

Separating the Waters (Part 1)

Clemens Messerschmid, *The Electronic Intifada*, 1 June 2007



View of the separation wall running through Palestinian lands in the West Bank city of Qalqilia, 26 January 2007. (Khaleel Reash/[MaanImages](#))

In 2002 Israel began construction of the so-called separation wall. By the end of July, the first two segments of the wall were completed, comprising a northern section running from Salem to Elkana, 10km south of Qalqiliyah (128 km length), and the "Jerusalem Envelope" between Ramallah and Bethlehem (22 km). A second phase of work was commissioned in January 2003, extending the northern section as far as Tayasir. A of July 2006, 362 km length were completed and another 88 km under construction. Another 253 km are planned, mainly deep fingers into the West Bank, de facto annexing settlement blocks E and S of Jerusalem and E and SE of Qalqiliyah.

The barrier itself consists of a strip of land between 35 and 50 m wide. The edges are defined by concertinas of barbed wire; within lie a series of ditches and observation strips, with patrol roads between them. At the centre stands "the wall" itself, which can reach up to eight metres high. At different points this is either a real wall, or an electronically secured fence, with contact sensors which can be set off by any movement, from minor vibrations to attempts to cut the wire. Additional observation techniques are also being deployed, including cameras, night-vision devices and radar. The overall length of the wall as currently planned is around 700 km, and a per-kilometre construction cost of around 2 million Euros (11 mil NIS/km, *Ha'aretz*, 9 May 2003, 21 December 2006 [1]). Since there are almost no Palestinian wells in the southern West Bank, this article will concentrate in the northern section, which is already largely completed.

Walling off the West Bank

The first section of the wall completed was the northern section between Salem and Elkana. Here the wall runs parallel to the border separating the West Bank and Israel, where the foothills of the major West Bank anticline give way to the Western Coastal Plain. More than 15 Palestinian villages have been cut off from the rest of the West Bank by the first stage of construction, and over 30 villages, together with the cities of Tulkarem and Qalqiliyah, have seen significant tracts of land expropriated.

The area of land that lies along the wall is not just any land. Along with Jericho in the Jordan Valley, it forms the heartland of irrigated agriculture in the West Bank. Thirty-seven percent of the area's agricultural produce comes from the districts of Jenin, Tulkarem and Qalqiliyah. Irrigation is the crucial limiting factor for agriculture in this region. In the year 2000, rain-fed land yielded only 319 tons per square km, where irrigated land produced 6,960 tons, for an economic yield of \$430,000 per square km.

Following the Israeli occupation in 1967, and in the absence of any significant Palestinian industrial sector, a peculiar form of structural dependence emerged, as Palestinian labourers migrated to work inside Israel. This movement was heavily encouraged by Israel at the time. The workers concerned found employment mainly in the construction and agriculture sectors.

However, after the first Gulf War in 1991, a permit system was introduced for Palestinians who wanted to work in Israel, and this process of selective closure was intensified following the Oslo agreements in 1993. Soon, it was only the lucky few who were able to get permission to cross the Green Line in search of work, and the number of Palestinians employed in Israel sank to a fraction of its former level. As a result, Palestinians from the border area were faced with two alternatives: returning to work on their own land, or long-term unemployment. Unemployment in these areas is currently running as high as 77.3 percent. Although these are the best lands in the West Bank, the percentage of the labour force which can actually find work in agriculture is surprisingly small, for only six percent of the available land is presently under irrigation. As a result, the agricultural sector can only absorb 11 percent of the active population, whereas over the West Bank as a whole it employs on average 43 percent. The only way these figures will change for the better is if more water is made available for irrigation.

In hydrological terms, this section of the wall is located within the boundaries of the Western Mountain Aquifer (or Western Aquifer). The recharge area for this ground water basin extends over a large area of the West Bank uplands. The pumping area, however, is confined to a narrow strip of land running parallel to the Green Line itself. Due to the natural groundwater flow conditions, only this narrow strip, which is currently inside the

West Bank, has any significant potential for raising the level of well abstractions from the aquifer in future.

