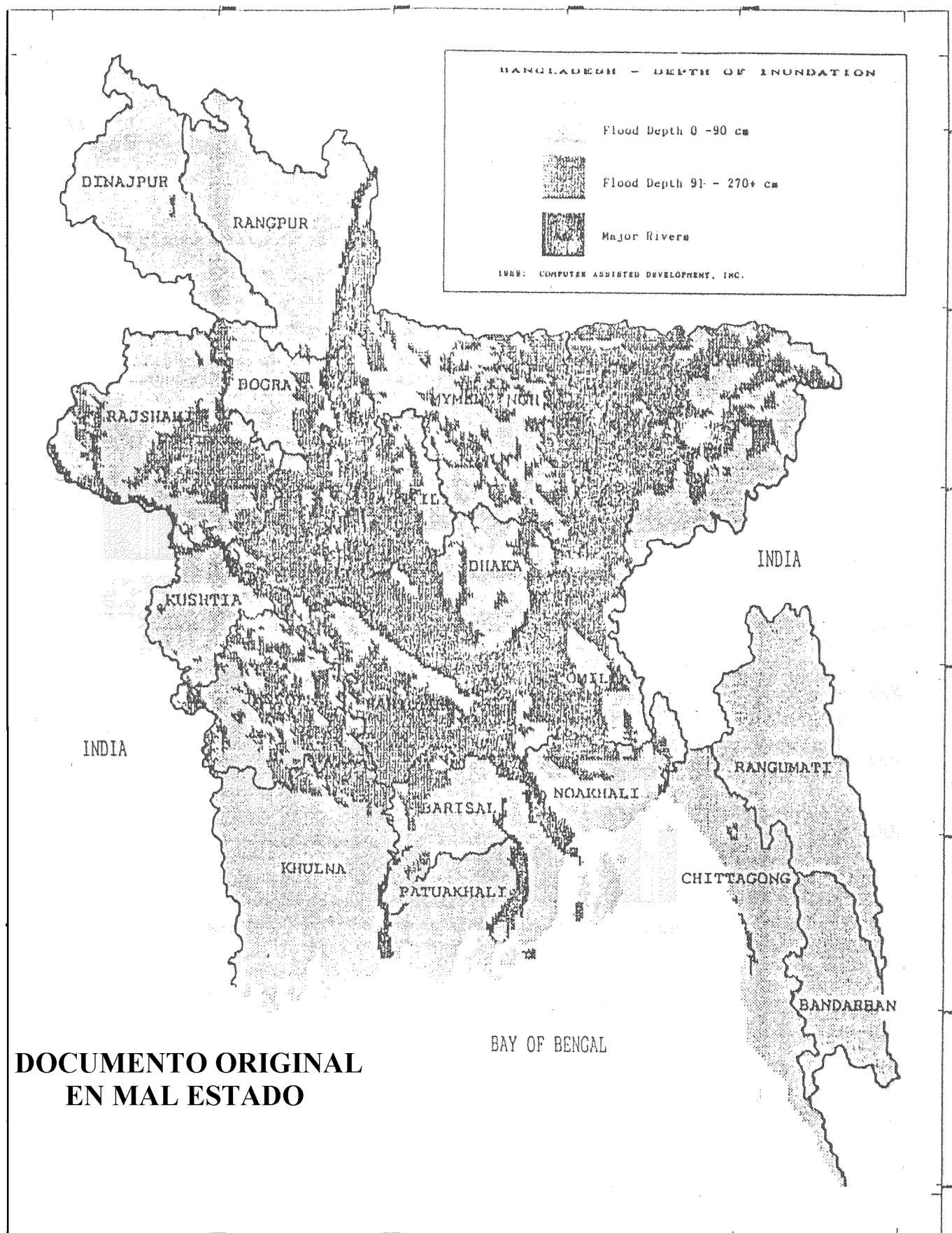


Map of Ganges-Brahmaputra Basin

Figure - 2



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Figure 3

Flooding Levels in Bangladesh, by District

Source: Rogers, Peter, et. al, 1989

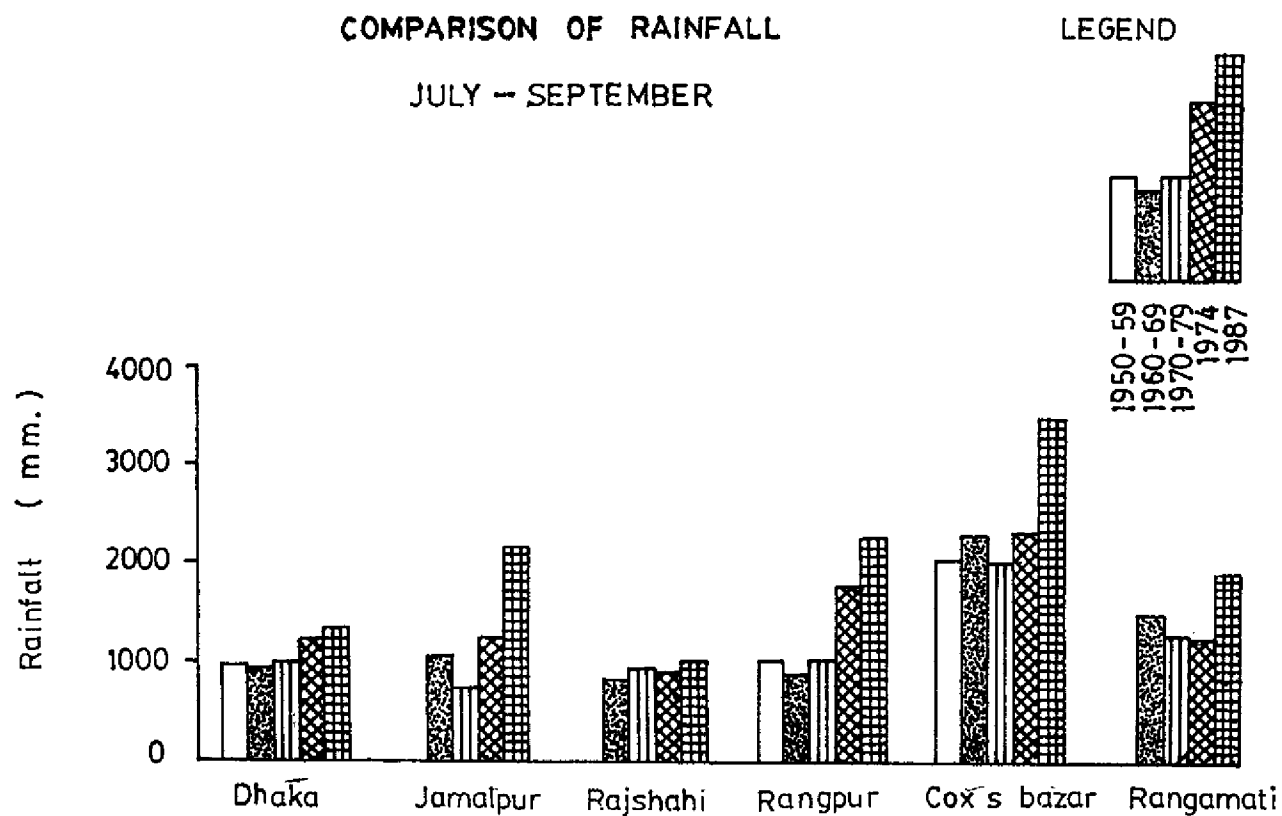


Figure 5

Source: Miah, 1988

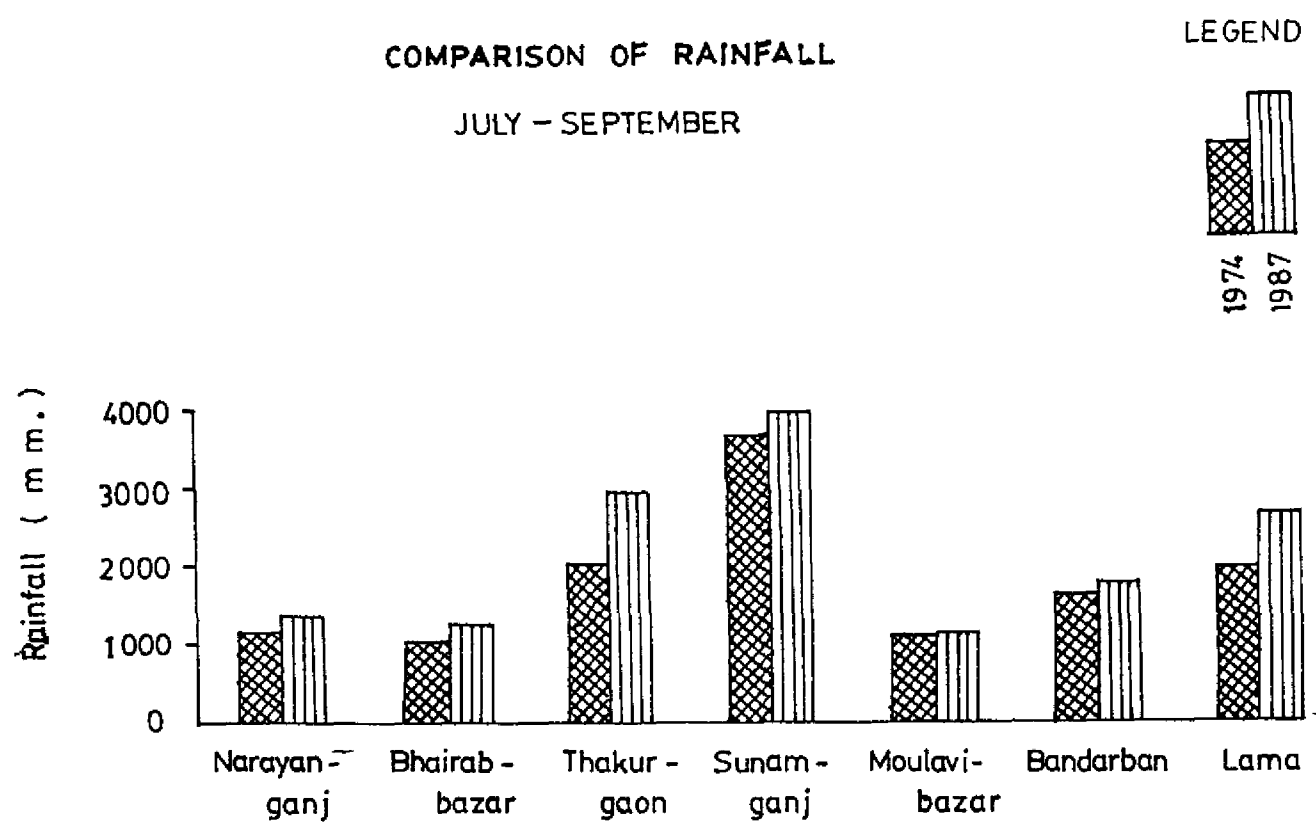


Figure 4

Source: Miah, 1988

SIMULTANEITY OF FLOOD , 1987

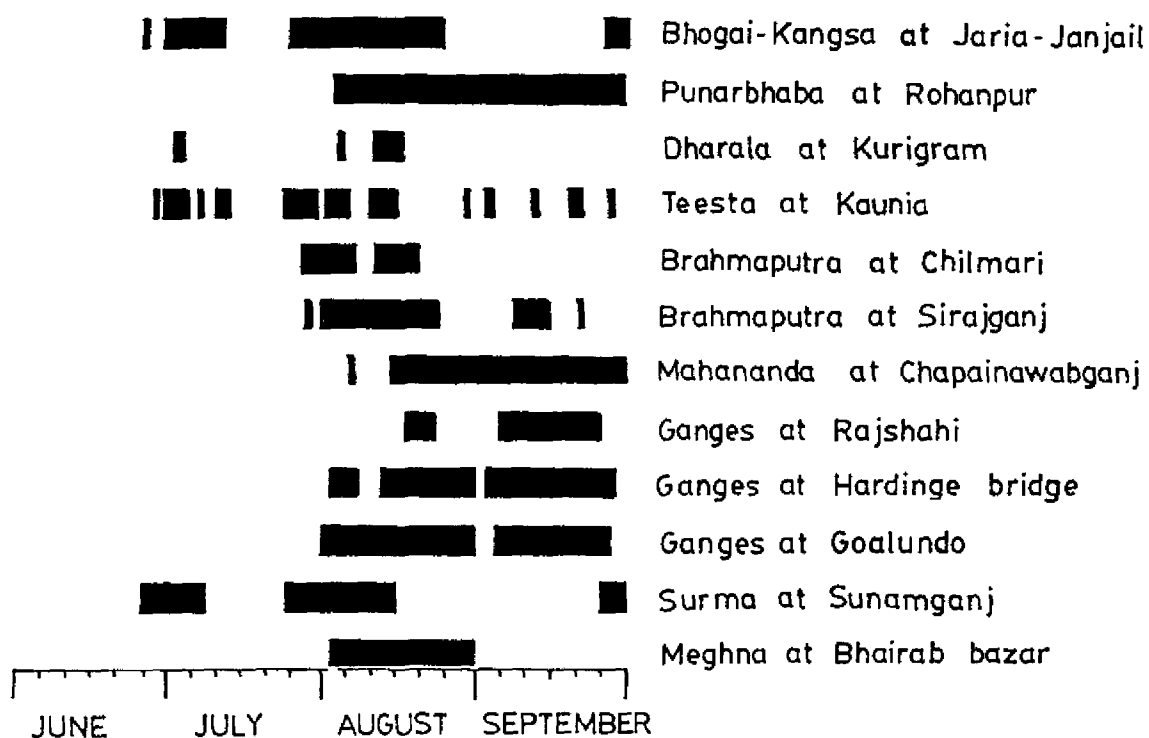


Figure 6

Source: Miah, 1988

Faulty construction of embankment hits 1,55,000 acres

A Correspondent

PABNA, Dec. 17: Faulty and unplanned construction of the Tarash-Nimaicharan flood control embankment has failed to serve the purpose of saving 1,55,000 acres land within the Chalan Beel project area from the inundation by flood water every year.

The embankment was constructed by the Bangladesh Water Development Board at an expenditure of Taka 47 crores.

The people of seven upazilas of Pabna and Sirajganj district within the project area have brought allegation of widespread corruption by a section of high officials of the WDB in collusion with the contractors.

