to the two heads of governments

for a 3 year extension. Since 1989, numerous efforts by Bangladesh to discuss the matter for solution have failed. The Prime Minister of India and Indian Ministers who visited Bangladesh time and again expressed their pledge for solving the water sharing problem. It is unfortunate that India thinks that Bangladesh is using Farakka as a political issue. The water sharing problem can only be solved by high political leadership of the two countries. The recent Indian perspective plan of which the Prime Minister of India is a party cannot be viewed by Bangladesh as a friendly act. It is high time Bangladesh should review and reassess their future relationship with India. It is expected that good sense will prevail among politicians of both the countries for solving the irritants as early as possible. Time is running out.

— Star photo by Enamul Huq

of which 65 thousand are low lift pumps, 50 thousand shallow tubewells and 7 thousand deep tubewells. In northern districts only 4 thousand low lift pumps out of 12 thousand, 24 thousand shallow tubewells out of 48,932 and 7 thousand deep tubewells out of 9,500 (excluding Barendra Project) are in operation.

The Prime Minister of India gave repeated assurance of a fair share of Ganges and other rivers. The Prime Minister of Bangladesh and India met in May 1992. It is unusual for the Prime Minister of India not to keep his solemn promises made repeatedly in public.

It is however unusual that Mr Srinivasan, Indian foreign secretary's statement that Bangladesh is using Farakka to solve her internal problems. Mr Srinivasan was posted in Dhaka as High Commissioner and well aware of the grave issue of the unilateral withdrawal of water. Whether Bangladesh did right or wrong in raising the issue to UN is

the average yield of soybean is the biggest in Italy (3.58 kg/ha) and then USA (2.53 kg/ha) and Argentina (2.32 t/ha) but in Asia it is only 1.20 t/ha.

Soybean Feeds the World

by Dr Subash Dasgupta

AT the turning point of the century, Bangladesh is passing the most crucial period in its agricultural development. Agricultural production and productivity is not able to meet the country's demand in a sustainable way. The quality of the main two agricultural resources i.e. land and water is deteriorating day by day at an alarming rate. The exploitation of environments and national resources occurring in various forms and dimensions cause serious threat to the existence of growing populations. Diversification of agriculture as well as crop diversification could be an appropriate approach to overcome the situation. Soybean is probably the most suitable crop for this purpose. Not unlikely, the crop is being considered as 'Post Green Revolution' crop and is under continuous expansion, especially in nontraditional countries. More than 80 countries are now planting soybean. Soybean is the most cost effective crop to combine protein and calorie per unit of resource invested. On a dry weight basis, it produces almost five times more protein than cereals (and twice that of other pulses). The soybean, with its many products, is one of the most versatile plant known to people, science and industry. Soybean contains in its dry state approximately 40-45% protein (with a high proportion of lysine), 20-25% quality oil (with a high proportion of linoleic acid), 34% carbohydrate and 5% ash and is considered to be a major food source for the future.

It assesses high dietary protein content and has become a vital feed component. The global demand for soybean meal for 1993-1994 is forecast at about 108 million tons which is about 14 million tons higher than that in 1987-1988.

In spite of immense value of the crop, Soybean has not received proper attention in Bangladesh due to certain limitations as planting area is relatively limited because of population pressure. Moreover, Soybean seeds contain three lipoxygenase isoenzymes L-1, L-2 and L-3 which are responsible for beany flavor and bitter taste.

The greatness of soybean is that it makes the soil richer, thereby raising the productivity of the next crop as well as facilitating next crop rotation. Bangladesh soil suffers seriously in the deficiencies of nitrogen fertilizer and government subsidies supports has been withdrawn since 1992. As a result, the price of nitrogen fertilizer has gone up which is beyond the buying capacity of resource poor farmers. Under this circumstances, promotion of soybean cultivation is a crying need of the time because soybean can fix biological nitrogen from the atmosphere very effectively. Soybean can grow in Bangladesh round the year and almost all kind of soils are suitable for this crop. Soybean cultivation makes the soil less poor than other crops though it depends on crop rotation.

Existing socio-economic conditions of the allow farmers to grow soybean as a sole crop or as an intercrop with other crops. Four high yielding variety namely Bragg, Davis, Pb-1 and G-2 have been recommended for commercial cultivation throughout the country. Several cropping patterns having soybean as a component crop have been recommended, for practicing in the farmers fields. Some other technologies such as varieties suitable for early and late plantings, inoculant strains, no-till soybean cultivation, relay cropping with paddy, soybean-maize and soybean-Aus paddy intercropping, fertilizer recommendations and seed storage techniques have been developed and awaiting dissemination. For establishing this crop in a sustainable manner we need proper government policy towards increasing the both productivity and acreage under this crop and government should take all measures to establish this crop as a source of oil as well as vegetables. Recent advancement in bio-technology, 'soybean heterosis and in developing varieties lacking beany flavor and bitter taste give ample scope to promote soybean in the country. A strong country-wide technology transfer programme supported by inputs and credits with the help of private sectors including NGOs could help lot in the effort. We should remember that soybean has tremendous potential for alleviating protein caloric malnutrition in cereal based Bangladeshi diets.

