



# Factsheet: Water in the West Bank



Ein Samia

## Why is water so crucial in the region?

Water is key to survival. Its scarcity in the region makes it a much sought-after commodity, and a major point in the Israeli-Palestinian negotiations. This makes water both a political issue and a humanitarian one, and a heavily discussed topic in the international arena. However, the discussion pool is rife with broad and even conflicting statistics and statements on water.

## So what is the truth about water?

As the two main bodies that interact with the Palestinian side on the issue of water, the Civil Administration and the Israeli Water Authority are the primary Israeli sources of information on water issues. This short brief will provide some basic background facts on the issue, as well as some key information about the situation in the West Bank today.

## Definitions

### Aquifer

A geological formation or structure that stores and /or transmits groundwater, such as to wells and springs.

### Fresh Natural Potable Water

Fresh, clean water from a renewable source such as a lake, spring or aquifer.

### Recycled Water

Water that is purified and recycled from wastewater.

### Desalinated water

Seawater or saline water rendered potable by removing the salt.

### Water available

A portion of water made available within a source - whether it is extracted or not is a separate matter.

### Water consumption

Amount of water consumed. Not to be confused with amount available.



Ein Feshkha (Einot Tzukim)

### **How much water is there in Israel and the West Bank?**

1433 Millions of Cubic Meters (MCM) is the average amount of fresh natural renewable water available between the Jordan River and the Mediterranean Sea – that is to say, in the area covering Israel and the West Bank, not including Gaza (multiannual average of 1993-2009). This figure does not fluctuate much. This water accumulates in lakes, rivers and underground aquifers.

### **How many people are there in Israel and the West Bank?**

According to the National Bureau of Statistics, there are currently 7.8 million people residing in Israel.

Based on an average using the Palestinian Bureau of Statistics and American/Israeli statistical study (Y. Etinger) it is estimated that there are currently 2 million Palestinians residing in the West Bank.

### **How is the water divided?**

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The Mountain Aquifer is a shared water source for Israelis and Palestinians. The multiannual average of water within the aquifer is estimated at 679MCM, according to the Israeli-Palestinian Interim Agreement on the West Bank and the Gaza Strip, signed in Washington, D.C., September 28, 1995. (Due to climate change the current average is estimated at 641MCM).

The allocation of water to the two sides from the Mountain Aquifer is conducted according to Article 40 of the Civil Annex to the Interim Agreement.

The Article gives two guidelines for the amounts of water to which each side is entitled. The first is a guideline for the ‘interim period’, that is to say the period between the agreement (1995) and the next scheduled agreement, which was expected to be 5 years later (2000).

The second gives a guideline for ‘future needs’, which is to say the timeframe beyond the interim period. This guideline allocates more water to the Palestinian side than the first guideline.

Although no follow-up agreement was reached in 2000 and therefore we are still in the ‘interim period’, Israel follows the guidelines pertaining to ‘future needs’, making more water available for the Palestinian side.

## How Much Water are the Palestinians Entitled to According to the Agreement? \_\_\_\_\_

According to the agreement (Article 40) Palestinians are entitled to 196 MCM of self-extracted water per year, plus an additional 31 MCM that Israel needs to actively supply from its own water and with its own infrastructure.

Combined, the Agreement states that the Palestinians in the West Bank are entitled to an availability of 227 MCM of water.

## How much fresh water do Palestinians really have available? \_\_\_\_\_

In reality, West Bank Palestinians have access to over 248 MCM of fresh natural water. This is because Israel supplies an extra 21 MCM beyond its obligation. (2010 figure). Adding to this, approximately 17MCM of water is extracted through unapproved wells from the Northern and Western Basins, against the Interim Agreement and at Israel's expense (because the water current naturally flows towards the Israeli side).

This gives us a per capita sum of 124 m<sup>3</sup>/year without counting unapproved extraction (based on 2010 census).

In comparison, Israel's per capita sum of fresh natural water is 150 m<sup>3</sup>/year . (2010 census)

## How much do they use? \_\_\_\_\_

Palestinian total consumption for all purposes is about 190 m<sup>3</sup>/year (2010 figure).

The per capita consumption figure (based on 2010 census) is 95 m<sup>3</sup>/year.

The discrepancy between availability and consumption is explained in the FAQ section.

## How Accessible is it? \_\_\_\_\_

In 1967, only 10% of Palestinian households were connected to water infrastructure. Today this figure had risen to 95%.

Palestinian cities in the West Bank currently have better access to water than residents of Amman and Damascus.



