OPEN ACCESS

Saudi Journal of Humanities and Social Sciences
Abbreviated Key Title: Saudi J Humanities Soc Sci
ISSN 2415-6256 (Print) | ISSN 2415-6248 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://saudijournals.com

Review Article

Water Resource is a Significant Cause of Conflict in South Asia

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DOI: 10.36348/sjhss.2021.v06i08.001 | **Received:** 30.06.2021 | **Accepted:** 03.08.2021 | **Published:** 09.08.2021

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Abstract

Water is one of the most important natural resources, as it is linked to numerous aspects from production of energy to agriculture, forestation, economic growth and livelihood, etc. South Asia is increasingly approaching water scarcity, which has resulted into the legacy of geo-political debates and consequences of intra and interstate interactions. Distribution of surface water has caused water shortage; to the downstream areas, for which many regions within South Asia has become water-stressed leading to verge of conflict between nations. Conflicts over water are on the rise in all forms. Due to vast natural resources, South Asian countries are highly gifted. It's a well-endowed location with good farmland, forests, animals, and access to fresh water. This article examines potential approaches to address and resolve these water distribution and conflicts as it has erupted in several regions of South Asian countries.

Keywords: Water Resources, Food, Agriculture, Economic Growth, Conflict, South Asia.

INTRODUCTION

The existence of environmental resources has given rise to conflicts in many parts of South Asian Countries (Chaturvedi, 1998). Among the environmental resources, water is one of the significant resources which is related to many factors like energy, agriculture, forestation, economic development through conversion, etc. South Asia is gradually heading towards a shortfall of water and this shortfall of water gradually becoming the prime focus between the intra and interstate relations. Distribution of surface water has been one of the key reasons that made South Asia a water-stressed region and heading towards conflicts. Water conflicts are becoming predominant at all levels.

South Asian countries are enriched with environmental resources. The region is blessed with highly fertile land, forest, wild life and agricultural producese, water bodies and the resources can be technically converted to power and energy, used as communication channels and many more innovative ways for economic development. Kashmir, Farakka barrage, border issues, the three bigha corridor, all the conflict issues are related to environmental resource distribution and claims over it.

Among them, distribution of river water is one of the major reasons of dispute (Wirsing, 2007).

This article is a preliminary effort to understand the causes of conflict for environmental resources in South Asia with a prime focus on water conflict. It begins with a brief discussion with academic literatures that relates to conflict over and socio-economic aspects. Further provides some discussions on relevant concepts, definitions, dimensions of resource conflicts and a conceptual framework. This paper further examines a few of the important types of water conflicts in South Asia. Finally, this paper examines the possible ways to address and work towards the resolution of these water conflict.

Theoretical Bases of Environmental Resource Conflicts

The table below shows the academic uneven social and environmental resources generate many resource conflicts and disputes, some of which develop into inequity and Conflict as a result of hardship which causes societal collapse and migration. The afflicted region's economy has deteriorated due to the prevailing circumstances, focusing on diplomatic disputes among South Asian states.

Table-1: Environmental resource theories are at odds

Theory Name	Basic Theory	Causal factors
Malthusian Theory	The expansion of the population will ultimately exhaust natural resources, resulting in problems like Conflict, sickness, and starvation. (Malthus,1798)	Population growth, Environmental resource scarcity, Social breakdown
Classic economic Theory (Smith)	Modern technologies and over-consumption lead to resource scarcity, which results in new and existing economic sectors developing, keeping disputes over environmental resources to a minimum. (Smith,1937[1778])	An innovation, economic development, and new business opportunities
Marxist Theory	Conflicts of interest arise in free markets when the "consume" and the "not consume" are faced with various benefits and disadvantages, and inequality in wealth is generated. the Marx/Engels synthesis	Social Inequality and Conflict
Classical sociological theory (Durkheim)	Microstructural change is a result of the capacity to accommodate societal change. When populations and natural resources rise, resources become more hotly contested, causing more Conflict. In order to relieve this Conflict, people form more complex social roles that allow them to become more adaptive to societal changes. (Durkheim,1965[1902])	Population growth, Social adaptability, and Conflict
Homer Dixon Theory	Human migration, lower economic productivity, and societal collapse are all linked to environmental resource shortages. (Homer-Dixon,1994:5-9)	Scarcity of natural resources, Conflict, and societal collapse
Schnaiberg and Gould Theory	Natural resources degradation, social inequality, and depletion is the cause of economic development and thus contribute to Conflict. (Schnaiberg and Gould,1994:234)	Resource scarcity, economic development, and Conflict

