

Chinese Vice-Minister visits WARPO

His Excellency Zhang Jiyao, Vice Minister, Ministry of Water Resources, Government of the People's Republic of China visited WARPO on 21st February 2000. An eight member high-level official delegation from the Water Ministry of China also accompanied the Vice-Minister. The Director General and other senior officials of WARPO warmly welcomed Mr. Zhang Jiyao and his delegation. Extensive discussions were held between the Chinese delegation and WARPO officials on different aspects of national level planning, basin-wide water management flood and drought management, sharing of transboundary river water resources.

Mr. Tauhidul Anwar Khan, DG WARPO, briefed the Chinese Delegation on the Bangladesh National Water Policy, the National Water Management Planning exercise and the National Water Resources Database. The Chinese Vice-Minister said that he had been impressed by the achievements made by Bangladesh in these key areas. Mr



Zhang Jiyao also hoped that China could benefit by learning from the Bangladesh experience on issues such as national water policy formulation, flood management and relevant aspects of transboundary water sharing. He agreed that an exchange of professionals between WARPO and the relevant Chinese departments would be of great help. During discussions, Dr. Riaz Khan, Executive Director of EGIS, Mr. Emaduddin Ahmed, Director SWMC, and the Director General, River Research Institute, Syed Abdus Sobhan, also briefed the Chinese delegation on the activities of their institutions. The Chinese delegation expressed happiness on the progress made by the Bangladeshi water professionals in mathematical and physical modelling as well as in Geographic Information Systems.

The visit to WARPO by the Chinese Vice Minister was a part of his six day visit to Bangladesh as a follow-up to implement the Memorandum of Understanding (MOU) signed on 11 November 1997 at Beijing between the Ministries of Water Resources of Bangladesh and China.

WARPO signs data exchange accord with LGED

As part of WARPO's ongoing activities to promote development of the National Water Resources Data Base, WARPO has signed an MOU with Local Government Engineering Department (LGED) to facilitate sharing of information held in their databases. The MOU was signed by Mr. Monowar Hossain Chowdhury, Chief Engineer LGED, and Mr. Tauhidul Anwar Khan, Director General of WARPO. Mr Khan said "mutual access will greatly enhance the planning capacity of both organisations in their respective areas of interest. WARPO looks forward to close continued co-operation with

LGED, and hopes to enter similar agreements with other organisations in the near future"



Inside this Issue

Chinese Vice-Minister visits WARPO

WARPO signs data exchange accord with LGED

Second World Water Forum at the Hague

Highlights of the Minister's statement at the Hague

Ganges Dependent Area (GDA) Studies

Sino-Bangladesh cooperation in the Water Sector

From the DG's Desk

Second World Water Forum at the Hague

The Second World Water Forum and Ministerial Conference was held at the Hague in the Netherlands from the 17th to 22nd March 2000. The objectives of the Forum were to:

- send a clear message around the world about the looming water crisis and the need to take urgent action;
- provide an occasion to address the challenges ahead and set down the conditions for a world in which everyone has access to clear water by 2025;
- present the World Water Vision - 2025 (Vision) and the Framework for Action (Framework) to the Ministerial Conference for generating political commitments.

More than 5,000 participants from about 140 countries including Ministers, senior Government officials, water experts, representatives of NGOs, international agencies, UN bodies, donor agencies, gender and youth groups and business communities attended. The plenary sessions, including the opening and closing sessions, were festive occasions. The Crown Prince of the Netherlands chaired both the sessions. The President of the World Bank and the Director Generals of the UNESCO and UNEP also addressed the closing session, which was held on the 22nd March - World Water Day.

The official Bangladesh delegation was led by the Minister of Water Resources. This included a 3-member Ministerial delegation with the Minister and Secretary of Ministry of Water Resources and the Bangladesh Ambassador to the Netherlands. Others included the Chairman BWDB, Director General WARPO, Managing Director DWASA, Chief Engineer LGED and officials from BWDB, WARPO, SWMC, JRC and a Consultant from Bangladesh Water Partnership. In addition to the official delegation, prominent Bangladeshi experts also attended. These included Dr. Jamilur Reza Chowdhury of BUET, Mr. QI Siddique, Chairman Power Development Board, Dr. QK Ahmad, Chairman of BUP; Prof. KB Sajjadur Rasheed from Dhaka University and Mr. MH Siddiqi, noted water expert, together with mid-level water professionals, NGO representatives and two Bangladeshi journalists.

