

GRASSROOTS CULTURAL POLICY FOR WATER MANAGEMENT IN BANGLADESH

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Rural Bangladesh's livelihood depends on water and the existing grassroots policy framework for sustainable water management (conservation and consumption) reflects a cultural unity within a country which is culturally very diverse. Extra-abundance or shortage of water supply is generally viewed as natural; however, prolonged or human caused water deficiency is treated as the retaliation of nature against anthropogenic transgression, which is often attributed to an act of climate change. The mostly uneducated rural people of multi-cultural Bangladesh live a simple lifestyle promoted by the country's inspiring Baul tradition, including water management. The Bauls religiously promote water conservation and are devoted to enhancing public understanding of the role of water.

Spirituality can be the basis for sound water management as traditionally prevalent in rural Bangladesh's self-reliant lifestyle. Western culture and development treat water as an economic resource and commodity. Irreverence or ignorance of water related spirituality by modern societies is the fundamental reason for scarcity, pollution, over-extraction, mal-utilisation and aggressive politics of water. Values-driven water management is emphasised as the sustainability breakthrough and an essential requirement for proper development. Based on the Bangladeshi experience, the paper argues for a spirituality oriented educational policy to inform sustainable water management.

Keywords: Bauls, rural development, spirituality, sustainability

INTRODUCTION

The sustainability of Bangladesh is by and large linked to water. The country's entire livelihood depends on the availability of water from a multitude of sources, such as flowing and non-flowing river systems, natural and human made lakes and canals, ponds, underground water and rainfall. In spite of this supply of water varies. Not dissimilar to Australia where there are great contrasts between floods and draught (Heathcote and Mabbutt, 1988), Bangladesh is also subject to water abundance and shortage, however this happens under very different geo-environmental and socio-political conditions. In fact, more than 80 countries on the globe nowadays suffer from serious water stress during certain times of the year due to a range of reasons, including the impact of climate change. Munasinhe and Swart (2005: 81) assert that "about one-third of the population of the world is living in countries experiencing moderate to high water stress. This fraction could increase to two-thirds by 2025." The phenomena of water shortage due to drought and extra-abundance of water because of floods are intensifying in the wake of climate change (Lemons et al., 1998: 104; IPCC, 2007b).

Modelling of global surface run-off by Fung et al. (2011) for the now expected 4oC temperature increase shows that population growth in most large river basins no longer overrides climate change as a driver of water stress. Pakistan's hugely devastating flood and Bangladesh's prolonged drought concurrently in the monsoonal months in 2010 is a most recent and live specimen of climate change breeding.¹

However, the people of Bangladesh consider floods positively, even in the case of over-abundance, as they can renew croplands with natural nutrients, replenish the drying water bodies and recharge depleted aquifers. Any hardships created by floods and rains in terms of damages to crops and homes, are considered as trivial comparing to their benefits from the after-flood bumper yields. Floods and rains cleanse the land by washing away dirt and pollutants. Bangladesh has witnessed numerous major floods throughout its history, the most recent ones being in 1985, 1988, 1998, and 2007.²

Figueres et al. observe that Bangladesh, being the lowest riparian country in the Ganges-Brahmatputra-Meghna region, bears the burnt of flooding: "Even in a normal year, up to 30% of the country is flooded and up to 80% of the land area is considered flood prone. Flooding in Bangladesh is caused by a combination of factors such as flash floods from neighbouring hills, inflow of water from upstream catchments, over-bank spilling of rivers from in-country rainfall and drainage congestion" (2003: 185). The conditions could become disastrous if floods peak in all of the three rivers at the same time.

On the other hand, droughts caused by water shortage are also experienced in Bangladesh. The elevated landmass of its northwestern regions is particularly vulnerable to droughts. A severe drought can cause more than 40% damage to non-monsoon crops. Apart from loss to agriculture, droughts have significant effect on land degradation, livestock population, employment and health. Between 1960 and 1991, droughts occurred in Bangladesh 19 times. In its recent history very severe droughts hit Bangladesh in 1979, 1981, 1982, 1984, 1989, 1994, 1995 and 2000.³ Any prolonged or human caused water deficiency is treated as the retaliation of nature against anthropogenic transgression, though this phenomenon is now popularly attributed to an act of climate change.