The embankment often gets collapsed at places leading to inundation of vast areas caused by increased rainfall and on-rush of water of the rivers Jamuna, Baral and Atrai.

It causes waterlogging and there is no proper arrangements for draining out water resulting in submerging rest areas cultivable land and damage of standing crops.

The Ullapara Division of Water Development Board spent Taka 28 crores in the initial phase of the construction of the project.

It was stated that the land within the project area would be turned into three-crop land and flood water will not be excess water would be arranged, silted khals re-excavated. The depth would be increased for water reservation and water-logging will be removed. the construction of sluice-gates and

regulators were taken up without proper planning. The work was hastily completed. Consequently the problems were not solved.

Later a supplementary scheme was prepared and approved at an estimated expenditure of Taka 19 crores and a 19-kilometre long embankment was constructed but the problems have not yet solved leaving lakhs of people in the area into utter distress and helplessness. The scheme for brick-soling of the other side of the embankment was taken up but that also failed to solve the problem.

On the face of widespread allegation a fresh scheme has been taken up by the water Development Board with the aid of Asian Development Bank.

The scheme includes development of Tarash-

Nimaichara road, construction of new embankment covering vast areas from Baghabari¹ Nimaichara, closing up of the mouths of 67 bridges over the North Bengal Highways from Bhuiyaganti² to Baghabari improvement of Bhuiyaganti-Tarash road and construction of embankment from Tarash to Ranishat and another from Baruahash to Moma.

The idea of closing the mouths of 67 bridges is reported to have been abandoned by the WDB and Roads and Highways Departments which proposed to construct a 70-kilometer long embankment on the bank of the River Karatoa at an additional amount of Tk. 20 crores.

The work was done without any tender and inferior quality materials were used, it is alleged.

The Bangladesh Observer
March, 1990

DHAKA COURIER
January 20-26, 1989
Vol. 5, No. 24

A study on the environmental impact of MDIP shows that it is not based on the principle of sustainable development. The study, conducted by three journalists and a development worker was made public through a publication ceremony in Dhaka city last week.

It is believed that MDIP would turn out to be an example of how disastrous a development project could turn if it was not preceded by an environmental impact assessment study followed by measures to minimise adverse impacts.

Mostafa Kamal Majumder, Molnuddin Naser and Monwara Begum were the journalist-members of the study team and Ummul Hasel its NGO-member. The report was edited and published by Mahfuzullah. The study was supported by The Panos Institute, London.

The MDIP provides for flood control, irrigation and drainage facilities to 19,021 hectares of land covering 319 villages in 14 unions of Mallab Upazila under the district of Chandpur. Already Taka 156.18 crore has been spent on the construction of a 64.36 kilometres polder embankment, 218 km of irrigation canals, 125 km of drainage canals, two main pumping stations, two booster pumping stations and hundreds of related structures.