As Figure 1 shows, the Western Aquifer can be divided into three zones, according to production conditions. The Western Aquifer in turn can be divided into two sub-components -- a lower and an upper aquifer. In the eastern zone, only the lower aquifer can be pumped, and this aquifer in any case is only partially saturated at this point, while the upper aquifer here is entirely dry. This zone is therefore defined as having "bad" production conditions. Next to it lies a zone of intermediate quality, which is approximately 5 km wide, and runs directly along the border. Here, both aquifers can be used, although the upper aquifer is still not fully saturated here. It is only to the west of this area, in the zone marked as "good" on the map, that high pumping rates are possible and it is possible for wells to draw on both aquifers, which are now fully saturated and marked by shallow water levels.

To put this in context, we should remember that the Western Aquifer is the single most important groundwater resource in the whole of Israel and Palestine. Current pumping rates are around 360 million cubic metres a year. In dry years, the pumping rate can rise as high as 572 millions cubic metres. As a result, this aquifer alone yields more water than do the two other groundwater basins originating in the West Bank put together. In addition, the Eastern and the North-Eastern Basins exhibit demonstrably less favourable drilling and pumping conditions. The Western Aquifer, however, is more or less perfect: it combines shallow water levels with high pumping rates. As a result, this aquifer has been heavily developed within Israel, mainly during the first decades of the state (the '50s and '60s). In the West Bank, on the other hand, since 1967 the Israeli occupation has more or less completely forbidden any drilling activity by Palestinians. During the period between 1967 and 1990, only 23 wells were drilled by Palestinians in the whole of the West Bank: 20 of these were exclusively for drinking water purposes, and were often under the indirect control of the occupying forces (aka. the West Bank Water Department). As mentioned above, while at Oslo Israel did concede a certain number of new drilling sites to the Palestinians in the Eastern and North-Eastern Aquifer Basins, it refused point blank to countenance any new sites in the Western Aquifer. As a result, all the wells which the Palestinians rely on today in this basin date back to Jordanian times. As a result, use of the Western Aquifer resource is now divided in a particularly unequal way: while in Israel there are approximately 500 strongly flowing deep wells, the Palestinians must make do with just 159 old wells, most of which were designed for irrigation purposes, and which are both less deep and less productive than their Israeli counterparts.