Agriculture is essential to the region's economy, particularly livelihood of rural population is solely dependent on it. Because of this, water is frequently viewed as being connected to the growth of metropolitan areas and vital. The economic livelihood of people in South Asia. Water shortage has prompted social breakdown and migration to adjacent areas, and in doing so, has exacerbated population disparity. Water bodies (including rivers and canals) crossing state borders have been a popular topic of political discussion and the site of several water-related conflicts. This work incorporates theories and causal considerations for the following definitions.

Environmental Resource Scarcity

Environmentally scarce resources are limited supply for use by individuals or groups of people. Although water availability per person has fallen from 5000 m3 per year in 1951 to 1100 m3 per year in 2006 and reduced to 900 m3 in 2020; This decline in water availability can be partially attributed to drastic population growth. Per capita water availability dropped from 1986 cubic meters in 1998 to 1731 cubic meters in 2005 and is predicted to decline to 1140 cubic meters by 2050 (Gupta and Deshpande, 2004) [9]. Since 70% of South Asia's grain output is produced via irrigation, water scarcity would adversely affect food production unless actions are taken to correct the problem [4].

Furthermore, use of submersible pumps at mass scale, use of underground water for agricultural production as well as industrial purpose contributes to the water carcity. Depletion and deterioration dimensions are known as this (Homer-Dixon,1994:5-9, Colombi and Bradnock, 2003:43-6). [10].

Population growth and urbanization

Human population growth may be described as increasing the number of people living in a certain geographic region. With South Asia's fast economic growth, and high demand for infrastructure development to scale up at equivalent pace, environmental resources are highly strained with the footprints. The growing urban population is correlated with a rise in urbanization. Additionally, there is a growing tendency globally for population growth in many cultures and an increase in the number of individuals who choose to live in urban zones that are already relatively dense. Although an urban environment is isolated from nature, it causes an increase in natural resource use and scarceness (Douglas, 2009:129; Khan, 2016:69) [7].

However, because agricultural livelihoods are heavily dependent on the availability of water, weather, and other natural catastrophes, many opt to move to larger urban areas where these resources are more readily available. However, higher urban population density has the opposite effect, resulting in a fast decline in groundwater quality. 56% of the water used in India is already going down the drain. Water scarcity is expected to worsen in the dry season due to climate change (Eriksson et al., 2009) [8].

Social Inequality

Social inequality occurs when people are unfairly allocated resources. In cultures that practice social stratification, significant levels of social inequality typically emerge when a small class owns or controls most resources. In contrast, a much larger class owns or controls very little. Despite Bangladesh and Pakistan's objections, India erected the Farakka Barrage, damming the Ganges River. The problems in establishing the Koshi and Gandak agreements were

exactly the same since Nepal did not participate in the discussions (Khan,2016:80-2) [11]. The intense nationalist attitude of Indian leaders has engendered hostility in neighboring countries.

Ethnicity is also frequently a source of social inequality; because ethnic ancestry is sometimes required for resource ownership, participation in the incorrect ethnic group may entail exclusion from wealth accumulation. Finally, social inequality may occur between civilizations in terms of market control or natural and human resource exploitation (Marx and Engles,1962[1848] [14], Ambagudia, 2010:60-1) [3].

