



Bangladesh Institute of International and Strategic Studies (BIISS)
1/46, Old Elephant Road, Ramna, Dhaka 1000, Bangladesh

PANEL DISCUSSION

on

**MANAGEMENT OF WATER RESOURCES AND WATER SECURITY: THE
CASE OF THE GANGES-BRAHMAPUTRA-MEGHNA (GBM) RIVER BASINS**

Tuesday, 15 June 2010

SUMMARY OF THE PROCEEDINGS

1. Introduction

The Bangladesh Institute of International and Strategic Studies (BIISS) organised a ***Panel Discussion*** on the **MANAGEMENT OF WATER RESOURCES AND WATER SECURITY: THE CASE OF THE GANGES-BRAHMAPUTRA-MEGHNA (GBM) RIVER BASINS** at the BIISS Auditorium on 15 June 2010. The Panellists examined a set of factors that had already given rise to a wide range of problems related to water resources management and water security amongst countries of the GBM Basins. Some key issues, which were discussed and analysed during the session, included, amongst other things, the following: i) water as an issue of “availability” and “accessibility”; ii) factors that determine water security and exert influence on water resources management and their consequences in inter-state behaviour; iii) the nature and extent of current level of cooperation of water sharing among the countries of GBM Basins; iv) imperativeness of knowledge sharing on the GMB Basins amongst the concerned countries of GBM region; and v) identification and application of various diplomatic and non-diplomatic means to manage water resources to harness equitable water sharing among countries of the Himalayan region to enhance water security.

The Panel Discussion was chaired by **Major General Muhammed Firdaus Mian, psc**, Chairman, Board of Governors, BIISS. **Major General Golam Mohammad, nwc, psc**, Director General, BIISS, delivered the Address of Welcome. The Chief Guest Speech was delivered by **Mr Mohamed Mijarul Quayes**, Foreign Secretary, Ministry of Foreign Affairs, Government of the People’s Republic of Bangladesh.

Two presentations were made in the Panel Discussion. The first one by **Professor Dr Ainun Nishat**, Vice-Chancellor, BRAC University, Dhaka. He spoke on “Management of Water Resources and Water Security of the GBM River Basins: the National Dimension”. The second paper, “Management of Water Resources and Water Security of the GBM River Basins: the Regional Dimension”, was presented by **Dr Qazi Kholiquzzaman Ahmad**, Chairman, Palli Karma Sahayak Foundation (PKSF), Dhaka.

Following the Panellists' presentations, the Hon'ble Chief Guest made his Speech. That followed **Open Discussion** in which government and non-government officials, representatives from academia, civil society organisations, national and international scholars and experts on water resources management and water security, members from business circles and other relevant professional bodies actively participated in the discussion by giving their comments, observations, and putting questions to the Panellists.

2. Address of Welcome

Major General Golam Mohammad, nwc, psc, Director General of BIISS, in his Welcome Address, said: “. . . scarcity of water is on the increase in the GBM river basins areas, and in the distant future scarcity would take a grievous form.” “. . . Today, in the realm of security—that is, human security—the water issue has figured out prominently. . . .” Mentioning that “the three river basins are densely populated region that is poised to face increasing crisis due to scarcity of water in future”, he cautioned that “the countries [concerning the GBM river basins] face risk of serious conflict over trans-boundary waters, if cooperative and collaborative efforts are not taken in time.” Touching upon the issue of renewable water supply, he said: “As far as renewable supply of water is concerned, this region experiences huge precipitation in many parts of its areas during monsoon for four to six months. Statistics show that, if divided equally, the 10% of total precipitation would be more than sufficient to satisfy the needs of the region.” To him, “better water management in the GBM Basins is the way to achieve a water secure region.” He, however, held that despite bilateral talks and efforts among countries of Nepal, India and Bangladesh, to date, “nothing meaningful” could be accomplished on shared rivers. Flagging that nowadays “a common understanding that an integrated water resource management initiative needs to involve all the five countries of the region — Bangladesh, India, Nepal, Bhutan and China,” he underlined that “in fact, there is no alternative to cooperation in view of the retreat of glaciers, resulting decline in the river flows. Countries sharing basins of rivers flowing across boundaries need to negotiate in new forms of cooperation which must involve compromise of traditional concept of security, or risk conflicts in future.”