Bangladesh, with an area of 1,47,000 square kilometres with 164.4 million people⁴ is distinguished by 230 criss-cross rivers, vast low-lying or flood plain (55%), costal (25%), the elevated Barind terraces (8%), the Hill Tracts (12%) and the tropical monsoon with annual precipitation between 1200 mm and 3500 mm (Brammer, 1997). The culture of the country is

¹ The New York Times dated September 7, 2011 reports that: "The summer of 2010 produced Pakistan's worst flooding in 80 years. Nearly 20 million people – an eighth of the population – have been significantly affected, about the population of New York State, the United Nations said. The number in urgent need is now about 10 million and expected to rise. More than half of them are without shelter" (http://topics.nytimes.com/top/reference/timestopics/subjects/f/floods/2010_pakistan_floods/index.html, accessed 06.10.2010). On the other hand, Bangladesh experienced the lowest rainfall in 15 years in October 2010: "Weather and climate experts... called it an erratic trend fearing it to be an impact of the global climate change" (News From Bangladesh, www.bangladesh-web.com, accessed 06.10.2010).

² E.g. http://en.wikipedia.org/wiki/List_of_floods#Bangladesh (accessed 06.10.2010).

³ Institutions for Rural Development Case Study prepared by Ramamasy and Baas (<ftp://ftp.fao.org/docrep/fao/010/a1247e/a1247e00.pdf>, accessed 06.10.2010).

⁴ The population of Bangladesh hit 164.4 million in 2010 (News from Bangladesh, www.web-bangladesh.com, accessed 27.09.2010).

also distinct and distinguishable by its characteristics of water-centric spiritual unity in resilience to weather and other calamities, and values-driven mitigation policy and practices.

While the geo-environmental and geo-political characteristics determine the varying degrees of seasonal availability of water in the country, the cultural characteristics drive people to seek and sustain their survival through both physical and spiritual endeavours. Synergies generated from the above characteristics inspire people towards self-reliance in terms of agricultural and fishing activities. As both agriculture and fishing are water contingent and the availability of water is largely unpredictable, rural people from pluralistic socio-religious backgrounds have constituted values-driven grassroots cultural policy and practices, which encourage sustainable water management in terms of consumption, conservation and drainage in their code of life. The paper shows what roles water plays in people's self-reliant livelihoods and how; and why the religiously diverse Bangladeshi people are in spiritual unity with regards to water management. It also highlights the serious issues of increasing water scarcity, pollution, arsenic contamination and climate change impacts, which synergistically tend people toward grassroots water management policy and practices. Spiritually oriented education is a major component in the development of appropriate attitudes and behaviour in relation to water .

WATER-CENTRIC CULTURAL UNITY

The unpredictability of water availability on one hand, and the necessity for water to be included in every step of people's living and livelihood activities, on the other, synergistically have influenced Bangladeshi people to develop an integrated grassroots policy framework for sustainable water management practices. According to UNESCO, the increasing demand for water due to population growth and frequent droughts coupled with the complexity of international water-sharing issues (with India, in particular in the case of Bangladesh) require an approach that reflects unity in order to integrate the human dimensions into water resource management and policy development.⁵ Such unity does exist in Bangladesh and it depicts people's spiritual commonality to water as water is considered a priceless living resource without which people's self-reliance is unthinkable.

Bangladesh has been a melting pot of many religions, ethnicities, cultures and dynasties. According to Indian cultural historians such as Bhattacharya (1383 BE), Basham (1975) and Haq (1975), the Dravidian and Tantric Bengalis had their own culture and religion that had mystical elements. During the Islamisation of India by the Semitic Islamic mystics (Sufis) in the medieval period, they mixed indigenous culture with their own aiming at establishing a spiritual unity through gradual integration of the existing customs. This gradually transformed the existing culture into a popular Sufi culture (i.e. popular Islam). Historians believe that this amalgamation of religiosity occurred time and again by other religious movements prior to Islamisation. The Sufis highly succeeded and rural Bangladesh continues to this day to be a place strongly influenced by their teachings (Hossain, 1990 and 1995).

