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When States Go Thirsty: A Critical Analysis of Water War Thesis

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Abstract

This paper discusses water war thesis. It argues that water war thesis is loosely based on the arguments by different world leaders, and writers which state that the new fault lines between states will be drawn on waters. The basic premise of the water war thesis rests on the argument of water crisis; the demand-supply gap will make states thirsty for water. It asserts that as climate changes unfold and population of the world increases, the thirsty states of the world will vie for water resources which will result in water wars. However, there are different writers who challenge the thesis by arguing that instead of generating conflict, water scarcity will induce cooperation amongst riparian states. This paper mainly focuses on this question of whether water scarcity results in conflict or cooperation. In other words, it offers a critical analysis of the water war thesis.

Key Words: Climate Change; Population; Scarcity; Water War Thesis

Introduction

In the twilight of the Cold War, the traditional concept of security was broadened to include various environmental issues. Ballooning population, proliferating diseases, soil erosion, deforestation, climate change, water scarcity and pollution were termed as the main foreign policy concerns and national security issue of 21st century (Kaplan 2000, 19). Owing to its vitality for human existence, water was treated on a priority basis within this newly emergent paradigm of environmental security. It was argued that water supply has diminished due to varying climatic variations, whereas its demand has increased due to the global population explosion. It was stressed that the water crisis has the potential of inciting direct violent conflicts or indirectly causing mass migration and food dearth, resulting in violence.

Such a concern was shared by many writers like Star, Bulloch and Darwish, Remans, and Amery. These writers argued that water scarcity could be a source of future wars amongst nations. Ismail Sergageldin, the Vice President of World Bank, went few steps ahead and stated in one of his articles published in the *New York Times* on 10th of August 1995 that, "the wars of the next century will be about waters." Such an opinion gained further currency when the then Secretary-General of the UNO, Kofi Anan, stated in March 2001 that, "Fierce competition for fresh water may well become a source of conflict and wars in future" (Priscoli and Wolf 2008, 9). Such arguments stressing that water crises could trigger violent conflicts are commonly referred to as Water War Thesis.

This research article examines water war thesis from a critical perspective. It is broadly divided into two sections. Section one provides insights into water war thesis and its basic premises. Section two questions the water war thesis by putting forward a critical appraisal of the premises of the water war thesis discussed in section one.

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A. Water War Thesis

Ancient civilizations flourished around rivers: the Indus civilization around the Indus, Egyptian around the Nile, Chinese around the Yellow and Mesopotamian around the Tigris and Euphrates are few to name. That is why these civilizations are sometimes termed as "hydraulic civilization". The withering away of such hydraulic civilizations owed much to flooding or scarcity of waters. Owing to its vitality for the existence and development of the modern urbanized and industrialized society, water is assuming unparallel importance in contemporary society as well. With the present trend of global warming, the unfavourable pattern of rainfall, population explosion, changing lifestyle and nature of diets, industrial, domestic, hydel and agrarian needs, water demand will outstrip supply in the near future. Keeping in view the looming water crises, many writers have predicted that future fault lines will be drawn on waters. Different world leaders have also issued such "water wars" warning in the context of water-scarce regions.

In present circumstances, scarce water resources in different regions are contested amongst different regional powers and have resulted in water disputes. For example, in Africa, the Nile is contested amongst Ethiopia, Sudan and Egypt. In the Middle East, the Tigris and Euphrates are contested amongst Turkey, Syria and Iraq, river Jordan and the aquifers of the Golan Heights amongst Israel, Jordan, Syria and the Palestinians. In the Far East, the Mekong river is contested amongst China, Indochina and Thailand. In Central Asia, the Oxus and Jaxartes amongst Tajikistan, Kyrgyzstan and Uzbekistan are the few cases where regional stabilities are at stake at the hands of water issues. Similarly, in the west, USA, Mexico, Brazil and Peru also face water-related differences. These water issues and differences are dormant in some cases whereas in other cases they have actually surfaced. The dormant water issues would become active, and the already active ones would assume severity with the gradual increase in a world water crisis. Such assumptions are commonly referred to as water war thesis.