3. Paper Presentation

Professor Dr Ainun Nishat in his presentation asserted that uneven distribution of water over the years had become a security concern for Bangladesh. He made a number of arguments in his paper. The abridged version of which is the following. While implementing development projects, the issue of management had always been neglected. The development projects here considered only the economic aspect, ignoring the social and environmental dimensions. In Bangladesh, activities in the water sector had traditionally been focused on flood control, drainage and irrigation (FCDI) to support the agriculture sector, and in that process those had neglected role of water in other sectors such as fisheries, navigation, domestic water supply and sanitation, industrial water supply, recreation, ecology and nature, hydropower and disaster management.

On the issue of water availability, Professor Nishat's view is average water availability does not give a clear picture of how much water Bangladesh receives. He adds: Bangladesh gets much water during monsoon, while during the dry season it suffers from shortage of water. Rather, Bangladesh requires only that amount of water [that is necessary] to maintain its ecology, for example, to reduce salinity of water in the coastal

area. Too much water is being pumped [out] from Bangladesh's rivers for irrigation and other purposes.

On the quality of water, Professor Nishat's opinion is: the inflow of water to Bangladesh through rivers from outside the border is a major concern in the recent years. In some places of Bangladesh, river flows are found to contain mercury which originates beyond Bangladesh's border. He emphasised the issue of arsenic as also a major [health security] threat for Bangladesh. Reflecting on the National Water Policy of 1999, he pointed out that the policy covered almost all important issues regarding water resources management along with the issue of trans-boundary water management and most of the global concerns. He then spotted some new challenges for Bangladesh that included climate change, arsenic contamination, ground water utility, natural environmental water requirements, cautioning their long-term implications for water management.

Based on the preceding issues and concerns, Professor Nishat suggested that a comprehensive approach to water security should entail the following:

- Ecosystem approach to water resources management;
- Water efficiency plans should be ensured;
- National planning process should give priority to water resources management issues;
- National actions should be strengthened through regional cooperation, particularly for shared river basins management;
- In water resources management, the sectoral and command control approach should be replaced by the integrated and participatory approaches;
- Management process should also be multi-disciplinary, decentralised, involving the private sector.

Dr Qazi Kholiquzzaman Ahmad, during his presentation, contented that the National Water Policy of Bangladesh, as mentioned by Professor Nishat, was one of the best in the world. He, however, pointed out the lacuna that the policy contained. That was the non-inclusion of climate change, which needed to be corrected. He added that Dr Nishat had some confusion about the "rate of return" of any flood control or development project that included water resource. He mentioned several viewpoints vis-à-vis the "rate of return". One was the private viewpoint, and the other was the economic one. Economists used accounting price to get close to demand and supply situation. It must reflect the realities. But it would not be easy to make 10 percent into 15 percent. Next would be the fact whether economists also conducted social analysis where externalities were also brought in. This could be done by putting in different data and analysing data differently.

Water management should, he said, be termed as water governance and governance would be more appropriate as the latter was much larger dimension and involved a lot more groups. He mentioned that Bangladesh must pay adequate attention to governance in regards to water resources management. Population pressure and consequent pollution are deteriorating the water crisis. There were several proposals for bringing about change in water management but in practice, however, little is being done. There is even dispute whether water should be termed as "water" or simply be included into the category of "natural resources".

On the issue of water availability, Dr Ahmad noted that the GBM Basin area is the second largest hydrological region of the world; but Bangladesh constitutes only 7

percent whereas India constitutes 64 percent of this region. Between Bangladesh and India, there is deep-rooted mistrust in many cases. GBM is only 0.12 percent of the global landmass but contains 40 percent of global population. However, regarding water accessibility, he noticed that Bangladesh has had enough per capita water but sometimes this water creates problem, for example, floods. 92 percent of Bangladesh's water comes from outside but the country has little or no control over the flow. Such problems are becoming worse by the adverse impacts of climate change. Bangladesh also suffers from intensified river bank erosion, heavy siltation of rivers resulting in devastating floods.

Dr Ahmad suggested some recommendations on the diplomatic front to enhance cooperation on water and water security amongst countries of the GBM Basins. He remarked the GBM Basin as resource-rich, and there are good possibilities for cooperation on resource development among the states. There is a need for "total" or "comprehensive" management of the basin. But there is also lack of cooperation among the states and the costs are becoming higher. Some significant potential measures for solving water management problems include ensuring good quality of water, augmenting the water flow in the Ganges system, implementing the "Equity fairness" clause in the 1996 India-Bangladesh Treaty on water sharing of Ganges and establishing GBM Regional Basin Authority.