The crop has been neglected in our country since long. Time has come to give due attention to this crop as the soybean has diversified uses. Government should provide necessary supports to increase acreage under this crop as well as production per hectare.

The writer is Principal Scientific Officer, Technology Transfer & Monitoring Unit, Bangladesh Agricultural Research Council, Dhaka.



Dyam river basins — a legacy of India's Farakka barrage.

— Star photo by Enamul Huq

Saga in Silk Thread Reeling and Spinning

STRETCHES of open green grass and tiny huts with half-naked urchins jumping in glee, are common sights when one proceeds to Miapur village, in the Chaughat area of Rajshahi district. In the somnolent atmosphere of Miapur village, for a person who has gone to collect data is an ordeal, because every case that one comes across is a tale of tragedy, horror and unending tears.

Like most villages in Bangladesh, women in Miapur lead a very tough life, living day to day almost from hand to mouth. Miapur village offers no skilled trade openings to women whereby they may attain economic solvency.

Angura Khatun is twenty-five years old and comes from a family of seven sisters and one brother.

Naturally Angura's father, Fayen Shaikh, and mother Nomajan, could hardly afford to give her proper education in the true sense of the term, thus Angura's life was not at all happy and to make things worse she got married to a poor day labourer called Ali Hussain Miah.

It is a fact of history that history repeats itself and tragedy in its many faceted hues and contours faced Angura in her married life.

Her husband a day labourer could hardly earn enough to support himself and the wife, leave alone the three sons to whom she gave birth. With all the problems that Angura faced, she still managed to study up to Class V. Having the basic elements of literacy inculcated in her, Angura naturally wanted to educate her three sons. Thus began Angura's search for solvency. But did she see a ray of hope around Miapur? Nothing really substantial to talk about.

A Case Study

money for three months and then vanished. The women including Angura remained disillusioned!

But a ray of hope dawned when the team of experts from the ILO/WAD project 'Technologies for Rural Employment with Special Reference to Women' visited Miapur and formulated the Miapur Women's Development Society, of which Angura became a member. The team seemed to speak logically and somehow when the experts organised the women into 'technology based' groups, belief and trust seemed to occupy an indelible corner in their minds.

Angura could now hope to educate her children beyond the primary level. She would be able to do more now and contribute to her family's solvency. Until the project team visited the place, Angura could not think of earning in any other way, except stitching, through which she earned about Tk 150.00 per month. Of course, Angura stitched on her neighbour's machine, because she has no machine of her own.

With the advent of the ILO/WAD project, Angura's life-style changed. Angura now is a different person. She attends weekly meetings regularly and contributes savings to the group's common fund. She is



Angura — spinning her way to economic solvency

now an active and responsible member of the silk thread spinning and reeling group. Under the auspices of the ILO/WAD project Angura underwent a month-long training in 'Silk Thread Reeling and Spinning' at the 'Bangladesh Sericulture Research and Training Institute' during 1991.

Angura says that though women in the area had never been trained in the above mentioned trade, yet social taboos and norms are no longer a constraint that can hamper women's progress. The elderly people have no objection to their daughters taking training in professional and skilled trades. She feels that such a skill development training is essential to master the art of silk thread reeling and spinning.

The mist has cleared and the sky appears bluer to Angura. By working eight hours a day, on silk thread spinning and reeling.

Angura expects to earn almost Tk 1,000.00 per month which will certainly make her solvent very quickly. In addition to this job, Angura also hopes to engage her leisure hours in subsidiary economic activities like apiculture, poultry rearing and kitchen gardening.

— from an ILO (International Labour Organisation) report on 'Technologies for Rural Women.'

Tent City Protesters Press for More Aid and Less Guns

Thousands of protesters waving banners and living in tents in 30 Spanish cities have succeeded in putting the spotlight on the country's poor record on international aid. The government, reports Gemini News Service, is having to take note of criticisms that the aid programme is too small, too military and too commercial.

Cristina Campbell writes from Madrid

THEY could not be missed: 700 tents La Castellana, the wide boulevard that divides the Spanish capital, clustered in front of the grey concrete of the Ministry of Economics and Public Finance.

