



Palestinian Water Sector: Status Summary Report

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Severe water shortages and acute water quality problems continue to negatively affect the lives and livelihoods of millions of Palestinians living in the West Bank and Gaza Strip. Rather than caused by environmental factors, both are attributable to the discriminatory water policies and practices Israel has instituted across the occupied Palestinian territory over the last forty five years. Without access to and control over their rightful share of the trans-boundary freshwater resources located in the occupied West Bank, and without an end to Israel's punitive land, air and sea blockade over the Gaza Strip, Palestinians have little hope of improving their current economic situation and no hope of building a sovereign and viable Palestinian state.

1. Overview

a) Water Shortages in the West Bank

Rolling water shortages across the occupied West Bank pose the greatest challenge facing the Palestinian water sector. These shortages affect only Palestinians, and have grown more severe over time as a result of the inequitable allocation of the shared freshwater resources located in the West Bank. In particular, Palestinians are denied their rightful share of water from the underground mountain aquifer – comprising the Eastern, North-Eastern and Western basins – and prevented from accessing a single drop of water from the Jordan River. Both straddle the 1967 border separating the occupied Palestinian territory (oPt) from Israel proper, and as such, both are classified as shared or trans-boundary water resources. While customary international water law calls for all such trans-boundary freshwater resources to be shared “equitably and reasonably,” Israel currently exploits over **90 per cent** of these resources for exclusive Israeli use, including for use in Israeli settlements, and allocates less than **10 per cent** for Palestinian use. As a result, Palestinian water consumption in the West Bank is limited to an average of just **70 liters per capita per day**, below the ‘absolute minimum’ of **100 liters per capita per day** recommended by the World Health Organization, and far below the average of **300 liters per capita per day** in Israel. Moreover, Israel sells to Palestinians part of the water supply – **56MCM in 2010** – allocated to them under the 1995 Interim Agreement.

Al-Fashkha Springs: In spite of the severe limitations it faces as a result of Israel's occupation, and in the absence of a political solution capable of ending Israel's violation of customary international water law, the Palestinian Water Authority (PWA) has put forward a number of project proposals designed to ease the severe water crisis in the West Bank. One of the most important of these is its proposal to develop the Al-Fashkha Springs located along the western shoreline of the Dead Sea. These springs serve as a final southeastern outlet for the Eastern Basin of the underground mountain aquifer, and have an

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estimated annual flow of **100-110 million cubic meters** of brackish water, which runs eastwards towards the Dead Sea. If developed in a responsible and sustainable manner, *they have the potential to offer Palestinians a vital and as yet untapped source of freshwater that will help alleviate some of the chronic water shortages currently affecting southern and central West Bank Palestinian cities* such as Hebron, Ramallah, Bethlehem and Jericho. The PWA has thus developed a series of draft proposals aimed at utilizing the Al-Fashkha Springs, including **a)** drilling 6 to 8 new production wells located along the Nabi Musa Syncline (known locally as the Jericho Syncline), which will provide additional freshwater of approximately *11MCM/y* for domestic use by Palestinians, while reducing the discharge of the Al-Fashkha Springs by no more than 20 to 30 per cent; **b)** the construction of a desalination plant capable of desalinating the brackish water discharge of the Al-Fashkha Springs, as well as purifying the available freshwater, with an initial capacity of approximately *22MCM/y*; **c)** the construction of a new water transportation regime, including new pipes and reservoirs, capable of carrying water from the Al-Fashkha Springs site to Hebron, Ramallah, Jericho, and Bethlehem for domestic purposes, and to Jericho for irrigation purposes.

To date, Israel has repeatedly refused to approve this project.

b) Poor Water Quality in Gaza

Under a land, air and sea blockade, Palestinians living in the Gaza Strip are forced to rely on the underlying portion of the Coastal aquifer as their only water supply. With an estimated annual recharge of 55MCM, the aquifer falls far short of the basic water needs of Gaza's 1.6 million residents. Prevented from utilizing any water from Wadi Gaza, and unable to import additional quantities of water, Gaza's population presently extracts **almost three times** the aquifer's sustainable yearly recharge.