Economic Development

According to the Schnaiberg and Gould (1994), the degrees and types of environmental harm caused by the world's nations assure that nations will come into conflict with one another over solutions to global environmental problems." Similarly, the considerable variance across states in the allocation of gains from ecosystem removals and additions would demand international Conflict (1994, p. 234)." South Asian disputes over water resources, according to Schnaiberg and Gould, Disproportionate use and pollution, as well as uneven distribution of resources, will contribute to resource depletion [15].

Differences in water distribution across international boundaries complicated agricultural value-chain activities and depressed economic growth for the disadvantaged population of the region. Instead of seeking a diplomatic solution, the issue has been politicized to garner votes from the same groups. Furthermore, development is commonly described as an increase in the exchange of commodities and services. Most people connect economic growth with a rise in living standards. Thus, it usually has a positive connotation. However, among many environmental, social scientists, economic progress is frequently connected with detrimental ecological consequences [11].

South Asian Water Resource Conflicts Conceptual Framework:

Based on the ideas mentioned above, concepts, and definitions, a theoretical model, given in detail below, may be used to forecast the likelihood of Conflict or conflict settlement between civilizations or components of society in South Asia over finite water resources.

The conflicts were primarily caused by three main driving forces: population change, economic development, and social inequity. Demographic change is predicted to indirectly impact water resource conflict through influencing economic growth, scarcity of water resources, and social inequality. On the other hand, economic development is expected to directly influence population increase and a positive indirect effect through scarcity of water resources, resulting in Conflict [12].

Urbanization also has a detrimental influence on water resource conflict, both directly and indirectly, due to societal adaptation. Social inequality is expected to have both a good and negative direct result. Water shortage is expected to have both direct and indirect consequences on the water resource conflict, owing to its impact on social disintegration and possible negative effects on social adaptation. Social adaptation may reduce the chance of water conflict.

Furthermore, as innovations and technology change the usage or definition of the resource base, societal adaptation may alleviate water shortage. Again, social transformation may decrease social breakdown by creating alternate problem-solving techniques and approaches. Finally, societal disintegration can directly or indirectly promote resource conflict by generating social and ethnic disparities. Resources, as more adaptive civilizations, take measures to improve the sources of contention. Human migration, for example, may directly cause water conflict in South Asia.

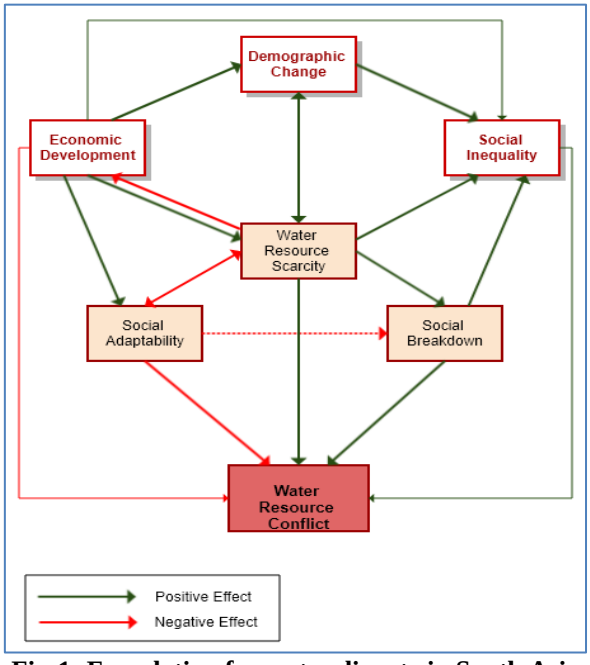

Fig-1: Foundation for water dispute in South Asia

Adversity migrating groups face while competing for resources can lead to either direct or indirect forms of social inequality (Homer-Dixon,1994; Alam,2002) [1-10].

