Water Wars

Examining the Israeli Water Policy in the Occupied Palestinian Territories

By Lamya Hussain

Palestinian water tanks destroyed by Israeli settlers in Hebron.

tensions over water have continuously been a feature of the Israeli occupation of the Palestinian territories since 1967. They are not unique to the Israeli-Palestinian conflict; rather, the struggle to access clean water is a regional and global phenomenon whereby "water wars" have been the crux of protracted conflict and violence for centuries. Nevertheless, in the case of the Palestinian territories, disputes of water and land take on a specific form that is best understood under the theoretical lens of *settler-colonialism*.[1] At the level of policy and programming, understanding the disparities in access to water across the oPt requires a critical lens to help rectify the conditions which are leading to forced displacement, de-development,[2] and chronic poverty.

The Palestinian territories are currently disjointed and have been through over four decades of occupation and siege. The fragmenting of the local geography has manipulated the natural landscape of historic Palestine affecting drastically the organic planning of water systems. The building of occupation-related structures, such as the Separation Barrier and illegal settlements, disturbs natural springs and water pathways that historically irrigated hills, valleys, and plateaus across the West Bank. In addition, the Oslo Accords have codified the fragmentation of the oPt by an additional layer of territorial division via the creation of Areas A, B, and C. Amidst all such segregation, Israeli military and civilian planning processes have further disadvantaged the communities of the state of Palestine, and more specifically in recent years.

While the overarching context of occupation and siege remains the primary motivator for Israel to dominate water (and other resources) across the oPt, there are parallel water-based infrastructural stipulations imposed across the various Palestinian communities. This paper will shed light on how water is used as a tool of war and manipulated to impair major productive sectors (mainly the agriculture sector) in order to disenfranchise Palestinians.

Since 1967, water (and access to it) has been an essential tool in Israel's power play in the West Bank. Several studies examining the hydro-political reality of this area have been published, and many researchers, including Sharif el Musa, Tony Allan, Eran Feitelson, and Aaron Wolf, have documented the intersections between water and power. Much has been written about how Palestinians since 1967 have been denied one of their basic human rights, namely the right to clean and drinkable water.[3] Additional studies highlight how Israel continues to enjoy unrestricted access to water – which adds substantially to its public and private sectors – while in contrast, Palestinians are denied the same unrestricted access to their natural resources[4] and have only limited access to emerging water-based technologies such as desalination and wastewater recycling systems. It is documented that Palestinian consumption of water is roughly 79 liters in the West Bank and 91 liters in the Gaza Strip in 2014. Further, it should be noted that both figures are well below the WHO minimum recommended 100 l/c/d. Meanwhile, communities in Area C and Gaza are far more vulnerable and have added restrictions towards accessing water. Consider that in Area C the disjointed water system barely provides 20 l/c/d. However, it is within the details of how a water war exerts itself that one can grasp a concrete picture of the Israeli occupation and settler-colonialism.

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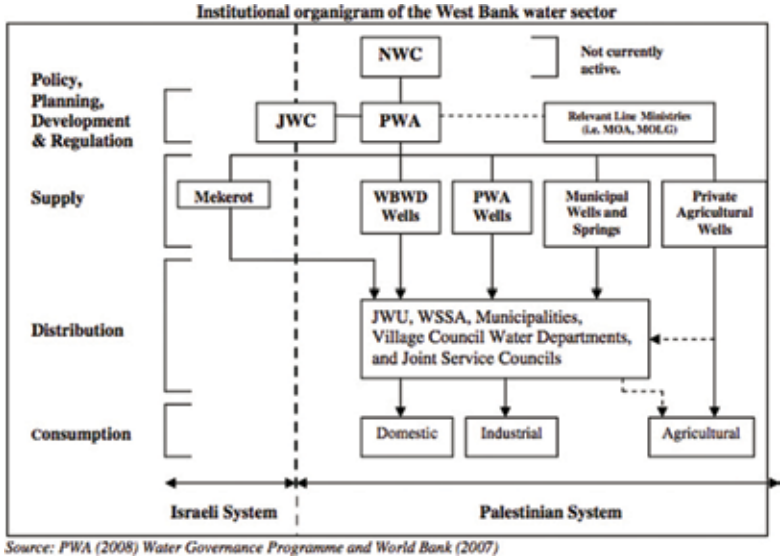


Figure 1: The many actors involved in water services in Palestine (NWC: (Palestinian) National Water Company; JWC: Joint Water Company; PWA: Palestinian Water Authority; MOA: (Palestinian) Ministry of Agriculture; MOLG: (Palestinian) Ministry of Local Government; WBDW: West Bank Water Department; JWU: Jerusalem Water Undertaking; WSSA: Water Supply and Sewage Authority)

Wide sections of the water networks in Gaza were destroyed in the 2014 assault.

