

Water & Wastewater in Palestine

A Fact Sheet Prepared by the EWaSH Group¹ in Palestine

Water as a human right

“The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses.”

The right to water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights), UN Economic and Social Council, General Comment No. 15 (2002).

- **The majority of Palestinians in the occupied Palestinian territory (oPt) in the West Bank and Gaza Strip (WBGS) do not have access to adequate and sustainable supplies of clean, safe and affordable water. Water supplies, mainly from groundwater sources, are insufficient to meet demand and more people are now surviving on less water.**
- **The average water supply for Palestinians in the West Bank is 63 liters per day (l/c/d) and 140 l/c/d in Gaza (WASH monitoring project survey, 2005).**
- **The problems of inadequate water supplies and under developed infrastructure in the oPt are the cumulative result of years of neglect and under resourcing, particularly during Israel’s occupation of the WBGS from 1967 onwards.**
- **Although the majority of Palestinian households are connected to public water networks, most of these are old and in urgent need of repair, and 37% of rural communities are still not connected.**
- **Between 35-50% of water supplies are lost due to leakages.**

Israeli control of shared water resources

- Central to the problems of diminishing water supplies for Palestinians is Israel’s continuing control over the region’s shared water resources and allocation.
- Following Israel’s occupation of the WBGS in 1967, the Israeli military took control over the oPt’s water resources (through military order No.92), declaring these “state property”, and from then on prohibited the construction of new water infrastructure without Israeli approval. In 1982, control was passed from the Israeli military Civil Administration to Mekorot, the Israeli water company. Following the establishment of the Palestinian Authority (PA) in 1993, the Palestinian Water Authority (PWA) became the official body to regulate and assume overall responsibility for the water resources of the WBGS.
- Israel, the power holder in the region, has managed to violate the Palestinian water rights in the Jordan River Basin. Since the Israeli occupation of the WBGS in 1967, Palestinians have been denied access to the Jordan River waters due to the Israeli restrictions imposed on the water resources and on the use of lands located along the river as they have been declared as closed military areas.
- The Oslo II Accords (signed between Israel and the PLO in 1995) left water rights to be negotiated in a future “final status” solution. Oslo divided control over the shared surface and groundwater sources roughly 90%-10% in Israel’s favor. Israel uses approximately 85% of groundwater resources originating in the WBGS, leaving about 15% of available water for Palestinian use. As noted by Jean Ziegler (July

2003), UN Special Rapporteur on the Right to Food, “It must be ensured that the future State of Palestine has a viable territory and control over its own resources, so that it has the capacity to realize the right to food for the Palestinian population.”

The Joint Water Committee (JWC)

All Palestinian water and wastewater projects in the West Bank are subject to technical approval through the Israeli-Palestinian Joint Water Committee, set up under Oslo II, and its technical sub-committees, as well as the Israeli military Civil Administration, and 11 Israeli government ministries. Decisions are made through consensus, which in effect means that Israel has a veto on Palestinian projects. Around 150 water and sanitation projects are still pending JWC approval for “technical and security reasons”. Only one new Palestinian well project for the Western aquifer has been approved since 1993. Israeli proposals for pipelines supplying water to illegal Israeli settlements in the oPt are not tabled at the JWC.

Water resources

- **Groundwater:** There are four Groundwater basins (North-eastern, Eastern, Western and Coastal aquifers) that are totally or partially located in the WBGS. The largest and most productive is the Western aquifer under the West Bank. 95% of Palestinian water supplies come from groundwater sources (either naturally from springs or extracted from wells). It is estimated that up to 85% of the natural recharge area (where rainfall seeps into and replenishes the groundwater basins) that is shared with Israel is within the oPt (i.e. the rain in the region falls mainly on the hills of the West Bank).
- **Surface water:** Since the 1967 Israeli occupation of WBGS, Palestinians have had no share in the Jordan River basin water resources. The unilateral management actions by the Israelis and even the Jordanians to exploit the Jordan River waters have reduced the flow of the Jordan River and negatively affected the Dead Sea, which is drying up at an alarming rate that is now two separate seas. Among those actions, is the Israeli National Water Carrier that diverts water from Lake Tiberias to Negev Desert. There is no other surface water available to Palestinians except for small seasonal springs and surface run-off in wadis.
- **Rainwater:** Due to increasing shortages of water supplies in the last five years, many rural communities not connected to networks have turned to rain water collection in cisterns, although the amounts collected is minimal since there is only a short winter rainy season (November to March). Many more communities are now forced to rely on local spring water as a major source for domestic supplies in addition to agricultural use where 95% of springs are now contaminated (PWA, 2005).