Seven thousand Spaniards from across the political spectrum slept in the tents for more than two months. The scene was repeated in 30 cities across the country, making it the country's biggest mass protest in the past decade.

Black and red banners fluttered along Madrid's elegant avenue of our-star hotels and government ministries demanding 'No more Rwandas' and the endlessly-repeated motif '0.7 NOW', a reference to the 1970 United Nations resolution calling on industrialised countries to contribute 0.7 per cent of their gross national product (GNP) as aid to developing countries.

The Madrid tents packed up in late November, but the over-all campaign continues until the December 28 delivery of Spain's national budget. The protesters are pressing Felipe Gonzalez's socialist administration to become the fifth government in the world to meet the UN target, following Denmark, Norway, Sweden, and the Netherlands.

Last year, Spain's contribution was only 0.27 per cent of its GNP — and much of that aid went to purchase Spanish military equipment.

Most Western countries quietly ignore the target. Many are cutting back aid programmes, arguing that private investment is the key to development, not aid. But despite a deep recession and

unemployment running at almost 20 per cent, the Spanish government is paying close attention to the campaigners and has started to make some promises that it will contribute between 0.35 per cent of GNP for aid in 1995, and 0.7 per cent in 1996.

Says sociologist Carlos Gomez, spokesperson for the Research Centre for Peace, a Madrid-based non-governmental organisation: 'This has been the most important mobilisation of Spaniards since the demonstration against NATO (the main Western military alliance) ten years ago.'

We're not talking about one group of people, but about most of the country.'

Press, TV and radio provided daily coverage of the demonstrations that brought 25,000 students onto the streets, and the gradual encroachment of tents onto city boulevards.

Powerful sections of society have voiced their support: the Archbishop of Madrid, the three major workers unions, and even the right-wing opposition party.

Says Pablo Oses, one of the leaders of '0.7 NOW': 'If we are going to eradicate hunger, a great deal is going to have to change. UP to now, Spain's contributions to bilateral development have been absolutely useless. Eighty per cent of what we call bilateral aid has been a big hoax.'

A review of the programme by the Paris-based Committee for Development Aid (DAC), which groups industrialised country aid-donors, said Spain had the most commercially oriented of all aid programmes and ranked second

place in terms of the harshness of its conditions.

Gomez, who has spent three years investigating the FAD programme, says: 'The government has systematically denied everybody any information on FAD, including MPs. Now I've finished my research, I entirely understand why.' The reason, he says, is link between FAD credits and military exports.

Step by Step Development

Small Attempts have Changed My Life

Bedana, 35, a member of Chandan Para Landless Women's Group (ASA) Sreepur, Gazipur, states her case of achieving gradual development

MY husband's (aft oil dealer vendor) income proved insufficient for bringing up our four children (2 boys and 2 girls). Gradually, the condition of our family was going from bad to worse as the children were growing up and demands increasing. In such a situation my first son fell ill. After suffering from fever for two months one of his legs became numb. Also the family expenditure rose considerably at that time as the other children had already started schooling.

But we did not have any extra income. Hence, I thought of starting a business. There was a rich man's house adjacent to ours. I was badly rebuffed by one of the women of that house as I requested her to lend me Tk 500/-. In such a state of utter sorrow I came to know about ASA Landless Women's Group. One day a worker of ASA (C.O) talked to

us and advised us to be organized. From that day my involvement with the group started.

In 1990 I received a loan of Tk 1,000. With that I bought a pair of goats at Tk 500/- and also started a mini poultry. At the end of the credit year there was not a single paisa in my hand except the goats and some chickens. The children ate a few eggs and hens and that is all. In the next term (in '91) Tk 2,000/- was issued in my favour. With that I bought a calf and sold it during the Eid festival at Tk 3,000/-. In the same year the goats gave birth to two pairs of kids which were sold in the following year (92). A portion of that money I spent for Eid. And it was after a long gap that we enjoyed the Eid festival!

Again in '92, Tk 4,000 came to me as credit. This time a small grocer's shop was

set up with that money. Now, I myself operate the shop. During day time my first son helps me in this. Sometimes, I take help of my younger son and daughter for calculating, although I learnt a bit of it in the development education class. The shop is running well. On an average, the daily sale is around Tk 100 to Tk 150. I am repaying the instalments from the income of the shop. I am optimistic of its further development. Two of my children are school going (both of them in class V). Our family expenditure has increased. But that is for the better quality of life. Unwanted diseases are now far away from my family. Attending the development education class has raised my awareness of health, nutrition and environment to a great extent. I have accepted family planning also. My social status has been upgraded considerably. I want to continue with the credit programme for several years more — till a stable position is confirmed. I believe to sustain, development comes gradually.