Water as a primary building block of life with the power to also destroy it, as a cleanser of impurities and pollutants, and a carrier of land nutrients, plays a central role in the religious beliefs and practices in pluralistic Bangladesh. Animists accord water as supernatural life force; Christians use Holy water at blessings, dedications, exorcisms and burials; Hinduism relates water to both physical cleanliness and spiritual well-being. In Islam water is important

⁵ http://www.unesco.org/water/ihp/pdf/water_cultural_diversity08.pdf (accessed 06.10.2010)

for cleansing and purifying, and Muslims must be ritually pure before approaching God in prayer. This comes from the Quran (5: 7/8): "*O you who believe, when you prepare for prayer, wash your faces and your hand to the elbows; rub your head and your feet to the ankles*" and is further elaborated in the Tradition.⁶

Muslims constitute about 85% of the total population of Bangladesh, others being Hindus, Christians, Buddhists and Tribal animists. Over 80% of people who live in the rural areas believe in water mysticism,⁷ that is the inexplicable mysteries of water in respect to life support. They show more commonalities than expected in a pluralistic cultural environment. People venerate water diversely on diverse religious grounds. Tilling, sowing, harvesting, fishing, cooking, eating, dressing – all are connected with religious practices using water. This is so because the Bengali Islam has not imitated a particular culture, but has blended aspects of Indian and other indigenous cultures with Islamic elements. Within the day-to-day Bengali habits and customs, such as cooking styles, ingredients, dress and ornaments, water related value judgements and vocabulary are common across pluralistic Bangladesh (Rozario, 1992).

Rural Bangladesh has gurus from all faiths. Though the gurus' religious faiths and spiritual proclivities are diversely manifested in the socio-economic sphere, they are unified when it comes to environmental and natural resource management. This unity sustains social harmony, brings economy and religious practice together and renders environmental sustainability an everyday outcome. The gurus religiously believe that progress towards sustainable development and sustainability are vested in the appropriate management of the country's water resources. Rural Bangladesh requires water supplies to be available in the vicinity of village housing for fish, drinking, household activities, navigation and agricultural purposes. Put simply, this means growing more food or gaining more benefits with less water (Molden, 2007: 279) and the country's traditional self-reliant style of living is therefore a viable means to water sustainability. Only development activities that conform to these precept and practices in terms of resource-use can form a paradigm for sustainable water management, especially for Third World countries such as Bangladesh.

TRADITIONAL WATER MANGEMENT PRACTICES AND EDUCATION

According to Gooch and Stalnacke (2006: 17), wise water management should maximise "the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems". This is extremely important in the western world where economic priorities can often take precedent to social and environmental considerations. Traditional water management however have been more holistic and based on water as a common resource that should be shared and cherished. The water management practices at the grassroots level in Bangladesh are largely regulated by its geo-environmental as well as cultural characteristics. They are aimed at generating maximum and sustainable water productivity to cover all aspects of the areas comprising integrated water management, namely population, agriculture, fishing, economy, politics, administration and environment (Gooch and Stalnacke, 2006). This management also includes community intervention in terms of financial and institutional arrangement with the legal frame of the national water management policy. Indeed, the river systems of Bangladesh have shaped much of the history, economy, literature and rich culture of the people (Ahmed, n.d.). Being a country of

⁶ <http://www.africanwater.org/religion.htm> (accessed 14.09.2010)

⁷ <http://www.disclose.tv/forum/the-mysteries-of-water-t15911.html> (accessed 14.09.2010)

self-reliance (that is, independent survival), sustainable food production is crucial and it should be free of boom-and-bust cycles and political crises. Self-reliance is at the core of practicing sustainable development but it also links to self-respect, pride, stability, competence, independence and innovation (Kumar, 1986; Marinova et al., 2006). All these translate into smart water management and the country's political manifestos are customarily formulated to maintain self-reliance, which has been the tradition of rural Bengalis. It is interesting to explore how this tradition has been maintained.

There are three major components in preserving traditional knowledge about water management: firstly, the importance of proverbs; second the role of gurus and thirdly, the integration in everyday life of spiritual and religious practices. They are briefly explained below.

Oral tradition and proverbs

Most rural people are not formally educated. They understand nature, including the role of water, through their careful observation of the occurrences of natural phenomena, such as seasons and precipitations, and through learning lessons from environment-related proverbs, namely Khonar Bachan,⁸ transmitted through an oral tradition. According to Regan (2000: 10), oral tradition is learning from the past as it is told and it really works. Rosenberg (1991) stresses that all beliefs and values have sprung from verbal face-to-face communication and are held vivid in human memory, particularly by rural societies. Orality is therefore “creations beyond the reach of literates” (Rosenberg, 1991: 27). It contains fundamentals of universal human thought which transcend their time (Jalil, 1993: 142). They tell people when to do what, how to avoid misery and how to achieve sustainable water management to fulfil their desired objectives. People adhere to water management practices in accordance with the essence of proverbs under the guidance of the experienced seers – the gurus.

