

# Water Insecurity in the Middle East: a Cause for Conflict or Cooperation?

Written by Mesrob Kassemajian

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<https://www.e-ir.info/2010/11/19/water-insecurity-in-the-middle-east-a-cause-for-conflict-or-cooperation/>

MESROB KASSEMDJIAN, NOV 19 2010

In this article, I shall investigate the extent to which water scarcity has contributed to insecurity in the Middle East. In order to do so, I shall first briefly outline some of the other factors which cause insecurity in the region. I feel it is necessary to at least identify these factors in order to place the water issue into context adequately. Then, I will draw attention to some global trends, which have affected the region and discuss the relationship of water to state sovereignty. Following that, I will analyse in detail, how water can be seen as a divisive substance within the region. Then, I will consider the potential for water to be an issue over which states can cooperate by using International Relations theories. And finally, I will assert a possible region-wide endeavour to cope with water scarcity.

### Regional Dynamics

The Middle East is a very complex region with many factors causing states to enter into violent and intractable conflicts. Such factors include the imperial carving up of the region to suit the interests of the European colonial powers, which cut across all kinds of ethnic, religious and tribal lines, creating new artificial, legal borders, and even entirely new states. This had a destabilizing effect on the region, as these new borders were usually not regarded as legitimate.[1] Second, is the creation of the Zionist State of Israel, with the dual outcome of the loss of the Palestinian homeland, and the massive displacement of refugees across the region. Third, and in more recent times, the invasions of Iraq and the deployment of US troops in the Gulf states and Saudi Arabia totally altered the balance of power in the region and inflamed the hearts of many contemporary jihadist's including Osama bin Laden.[2] A fourth, factor would be the region's oil wealth and thus, strategic and economic importance to a hegemonic power, trying to attain a critical leverage over any challenging power. Although, these factors are of the utmost importance, it is beyond the scope of this essay to analyse them any further. It is however, important to always remember the wider political contours of the region if one is to understand the water problem and how to solve it.

The region has been adversely affected by climate change. This has led to the entire Middle East becoming dryer, thus meaning that water volumes, be it in aquifers or river basins, are declining. The aquifers are not being recharged at optimal levels due to a decrease in annual rainfall and because of over-pumping by humans, which has upset the delicate equilibrium of the hydrological cycle. The extent to which this can be reversed is unknown. The region is also experiencing more frequent and longer lasting droughts. The severe water strain is causing the desertification of arable land used for agriculture, which in turn destroys the livelihood of the majority of people in the region. Therefore, water scarcity is steadily affecting food supply. This is a crisis when we combine the issue of a rising population in the region. A larger population will need more water and food resources, which are already at break point. Also, the rising living standards across the region will mean that per capita, there will be more consumer demand for water to be used in daily life. When all three factors are added together the situation looks bleak.[3]

### Water Sovereignty

Water is a contentious issue for states because it does not neatly fit into the legal parameters of a state. The psychological borders of a state cannot usually extend to completely encompass a water system. Hence, water is a trans-boundary resource, unlike, say a diamond mine. Water's natural tendency to flow over and under vast sways of land,

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cutting across state borders, makes it highly difficult and expensive to control and measure. Also, water maybe conceptualized as a zero-sum game, in that, when one party utilizes some, it directly affects the amount left for the other parties. The legal questions over who has rights over water have no consensus as yet. Such questions are, for example, who owns a river that flows within two states. Is it the upstream state where the river begins, or the downstream state where the water ends? Such a fundamental question over water sovereignty is nevertheless very complex once the involved parties have to decide exactly how to split the volume of water they are each entitled to.[4]

## **From the Euphrates to the Nile and the West Bank: the potential for violence**

Therefore, water can be a divisive issue within the region. In order to illustrate this, I shall now consider the politics surrounding the region's most important river basins: firstly, the Tigris and Euphrates. Modern day Turkey has the advantaged position of being the upstream party. This means that Turkey has the power to be able to affect the flow of the rivers into the downstream states, which include such countries as Syria and Iraq, among others. Both these states are highly dependent on the continuous flow of these rivers to irrigate their scarce arable land. Moreover, Turkey has invested heavily into water infra-structure. Its project for utilizing its water is called the Anatolian Project. This includes 66 dams, 60 hydro-electric stations and many drainage and irrigation schemes. Such a vast project significantly hinders the amount of water flowing into the downstream parties thus negatively affecting them both, socially and economically. Since the 1970's, Syria and Iraq had been working together to put political pressure on Turkey to adopt a water sharing arrangement, which would take their needs into account. However, the invasion of Iraq in 2003 has taken Iraq out of the water equation, and consequently made Turkey stronger. Iraq has been left out of water sharing agreements by the other parties.[5] This has had a devastating effect on Iraq. It has seen 36% of its total arable land turn to desert in an irreversible way, which has led to 3.3 million Iraqi's displaced and forced to live on the outskirts of the cities in Latin America-style, shanty towns. Such a situation is very unstable and will cause a lot of resentment within Iraq and may perpetuate the internal conflict for longer.[6]

