



water &  
economic  
justice

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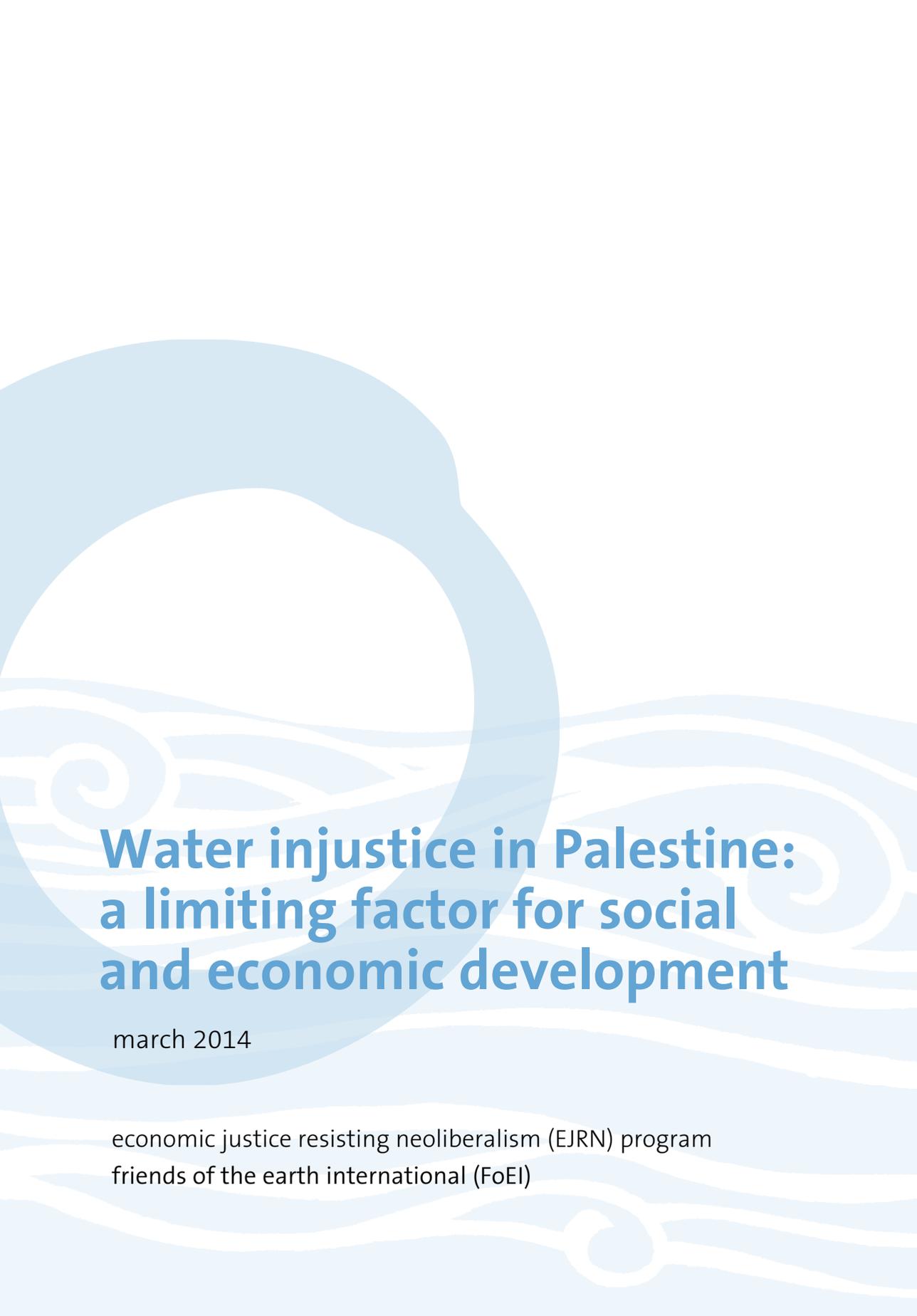
# water injustice in palestine: a limiting factor for social and economic development

march 2014



**Friends of  
the Earth  
International**



The background features a light blue and white color palette. A large, semi-transparent blue circle is positioned on the left side, partially overlapping the text. Below the circle and extending across the bottom are stylized, white-outlined waves that resemble water. The overall aesthetic is clean and modern.