Gurus and Bauls

Who are the gurus in rural Bangladesh? Amongst others, such the Mollahs or the village priests, Bauls are the most popular gurus in rural Bangladesh and are often seen as being at the root of the Bengali culture. They come from both Muslim and Hindu backgrounds and while mostly unlettered, show a full measure of poetic, musical and philosophical talent. According to Roy (1983), the Baul tradition is unique in socio-religious and spiritual syncretism⁹. The Bauls are truly soul stirring and take the listeners closest to nature – the divine. They are environmentalists in their belief and practice; they are simple, natural, unembellished and rooted in the soil. Bauls are ‘illiterate’ as judged within a written culture, but hearing their innumerable songs, one cannot but regard them as supreme Pundits (scholars). For example, Baul Fakir Lalon Shah has not read any religious books, but in discussing religion, he displays

⁸ Khonar Bachan (a compilation of the revelation of the mythical woman Khona) is a socio-economic and environmental folk literature, comprising teachings with proverbs. *Khona* has endless proverbs and many of them relate to weather and agriculture. Examples are, in relation: (1) climate: If there is slow wind and clear cloud, the winter crop yields beyond expectation; A cloudy day and rains at night, no chance for good agriculture; Clear sky and breeze during the month of *Kartik* (September) give good winter harvest, but if it rains in this month the harvest will be bad; If there is no rain during the month of *Agrahayan* (October), the jackfruit will not give good harvest; (2) rainfall: If it rains in *Chaitra* (March), not the King, but the tenants (labourers) are in great demand. If it rains by the end of *Magh* (January), the country is blessed and the King is happy. If it rains in *Falgun* (February) the land yields four-fold harvest. If it rains in between the end quarter of *Agrahayan* (November) and the beginning of *Poush* (December), the King extends his begging bowl to combat famine.

⁹ This has also been acknowledged by scholars such as Bhattacharya (1383 BE), Dimock (1966), Dasgupta (1976), McDaniel (1989), to name a few.

an extraordinary knowledge of the Scriptures. Bauls do not believe in writing down their spontaneously composed songs. They sing as they go along and as feelings come to them.

The messages conveyed through the Bauls' songs and music are of great relevance today (Hossain, 1995) and many of them encouraging people to use water wisely. For instance, the Baul guru Aziz Shah Fakir regularly discourses on sustainable use of water, both in the home and at the farm. Bauls also warn people that they need to work hard to receive the benefits from water and example of this are Lalon Fakir's words: "One who does not apply his/her own efforts, can die thirsty while river Meghna is at hand". The Bauls also recommend water management practices at the grassroots level, such as the timely and regular re-excavation of silting so that the water is held in the water bodies throughout the year.

Integration of spiritual and religious practices in everyday life

Bangladeshi rural people integrate religious and spiritual practices into their day-to-day mundane activities. For example, people take a moderate course in consumption and exploitation of natural resources and treat this as a religious act. Water is essential to complete ablution for prayer. However, using only one jug of lifted water is seen as meritorious over wasting more water; using water directly from a pond or river is considered an even better practice. In a dry summer, ablution with lifted water is considered more meritorious if it is performed near trees and plants requiring irrigation. The domain of religious practices in environmental management extends to caring for natural resources during seasonal environmental adversities affecting trees, crops, fish, animals and birds. To take care of these resources is recognised as the most creditable religious practice in the diverse religious cultures of Bangladesh. The common people seek help from the gurus for their spiritual as well as mundane success. The Bangladeshi radio and television programs are crowded with Baul gurus and other religious personages who talk or sing about contemporary issues in environmental and nature management, including care for the water resources.

The subtle process of education and knowledge transmission allows for traditional practices to be preserved and followed in the numerous densely populated Bangladeshi villages. However as water management is becoming an increasingly complex process with the challenges of climate change, arsenic contamination and trans-boundary water disputes with India, these relatively recent issues are causing significant concern at the grassroots level and are developing into a new policy agenda.

CURRENT WATER POLICY CHALLENGES

According to Figueres et al. (2003), water management is becoming a complex process at all levels – global, regional and local. This complexity is reinforced by the effects of climate change as represented by untimely and difficult to predict water abundance (floods and severe rains) as well as seasonal scarcities of water for basic needs, such as drinking, household use, fishing, agricultural and navigation purposes.