Water Resource Conflicts in South Asia:

The origins of the India-Pakistan Conflict may be traced back to their religiously motivated split. Nonetheless, the head of the Boundary Commission,

Cyril Radcliffe, accounted for canals that held water while defining the border in 1947. It was already known that the partition would impair irrigation, trains, and electricity communications and that a remedy could have been begun by shared authority over some common utilities. On the other hand, the political course of action is mirrored in the other way by making it a negative agenda against the opposing state and earning the trust of their population. Finally, the borderlines were established rather than any rational distribution due to violent battles between the two republics. Until now, India has built barrages across international waterways within its borders. Exacerbating inequity in cross-country economic development contributed to political turmoil in adjacent nations [13]. Some of the conflicts over water resources in South Asia that arose after the 1947 split are listed below:

Table-2: Conflict over South Asia's water

Year	Parties Involved	Basis of Conflict	Violent Conflict or in the context of violence	Description
1947 onwards	Bangladesh and India	Development Disputes	No	Ganges River has been split by the 1947 partition, with half in India and half in Pakistan (later on, Bangladesh after 1971). Farakka Barrage construction in India, which began in 1962, fuels tensions; three treaties negotiated in the 1970s, '80s, and '90s settle differences in 1977-82, 1982-84, and 1988-88, and an accord spanning three decades was reached in 1996.
1947-1960	India and Pakistan	Development Dispute	No	A partition divides the Indus basin between India and Pakistan; irrigation water conflicts ensue. India steams flow of water into irrigation canals in Pakistan; Indus water accord completed in 1960 after 12 years of World Bank-led negotiations.
1991-present	Karnataka, Tamil Nadu (India)	Development Dispute	yes	The Supreme Court established when Karnataka rejects an interim ruling given by the Cauvery Waters Tribunal, violence ensues. The tribunal was established in 1990 to deal with issues related to Cauvery River irrigation rights that have been ongoing for almost two decades.
2000	Gujarat (India)	Development Disputes	yes	Water riots have been recorded in several regions of Gujarat in response to the government's failure to provide an adequate supply of tanker water. According to reports, police fired at a crowd in Falla village in Jamnagar, killing three people and injuring twenty others in protest of water diversion from the Kankavati project to the Jamnagar dam.
2004	India	Development Disputes	yes	In October, four people were murdered, and more than 30 were injured in continuous farmer demonstrations over water allocations from the Indira Ghandi Irrigation Canal in Srinagar district, which borders Pakistan. Gharsana, Raola, and Anoopgarh have been placed under curfew.

The media reports that: (Alam,2002; Chaturvedi,1998; Colombi and Bradnock,2003; Khan,2016; Mustafa,2007; Wirsing,2007)

Factors that cause water conflicts in South Asia:

Demographic change and Water Resource Conflict:

A key source of Conflict in South Asia is its rapid population growth and water scarcity. South Asia, which has a population of one-fourth of the global total and just 3% of the world's land area, is very significant (1.6 billion people). Increased stress on freshwater due to increasing demand for conflicting uses is further complicated by climate change. Throughout South Asia, almost one in five people do not have access to clean drinking water (Eriksson et al., 2009). More water is needed for agricultural output, but this causes worry about the balance between hydroelectric and agricultural water.

On the contrary, obtaining enough water for agricultural production, such as groundwater pumping, requires minimal effort [15]. More than 80% of food production in South Asia comprises irrigated agriculture, which accounts for around 39% of cropland. Most of the water and energy utilized in South Asia is used for agriculture (Douglas,2009) [7].

South Asia is one of the world's most dynamic areas. considering the population increase, economic progress, urbanization, and industrialization. Providing clean water to city people is far more challenging than delivering it to rural residents. Cities generate far larger volumes of sewage than rural regions, making sewage treatment more difficult [16].

Urbanization and population growth are the main causes of water scarcity and environmental deterioration in South Asian nations, contributing to the ongoing conflict in the area. Another case in point is pollution, which poses a serious danger to the Ganges. Industrial wastewater and fertilizer runoff from several companies and industries enter the river, with millions of liters of wastewater applied to the tanneries, textile mills, and chemical manufacturers. Due to pesticides in the groundwater, the environment is harmed and the water supply is reduced. Much of the early progress to reduce pollution was undone due to population growth (Chaturvedi, 1998; Wirsing,2007) [4].

