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WATER SECURITY: PAKISTAN AND REGIONAL PERSPECTIVE

Khalid Chandio*

Abstract

In terms of its importance as a strategic material water is gradually taking the centre stage in the world. It is argued that in the decades to come water would surpass oil and future wars would be fought over this scarce commodity.. South Asia is one of the regions where nature has bestowed a generous supply of water resources. But poor management and limited cooperation on its use is a source of tension among countries of the region. Pakistan-India relations in this respect are a case in point. Pakistan recognized as a water scare country needs to do a lot of work in managing and sustaining the commodity. Regional cooperation is of essence in meeting the country's needs. The article studies the water situation in Pakistan and suggests measures for judicious use of water resources in the region.

Key Words: Water Security, Pakistan, India, Regional Cooperation.

Introduction

Many of the wars of the 20th century were about oil, but wars of the 21st century will be over water,[1] said Isamil Serageldin, World Bank Vice President. Water is surpassing oil as the world's scarcest critical resource as it has no substitute.[2] There's an increasing feeling in the world that everyone has a basic right to a minimum 13 gallons of water a day for basic human health. The world is divided into water haves and have-nots. Pakistan is facing critical water issues in the 21st century.

The South Asia region has a number of international river basins, many of which are shared with countries beyond the region. Seven countries share rivers in the Himalayas. The common issues to address in the Himalayan

* Assistant Research Officer, Islamabad Policy Research Institute (IPRI).

1 Jason J. Morrissette and Douglas A. Borer, "Where Oil and Water Do Mix: Environmental Scarcity and Future Conflict in the Middle East and North Africa," Find Articles, http://findarticles.com/p/articles/mi_m0IBR/is_4_34/ai_n9522621/ (accessed November 22, 2012).

2 "Will the Next War be Fought over Water," NPR, January 3, 2010, http://www.npr.org/templates/story/story.php?storyId=122195532 (accessed November 12, 2011).

region relate to the expected impact of climate change, such as receding glaciers, increased floods and incidents of glacial lake bursts over the coming decades, followed by much less water availability after 2050. Conflicting demands on these international waters, and consequent tensions, already exist both within and between countries, and as the populations and economies of countries grow, they will undoubtedly intensify.[3]

The availability of water in Pakistan has been declining over the past few decades from 5000 cubic meters per capita sixty years ago to 1200 cubic meters per capita in 2010. By 2020, this shortage will further reduce to 800 cubic meters per capita. Pakistan is also estimated to be losing 13 million cusecs of water every year from its rivers into the sea, as it does not have enough reservoirs or dams to store water. Water management and distribution has always been an important but cumbersome process in the country.

Water Security: Pakistan

Being a semi-arid country Pakistan's economy is based mainly on agriculture and related industry. Pakistan has the largest contiguous supply-based canal irrigation system in the world. Pakistan needs an extensive water management programme as what the country lacks, and has not done, is storing the rainwater that comes down every year at a specific period of the year. By developing hundreds of reservoirs and small dams to hold water for utilizing it on the plains, Pakistan's biosphere over a period of time can be transformed.[4] In 2005, Government of Pakistan issued a "National Environmental Policy" where one of the areas i.e., water supply and management was also stressed by focusing on such areas as pollution of fresh water bodies and coastal waters, climate change, developing legal and policy frameworks, water quality monitoring and surveillance systems and low-cost water treatment technologies etc. Also more dams could have eased Pakistan's July flood levels – and made more water available for irrigation. Therefore, in any policy on water availability, building of more dams is likely to be a regular recommendation.

Water in Pakistan's rivers has touched perilously low levels, sometimes creating inter-provincial irritants, and the reason for it is not just lack of rains. Internal mismanagement and India's control over the natural flow of rivers, especially over the Indus, Chenab and Jhelum, are some of the main reasons behind the water woes of Pakistan. If this trend continues, some

[3] "Regional Cooperation & Integration," World Bank, http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/0,,contentMDK:21511029~pagePK:146736~piPK:146830~theSitePK:223547,00.html (accessed January 1, 2012).

[4] "Pakistan Needs an Extensive Water Management Program," *La Rouche*, August 26, 2010, http://www.larouchepac.com/node/15600 (accessed December 9, 2011).

commentators fear that it could increase its dependency on food imports and suffocate the Pakistani economy.[5] Modernization of agricultural practices would require more water necessitating improvement of the canal system. Moreover, there is an urgent need for more efficiency in irrigation. For example, over 90 per cent of Pakistan's water is used for agriculture. This water allocation for agriculture is very high. In fact, given that the average proportion of water diverted to agriculture in other developing countries is between 70 to 75 per cent. This percentage could be lowered if irrigational management becomes more efficient, since no more than 40 per cent of the irrigation water is currently reaching crops. The Water and Power Development Authority (WAPDA) has launched a project for lining three main canals of Sindh namely Rohri, Dadu and Rice canals in a bid to conserve water, save agricultural land from water logging and increase in crop intensity as well as conveyance efficiency of the canals.

