Abul Kalam

ENVIRONMENTALISM IN SOUTH ASIA : BUILDING A SHARED WATER COMMUNITY IN THE EASTERN HIMALAYAN REGION

Environment and water are areas which in recent years have attracted global attention; internationally the issues have also infused a great deal of interest among analysts and scholars because of the development nexus linking both. In South Asia, as well, they are treated as subjects of deep concern; yet the subjects, in particular the issue of water, provoke very divergent thoughts. Some, for instance, perceive regional water streams as sources of 'hope'' and of 'life'²; but the pattern of hydro-diplomacy of the geopoliticians in the eastern Himalayan subregion³, watered by the Ganges, the Brahmaputra,

- 1. B.G. Verghese, Waters of Hope: Integrated Water Resource Development and Regional Cooperation within the Himalayan-Ganga-Brahmaputra-Barak Basin. (New Delhi: Oxford and IBH Publication Co., 1993)
- 2. Kelly Haggart (ed.), *Rivers of Life*. (London and Dhaka: Panos and Bangladesh Centre for Advanced Studies, 1994).
- 3. The words 'region' 'subregion' have been used interchangeably in the article to convey a relationship pattern of somewhat same meaning. Thus the

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The article treats environment and water as linkage issues, both being areas of common concern for development of all the people in the eastern Himalayan region. It is felt that while there have been sweeping changes across the globe, South Asia, despite plentiful of water and natural resource base, continues to suffer from grinding poverty, hunger and malnutrition. The author fully endorses the plea for subregional cooperation, but takes the argument further along and suggests that the potential exists for a water community in the eastern Himalayan group of countries, where there is a natural flow that transcends and traverses across the political boundaries of the existing state-entities from the source-head in the Himalaya to the stream-end in the Bay of Bengal. The idea is *not* to focus on the engineering or technical aspects of the water sharing problem, but to emphasize the need for a framework of long-term relationship in the region which would help overcome the legacies of "mistrust, fears, misperceptions

- Mohiuddin Farooque. "Holy Ganges: The Unholy Translegal Tragedy", in Hasna J. Moudud (ed.), Women for Water Sharing. (Dhaka: Academic Publishers, 1995), pp. 122-123
- Saleemul Huq and A. Atiq Rahman, "Environment and Development Linkages: An International Perspective", in A. Atiq Rahman, Raana Haider, Saleemul Huq, Eric G. Jansen (eds.), *Environment and Development in* Bangladesh. (Dhaka: University Press Limited, 1994), p. 1.

territories/countries of the eastern Himalayas i. e., the Indian states and Union territories of the East and northeast, Bhutan, Bangladesh and Nepal may be seen as subregion in relation to South Asia as a whole, which is viewed as a region, but South Asia itself may be treated as a subregion in relation to the growing interaction involving the countries of the wider Asia-Pacific region.

and myths"⁶, contributing to the "dream of freedom from drought, flood and poverty in South Asia"⁷.

In addressing the issue of water sharing in the eastern Himalayan region, the article places emphasis on a **community approach** in resolving environmental concerns in South Asia. To this end, it makes a conceptual appraisal of the emerging fields of environment and sustainable development, and suggests that both these fields of human concern should provide the necessary framework and motivation in building a multi-level service-oriented water community in the eastern Himalayan subregion, to get away from the prevailing conflictual prognosis--overcoming the complexities of a multi-layered problem in subregional relations.

ENVIRONMENTALISM AND DEVELOPMENT: CONCEPTS AND FRAMEWORK

In a "world bristling [with] nationalism", writes Waltz, any "confusion of concepts works against clarity of analysis and obscures both the possibilities and the necessities of action."⁸. Much of the modern environmentalism, for instance, is perceived as a broadbased assault on conventional reasoning and a concomitant assault on freedom of states⁹. This itself may cause a lot of misgivings at policy making level.

However, concern about environment has now come to occupy an important place in the contemporary international system, since it has serious implications for national, regional and international security

^{6.} Verghese, op. cit., p. viii.

^{7.} Ben Crow with Alan Lindquist and David Wilson, Sharing the Ganges: The Politics and Technology of River Development. (Dhaka: University Press Limited, 1995), p. 25.

Kenneth N. Waltz, "Structural Causes and Economic Effects", in Richard K. Betts (ed.) Conflict After the Cold War: Arguments on Causes of War and Peace. (New York: Macmillan Publishing Company, 1994), p. 229.

^{9.} Ben Bolch and Harold Lyons, Apocalypse, Not Science, Economics, and Environmentalism. (Washington D.C. : Cato Institute, 1993), p. viii.

which, until recently, included only military matters. This concern stems from the fact that over-population and world-wide industrial pollution, exploitation of surface soil and deforestation, depletion of subsoil water and desertification and such other man-made disasters are exacting a heavy toll on human well-being. Large-scale erosion of river-banks and land degradation, frequent natural hazards and general lack of inter-state understanding over shared natural resources have all accentuated the environmental crisis. While some aspects of the environmental crisis can be tackled nationally, most of them have regional and global dimensions.

It seems obvious that environmental degradation is not only bringing about undesirable effects within a state but is affecting the vital interests of the community of nations. There is little wonder, as an analyst commented that "environmentalism has replaced communism as the number one enemy"¹⁰ of mankind. Environmental issues in recent years have acquired the proportions of 'high politics', as evidenced in the holding of an international summit, the U.N. Conference on Environment and Development (UNCED), the socalled 'Earth Summit', held in June 1992 in Rio de Janeiro, Brazil.

Moreover, since 1972 Stockholm Conference on Human Environment, which was the precursor of today's environmental movement, the international community has created a large body of international environmental law to establish standards and procedures on handling disputes¹¹. The UN General Assembly recognized on 20 December 1989 (Resolution 44/228) that the members of the international community must act together to address global environmental challenges and to prevent the occurrence and escalation of international environmental conflicts. Similarly, the UN Security Council itself emphasized the emerging importance of environmental

^{10.} Keith Schneider in The New York Times, (6 February 1992).

Philippe Sands, "Enforcing Environmental Security: The Challenges of Compliance with International Obligations", *Journal of International Affairs* (Columbia), (1993), pp. 368-369.

concerns to international security and declared in January 1992 that "non-military sources of instability in the economic, social, humanitarian and ecological fields have become threats to peace and security."¹²

At the root of international environmental conflict lies the actual or perceived failure of a state to fulfil its international environmental obligations under customary law, as codified, for example, in Principle 21 of the 1972 Stockholm Declaration or international treaty obligations. The controversial issues include transboundary air pollution, the diversion or withdrawal of water of international rivers and conservation of farmlands and fisheries etc.¹³

Although the legal mechanisms for ensuring compliance and resolving environmental disputes have developed significantly, these mechanisms are still used infrequently and have yet to be tested by a major conflict. In the absence of clear rules establishing acceptable global and regional standards of environmental behaviour, inter-state disputes will occur with increasing frequency. Similarly, the failure to comply with minimum standards of good neighborliness--carrying out transboundary environmental impact assessments, exchanging information or consulting on projects likely to have transnational effects--will cause significant tension¹⁴.

Unfortunately, there are many cases where states have been unwilling to enforce obligations of environmental protection. While international institutions play an important legislative role in the development of international environmental law, sovereign interests of nation-state actors have resulted in a general unwillingness to transfer much--if any--enforcement power to international institutions¹⁵.

- 13. Sands, op. cit., pp. 368-71.
- 14. Ibid., pp. 369-70.
- 15. Ibid., pp. 374-75.

^{12.} Agenda 21, U.N. Doc. A/CONF. 151/26, 1, II, III, [12 August, (New York: United Nations, Doc. 1992), Chapter 1, Preamble, Paragraph 1.1.

In this broader security context, compliance by the nation-states with their international environmental obligations has become a more critical issue in international affairs in recent years than ever before, though several thousand bilateral and multilateral treaties concerning the environment have been adopted since the late eighteenth century¹⁶. This is evident from the attention the subject received during the 1992 UNCED as well as the negotiation of recent landmark environmental treaties, including the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer (1987 Montreal Protocol) and the 1992 Conventions on Climate Change and Biological Diversity¹⁷.

Since the Rio summit, countries across the world have also been busy setting up new institutions, commissions, agencies and regulations to deal with the environment. Environmental officials' stature and clout has risen, and many countries are moving ahead to ratify the conventions signed in Rio as well as other international treaties on environmental issues. Regional bodies such as the Asian Development Bank have moved toward funding environmentaloriented projects¹⁸.

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Environment and water are most closely related, as without the latter one can hardly conceive of the former. Connecting both is land, the very base of the eco-system. In this context, the GBBM region,

19. Sands, op. cit., pp. 371.

^{16.} The United Nations Environmental Program (UNEP), (1991), Selected Multilateral Treaties in the Field of the Environment, 1 (1983), p. 2.

^{17.} Sands, op. cit., p. 371.

Adam Schwartz, "Looking Back to Rio: 'Give us trade, not aid': Environmental Values vs Economic Growth", Far Eastern Economic Review (28 October 1994), pp. 48-49.

one of the poorest in the world, faces accelerating environmental degradation with an increasing number of people being compelled to live off its natural resource base for very survival. With an expanding population and steadily increasing demands for more food, fodder, fibre and energy, there is a inter-linked vicious circle of demand and pressure spirals downwards affecting land and soil fertility, forests and living beings. The Himalaya, known as a critical global watershed, has been badly affected. So too the Sunderbans, a unique deltaic eco-system²⁰.

Breaking out of the poverty trap and making a demographic transition will only be possible through far more rapid development, two major entry points for which in a primarily agrarian society must be land and water. While the GBBM region is basically well-endowed in regard to both land and water, both need to be far better managed for environmental planning and development purpose than what is currently contemplated.

It may in this context be mentioned that the concept of sustainable development is now widely used and accepted as a framework within which all countries, rich and poor, should operate. The questions that naturally come up are: development for whom, at what cost and to which end? The notion of 'development' has undergone major transformation in recent years. Development may be linked to a chaineffect relationship involving people, environment and nature-endowed resources. Maintaining the balance of nature is, of course, a primary concern, but equally, people are central to the purpose and planning, as they live across nation-state boundaries. An increased demand for development in one entity may exacerbate the development cum environmental problem of another, with an overuse and depletion of a finite resource base. Hence, there emerged the concept of 'sustainable

Q K Ahmad, Nilufar Ahmed and K. B. Sajjadur Rasheed (eds.), Resources, Environment and Development in Bangladesh with Particular Reference to the Ganges, Brahmaputra and Meghna Basins. (Dhaka : Academic Publishers, 1994 (hereafter Ahmed et al., 95b), p. 60.

development' which is to ensure the lasting use of resources beneficial to all nation-states across the region under reference²¹. For this concept is relevant to a central philosophic question: "sustainable for whom"?²². Can it be pursued in the interest of a segment of human souls at the expense of others or in disregard towards the interest of the rest of creation? Hence the concept has been defined as "development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends"²³.

It provides a perspective on environmental management that emphasizes the need to reconcile present and future economic needs through environmental conservation²⁴. The paradigm assumes the need for greater equity between both wealthy and poorer nations and within societies and between generations, recognizing that developing countries must meet the basic needs of the poor in ways that do not replete the countries' natural resources²⁵.

The process of paradigm shift has already begun. For there is the issue of human rights which is inextricably linked to economic and social development as well as good governance. All these are mutually reinforcing. Human rights cover economic, social and cultural rights as well as civil and political rights as reflected in the two international covenants, which sought to strike a balance between freedom and responsibility, enshrining universal values and declarations to which the entire global community subscribes.

- A. Atiq Rahman and Saleemul Huq, "Environment and Development Linkages in Bangladesh", in A. Atiq Rahman, Raana Haider, Saleemul Huq, Eric G. Jansen (eds.), op. cit., pp. 27-33.
- 22. Shamser Ali, "Eco-philosophy and Sustainable Development: Bangladesh perspective", in S.M.H. Kabir (ed.), *Environmental Crisis in Bangladesh*. Dhaka: Professors World Peace Academy of Bangladesh, 1993), p. 57.
- 23. Philip Flood, "Sustainable Development: The Way Ahead", BIISS Journal, Vol. 16, No. 1 (1995) p. 38.
- 24. Gareth Porter and Janet Welsh Brown, Global Environmental Politics. (Boulder: Westview Press, 1991), p. 191.
- 25. Ibid., pp. 30-31.