Water-induced displacement

Israeli-led planning of both civilian and military areas has been a core feature of its architecture in the oPt. One less-explored area is how water is manipulated to forcibly displace Palestinians from their lands. Consider the case of Area C in the Jordan Valley, where Israel maintains a "heightened" state of occupation and related practices: By disallowing the building of key infrastructure, including water systems, Area C regions are severely limited in their development and struggle with access to key basic services, among them water. Thus, for instance, the (at least) 300,000 Palestinians[5] who live in Area C have irregular access to water and depend on tankers for their water supply. Moreover, in the Jordan Valley, Israel isolates and routinely destroys irrigation projects along Road 90,[6] which has a devastating effect on the farming and herding communities in nearby villages. Israel also denies Palestinians their share of water from the Jordan River that amounts to 250 million cubic meters annually as stipulated by international law for riparian countries (located adjacent to bodies of water),[7] which adds to the de-development of Palestinian livelihoods. There is no doubt that Israel has organized its water networks politically, with its average consumption recorded at 1,300 mcm/y. While Israel places much emphasis on constructing the argument that water is sourced to support its agriculture sector, it should be noted that the share of agriculture in GNP has constantly declined from 11 to 2.6 percent between 1950 and 200[8]. Altogether the agricultural exports have decreased from 60 percent to 2 percent.8 In contrast, the agriculture sector was formerly the backbone of the local economy, whereby the restrictions on water have significantly deduced the sector into a dependent and disjointed area.[9] Despite being the core sector of employment, the agriculture sector to date struggles with access to water, impacting the livelihoods of thousands of farming communities across the oPt.[10] Therefore, it is rather simplistic to contextualize water purely in economic terms, and thus looking at it as a tool of war and displacement provides a new dimension.