But even before the completion of the project people started casting doubts about its future because the flood control embankment breached in last two successive years causing colossal loss and limitless sufferings to the people of the area.

Located at the confluence of the three major rivers -- the Meghna, the Brahmaputra and the Ganges, the project is in an area subject to annual flooding by four to ten feet of water for about five months. The area is bordered by the Meghna on northern and western sides and by the Dhonagoda on eastern and southern sides.

Although the project was conceived in 1964 its implementation began vigorously in 1979 with funding from the Asian Development Bank. It is based on two feasibility studies conducted between 1967 and 1979. But now people question the selection of the site for such a huge project just on the bank of the mighty Meghna which has already forced the

retirement of a seven kilometre section of the embankment from Ekhlaspur to Amirabad due to erosion. The project planners had foreseen a stable bankline on the Dhonagoda riverside of the project, but even this small river threatened the embankment at Gazipur point in 1987. The embankment now stands threatened by river-bank erosion at a total of 11 points.

People connected with the project feasibility studies have said that at that time they lacked the technology to suggest a stable bankline by way of simulation studies. The mistakes committed were not intentional, they say. It appears that although the start of the project was delayed by unavailability of fund, further delays were caused by design faults at the main pumping stations, faulty management, frequent transfer of project officials, and some local resistance.

The cost of implementation of the project increased by 140 percent over the years but the target population are yet to enjoy its full benefits. This year an additional allocation of over Taka 17 crore has been made for MDIP and another nearby project, although the people are not quite confident that the project will last long.

It is true that some political leaders of the area had organised pressure on the government in the mid sixties for taking up the project with all the good intentions. But the average people of the locality were not consulted, nor were they briefed about the forthcoming environmental changes and ways of adapting themselves to the changed situation.

Thus MDIP was devoid of people's participation from the very beginning and just like any other government project it was imposed from the top. It was based on the western model of development in which increase of production and gross national product is the main concern, and the question of sharing of resources equitably is left to the free play of the market forces.

This explains why 150 families were forced to become rootless, and another 13,000 families to allow acquisition of land for construction of structures while another 37 thousand families got the benefits of the project without making any sacrifice. The planners were so much obsessed

Environment

The environmental price of a development project

Any development activity is supposed to involve some environmental sacrifices. We know from mistakes committed in the past that environmentally unsound development is no development at all because by jeopardising the environment the human race cannot survive.

But often it so appears that planners in developing countries like Bangladesh are so heavily preoccupied with the question of development that the environmental consideration is invariably overlooked. The recently completed Meghna-Dhonagoda Irrigation Project (MDIP) is the case in point.

Appendix - B

with increased foodgrains production that they ignored the interests of 6000 and 3000 families which depended on fishing and plying of country boats in the project area to earn their bread. The social question of rehabilitation of evictees and alleviation of poverty were given no attention at all.

The project, during the ten years of its implementation created 63 million man-days of employment. It has created 52 million man-days of additional work so much so that farm labourers from outside, are now employed in the project area. The MDIP area which earlier could produce only 43 percent of its foodgrains requirement is now a surplus area giving the nation 43 metric tons of foodgrains annually. These all look very attractive. But at what cost have these been achieved?

The present study notes that the implementation of the project has led to degradation of huge natural resources. One hectare of scarce land out of every eleven hectares (total 1578.33 hectares) have been taken out of agricultural use permanently for the construction of different structures. By closing the mouths of about 40 canals including 14 big ones and turning the flood-prone area into a flood-free one, a huge natural ground for fish breeding has also been destroyed. The MDIP area was famous for production of lobsters, an important foreign exchange earner for the country, and during five rainy season months about two maunds of such fish used to come to the nearby Mallab market alone each day. Besides the professional fishermen poor farmers used to earn extra income by catching lobsters. Earlier the people could catch fish from the canals and crooks free of cost. Now they have to buy fish from outside.

A total 125 miles of canals, now being used for drainage purposes, have become unsuitable for cultivation of fish because of the deposition of residues of chemical fertilizers and pesticides. The quality of the soil, experience with similar projects show, will start deteriorating because of the absence of natural manuring through floods and decomposition of aquatic plants. Worst of all the farmers of the area, illiterate as most of them are, do not know the use of fertilizers and

pesticides in appropriate doses. The use of agro chemicals without proper understanding may further aggravate the problem. Implementation of the project had created transportation problem which may, however, go if rickshaws take the place of country boats. At present the people of the area are facing an acute fuel scarcity because no longer can they grow deep water aman paddy to get the straw, and jute to get sticks to burn.