Globally there is an increasing realization that all nature-given resources, including water, that run across national boundaries, need to be shared equitably for achieving the new conceptual order of sustainable development. The concept has appropriately placed human beings as central to national and international relations²⁶. The Rio summit of 1992 stressed the urgent need for global commitment for ensuring environmentally sound and sustainable development (ESSD). Moreover, the United Nations Conference on Human Rights held in Vienna in 1993 clearly affirmed that all human rights are equal and indivisible²⁷.

The World Summit Meeting on Social Development (Copenhagen, March 1995) emphasized the global need to achieve alleviation of poverty, generation of productive employment and social integration by determined worldwide efforts to mainstream the disadvantaged segments of society. Sustainable development has thus come to denote something immensely greater and more important than mere economic and technological advancement of societies which tends to forget the human dimension of development, and at the same time, wantonly plunder resources available in the present to ensure nothing but a bankrupt future for the posterity²⁸.

Environmental concerns in development figures as an issue not merely from an anxiety about the sustainability of natural ecosystems when economic development efforts intensify but principally from the sustainability of natural ecosystem in relation to sound and sustainable quality of human life. The assertion of the key aspect of human component in ESSD has further underscored the vital necessity of holistic thinking and valuing quality of life²⁹.

- 28. Ibid., pp. 132-33
- 29. Ibid. p. 133

^{26.} Mizanur Rahman Shelley, "Equitable International Sharing of the Water of International Rivers: A New People-Centric Approach for Sustainable Development" in Moudud (ed.), op. cit., p. 131

^{27.} Flood, op. cit., pp. 39-40.

In order to ensure sustainable development the Regional Strategy for ESSD, fashioned by the Asia-Pacific region in the UN-ESCAP (1991), calls for "a set of measures, of development that *inter alia* reflect natural resource depletion, the environmental and health impact of pollution and the dissipation of human capital through poverty, ignorance and disease."³⁰ Central to this new approach is "to rethink of people: people not as problem but people as solution.... It means valuing diversity, sustainability, community and livelihood, security whether or not these can be valued through the market place."³¹

Thus the new vision and strategy for sustainable development gives development a *human face* by insisting on adoption of measures whereby *people* are to be fully involved in formulating and implementing development plans and programs, in finding solutions to the problems of national and international developmental efforts³². It projects also a vision and strategy of transnational and human-centric attempts to resolve problems created by governments unaware of or unwilling to take the interests of the people at large across political frontiers.

Thus the concepts of environmental security and sustainable development have become entwined as parts of a comprehensive security. Indeed both are incorporated in the report of World Commission on Environment and Development (WCED). The report proposed the concept of sustainable development as a global goal and defined development as a level, allowing development for the current generation without making the interests and rights of future generations insecure. To put it simply, the environment or natural resources should not be misused or exploited to one's own advantage which would create environmental stresses for others, causing insecurity for the subsequent generations of people. The concepts have been subsequently adopted by the UN and most of its members³³.

^{30.} Quoted in Ibid., p. 133

^{31.} Douglas V. Smith quoted in Ibid. pp. 133-34.

^{32.} Ibid., p. 134.

^{33.} World Commission on Environment and Development (WCED), Our Common Future. (New York: Oxford University Press, 1987)

The notion of a comprehensive security, which embrace elements other than conventional military concerns, encompassing both environment and development, has already been accepted *de facto* by the policy makers of the SAARC countries. This is inherent in the notion of 'food security', with the tentative arrangement made for food reserves in each country of the region so that there may be mutually beneficial stock of foodgrain to be used/supplied at times of regional emergency or food crisis. In this context it hardly needs emphasizing that water is the most important component in the whole equation which may positively contribute to the security of life itself and preservation of the living beings or, to put it differently, to ensure food security as contemplated by the SAARC decision makers. Therefore, food security itself becomes integrated with 'water security', without which neither food security nor security of life and living beings can be ensured.

Thus, security today as conceived is a more multidimensional, even when security is applied in the context of nation-state, rather than world community. It comprises not only *negative security* (the ability to defend against threats viewed as harmful) but also *positive security* (the ability to maintain relationships that are viewed as essential to survival such as access to food, oil, water and credit). Such a reconceptualization of security, to include both positive and negative security, inevitably means that reliance on traditional approaches to security are less likely to be seen as adequate³⁴.

Moreover, as in development, the security of people must be regarded as equally important as the security of states.³⁵ This means that the concept of security must be broadened to include the protection

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Carolyn M. Stephenson, "New Approaches to International Peacemaking in the Post-Cold War World" in M. Klare and D. Thomas (eds.), World Security: Trends and Challenges at Century's End. (New York: St Martin Press, 1994), pp. 18-19.

^{35.} The World Commission on Global Governance, Our Global Neighborhood: The Basic Vision. (Geneva 1995), p. 21.

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of people as well as the security of neighborhood. Accordingly, the principle of sovereignty must be adapted in such a way as to balance the rights of states with the rights of people, and the interests of nations with the interests of the global neighbourhood³⁶. The security of people in the global neighbourhood also requires greater respect for its environmental integrity. This demands from all of us increased sensitivity to the long-term effects of state behavior on the habitat³⁷.

Both environmental and economic security, though viewed as non-traditional security areas the dual characteristics of being non-lifethreatening (the physical aspect of security) and, hence, within the psychological realm of security. Both these notions imply taking security beyond the traditional realm of national boundaries or even international of economic activity, meaning sometimes the *de facto* assault on national sovereignty³⁸.

Security is thus defined from a multidimensional, multilevel perspective³⁹, with denomination such as "common security"⁴⁰, "neighbourhood security", "comprehensive security"⁴¹, a "world

36. Ibid., pp. 21-22.

- 38. Donald M. Snow, National Security: Defense Policy for a New International Order. Third Edition. (New York: St Martin Press, 1995), pp. 245-46.
- D. Dunn, "Peace Research versus Strategic Studies", in K. Booth (ed.), New Thinking About Strategy and International Security. (London: Harper Collins, 1991).
- 40. The contemporary definition of "common security" was first given political prominence in the report of the Independent Commission on Disarmament and Security Issues (1982), which pointed to the basic nuclear paradox, i.e. the security of states depended on the insecurity of their citizens, and viewed that such a paradox had stretched the traditional concept of security to its limit (J. Ann Tickner, "Re-visioning Security", in Ken Booth and Steve Smith (eds.), *International Relations Theory Today*. University Park, Pennsylvania: The Pennsylvania University Press, 1995), p. 181.
- 41. The concept of "comprehensive security", as defined first in Japan in 1980 and later on also pleaded by Gorbachev in the mid-1980s. See Tickner, *op. cit.*, p. 182.

^{37.} Ibid., pp. 28-29.

order" vision⁴², feminist dimension or gender perspective etc.- all, in essence, conveying somewhat closer views. It includes freedom from military, political, societal, economic and environmental threats, demographic or gender concerns and prevention of natural disasters, ensuring quality of life and fulfilling basic human needs⁴³. They stand together on one basic point, namely, their rejection of hegemonic or military-centered notions of security as the sole criteria of security, which it is felt, "are fundamentally flawed in a highly interdependent world facing multiple security threats that are not amenable to traditional statist solutions"⁴⁴.

- 42. The World Commission on Environment and Development (1987) and the Independent Commission on Disarmament and Security Issues (1982) proposed redefinitions of security of state, as no state could find security by itself, and underscored the interdependence between economic and ecological dimensions of security under a scheme what it had called 'sustainable development'.
- 43. Barry Buzan, People, States and Fear: An Agenda for International Security Studies in the Post-Cold War Era. (London: Harvester Wheatsheaf, 1991); Jessica Mathews, "The Environment and International Security", in M. Klare and D. Thomas (eds.), World Security: Trends and Challenges at Century's End. New York: St Martin Press, 1991); Richard, Ullman, "Redefining Security", International Security, (1983).
- 44. Tickner, op. cit., p. 181. Security notions such as "common security", "neighbourhood security" or "comprehensive security" are not without challenge. There are some like Samuel Huntington who has a hegemonic vision of the world order and insists on conflict paradigm such as a "civilizational" chasm for preserving Western dominance. There are others like Charles Krauthammer who subscribe to Pax Americana vision, maintaining a critical view of what Krauthammer calls "pseudomultila-teralism" for ensuring security and projecting what he calls "unipolar moment" in which the Western countries having won the ideological conflict can only ensure effective security by fully lining behind the US, whose military power remains the ultimate guarantee of security, but then there may be trade-offs between American military capabilities and its economic power (Tickner, op. cit., p. 183; Charles Krauthammer, "The Unipolar Moment" in Graham Allison and G. Traverton (eds.), Rethinking America's Security: Beyond Cold War to New World Order. New York: W.W. Norton Rose, 1992; also see, Abul Kalam, "Huntington and the World Order: Systemic Vision or

Security, narrowly defined, has been the primary goal of the foreign policies of South Asian countries, and at times this has given rise to contradictions because of the inherent asymmetry or inequalities in size and capabilities between India and her neighbouring states. There is indeed an inherent feeling of insecurity in the region which is derived mainly from this latent mutual distrust based on perceptions of behavioral patterns and basic attitudes⁴⁵. But the cycle of povertyenvironmental degradation-poverty offers little prospect for stable government in the region; rather hopelessness breeds despair and apathy, where only the strong few can settle key issues through resort to arms⁴⁶. Therefore, the alternative framework of security as defined under environmentalism and sustainable development can provide a useful model for both harmony and stable relations in South Asia.

THE GBBM WATER BASINS AND THE CONFRONTING PROBLEMS

In Asia, home to more than half the world's population but just 13 per cent of its total landmass, the debate on the environment management and water resource development rages on, with a colliding argument as how to balance the need for economic development against the costs of environmental deterioration⁴⁷. While Asia has had a rich tradi-

Hegemonic Vision?" in Salim Rashid (ed.), Asian Response to Huntington, (Dhaka: The University Press Limited, forthcoming).

- 45. Leo E. Rose, "A Regional Subsystem in South Asia: Problems and Prospects", in Robert A. Scalapino, Seizaburo Sato, Jusuf Wanandi, and Sung-joo Han (eds.), Asian Security Issues: Regional and Global. (Berkeley: Institute of East Studies, University of California, 1988), p. 375.
- 46. Barbara Jancar, "The Environment, Population Growth and Resource Scarcity" in Michael T. Klare (ed.), Peace and World Security Studies : A Curriculum Guide Sixth Edition (Boulder : Lynne Rienner Publishers, 1994), p. 306.
- 47. Schwartz, op. cit., p. 48.

tion in development and use of water resources⁴⁸, currently it is witnessing an era of water crisis, as it has increasingly become scarce⁴⁹.

For a developing region like South Asia, comprising nearly onefifth of mankind--almost one half of Asia's total population--and one of the poorest regions in Asia in terms of living standard, the importance of economic development can hardly be over-emphasized. However, it is an objective which no country in the region can afford to reach at the cost of environment. Being situated in close proximity to each other, the countries of South Asia share more or less the same ecology governed by the mighty Himalayas and the same river systems originating from the above source. Most of these countries are also subjected to the same type of climate characterized by monsoon and are prone to same type of natural hazards. The social problems here are aggravating due to mass poverty, widespread unemployment and economic stagnation.

There is then the looming greenhouse effect and the consequent global warming and the rise of the sea-level as a result of the reduced capacity for absorption of carbon-dioxide, leading to the slow but steady subsidence of the coastal belt of the South Asian countries. The grim fact is that none of the countries in the region is in a position to cope with even the problems which are localized in nature.

Some environmental problems which transcend state boundaries call for not only regional measures but also international co-operation. Certainly countries acting alone can do little to mitigate, for example, rain forest destruction, the decline of biodiversity and the greenhouse effect.

Kazi Farhad Jalal, "Regional Water Resources Situation: Quantitative and Qualitative Aspects", in Mohammed Ali, George E. Radosevich, Akbar Ali Khan (eds.), Water Resource Policy for Asia (Boston and Rotterdam: A.A. Balkema, 1987), p. 13.

^{49.} Mohammed Ali, 'Foreword', in Mohammed Ali et al., op. cit., p. ix.

There is also the issue of shared water resources, both riverine and marine, a very critical matter of regional concern, which also gives rise to considerable environmental problems for South Asian countries requiring joint collaboration. As a commodity essential to life and a symbol of life itself, water has long been regarded as an unlimited resource; but it is no longer so in an age beset by vast demographic, economic, and social mutations having a major impact on natural resources.