Core arguments of the water war thesis are discussed as under.

Water Scarcity Results in Water Wars

Water is both an infinite and finite resource. It is infinite because of its abundance and renewable nature. It is abundant as 71 % of the planet is covered with waters totalling 1.4 billion km^3 water. It is renewable in the sense that water utilized evaporates in the environment and comes back in the shape of rains. However, it is finite as only 2.5% fraction (35 million km^3) of the total water available is fresh. The rest (97.5 %) is saltiest, existing in oceans (96.5%) and ground (1%). Out of the total freshwater (2.5%) fraction, only 0.26% (90000km^3) is readily accessible in the form of freshwater lakes and rivers for consumption. The residuary constitute parts of glaciers, snow covers of the Antarctic or Arctic regions, ice caps elsewhere, soil moisture, or too deep-seated to consume (Sivakumar 2011).

Moreover, according to glaciologists, the present temperature is the highest in this millennium. In the past 30 years, the temperature has increased by 1Celsius and would further increase by 2.0Celsius to 2.6 Celsius at the mid of the present century. This global warming would result in the melting of glaciers by 10 to 60 m per year (Morton 2011). Similarly, global warming has adverse implications for rainfall patterns as well. Excessive rains will occur when they are not needed. Such untimely rains will result in floods wreaking havoc on agriculture. Fewer rains will occur when the rains will be needed, resulting in water scarcity and drought.

On the demand side, human species has doubled in the past seven decades, whereas the water utility has multiplied by six times (South Asia's Water 2007, 1-2). In addition, with improved lifestyle, water demand would increase due to sanitation, hydel and agrarian needs. Shift from simple diet to intense water foods, fruits, and vegetables would further aggravate water demand. Such a shift in diet has been pointed byWorld Water Assessment report. The report stated that it is not important that "how much water do people drink?" but "how much water do people eat?" (Condon et al. 2009).

The thirsty states would strive hard to acquire water resources to meet its domestic needs without taking care of its impacts on neighbors. Since co-riparian nations do not only share a river, they share an ecosystem; therefore, a drive-by one nation to meet its growing water demand would directly impact the finite water supply of the other riparian state. This action would result in a reaction, and a chain of similar actions would lead to a domino-effect, thereby leading to war (Brennan 2008, 9).

Presently, 1.5 million people around the world lack access to fresh water and round about 25000 daily deaths and 60% of infant mortality occurs due to water-borne diseases (Babel and Wahid 2009, 2). Such limited access to freshwater resources, global warming and its implications for water supply and the surge in human population and its implications for water demand has resulted in water demand-supply gap. In order to avert water crises, the thirsty world states will struggle for control over limited water resources. The other contending and thirsty states will challenge the other thirsty states which will incite violence amongst states.

Pearce in an interview once stated that "water conflicts of various sorts are happening all over the arid parts of the world.

As more and more water is collected behind dams, and otherwise controlled, it is the power that gets access to the water and the weak that lose. So, there is a serious global issue about water governance" (Brennan 2008, 9). This is to suggest that the powerful regional states in water-scarce regions will struggle to establish hydro-hegemony. Hydro-hegemony like all hegemonies will breed contempt for the hegemon and will be resisted by the bigger states of the region individually or through forming hydro-based mutually antagonistic alliances. These alliances might prove provocative for largescale water wars.