A senior officials' meeting was held on 18th and 19th March to prepare a draft Ministerial Declaration. Government officials of more than a hundred countries, representatives from International Trade Unions and

international NGOs Forum attended. Dr. ATM Shamsul Huda, Secretary, Ministry of Water Resources, Government of Bangladesh made important interventions during the meeting on the issues of basin-wide Integrated Water Resources Management (IWRM) through cooperation of co-riparian countries and water related risks like floods and droughts.

Discussions on Asian issues took place on 19th March. Amongst the various topics, two important sessions on the Ganges-Brahmaputra-Meghna (GBM) region and on South Asia Water Vision were held. The importance of regional cooperation between China, India, Nepal, Bhutan and Bangladesh was stressed for basin-wide management of water resources of the vast G-B-M region. In the session on South Asia, water and food security, water and environment, river basin management, hydropower development, ground water management, floods, and gender perspectives were discussed. The National Water Visions and Framework for Action from Bangladesh, Pakistan, India, Nepal and Sri Lanka as well as a South Asia Regional Vision were introduced and deliberated. Mr. QI Siddique, Mr. MH Siddiqi, Dr. Afzal Hossain and Ms. Lailun Nahar Ekram made presentations on Bangladesh Water Vision, Floods of Bangladesh, Groundwater and Gender respectively. Members of the Bangladesh official delegation made forceful interventions on issues such as arsenic poisoning of groundwater, floods, severe scarcity of water during dry seasons, salinity incursion in the south west region and need for regional cooperation to facilitate basin-wide IWRM. Different aspects of the Bangladesh National Water Policy and ongoing National Water Management Plan exercise were also highlighted.

Mr. Abdur Razzaq, Hon'ble Minister of Water Resources, Government of Bangladesh, chaired the ministerial regional discussion on South Asia during the Ministerial Conference on the 21st March. Extracts of Mr. Razzaq's important statement made on 22nd March to the Ministerial Conference are reproduced overleaf.

To highlight activities in Bangladesh on Asia day, specially prepared posters on National Water Policy, National Water Management Plan and harnessing of Ganges Waters were displayed by WARPO. Posters and pictures on floods etc. were also put up by SWMC and BWDB. These attracted much attention from the large number of international participants.

Highlights of the statement given by MR. ABDUR RAZZAQ, Hon'ble Minister of Water Resources during the Ministerial Conference on 22nd March at the Hague

'Water is one of the most important resources of Bangladesh; but its availability in the country is highly seasonal and widely variable. In the monsoon when we don't need any more of it we are flooded with water. On the other hand, during the dry season when we need it badly, there is severe scarcity. Bangladesh, being the lowest riparian of 54 international and transboundary rivers has limited control over the flows coming from across the borders. Excessive population and severe scarcity of land are other major impediments to the overall development of the country. On top of all these, the country is visited periodically by natural disasters like floods, cyclones and droughts. These water-related disasters claimed approximately 153,000 lives in Bangladesh during the last decade, affected at least 50 million people and caused more than 7 billion US-dollars in property damage. Is it not too much to endure for a poor country like Bangladesh?

In order to tackle these adversities we, with our meagre resources have been doing our best. The country has been able to provide some degree of protection to several millions of people from floods, cyclonic storm surges, droughts and river erosion. But these are not enough. We are glad that we could provide more than 90% of the population access to safe drinking water. But the most unfortunate phenomenon of arsenic poisoning of groundwater in more than 50% of the total area of the country is now frustrating this achievement of ours. We have been able to bring more agricultural land under irrigation to grow more food to alleviate the chronic food deficit problem to a large extent. In the absence of major surface water development in the country we had no alternative but to exploit more and more groundwater to irrigate our crop fields. In fact more than 70% of the irrigation water is supplied by groundwater. But today we are deeply worried about the irrigation sector also. We do not know what would happen once the arsenic, which is now causing a great public health disaster, gets into the food chain.