The region is amongst the poorest part of the world, containing rich natural endowments of land, water and energy. The rivers flow through five countries, including China, but they can only be optimally developed through co-operation among these countries. Immense possibilities exist for conversion of water into wealth and mobilizing and utilizing the creative energies of the people of the region in various fields of human progress, which can best be realized through effective co-operation.

The partition of the Subcontinent ran counter to the basin logic of co-operative endeavors and of the natural-ecological frontier and flow of water. Relations in the region have always reflected the mix of fear and hope--that is the legacy of 1947. The nations and subnations of the region are linked not only by history, religion, language and culture, but also by swiftly shifting economic determinants which flow through international affairs like rivers and streams, the control of whose waters have been a constant source of friction and irritation⁵⁰. All have their respective self-images and perception of strengths, weaknesses and vulnerabilities.

Still regrettable is the reality that SAARC as a regional entity for co-operative ventures in areas like environment or water has remained operational 'only as a theory'⁵¹. It is not in a position to tackle any of

^{50.} M. J. Akbar, India: The Siege Within, Challenges to a Nation's Unity. (Harmondsworth, Midx.: Penguin Books Ltd., 1988), pp. 98-99.

^{51.} Saifur Rahman, former Finance Minister of Bangladesh quoted, The Daily Star, (30 July 1995), p. 1.

these problems as the organization is not empowered by its Charter to consider any of the contentious issues. There is also the question of political will, which often needs to be propped up from without; the question of technology, in which the South Asian countries are critically lagging behind; and most important of all, the resources, which the poverty-stricken countries of the region can ill-afford to allocate individually for collective development and welfare.

As elsewhere, in South Asia water has multipurpose use, but it has special context and meaning in the region. For natural flow of water in South Asia knows no political boundary, despite the existence of numerous sovereign state entities. The eastern Himalayan subregion consists of Bangladesh, Bhutan, Nepal, eastern and the northeast States and Union Territories of India⁵². While the subregion is amongst the poorest in South Asia, it contains rich natural endowments of land, water and energy. Water resources in the region are made up of

52. The eastern Himalayan region covers an area of 141.24 million hectares (m ha) of which 12.90 m ha lie in Bangladesh, 14 m ha in Nepal, 4.50 m ha in Bhutan and 109.84 m ha in 16 Indian states and Union Territories. The Ganga basin accounts for 104.74 m ha (86.14 m ha in India, 4.70 m ha in Nepal and 4.60 m ha in Bangladesh). The corresponding figures for the Brahmaputra basin are 28.70 m ha (19.50 m ha in India, 4.70 m ha in Bangladesh and 4.50 m ha in Bhutan), and 7.80 m ha in the Barak/Meghna basin (4.20 m ha in India and 3.60 m ha in Bangladesh). About 405 m persons live in the Indian part of the subregion, some 106 m in the Bangladesh portion and 19 m in Nepal Ahmad, et al., 94: 16]. The region excludes the Indus Basin system, as the historic Indus Treaty of 1960 settled the India-Pakistan contention over water sharing of the Indus basin and allocated the three western rivers to Pakistan and three eastern rivers to India with the completion of certain replacement works during a transition period, enabling India to go ahead with the Bhakra and Pong dams and canal systems and the Indira Gandhi canal (Rajasthan), while Pakistan took up the construction of the Tarbela and Mangla dams. The arrangements not only resolved the sensitive issues of contention but also made possible the green revolution of the latter 1960s. See Q.K. Ahmad, B.G. Verghese, Ramaswamy R. Iyer, B.B. Pradhan, S.K. Malla (eds.), Converting Water into Wealth. (Dhaka: Academic Publishers, 1994) (hereafter Ahmad et al., 94a), pp. 14, 18.

three closely related main components--precipitation, stream flow and other waterbodies and ground water, stream flow being the largest component.

Of the river network in the basin the Ganges is one of world's great rivers. It originates from the southern slope of the Himalaya, flows through the North Indian Plain and moves southwest towards Bangladesh, joins the Brahmaputra at Goalunda and meets the Meghna at Chandpur before the combined flow empties into the Bay of Bengal. The Brahmaputra is the largest river in the Subcontinent which rises from a glacier in the Kailash Range of the Himalaya in southeast Tibet, flows through Arunachal Pradesh and Assam of India and entering Bangladesh near Goalpara and flowing southward it joins the Ganges at Goalundo. Finally, there is the Barak-Meghna stream linkage system. The Barak originates from the hills of Assam and through a process of bifurcation, added discharges and combination downwards it takes within Bangladesh territory the name of Meghna near Kuliarchar upstream of Bhairab Bazar and it flows southwest to meet Padma at Chandpur. These three river systems with their numerous stream network and tributaries have three distinctly separate basins and it is only within Bangladesh that their flows combine and find an outlet into the Bay of Bengal53.

The total drainage area of the GBBM river system is 1.75 million sq km stretching across five countries--China, Nepal, India, Bhutan and Bangladesh. The sediment load, caused by mass-wasting in the fragile seis-prone Himalaya, is carried and deposited by the network of rivers (estimated somewhere between 1 to 2.5 billion tons annually) spread over an area of about 130,000 sq km⁵⁴.

The rivers flow through all the countries of the eastern Himalayas and the water resources can only be optimally developed through cooperation among the countries. During the monsoon, rainfall is

^{53.} Ahmad et al., 94b, pp. 23-25.

^{54.} Ibid., pp. 23, 119.

abundant in all the countries of the region, but the annual precipitation declines significantly towards the western region. The Himalaya constitutes the critical watershed in the region. The entire Himalayan belt experiences snowfall during winter as a result of western depressions, the intensity declining from west to east, which is the reverse of the monsoon pattern⁵⁵.

The region gets much of its summer flows from snow and glacier melt which feeds the rivers that rise in the High Himalaya or in the Tibetan plateau. Ground water is an important component of the region's water resources. It accounts for about 41 per cent of the total supply in the Ganges basin; however, increasing ground water use upstream could reduce stream flows, particularly downstream in Bangladesh. Moreover, nearly 92 per cent of Bangladesh's stream flow originates outside the country, though the total average run-off of some 128.14 m ha m flows through Bangladesh every year and empties into the Bay of Bengal⁵⁶.

The region is no doubt water-rich in many respects, with a huge run-off ranking third in the world and some of the heaviest rainfall regions anywhere located in the eastern half; yet the distribution of this moisture is skewed geographically and seasonally, and at the same time is highly variable. Alternating excesses, sometimes marked by ravaging cloudbursts, deficits and dry spells make for flood and drought which have long caused agriculture in these parts to be described as a gamble on the monsoon⁵⁷.

There are other daunting problems. Severe and spreading land degradation today alone costs seven countries of South Asia a staggering 10 billion US dollars annually--roughly 7 per cent of their total agricultural output, suggests a FAO report. It also suggested that other ecological disasters loom ahead. Most threatening is the severe

^{55.} Ahmad et al., 94a, pp. 9, 69.

^{56.} Ibid., pp. 9-10.

^{57.} Ibid., p. 13.

deforestation and water erosion in the mountain and hill areas of Nepal. Water tables have dropped sharply. Salt is seeping into aquifers. Rainfed and deforested land in four 'countries of the humid zone'--Bangladesh, Nepal, Sri Lanka and most of India--are severely eroded by water.

Soil fertility is dropping sharply. The impoverished land base results in depleted yields and higher input costs. It cuts into the ability of the people to obtain food and other basic necessities. All countries have agencies to combat land degradation. But they are of varying effectiveness. Some are saddled with "unduly complex structures." Others lack resources. Many are troubled by overlapping functions. And the economic losses will fall on those least able to bear them--frail impoverished men and women who provide food⁵⁸.

If one takes water resource development as the starting point, then sound water management, including drainage and conjunctive use, is important if overuse and misuse are to be avoided. An important aspect of water resource development in the region would involve an effort to integrate water systems that transcend national boundaries. It is also known that the region needs sharing of water for i) agricultural irrigation, drinking, commercial and industrial use; ii) preserving environment; iii) preventing natural calamities and natural disasters; iv) harnessing energy; and v) navigation, transit and water transport. Other issues of regional concern include generation of hydropower and an enhancement of land use/prevention of land degradation.

Protecting water quality and curbing pollution, catchment area treatment and sediment control, protection of wetlands and the ecosystem, preserving biodiversity, replacing *jhum* with settled cultivation, re-forestation and salinity control are only some among many fields where concerted action is needed.

 [&]quot;Land degradation costs seven S. Asian states \$10b a year", The Daily Star, (9 March 1995), pp. 1, 12

As a result of declining forest cover in the region, several animal species are endangered; similarly, many plants, ferns, herbs and orchids are also endangered, thus damaging the very valuable "treasure-house of biodiversity and biogeographic cross-roads of great scientific interest." Soil and river bank erosion from a host of activities causing sedimentation is seen as a major cause of floods in the plains⁵⁹.

Recurrent flood, waterlogging and poor land management in the region result in low yields. Wetlands ashy reclaimed without a proper understanding of their role as flood detention basins, irrigation sources and spawning grounds for fish which are washed into these quiet waters during floods. Flood-irrigation and embankments without drainage or even minimal on-farm development can obstruct natural drainage and soon lead to adverse consequences to both agriculture as well as fisheries⁶⁰. Salinity ingress through excessive coastal pumping and tidal inundation also pose a serious problem in the deltaic regions both of India and Bangladesh.

Given the critical socio-economic parameters that contribute to poverty, environmental degradation and instability in the eastern Himalayan region, hastening the pace of economic development would appear axiomatic and imperative. This is a predominantly agricultural region and farming or other land-related activities are central to the economies of all the national or federal units, despite some industrial overlay. The region is also of high population growth and density which faces increasing pressures on the land. Farm yields are well below their potential and unable to generate the income, employment and surpluses needed to stimulate industrial investment and demand.

The demand for water is, however, not confined to irrigation, though this is by far the largest user, accounting for 85 to 90 per cent of consumptive requirements today. The highest priority is, of course,

^{59.} Ahmad et al., 94a, pp. 63-64.

^{60.} Ibid., pp. 60, 63-66.

for drinking water. Added to this is the growing demand for industrial and cooling water, some of which can be recycled. This still leaves out requirements for navigation, fisheries and aquatic life, recreation, pollution control and related ecological uses, including groundwater re-charge, protection of wetlands, preservation of biodiversity and prevention of salinity ingress⁶¹.

All these demands, some of them competitive, have to be satisfied in the context of the region's rising population, which is expected to grow from about 535 million (1991) to a billion within the next 30 to 40 years, and increasing economic activity.

The social problems are aggravated due to mass poverty, widespread unemployment, and economic stagnation.

Substantial numbers of the rapidly rising population are below the poverty line, with dismal quality of life indices. Land-made ratios and per capita food grain availability are steadily declining. There is heavy dependence on non-commercial fuels which, taken with the pressure on land, forests and grasslands, is aggravating environmental degradation. The resultant loss of productivity of the natural resource base and new entrants to the labour market are forcing people out of the farmlands and rural areas. This is a vicious circle and there is a crucial need to increase the productivity of the natural base i.e., land and water⁶². All this cannot be done without regional co-operation with community involvement, by developing water and generating hydropower.

The GBBM region has an immense potential to generate an enormous amount of hydropower, which can meet the energy requirements of the region for a very long time. Storage on the Brahmaputra system alone could offer the prospect of conserving destructive monsoon flows for multipurpose benefits of energy (40,000 MW potential), flood moderation, irrigation and navigation,

^{61.} Ahmad et al., 94b, pp. 13-14.

^{62.} Ahmad et al., 94a, p. 11.

without detriment to requisite lean season flows⁶³. The hydrocarbon fuels, used largely by India and Nepal, are non-renewable resources and their uses have an adverse effect on the environment. Current concerns about greenhouse gas emissions and global warming are bound to have an impact on their unrestricted use in future. These issues can be addressed through the development of hydropower in the GBBM region.

Ample scope exists for co-operation among the countries of the region to develop some of the multipurpose storage projects, especially in Nepal. The benefits which might be of interest to the co-riparian countries include i) increased river flow during the dry season; ii) flood moderation and mitigation; iii) availability of pollution-free energy, and iv) potential for inland water transport⁶⁴. There is little doubt that development of identified major projects, whether in Nepal, India or Bangladesh, has the potential to yield multiple benefits which can be of interest to all the countries.