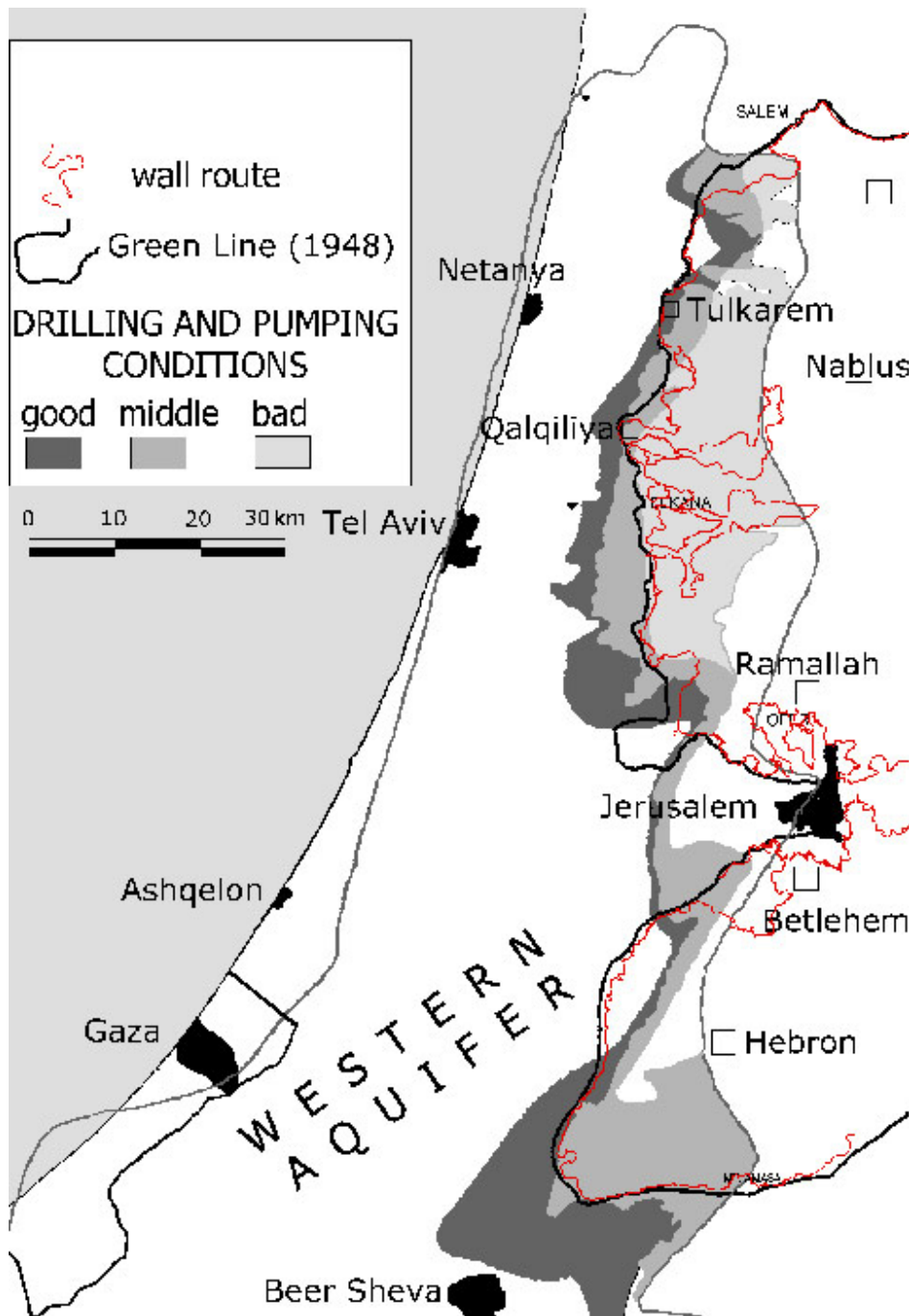


Figure 1

Conflicting interests

Many of the Israeli wells in the Western Aquifer are connected to the Israeli National Water Carrier. As a result, the water they produce is highly mobile and is available for use almost anywhere throughout the whole of Israel. By contrast, many of the Palestinian

villages which sit on top of the aquifer have little or no independent water supply of their own, even though there is water directly under their feet. As a result, they too are obliged to buy from Mekorot (the Israeli National Water Company), even though Mekorot does not grant them equal access, whether in terms of quantities, services or pricing. If the Palestinian inhabitants are to develop this region economically and socially in the future, they will have to be able to draw more heavily on its own ground water resources. This explains why this basin has been the most intensely disputed resource in every round of water negotiations between Israel and Palestine.

Water use: some basic figures

Israel uses approximately two billion cubic metres (2000 million cubic metres) of water a year for drinking, agricultural, commercial and industrial purposes. Depending upon annual rainfall and groundwater yields, around 1,100 - 1,200 cubic metres of this amount will be drawn from wells. Of the rest, most originates as surface water, predominantly from Lake Tiberias (400 - 500 million cubic metres/year).

Of the many groundwater basins that are exploited on an intensive basis, the Western Aquifer and the Israeli Coastal Aquifer have the highest recharge rates, receiving an estimated 360 million cubic metres and 370 million cubic metres a year, respectively. The two other West Bank Aquifers together recharge at a rate of approximately 310 million cubic metres each year. Well extraction runs at approximately 50 percent of the recharge rate.

Taking wells and springs together, the Palestinians in the West Bank control around 138 million cubic metres/year (= 20 percent of West Bank groundwater resources), while the Israelis take approximately 562 million cubic metres (= 80 percent). The 2.3 million Palestinians living in the West Bank thus control 138 million cubic metres, while the 1.2 million inhabitants of Gaza use approximately 100 million cubic metres per year. Overall, these 238 million cubic metres give the 3.5 million Palestinians living in the territories only 11 percent of the total water resources of historic Palestine, while the 6.7 million inhabitants of Israel use a total of 2000 million cubic metres, or 89 percent.