# **Water injustice in Palestine: a limiting factor for social and economic development**

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economic justice resisting neoliberalism (EJRN) program  
friends of the earth international (FoEI)

## water injustice in palestine: a limiting factor for social and economic development

### background

West Bank and Gaza have surface areas of 5572 and 365 km<sup>2</sup> respectively, both enjoying typical Mediterranean climate - dry and hot summers, followed by mild and wet winters. Rainfalls occur only during winter season, which lasts for approximately five months, from November to March, while the average annual rainfall varies from 550-600mm to 400mm per year in the West Bank and Gaza, respectively. The magnitude of renewable groundwater resources in the Occupied Palestinian Territory varies from 640-750 Mcm/year (590-690 Mcm/year in the West Bank and 50-60 Mcm/year in Gaza).

The Jordan River, which accounts for the bulk of the available surface water in the Occupied Palestinian Territory, is not yet accessible to Palestinians. Previous plans such as the amended Johnston Plan from 1955, attempted to distribute the Jordan River's waters among the coastal countries, envisaging the allocation of nearly 200 Mcm/year of those waters to the Palestinians, through the proposed West Ghor Canal. However, this canal was never built due to the [Israeli occupation of the West Bank](#) in 1967.

Furthermore, Israel has been continuously depleting the surface water resources since the mid '50s, especially the head waters of the Jordan River. They diverted water from Lake Tiberias in the north to the Negev desert in the south, through the so-called [National Water Carrier](#). This diversion has caused severe water problems and massive reduction of the Jordan River's flow. The amount that historically flew into the lower Jordan River, reaching the Dead Sea, was nearly 1.1 billion cubic meters per year in 1900, while the current flow barely reaches 50 Mcm, mostly consisting of [sewage water from the Israeli Settlements](#) in the upper Jordan Valley, and the brackish water diverted from the springs around Lake Tiberias into the lower part of the river. The greatest share of that decline in flow has happened since 1960.

As a result, the water level in the Dead Sea drops by 0.8 m every year. Such plummeting in the sea level has led to the development of sinkholes and an increased groundwater flow from surrounding Palestinian aquifers towards the sea, determining a severe drop in groundwater levels.

Consequently, the [Occupied Palestinian Territories](#) (West Bank and Gaza Strip) suffer from structural scarcity of water, amongst other forms of scarcity, given an inequitable distribution of resources, where the majority of water resources are concentrated in the hands of Israel, while the Palestinian population endures significant water deficits.

As the power holder in the region, [Israel has managed to violate Palestinians' water rights systematically](#). Since the establishment of the Armistice Line in 1949, Israel began to impose restrictions on the development of wells in the area under Jordanian administration, specifically in the West Bank area. After the 1967 war, followed by the annexation of the Golan Heights and the occupation of the West Bank, all major Arab water resources, including the Jordan River basin as well as those in the West Bank and Gaza Strip fell under Israel's control.

In sum, the nature of water conflicts between Israel and Palestine span over six main areas:

- the land-water nexus or the control over the hydrospace in Palestinian Territory.
- the misdistribution of water rights over common resources and the resulting water gap between Israeli and Palestinian access to water resources.
- the encroachment by Israeli settlers on Palestinian water resources
- Israel's control of Water institutions, information and legal mechanisms
- out-of-basin water transfers.<sup>1</sup>

### **water for household use**

The total renewable groundwater resources in the West Bank and Gaza are estimated at 722 Mcm per year (not including surface water), however, Palestinians are only allowed to use 250 Mcm / year, while the rest is used by Israel.

The total per capita water use in Palestine averages almost 93 m<sup>3</sup> per year, compared to nearly 244 m<sup>3</sup> per year in neighbouring Jordan and almost 344 m<sup>3</sup> per year in Israel. Meanwhile, the estimated regional per capita water use averages 257 m<sup>3</sup>/year.