An inter-country power grid, with an inter-connector, covering the countries of the region may facilitate the integration of the different power systems; that, in turn, may help in making more efficient use of the resources of the individual systems through the optimum use of the diversity of the different systems and also reduce the transmission distance.

Likewise, the northern Ganga plains constitute a single hydrological unit with Nepal. Water storage and regulation on the Mahakali, Karnali, Gandak, Kosi and several other medium and smaller rivers is only possible in Nepal where they leave the hills to enter the plains. This is a critical geopolitical fact which dictates cooperation in harnessing these waters for productive purposes. One possible source of water may be available for exploitation, as hypothesized by some petro-geologists, underlying the north-central

63. *Ibid.*, p. 24. 64. *Ibid.*, p. 42. Ganga plain, the Bengal Basin in West Bengal, part of the Nepalese *Terai* and eastern Bangladesh, where there is a deep fresh water aquifer. Economical and clean hydro-power which can be used among other purposes to lift water, flood moderation and inland navigation are other benefits of multipurpose regulation which merit mention as dimensions of water resource development⁶⁵.

It is rightly emphasized that regional co-operation is an important instrument to alleviate the current situation by working together for collective self-reliance and ecologically sustainable development. There is also a strong basis for co-operation in view of common heritage of the countries in socio-cultural fields, similarity of development problems faced and a common need to work together in a highly iniquitous world environment⁶⁶. But lack of trust and goodwill has led to contentions in the region.

CONTENTIOUS ISSUE AREAS: BANGLADESH AND INDIA

For a country like Bangladesh, water is critical to its agricultural output. Being a flat alluvial plain with an average elevation above sealevel of only 10 metres, Bangladesh is one of the few countries of the world faced with environmental challenges of multiple proportions⁶⁷. Farmers, for example, depend on monsoon flow for a successful harvest and the silt carried by rivers and streams helps maintain soil fertility. "In moderation, these natural commodities are essential to Bangladesh; delivered in excess, they can be disastrous"⁶⁸.

Water availability situation in Bangladesh is unique in its characteristics and nature. Considering the annual cycle of water, the

^{65.} Ahmad et al., 94a, p. 16-17.

^{66.} Ahmad et al., 94b also Ahmad et al., 94a, p. 12.

^{67.} Kaiser Murshed, "National Consensus on Foreign Policy is a Must", Star Weekend Magazine (21 June 1996), p. 7.

^{68.} Jodi L. Jacobson, "Environmental Refugees: A Yardstick of Hability", Worldwatch Paper, No. 86 (November 1988), p. 18.

country suffers from over-abundance (during the monsoon from June through September) to scarcity (during the lean season (November through May). There is thus an uneven distribution of water in Bangladesh, both spatially and seasonally, which severely constraints a planned development of the country⁶⁹.

The problems for Bangladesh started to accumulate as India had began water diversion schemes on the Kosi and Gandak in collaboration with Nepal, the Sharda Sahayak project and other programmes. Concern deepened in 1975 when India commissioned the Farakka Barrage, at a point before the Ganga enters Bangladesh, to preserve the port of Calcutta by flushing the Bhagirathi-Hooghly channel. The Farakka project, consisting of a barrage and a feeder canal, is capable of diverting up to 40,000 cusec of water into the Bhagirathi-Hooghly. A temporary accord was signed in April 1975 permitting the operation of Farakka, but it was not followed by any permanent arrangement as envisaged within the specified period. Friendly relations and mutual harmony were soon overtaken by political developments and a continued stalemate on joint measurement of Farakka effects had ensued after an interlude during which Dhaka raised the matter in the UN. In 1977, however, a 5-year agreement was reached on sharing the waters of the Ganga at Farakka and augmenting its flows.

The lapsing of the 1977 accord in 1982 was followed by two short-term memoranda of understanding on water-sharing. These have not been renewed since 1988. Bangladesh claims that deliveries to it have dipped drastically, falling below 10,000 cusec in April 1993, making Farakka to Dhaka a 'life and death question', whereas India says it is doing the best it can, given the overall shortage and its own unmet requirements. The joint committee set up from time to time

Tauhidul Anwar Khan, "The Water Resources Situation in Bangladesh", in Mohammed Ali, George E. Radosevich, Akbar Ali Khan (eds.), op. cit., p. 139; Ahmad et al., 94a, pp. vii, 9; also Ahmad et al., 94b, pp. 119-120.

under different designations to undertake substantive negotiations have yielded little result because of the vicissitudes of bedeviled bilateral relations.

In Bangladesh there is a generally shared perception that India's diversion of water of the Ganges not only led to the destruction of ecological balance and environmental system of Bangladesh, but also had the most devastating effects on the country's economic sectors such as agriculture, industry, forestry, and navigation⁷⁰.

Most Bangladeshis blame India for the growing scale of flooding and environmental disasters facing the country. They protest that India could prevent recurrence of flooding in the country by not opening the gates of the Farakka Barrage. India, of course, deny the charge. Bangladeshis also object that by using the Barrage to stem the natural flow of the Ganges in the dry season, India contributes to the increased amount of silt deposited in the river system flowing into Bangladesh, thus blocking drainage channels for the flood waters and adding to the miseries of the millions of the Bangladeshi people. From the Indian point of view, there is an acute sense of resource-sharing of water of the river systems by nearly 500 million Indian and Bangladeshi farmers living in the valley lands commonly inhabited on either side of the borders. Occupying the lower reaches of the river systems, Bangladesh views that its demands represent no more than allowing the natural flows of the river systems undisturbed by human intervention. Between the contentious claims of either side, there is an emerging situation with abundant potential for serious conflict. As pressure increases on scarce land in Bangladesh, there would naturally be a sheer "people pressure" on a limited land-resource base in the country--a prime component of the migratory impulse from Bangladesh for the very sake of security and survival⁷¹.

See, e.g., M.N. Islam, "The Farakka Barrage: A Man-Made Disaster for Bangladesh", in S.M.H. Kabir (ed.), *Environmental Crisis in Bangladesh*. (Dhaka: Professors World Peace Academy of Bangladesh, 1993), pp. 29-33.

^{71.} Norman Myers, "Environmental Security: The Case of South Asia", International Environmental Affairs, Vol. 1, No. 2 (1989), pp. 146-47.

There is thus an added element in Bangladesh-India contention, having other environmental ramifications and spillover effects. The disputes between the two neighbouring countries on the sharing of the Ganges waters and the dam-building activities of India on the Brahmaputra River, which flows through Bangladesh for a large section of its course have become complicated because of New Delhi's complaint that there has been a continuous flow of populations migrations from Bangladesh to its northern provinces and union territories. Bangladesh denies that there has been any migration of its population to India, but strongly views that Indian activity on the river systems across the borders was leading to disastrous changes in the patterns of flooding, rainfall, soil erosion, and forest growth in the Brahmaputra catchment area, thereby causing severe social consequences and economic disruptions for large segments of the Bangladeshi population⁷².

There are discords also between Bangladesh and India over sharing the waters of the Teesta, in which both the countries have constructed their own barrages, as well as on some of the smaller eastern rivers as well⁷³. India is known to have long-term hydropower and irrigation programmes in the Brahmaputra and the Barak-Meghna Basins, which would reduce surface water availability to Bangladesh. The water development activities in other minor common rivers by India also pose a threat to the economy and environment of Bangladesh. In addition, India has entered into bilateral agreements with Nepal and Bhutan to undertake water development projects in the major as well as minor rivers, which, it is feared, may deprive Bangladesh of its legitimate share of the surface water flow⁷⁴.

- 74. Ahmad et al., 94b, pp. 120-121.
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^{72.} Chetan Kumar, "Environmental Degradation and Security in South Asia", in Marvin G. Weinbaum and Chetan Kumar (eds.), South Asia Approaches the Millennium: Reexamining National Security. Boulder: Westview Press, 1995), p. 146.

^{73.} Ahmad et al 94a, p. 20.

To overcome the shortages of water in the rivers of Bangladesh, Dhaka proposed to include Nepal in the problem-solving negotiations as the water flow of some of the tributaries of the Ganges river originated in Nepal. So it was suggested that Nepal would be included as a partner in the whole process. The probable places which have been proposed for the erection of the dam are Kosi, Gandak, and Karnali rivers of Nepal. The idea is that if this is effected, the water flow of the land-locked Nepal can reach the Bay of Bengal through Bangladesh⁷⁵, having met the necessary requirements of all the riparian countries.

In order to resolve Bangladesh-India contention, India did agree in 1987 to Nepal's inclusion in a trilateral dialogue over water resource sharing and augmentation, and accordingly offered to make joint approach to Kathmandu. Later, however, it relented its position and chose not to be drawn into such a joint approach, swinging apparently back to its original stance of bilateralism.

Meanwhile, as a result of Farakka Barrage and diversion and withdrawal of water from the Ganges, the reduced flow in Bangladesh not only diminished water for its own food production, but also caused wells in the southwestern part of the country to dry up or be invaded by saltwater from the Bay of Bengal. In any case, reduced amounts of water now reach the Barrage each year due to greater irrigation diversions upstream in the politically potent "Hindi belt" of northern India⁷⁶.

India's traditional position on the issues seemed consistent with its age-old strategic stance. Internationally, while India stood as a great champion of multilateralism as a founding leader of Asianism and nonalign movement, regionally it speaks of bilateralism so that it can use its bargaining lever of power asymmetry to its advantage with each of

S.M. Mizanur Rahman, "Farakka Barrage: Water Sharing Problems and Proposals", *The Daily Star* (11 March 1996), p. 5.

^{76.} Myers, op. cit., p. 148.

its smaller neighbours, using different kinds of arguments or logic to suit its purpose. Thus, for instance, on the subject of water resource sharing, for a long time New Delhi frequently invoked the doctrine of absolute sovereignty over the Ganges with the lower riparian Bangladesh, while asserting the principle of equitable sharing with the upper riparian Nepal⁷⁷.

Nepal's position on the subject can best be described as one of ambivalence. It does sympathize with the predicament of an almost equally poverty-ridden Bangladesh, but water being that country's only resource it has lots of unanswered questions on plausible "benefits of facilitating India-Bangladesh riparian co-operation by earmarked storage in its own domain, with no lasting advantage, indeed loss of land through submergence on its territory"⁷⁸. Some Nepalese analysts even tend to offer an autarkic approach of water and power conservatism and shun any kind of bilateral or regional cooperation involving the only resource they have so that Nepal may have better times and materialize their self-sufficiency"⁷⁹.

INDO-NEPALESE CONTENTIONS AND BANGLADESH'S INTERESTS

Nepal is richly endowed with water resources, but spatial and temporal distribution creates both surpluses and shortages. It occupies only about 13 per cent of the total drainage area of the Ganges, but contributes about 45 per cent of its average annual flow and 70 per cent during the dry season⁸⁰.

80. Ahmad et al., 94a, pp. 9-10.

^{77.} Abul Kalam, Japan and South Asia: Subsystemic Linkages and Developing Relationships (Dhaka: The University Press Limited, 1996), esp. ch.4.

Jagat S. Mehta, Rescuing the Future: Coming to Terms with Bequeathed Misperceptions (Unpublished Manuscript, ACDIS Library, UIUC, 1995), p. 216.

^{79.} Ibid., p. 225.

The headwaters of some of the major rivers in the Ganga basin lie in Nepal which is the upper riparian. A late starter in the developmental road, Nepal confronts (to a greater extent than India) prior appropriation in respect of some smaller trans-border rivers. Its other difficulty is that it suffers from resources constraints to harness the larger rivers on its own, while donors are reluctant to fund these projects without an assurance of India's willingness to buy the energy surplus and share the cost of other benefits. There is also a perceptual problem, with Nepal feeling that it has not derived as much advantage as it was entitled to in earlier projects (on the Mahakali (Sharda) which was commissioned in 1928 and, more recently, on the Kosi and Gandak diversion schemes taken up and completed in the late 1950s and early 1960s) as well as in the more recent Tanakpur hydel barrage.

Nepali critics argue that in the case of both the Kosi and Gandak, setting the barrage near the border resulted in some loss of land to Nepal with the bulk of the irrigation and flood control benefits going to India. This argument is particularly strong about the Kosi. Subsequent Indian maintenance of certain project canals providing irrigation to Nepal has not been entirely satisfactory, resulting in irregular supplies during certain years, while the associated power generation from canal falls has also been uncertain. It is felt that the irrigation and flood benefit to Nepal from the Kosi project in particular would have been greater had the barrage site been located further upstream⁸¹.