Ein Samia

## The Interim Agreement – key points concerning water \_\_\_\_\_

Article 40 of the Interim Agreement provides the guidelines for administration of water between Israelis and Palestinians. It not only dictates how it should be portioned, but also how the joint resource should be managed and what steps should be taken by either side to guarantee water sustainability and coexistence. Leaving aside portioning, as this was discussed above, the key points for management of the resource are as follow:

Some of the key points include:

- Palestinian Water Rights in the West Bank are recognized and shall be negotiated in the Permanent Status Agreement.
- Establishment of a permanent Joint Water Committee (JWC) to deal with all water and sewage related issues in the West Bank. All decisions of the JWC shall be reached by consensus.
- Maintaining the existing quantities of water utilization, while taking into consideration the quantities of additional water for the Palestinians from the Eastern Aquifer.
- Recognition from both sides of the necessity to develop additional water for various uses
- Prevention of the deterioration of water quality in water resources.
- Treating, reusing or properly disposing of all domestic, urban, industrial, and agricultural sewage.
- Existing water and sewage systems shall be operated, maintained and developed in a coordinated manner
- All development of water resources and systems, by either side, shall require the prior approval of the JWC.
- Both sides shall establish Joint Supervision and Enforcement Teams that shall operate in the field to monitor, supervise, and enforce the implementation of Article 40.



Ein Feshkha (Einot Tzukim)

## Some Issues the Israeli Side is Facing

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Breaching of the Interim Agreement by the Palestinians in various ways. For example: The drilling of wells and creation of other water-extraction sources on the Palestinian side without approval by the JWC. This not only breaches the terms of the Agreement, but also endangers the sustainability of the Mountain Aquifer as the wells are built without hydrological and engineering assessment. The JWC does meet regularly, as per the Agreement's instruction, and does approve many new water projects including many new wells on the Palestinian side. Yet, many of these approved wells are not being built, and unapproved, unmonitored wells are being favored instead – despite all the permits for approved wells being already acquired. (see FAQ section for further explanations).

Water theft by the Palestinian side through illegal connections to Israeli water infrastructure (and collateral damage resulting in water spillage).

Water contamination and environmental damage from untreated sewage. The water source for both parties is put at risk by untreated Palestinian sewage flowing through wadis (streams), endangering the underground aquifer and polluting the environment. Of the 52MCM of wastewater generated by the Palestinian population, 17MCM raw sewage flows untreated in the streams and into Israel, contaminating environment and groundwater en route (Israel is then compelled to treat it), 2 MCM is treated at the El Bireh Treatment Plant, and 32.5 remain untreated in the West Bank, contaminating the joint groundwater source. (Israel provides encouragement and support to the Palestinian side in the field of wastewater treatment, including proposals to share Israeli technology and know-how).

Partnership difficulties due to misrepresentation of the situation from the Palestinian side to third parties, which also hampers progress on the ground.

## Some Issues the Palestinian Side is Facing

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Water loss through poor infrastructure and well maintenance. The P.W.A. estimates their total water loss, or 'unaccounted-for-water' (UFW) at 33%. This figure includes both actual loss due to poorly maintained infrastructure, as well as unpaid-for water, used by Palestinian citizens, but for which the Palestinian Authority did not receive payment.

Non-treatment of own wastewater resulting in:

- Contamination of groundwater and pollution of the environment.
- Inability to recycle sewage water and use it for agriculture like the Israeli side, thus reducing the amount of fresh water available for domestic use.

Water contamination and environmental damage from untreated settler wastewater.

19.1 MCM is the total amount of wastewater generated by Israelis residing in the West Bank. Of this, 16.2 MCM is treated in Wastewater Treatment Plants in Israel and the West Bank. 2.2 MCM are partially treated and deposited in cesspits, and 0.7 MCM currently remain untreated, contaminating the joint water source (although plans are underway to address this problem).

Demolition of unapproved wells by the Israeli side. This occurs because of the need to enforce the provisions of the Interim Agreement, and because the Palestinian Water Authority does not fulfill its pledge of removing wells unapproved by the JWC. Since these unmonitored wells can seriously endanger the sustainability of the entire region's main natural water source, the swiftness of their removal is crucial. (As the example of Gaza shows, where the unmonitored drilling of thousands of Palestinian wells after the disengagement destroyed the Gaza Aquifer). Unapproved wells affect Israel, but also Palestinian private owners, whose approved wells suffer from the increased extraction by the unapproved wells.

Corruption within the P.W.A., lack of organization and insufficient funds.

**Do settlers get more water than the Palestinians?**

As Israeli citizens, settlers' water falls within the Israeli allowance allocated by the Interim Agreement. The 350,000 settlers in the West Bank consume 47 MCM/year, which means 134m3/year of fresh natural water per capita. This is lower than the Israeli allowance of 150 m3/year .