Additionally, per capita household water use is estimated at 98 m<sup>3</sup>/c/year in Israel, 56 m<sup>3</sup>/c/year in Jordan, and nearly 34 m<sup>3</sup>/c/year in Palestine (NRC, 1999). The average Palestinian per capita water use for household purposes has been reduced further as a result of the restrictions imposed by Israel. In a best-case scenario, it reaches 70 l/c/d in urban centres, including 40% of wasted water due to leaks. However, the use is much less in Palestinian rural areas that have no access to piped water and still depend on collecting rainwater. Water use per capita per day for all household uses (including domestic agriculture, domestic livestock, and all losses) was less than 30 l/c/d in some communities, and in others even below 15 l/c/d. (PHG, 2004)

It is worth mentioning that this quantity does not reflect the actual water needs of Palestinians, and it is far below the level recommended by the World Health Organization (WHO) of 100 – 250 l/c/d. The restrictions and limitations imposed on Palestinians to access their own resources and develop them have led to severe water use shortages among Palestinian communities.

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1. See Sharif El-Musa, 1996.

Furthermore, the construction of [new Israeli colonies](#) and the expansion of existing ones is further reducing the quantity of water that should be allocated to Palestinians. Currently, there are nearly 260 thousand Israeli settlers in the West Bank, and they use nearly 75 Mcm per year, of which 44 Mcm are pumped from wells drilled in the West Bank. The total daily per capita use of water by settlers is 780 l/c/d, of which 461 l/c/d is from the West Bank. This means each settler uses 4 times more water than a Palestinian (World Bank, 2009).

## water for agriculture and projected water demand

Agriculture used to contribute with 30-35% of the Gross National Product (GNP) and nearly 35% of the labour force in Palestine. However, according to the Palestinian Ministry of Agriculture (2008), this percentage has dropped substantially and its current contribution to GDP has dropped to nearly 8%, representing only the 13.4% of the labour force. At the same time, it uses about 55% of the available water, approximately 123 Mcm in the West Bank and Gaza. This quantity has been shrinking over the past three decades due to restrictions imposed on developing existing resources and the prohibition imposed on Palestinians for the development of non-conventional resources to meet their growing water needs. This, in turn, has affected the agricultural sector as a whole, leading to a general decline in irrigated land.

Moreover, in some places, Palestinian farmers have been forced to purchase water at high prices from the water sources controlled by the [Israeli Water Company](#). This has led to increased production costs for agricultural crops, thus affecting the ability of Palestinian farmers to compete with the heavily subsidized Israeli agriculture, leading to substantial economic losses at farmer and national levels.

Furthermore, there is a big gap between water demand and water use - a problem which is likely to aggravate with population growth and the associated increase in demand. Table 1 summarizes the projected water demand in the West Bank and Gaza until the year 2040.

Table 1: Projected water demand in the West Bank and Gaza until the year 2040.

Year	Population (Million)	Projected Water Demand (Mcm/year)		
		Domestic use & Industry	Agriculture	Total
2000	3.15	196	191.8	387.8
2010	4.95	416	301.5	717.5
2040	9.98	1075	607.8	1682.8

*Note: Population projections are taken from the Palestinian Central Bureau of Statistics (PCBS) census of 1998 and the water demand projections are adjusted from GTZ reports.*

It is worth taking note that the medium and long term water demand will far exceed the available supply in the Occupied Palestinian Territories (West Bank and Gaza), all water sources considered.

## access to piped water

While all Israeli colonies in the West Bank are connected to piped water and many have swimming pools, an estimated 220 communities in the Occupied Palestinian Territories are not serviced through the water network - that is, approximately 15% of the population. The reason why so many communities are not connected to the water supply network is that they have always been denied connection. This injustice and inequity of access to water supply has always been a source of tension, especially when Palestinian villagers see how the pipe leading to an Israeli colony passes through their land without supplying their village with water.