Water supplies

- Over 50% of water supplies in the oPt is still purchased directly from Mekorot, the Israeli water company, mainly from wells inside the West Bank. Mekorot sells in bulk to the West Bank Water Department (which is now part of the PWA), however Israel controls and limits the amounts sold to the Palestinians.
- Palestinians are charged more than their counterparts in Israel for water: Mekorot charges Israelis NIS 1.8 per cubic metre, compared to an average of NIS 2.5 per cubic metre for Palestinians.
- Inside the WBGS there are great discrepancies in the costs of water amongst Palestinian communities. The Israeli-imposed closure since 2000 has caused high levels of unemployment and increased poverty, which has affected Palestinian households’ ability to pay for water consumption and other utilities. Local

municipalities and village councils, especially in the West Bank, are facing mounting water debts. Often the poorest Palestinian households are affected the most, particularly those that are forced to rely on tankered water during the dry season. According to the WaSH monitoring project, the cost of private tankered water in 290 communities in the West Bank has increased between 100-200% for one cubic meter since the start of the Intifada. Consequently, hundreds of Palestinian households have resorted to illegally connecting their homes to mains supplies. Thousands of old unlicensed wells are also being used, especially in Gaza and the northern West Bank, where water quality cannot be guaranteed. Personal hygiene and health is affected in communities with inadequate supplies and the burden falls on women to cope with running households with minimal water.

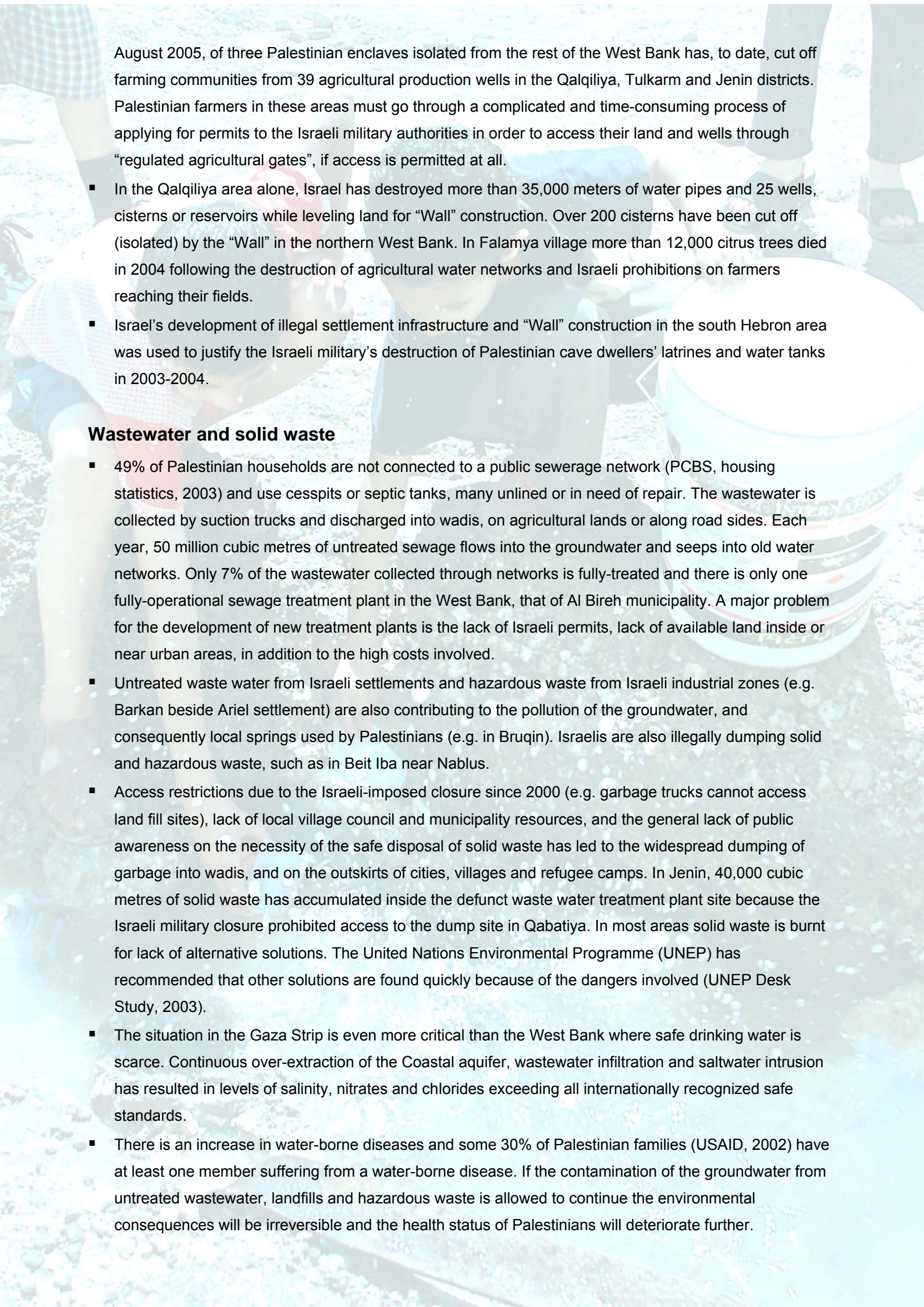
- In order to ensure continuous water supplies to Israeli settlers (particularly in the dry summer months), Mekorot reduces or temporarily cuts-off supplies to Palestinian communities. Some 230,000 Israel settlers in the West Bank enjoy a continuous flow of water and on average consume approximately six times more water than Palestinians. In some areas, Mekorot's main water valves controlling supplies to both Israeli settlers and Palestinian communities are located within or beside Israeli settlements. Supplies to Palestinians are often reduced or cut-off at the whim of local settlers.
- Over the years, old Palestinian agricultural wells have dried up as a result of Israeli drilling and pumping of deeper wells (PWA, 2004).
- Chlorination units are being used to disinfect water supplies from local domestic wells. However, domestic water supplies from springs are usually not chlorinated, and as yet, there is no national monitoring of the quality of water collected in cisterns.