Massive over-pumping has led to increased saline intrusion as seawater from the adjacent Mediterranean enters and contaminates the aquifer, while the infiltration of raw sewage from sewage collection ponds on the surface further adds to the aquifer's rapid deterioration. At its present rate of deterioration, the United Nations estimates that the underlying portion of the coastal aquifer on which the Gaza Strip relies for all its water needs will be unusable by 2016, and irreversibly damaged by 2020.¹

Gaza Desalination: In order to reverse the damage being done to the Coastal aquifer underlying the Gaza Strip, an immediate priority is to dramatically reduce current groundwater abstraction rates. Towards this end, the PWA has adopted a **rolling program of interventions** specifically designed to tackle and reverse Gaza's acute water crisis. This program is structured around a series of staged interventions that include **a)** substantial upgrades to Gaza's domestic water distribution system; **b)** an increase in water imports from Israel; **c)** a substantial increase in Gaza's wastewater treatment capacity matched by accelerated reuse of wastewater; and **d)** the introduction of large scale regional desalination. This latter, the expansion of Gaza's desalination capacity, will involve the immediate introduction of short-term low-volume (STLV) desalination with a combined capacity of *13MCM/y*,

¹ United Nations Country Team in the oPt, *Gaza in 2020: A livable Place?*, August 2012, p.11, retrievable at <http://reliefweb.int/sites/reliefweb.int/files/resources/104094048-Gaza-in-2020-A-livable-place.pdf>.



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followed by the construction of a regional desalination plant, with initial capacity of 55MCM/y, to be located in the middle of Gaza. In the future, extensions to the same site, or the construction of a second plant, will see capacity increase to 130 MCM/y to accommodate growing demand.

This proposal to construct a high volume regional desalination facility in the Gaza Strip was endorsed by the 43-member states of the Union for the Mediterranean (UfM) in June 2011, who unanimously pledged to support the PWA in finding the necessary funding for the project.

2. Using the Joint Water Committee to consolidate illegal Israeli settlements

The Joint Water Committee (JWC) was originally established under the 1995 *Interim Agreements* to oversee all water and wastewater related projects in the West Bank. All projects submitted for JWC approval require joint Palestinian and Israeli agreement. While the rationale for this arrangement was to ensure the joint management and protection of water resources, Israel has used the JWC to veto Palestinian proposed water projects, including the construction of new wells and the drilling of substitute wells, as well as the development of much needed wastewater treatment and sewage networks across the occupied Palestinian territory. The Palestinian Authority has no reciprocal power of veto over water related projects in Israel.

More recently, Israel has begun conditioning JWC approval for urgently needed Palestinian water projects on prior Palestinian approval of water projects benefiting illegal Israeli settlements. This has since become consistent Israeli policy, in effect undermining the JWC by reducing it to a forum for blackmail. Illegal under international law, Israeli settlements entail the confiscation and colonization of occupied Palestinian land, and diminish prospects for Palestinian statehood. Palestinians will not approve these projects. As a result of Israel's insistence on linking JWC approval for essential Palestinian projects on reciprocal approval for water projects designed to consolidate the presence and facilitate the expansion of illegal Israeli settlements, the JWC has been completely deadlocked for the last two years, while its future remains uncertain.

Moreover, many of the Palestinian water projects that Israel is holding hostage to approval of settlement water projects in the JWC are supported and funded by international donors. These same donors are vocal in their support for the two-state solution, and equally vocal in their condemnation of Israeli settlements as both illegal and contrary to the objective a just and lasting peace based on the establishment of a sovereign and viable Palestinian state. As such, Israel is creating a situation in which donor support for the Palestinian water sector is in danger of running contrary to donor support for the two-state solution.

3. ICA Permits: Prohibiting Palestinian development of Area C

In addition to requiring prior approval from the JWC, all Palestinian water projects located in Area C of the West Bank must also obtain a permit from the Israeli Civil Administration (ICA). Israel thus maintains what is in effect a **double veto** over Palestinian water projects located in Area C. Any Palestinian water infrastructure lacking the required permits is immediately slated for demolition by the Israeli military.

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ICA permits are characterized by long delays and frequent rejections. In particular, Israel uses ICA permits to make it virtually impossible for Palestinians to drill new wells in Area C – where the best water extraction points are located – or to rehabilitate old wells. At present, **32** PWA well applications are awaiting JWC and/or ICA approval, with some of these applications *dating as far back as 1999*. Since 1967, not a single new well has been approved by Israel in the Western Aquifer.