Hydrological Dimension of Contemporary International Disputes

Apart from the potential of inciting direct future water wars, researchers have also identified strong hydrological dimensions to different international political disputes. For example, the Israeli-Palestinian issue is considered an ideological and religious dispute and an issue of self-determination, human rights violation or colonial legacy. However, the dispute has a strong hydrological dimension as well. Since the creation of the state of Israel, the Arab world is at loggerheads with the Jewish state. Important episodes of the dispute include the wars of 1967, 1973, Intifada I, and Intifada II which had an important religious and ideological flavor. It is, however also accepted at the hands of many strategists that one of the foremost objectives of the warring armies in the war of 1967 and 1973 was to secure the scarce water resources of the region.

Similarly, the same hydrological dimension was found in the first Intifada of the Palestinians uprising of 1987 against the state of Israel. The degraded water quality due to Israeli exploitation of water resources for three decades caused widespread water diseases which ultimately compelled the Palestinians to rise against the former. Similar factor of water pollution and its spin-off effects were responsible for the Palestinian Intifada II (Giordano, Giordano and Wolf 2002). That is why the "hydraulic imperative" theories are put to fore while describing Arab-Israel conflict (Wolf 1998), in the Middle East, where armies have actually shot fires over water resources as well. For many writers of the water war thesis, Middle East is considered to be the region where the thesis could become a reality. However, the region of South Asia is equally vulnerable to water war thesis (Mehsud and Khan 2019).

Advocates of the water war thesis also highlight the hydrological aspect of the Kashmir dispute as well. It is argued that the dispute of Kashmir between India and Pakistan has multiple dimensions: a colonial legacy of an incomplete partition, a freedom movement for the right of self-determination, a boundary dispute, a proxy war and an excuse for cross border terrorism (Chadda 1997, 51). They agree that the dispute has a strong ideological dimension. India claims itself to be a secular state and states that garnering Kashmir-being a Muslim majority area is to embolden its secularism. Similarly, Pakistan was created on the basis of Two Nation Theory which viewed federating Kashmir with Pakistan as its ideological duty (Khan 2012). However, in addition

to the mentioned aspects of the dispute, the hydrological dimension of the dispute is also projected rigorously.

Such projections are based on the arguments that both India and Pakistan want to integrate Kashmir because of its water resources. They maintain that amongst their stated political, economic and security interests in the region of Kashmir, water is one of the primary interests as the economic, political and social structure of the region are dependent upon the water (Qazi 2012). The then Prime Minister of Pakistan, Hussein Soharwardyhighlighted this hydrological dimension of the dispute when he announced publicly that "there are as you know six rivers (in the Indus basin). Most of the rise in Kashmir. One of the reasons why, therefore, that Kashmir is so important for us is this water, these waters which irrigate our lands. They do not irrigate Indian lands" (Alam 2002).

It is further stressed that some of the strategic aims of the wars of 1948 and 1965 between India and Pakistan, were to acquire the resources of waters of the Indus. Moreover, such water war writers stress that whenever Pakistan has proposed the resolution of the issue, it has been suggested to divide the valley in a way to secure access to waters of the river flowing through Kashmir. The debate whether Kashmir dispute is a hydrological dispute or an ideological one is out of the domain of this paper, but this paper suggests that many new studies which are based on water war thesis have highlighted the hydrological dimension of the Kashmir dispute as well. Such studies also reveal that in addition to the Palestinian and Kashmir dispute, the recent conflict in Darfur, Sudan was also having a strong water dimension (Consortium of Non-Traditional Security Studies in Asia, September 2008). The importance of water in international conflict is further strengthened by United Nations report, according to which water scarcity has caused 25million "Water Refugees" as compared to 22million "War Refugees" globally (Global Water Shortages 1999, 1-2).

Nature of the Water Sharing Treaties

The history of international water management and treaties goes back to 2500 BC when the two city-states of Sumerian civilization-the Lagash and Umma-concluded a treaty ending rivalry over the sharing of the waters of river Tigris. Afterwards, international water treaties have proliferated at an unprecedented pace. From 805 AD to 1984 AD, some 3600 water-related treaties have been identified which cover many aspects of water-related issues like navigation and non-navigation usages, floods and distribution of water resources. In the past 50 years, some 200 new treaties were crafted (Priscoli and Wolf 2008). This tendency of rising water treaties runs counter to the water war thesis, which suggests that thirsty states will fight instead of cooperating over water resources.