Furthermore, contaminated water returned by consumers causes issues in downstream nations, and a lack of fresh water causes economic loss, social hardship, and illness. They are becoming a major source of contention and strife in nearly all South Asian countries—this pollution influences both the environment and people's livelihoods. According to the debate above, Population growth and urbanization, which lead to water pollution and depletion, are already spurring inter-state conflict in South Asia. The conflict over water that will result if no sufficient steps are done will start with water shortages.

Water scarcity and water conflict

The demographic, economic, and environmental changes in South Asia have increased the demand for water resources and intensified their uses, which has serious implications for food and water security in the sub-region. The world's largest irrigation concentration is in the Indo- Gangetic plain. In Pakistan, food, water, and energy security depends heavily on the state of the Indus River. The Indus irrigation system, the world's largest contiguous irrigation system, irrigates about 14.3 million hectares of farmland, representing about 76% of the cultivated area in Pakistan; it enables the production of more than 80% of the food grains of Pakistan and cash crops, in particular cotton. Agricultural water withdrawal in Pakistan is 170 billion cubic meters per year.

Similarly, the Ganges River system is the main source of freshwater for half the population of India and Bangladesh and nearly the entire population of Nepal. The Ganges and Yamuna canal systems irrigate vast areas of India by using surface and groundwater received from the Himalayas. Almost 60% of India's irrigated area of 546,820 sq.km is in the Ganges basin. Water use for irrigation in the Ganges basin is about 100 billion cubic metres per year. The Brahmaputra River supports irrigation, hydropower, and fisheries for a vast part of Bangladesh, Bhutan, and India. Almost 6000 square-km are irrigated using 1.4 billion cubic metres of water per year. Throughout the Himalayas, the growing demand for resources, widespread poverty, and the strong profit motive of commercial enterprises, and inadequate incentives for sustainable management have led to unsustainable use of resources (Singh, 2006: Wirsing,2007). Rapid population growth with South Asia's population projected to increase from 1.36 billion in 2000 to 2.31 billion in 2050 (Chaturvedi,1998) has increased demand for food, fodder, grazing land, water, and other natural resources in the mountains and downstream.

The Brahmaputra River remains a source of tension between China and India, and between India and Bangladesh. While the intensity of the Brahmaputra's recurring flood cycles in both India and Bangladesh could be mitigated by a united disaster response, the lack of bilateral agreement on hydropower projects and water transfer schemes has led to sub-optimal outcomes. India's proposal for inter-basin water transfer i.e. diverting water from the Brahmaputra to augment water flow and resolve water problems in both the Ganges and Brahmaputra basins has met with resistance from Bangladesh. But Bangladesh's dependence places it in a weak position in negotiations with its neighbor.

China's decision to begin construction of a series of dams on the Yarlung Tsangpo in early 2013 raised concerns in India (similar to those in Bangladesh) that China intends to divert water from the river. There are no bilateral agreements or treaties concerning water management between India and China. Ironically, this may lead to an opportunity for greater regional engagement: numerous water experts in India suggested in the survey that India was rapidly developing a greater sense of empathy with other downstream riparian's in the neighborhood (Khan,2016:68-70).

Social Inequality and Water Conflict

A Homer-Dixon (1999) study shows that social consequences of natural resource shortages can lead to Conflict. The fact that he has looked at the environmental roots of acute Conflict for over a decade has led him to conclude that natural resource scarcity might indirectly contribute to human conflict. Although resource constraint causes several issues such as increased human migration, social inequality, and the expulsion of people, insufficient economic production, and a weakened state, it can also have specific positive results.