Flood forecasting and warning system has been improved in the country to the extent possible with very limited cross-boundary data. On the other hand, water induced disaster management capability has also been enhanced significantly. But when disastrous floods like 1988 and 1998 visit us, we find all these achievements to be too little to cope with the situation. What we need is attenuation of floods, more than 90% of which enter Bangladesh from across the borders. We require to secure our shares of flows of the 50 odd transboundary rivers to cater to the demands of different water users during the dry season including the demands for prevention of intrusion of salinity from the Bay of Bengal in the south of

the country.

Our government has signed a 30-year Treaty with the Government of India in December 1996 and secured the share of the Ganges waters during the dry season. Past reductions of dry season flows have caused widespread and severe environmental degradation to over a quarter of the country, affecting the lives and livelihoods of the people, particularly women and children. Our Government today, is committed to making best use of the waters of the Ganges secured under the Treaty. Several previous studies indicate that large-scale diversion of the Ganges waters to its dependent areas is necessary to meet the many different needs. Bangladesh needs support from the international community to bring about harnessing of the Ganges water to restore the environment of the Ganges dependent area, promote socio-economic development and alleviate poverty.

Bangladesh last year has adopted a National Water Policy to ensure Integrated Water Resources Management (IWRM) throughout the country. Right now we are in the midst of formulation of a 25 year National Water Management Plan to translate the policy into action. The National Water Policy attaches due importance to quantity as well as quality aspects of water, People's participation at every level of water management, poverty alleviation, harmony with nature, needs of the society-particularly of the poor, women and children, and public-private sector and GOV-NGO collaboration for IWRM.

All our efforts could be futile if we do not get co-operation of the co-basin countries of the major international rivers like the Ganges, the Brahmaputra and the Meghna which drain through Bangladesh. Basin-wide management of the water resources of these three rivers with full political commitment of all concerned Governments is an essential prerequisite for IWRM, not only in Bangladesh but also in the entire region. Past efforts for integrated basin-wide management in the Ganges, Brahmaputra and Meghna (G-B-M) region have failed to make any significant headway. In our opinion the international community can play a key role to foster cooperation in the GBM region.

On behalf of my Government I can assure you that our commitment will be there for the Ministerial Declaration of the Hague as we believe that the Declaration would lead the way towards basin-wide water management in the G-B-M region and would encourage the developed countries to come to the assistance of Bangladesh in its bid for IWRM in the country.

Ganges Dependent Area (GDA) Studies

Ever since the diversion of flows started at Farakka, the dry season Ganges flows in Bangladesh have reduced significantly causing manifold problems particularly to the environment of the Southwest region of the country. The present

- environment of the Ganges dependent areas including protection of the Sunderbans;
- restoring flows into the Gorai, the major distributory of the Ganges passing through the

In March 1998, an international seminar was organised at Dhaka to deliberate on the issue of development and harnessing the water resources of the Ganges. At the end of the seminar, a three-point action plan was adopted, of



Government signed a 30-year Treaty with India on 12th December 1996 for sharing the dry season flows of the Ganges available at Farakka. Immediately after signing the Treaty, the Government undertook efforts towards making optimal utilisation of the dry season flows of the Ganges which Bangladesh has secured as its share under the Treaty with the following objectives:

- reversing the process of degradation of the ecology and

- southwest region, and thereby controlling saline intrusion;
- reducing national and regional dependence on groundwater safeguarding rural, urban and industrial water supplies;
- increasing agricultural production through irrigation in more areas; and
- raising the living standards throughout the area through agricultural employment, food production and health standards.

which the second point was as follows:

To establish the basis for optimal use of the Ganges waters made available under the Treaty, further studies should be undertaken as a matter of urgency. These studies should determine the water-related social and environmental needs of the GDA. The studies should also assess the technical and economic viability of different options, including a barrage across the Ganges, for restoring the environment and promoting social

and economic development in the GDA. The National Water Management Plan will identify, during the Inception Phase, the detailed requirements and programme for these studies and, following agreement with Donors, will subsequently undertake them as a top priority.