Nowhere is this huge imbalance in distribution so grotesquely unfair as in the Western Aquifer, where Israel takes 93 percent of the available water supply. The Palestinians are left with only seven percent of the total yield (25.67 million cubic metres per year, extracted from 159 wells). Palestinian well production is concentrated in the area around the northern section of the wall, and especially around Tulkarem and Qalqilyah, where an average of 22.19 million m³ is drawn each year from 141 wells (see Figure 2).

When it comes to international law, reallocation of groundwater resources is a delicate matter. While there are strong precedents for the joint management and negotiated allocation of surface water, there are hardly any for the sharing of groundwater resources. While there is no space here to discuss this issue in detail, we should point out that Israel constantly shifts between arguments in this area -- or perhaps it would be more accurate to say that different interest groups (lobbies) within Israel argue in different ways, and take turns to dominate the debate. One frequently used argument refers to the notion of "established water use". However, this approach fails to take into account that there is nothing natural or organic about present patterns of use, which are a direct result of the occupation. Palestinians often refer to the international principle which protects the rights of the upstream riparian party (a principle which is often used to resolve disputes over rivers): this is not surprising, since 90 percent of the natural rainwater recharge of all the shared Aquifers occurs within the West Bank. While Israel itself lies to appeal to this principle in the case of the Jordan River, where it controls the section immediately upstream of the West Bank, it has always flatly rejected any attempt to adapt this argument to apply to the Western Aquifer.

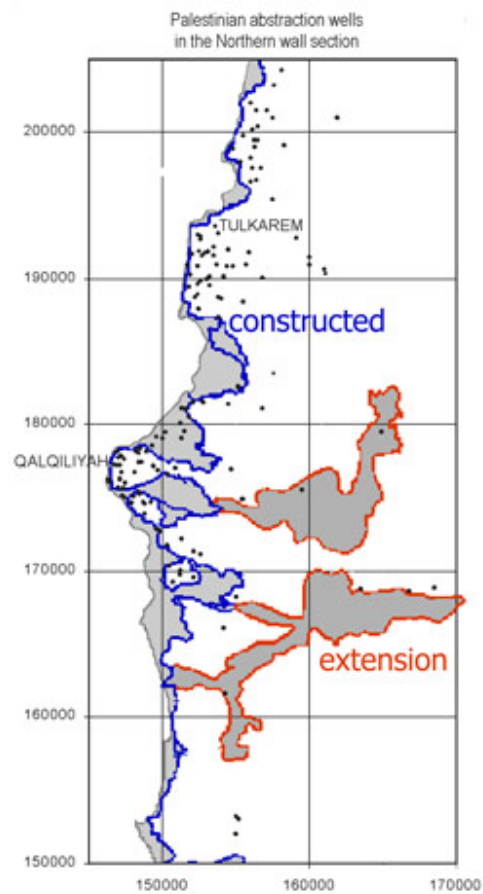


Figure 2

it has always flatly rejected any attempt to adapt this argument to apply to the Western Aquifer.

If the Palestinians are to succeed in obtaining fair access to shared water resources through negotiations, they will not only need to be technically well prepared. They will also need to make sure that the true nature of the separation wall, and what it represents in terms of water access, is internationally acknowledged, so that pressure can be brought to bear on Israel -- most likely, by the mediating powers, who will certainly play a central role in any future resolution of the situation, whether or not the "road map" is finally implemented. It is therefore vital to begin the fight for public opinion today, even though it may be some time yet before serious negotiations are restarted.

The dispute over the Western Aquifer will become even more vital should Israel refuse to take at least part of the responsibility for supplying water to Gaza. Water use in Gaza has long passed the critical threshold: drastic over-pumping has already caused catastrophic effects, harming both the economy and the ecology of the area, damaging the health of the Gazan population and undermining their basic water supply. Should future negotiations force the Palestinians to supply Gaza with water from the West Bank, then the only possible resource which could be used for this purpose will be the Western

Aquifer. For it would make absolutely no sense to pump water from the eastern side of the West Bank, near the Dead Sea, more than 1,000 metres up over the Hebron Mountains, spending billions of dollars on pipelines in the process, when the natural flow conditions of the Western Basin bring the water literally to the front door of Gaza!