Finally, Dr Ahmad indicated that political will would be the most important element for the successful implementation of all the proposals and therefore, political leaders should come forward in this regard.

4. Address by the Chief Guest

The Hon'ble Chief Guest, **Mr Mohammad Mijarul Quayes**, Foreign Secretary, Ministry of Foreign Affairs, in his speech referring water as a critical issue, drove at home the nexus between water resources management and security. According recognition to the relevance of the Panel Discussion, he said: "the Panel Discussion has not only an elaboration and the state of the art of understanding the issue itself, but [also] our capacity to be able to struggle with a policy perspective. The trans-boundary dimensions of domestic policies and interests are perhaps a major policy challenge." The Chief Guest felt that it was necessary to have "an organic progression and it is important through the realization as much as being able to put in place the policies that covered various dimensions and a commitment from the top to implement those." He put: "The discourse has been progressing. One of the reasons of water management issue is that it is related with security issues. The proper management of the GBM river system is very important as the socio-economic developments of this region depend on the equitable share of the water resources. The entire life support system of this region depends on the water of the three rivers—the Ganges, the Brahmaputra and the Meghna." Therefore he emphasised the imperativeness "to move towards operationalising many of the ideas and decisions that have been taken." "It is this realization", he continued "that in our collective effort to make the best use of our natural resources lies in our individual interest also." Reflecting on food security, the Chief Guest said: "the spill over effects of the water issue will also have implication on food security". To him, "institutional mechanism of consultation will only be outcome of confidence and this institutional process of consultation would have to go hand in hand." He concluded saying: "It is critical therefore there is greater confidence between and among states within the region. The South Asian institutional framework of SAARC has contributed greatly to develop

the confidence. Human security is all inclusive and the traditional notion of security is subsumed by [sic] larger and holistic understanding of security.”

5. Open Discussion Session

During the Open Discussion Session, **Mr Emaduddin Ahmed**, Executive Director, Institute of Water Modelling (IWM), Dhaka, underlined the necessity of cooperation but lamented that it did not happen in actuality because we rarely understood the benefits of cooperation. He suggested that the IWM might serve as volunteers in dealing with water sharing problems. Also, Bangladesh could go for drainage management. He added that IWM would like to cooperate on water and its management issues from the Himalayas to the Bay of Bengal. He informed that the IWM could show a good model for moving people and properties to safer places to save them from the adverse situations caused by climate change.

Ambassador (Retd) Humayun Kamal said that trans-boundary issues had not been pursued by Bangladesh and the country should have taken the initiative because it was never too late. He reported that Bangladesh did not know what was happening in other countries. He focused on the importance on Nepal because many rivers originated in and flowed through Nepal. He then said that one of the gravest problems of Nepal was that the country was facing rapid deforestation which was having negative impacts on neighbouring countries also. He added that 76 percent of Nepal’s energy needs were met by forest resources. Therefore, to stop rapid deforestation, alternative sources for energy must be found out. He suggested that Bangladesh and other countries should assist Nepal to stop deforestation, if possible, by financial means and should help initiate forestation and reforestation. There were many agencies for this purpose, even international ones. He suggested that we must remember China was also a part of our basin, and reminded that joint Sino-Bangladesh studies on many issues had been concluded in the past as well.

Mr Morshed Ahmed, former Director, Bangladesh Water Development Board (BWDB), expressed his concern that Bangladesh is not in a common level of understanding about the issues of GBM Basins. That was owing to mistrust on benefits of cooperation and non-cooperation. He suggested that drainage management, tropical arrangement, internal irrigation and agricultural system should be addressed in the national water resource management of Bangladesh. He added that Bangladesh failed in implementing its plans but China never did. Referring to the Nile Basin Initiative that comprised of eight countries of Africa, he suggested that a far-sighted Integrated Water Resource Management (IWRM) ought to be adopted by countries of the GBM Basin region. For that purpose, he added, Bangladesh needed an apex body comprised of the SAARC member states. He told the session that there was a need for creativity in successful implementation of the plans, complemented by strong voice raised from Bangladesh.

