A4. AMNESTY INTERNATIONAL, "TROUBLED WATERS—PALESTINIANS DENIED FAIR ACCESS TO WATER," LONDON, 27 OCTOBER 2009 (EXCERPTS).

This 112-page report by human rights NGO Amnesty International examines the main patterns and trends affecting Palestinians' access to water in the West Bank and the Gaza Strip, highlighting the extent to which Israel's discriminatory policies affect their rights in this area. Parts of the report not reproduced here include detailed chapters on the water resources available in Israel and the occupied Palestinian territories (OPT), the water crisis in Gaza, water-related expulsions of Palestinians, the effects of military attacks on water resources, and Palestinian mismanagement of water resources. The full report can be found online at www.amnesty.org. Footnotes have been omitted for space considerations.

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The West Bank: Israeli Over-exploitation of Shared Resources

Israel's water consumption stands at some 2,000 to 2,200 MCM/Y [millions of cubic meters per year] for a population of 7 million (some 1,500 MCM is fresh water, with the remainder composed of desalinated seawater and treated wastewater). Most of Israel's fresh water supplies are drawn from the shared groundwater and common surface water resources—more than 400 MCM/Y from the Mountain Aquifer and up to 650 MCM/Y from the diverted Jordan River.

Jordan River

Since Israel occupied the West Bank in 1967, it has denied its Palestinian inhabitants access to the water resources of the Jordan River, preventing them from physically accessing the river banks and diverting the river flow upstream into Lake Kinneret/Tiberias/Sea of Galilee. . . .

Mountain Aquifer

As Palestinians in the West Bank have no access to the Jordan River, the Mountain Aquifer is their only remaining source of water. Israel, on the other hand, has two other main water resources (Lake Kinneret/Tiberias/Sea of Galilee and the Coastal Aquifer).

Even so, Israel limits the amount of water annually available to Palestinians from the Mountain Aquifer to no more than 20 percent, while it has continued to consistently over-extract water for its own usage far in excess of the aquifer's yearly sustainable yield. Moreover, much of Israel's over-extraction is from the Western Aquifer, which provides both the largest quantity and the best quality of all the shared groundwater resources in Israel/OPT. . . .

The World Bank put Israel's extraction from the Western Aquifer in 1999 at 591.6 MCM—that is, 174.6 MCM (or 229.6 MCM according to the Oslo accords figures) in excess of the aquifer's yearly sustainable yield.

Such sustained over-extraction has reduced the aquifer's current yield and future reserves and has caused potentially serious damage to the quality of the water supply for both Israelis and Palestinians. As the Israeli Ministry of Environmental Protection noted, "Overexploitation may lead to a rapid rate of saline water infiltration from surrounding saline water sources." According to the World Bank, "Palestinians have access to one fifth of the resources of the Mountain Aquifer. Palestinians abstract about 20 percent of the "estimated potential" of the aquifers that underlie both the West Bank and Israel. Israel abstracts the balance, and in addition overdraws without JWC [Joint Water Committee] approval on the "estimated potential" by more than 50 percent, up to 1.8 times its share under Oslo. Over-extraction by deep wells combined with reduced recharge has created risks for the aquifers and a decline in water available to Palestinians through shallower wells."

In 2007, according to the World Bank, overall Palestinian water extraction from the Mountain Aquifer in the West Bank was 113.5 MCM (down from 138.2 MCM in 1999), and according to PWA [Palestinian Water Authority] figures, total Palestinian extraction in 2008 was 84 MCM, with the reduction due to operational problems for some wells and a drop in the level of the water table caused by Israeli over-

extraction and low annual rainfall. According to the Israeli authorities, Palestinians also extract some 10 MCM/Y from unlicensed wells and obtain some 3.5 MCM/Y from illegal connections to Israeli water lines in the West Bank.

To boost insufficient supplies, the Palestinians must buy water from Israel—water that Israel extracts from the Mountain Aquifer and which the Palestinians should be able to extract for themselves if Israel were to allow them a more equitable share of the aquifer. In recent years the quantity of water bought by Palestinians from Israel has increased, to some 50 MCM/Y, but this is not enough to match the increase in population in the West Bank, and supplies are often reduced by Israel to the Palestinians (but not to the Israeli settlers in the OPT) during the hot season when needs are greater.