Due to its geographical location, Bangladesh is highly exposed to these climate change related calamities. However in this country there are also some very specific and hard to resolve additional difficulties. The presence of arsenic in drinking water beyond the acceptable level discovered in 1995, has threatened the safe drinking water supply from tube wells (Rahman and Rvenscroft, 2003: 407). An estimated 27% to 46% of the 6 to 11 million tube wells that

currently exist in Bangladesh are contaminated at varying degrees with arsenic (Milton et al., 2006). There is a lot of concern at the grassroots level about “the biggest catastrophe in the world” (Khan et al., 2007) and many non-governmental organisations (NGOs) are involved in data and evidence collection as well as policy development (Safiuddin and Karim, 2001) and providing support to the effected communities. BRAC (Bangladesh Rehabilitation Assistance Committee), the world’s largest development NGO, is also heavily involved in fighting the arsenic contamination at the grassroots through increasing community awareness and information dissemination (Hadi, 2003).

Furthermore, Bangladesh’s trans-boundary water issues with India are also a policy concern at the grassroots. Since its independence, the country has been watching with grave concern, the gradual reduction of the dry season flows of trans-boundary rivers such as the Ganges, Teesta and Brahmaputra due to upstream diversions across the borders. A diversion of up to 60% of the Ganges water over 25 year has caused significant reduction in surface water resources, increased dependence on ground water and destruction of the breeding and raising grounds for 109 species of Gangetic fishes and other aquatic species and amphibians (Ahmed, n.d.). According to Ahmed (n.d.), the desertification in the Barind terrace is the direct outcome of India’s unitarian withdrawal during of water the dry seasons.

To stop this unitarian withdrawal (existing as well as any future plans) of water from Bangladesh’s international rivers such as the Ganges and the Brahmaputra, a socio-political grassroots people movement has been ongoing since 1975. It aims at supporting the country’s government in international negotiations with India but it also confirms the need for water management to find cross-generational and cross-regional solutions (Figueres et al., 2003). The grassroots cultural water policy in Bangladesh is yet again setting the framework for current and emerging problems. Any sustainable solutions to the existing and future issues are embedded in the social and lifestyle management movements incorporating adaptation-driven mitigation exercises.

The pressure of a western type of development is also felt in Bangladesh. For example, some fifty years ago people of Bangladesh ate less meat, and required less water to produce their food; the pressure they inflicted on the environment was also much lower (Molden, 2007: 1). Similar changes can be seen in other more recent consumption patterns and they ultimately put pressures on the natural environment and its fresh water resources.

According to Thanh and Biswas (1990), one of the keys to successful environmentally sound water management is the pursuit of higher level of water spirituality. This has been demonstrated over and over again in rural Bangladesh. It seems that unless water is perceived as a resource of profound importance and gift from nature, other management policies and practices are likely to reinforce the human created conflict between development and the environment. They are also likely to be unsustainable.

CONCLUSION

Environmentally-sound water management is an essential requirement for the future of developing countries, and will become an even more important consideration than it has been in the past. According to Thanh and Biswas, “(w)ithout environmentally-sound water management, it will not be possible for developing countries to achieve self-sufficiency in

food and energy” (1990: 56) and “(e)fficient use of water is simply not possible, unless it is managed in an environmentally-sound manner (1990: 57).

The above assertions have been present for a long time in the grassroots water management policy in Bangladesh. In fact, the Bangladeshi culture has a blueprint for sustainable water management: *Nadi vora jol, pukur vora maas; etai Bangladesher jibon gaas* (rivers full of water round-the-year, ponds full of fish; these make the life-tree of Bangladesh). This blueprint is widely present in the media, school textbooks, Baul songs, folk stories and proverbs.

However, the last few decades have seen many challenges and threats of water resources being depleted. Bangladesh is also a country which has experienced in the past the devastating effects of the Green Revolution whose high yield variety crops and associated technologies had pushed water resources almost to the point of unsustainability (Jones and Hollier, 1997: 26). The grassroots cultural policies in Bangladesh reflect the generated frustration amongst the rural mass against the global politics and business of water and water resources. To retaliate, many people including some spiritual leaders are thinking of launching a nationwide movement to boycott emissions generating goods and services beyond basic needs.

Bangladesh is unique with its cultural past and present. Water management practices and policies in this country would not be possible to resemble those of Australia, America or Europe. However, Bangladesh's future shape needs to resemble the riverine characteristics of the past to keep the country's sustainability. What is also clear is that this future water management will build upon the tradition and wisdom of its rural people informed by their gurus and their own experiences and spiritual values.

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