The situation is not that much better for the communities purchasing water from the [Israeli water company Mekorot](#). During summer, water is rationed and supply might be reduced up to 70% in certain places. Some cities, towns and villages may have water only once a week or even once a month.

The daily suffering of Palestinian people still continues. Restriction of movement and access is still the norm. Such restrictions are implemented through the wall and the many checkpoints in the West Bank, and the complete closure of the Gaza Strip. Furthermore, Israeli settlers in the West Bank are confiscating local water sources (especially natural springs) that Palestinians have used for ages, blocking them from using them. This has not only affected the overall well being of the Palestinian people, it also makes it more difficult to access water resources for household use, irrigation and other economic activities.

As a result, many communities are not able to access adequate water supply sources. In communities that rely mainly on water tankers, poor families are particularly vulnerable. With few or no alternative options for purchasing water, a considerable percentage of families don't afford buying water from the tankers.

Restrictions have transformed the villages and towns into large jails or ghettos and caused serious damage to the economy and people's livelihoods. According to the Palestinian Central Bureau of Statistics (PCBS), GDP has dropped by 14.9% since 1999, bringing down by 30% the per capita share of GDP in the same period.

The situation has become particularly critical since the construction of the separation [Wall in the West Bank](#), which draws apart people from each other, people from their land and people from their water sources, jeopardizing their entire livelihoods.

The consequences of the separation Wall on the ground are catastrophic. The western section of the Wall cuts off and confiscates more than 1000 km<sup>2</sup> from the West Bank's most fertile land and water-richest area. It seizes more than 28 groundwater wells that produce 4.5 Mcm per year and supply irrigation water for hundreds of *dunums* in the agricultural areas in Tulkarem and Qalqilia districts.

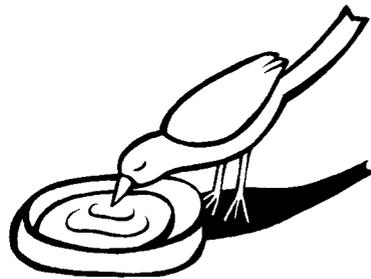
The Wall isolates nearly 6800 Palestinians between the Green Line and its trajectory, leaving them with no access to other parts of the West Bank. Adding injury to insult, they are even required to obtain permissions to stay in their homes and land -permissions that are valid for one year and only for one gate.

## conclusion

Water injustice and inequitable allocation of water to Palestinian people has seriously deteriorated the overall economic and social well being of the people. Reductions in available water quantities and pollution caused by Israeli colonies to the land and local water sources and the aggression of Israeli settlers on local sources have all contributed further to the deterioration of social and economic conditions of the Palestinian communities.

Equitable and wise use of available resources among all people living under the same conditions is the basis for lasting peace. Accordingly, Palestinians must obtain their rightful shares in their resources and be granted full authority to manage their resources properly.

The water sources must be protected and pollution sources eliminated, especially those caused by the Israeli colonies. Palestinians can no longer accept to see the [illegal Israeli colonies](#) using and controlling their water resources and polluting their land, resources and space without being able to prevent such violations.



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↑ The Israeli blockade and closures of the tunnels to Egypt in 2013 has resulted in a severe shortage of fuel in the Gaza Strip. Blackouts ran for almost 12 hours of the day, which has also impacted access to clean water. Photo: Alun McDonald / Oxfam.



→ Om El khair, a Bedouin community in Southern eastern part of Hebron city, West Bank, Palestine. Photo: PENGON - Friends of the Earth Palestine.



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Our vision is of a peaceful and sustainable world based on societies living in harmony with nature. We envision a society of interdependent people living in dignity, wholeness and fulfilment in which equity and human and peoples' rights are realized.

This will be a society built upon peoples' sovereignty and participation. It will be founded on social, economic, gender and environmental justice and free from all forms of domination and exploitation, such as neoliberalism, corporate globalization, neo-colonialism and militarism.

We believe that our children's future will be better because of what we do.

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The full report is available for download at [www.foei.org/water-financialization](http://www.foei.org/water-financialization)

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