This past year in particular has seen a sharp increase in ICA permit delays, as well as the introduction of new bureaucratic requirements that make it even harder for Palestinians to receive ICA approval for water infrastructure projects located in Area C. Both appear to be the result of a calculated policy on Israel's part to pre-empt and counter growing international condemnation of Israeli policies in Area C. Their objective is to further raise the bar for ICA permit approvals so as to appear to be offering "major concessions" should political pressure be applied on the ICA to modify its permit criteria. Within this context, "concessions" on the part of the ICA would entail restoration of the status quo.

Some of the new requirements recently introduced by the ICA include **a)** requiring that new permit applications be submitted for the rehabilitation of old wells, and construction of substitute wells, even when these wells already possess an ICA permit; **b)** requiring that the PWA pay 'supervision fees' to various ICA departments for being present during work carried out on site; **c)** refusing to allow Palestinian pipe work to be laid along road shoulders, instead requiring that they run through adjacent private agricultural lands; **d)** the introduction of new regulations requiring that roads be at least 12 meters wide when submitting a zoning plan, causing significant problems for many Palestinian towns and villages; **e)** extending special security clearance requirements for pipes 2 to 10 inches in diameter, leading to severe delays and higher fees for contractors.

The net effect of Israel's permit regime in Area C is to reinforce the *status quo* of territorial fragmentation, settlement expansion and resource exploitation in the West Bank, while ensuring that Palestine's water sector remains underdeveloped and inadequate to meet even the most basic water needs of Palestinian communities living in Area C. Not only do these policies lead to the forced displacement of Palestinians who are no longer able to survive under the severe hardships created by Israel's occupation, but they also prevent Palestinians from building essential national infrastructure needed to support a future Palestinian state. In essence, they serve to further Israel's territorial ambitions in the oPt based on the *de facto* annexation of large parts of Area C into Israel proper.

4. Additional supply of water and pricing

Following lengthy discussions between Israel and the Palestinian National Authority (PNA), agreement was reached that Israel will provide an additional 5MCM to the Gaza Strip through the Nahal Oz connection as per its obligations under the 1995 *Interim Agreement*, as well as an additional quantity of 2500 cubic meters per day to Hebron, and 2500 cubic meters per day to Bethlehem upon Palestinian request. Moreover, to break the deadlock in pricing negotiations over these additional quantities, the parties agreed on an **ad hoc temporary price** for these additional quantities only of 3.44 NIS for the Gaza Strip, and 3.5 NIS for Hebron and Bethlehem. This price is to be revisited in due course.



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Despite reaching this agreement, Israel has since tried to condition the supply of these additional quantities of water on updating and increasing the price of all water supplied by Israel to the PNA (56 MCM in 2010), both retroactively and henceforth. This Israeli demand would in effect cost the PNA millions of dollars in retroactive payments, as well as add over 14 Million USD to the PNA's annual water supply bill.

This new Israeli conditionality is clearly meant to leverage the ongoing water crisis in Palestinian areas (itself a result of Israeli measures) in order to extort a higher and unjustified price for water supplied by Israel to the PNA, with dire consequences for the PNA budget and the Palestinian economy. Moving forward, the additional quantities (5 MCM to Gaza Strip through Nahal Oz; 2500 cubic meters per day for Hebron; and 2500 cubic meters per day for Bethlehem) should be supplied by Israel according to the temporary prices agreed, without linking them to ongoing discussions between the parties on supply and pricing of water. In addition, the update of the price of water is but one of many other pending issues.

5. Vetoing development of Palestine's wastewater sector

Of the 30 Palestinian wastewater treatment plants (WWTP's) submitted to the JWC since 1995, only 4 have received Israeli approval. Even with JWC approval, their construction has been repeatedly delayed. Nor did they all receive ICA approval. Today, only one Palestinian wastewater treatment plant is functioning in the West Bank, treating less than 3% of all sewage produced.

Systematically blocking the development of Palestine's wastewater and sanitation sector, Israel has exploited the resultant lack of Palestinian wastewater treatment plants by unilaterally imposing new wastewater arrangements that are patently unfair.

For example, since 1996 Israel has unilaterally deducted over \$US42 million from Palestinian tax revenues (with no prior notification and no accounting of details) for the construction and maintenance of wastewater treatment plants in Israel built to treat and reuse Palestinian wastewater for the exclusive use of Israel's agricultural sector. Palestinians receive no compensation for this lost resource. Today, Israel treats approximately 21% (15MCM) of sewage produced in the West Bank, which flows across the 1967 Green Line. It automatically deducts all costs associated with its treatment from tax monies owed to the Palestinian Authority (PA).