Accordingly the Government proposed to undertake studies on GDA under the ongoing NWMPP with financial assistance from the World Bank. After lengthy discussions, the World Bank agreed to provide some additional support under the NWMP contract for the GDA studies, together with other activities requiring additional attention. However, since this amount was not sufficient to meet the Governments' full requirements for the GDA studies, Government has decided in principal to provide supplementary funds from its own resources. Arrangements to mobilise these extra resources are in hand.

The planned overall studies include components for:

- Consultation on Water Use and the Environment
- Augmentation, Diversion and Distribution options
- Water Management options
- Wider Development options
- Impact Assessment
- Strategy options

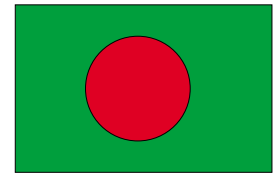
and would include the major activities as listed opposite.

Major Activities of the GDA studies

- ▲ Collect and assess the views of the people of the GDA on the need for and potential use of water in the region through a wide ranging programme of raising awareness and PRA, and within this programme collect and assess views on environmental issues and options to resolve them to preserve, restore and enhance the water related environment
- ▲ Assess options for diverting water from the Ganges for flows in the range 100 to 1000 m³/s, by means such as pumping or constructing a barrage across the Ganges at alternative sites, and compare them with estimates for options to do this by a combination of dredging and training works as prepared under the Gorai River Restoration Project.
- ▲ Prepare preliminary cost estimates for each option, taking into account recent construction experience in Bangladesh. Costs of operation and maintenance and those associated with land acquisition and resettlement, would be estimated also.
- ▲ Assess how the watercourses of the GDA could be augmented by water distributed from the Ganges, using natural and rehabilitated channels, existing and new canals, and check structures, to benefit as large an area as possible of the GDA.
- ▲ Assess whether options exist to modify the approach to management of water resources being used by existing and ongoing projects in the GDA.
- ▲ The review would cover a re-evaluation of the supply-demand relationship in the GDA, considering the needs for water supply, irrigation, industry, salinity control, mitigation of the effects of arsenic contamination of groundwater, shrimp farming and the movement of sediment in the rivers and estuaries.
- ▲ In considering options for water use, full attention would be given to the need to maintain in-stream flows for capture fisheries and for the maintenance of haors, beels and culture fisheries, taking into account effects of changing water quality and salinity.
- ▲ Assess the social, environmental and economic benefits of meeting part or all of the identified options for the supply and use of augmented flows, including health benefits, and wider development options. Where appropriate, assess benefits from the control of floods and the location of the saline front.
- ▲ Prepare a comparative economic analysis of the capital and maintenance costs and benefits of identified options. The direct costs, land acquisition and resettlement costs, cost of mitigation measures and benefits would be included in the analysis, together with sensitivity tests for key assumptions.
- ▲ Formulate one or more strategies from a synthesis of compatible options and prepare a comparative review of them. At a minimum, strategies based on abstracting water from the Ganges should be compared with those compared with leaving it in-stream.



Sino-Bangladesh



Cooperation in the Water Sector

A six-day official visit to Bangladesh took place in February by the Chinese Vice-Minister, Mr Zhang Jiyao, and an eight member delegation from the Water Ministry of China. The visit was a follow-up on implementation of the Memorandum of Understanding (MOU) signed in Beijing in November 1997 between the Ministries of Water Resources of Bangladesh and China. The main features of the MOU are as follows:

- Cooperation will be mainly related to activities like technical consultation, mutual visits, personnel training and exchanges of information.
- Each country would designate a Coordinator with the responsibility to liaise affairs concerning the cooperation in between.
- Both sides would put efforts to promote and exchange



- Both countries recognized the urgent importance of flood control and water induced disaster reduction in Bangladesh.
- Both countries agreed to closely cooperate in the fields of flood control, river training, water resources utilization and development.

cooperation between business companies and research institutes dealing in the above fields.

- The MOU has a tenure of five years with effect from 11 November, 1997.