Israeli military occupation, incursions and closure

- Israeli military operations since 2000 in the oPt has caused, in some areas, widespread destruction or damage to water and sanitation infrastructure. The most severely affected areas are Rafa and Beit Hanoun in Gaza and Nablus in the West Bank. In Rafah, the Israeli military destroyed 36kms of water network and 42kms of sewerage network during its incursions in May 2004. The cost of damages to Beit Hanoun municipality's water and sanitation infrastructure during the Israeli military operations in July/August 2004 was estimated at US\$250,000. Israeli military and settler destruction of Palestinian cisterns, springs, wells and rooftop water tanks has been a regular occurrence. The ability to plan maintenance and upgrades to networks is made even more difficult when the PA and the international community's resources are being diverted into repairing these damages rather than maintaining and developing water and sanitation networks.
- The Israeli closure regime and the restrictions on movement since 2000 (curfews, checkpoints, roadblocks, earth mounds, road gates, trenches, etc.) has affected the PWA's ability to consistently monitor and provide reliable data on the quality and quantity of water resources. Maintenance teams en route to repair water and waste water infrastructure have also faced access difficulties and delays as have water tankers trying to reach communities with reduced or no water supplies. Apart from the issue of personal security for Palestinians working under these conditions, the delays and longer distances involved have added to the higher water costs borne by households and local authorities.

The "Wall"

- Water resources have become critical in areas directly affected by Israel's "Wall". The construction of the "Wall" inside the West Bank (or near the 1949 Armistice Line or "Green Line") and the creation, by



August 2005, of three Palestinian enclaves isolated from the rest of the West Bank has, to date, cut off farming communities from 39 agricultural production wells in the Qalqiliya, Tulkarm and Jenin districts. Palestinian farmers in these areas must go through a complicated and time-consuming process of applying for permits to the Israeli military authorities in order to access their land and wells through “regulated agricultural gates”, if access is permitted at all.