In addition, illegal Israeli settlements continue to be a major source of pollution in the West Bank. In 2009, almost 40% of all sewerage produced in the West Bank, including East Jerusalem, originated from Israeli settlements, many of which dump raw sewage directly into the surrounding environment. Today, illegal Israeli settlements dump approximately 35MCM of untreated sewage each year into the surrounding environment, destroying Palestinian agricultural lands, polluting local water supplies and endangering the health of entire communities.



6. Israeli Unilateralism: Israel's construction of the Nabi Musa Wastewater Treatment Plant

Israel's development of water infrastructure intended to service illegal Israeli settlements in the West Bank only helps to further consolidate and expand its ongoing settlement and colonization of occupied Palestinian land. Not only are such actions in open violation of international law; they prejudice the outcome of negotiations and erode prospects for a viable and sovereign Palestinian state, further diminishing hopes for a negotiated two-state solution.

One such example is Israel's unilateral construction of a wastewater treatment plant in Nabi Musa despite repeated Palestinian objections, and without JWC approval.

The plant is located on 300 dunams of land in Area C, just north of the main road to Jericho. During its initial phase of operation, the Nabi Musa wastewater treatment plant will treat wastewater flowing into Wadi Abu Hindi from East Jerusalem, as well as from a number of Israeli settlements, including Maale Adomin. During its second phase of operation (to commence within 2-3 years), the plant will treat sewage flowing in to Wadi Nar, which Israel intends to divert to the Nabi Musa wastewater treatment plant.

The treated effluent from the new Nabi Musa plant will be diverted for use by illegal Israeli agricultural settlements located in the Northern Dead Sea and Jordan Valley for the purposes of irrigation, further consolidating their presence and facilitating their expansion.

Israel's construction of a wastewater treatment plant in Nabi Musa without prior approval from the JWC:

- a) Serves to consolidate the expansion of illegal Israeli settlements and their colonization of Palestinian land. This includes providing treated wastewater for irrigation in agricultural settlements in the Jordan Valley, servicing settlements in East Jerusalem, and further enabling the incorporation of these settlements into Israel.
- b) Further undermines prospects for Palestinian statehood by both eroding the prospects of Palestinian control over the Jordan Valley, as well as undermining Palestinian attempts to build the infrastructure of a Palestinian state. As such, it runs counter to the international community's support for a negotiated two-state solution.
- c) Openly violates the Oslo II Interim Agreement, and makes a mockery of the JWC, casting yet further doubt on Israel's commitment to existing agreements and genuine cooperation in the water sector.
- d) Undermines Palestinian water rights, taking away a valuable resource which will be used exclusively for Israel's benefit.

The Palestinian Water Authority continues to call for the ownership and operation of the wastewater treatment plant in Nabi Musa to be transferred into Palestinian hands, through transferring the land on which the plant is being built from Area C to Area A.



7. Using Water as a Weapon: Israeli demolitions of Palestinian wells and cisterns

Israel uses water as a weapon to forcibly displace some of the most vulnerable Palestinian communities in the oPt. This includes preventing such communities from harvesting rainwater or accessing freshwater resources on which they have traditionally relied to meet their domestic and agricultural needs. In particular, Israel has escalated its policy of demolishing essential Palestinian water infrastructure, including wells, rainwater harvesting cisterns, and farming irrigation systems.

Palestinian communities that are not connected to any water network are particularly vulnerable, and more often than not the target of demolitions carried out by the Israeli military. The destruction of their traditional water resources makes these communities reliant on expensive tankered water, the costs of which are prohibitive.

A Palestinian family spends on average *8 per cent* of its monthly expenditure on purchasing water, as compared to the worldwide average of *3.5 per cent*. This figure jumps as high as *50 per cent* for those Palestinian families forced to rely on tankered water. In stark contrast, Israeli settlers living illegally in the Jordan Valley pay on average just *0.9 per cent* of their monthly expenditure on water. These same settlers are allocated 18 more water than the per capita amount allocated to Palestinians.

In 2011 alone, Israel demolished 46 Palestinian rainwater-harvesting cisterns, preventing Palestinians from even collecting rainwater. A further 31 Palestinian wells primarily used for agricultural and residential use have been destroyed over the last two years up to September 2012.