The project has also caused pollution of water of all open water bodies. Earlier flood water used to wash away the human excreta and other accumulated waste which now get into ponds and canals by getting mixed with rainwater. The people now need an improved sanitation to cope with the situation. It appears that the project has led to a limitless violation of the environment of the area. Nobody knows whether the project would last for 50 years as is projected. But it is going to cause some permanent damages to the ecology because the project would not only change the farm practices and life style of the people but also affect the flora and fauna.

Prime Minister Moudud Ahmad who was the chief guest at the publication ceremony of the report of the study said that the government had made fresh allocations for MDIP because it had already spent 156 crore taka on it and could not allow it to turn useless. Former Irrigation Minister Barrister Anisul Islam Mahmud said that although there were many mistakes in the process of planning and implementation of the project, the entire investment made on it is expected to return in just five years.

According to a senior planner, MDIP was taken up in the mid sixties to fetch more fund from the central government for the development of Bangladesh. After the liberation of the country it was produced before the donor agencies to get loans easily on the ground that the project was already accepted by them.

This, however, is a poor argument to justify the implementation of the project without paying due attention to its environmental impact. Although the project was initiated in the mid sixties when there was the least environmental concern, the implementation of the project was started at a time when there was

enough of awareness about this. One can only hope that the MDIP will be the eye opener, and that similar mistakes will not recur. Ω

Mostafa Kamal Majumdar

Flood problem: Conflicting recommendations

Commenting on recent reports by foreign experts on the country's flood problem, a water expert has expressed skepticism about their utility. "Since the Krug Mission we have received a lot of recommendations", he said questioning if they had yielded any solution to the perennial flood problem.

The 1907 and 1908 floods in Bangladesh moved the world community. The United States, France, China and Japan expressed their concern over the recurring flood devastations. Experts' teams from Denmark, the EEC and UNDP visited flood-ravaged Bangladesh and prepared reports recommending flood control measures. It is learnt that the World Bank is also preparing one such report considering the country's vulnerability to natural vagaries.

A Bangladeshi expert, who asked not to be named, pointed out that most of the recommendations already prepared were in contradiction with each other. On the other hand a poor country like Bangladesh finds it difficult to spend the huge amount of money required for the recommended projects. "We cannot afford to bear even the maintenance cost of the projects if they are implemented entirely by foreign aids", he observed.

The French report suggested that embankments be built on either side of Bangladesh's main rivers to contain excess waters. It did not give details of the project. The recommendations said embankments should be constructed near the rivers to prevent such floods which occur in Bangladesh every 10 years. To resist floods with greater intensity specially which take place once in a century the embankments should be built at a distance ranging from 2 to 5 kilometres, the report said. It also recommended cross dams to prevent river erosions.

The cost for the France-recommended 20-year project was estimated at 10.2 billion US dollars. It will necessitate an annual expenditure of 510 million US dollars with a foreign exchange component of \$ 267 million. The break up of the total cost was shown as follows: embankments (\$ 2.9 billions), river training (\$ 4.8 billion), town protection embankments (\$ one million), and drainage system (\$1.4 billion). The maintenance cost stands at 180 US dollars every year.

UNDP's report has recommended construction of embankments and river training to prevent overflowing of waters. It laid special emphasis on regional cooperation to combat floods. It

suggested that unplanned road construction must be stopped and measures be taken to facilitate flowing of waters through railway and highway bridges.

The UNDP report proposed for the formation of separate organisation like National River Authority, similar to the existing Jamuna Bridge Authority, should be created to deal with the flood problem. Criticising the Bangladesh Water Development Board (BWDB) the report said it was a "bureaucratic department" accommodating 20 thousand people. It cannot be given the responsibility of new projects, the report said emphasizing that the BWDB could at best look after the project maintenance.

The project as recommended by the UNDP will be implemented on turn-key basis or under the direct supervision of foreign experts. The cost involved was shown to the tune of 7.5 billion dollars. The annual expenditure will be 1.5 million dollars. A sum of 100 million dollars will be required annually for maintenance cost after completion of the project.