The Indian responses suggest that no injury to Nepal was ever intended. The Kosi barrage was part of a phased programme, a subsequent stage of which was to be a High dam at Barakshetra (now again proposed for joint investigation) which would provide irrigation, flood control and energy to both the countries in considerable measure. In any event, even at the inception, embankments were constructed both upstream and downstream of the Kosi barrage to anchor the river and provide a confined floodway. The upstream embankments in Nepal

81. Ibid., pp. 26-27.

have saved a large area from inundation and brought it under cultivation. The Chatra inundation canal, subsequently excavated, also provides a measure of irrigation though it still faces certain problems relating to canal intake and siltation. Both the Kosi and Gandak agreements leave Nepal free to use and divert waters from these rivers in the upper catchment. They provided a valuable east-west road link over the two barrages and entire canal networks either constructed or funded by India. The Kosi and Gandak agreements were, furthermore, revised in 1964 and 1966 to satisfy Nepal on certain counts.

The Sharda agreement is again seen by the Nepalese as conferring by far the larger irrigation benefit on India. Some water was reserved for Nepal during the kharif season and a lesser quantum during the rabi season which Nepal began to utilize through its Mahakali irrigation project taken up in the 1970s. The more recent Tanakpur hydel barrage nearby, constructed on a loop in the Mahakali wholly within Indian territory, has aroused strong feelings in Nepal, the opposition in the parliament demanding two-third majority before a treaty signed between the two sides is ratified as required under a constitutional provision pertaining to natural resource utilization. The project is intended to harness the waters of the Mahakali River, marking part of the borderline between India and Nepal, would involve using the river's waters for generating power and for irrigation⁸². Many Nepalese felt that the left afflux bund constructed on 2.9 hactres of Nepalese territory is an integral part of the project and constitutes, along with 9 ha of submerged land upstream, Nepal's contribution towards the project. Nepalese argue that this reality was ignored and it was not consulted during the project planning stage. Nepal's contention is that its contribution should be recognized and reflected in the sharing of benefits.

River Treaty with India, "Communists in Nepal take to street", *The Daily Star* (21 September 1996).

The Indian view is that the left afflux bund provides a measure of flood protection downstream and that sovereignty over this area remains with Nepal. Moreover, Nepal is to get free of cost 20 m kwh of energy annually, a head regulator and canal up to the border (a couple of kilometre away) for future irrigation and a 150 cusec allocation of water. India is also committed to investigate a 17-kilometres road link from the barrage site to Mahendranagar, the western terminus of Nepal's East-West Highway⁸³.

More generally, India has assured Nepal that it can use beneficially all the water it requires within its territory. The problem of the small transborder rivers can be taken care of by storage and interbasin transfers or by groundwater lift. Suitable transitional arrangements can be worked out to ensure that local farmers on either side of the border are not put to avoidable hardship.

Nepal's contention that the major benefits under the Sharda, Kosi and Gandak agreements lie in India must be seen in the context of geography. Nepal, being mountainous, has only a limited irrigable area, mostly in the narrow *Terai* belt below which the rivers open out into the vast Ganga plain.

Nepal could justifiably be compensated for storage within its territory. It can also be assured some return for measurable downstream benefits in terms of flood protection and regulated releases of water supplied from its dams that stabilize or augment irrigation and/or power generation in India. There are precedents for this in Indian and international experience. No uniform rule may apply, but reasonably acceptable agreements can be negotiated in respect of each project⁸⁴.

However, psychological barriers of mistrust hampered understandings. Eventually, the two sides had signed the Mahakali Treaty in

83. Ibid., pp. 27-28.
84. Ibid., p. 28.

February 1996. The Mahakali Treaty calls for joint investment in hydro-electric and irrigation projects on the river and shared benefits⁸⁵. As already mentioned, the treaty concerns shared water rights for irrigation and hydropower on the river, located 415 kilometres west of Kathmandu that serves as a border between the two countries. It may also be added that the Mechi river also serves as Nepal's southeastern border with India. There is a sense of regret in Bangladesh that it has been left out of these Indo-Nepalese bilateral negotiations which essentially should have been trilateral and include Bangladesh as a necessary partner. The Mahakali River Treaty, however, provoked a great deal of controversy and strong opposition in Nepal itself and the Nepalese parliament finally ratified the treaty on 20 September 1996, only after the Nepalese government produced a letter from their Indian counterpart committing New Delhi to hold talks on the Mahakali package and other relevant issues⁸⁶.

- 85. The leading opposition party, Nepal Communist Party, United Marxist and Leninist (NCP-UML) alleged that a secret treaty was signed between Kathmandu and New Delhi during Prime Minister Sher Bahadour Deuba's official visit to India in February, 1996, an allegation denied by the Nepalese government. "Nepal denies secret treaty with India", *The Daily Star* (6 April 1996), p. 1
- 86. "Nepali parliament ratifies river treaty with India", *The Daily Star* (21 Sepember 1996); also "Kathmandu rally protests river treaty with India", *The Daily Star*, (17 August 1996); M. Asafuddowla, "The Ganges Tragedy: Sharing of Transboundary Rivers----III", *The Bangladesh Observer*, (25 May 1995). Nepali left-wing and nationalist leadership in recent months strongly opposed Kathmandu's border river treaty with India and criticized India for its alleged "big brotherly acts against small and docile nations." There has been a strong belief in the Nepalese opposition circles that the treaty is unequal, providing little in the way of facilities to Nepal while giving the lion's share to India, although both countries have agreed to invest equal amounts on the river projects. "Mechi and Mahakali rivers are ours", shouted sign-waving demonstrators who surged into the Nepalese capital, "We will not let India encroach our lands." They also denounced India's alleged encroachments of Nepalese territory in the southeast and west by moving border makers towards Nepal ["Kathmandu rally...", op. cit.

Meanwhile, India entered into bilateral agreements with Nepal in 1991 and 1992 to undertake projects on the rivers Karnali, Pancheswar, Saptkosi and Buri Gandaki, tributaries of the Ganges--all these projects are going to intervene with the natural flow of these rivers downstream, to the detriment of the interest of Bangladesh, the lowest riparian of the Ganges.

INDO-BHUTANESE-BANGLADESHI CONCERNS

In terms of size and population Bhutan is on the other side of power asymmetry in its relations to both India and Bangladesh, though there are significant commonalities among them which may enable them to seek true community bond in the pursuit of their

The main opposition NCP-UML released a list of changes it wants made to the treaty before it will ratify the project. It is opposed to the signing of the multi-billion dollar Mahakali River Integrated Development Project (MRIDP) which has the potential to generate 4, 000 megawatt of electricity besides harnessing the border river for irrigation. By terms of the treaty the two neighbors agreed in February 1996 to invest equal amounts in the project for equal benefits. But opposition leaders say India will gain the most ("Nepali opposition won't ratify treaty with India", *The Daily Star*, (12 September 1996). The NCP-UML decided to change its stance on ratification of the treaty only after India has agreed to hold further talks, apparently to accommodate the opposition viewpoints on Mahakhali package and relevant issues. See, "Nepali parliament...", op. cit. However, resentments against the treaty in Nepal still seem quite strong as many opposition groups continue to agitate against it.

The tripartite coalition government of Nepal of the Nepali Congress (NC), the rightist Rastriya Prajatantra Party (RPP) and the pro-India Nepal Sadbhavana Party (NSP) supports the ratification of the treaty. The parties opposing the treaty include Nepal's main opposition Nepal Communist Party--United Marxist-Leninist (NCP-UML), the extreme left National Democratic Front-Nepal (NDF-N), the Maoists led by the Nepal Peasants and Workers' Party (NPWR), who called the treaty "a treacherous treaty" and accused India of "blindfolding Nepal to get the treaty ratified only thinking of its interests rather than thinking of Nepal and its people."

security, peace and development. As early as in 1972 both Bangladesh and Bhutan envisaged the development of water resources in common interest, but there has not been any follow up effort in the area which perhaps could have contributed to common welfare, more specifically to the development of the agricultural sector in both the countries and, as well, would have prevented flood disaster which has been causing widespread damage to life and property almost annually in Bangladesh. However, after the 1987 flood disaster in the country, Bangladesh President Ershad visited Bhutan. The Bhutanese King and the Bangladesh, President then agreed to co-operate with each other and help identify and implement appropriate measures for flood control and mitigation. They had set up joint team to study the problem but no tangible initiative was taken since then to work out mutually beneficial relationship in the area. Rather dissatisfaction arose in both the countries after Bhutan signed a Memorandum of Understanding (MOU) with India for building of a multipurpose dam on the Sankosh river. Bangladesh raised objection to it, as the proposed dam would adversely affect Bangladesh as a result of diversion of water from Brahmaputra and its tributaries⁸⁷. There has been a feeling in Bhutan that "Bangladesh itself has not been able to take up the development of water resources but it is inclined to put a brake on [their] development in the neighbouring countries"88.

The harnessing of the Brahmaputra is not going to be accomplished in a day or a week. But the first few pieces in a giant mosaic of water resource development must be put together as soon as possible. Comprehensive investigations have been made and detailed reports on the Dihang and Subansiri projects are available. The Indo-Bhutanese agreements cover investigation and, hopefully, construction of storage

88. Ibid., p. 242.

Kapileshwar Labh, "Bangladesh-Bhutan Partnership in Peace and Economic Development: Commonalities and Constraints", in S. R. Chakravarty, *Foreign Policy of Bangladesh*. (New Delhi: Har-Anand Publications, 1994), pp, 232, 241-242.

on the Sunkosh and Wangchu (Torsa) rivers⁸⁹, where the interest of Bangladesh can as well be accommodated through multilateral water dialogue.

SHARING COMMON BENEFIT: THE CASE FOR A COMMUNITY APPROACH

Problems confronting the GBBM region in environmental management and water resource sharing are enormous indeed. But every problem, however complex, has a solution if approached with a sense of understanding in a community spirit. The issue of water resource sharing in the GBBM region has manifold dimensions, yet there is already a long history of co-operation on water resource sharing in South Asia between India and Nepal⁹³, India and Pakistan⁹¹, Bhutan and India⁹², and India and Bangladesh³⁴. Therefore, given this precedence and the necessary political commitment one cannot see why a framework of new co-operation cannot be found among the countries of the eastern Himalayan subregion. Once a firm commitment is made and a framework is established, technical modality and other related problems can easily be overcome⁹⁴.

- 90. The functional mechanisms of Indo-Nepal water resource sharing include Kosi/Gandak Coordination Committees, Secretary-level Committee, the Karnali Committee, the Joint Group of Experts on Pancheshwar, the Joint Experts team on Burhi Gandak, Sub-Commission of the Indo-Nepal Joint Commission on Water Resources.
- 91. The functional mechanisms in India-Pakistan water resource sharing include the Indus Commission, the Joint River Commission etc.
- 92. The functional mechanism on water resource cooperation between Bhutan and India include Indo-Bhutan Chukha Project Authority.
- 93. Water resource sharing negotiations between Bangladesh and India has been highly contentious; yet a number of bilateral mechanisms such as Joint Rivers Commission, Joint Committee of Experts, the Joint Task Force etc. had been created and remained functional from time to time as and when the governments concerned decided at the political level to utilize them for purposeful ends.
- 94. Ahmed in Ahmed et al., 94a, p. vii.

^{89.} Ahmad et al., 94a, pp. 24-25.
As is discussed earlier, it appears that environmentalism and development are two aspects of the central organizing concept of 'security'95; for they both convey a sense of stability and improvement of the quality of human life, at the same time carrying capacity of supporting eco-systems. Both involve a process calling for protection of natural systems, restoration of degraded systems, and sustainable production of means of living as well as preservation of renewable resources. There is need to introduce a community approach through a process of mutual learning, both non-formal and formal mechanisms of teaching, inspiring people to respect nature, communicating by physical and social scientists accurately with their findings on the ecosystems and the effects they may have on both environment and development, drafting laws to support ethic, recommending and evaluating the changes required in public policy and suggesting the necessary action-programmes, and finally, utilizing transnational organizations in a true community spirit harnessing people's education and skill for environmental management and conservation/enhancement of water resources%.