The second river basin I will reflect on will be the Nile basin. The power make-up in the Nile basin is almost a reversal of the Tigris-Euphrates situation. Egypt is a downstream state. However, it has power relative to the upstream states. This is only due to the extensive investment in water infra-structure that Egypt has carried out, first during colonial rule under Britain, and then pursued independently thereafter.[7] Water security is of vital importance to Egypt because only 5% of its land is viable for agriculture and hospitable to live on, thus making water control a matter of high politics. The upstream parties are east African states with a much more lush landscape relative to most of the Middle East. These states were actually hindered in their development of water works by the British in order to secure Egypt's control. Since independence, they lack the expertise, technology and capital to develop such complex and expensive infrastructure.[8] However, once these states do utilize their water resources and begin to hinder the flow to Egypt, the situation may become very volatile. Egypt has already stated that under the current regime, Egypt would only go to war for water. Without an adequate and enforceable water sharing arrangement, conflict could be inevitable. Already Sudan is experiencing severe water shortages although to what level it is caused by Egypt or climate change is unknown. Sudan's arable land is also very scarce. Therefore, the loss of huge sways of grazing land is a catastrophe. Lakes and wells which have allowed cattle and camel herders to live in peace for hundreds of years have all but dried up, leaving the herders to fight over what is left or lose not just their livelihoods but their entire way of life. The Bedouin camel herders can no longer follow the well known desert routes because the wells they depend on are dry. Thus a conflict for land and water resources has exacerbated the other conflicts in Sudan pushing rival communities to violence.[9]

In respect to the Jordan basin, one must remember that the volumes are much less relative to the Nile or the Tigris-Euphrates. Israel, the water hegemon of the Levant, due to its water infra-structure and high-tech industry is currently experiencing a continual and deepening water crisis. This is a security threat to the sustainability of the State in itself. Thus, it reduces the possibilities for political negotiations with other parties. An example would be the West Bank. The West Bank is relatively rich in water, due to ground water within its three major aquifer systems. These aquifers are the reason why the Israel's internationally condemned settlements continue to expand. A look at the geography would indicate that they are directly positioned to correlate with the high ground on top of the aquifers. Thus the settlements have abundance of water and arable land. Also, from their high latitude on top of the hills they can control the flow of water downward, thus making the Palestinians totally dependent on them for water.[10] The Palestinians

# **Water Insecurity in the Middle East: a Cause for Conflict or Cooperation?**

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have not been allowed to develop their own water infrastructure and the walled settlements are actually separating them from their water and land resources. This shows that a Palestinian State in the West Bank is not a possible option for Israel. Already experiencing a water crisis and unsure future, it cannot give up the rich West Bank, which it feels is vital for its water security. Therefore, the only possible option of a Palestinian State in the West Bank will be a semi-autonomous cluster of unviable cantons with total water dependence on Israel. The Golan Heights also present a political obstacle to negotiations and friendly relations with Israel's neighbouring states. Israel is holding on to the Heights because they are strategically important to protect the Sea of Galilee, which is the main water supply of Israel. Therefore, until water issues can be resolved they are a major source of instability and an obstacle to peace in the region.[11]

Water, although a divisive issue, can also have the potential to foster greater cooperation. It is hopeful that there has not of yet been a water war in recorded history. The closest a war solely fought for water has ever come to materializing was in 1975 when Syria sent her troops to the Syrian-Turkish border in retaliation for Turkey's unilateral decision to fill the Ataturk Dam, significantly harming Syria's economy temporarily.[12] Whereas wars have been fought with water as a factor, it is usually sidelined and as only of secondary importance to the conventional war aims of a state.

## **Conceptualizing Cooperation: International Relations Theories**

However, such a serious pan-regional and common crisis may be the only way that intractable conflicts like the Arab-Israeli conflict, can be alleviated. This concept is consistent with Realism's views of why and how states can cooperate. Realists feel that only in periods of common crisis can states cooperate, although this cooperation will be fragile and temporary. Moreover, when a hegemon exists (in this case a water hegemon) it can drive for greater cooperation and even the institutionalization of cooperation; although, such institutions are inherently designed to work in the interest of the hegemon and directly reflect the balance of power. Other theories are however, more optimistic. Neo-liberals assume that when the mutual gains are apparent and out-weight the gains of going alone, states will act rationally and cooperate for the greater absolute good. Institutionalizing such agreements can help eliminate cheating.[13]

If such a water based institution or regime was created, it might experience what neo-functionalist call the elite socialization process, where representative of differing parties are put in prolonged contact and communication. Also, policies related to water would undoubtedly have a spill over effect into overlapping policies, thus snowballing more cooperation. We can already identify an epistemic community of transnational dimensions advocating cooperation around all the three basins. These communities put forward an alternative to the dominant sanctioned discourse of the farming/military coalition. The alternative is a discourse of water sharing and cooperation in order to live in peace. For Post-structuralism, discourse shapes the minds of people and hence, their social reality and perceived truth.[14] Replacing the dominant discourse however, is not easy. There must be a consensus amongst experts in order to legitimate such a binary and opposing alternative. However, if such a consensus is reached the concept of cooperation, as the only viable way for all parties to survive, would gain authority in the hearts and minds of the people and thus compels political change. Although as of yet such epistemic communities have proved ineffective, they can be said to be resilient and robust as they have survived and continued under such insecurity and conflict. In the case of the Jordan basin, Israel and Jordan have always had a water regime, even when the two states were at war.