Ambassador (Retd) Ashfaur Rahman, Chairman, Centre for Foreign Affairs Studies, Dhaka, underscored the fact that emphasis should be given on changing policy and strategy of water related issues for Bangladesh and India. All political parties should be engaged in these issues. ‘Prosper thy neighbour’ should be a strategy for both [India and Bangladesh] the countries. He pointed out about the necessity of measuring properly the benefits of cooperation for Bangladesh and India. He said: “Bangladesh-India cooperation gets a momentum when two parties in Bangladesh and India come to power. Mutually beneficial policy should transcend all the political parties of Bangladesh and India”. When China’s plan to build dams on the Brahmaputra river got exposed, it was

only then that felt India that she was also a lower riparian country like Bangladesh. Therefore he suggested that now was the proper time for Bangladesh to make India realise Bangladesh's problem.

Professor Abdul Matin, Chairman, Department of Water Resources Engineering of Bangladesh University of Engineering and Technology (BUET), emphasised on ensuring quality of water from the trans-boundary rivers as that was important. He suggested that priority should be given on pollution-free river in terms of water management. Navigation should be an integral part of water management so that rivers could be used for trade and tourism purpose. Progress of water-related issues should be made transparent through media. Prioritisation of policy and proper implementation are required—he added. He recommended that the government should incorporate climate change issues in water resource management, first from the local perspectives and then from the global perspectives. The government should also establish a national climate change monitoring cell.

Professor Mahbub Ullah, Chairman, Department of Development Studies, University of Dhaka, asked the Panellists whether Bangladesh could really manage [water issue] before having a comprehensive agreement to share [waters] of all the 54 rivers. He stated that Bangladesh did not raise voice for our [read its] due rights and also that the country was afraid of annoying our [read its] neighbour. He then raised the point of mindset. Here, he referred to Veena Sikri, the former Indian High Commissioner to Bangladesh, who had opined that the problem of Bangladesh about water receiving had to do with its management, not with the shortage of water. Referring to the mindsets, he held that these were formed by Manu Samhita and Chanakya Kautilya, and those were deeply ingrained in Indian mentality. Although those had become quite old, they were very hard to be given up. He also warned that in future, Bangladesh might have to remain satisfied with rainwater only, because rivers would totally dry up.

Dr Sultana Razia, Associate Professor, Department of Chemical Engineering, BUET, suggested that trans-border issues should be dealt in a package rather than separately in the negotiation table. Two aspects of cooperation were necessary here: government cooperation and people-to-people cooperation. The first one has not yet been much effective, whereas the second one could be practical through building awareness on water-related issues not only in Bangladesh but also in India. She added that India might face large influx of refugees from Bangladesh owing to environmental crises in the latter. This influx was, to a large extent, being caused by India itself. Therefore, she suggested that Bangladesh should ask India to stop doing things that would result in adverse environmental conditions, thereby causing such influx of refugees into Bangladesh's territory.

Dr Jane McAdam, Associate Professor, Faculty of Law, University of New South Wales, Sydney, Australia, put a question to know whether it was possible to have any institutional regional cooperation model like the Mekong River Commission for the GBM basin.

Mr Azizul Haque, Plumbing and Sanitation Specialist, Public Works Department, Dhaka, wanted to know whether or not sedimentation should be considered as a resource. He commented that water received by Bangladesh had lot of sediments emanating from trans-boundary rivers. He then touched upon the point of the severity of ground water pollution in urban areas such as the Dhaka city. He informed the audience of about 87

percent of ground water was being extracted, which was simply over extraction. He suggested that ground water pollution was an important concern in water security and necessary steps should be taken in this regard for water resources management.

Professor Dalem Chandra Barman, Department of Peace and Conflict Studies, University of Dhaka, stated that rapid urbanisation had been leaving an alarming impact on internal water resource management. He suggested that policymakers should decide whether Bangladesh should go for sector-wise cooperation on water.

Mr M A Malek, former secretary of the Ministry of Water Resources, Government of Bangladesh, told the audience that a new technical issue had been re-emerging. That was related to the point whether the GBM constituted three separate basins or one single basin. According to him, India possibly wanted to consider it as a single basin. He warned that this issue would have to be clearly resolved because if the GBM were to establish as a single basin, then it would certainly not go in favour of Bangladesh by any means. He added that India always insisted on bilateralism and viewed multilateralism always with suspicion. Referring to the suggestion of confidence building by the Secretary of Foreign Affairs he held that we would need joint study, data sharing and data gathering. Once upon a time, India was secretive about data sharing; Indian authorities were paranoid. He suggested that confidence building should be [read begin] here. His observation was that riparian disputes had essentially been political and not technical in nature.

Dr Ben Saul, Associate Professor, Sydney Law School, University of Sydney, Australia, referred to the contemporary hypothesis that water would be the major source of inter-state conflict. He wanted to know whether claim, such as the intensity of wars over water would be greater than traditional inter-state conflicts, especially in the context of South Asia, was true or exaggerated.