Water scarcity is a long standing problem for agriculture, which contributes about 21 per cent of the country's Gross Domestic Product (GDP). It is notable that many of Pakistan's industries are agro-based such as textiles. Besides, 80 per cent of its food needs are fulfilled domestically. Thus an interruption in water supply would be devastating for the economy. There were riots in Karachi following a three year long drought, from 1998 to 2001.

As far as hydro-electric power is concerned, Pakistan needs about 14000-15000MW electricity per day, and the demand is likely to rise to approximately 20,000 MW per day by 2013. Presently, it can produce about 11, 500MW per day and thus there is a shortfall of about 3000-4000MW per day.[6] This shortage is badly affecting industry, commerce and daily life of the people. The country needs a quantum jump in electricity generation in the medium-term scenario. The Government of Pakistan (GoP) has applied for a credit from International Development Association (IDA) for implementation of Water Sector Capacity Building and Advisory Services Project (WCAP). One component is regarding Capacity Building of and Support to Federal Institutions in Water Resources Planning and Management (US $ 17.0 Million). This component would support capacity building of and support to federal institutions involved in water resources planning, management and development. The component includes, among other things, support for building human resources and institutional capacity in the federal institutions, and support for developing studies, strategies, and plans for improving water resources planning and management.

The current economic situation of Pakistan is already under intense pressure which is being worsened by the country's involvement in the 'war on

[5] Khalid Chandio, "Water Woes: The Way Forward," *Pakistan Observer*, March 24, 2011.

[6] "Energy Crisis in Pakistan," *IPRI Factfile*, June 2008.

terror' and its backlash on development which is stagnating due to slump in investment. The national reliance on a single river basin, the threat of climate change, water wastages and the lack of coherent conservation policies are all factors that are said to contribute to the problem.

Pakistan has the seventh largest coal reserve in the world (Thar- Sindh) but it is very unfortunate to know that it currently plays a minor role in Pakistan's energy mix. Coal is one of the cheapest ways to produce electricity, and that is why countries like Australia produce 77 per cent of their electricity from coal. Coal must be tapped as soon as possible. The only argument against coal is its pollution but recently, thanks to technology, work is being done to make it as pollution free as possible. Recently the provincial government of Sindh with the help of the federal government has started working on a coal for energy project. Once this source is tapped, Pakistan would be in a position to export electricity.

Water Security: Regional Cooperation

South Asia is home to over 1.5 billion people, living in Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. If there were a single issue that affected bilateral relations among the countries of the subcontinent, water would be a good candidate. Water connects the whole of South Asia historically and geographically and binds the countries of the region. Simultaneously, contentious issues of cross-border water distribution, utilization, management and mega irrigation/hydro-electric power projects are gradually taking centre-stage in interstate relations as water scarcity increases and both drought and floods make life too often miserable.[7] Analysts have suggested that, given the generally tense relations between South Asian countries, water will provoke clashes rather than co-operation. A 2009 report for the CIA concluded that "the likelihood of conflict between India and Pakistan over shared river resources is expected to increase", though it added that elsewhere in the region "the risk of armed interstate conflict is minor". And a Bangladeshi security expert, Major-General Muniruzzaman, predicts that India's "coercive diplomacy", its refusal to negotiate multilaterally on such issues as river-sharing, means that "if ever there were a localised conflict in South Asia, it will be over water."[8]

Under the 1960 Indus Water Treaty (IWT), India is not permitted to build dams for the purpose of water storage on the Indus, Chenab, and Jhelum rivers, but it is allowed to make limited use of their waters, including developing run-of-the-river hydroelectric power projects. India is required to

[7] "Welcome to South Asian Water Studies," *South Asian Water Studies Journal*, http://www.sawasjournal.org/ (accessed January 25, 2012).

[8] "South Asia's Water: Unquenchable Thirst," *The Economist*, http://www.economist.com/node/21538687 (accessed November 15, 2012).

provide Pakistan with the technical details of any water project it wants to develop on these rivers before building begins. Some analysts have termed India's holding back the waters of rivers flowing from Kashmir as a clear violation of the Indus Water Treaty. In a sense, the availability of less water from the rivers is a security issue for Pakistan as it could put the country's very survival at stake. India justifies its position by saying that since the availability of water is low; therefore Pakistan is assuming that India had restricted the flow. But again an argument can be advanced that even if the water flowing into Pakistani rivers is less due to genuine climatic scarcity, India can not escape responsibility as a state to maintain and manage the water resources that it exercises control over. India's responsibility comes under the general framework of international law that calls on the upper riparian state to take the necessary measures to minimize water scarcity.[9] If India, being lower riparian to China, has concerns about China going for big dams i.e., Zangmu hydro electrical project,[10] Pakistan, being lower riparian to India, has the same concerns regarding Indian hydro electrical projects on rivers allocated to Pakistan under the IWT.