Water shortage is being caused by inequitable water distribution in South Asia, increasing the probability of war. Due to unequal water distribution, several South Asian countries rely on their neighbors, particularly India, for water supplies. Water-sharing is a problematic issue that requires a rational approach to ensure equal distribution. However, even the friendliest border states find it difficult to develop a universally agreed-upon water-sharing formula for controlling their transboundary water reserves (Khan, 2016) [11].

The following overview can demonstrate the reactions of various countries to the three major rivers in South Asia. The summary does not include all of the tributaries that flow from these main rivers, resulting in a more complicated interconnection across numerous nations. The following are the details of three major rivers:

Table-3: All of South Asia's major rivers

The majority of South Asian rivers	Brahmaputra	Ganges	Indus
Length	2,900 km	2510 km	3180 km
Source	Kailas range, Himalayas	Gangotri glacier, Himalayas	Kailas range, Himalayas
Mouth	flow into the Bay of Bengal and merge with the Ganges	Merge with the Brahmaputra, then into the Bay of Bengal	Arabian Sea
Countries	Bangladesh, China, India	India and Bangladesh	China, India, and Pakistan
Population around the basin	300 million	300 million	150 million

Source:(Alam,2002; Chaturvedi,1998; Colombi and Bradnock,2003; Khan,2016; Mustafa,2007; Wirsing,2007)

None of the rivers described here are without their transboundary issues. Transboundary disputes have been another significant source of regional tension in South Asia, where the Indus River and Ganga River systems have proven troublesome. South Asian states may also face social inequalities because of disputes over water allocation. There are numerous impacts that national inequality may have on international Conflict, including worries over relative deprivation, such as South Asian countries claiming that they have not received the benefits of economic growth due to a lack of adequate water supply.

Social Disruption and Water Conflict

Human migration can be affected by several types of water-related issues. When the water supply decreases, populations may be forced to move as a result. Many people are forced to relocate because of water scarcity; they may fight with others who have already made their homes in their new location. This can occur both directly and indirectly, as immigrants compete for resources and because of social and ethnic differences, leading to increased ethnic and class Conflict.

South Asia's Ganges River basin illustrates the complications of migration due to water concerns. In the world's second-most densely populated country, Bangladesh, both a lack of water and devastating floods are prevalent. Only around 40% of the Ganges' water is left for environmental uses like agriculture and domestic use during the dry season. Flooding in the Ganges River delta during the wet season creates standing water in the flood plain of Bangladesh. Upstream deforestation in India and Nepal, as environmental groups believe, causes more flooding in Bangladesh.

Due to water shortages, floods, and pollution, many Muslim Bangladeshis have moved to predominantly Hindu India. Ethnic tensions on the nation's borders have been exacerbated (Wirsing,2009:9-10; Colombia and Bradnock,2003:44-59; Ambagudia,2010:62-65) [19-5]. While both the Indian and Bangladeshi governments have officially announced plans which are expected to alleviate some of the water problems for the people, people in both countries are nonetheless experiencing the negative impacts of years of inadequate water management.

Minimal Regional Cooperation

When combined with other existing causes of Conflict, water problems have led to water nationalism among South Asian riparian governments. They are becoming more common in both upper and lower riparian nations. Because many of the rivers included in the River Linking Project (RLP) straddle the Indian border, the situation may deteriorate once it is operational.

The preceding explanation suggests that the South Asian riparian states cannot resolve water-related bilateral issues due to their political connection. Regional groups can intervene in such cases. Where there is a history of collaboration, there is a strong inclination for cooperation among riparian governments on transnational river basins. Since 1985, the South Asian Association for Regional Cooperation (SAARC)

has been mostly ineffective. The SAARC leaders accepted a provision on basin management at their fifteenth summit in Dhaka in 2008, but it has yet to be adequately implemented. Unlike SAARC, regional organizations such as the European Union (E.U.) have played an essential role in many other locations where successful basin management systems are in place (khan,2016).