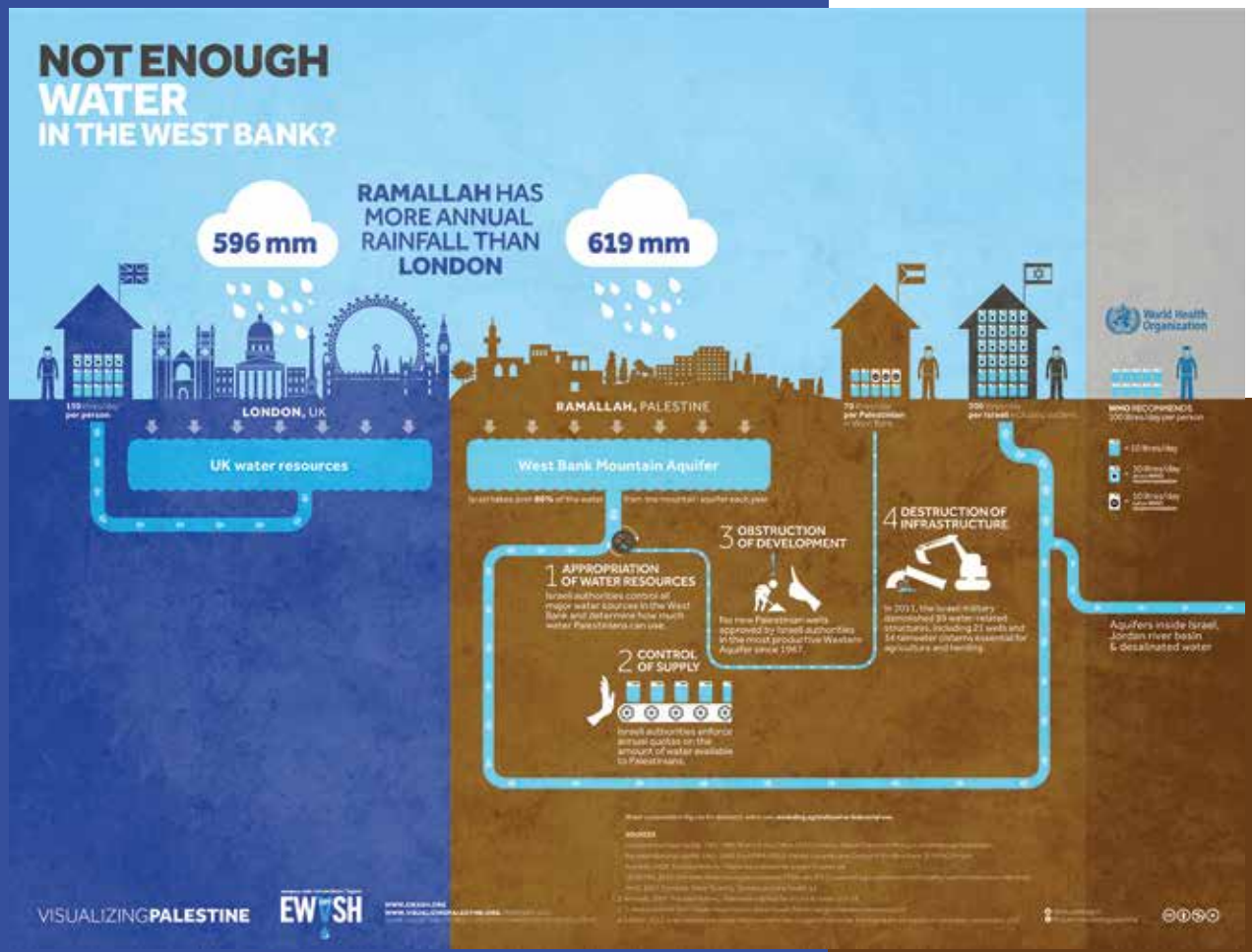
The economics of water

It is important to highlight that indeed the control of water is a means of economically undermining the Palestinian productive sectors. As witnessed across the oPt since 1967, the agriculture sector has suffered substantially under Israeli occupation practices.[11] Similarly, other basic services that are dependent on planning and access to water, among them health and education, also face restrictions and impairment given the barriers towards Palestinian control of natural resources. This is specifically evident in the cases of Area C, East Jerusalem, and Gaza, where poor infrastructure and targeted policies are crippling the local economy and state of social services. In 2009, the World Bank produced a study on water, citing that water expenses amounts to at least 8 percent of the average West Bank household income.[12] Further, the report also highlighted that while the costs are rising, the overall quality is deteriorating drastically given the poor state of existing water-related infrastructure. Various studies have noted that across at least 85 communities water prices have increased by 60 percent since the beginning of the occupation. Moreover, it was documented that before the second Intifada, the average cost ranged between 5 and 10 NIS/m3 and is typically a high of 20 to 25 NIS/m3.[13] In 2003, PCBS documented that the additional costs at the national level via the use of tankered water[14] (instead of networks) are as high as 176.5 million NIS annually.[15] These conditions have ripple effects across other sectors, among them the health sector that is highly concerned about the risks of waterborne diseases, especially in vulnerable Palestinian communities.

Poor environmental practices and water degradation

Consider the erosion of the Jordan River, where unsustainable policies and the overuse of important resources have helped engender a drastic reduction in water levels. These shortages have severely impacted Palestinian farmers

and Bedouin communities, while settlers and settlements continue to be granted far greater access to water networks and subsidies reducing their costs of agricultural operations. An estimated 98 percent decline in the water flow of the Jordan River has been reported over the past four decades.[16] These conditions have also affected the biodiversity of the area, including continual shifts in salinity levels of the Dead Sea, which in turn poses more serious threats to overall groundwater resources in the region. In response, Israel has been pushing toward the development of the Red Sea-Dead Sea Conveyance Project, which seeks to channel water from the Red Sea to the Dead Sea with the aim of rehabilitating the Dead Sea and supplementing the water supply of the Jordan River. The project includes the forging of complex water systems and pipelines that will transport an estimated 2 billion cubic meters annually from the Red Sea to the Dead Sea; it also encompasses a hydropower plant that is designed to generate approximately 850 megawatts of electricity and provide power for a desalination plant to treat an estimated 800–850 million cubic meters of fresh water annually. However, the proposed pipeline is widely contested due to questions regarding its effectiveness and economical feasibility as well as predicted environmental damages to the local community[17] that seriously undermine other sustainable approaches to improving the natural flow of water resources. Interestingly, a World Bank report indicates that both Jordan and Israel profit by approximately US$ 4.2 billion through annual sales of products sourced from Dead Sea minerals,[18] while the Red Sea-Dead Sea project is decisive in regenerating the site toward continued extraction and exploitation of these valuable minerals. It should also be noted that while Israel is championing the pipeline project, it has forbidden Palestinians from making use of the Jordan River since its military occupation of 1967. Moreover, Israeli private-sector companies have contributed to the natural disaster that is threatening the Dead Sea by limiting recharge of water (diverting waters from the Jordan River via the National Water Carrier to the south of Israel since the 1950s) and through overuse of Dead Sea water in the production of potash and methyl-bromide fertilizers on the shore, causing pollution and damage. Other practices have resulted in the devastation of local springs in the Jordan Valley, particularly in the village of Al-Auja, which is a key site for further investigation in order to grasp how water policies have devastated the historic landscape of Palestine.