Yet, the prophets of the water war thesis argue that most of the water-related treaties are under severe stress and strain and are lacking in many aspects. Such stress in the water treaties is due to a number of reasons. First, these water treaties lack an enforcement mechanism. Out of 263 international river basins only in 117 basins, formal management and enforcement institutions have been established (Priscoli and Wolf 2008, 61). Second, most of these water treaties are influenced by power politics (Norins 2011, 40). Third, water quality issues are ignored in the majority of these treaties. Fourth, most of the treaties were limited in relation to the involvement of all co-riparian states (Priscoli and Wolf 2008, 62).

Except for a few rivers in Europe, none of the major basins in other parts of the world is covered by a comprehensive agreement of all riparians (Salman 2007, 638). If there exist treaties, most of them are controversial in many aspects and are under severe stress and strain. For example, the Egypt-Sudan treaty is in choppy waters as the other riparian states are not a party to the treaty. The India-Pakistan Indus Waters Treaty 1960 is under stress due to water scarcity, divergent interpretation of the treaty by the two signatories and exclusion of other riparians of Afghanistan and China. In Mekong case, China and Myanmar are not a party to the treaty; therefore, this treaty seems not viable in the long run.

The India-Bangladesh treaty of 1996, which is going to expire in 1926, is not implemented in its true spirit. Equally stressful are the water treaties of the Middle East and elsewhere. In the case of the Danube, Slovakia and Hungary are at loggerheads with one another. This dispute too awaits resolution. If there is water governing treaty, there are controversies about its interpretation and implementation, and consequently, water disputes are on the rise (Salman 2007). In addition to the discussed stress on the installed water apportionment treaties, there are disputes where there does not exist any treaty. In such a situation where there is no treaty, the riparian states utilize the waters of the rivers without any restraint and guidance from international water law; the law which is still in its embryonic stages.

Limited International Water Law

The two "foundational sources" of international water law are the 1966 Helsinki Rules and the 1997 UN Watercourses Convention. The former rules are formalized by the International Law Commission and the later ones by the International Law Association (Gander 2014). The 2004 Berlin Rules, written by the International Law Association, are based on these two sources. The 1997 UN Convention is based on the 1966 Helsinki Rules and therefore constitute the basic document in international water law (Gander 2014, 316). However, there still exist many disagreements over the basic principles of international water law.

One of the factors being pointed by water war theorists is the limited legal cover of international water law. It is opined that the law covering water distribution is in its early stages and is often confusing in the application of different principles—the first basic development in the field of international water law Helsinki Rules that were approved in 1966. Subsequent UN Watercourses Convention and the Berlin rules were elaborated in this regard. However, as was the case with Helsinki rules, the later rules have also failed to clarify confusion about the basic principles of water sharing of equitable and reasonable utilization and the obligation not to cause harm (Salman 2007). Owing to the stated ambiguity, there are states which priorities one of the principles of water apportionment over the other depending on the nature of the location of the riparian and political structure of the region. This tussle of the two principles of international water law is termed by Ibrahim Shihataas "the fictitious dichotomy" (Salman 2007). The ultimate lack of agreement over the principles of distribution of water paves for misconceptions and disputes over water apportionments.

Miscellaneous Factors

In addition to the aforementioned factors, there are other factors that are pointed out by the literature that supports the water wars thesis. Firstly, it is argued that there are 261 international rivers basins which are shared by 145 different states (Dolatyar2002). These river basins represent a complex web of one ecological unit. Consequently, activity in one part of the basin located in one state affects another part of the basin located in another state. Such ecological interdependence results in mutual vulnerabilities and thereby has the risk of water wars. Secondly, parties to the water disputes and water-related issues are also expanding. Individuals, other legal entities and Multinational Corporations (MNCs) are also becoming parties to water disputes. To boot, the focus is not limited to water quantity, but its quality, access, rights, pricing are the newly added water-related issues which would add further complexities to water disputes (Salman 2006).