Regional co-operation is an important instrument to alleviate the current situation in the GBBM region by working together for collective self-reliance and ecologically sustainable development. The vicissitudes of political relations for a long time defied the logic of sustainable development and environmental needs and hindered the process of co-operation. Such a stance does not serve the interest of

^{95.} For an in-depth analysis and appreciation of the conceptual aspects of security, environment and sustainable development, as well as of the necessary blue-print of action program, see Abul Kalam, *Environment and Development: Towards an Eastern Himalayan Community* (Dhaka: The University Press Limited, *forthcoming*)

^{96.} For views closer to this see, Md. Salar Khan, "Environmental Crisis in Bangladesh: Plants and Sustainability", in S.M.H. Kabir, *Environmental Crisis in Bangladesh*. Dhaka: Professors World Peace Academy of Bangladesh, 1993), p. 51.

any country of the region, resulting in the long-suffering of the people⁹⁷.

Countries of the subregion have few choices: they will have to make the effort--right now--to save their environment consistent with the central organizing principle of their relations i. e. welfare of their people. Or else the result could be meekly acquiescence of the recurrent losses of life and immense sufferings and devastations caused by the natural disasters, the loss of vegetation and soils of the Himalayas⁹⁸.

Nature has indeed spread out its arms like an octopus across the Himalayas to force a sense of a shared community, but politics has undone what nature has created. A step-by-step approach towards a water community may encompass a national water policy and bilateral water sharing, as well as augmentation and joint arrangements for development of water resources for common benefit. The motivating idea should be to bring together those who matter and would benefit the most, *the people* whose lives are bound up with the Himalayan rivers so that they become 'rivers of union' and help achieve a sustainable quality of life for them⁹⁹.

It is time, writes an insightful analyst, that the scholars and scientific community through their research perspectives and empirical findings:

must send out one message, loud and clear: that it is an illusion that we can command the elements - the soil, their air, the water - for the nation's benefit as they simply defy territorial frontiers. Governments must be prepared to tell their people that riparian chauvinism is an invitation to a

^{97.} Ahmad et al., 94a, pp. 12, 20.

^{98.} For arguments along the line see Senator Al Gore, Earth in the Balance: Ecology and the Human Spirit. Boston and New York: Houghton Mifflin Company, 1992), p. 272.

^{99.} Hasna J. Moudud, in Hasna J. Maudud (ed.), op. cit., Preface

condemned national future. Cooperation amongst riparian partners is the only answer to hunger and thirst which gnaws at the entrails of millions and is putting all governments internally on the defensive....¹⁰⁰ (emphasis added).

Adopting a central organizing principle of community approach-one agreed to voluntarily and through consensus--means embarking on an all-out effort to use every tactic and strategy, every plan and course of action--or to put it differently, every means to halt the destruction of the environment and to preserve and nurture the region's ecological system. Minor shift in policy, marginal adjustments in ongoing programmes, moderate improvements in laws and regulations, rhetoric offered in lieu of genuine change--these are all forms of appeasement, designed to satisfy the public's desire to believe that sacrifice, struggle, and a wrenching transformation of society will not be necessary¹⁰¹.

Sustainable development in the region is not an unattainable goal, but it rests on equitable development of the community of people involved in the region as a whole. It also calls for new development strategies to provide alternative sources of fuelwood, fodder and energy and to speed growth. Population increase imposes a crushing burden on already impoverished peoples. The right kind of development would be the strongest counter to environmental degradation, and a faster pace of economic and social development the quickest and surest means of accomplishing a demographic transition.

The problem of water sharing has soured relationship among the countries of GBBM Basins for a fairly long time now. A solution of the problem may involve long-term planning perspectives, but that should not preempt short-term options, considering the urgency and critical nature of the needs. Similarly, short-term options should not

101. Al Gore, op. cit., p. 274.

^{100.} Mehta, op. cit., p. 227.

preclude longer range optimization of large systems in the mutual interest of all the riparian states, should it be approached in a community spirit and from the perspective of sustainable development, replacing the hitherto ruling narrow political outlook that served to constraint human progress.

Water is a nature-given resource and sharing of its limited supplies or working for a common approach towards its development should not be made a victim of politics or be made a tool of zero-sum game. For, as is rightly said, water is a basic human necessity and should *not* be made an issue of political contention. Similarly, rivers of the same basin should not be viewed as knives dividing people; on the contrary, they are the very sources of life¹⁰². A number trade-offs are possible to even out specific gains and losses on either side to yield an overall package that would spur development and enhance the quality of life in all the countries of the region¹⁰³. There should be joint efforts for breaking the 'logjam' and moving forward 'a win-win positive-sumgame' for all the participating countries in a water sharing community. Comprehensive investigations on some of the projects have already been made and detailed reports on some of the projects are known to be available¹⁰⁴.

Geography permitted the division of the Indus Basin between the two perceived enemies, India and Pakistan. It serves as an useful example of an intra-basin co-operation for water-sharing. There is no reason why the same would be untenable in the GBBM Basins connected by a succession of a complex river network and hence must be shared with a community approach for optimal regulation and beneficial use. This is the problem that has to be pursued in a truly community spirit and that still awaits solution.

104. Ibid., pp. 24-25.

^{102.} Shelley, op. cit., pp. 135-36.

^{103.} Ahmad et al., 94a, p. vi.

Indeed, intra-basin co-operation in a community spirit would seem an important mechanism to get away from the current predicament of conflictual relations in the GBBM region, but such an approach would require rising above 'nationalistic' stance based on the state entities of more recent creation. If France and Germany could build up the base of a 'Community' and eventually promote a continent-wide 'Union' with industrial commodities such as coal and steel for which they bitterly fought over a century, why the states of the eastern Himalayas bound by the natural flow of waters and a system of 'holy' river network could not rebuild their age-old relationships on the basis of community consciousness. A community approach may well involve supranational arrangements as in Europe, but given the nature of the problem and the commodity involved, intra-national community participation, inter-state accords, regional initiatives, transnational linkages, international support and private sector participation may also be necessary.

At the intra-national level, water management through a community spirit could do with a good deal of improvement in terms of conjunctive use, consolidation, conservation and improved use-efficiency. There is clear need for more realistic water pricing and greater irrigation equity through water user's associations or farmer-managed system of societies at lower outlets on the minor canals of large irrigation projects. Cheap and reliable energy supplies are crucial to greater ground water use and recharge. In all these the countries concerned could each learn from the other's experience¹⁰⁵.

At the national level also, one could learn from the experience of Israel which over the last 30 years has revolutionized the value of its crops almost five-fold grown with a given amount of water by a judicious use of it, cutting much of the waste in irrigation. In a flooded or spray-irrigated field, at least half the water never reaches plant roots, but seeps underground or evaporates. Systems such as drip

105. Ibid., p. 22.

irrigated system as is in use in Israel--from long lengths of hose containing pin-holes that drip water close to roots--cut water loss by half. It has replaced the traditional flooded or spray-irrigated fieldmanagement which is in use in most tropical countries. Yet even in water-starved countries, such systems are still exception.

Waste takes other forms. Most city supply systems leak 30-60 per cent of their water underground. And most urban sewage--a vast potential source of recycled water passes untreated into rivers.

To make up for insufficient knowledge in water resource development projects or lack of accountability among project authorities of concerned governments with regard to environmental factors, environmental impact assessments (EIA), with appropriate cost-benefit analysis and community participation and hearings, must be made mandatory in all funding and execution of all major projects. There should be increasing emphasis on qualitative norms of life, rather the quantitative aspects of benefits. Poverty alleviation, employment generation and demographic change--all should be closely linked and be monitored and uphold with equity, as they hold the key to environmental improvement, so that creation 'environmental refugees' may be avoided or effect on people may be minimized. To this end 'project' task may be made more than 'engineering', as conventionally conceived¹⁰⁶. The task may well involve social scientists as well as political decision makers with a deep insight into social phenomena and also a farsightedness about the ultimate shaping of the community itself. Also, there should be greater openness and transparency at the nation-state level, with an involvement of the interested voluntary organizations and the NGOs in keeping informed through public hearings of the impacts and opportunities inherent in projects right from the formulation stage.

At the inter-state level, the two Teesta barrages and the ongoing process of building a network of canal system in Bangladesh and India

106. Ibid., pp. 61-62, 66-70.

exemplify an avoidable duplication. Further developments could include an integrated system, which would augment lean season flows, and further supplementation through agreed diversions to the Teesta from the proposed Sunkosh dam in Bhutan or other sources, without prejudice to Bhutanese interests. The same can be said for the Barak-Meghna and other smaller rivers flowing into eastern Bangladesh from India's northeast. Water storage as well as dam and hydel power projects such as Tipaimukh could to the mutual benefits of both Bangladesh and India.

Such a large part of Bangladesh and eastern and northeastern India is subject to floods of varying depths and periods that any mitigation of these parameters would have a profound bearing on crop planning and agricultural strategies. Flood and drought proofing are also often complementary. A rich dividend may be obtained from multi-purpose water resource projects, what has broadly been conceptualized as a 'National Water Grid' in India if built in common consensus with Bangladesh as a 'subregional Water Grid'. This though primarily intended to provide irrigation or generate power through storage, may also yield an incidental or planned flood benefit as well as lean period augmentation beneficial to both the countries¹⁰⁷. An improvement of the flow of the Ganges has been advocated by an application of a system known as "Induced Ground Water Recharge."¹⁰⁸

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108. The system of an "Induced Ground Water Recharge" has been recommended by the Center for Population Studies, Harvard University. The Center carried out a survey for ten years on the flow of the Ganges-Brahmaputra river. It was suggested that, by constructing dam and reservoir alone it would not be possible to supply sufficient water in the dry season. Hence the Harvard experts suggested that one third of monsoon flow of the Ganges may be kept reserved at ground water layer by the induced system of re-charge. They advanced the view that during the dry season when the water flow in the river would be minimum, then due to lowering down of the water layer of the ground layer of ground water, water from the ground layer should be picked up with pumps.

^{107.} Ibid., p. 29.

However, now water conservation is on the national agenda of many countries of the world and, amid gloomy forecasts of growing supply-demand disparities, the search continues for 'new water': tapping reserves of fossil water; recycling waste water as well as brackish and sea-water desalination; and introducing more efficient water delivery systems for irrigation and municipal networks. Modernizing irrigation systems can make a tremendous impact on national water budgets and water conservation and utilization¹⁰⁹. Rather than sharing current shortages and avoidable poverty, the co-riparian countries thus can share experiences and enrich their learning from each other.

Moreover, they can benefit and enjoy gains of cooperation in harnessing the potential of the eastern Himalayan rivers by a basinwise development approach. Demand management can be as important as sharing available supplies and their augmentation with safeguards that guarantee the essential interests of each party. There can be a combination of short, medium and long-term measures with a variety of dividends over space and time. Greater inter-state transparency, joint planning and management and interdependence can help instil confidence in place of the prevailing mistrust that has held back progress these many years¹¹⁰.

Regionally, a SAARC Study Group should be constituted as soon as possible to address the issue of water resource sharing and other related issues of common concern in the eastern Himalayan region. Now that India, the leading regional actor, is the Chairman of the regional grouping it should seize upon the opportunity to demonstrate

Consequently in the rainy season when there is abundance of water in the river water will penetrate the layer more quickly than before. The researchers have expressed with confidence that this system would be able to contain both drought and flood to some extent and, at the same time, enhance food production (Rahman, *op. cit.*, p. 5).

^{109.} Natasha Beschorner, "Water and Instability in the Middle East", Adelphi Paper, No. 273. (Winter 1992/93). (London: The International Institute for Strategic Studies), p. 5.

^{110.} Ahmad et al., 94a, p. 29; Shelley, op. cit., p. 136.

its goodwill for the smaller neighbours and provide the much-needed leadership in generating the political will as well as in mobilizing regional public opinion so that initial steps can be taken urgently to create a regionwise community consciousness. The proposed Study Group should consist of experts with an enlightened interest in a regionwise water resource sharing and be drawn from each of the countries of the subregion. To make the whole exercise policy relevant the concerned secretaries of the governments should also be included as members of the proposed Study Group. The terms of reference may include suggestions on a general 'framework' treaty for water resource development, information-sharing, water-shed management, environmental protection, navigation etc. as well as specific arrangements for water resource sharing involving river/rivers and/or storage dams and distribution canal network etc. The Study Group may also offer suggestions for inter-country bilateral/multilateral co-operation or private sector participation required in related project areas of power/gas grids cutting across national boundaries111.