Conclusion and recommendations

There is a critical need to revise and rectify the damage to water systems across the oPt. To do so, both public- and private-sector agents must work collectively to produce a long-term strategy that combines programming and advocacy in order to challenge Israeli water wars that have negatively impacted the oPt since 1967. *Firstly*, water resources across rural and urban areas must be understood in a contiguous manner. The planning of water infrastructure in rural and urban areas must be harmonized and should be better designed for sustainable and long-term use. The various stakeholders must invest in key opportunities for building on emerging technologies to harvest and recycle water, which is mainly applicable at the urban level, whereas in rural communities desalination and measurements for sustainable use can help increase production in the agriculture sector and support industrial development. *Secondly*, damages to the landscape can be reversed by investing in the local environment and researching techniques to convert non-productive areas into productive sites for key development. *Thirdly*, traditional large-scale infrastructure developments are needed to help improve the state of water and drinking-water quality and

access across areas such as Gaza, Area C, and East Jerusalem. This will help reduce the rising costs of tankered water, and increase access while regulating quality.

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[1] For a definition of settler-colonialism, see Edward Cavanagh and Lorenzo Veracini (2010) at https://settlercolonialstudies.org/about-this-blog/.

[2] De-development as a theory was first coined by Sara Roy in 2001.

[3] Prominent among such reports is "Troubled Waters: How Palestinians are denied fair access to water," *Amnesty International*, 2009, available at https://www.amnestyusa.org/pdf/mde150272009en.pdf.

[4] Ian Black, "Water Under the Bridge: How the Oslo Agreement Robbed the Palestinians," *The Guardian*, February 4, 2013, available at https://www.theguardian.com/world/on-the-middle-east/2013/feb/04/israel-palestinians-water-arafat-abbas.

[5] Amira Hass, "UN Report: 300,000 Palestinians Live in Area C of West Bank," *Haaretz*, March 5, 2014, available at http://www.haaretz.com/israel-news/.premium-1.577997.

[6] Jordan Valley Solidarity, *Water Rights*, 2008, available at http://jordanvalleysolidarity.org/background-info/water-rights-in-the-jordan-valley/.

[7] Camilla Corradin, "Israel: Water as a Tool to Dominate Palestinians," *Al Jazeera Middle East*, June 19, 2016, available at http://www.aljazeera.com/news/2016/06/israel-water-tool-dominate-palestinians-160619062531348.html.

[8] Economy: Sectors of the Israeli Economy. See: http://mfa.gov.il/MFA/AboutIsrael/Economy/Pages/ECONOMY-%20Sectors%20of%20the%20Economy.aspx.

[9] See World Bank Report on Area C and the Future of the Palestinian Economy, http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/01/23/000442464_20140123122135/Rendered/PDF/AUS29220REPLAC0EVISION0January02014.pdf. See also publications by MA'AN Development Center, PARC, etc.

[10] See PCBS data on agriculture and employment between 1980 and 2000.

[11] United Nations Conference on Trade and Development (UNCTAD), *The Besieged Palestinian Agricultural* Sector, 2015, available at http://unctad.org/en/PublicationsLibrary/gdsapp2015d1_en.pdf.

[12] Assessment and Restrictions on Palestinian Water Sector Development, *The World Bank*, 2009, available at http://siteresources.worldbank.org/INTWESTBANKGAZA/Resources/WaterRestrictionsReportJuly2009.pdf.

[13] Water and Sanitation, Hygiene Monitoring Panel (WaSH MP) reports, such as "Water for Life: Continued Israeli Assault on Palestinian Water, Sanitation and Hygiene during the Intifada" (2005), available at http://phg.org/wash-mp/index.asp?i=39.

[14] The average cubic meter of water via piped networks costs NIS 6 (i.e., $1.60). Meanwhile, tankered water costs NIS 19 (i.e., $5.20). Given high unemployment rates and issues of chronic poverty, the costs of water are relatively higher than most people can afford.

[15] Preliminary calculations from Palestine Economic Research Institute MAS, 2009c (draft).

[16] See also Inventory of Shared Water Resources in Western Asia, *Jordan River Basin*, published by the UN in cooperation with German institutions, available at http://waterinventory.org/surface_water/jordan-river-basin.

[17] Greta Link, "Red Sea – Dead Sea Canal and the Feasibility Study of the World Bank," Global Nature Fund, available at https://www.globalnature.org/bausteine.net/f/8005/RedSea-DeadSeaCanalandFeasibilityStudyoftheWorldBank.pdf?fd=2.

[18] Orhan Niksik, et al., "Area C and the Future of the Palestinian Economy," The World Bank, 2014, available at https://openknowledge.worldbank.org/bitstream/handle/10986/18930/893700PUB0978100Box385270B-00PUBLIC0.pdf?sequence=1.