For a long time, the Palestinians have been demanding more water, both to drink and to underpin their economic development. Palestine is a long way from being an industrial nation, and there will inevitably be a considerable transition period during which it will have to rely on agriculture. This is especially true for those areas which are close to the Green Line, and where the Israeli closure has brought massive unemployment in its wake. If agricultural development is to happen, water will have to play a key role. This means that when we analyse the effects of the wall, we must not simply focus on the loss of existing land and water resources, we must also be aware of the future development potential that is disappearing with them.

Separating the Waters (Part 2)

A wall of rhetoric

Initially, the wall began life in Israel as the brainchild of the "Left", i.e. the Labour Party and Meretz. It was they who first demanded that the wall be built, and they wanted it built rapidly. This enthusiasm was the sign of a fundamental shift of opinion among liberal-progressive Israelis, who in former times had seen themselves as belonging to the broad peace camp, since the beginning of the second intifada. While there is no single cause for this change, one major reason was the narrative Barak delivered on his return from Camp David in summer 2000, when he rejected any responsibility for the failure of the talks. In doing so, he coined the phrase: "We offered them everything, but they chose violence." For liberal-progressives, therefore, the wall is first and foremost intended as a protective barrier against terrorist attacks. A secondary consequence, which they also see as desirable, is to reduce the number of troops required to put down the intifada. [2] Many of these early supporters thus cling to the illusion that they only need 'enough' wall to ensure that they are no longer exposed to Palestinian suicide attacks inside Israel. Others have even more innocent motives, hoping that it may also bring an end to their army's notorious military operations against the Palestinian civilian population, which has seen soldiers shoot their way through defenceless villages, impoverished refugee camps and historical town centres. It is immaterial that all these expectations remain a bloody illusion, in both senses of the word and for both sides, Israelis as well as Palestinians. To date, many left-liberal Israelis still believe that the wall is an instrument of peace, and support it on that basis.

The settlers, on the other hand, were at first completely opposed to the wall, which they believed was bound to disconnect them from the rest of Israel. [3] In late 2002 and early 2003, however, the Yesha Council (the council and administration apparatus which covers most of the settlements in the West Bank) shifted its position and embraced the

wall campaign. At the same time, they also demanded alterations to its route. Even before the settlers made their demands, the route of the wall did not simply follow the Green Line, but in general ran further to the east, inside the West Bank. Now, however, the wall's route was gradually redesigned so as to incorporate as many settlements as possible on the Israeli side. Blatant annexation replaced any apparent focus on security. At the same time, the planners wanted to annex as few Palestinians as possible: as a result, the line of the wall swings back to the west each time it encounters a Palestinian village, thus separating its inhabitants from their western hinterland. In short: the land is now on the west, and the Palestinians on the east of the wall. The deep meandering curves to be seen on any map of the wall are an eloquent expression of this strategy.

A common complaint of the "moderate" opposition (i.e. those opposition groups who are close to the present government) was that Sharon was always trying to delay the construction of the wall. And indeed, their fears are not perhaps entirely unfounded: for when the wall was first proposed, Sharon did not look kindly on it. The settlements are, after all, his pet project, and his major legacy to history. Like the settlers themselves, he was worried they would find themselves isolated; to his way of thinking, the wall also constituted a dangerous precedent, since it could be seen as a first step to establishing the borders of a future Palestinian state. By thus creating the wrong sorts of 'fact on the ground', the wall could actually end up facilitating an end to the occupation.

However, his attitude changed. Having formed the most right-wing government in Israeli history [4], Sharon found himself under at least some marginal pressure to reopen negotiations, due to the context of the Iraq war. Necessity is the mother of invention: under pressure to accept the road map, he quickly abandoned his hostility to the wall -- not because he now accepted the idea of a Palestinian state, but because he had discovered how to subvert the project so as to make it serve his own purposes.

In an advisory opinion, the International Court of Justice (ICJ) in The Hague ruled on 9 July 2004, that most of the wall, inside the West Bank, constitutes a violation of international law -- "... Israel ... has the obligation to cease the(se) works of construction (and) ... further ... has the obligation to make reparation for the damage caused to all the natural or legal persons concerned."