**Do settlers 'steal' Palestinian water?**

No. Settler consumption falls within the Israeli allocation, and therefore does not tap into, or affect, the Palestinian allocation. Settlers source their water only from Israeli sources, which includes approved (Israeli) wells in the West Bank and sourcing directly from Israel. The water sourced from Israel amounts to 100MCM in total, of which 52.5 MCM for Palestinian

usage, and 47.5 MCM for settler usage (in addition Palestinians produce 140 MCM/ year themselves) – although in reality settler usage is lower than this, thus leaving more water for the Palestinians.

**Does Israel use Palestinian water?**

No. Israel uses strictly the amount of fresh water allocated by the agreement, and does not tap into Palestinian allocation.

**Does Israel continue its presence in the West Bank as this offers a water advantage?**

No. Israel's consumption from the Mountain Aquifer (and freshwater consumption in general) is distinctly lower than it was in 1967: In 1967, Israelis consumed 504 m3/year per capita (total water consumption of 1411MCM/year) of fresh natural water. In 2009,

Israeli consumption was 137 m3/year per capita (total water consumption of 1040 MCM/year), and this despite a considerable population increase since 1967.

**Does Israel need the West Bank in order to access the underground aquifer?**

No. The aquifer is spread out under both Israel and the West Bank, with the largest part of the aquifer actually lying beneath Israel: 8900 km, while only 5600 lie under the West Bank.

**Does Israel sell water to the Palestinians at inflated prices?**

No. The trade price of water between the Israeli and Palestinian sides was established by the JWC Pricing Protocol in 1998, as 2.6 NIS per cubic meter for the PWA. This is a considerably lower rate than the full real price and also

significantly lower than that paid by Israeli municipalities, both within Israel and the West Bank (the average Israeli Municipality pays 3.86 NIS per cubic meter).

**Is it difficult for Palestinians to drill wells?**

No, and the procedure is identical for Israelis wishing to drill wells. The procedure for drilling wells requires either one or two steps. The first step is to get an approval for the well by the JWC. This applies to both Israelis and Palestinians wishing to drill wells in the West Bank. If the well is located within Areas A or B, Palestinians do not need any further approvals or permits, and can start drilling. If the well is within Area C, both Israelis and Palestinians require a permit from the Civil Administration, which approves and permits 99% of requests.



Ashkelon Desalination Plant

## Does Israel have a lot more water than the Palestinians?

In terms of fresh water, Israel has only marginally more water availability than Palestinians per capita (150 m<sup>3</sup>/year versus 124 m<sup>3</sup>/year). Overall though, Israel does have more water because it developed desalination technology to desalinate saline water. Israel recycles wastewater and uses the clean output for agriculture. The Palestinians do not recycle their wastewater. Israel is happy to share expertise, and is currently providing training in both recycling and desalination to the Palestinian side.

## Palestinian availability is 248 MCM, yet consumption is only 190 MCM. Why the discrepancy?

Although 248 MCM is available, this does not mean that all of it is already extracted from the ground. Part of this water is part of the Palestinian 'future needs', as assessed by the Interim Accords, and in order to access the entire amount, deeper wells would need to be dug. This is postponed due to lack of funding and internal management and decisional issues.

## Why are the Palestinians digging unapproved wells in contradiction to the Water Agreement, but not digging approved ones?

Of 66 Palestinian wells intended for domestic use approved by the

JWC, 24 have not yet been built – despite the fact that there is no legal or other impediment, as all 24 wells hold the appropriate Civil Administration permit. The reason is twofold: the first reason has to do with the direction of the water flow. Water in the Mountain Aquifer flows in two directions, on either side of the mountain range. Some water flows to the west (so towards Israel) and some to the east (towards the West Bank). The approved Palestinian wells are located in areas that flow towards the east. The unapproved wells are all located in areas that flow towards the west. The illegal wells thus cut off the flow before the water can reach Israel. This has an impact on Israeli wells in Israel, as not enough water is reaching them. The second reason has to do with funding. The areas where the water flows naturally towards the east is located in the southern part of the West Bank, and require deeper digging to access the water than in the northern part, where the ground is less deep and thus cheaper to dig. Acquiring additional water through unapproved wells is also cheaper than developing new water through desalination and recycling.

## Is the current rate of consumption sustainable?

No. With population growth, natural water

sources will become insufficient. The Interim Accords state that both sides need to develop new water sources for the future. Israel has developed desalination and water recycling technologies, and is currently sharing its expertise with the Palestinian Water Authority through a series of workshops.



Wastewater Recycling Plant

## Does Israel respect the terms of the Interim Agreement?

Yes, and beyond. You are invited to find out more by visiting us at the Civil Administration, or visiting the Israeli Water Authority website.

## Contact Details

If you would like more information about water or another field within the Civil Administration's activities, please feel free to get in touch or visit us.

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