The total amount of water available to Palestinians from these various supplies in recent years has been a maximum of some 170–180 MCM/Y, which reportedly fell to a mere 135 MCM in 2008, for a population of 2.3 million. However, as much as a third (some 34 percent) is lost in leakages due to old and inefficient networks, and these cannot be readily replaced and modernized due to the restrictions on Palestinians' movements and other obstacles imposed by Israel, including the requirement that permits be obtained from the Israeli army for even small development projects. In practice, therefore, Palestinians have access to an average of no more than 60–70 liters per capita per day, and some survive on much less even than this, as little as 10–20 liters per person per day.

Even at an average of 60–70 liters per person per day, the amount of water available to Palestinians is the lowest in the region. While there has been a meager increase in the total amount of water available to Palestinians in the OPT during the more than 40 years of Israeli occupation, the amount available per capita is now less than in 1967 as the Palestinian population has more than doubled since then.

Gaza: Unsafe Water Supplies

The southern end of the Coastal Aquifer is the sole source of water for the 1.5 million Palestinian inhabitants of the Gaza Strip, but it is only one of several sources of water for Israel. Due to the aquifer's east to west flow, the quantity of water extracted in Gaza does not diminish the available yield in Israel; consequently, Israel has not imposed restrictions on Palestinian extraction from the part of this aquifer which underlies Gaza. However, extraction by Israel from this aquifer in the area to the east of Gaza affects the supply available to be extracted in Gaza. As well, most of the water from Wadi Gaza, a stream and surface water source which originates in the Hebron mountains in the West Bank and then flows southeast through Israel and into Gaza, is diverted into a dam in Israel, just before it reaches Gaza. There are no available reliable figures for the annual flow of Wadi Gaza or for the amount collected on the Israeli side.

The yearly sustainable yield of the Coastal Aquifer in Gaza, some 55 MCM, falls far short of the population's needs. Israel does not allow the transfer of water from the Mountain Aquifer in the West Bank to Gaza. (In any case, such transfers would be feasible only if Israel allowed the Palestinian population of the West Bank access to a more equitable share of the Mountain Aquifer, as the current allocation is not sufficient to meet even their own needs.)

With no other source of water available to them, Palestinians in Gaza have long resorted to over-extraction from the Coastal Aquifer, by as much as 80–100 MCM/Y—a rate equivalent to twice the aquifer's yearly sustainable yield. The result has been a marked progressive deterioration in the quality of the water supply, already contaminated by decades of sewage infiltration into the aquifer. Today some 90–95 percent of Gaza's water is polluted and unfit for human consumption.

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Oslo Accords: Institutionalizing Israeli Control of Resources

Contrary to Palestinian expectations, the Oslo accords did not result in greater access for Palestinians to the water resources of the OPT. Even after the establishment of the PWA, up to the present day, Israel's control of the water resources and of most of the land in the OPT has allowed the Palestinians little possibility to develop their water and sanitation sector and to put in place more efficient extraction systems and distribution networks in the OPT.

The Israeli authorities contend that "Water matters, like other civil powers,

have been for some time under the full responsibility of the PA. . . . Jurisdiction over water was transferred [to the PA] completely and on time . . ."

In truth, however, the PA did not acquire control of water resources in the OPT under the Oslo accords. It acquired only the responsibility for managing the supply of the insufficient quantity of water allocated for use by the Palestinian population and for maintaining and repairing a long-neglected water infrastructure that was already in dire need of major repairs. As well, the PA was made responsible for paying the Israeli authorities for half of the water used for domestic purposes by Palestinians in the West Bank, water which Israel extracts from the shared aquifer and sells to the Palestinians.

Under the Oslo accords, the PA was given no authority to make decisions relating to drilling of new wells, or upgrading existing wells, or implementing other water-related projects, and Israel continues to control decision making regarding the amount of water that may be extracted from existing wells and springs in the OPT virtually to the same extent as it did before the Oslo accords.

Thus, the Israeli authorities continue to monitor and control the amount of water extracted from Palestinian wells and springs in the West Bank, and Palestinians are not allowed to drill new wells or rehabilitate existing wells without first obtaining authorization from the Israeli authorities. Such authorization is rarely granted; even when it is, the process is an unduly lengthy and complicated one and the potential for delays and consequent cost increases is high.

As well, the multitude of other restrictions that the Israeli authorities have imposed and maintain on the movement and activities of Palestinians in the OPT have further hindered or prevented the development of the water supply infrastructure and related facilities.