On 20 July 2004, the General Assembly, in resolution ES-10/15, called on Israel to comply with the legal obligations identified in the ICJ advisory opinion, but the Israeli High Court rejected the ICJ opinion regarding the illegality of the Barrier, holding that the Barrier may be built within the occupied Palestinian territory to protect Israeli settlements.

By this, Israel has turned an apparently defensive structure like a wall or fence into a blatantly offensive device: Israel, by ever expanding the perimeter of the fence, amasses more and more land around its settlements under the pretext of "security and protection",

thus establishing facts on the ground for a silent land grab. For the Israeli public at large, "security and protection" is the almost mythological mantra to justify any measure and silence possible criticism.

The fact, that the barrier by no means is intended as merely a temporal structure, has turned into an open, albeit well-guarded secret inside Israel. In December 2005, Tzipi Livni, then Israel's Justice Minister, attracted angry responses, when she said that the fence would serve as "the future border of the State of Israel." In fact, she said, "by means of its rulings on the separation fence the High Court was sketching the borders of the state." ("State to Court: Fence route has 'political implications,'" *Haaretz*, 14 June 2006, by Yuval Yoaz).

The real agenda is the future

Throughout this process, no one paused to ask the Palestinians their opinion; though their answer, of course, was hardly likely to have been positive. For the northern section of the wall alone, 83 square km of land have been expropriated, including valuable agricultural lands and large parts of the natural hinterland of many villages in the wall strip. Sixteen villages (13,386 people) will find themselves locked into the sort of no-man's-land that is being created west of the wall. Two-hundred-thirty-eight square km of agricultural land have been cut off from the farmers who used to work it. In addition, 53 villages will lose almost 142 square km of farmland to the wall. Furthermore, 8.4 square km of olive groves and orchards have been or will be uprooted. The barren hills the olive trees will leave behind may be an open wound in the land, both for its inhabitants, and from an ecological point of view, but they represent a precious real estate resource for Israel and an unexpected gift to its urban planners, who are looking for ways to alleviate pressure on the densely populated coastal plain. The lands expropriated so far to make way for this one section of the wall alone already constitute two percent of the surface area of the West Bank. And with the loss of this land, many thousands of people have lost their only source of income.

My main concern here, however, is with water. Water is clearly a major issue for both the builders and the victims of the wall. The section built to date between Salem and Alkana has isolated 47 wells (in the area between Tulkarem and Qalqiliyah) on the western side of the wall, where they are either partly or wholly inaccessible to the Palestinian population.

Many Palestinians, as well as many journalists writing in the foreign press, now suspect that it was the conscious intention of the Israelis to incorporate these wells into their territory and take over their production for their own use. However, this argument does not really stand up to close inspection. Indeed, the location, use and technical infrastructure of these wells suggest otherwise:

First of all, the West Bank wells that now lie on the west side of the wall are less deep and less productive than the neighbouring Israeli wells, because they are located in less favourable production areas than their rivals.

Secondly, the quantity of water directly 'annexed' by the wall only comes to some 5 million cubic metres per year in total. If we assume that, as in Gaza, Israel will declare a 1km-wide strip to the east of the wall as a restricted "security" area, then another 60 wells, amounting to some 10.3 million cubic metres in annual yield, would be added to the above figure. Yet even then, these 15 million cubic metres per year only represent four and one-half per cent of the current annual Israeli production rate, and thus lie far below the existing range of seasonal/annual fluctuations in pumping rates, which can extend from dozens up to hundreds of millions of cubic meters. Their potential contribution to Israeli water needs is therefore marginal, at best.

It should not be forgotten that most Palestinian wells were built for irrigation purposes. As a result, and unlike most Israeli wells, they have no underground connection to a water network, which would allow the water to be pumped to more remote areas or fed into the National Water Carrier. Indeed, it is precisely for this technical reason that the Palestinian well owners may well in time abandon the water in these wells completely. Even if the wells can be kept operating on the other side of the wall, they will have no way to get the water out.

Finally, we should remember that Israel does not need the Palestinian wells to access the water they contain. Technically, they can already get at most of these 15 million cubic meters simply by increasing the pumping rates of their own wells to the west of the Green Line. Thus they could extract the water "invisibly", without having to lay a finger on the wells in the West Bank.