A high level meeting between the Government delegations of

China and Bangladesh was held at the State Guest House Meghna in Dhaka on February 22 to define the scope of different activities to effectively implement cooperation between the two countries under the MOU. Attending the meeting were a nine-member Chinese delegation led by Mr. Zhang Jiayao, Vice Minister, Ministry of Water Resources, PRC, and a seven-member Bangladesh delegation led by Dr. ATM Shamsul Huda, Secretary, Ministry of Water Resources, Government of Bangladesh. The main points agreed by the two sides were to actively cooperate in the following areas:

- a) Feasibility study on potentials of mini-hydropower development in Bangladesh with immediate emphasis on hydropower projects in rivers Matamuhuri and Sangu
- b) Three rubber-dam projects to be undertaken by Bangladesh Water Development Board
- c) Training and exchange of visits by experts between the two countries
- d) An update of the study report on Flood Control and River Training on the Brahmaputra River in Bangladesh prepared by China-Bangladesh Joint Expert Team, published in March 1991
- e) Co-operation in the fields of
 - Mathematical and physical modelling
 - Dredging for sediment removal from the rivers of Bangladesh



- Integrated Water Resources Management
- Disaster Management and Flood Disaster Reduction
- Flood Forecasting and Warning, and
- Hydrological and morphological data collection and analysis.

It was also agreed that the Coordinators designated by each country would, through close consultation, prepare detailed yearly Action Plans for approval by their respective Governments. To facilitate this, Heads of relevant departments, institutions and agencies of each country would also communicate on details of works in their specific areas.



Coordinators were agreed as Mr. Liu Jianming, Deputy Director General, Department of International Cooperation, Science and Technology, Ministry of Water Resources, PRC, on the Chinese side, and Mr. Tauhidul Anwar Khan, Director General, WARPO, Ministry of Water Resources, on the Bangladesh side. The Coordinators will maintain regular contact with each other and at least one formal meeting will be held every year alternatively in China and Bangladesh. An early task for the Coordinators is to work out a list of relevant departments and institutions of each country and fix their counterparts in the other country.

From the DG's Desk

This quarter has been a particularly busy one for WARPO staff. The World Water Forum took place in the Hague and members of WARPO were invited to participate. This was a very special event drawing water experts and practitioners from throughout the world together to discuss critical water issues facing us all in the 21st century. The World Water Vision for 2025 was presented at the Forum together with a Framework for Action. Preparations for the conference were extensive and the Bangladesh Water Partnership played an important role in formulating vision statements for this country and the South Asian Region as a whole. Important issues were extensively, and sometimes hotly, debated. The need for regional co-operation in resolving problems was a strong theme to emerge, along with the need for integrated water resources management.

Here in Bangladesh, WARPO hosted a meeting with a high-level Chinese delegation to share experiences on preparation of water policy and national level planning, as part of a six-day official visit by the Chinese to promote Sino-Bangladesh co-operation in the water sector. It is very encouraging to note the cordial relations that exist with our Chinese counterparts, and we hope that this will lead very soon to a series of joint activities to our mutual advantage. I am pleased that WARPO has a central role in promoting these activities.

WARPO's core activities continue, of course. Development of the National Water Resources Database is an important task, not only to support the current planning activities, but also for long-term support for sector-wide initiatives. We are steadily forging links with other organisations with sizeable relevant data holdings, and will continue to be giving importance to data quality, always an area of concern. Preparation of the National Water Management Plan also continues. Over the last few weeks, we have been focussing our attention on how the documentation should look like to meet the requirements of all future users of the NWMP. We have also revisited the preparation programme and are considering some extension to allow more time to ensure a quality product and adequate time for consultation. This may set the final plan back a bit, but we fully expect it to be ready by November 2001 at the latest.

After lengthy discussions with our development partners, we have been able to make a start on studies related to the Ganges Dependant Area. This area was highlighted in the 1998 International Seminar on the Ganges Waters as one which merited urgent and special attention, and it was resolved then that this should be done under the NWMP. Arrangements are in hand to complete resource mobilisation for this shortly.

As noted in the last issue, preparation of the Integrated Coastal Zone Management project is being taken up at WARPO. The team of experts is now set up on the 6th floor, and we look forward to working closely with them.

Please do not hesitate to contact us if you would like more information on WARPO's activities or on any of the articles featured in this issue. Our doors are always open!

Tauhidul Anwar Khan
Director General, WARPO