Thirdly, water scarcity is associated with instability and failed states. It is argued that water scarcity adversely affects agricultural, industrial and energy sector, thereby escalating poverty, creating pollution and infrastructural failures which lead to internal instability, bad governance and ultimately to failed states. At the national level, different administrative units of different states are at loggerheads with one another over water resources. Such inter-units tug of war over water resources sometimes results in secessionist movements as well. One of the factors responsible for the separatist Khalistan movement in India is identified as inter-provincial(states) discord over water resources. Such intra-federation water disputes are not only common spread

in contemporary India but have the potential to threaten the very existence of Indian federation. Punjab, Rajasthan and Haryana on the one hand and TamilNadu and Kerala, on the other hand, are disputing over water resources which could trouble the fabric of Indian federation. Similarly, the water feud amongst the provinces of Punjab, Sind and Khyber Pakhtunkhwa (KPK) is also creating troubles for the federation of Pakistan as well. The same water-scarcity ridden intra-state disputes could be found in the water-thirsty states of other water-scarce regions like Central Asia and the Middle East as well.

Fourthly, the Chinese hydro-behaviour in the Tibetan plateau is another factor in this regard. In order to meet the rising demand of its population and maintain its present economic growth, China, as per Indian reports, is allegedly diverting waters from some of the rivers originating from the Himalayan glaciers of the Tibetan plateau. The Himalayan glacier which is termed as the largest water tower and the third pole for its polar caps is origin to the mightiest of the rivers of Asia feeding 1.5 Billion people extended over a dozen of countries. The fate of water security of these countries is dependent on the future of Chinese hydro-behaviour in the region. Any hydro-hegemony on the part of china in the Tibetan plateau and reaction on the part of lower riparian states, especially the lower riparian-anxiety has ridden India could result in materialization of water war thesis.

Lastly, it is commonly believed that history has never witnessed a water war in the near past. However, the absence of water war in history is not a guarantee that states would abstain from going to war in future over water resources. On the contrary, a UNO report has pointed out some 300 potential water disputes in the world, which has the potential to turn violent in the coming future (The Big Question 2009).

B. Questioning the Rationale of Water War Thesis

As opposed to the group of water experts that stresses the aforementioned factors as a cause for water wars in the future, there is another group which questions the foundations of the water war thesis. This group of water experts put to fore their critique of the thesis from different perspectives. One such perspective is the origin and evolution of the water war thesis in itself. It is argued that though the water war thesis got notoriety in the decade of the 1990s, yet the relation of environment and politics has been discussed during the Cold War as well. It was Toynbee who gave his "Challenge-Response" thesis in 1946 in which he described that environmental challenges and stresses would lead the nations towards civilization.

Such assertions run counter to water war thesis, which believes that the challenge of water crises will result in water wars instead of peace and civilization. Interestingly, extending on Toynbee's argument, Wittfogel suggested in 1956 that the drive to water management has the chances of leading to the beginning of institutional civilization and the emergence of authoritarianism (Priscoli and Wolf 2008). Though the latter argument is criticized by Toynbee for being socially constructed or politically motivated by the US defence establishment as targeted against the Soviet Union, yet it received wide acceptance. Sprout and Sprout to establish the same link between environment and politics in 1957 which further led to the emergence of the wide "Environmental Security" literature sparked by Homer- Dixon (1991) article, "On the Threshold: Environmental Changes as Causes of Acute Conflict". Homer-Dixon like Wittfogel too was appreciated by the defence establishment and criticized by the opposite group (Priscoli and Wolf 2008

). Homer-Dixon by integrating the two separate fields of military-conflict and environment studies together, clearly stressed that future wars and violence would be triggered-off by environmental resources including water, forest and fish (Kaplan 2000, 21).