Indian actions are not limited to restricting the flow of waters in the rivers flowing from Kashmir it now seems poised to intensify the water war against Pakistan with a plan to build 12 hydropower projects on the Kabul River in Afghanistan.[11] Though Afghanistan has the right to utilise water from the Kabul River as the total flow of Kabul River is 21,000 million cubic meter (mcm) but River Kunar, which contributes 15,000 mcm to the Kabul River, originates in Pakistan.[12]

Pak-India cooperation and normality in relations is an inevitable need for long lasting peace in South Asia. Therefore, outstanding issues including water must be addressed in letter and spirit. Talks with India over water are getting prolonged and Pakistan's water needs are getting aggravated. Water may be included in the *Composite Dialogue Process* (CDP) between the two countries. The Governments of India and Pakistan should look beyond national borders to basin-wide cooperation. A similar situation arose between India and Pakistan on the Salal Dam issue, but the matter was finally resolved through bilateral negotiations and conclusion of Salal Dam Treaty in 1978. The 1992 Convention on Trans-Boundary Water Courses primarily meant for European countries offers another legislative model for Pakistan and India for bilateral cooperation on the issue of handling water scarcity. The Indian

[9] Ahmer Bilal Soofi, "Water War with India?," *Dawn*, February 20, 2010.

[10] "China building dam on Brahmputra River: Report," *Zee News*, October 15, 2009, http://zeenews.india.com/news/nation/china-building-dam-on-brahmputra-river-report_570993.html (accessed November 15, 2011).

[11] Khalid Mustafa, "India to Help Afghanistan Build 12 Dams on Kabul River," *News* (International), May 12, 2011.

[12] Ibid.

version of genuine water scarcity should be scrutinized. The international community may be brought in to resolve the water issue between Pakistan and India. Once the water issue between the two major countries of the region is resolved, it will be easier to move towards resolving other countries' water issues and for this either the role of the SAARC may be brought in or some sort of mechanism such as a "Water Regularity Authority" (WRA) should be made with consensus as the problem is getting from bad to worse and South Asians cannot simply sit idle. It's high time to ponder over the proposal of joint watershed management proposal in South Asia. Some analysts feel that the water issue may take precedence over the Kashmir issue but this view overlooks the fact that the two issues have an integral relationship since the disputed waters flow from the disputed territory. In fact water adds its own dimension to Kashmir.

Environment Impact Assessment (EIA) at regional level is also the need of the regional countries. A sophisticated forecasting system accurately estimating how much water flows into the Indus River has to be there as almost 90 per cent of the water in the Upper Indus River Basin comes from remote glaciers of Himalayan and Karakorum mountain ranges, which border China and India, and the Hindu Kush, which borders Afghanistan. These regions are so remote that the authorities in Pakistan or in other South Asian states hardly know exactly the weather conditions up there.[13] This system will also help in alleviating droughts and floods. The water forecasting system could ultimately help countries to optimize water allocation at a national level by deciding how much water is used for irrigation, industry, and domestic purposes.

Regional cooperation can enable better environmental management, providing benefits to the river, and underpinning all other benefits that can be derived. Cooperation can yield major benefits from the river including increased irrigated agriculture and hydropower production. Cooperation will result in economic benefits associated with lesser tension among countries. It would help local communities in the region in increasing their incomes and protecting the environment.[14]

Conclusion

Politically, South Asia is the least integrated region in the world. Closer integration can be an effective tool in addressing energy shortage, improve

[13] Muddassir Rizvi, "Forecasting Water Flows in Pakistan's Indus River," *International Development Research Centre* (IDRC), http://www.idrc.ca/EN/Themes/Environment/Pages/ArticleDetails.aspx?PublicationID=907 (accessed December 20, 2011).

[14] "Regional Cooperation & Integration."

connectivity, and promote peace and stability.[15] One area that needs the highest priority is the management of the water resources in the region for which the governments should urgently pass a series of laws to prioritize water allocation. Such policies should ensure that drinking water and sanitation are available.[16] Civil societies with the help of the media can do a lot in promoting awareness among the masses about the use of water. The main focus must be to conserve the commodity. And towards this the countries of the region can share knowledge of successful resolutions of water related problems as well as constructive analyses of deadlocks and failures, and create an intellectual debate on South Asian water.[17]■

[15] Ibid.

[16] Syed Mohammad Ali, "Development: A Growing Water Problem," *Daily Times*, July 13, 2010, http://www.dailytimes.com.pk/default.asp?page=2010\07\13\story_13-7-2010_pg3_3 (accessed January 28, 2011).

[17] "Welcome to South Asian Water Studies!"