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The Fence/Wall—Barring Access to Water

A 700-kilometer fence/wall that has been under construction by Israel since 2002 has further reduced Palestinian access to water in the West Bank. . . . The route of the fence/wall has been planned in such a way that it prevents access by Palestinians to areas of the West Bank that include some of the best access to water, notably the Western Aquifer. . . .

Water-rich Land Inaccessible

Much of the land that has been cut off from the rest of the West Bank by the fence/wall is among the most fertile and valuable in the West Bank, not least because it has good access to the best fresh water resource, the Western Aquifer.

The Western Aquifer and its recharge area is located mostly in the West Bank, but its best extraction potential is in Israel except for the strip of land within the West Bank to the east of the Green Line, which Israel has effectively appropriated firstly by building illegal settlements and now by building the fence/wall.

Israel does not need this land in order to extract water from the Western Aquifer, as it can and does so very successfully within Israel. By appropriating this land, however, Israel denies the Palestinians access to that part of the West Bank that has the best potential for drawing water from the Western Aquifer. For the Palestinians the loss of this potential for future development of their water resources is as important as their loss of access to the land and wells today.

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Jayyus

An examination of the map showing the line of the fence/wall around Jayyus indicates that its route was determined with land grabbing, rather than "security" considerations, in mind. The fence/wall makes a large loop around the Israeli settlement of Tzofim, itself built on Palestinian land, incorporating an area of Palestinian land ten times the size of the settlement, with a view to expanding the settlement in the future.

Jayyus village, north of Qalqilya, is home to some 3,000 Palestinians whose livelihoods depend on farming, but when the fence/wall was constructed in the area in 2003 it cut off the villagers from two-thirds of their land, amounting to some 9,000 dunams (900 hectares), and all six of the wells that had provided most of the water for the villagers' domestic needs and to irrigate their crops. The loss of access to the wells has had a drastic impact on the lives of the Jayyus villagers. Water consumption in the village dropped to a

mere 23 liters per person per day, far below the minimum level recommended by the [World Health Organization] and less than a tenth of the average daily consumption of Israelis. In the summer, water has had to be rationed to two hours a day, and often villagers have had no water supply at all for days at a time. . . .

Lost Livelihood

Prior to the construction of the fence/wall, Jayyus was known as the food basket of the region. Its land was among the most fertile in the West Bank due to the ready availability of water, and the village produced some 9 million kilograms of fruit and 7 million kilograms of vegetables annually. Today, the level of production has fallen to a fraction of that, and most families are now dependent on international humanitarian aid. When building the fence/wall around Jayyus, the Israeli army uprooted some 4,000 of the Palestinian villagers' trees and bulldozed some 500 dunams (50 hectares) of cultivated land.

Much of the cultivation at Jayyus requires irrigation, so farmers need regular access to their land to water their crops, but due to the fence/wall such access was removed except for those farmers fortunate enough to obtain permits from the Israeli army allowing them to pass through the fence/wall to reach their fields. Yet, even these farmers frequently have had to wait months to obtain such permits or have them renewed, during which time they cannot cultivate their land. Many have lost their harvest, the outcome of months of hard work, because they were not permitted to access their land or water their crops. The number of permits granted by the Israeli army to Jayyus Municipality decreased from 630 in October 2003 to approximately 100 in May 2009. . . .

The residents of Jayyus petitioned the Israeli Supreme Court in 2004, challenging the route of the fence/wall. The Court asked the army to present an alternative route that would not encompass an excessive amount of land around the Israeli settlement of Tzofim. The army took no action to comply for several years, until early 2009 when it moved a small section of the fence/wall. This brought little relief to the villagers, however, as half of the village land and all the village's wells remain on the far side of the fence/wall and most villagers are unable to obtain permits to access them.

Bearing the Cost—Solving the Problems Created by the Fence/Wall

. . . After the army eventually moved a section of the fence/wall in early 2009, the PWA applied to the Israeli army in May for a permit to lay the pipeline beneath it to connect the wells to Jayyus. As this was happening, a new problem arose when the army refused to issue a permit to allow the booster pump to be installed in its planned location because the Israeli authorities have earmarked that area for the expansion of the Tzofim settlement. The army's demand that the booster pump be located elsewhere means that the PWA must identify a new site, convince its owner to sell the land, and obtain funding from international donors to buy the new site, and also obtain a permit from the Israeli army to carry out the work. In practice, however, the PWA may be unable to obtain funding from international donors until it has obtained an Israeli army permit indicating that the work can proceed, yet such permit is unlikely to be granted until the new site for the booster pump has been located and the land purchased. . . .