6. Final Responses by the Panellists

Dr Qazi Kholiqzaman Ahmad

Dr Ahmed noticed that Bangladesh suggested for building seven dams in Nepal. Now India and Nepal are operating those dams, but Bangladesh is not a party to that initiative *albeit* this would help generate about 3,500 megawatts of electricity. The Bangladesh government should try to make the country a party to this project. Referring to Dr Jane McAdam's question of the Mekong River Commission, he opined that mindset should be changed before such an initiative could be implemented in South Asia. Dr Ahmad was also against the proposal of establishing mega projects of water reservoir, raised from the floor, as those would neither work nor other countries would accept those kind of initiatives.

He suggested that the capacities of the Climate Change Cell should be enhanced as climate change was largely responsible for worsening water related problems. He added that a decision was taken to establish a GBM River Commission but it did not take place. On the point of going for a separate cooperation strategy on separate issues he opined that it would be problematic for solving disputes. The Indus basin was the only case where foreign intervention had worked successfully. Foreign intervention in the GBM region would be a wrong idea. He advised that changing mindset and increasing people-to-

people cooperation would immensely help in better water management and ensuring water security in the region.

Professor Dr Ainun Nishat

Dr Nishat made the following responses to address various questions, queries and observations that came from the floor:

- Professionals of upper riparian countries clearly understood the benefits of cooperation but the problem was political. He refused the idea of offering the upper riparian countries cooperation in cyclone warning on the ground that their warning system was reasonably good. Instead, he suggested highlighting the benefits of navigation to make the countries more interested in cooperating in water management issues;
- Nepal's capacity in building biogas, solar and mini-hydro power plants was much higher than Bangladesh. He agreed that deforestation was a serious problem for Nepal but also informed that Nepal had been taking serious steps to solve it. He added that deforestation problem was severe in Bangladesh too. Giving the example of Sherpur district, he further commented that deforestation in one country might very well affect another country;
- The issue of controversy of development projects like the coastal embankment project, he said that the project itself was not controversial; rather, it was a problem of project maintenance and monitoring. He added that some controversies arise from misunderstanding of terminology;
- He agreed that in Bangladesh there was lack of transparency in relation with data. He informed that previously even the data on rainfall was also considered to be confidential. He also said that governments had now changed their minds and were putting such data on the website;
- He said that the river Teesta was more complex than the Ganges because Teesta was an erratic river. He added that unlike the Ganges [river], in [the] Teesta [river] the control structure would be 50 miles upstream and hence it would be difficult for Bangladesh to measure the water flow. He suggested setting up some body in the form of river commission;
- He commented that the Male-Darling model was better than that of the Mekong model followed by the South African model. He added that Mekong was a good theoretical model, but it was non-functional;
- He agreed that Bangladesh had all the nice strategies, plans and policies regarding water management but the problem was implementation;
- He clarified that rivers, which were coming from across the border, were drying owing to the control structures built in India. But inside the country, rivers, which were generated locally, had been drying up because of pumping [out] of water. He said that ten-day-wise data on availability and pumping [out] of water was available in Bangladesh;
- He commented that mindset problem remained not only between sovereign states but also between different states of the same country like India. He further commented that mindset problem was deep rooted and it was the political leaders who could break it up;
- He recommended that the technical level approach should be sectoral but at the political level, the package approach could be taken for solving trans-border

problems. He commented that NGOs were not interested in working with salinity problem because there was no donor fund for it. About out-border migration owing to climate change he opined that there must be proper data to take proper step [in this regard];

- He contended that water shed management was a possible solution to sedimentation;
- He agreed that ground water pollution was a serious issue;
- He made it plain that GBM were three virtually independent basins having a common outlet;
- He asserted that the foundation of foreign policy of India was laid on bilateralism and it was a stumbling block for trans-border water management. But he estimated that among the common 54 rivers, 50 were shared by Bangladesh and India only, and hence these were essentially a bilateral problem.

7. Summing Up by the Chair

Major General Muhammed Firdaus Mian, psc, Chair of the Panel Discussion, remarked that water was a security concern linked with climate change. In this regard the development of adaptability mechanism was essential. For him, political commitment was significant for solving the crisis, and help from experts and civil society was also important in this context. He thanked the Chief Guest, the Panellists and all distinguished participants for their very active and rewarding participation in the Panel Discussion.