For the Palestinians, on the other hand, the annual loss of 5 to 15 million cubic metres is very significant, since it represents between 23 percent and 75 percent of their long-term average production from the Western Aquifer. These losses will therefore be painfully felt, and will drastically reduce agricultural production in villages and towns directly adjacent to the wall.

However, while the present loss is great, the future indirect losses which the wall will cause will be even more drastic. For the loss we need to calculate is not simply the 47 or 107 wells that will be lost this year or next, *but all future well development in this area which has effectively been made impossible, even should there be successful peace negotiations.* The strip of land west of the wall, which will be annexed by Israel *de facto*, coincides with what is, from a hydro-economic point of view, the only area where abstraction from the Western Aquifer could potentially be expanded through future drilling. The areas further to the east are situated on the slopes of the West Bank and fall outside the basin's productive area. In hydro-geological terms, they belong to the transition zone between the recharge area which lies in the mountains and the production zone in the plains below. In the upland areas, the water table is only encountered at great depth, and the groundwater-bearing layers are only partially saturated. Thus, at best, any new wells drilled here would be very weak in flow, and the water level would be liable to

sudden huge drops under operation. *As a result of the wall, then, the Palestinians stand to lose not only three quarters of their present well production from the Western Aquifer, but also the whole of the basin's future potential for groundwater development, which is confined to this narrow productive strip along the Green Line.*

It seems likely, then, that Israeli planners were not so much concerned with annexing present resources when they designed the route of the wall, as they were with expropriating their neighbours' future. Already under Oslo, Israel had shown itself particularly intransigent every time the Western Aquifer came up for discussion. And while the Palestinians managed to obtain drilling permits for additional wells in the Eastern and North-Eastern Aquifer (for a modest total of about 70-80 million cubic metres for the Oslo interim period), Israel always insisted that they should not be allowed to develop even one more drop of water from the Western Aquifer.

By the mid '90s, long before Camp David, Israeli hydrologists had already drawn up so-called "maps of water interests," on which those areas that are now located behind the wall were marked as zones of strategic interest for Israel. It was in these areas that all future Palestinian groundwater development had to be prevented. It is therefore hardly surprising that the route the wall has taken in these areas appears to have been dictated by these maps. Of course, for Israel, there are other strategic factors that have to be taken into account -- the most significant of which is the constant drive to expand the settlements, even though this policy is illegal under international law. Nor is the approach to settlements and water the same. While what matters with the former is their continuous growth, in the water sector, or at least in the Western Aquifer, Israel's main preoccupation would seem to be to maintain the injustices already enshrined in the status quo.

The main water objective of the wall, then, is not to steal a handful of wells, but to prevent any future expansion of Palestinian capacity to mine the Western Aquifer. That is the purpose of the facts on the ground currently being created. Once those facts have been created, they will make it impossible for Palestinian society in the fertile regions along the former Green Line to know any form of development, or even a return to something like their former 'normal' life. Among all the reporting of harassment and the grief of immediate losses, amid all the talk of political and human rights, we should not forget that the Israelis have their eye firmly set on the hydrological and economic future. Even if a political settlement is one day achieved, Israel's annexation of this vital undeveloped resource will continue to undermine the lives and hopes of millions of Palestinians, both now and in generations to come.

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The article was originally published in the German quarterly inamo # 34: "[Israels Mauer und die Wasserressourcen](#)" (2003).

Endnotes

[1] In addition, changes to the already built stretches of the barrier will amount to roughly NIS 900 million, according to Akiva Eldar (*Ha'aretz*, 21 December 2006).

[2] A "leftist" variant of this argument regards the wall as the first step towards a Palestinian state and continues to claim that the numerous deviations from the Green Line eastward are only "microscopic corrections."

[3] This did not worry the original proponents of the wall very much, since they had little sympathy for the settlers.

[4] Sharon's coalition partner, Shinui, which is the legitimate sister of the European Liberal Parties, made no serious attempts to oppose the former Prime Minister's more strictly right-wing ambitions in the Knesset. Thus, for example, part of the responsibility for the extreme intensification of IDF repression in Gaza under Sha'ul Mofaz lies with these "liberal" members of government, who have allowed this process to unfold unopposed.