CONCLUSION

Environmental resources, particularly water, which is closely linked to the agricultural economies of South Asian nations, contribute to economic growth via equitable distribution and practical usage by all stakeholders. Nonetheless, the major political players have been primarily concerned with turning people's wants and emotions into votes. It has been utilized in political instability in addition to diplomatically resolving limitations. Environmental issues are having a significant impact on power balances and negotiations

Hence, there is a need to foster collaboration over multi-purpose water projects or support demand-side water management to help India and its neighbors handle water disputes. Allegations of water theft made by the upper riparian are somewhat prevalent. A more complex set of interests might lead to the upper riparian state taking over management of the water of lower riparian states, regardless of whether they wish it. These states tend to be rooted in either security or 'rational actor' theories. The significance of conflict over environmental resources is becoming more and more apparent in the region. which can be minimized through good motive diplomatic cultures and interest.

REFERENCES

1. Alam Undala,Z.,2002. "Questioning the Water Wars Rationale: A Case Study of the Indus Waters Treaty," *The Geographical Journal*, 341-353.
2. Aggarwal,P., Joshi,P.,Ingram,J.,Gupta,R., 2004. "Adapting food system of the Indo-Gangetic Plains to global environmental change: Key information needs to improve policy formulation," *Environmental Science & Policy*, 7(6): 487-498
3. Ambagudia, J.,2010. "Tribal Rights, Dispossession and the State in Orissa," *Economic and Political Weekly*, 45(33):60-67.
4. Chaturvedi,S.,1998."Common Security?: Geopolitics, Development, South Asia, and the Indian Ocean', *Third World Quarterly*,19(4):701-24.
5. Colombi Stephan, B and Bradnock Robert,W.,2003. "Geopolitics, Water and Development in South Asia: Cooperative Development in the Ganges-Brahmaputra Delta", *The Geographical Journal*,169(1):43-64.
6. Durkheim,E.,1965[1902]. *The Division of Labour in Society*. New York: Free Press.
7. Douglas,I., 2009. "Climate Change, Flooding and Food Security in South Asia," *Food Security*, 1(2): 127-136
8. Eriksson,M.,Xu,J.,Shrestha,A.,Hydr,R.,Nepal,S.,Sandstrom,K., 2009.*The changing Himalayas; Impact of climate change on water resources and livelihoods in the greater Himalayas.* ICIMOD, Kathmandu: ICIMOD.
9. Gupta,S.K., Deshpande,R.D., 2004. "Water for India in 2050: First order assessment of available options," *Current Science*, 86:1216-1224
10. Homer-Dixon,T.F. 1994. "Environmental Scarcity and Violent Conflict: Evidence from Cases," *International Security*, 19(1):5-40
11. Khan,Nawaz. M., 2016. "Geopolitics in South Asia", *Journal of Current Affairs*, 1(1&2):66-86
12. Malthus,T.,1798. *An essay on the principle of Population as it Affects the Future Improvement of Society.* London: J.Johnson, ST. Paul's Church-Yard.
13. Mustafa,D.,2007. "Social Construction of Hydro politics: The Geographical Scales of Water and Security in the Indus Basin," *Geographical Review*, 97(4):484-501.
14. Marx,K. and Engles,F.,1962[1848].*Manifesto of the Communist Party.* New York: International Publishers.
15. Schnaiberg,A. and Gould,A.,1994. *Environment and Society: The Enduring Conflict.* New York: The Modern Library.
16. Shah,T.,2009. "Taming the Anarchy: Ground Water Governance in South Asia," *Resources for the Future Press*, Washington, DC.
17. Singh,J.,2006. "Sustainable Development in Indian Himalayan Region: linking ecological and economic concerns," *Current Science*, 90(6):784-788
18. Smith,A.,1937[1776].*An Inquiry into the nature and Causes of the Wealth of Nations.* New York: The Modern Library.
19. Wirsing Robert,G., 2007. "Hydro-Politics in South Asia: The Domestic Roots of Interstate River Rivalry", *Asian Affairs*, 34(1):3-22.