An experts' team from the United States reported that Bangladesh should not go for flood control measures which would entail great expense on her. They recommended that flood mitigating measures be taken up on an urgent basis. The US report said emphasis should also be given on the production of winter crops, besides increasing irrigation facilities to help boost up production.

A report from China is more or less similar to that of the USA. The Chinese report said instead of going for a big plan, Bangladesh should concentrate on flood control measures in the light of her own experience.

Local experts believe Bangladesh cannot afford huge expense to implement recommendations made by foreign experts. They say the whole nation should be involved to find solutions to the menacing flood problem. Determination, sincerity as well as honesty are important factors in this regard, they say.

Salahuddin Babar

Flood control: Too many studies, too few measures

A French expert team currently studying problems of flood control is expected to submit its preliminary report by 31 May. As per informed sources, the report will recommend some measures to check floods in Bangladesh on the basis of the previous studies made since 1957.

Meanwhile a team of Bangladesh Water Development Board left for Paris on Sunday in advance of the visit of President Ershad to France. The responsibility of the team is to prepare a background for official discussion of two heads of state. The BWDB team is expected to return home by the 1st week of April.

A Dutch national, who is one of the members of the French expert group told this correspondent recently in Dhaka before his departure for the Netherlands, that the French team will put emphasis on river training and construction of embankments. He further said that the team will recommend to set up a separate flood control authority under the Ministry of Irrigation, Water Development and Flood Control. He further stated that the French team will also recommend to train more Bangladeshi experts to handle the flood problem because Bangladesh cannot afford the huge expenses to procure foreign experts.

A top ranking official of Bangladesh Water Development Board when asked about the possibility and allied problems of creating a separate flood control authority, replied that there was no justification to create separate flood control authority in parallel with the BWDB. The existing flood control, drainage and irrigation problems projects have different components like flood control, irrigation as well as drainage. If one body is looking after the flood control only, another body will look after the other components. It may eventually create institutional problems. He further added that the government may take up a separate master plan for flood control reflecting the recommendations of the National Water Plan (NWP). But it is necessary to mention here that in the

NWP, flood control was given less priority.

Presently, three more teams are also working on the flood control issue. UNDP submitted its preliminary report in November, a Japanese team recently arrived at Dhaka; a British team is also working. All these reports will be available by the mid of this year when another flood will knock the door.

Dhaka Courier contacted a veteran water expert to know how the government will coordinate all these reports. Will the other donors give aid or loan on the basis of these individual reports and recommendations? He said, "little chance". He further added that if a United Nations team is mobilized with the participation of renowned water experts like the Krug Mission of 1956, then the report may be acceptable to all donors or the government might ask the World Bank as executing agency to carry out the studies.

Meanwhile, the Government's progress regarding the

implementation of an ad hoc flood control programme is learnt to be not encouraging. In a recent meeting presided over by Vice-President Justice Nurul Islam, the progress was revealed to be unsatisfactory. Regarding the digging of 2921 ponds, around 50% is calculated to have so far been completed. For the digging of ponds, a total of 41,000 M.T. of wheat has been allocated, the meeting was told.

A water expert of BUET described the pond digging programme (as part of flood control measure) as 'unscientific and total wastage of wheat'. He asked: How much water can these ponds store? Moreover, it was decided that Upazila Parishad will look after these ponds but bank of the ponds will be under the Ministry of Fertilizer and Rehabilitation. The Bangladesh Water Development Board has identified 33 rivers of the country for digging to increase the water carrying capacity during flood

periods. But so far 8 rivers have been selected for the purpose with a total allocation of 11,000 M.T. of wheat. A member of Water Development Board said that allocation of 11,000 M.T. wheat will not be sufficient and BWDB can hardly procure more wheats.

It was disclosed in the said inter-ministerial meeting that the T&T Board has already spent Tk 200 million for flood rehabilitation but the Ministry of Finance is yet to transfer that amount of money to T&T Board. Similarly, an IWTA representative told the meeting that they had chalked out a plan of Tk 51 million for dredging but the money was not allocated by the Finance Ministry. In the meeting the Vice-President issued directives to Ministry of Finance to allocate the money immediately for expediting flood rehabilitation work.

Meanwhile, the government has submitted a flood control plan worth \$1.6 billion to World Bank as part of its long term flood control plan. But informed source said that World Bank would wait for different studies undertaken by UNDP, French, British and Japanese teams. The source further added that the World Bank might take up a new study in the light of the National Water Plan.

Arwar Ibrahim