In all the foregoing tasks the governing principles should be the spirit of international cooperation and harmony of the post-Cold War era in which South Asia has been lagging far behind. 'Nationalistic' rigidity should give way to regional flexibility; accommodation and mutual understanding should replace distrust and mutual suspicion; a government-to-government approach overburdened with legacies of past bitterness should make room for a more businesslike/professional approach so that cost-benefits both in political and economic terms may perhaps be better apprised and judged from a distance. In other words, community spirit and gifts of nature embodying the interests of the people as a whole, irrespective of political boundaries of the existing state entities, should be the guiding spirit in any subregional water resource sharing arrangement and environmental management.

^{111.} The terms of reference suggested for the Study Group are somewhat consistent with those offered as general forms and mechanisms for regional cooperation in water resource sharing in Ah

A basinwise development approach of water resources of the common rivers would inject a new consciousness of community among all the people of the region and might pave the way for regenerating the dented spirit of a common cultural and political identity in the region, thus building up the very base of a common South Asian destiny.

There is an element of irrationality in the tangle over watersharing, and that the failure to find "constructive compromises ... has got subordinated by the psychological barriers of mistrust"¹¹². Given the existing state of mutual suspicions and contentions among the South Asian neighbours, there is little option but a community approach and an international involvement which could bring about an amicable understanding between and among contentious states and may finally prove beneficial to all.

Currently and looking to the future, it is indeed suggested that sustained endeavour must be made towards impairing the disrupted relations, rehabilitate the harm which had been done; "sensitive efforts have to be marshaled through diplomacy which is of environmental engineering to change the political climate"¹¹³. A permanent sharing of the Ganges at Farakka may not be difficult and may indeed be made based on the agreed data on availability of the Ganges water at Farakka between 1948 and 1973 with 100 per cent guarantee¹¹⁴.

Certainly, the world beyond is not disinterested in South Asia's destiny, aware that South Asia is "one of the last untapped economic frontiers in the world"¹¹⁵. Indeed, the major powers of the world,

^{112.} Mehta, op. cit., p. 216.

^{113.} Ibid., p. 221.

^{114.} Khan, op. cit., p. 4.

^{115.} An Asia Society mission report published in the Asian Wall Street Journal accordingly urged the leading global power, the U. S., to broaden its linkages in the region to broker talks to help India, Bangladesh and Nepal harness and share the runoff of the Ganges, Brahmaputra and Meghna rivers. See, "U.S. Should Foster Ties In South Asia, Study Says", The Asian Wall Street Journal, (22 September 1994), p. 6.

including the US, Japan¹¹⁶, France, Germany, China--all have shown their keen interest in promoting regional co-operation for water resource development and environmental management in South Asia. The multilateral donor agencies, including the World Bank, the Asian Development Bank and the UNDP as well as the reputed world funding agencies, like the Ford Foundation, the Asia Foundation, the Global Infrastructures Research Foundation of Japan (GIF), the Norwegian Agency for International Development (NORAD)--have all shown deep interest in assisting the fruition of ideas and projects for regional cooperation jointly conceived¹¹⁷.

Suggestions on mutual co-operative benefits and pay-offs made in research reports and studies range from sharing hydro-electric power to supply of water storage benefits--irrigation water and flood mitigation, from inter-basin transfer of water to granting of navigation, transit and communication rights and secure expectations of minimum water flow. The concerned national governments, major world powers and international agencies may offer financial incentives and technical support, make available engineering expertise to facilitate the implementation of accords commonly agreed through negotiation and a process of mutual confidence-building¹¹⁸.

- 116. Japan, which has emerged as the "world's biggest source of foreign aid", is committed to assume a larger leadership role on aid issues, has its own plan on major environmental funding. "Japan plans bigger leadership role on aid issues", *The Straits Times* (Singapore) (1 October 1994), p. 15.
- 117. Studies and reports by some of the expatriate experts have provoked much criticisms in most countries of South Asia for the considerable amount of time and money wasted which the poverty-stricken countries of the region can hardly afford. Hence, a more pragmatic approach to water resource management has been suggested using local expertise and equipment, and thus drawing optimum benefits for the concerned people by utilizing the funds made available from the international donors. See, for instance, Haybat J. Chowdhury, "Water resource management in Bangladesh context", *The Independent* (Dhaka), (10 September 1996), p. 6

^{118.} Ben Crow et al., op. cit., pp. 218-239; Ahmad et al, 94a.

The political rigidities and sensitivities in the past were so great that no wide-ranging accord was in sight between and among the concerned state-actors. Therefore, transnational network of organization¹¹⁹, including media and the publicists, the non-governmental organizations (NGOs) and the universities, national research bodies and environmental pressure groups etc. should continue to build up and strengthen their network of relationship, breaking the traditional state-managed frontiers of research and studies, and should organize and publicize the beneficial aspects and fruits of a community approach in environmental management and water resource development.

Given the whole history of conflict of the recent past and the confronting realities of policy constraints created by the geopoliticians, it may not be that easy for those well-meaning to provide an appropriate blueprint for a water community in the eastern Himalayan subregion; nevertheless, the minimum that can be done is not only to continue but also intensify and carry forward the type of ongoing joint research and study endeavor under the auspices of the centers of learning and excellence in the three countries, viz., Centre for Policy Research (CPR) of New Delhi, Bangladesh Unnayan Parishad (BUP), Bangladesh Centre of Advanced Research (BCAS) of Dhaka and Institute for Integrated Development Studies (IIDS) of Kathmandu. Individuals and groups with enlightened interest in the issues should be offered as much patronage and support as possible.

^{119.} Transnational organizations are referred to entities larger or smaller than nations and outside the framework of nation-states. Such entities may include NGS/IGOs, religious bodies, peasants' organizations, chambers of commerce, bodies devoted to the cause of disarmament, peace, environment, human rights, or developmental groups, in essence, those that are devoted to the investigation of the roads to cooperation, development and peace (Joseph V. Montville, "Transnationalism and the Role of Track-Two Diplomacy", in W. Scott Thompson et al. (eds.), op. cit., 1991), 255)

The governments may be hesitant about, or latecomers to, the process¹²⁰, but once the conceptual blocks are built on a reasonably sound basis they would have little option but to come along and move towards concrete project formulation and policy implementation that would condition the life of the teeming suffering millions of the projected eastern Himalayan community.

For developing societies such as those of South Asia, there will be transition time and curve as they gear themselves to put new, environmentally sound technologies in place and develop the infrastructure and skills to absorb and maintain them. In all these spheres, skills and technologies, they need support and patronage of the richer nation of the world.

However, consistent with the global trend and market liberalization in South Asia itself, the possibility of private sector participation both from within and without in setting up of some of these potential projects may be explored in the light of a general framework agreement between and among the governments concerned. Regional and international consortia can find a role in the construction and management of such projects.

All this can be facilitated to happen only when the regional actors decide to take their relationship beyond their conventional territory and security vision, visualize a common future for their respective people

120. Bangladesh, for instance, for a long time strongly desired close cooperation between Dhaka and Kathmandu in water resource management and in flood mitigation and in early flood warning. Accordingly, Dhaka endorsed the recommendations of the Nepal-Bangladesh Joint Study Team on water resources. Bangladesh feels very strongly that huge scope for cooperation 'is going waste', which is 'a tragedy', because billions kilowatt of electricity could be produced in Nepal through joint water management effort. Nepal appears inclined towards a Joint Intra-Basin development approach. India's input in the proposal was the `the missing link' for a long time. Former Bangladesh Finance Minister Saifur Rahman quoted, "Dhaka seeks help in water management", *The Daily Star*, (30 July 1995), p. 12; also 'Editorial', *The Daily Star*, (2 August 1995).

on the basis of multi-level and multi-dimensional notions of security, think and act in a community spirit of togetherness of a South Asian destiny. This involves abandoning plans and programmes based on negative perception of security arousing mutual suspicions and hatred such as unilateralism, self-righteousness based on a barbed-wire approach of dividing lines. Unilateralism has to replace multilateralism as in the European Union, the ultimate or long-term vision being to transform South Asia into a borderless region. As in Europe countries would, of course, retain their respective identities of nationalities, cultures, national sovereignty etc.; yet the process of multilateralism has to catch up and replace heterogeneity for maximum homogeneity in pursuing relations. People would retain citizenship of their respective state entities, yet freer movement of people would bring souls together.

As the leading actor, "asymmetric power" in South Asia, India has to provide leadership and show the way. It can no longer afford to look to the world, especially to its neighbourhood, only in terms of its own interest; it has to give up what Shekhar Gupta calls "a siege mentality, imagining danger" not only from China and Pakistan but also "suspecting smaller neighbors such as Bangladesh and Nepal of conspiring with its enemies."¹²¹ The traditional Indian perspective of its smaller neighbouring countries being anti-Indian because of their regimes being undemocratic and who tend to invite outside powers into the region, thus endangering regional security (whereas the people of the region are sympathetic to India because of historic ties of religion, culture and language)¹²² seems no longer valid, as most of them now have democratic governments, and some like Nepal and Bangladesh have governments led by political parties friendly towards India.

^{121.} Shekhar Gupta, "India Redefines its Role", Adelphi Paper, No. 293. London: The International Institute for Strategic Studies, 1994), pp. 5, 66.

Stephen Philip Cohen, "The Regional Impact of a Reforming India", in Adelphi Paper, No. 276, April 1993, p. 88.

Looking at security calculus, the threats to India and South Asia's stability would seem to emanate from the rapidly changing internal political equations and the altered electoral calculus in India itself¹²³. Hence India needs to adjust its environmental and developmental priorities with the needs and aspirations of its smaller, poorer neighbors. India's growing confidence and stability would be a welcome development. It could lead South Asia towards its own rewards in terms of trade, security and more open relations. A more confident, yet less self-righteous, assertive or adventurous India would find it easier to settle environment and developmental issues with its immediate neighbours, whether it is the question of sharing waters with Bangladesh or joint exploitation of water resources with Nepal. The fate of economic reform undertaken and of developmental aspirations of the people in the region would be closely linked to the way India evolves and leads the rest¹²⁴.

A community approach ensuring basinwise development of water resources of the common rivers would inject a new consciousness among all the people of the region and might pave the way for regenerating the dented spirit of a common cultural and political identity as well as intensifying all-round economic co-operation in the region, thus building up the very base of a common South Asian destiny.

BANGLADESH-INDIA TIES AND THE FUTURE OF A SHARED COMMUNITY

The history of Bangladesh-India bilateral talks at the level of officials and the committees of experts is lengthy and painstaking. It is true that results on complex issues are at times difficult to obtain even if goodwill exists. But it is equally true that nothing can really prevent the progress, should there be mutual goodwill and goodneighbourliness.

^{123.} Shekhar Gupta, op. cit., p. 67.

^{124.} Ibid., pp. 67-68.

Several thorny bilateral issues have tested relations, including trade imbalance, transit and the question of common waters in the Ganges river. The new Indian Prime Minister has already sounded most forthcoming on the question of trade imbalance against Bangladesh--expressed willingness to listen to Bangladesh's demand for a zero tariff access to a selective list of Bangladeshi exportable items, at the same time green-signalling new markets in Gowhati and Shillong¹²⁵. But the water issue is perceived as more critical in Dhaka for the country's survival. It is now widely known that India releases excess water at the Farakka barrage during the rainy monsoons, causing severe floods, while holding back water in the dry season¹²⁶.

Discussions at bilateral level in recent weeks did cover all issues and certainly highlighted a deep concern on the sharing of waters. The new government of Bangladesh cannot afford to be seen that it has even an iota of slackening attitude as regards the water issue, an issue that featured in the election manifesto of the ruling Awami League and party policymakers never missed in taking a swipe at their principal adversary, the Bangladesh Nationalist Party (BNP), "for its failure to secure waters of the Ganges when it was in power for long five years." The wider spectrum of the Awami League critics will also seldom miss an opportunity in tuning the table on it by accusing the present government of its dealings with the water issue. The new government cannot also turn a blind eye to the fact that it is widely perceived as being `soft' toward India and hence its bargaining behavior with India on the water issue and the outcome will be very closely watched with all seriousness¹²⁷.

Despite all these, there is no dearth of exuding optimism from both sides when they speak of good-neighbourliness and the SAARC spirit or expressing an intent to settle outstanding issues in the shortest

^{125. &}quot;Editorial", The Daily Star, (9 August 1996).