- In the Qalqiliya area alone, Israel has destroyed more than 35,000 meters of water pipes and 25 wells, cisterns or reservoirs while leveling land for “Wall” construction. Over 200 cisterns have been cut off (isolated) by the “Wall” in the northern West Bank. In Falameya village more than 12,000 citrus trees died in 2004 following the destruction of agricultural water networks and Israeli prohibitions on farmers reaching their fields.
- Israel’s development of illegal settlement infrastructure and “Wall” construction in the south Hebron area was used to justify the Israeli military’s destruction of Palestinian cave dwellers’ latrines and water tanks in 2003-2004.

Wastewater and solid waste

- 49% of Palestinian households are not connected to a public sewerage network (PCBS, housing statistics, 2003) and use cesspits or septic tanks, many unlined or in need of repair. The wastewater is collected by suction trucks and discharged into wadis, on agricultural lands or along road sides. Each year, 50 million cubic metres of untreated sewage flows into the groundwater and seeps into old water networks. Only 7% of the wastewater collected through networks is fully-treated and there is only one fully-operational sewage treatment plant in the West Bank, that of Al Bireh municipality. A major problem for the development of new treatment plants is the lack of Israeli permits, lack of available land inside or near urban areas, in addition to the high costs involved.
- Untreated waste water from Israeli settlements and hazardous waste from Israeli industrial zones (e.g. Barkan beside Ariel settlement) are also contributing to the pollution of the groundwater, and consequently local springs used by Palestinians (e.g. in Bruqin). Israelis are also illegally dumping solid and hazardous waste, such as in Beit Iba near Nablus.
- Access restrictions due to the Israeli-imposed closure since 2000 (e.g. garbage trucks cannot access land fill sites), lack of local village council and municipality resources, and the general lack of public awareness on the necessity of the safe disposal of solid waste has led to the widespread dumping of garbage into wadis, and on the outskirts of cities, villages and refugee camps. In Jenin, 40,000 cubic metres of solid waste has accumulated inside the defunct waste water treatment plant site because the Israeli military closure prohibited access to the dump site in Qabatiya. In most areas solid waste is burnt for lack of alternative solutions. The United Nations Environmental Programme (UNEP) has recommended that other solutions are found quickly because of the dangers involved (UNEP Desk Study, 2003).
- The situation in the Gaza Strip is even more critical than the West Bank where safe drinking water is scarce. Continuous over-extraction of the Coastal aquifer, wastewater infiltration and saltwater intrusion has resulted in levels of salinity, nitrates and chlorides exceeding all internationally recognized safe standards.
- There is an increase in water-borne diseases and some 30% of Palestinian families (USAID, 2002) have at least one member suffering from a water-borne disease. If the contamination of the groundwater from untreated wastewater, landfills and hazardous waste is allowed to continue the environmental consequences will be irreversible and the health status of Palestinians will deteriorate further.

¹Emergency Water and Sanitation Hygiene group (EWASH)

EWASH was set up in 2002 to help coordinate emergency water supplies, the repair of damaged or destroyed infrastructure, and to identify the communities most in need of water supplies. EWASH is also an information-sharing forum. Some participating organizations are actively involved in the development of sustainable water and wastewater infrastructure. Projects being undertaken by participating organizations include the WaSH monitoring project, the rehabilitation of wells and springs, the repair or construction of household, public and school rainwater collection cisterns, and public awareness campaigns on hygiene and best water practices. The PWA, with the support of donor governments and INGOs, is carrying out a major project to build two main water transmission pipelines in the southern West Bank.

EWASH Participants

Palestinian Hydrology Group (PHG), Palestinian Wastewater Engineers' Group (PWEG), Applied Research Institute- Jerusalem (ARIJ), Oxfam (GB), Action Against Hunger (ACH), GVC, Asamblea de Cooperación por la Paz (ACPP), Care, Caritas, Anera, World Vision, UNRWA, UNDP, UNOCHA. The Palestinian Water Authority (PWA) is an observer in EWASH.



Palestinian Water
Authority

This fact sheet was prepared by the EWASH group and does not necessarily reflect the opinions and policy of individual organizations participating in the forum.