This group argues that no doubt water is scarce and is unevenly distributed across planet earth. However, water scarcity doesn't necessarily result in war. In fact, water scarcity could create both conflict and cooperation. For Toynbee, such a scarcity or challenge would create a cooperative environment whereas for Homer-Dixon such scarcity would generate conflicts. This dichotomy of

two divergent perspectives thus resulted in the creation of two different and contending schools of thought. The first school which draws their argument from Toynbee is represented by the writings of Sandra I.Postel, and Aaron T.Wolf. This group is sanguine about the peaceful resolution of water disputes.

Their claim is based on certain arguments. Firstly, it is argued that there exist almost 3600 water treaties at different levels, and nearly all of the disputed parties to water conflicts of one form or another have either managed to reach an agreement or is in the process of charting a strategy to manage waters (Priscoli and Wolf 2008). Egypt-Sudan in 1959 over the Nile, Indian-Pakistan in 1960 over Indus, Thailand-Vietnam, Lao Peoples Democratic Republic-Cambodia in 1995 over the Mekong, the eleven co-riparian countries of the Danube River in 1994, India- Bangladesh in 1996 over the Ganges are few of the examples where water disputes have been resolved through cooperative arrangements.

Secondly, most of these treaties remained intact even when the parties to the agreement actually waged war against one another. The functioning of the Indus Water Treaty between India and Pakistan amidst large scale wars between these two nations and the smooth working of the Lebanese water supply system during Lebanese civil wars (Global Water Shortages1999) are cited as solid examples in this regard. Thirdly, Wolf further augments the arguments in hand by arguing that historical water disputes have never turned violent and that water war is strategically irrational, hydrographically ineffective and economically not viable (Chakraborty and Serageldin 2004). Fourthly, it is opined that increase in a number of water dispute's resolution mechanisms, the expanding international law of waters and positive role of third parties in the resolution of water disputes have left no room for the water war thesis (Wolf 1998). Owing to the aforementioned reasons, some of the analysts from Swedish Water House echoed that, "the loudest alarmist calls for future "water wars" have died away" (Brennan 2008, 10).

Conclusion

This paper discussed the basic premises of the water war thesis. The water war thesis argued that the implications of climate change had affected the water supply. Such water supply has experienced serious scarcity in the region where the effects of climate change are more visible and where water supply was already scarce. The water supply was further put to pressure by the burgeoning population of human species demanding more water supply for agrarian, industrial and domestic uses. The demand supply-gap has resulted in water crises. Such water crises are more pronounced in the regions where water supply was already, for example, the Middle East, South Asia, and Central Asia.

The effects of climate change had its toll on rainfall patterns and water supply from rivers, and streams. Coupled with the ballooning population, the water scarcity was propelled to alarming levels. In order to meet the rising need of the population within their boundaries, the thirsty states have already resorted to minor violent acts for the time. However, as planet earth falls to the grip of further water scarcity, water-related would snowball into larger conflict and will ultimately result in water wars. Such a narrative of the water war thesis is questioned by the contending group, which states that water scarcity doesn't necessarily breed violence. Instead, while relying on actual data from history and contemporary water governance and water haring practices, water scarcity is argued to result in water cooperation instead of conflict.
In a word, the question of whether the future war would be fought over waters or not is a simple one. It is not as it has been predicted by either group. Both history and present are replete with examples of cooperation and conflict over waters. Whether thirsty states will go to war or will wage peace instead will depend on the willpower of the steering machinery of the thirsty states. Kofi Annan, nine months later after his first statement mentioned above had to announce that, "but the water problems of our world need not be only a cause of tension: They can also be a catalyst for cooperation…if we work together, a secure and sustainable water future can be ours" (Priscoli and Wolf 2008, 9).

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