^{126.} The Daily Star, (9 August 1996).

^{127.} Zaglul A. Chowdhury, "I K Gujral's Visit and its Significance", *The Daily Star*, (5 September 1996],

possible time, specifically mentioning the preparedness to resolve the Ganges water issue permanently at the highest political level, if need be. Such an intent and political goodwill may well pulsate through the workings of the relevant decision makers of both the countries. While broader issues like the much-talked about Indian desire of transit facilities--either tinged with water issue or not--and the trade imbalance can wait until bilateral relations are harmonized but water issue certainly cannot¹²⁸.

Permanent solution of the wider range of water resource problems is a long-term affair and it is laudable if the two sides can reach some basic understandings on water sharing on the Ganges which would meet Bangladesh's immediate and urgent needs. India and Bangladesh are known to be differing for a long time on such matters such as construction of storage in Nepal as a way out to augment the dry season flows of the Ganges. The position of the two sides on matters like link canal through the Brahmaputra and involvement of Nepal in the exercise are also too well-known¹²⁹.

However, as is already suggested, the current parleys are being held in a changed political context¹³⁰. Relations between the two countries are marked by an element of cordiality; yet relations remain sensitive despite renewed pledges of good-neighbourliness from both

130. There is, however, an element of uncertainty and cautiousness. Political changes in both Bangladesh and India brought new prime ministers in both Dhaka and New Delhi; but neither of them enjoy absolute majority in their respective parliament. Rather the government of H. D. Deve Gowda, the leader of the Janata Dal, who heads a heterogeneous coalition government in New Delhi, has less than one tenth of total strength of the Lokshaba. Sheikh Hasina has a clear majority now, but the presence of a strong opposition in the parliament does not automatically give her an easy ride in translating her political will to concrete plan of action (*Ibid.*).

^{128.} Ibid.

^{129.} Ibid.

sides and parleys continue between the both sides in their respective capitals through "diplomatic channel." ¹³¹

Arguably, given the complexities of the kind of the subjects involved in such parleys like the water issue, demarcation of the land and maritime boundaries, return of the tribal refugees from camps in Indian state of Tripura, allegation of assistance to anti-national militants in the soil of either country, transit facilities or trade imbalance cannot be redressed in the meetings of the officials and ministers as they find it extremely difficult to make progress on these issues even if they have full mandate from their respective heads of governments. Past experiences have shown that talks even at summit level seldom produce quick results on the thorny issues notwithstanding the lofty expressions of political goodwill and in the process the very pattern that talks continued remained unaltered although the ambience of the discussions did change from time to time because of the political atmosphere that governed the ties¹³².

In the changed context of politics in both the countries, people in Bangladesh already feel heartened by reports of forward movement in the Bangladesh-India relationship "hitherto caught in a prolonged cycle of drought and immobility. What has already been a steady improvement in terms of pure atmospherics brought about by a change of government, neither of which should suffer from the hangover of the past; indeed in both countries seems now to be speedily followed up by a steady exchange of visits."¹³³

During his "mission of friendship" in Bangladesh in September 1996, the Indian Foreign Minister I K Gujral has already specified his opinion on a number of issues. About the overall asymmetrical nature of relations between the two countries, India believes that relations with its neighbours should be asymmetrical, as Gujral said, meaning

^{131.} Ibid.

^{132.} Ibid.

^{133. &}quot;Editorial", The Daily Star, (9 August 1996).

that "India as a larger country with a larger economy and larger resources has more responsibilities towards its neighbours. It has more to give to its neighbors than expect from them."¹³⁴ Touching on the historical and emotional bond between the two countries, he said: "India looks at Bangladesh with affection and closeness."¹³⁵ On the water issue he offered an optimistic note about finding an acceptable settlement that would meet Bangladesh's water requirements, and stated categorically: "I understand Bangladesh's position and need and hope to accommodate."¹³⁶ It seems that the political postures and spirit of negotiation has so far been in the right direction.

Both Bangladesh and India seem committed to work out a solution of the water-sharing issue and sign an accord "even before the next dry season", as the two sides are "as close as my heart", to put it in the words of Gujral. Neither governments, as he stated, "carry the baggage of the past." There is a growing feeling that SAARC must immediately do something and there was tremendous anxiety, and rightly so, "that we must catch up fast as a region."¹³⁷

Obviously, as stated by Gujral, at this it is hard to predict a specific quantum of water to be provided in the accord, which in essence is to be left to the experts who have to take into account three factors: examining what was Bangladesh's exact requirement, how much was available, and what was the actual ground reality on both sides during the dry season¹³⁸. This makes India's position a little skeptical, as one may wonder whether consistent with its traditional strategic approach India is poised towards a tactical line against smaller neighbours like Bangladesh¹³⁹, for since 1974 when India made

138. Ibid.

^{134.} quoted in Ibid.

^{135.} Formal talks, in Ibid. 7 Sept 96: 12.

^{136.} Ibid. p. 12.

^{137. &}quot;A new chapter in Indo-Bangla ties has opened: Gujral", *The Daily Star*, (10 September 1996), p. 1.

^{139.} Gujral did not, of course, conceal India's intention to win Bangladesh's support for India's candidature for a non-permanent seat in the UN

Farakka operational much waters were being diverted from the Ganges in U.P. and Bihar upstreams.

Indeed, as the experts meet and an inventory be made on the quantum of waters available India is likely to come up with its views like shortages of waters in the upstream in India itself, should it finally agrees to confine the talks within the framework of water sharing, but both sides have to evolve mechanism without Ganges rhetoric. At the technical level, data analysis and establishment of meeting-points can be quickened by the same percolator will that is likely to have dynamited others in the circuit¹⁴⁰.

What seems apparent that both Bangladesh and India in their recent talks have had threadbare discussions on all issues, including water sharing, trade, Chakma refugees, land boundary, security and visa; both have also agreed in principle to reach a water accord for settling the water sharing issue before the onset of the next lean season. Gujral mentioned that the "water-sharing issue has been discussed to the satisfaction of Bangladesh" i. e. the latter being desirous of "a permanent and immediate solution" of the water issue¹⁴¹. "Mechanism also will be set in motion to work out the details", he added. Continuing he said: "There is different mood. Political will is backing both sides in resolving outstanding problems between the two countries." All these developments have taken place in the backdrop of a "very friendly, very warm and very productive dialogue" between the two new governments of both the countries¹⁴².

Security Council. He stated specifically, "India is very serious about its candidature and I have requested Bangladesh for its support." *Ibid.*, p. 12.

140. "Editorial": The Daily Star, (9 August 1996).

Bangladesh Water resource minister Abdur Razzak quoted in "Indo-Bangla ministerial level meet in late Oct", *The Daily Star* (8 September 1996): 12; "Water accord", *Ibid.*

142. "Water accord...", op. cit. (8 September 1996), pp. 1, 12. It is well argued that the task of the political leadership is to mainstream the public opinion "towards rational compromises and not be inflamed into chauvinistic self-righteous" (Mehta, op. cit. p. 192). Hence the challenge is to

The resolution of the wider water-related problems, whether environmental management or sharing common benefits of water resources, can only follow very detailed economic and technical studies by all sides. In the developing world, such as South Asia, where energy, food, flood control, siltation, deforestation are much bigger problems the imperatives for water diplomacy are greater; but in some way nationalist course of logic proved even stronger and more short-sighted. The real overriding challenge is whether nationalism can be squared with the patent logic of interdependence and community consciousness. The problem of water resource sharing is critical, but not unique, to South Asian polities. The example of short-sighted confrontational attitudes are around; but the community of South Asian people cannot "fiddle while the wells go dry, the river beds rise, the flood plains spread and the rich forests become totally denuded."¹⁴³

Owing to an array of reasons pertaining to its geography, history, ecology as well as socio-economic and politico-cultural life, South Asia indeed remains the most significant area of importance to Bangladesh. As environment threats constitute a major area of concern to Bangladesh, the perception and interest of the people of the country are likely to be governed how Bangladesh gets its due share of water.

statesmanship and diplomacy to ignore their own past or defy the examples or game of power diplomacy, rediscover God-given basin unity, looking ahead in their own nooks. The challenge is also to develop vision, overlooking the considerations like established user rights or purely national economic alternatives. Water diplomacy must one day bring home the lesson of survival through interdependence of community (Mehta, *op. cit.*, pp. 177-178). The new Indian external affairs minister, Inder Kumar Gujral, who served the V. P. Singh government, has a scholarly image and is known to be keen to promote ties with neighbors. His Bangladesh counterpart, Abdus Samad Azad, who not only led the foreign ministry but rather built it up in the wake of the independence of the country; hence he is also well-placed to reciprocate any generous Indian gesture on the water issue within the limit of Bangladesh national context of politics and its interests. Experience, image and a sustained goodwill should not defy solutions even if the task is complex.

143. Mehta, op. cit., pp. 177-78.

In this regard, India continues to occupy the paramount position¹⁴⁴. And it is proper to emphasize that Bangladesh-India relationship forms the core element of change in determining South Asia's destiny. Both Nepal and Bhutan have a shared concern in this change. Each of these entities needs to formulate respective national water policies, and then should strive to attain national consensus towards building a subregional water community.

India has already publicly conceded that the issue of water is so critical that it can hardly be avoided and Bangladesh must get its due share¹⁴⁵. But, admittedly, there are other areas of mutual benefit. India has, meanwhile, also agreed to permit Nepal overland access to Bangladesh, so that it can use the Chittagong port for imports and exports. She has also offered to reduce tariff on goods from Bangladesh and

144. Murshed, op. cit., p. 7.

"India is determined to solve the water issue with Bangladesh", stated 145. Guiral, "to open a new chapter in Bangladesh-India relations". He reassured that India "will go all the way to solve the problems", and that both the countries should "join hands in a whole range of cooperative relationship leading to prosperity for both." Gujral also has been critical of the past approach of politics: What was holding the region back, truly diagnosed Gujral, "We are all prisoners of the past. Only if we could unhook ourselves from it". There was problem of old "mindset" on all sides, he said. Citing the example of ASEAN, he said, Southeast Asian countries could go ahead because they could establish cooperative links in trade and commerce even while political and other differences remained. "In Southeast and East Asia they differ in private and agree in public. But in South Asia we agree in private and differ in public. Thus we become prisoners of our political postures" (Conversation with Guiral, 96: 5). He felt that both must give up their zero-sum approach or "All or Nothing" attitude and look at a wide-range of possibilities and not make their's a "one issue" relationship. Obviously, such an approach based on one area approach in the past produced no results leading to missed opportunities in many other areas (Conversation with I.K. Gujral, op. cit., p. 5). Gujral's articulation of policy so far seems quite positive. It remains to be seen how far New Delhi is prepared to go at the implementation level.

provide access to Bangladeshi goods in the Indian market¹⁴⁶. New Delhi must move speedily to concretize its new policy outlook and demonstrate its true largesse as a regional power with an asymmetrical power status; politics should not be allowed to overtake the current course of subregional harmony.

In the changing context of Indian foreign policy the Indian government expressly attaches highest priority to settling disputes with neighbours, emphasizing that "Bangladesh gets the top spot" so that "relations between our two countries move faster", as Gujral stated, enabling SAARC to "move faster. Bangladesh, India, Nepal and Bhutan can [thus] form a dynamic area of growth." "Poverty of this region", as he rightly viewed, "is unnatural because we have everything--enormous natural resources, huge reservoir of skilled and unskilled manpower, and also a huge market"¹⁴⁷.

Such an expression of faith and belief raises high expectations; yet it is consistent with the suggested community consciousness encompassing environment and development and with the larger pattern of changes occurring elsewhere in the post-Cold War world. This needs to be fully translated in stages at the level of policy implementation, and a permanent water sharing arrangement on the Ganges between Bangladesh and India would be the first concrete step, which would then offer a real scope for working toward a shared water community in the eastern Himalayan region where the bond of nature is so strong, the arguments over water resource sharing have been much bitter, yet potentials for forming "a dynamic area of growth" seem limitless in a framework of community arrangements.

^{146.} Conversation with Gujral, op. cit., p. 5.

^{147.} I K Gujral speaks to *The Daily Star*, "I want to open a new chapter in Indo-Bangladesh relations", *The Daily Star* (5 September 1996), p. 1; Conversion with Gujral, op. cit., p. 5.