## **Overcoming barriers**

For the stability of the greater region, I feel that it is imperative for the Arab-Israeli conflict to be resolved. However, as I mentioned above, water is a significant barrier to developing a just peace without structural violence, which would cripple negotiations from the start and destine them to unravel. Therefore, cooperation between Israel and its neighbours over water could be a source for dampening insecurity. Such cooperation can follow a model similar to the three stage plan put forward by Arie S. Lissar.[15] Stage 1 would call for Israel to reduce its water consumption to the 1992 levels, at which its economy was working perfectly well. This would allow Israel to give the Palestinians over 400 million cubic metre per year (mcm/y) of water. Then series of desalination plants would be built off the cost of

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Gaza to purify, via reverse osmosis, the sea water and contaminated waters of the coastal plane aquifer. Another desalination plant would be built over the rift valley and purify brackish water for Jordan. The desalination option is cheap, costing about 1 dollar per cubic meter and can at least satisfy some irrigation and industrial uses for water. However, it has a quantities' limit and will not work unless the people change their habits. The people of the region have a history of farming and a strong cultural bond to agriculture. Even the Zionist ideology calls for the cultivation of the land, "make the desert bloom".[16] This irrational pursuit of farming takes up approximately 90% of both Israel/Palestine and Jordan's water resources and only give them a return of around 3-5% of their GDP. In contrast, industry which only takes a relatively small amount of water, around 5%, gives a return of around 90 % GDP of both Israel and Jordan. Therefore, it is totally uneconomical to invest in agriculture for either self-sustainability or exporting to the world. The valuable water should be used in high return, low intensity fields such as industry or the high-tech sector. Furthermore, the region should import water rich food, a process known as virtual water. This would be much more effective than growing the food locally, which demands a lot of water.[17] Also, as part of stage 1, Israel should drill the Sinai in cooperation with Egypt. The water underneath the Sinai is fossil water and is hence non-renewable. However, it could last for a significant time, such as a century, if drilled responsibly, enough time to develop new techniques for maximizing water utilization.

Stage 2 would be to cooperate with Lebanon and create a pipeline along the coast, which could send around 1000 mcm/y to Israel alone, with plenty of capacity for other neighbours.[18] Lebanon is relatively rich in water due to its high mountains, which receive a lot of rainfall in the winter. In 2009, while Israel, Syria and Jordan were experiencing severe droughts, Lebanon was experiencing extensive flooding. The waters of Lebanon, however, are simply flowing into the sea and could be responsibly and sustainably harnessed to supply its neighbours, while bringing Lebanon a fair economic return. This however, is not possible as of yet due to the political relations between Lebanon and Israel. Lebanon cannot develop any other water infrastructure due to lack of capital and the paralyzing insecurity of the region.[19] This serves as an example of how common interests in water issues can be negated by other destabilizing factors within the region and would lead one to feel that cooperation in water is not possible without political change first. Although, if the crisis were to become deeper, parties may be willing to negotiate.

Finally, Stage 3 of a plan to developed water cooperation within the Middle East, which might allow for the resuming of Arab-Israeli peace talks more equally-weighted and with a greater chance of success, would be the materialization of Turkey subsidizing the water-scarce Israel/Palestine and Jordan. Turkey is such a super power in water that it may one day rule the entire region. It could pump 5000 mcm/y just to Israel. So far, this has been on hold because Syria is not allowing a pipeline through her territory, because of her ongoing disputes with Israel.[20] This is therefore, another example of other divisive factors in the region which outweigh the water problem.

In conclusion, water resources are at an all time low and decreasing thus making water supplies of the present and future of vital importance. Water in my opinion has the latent potential to immerse the region into even more deadly and intractable conflicts. However, water is not simply an economic resource, but the essential substance for life to exist. Therefore, the whole future sustainability of the region is starting to look endangered. Under such high stakes, maybe water scarcity can be a stabilizing factor in Middle East relations, which could cause concessions from all local parties that could bring about a lasting peace. Although, even if the severely destabilizing Arab-Israeli conflict were solved, the region is still littered with disputes over borders and external hegemonic actors' influences and strategic goals. Therefore, water conflict may destroy the Middle East or water could be one of the easiest factors to solve. If the latter option is realized, then water has the potential to solve some but not all of the Middle East insecurities.

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