



**Title: Water Desalination, Supplied Water Costs, Total Costs and Benefits**

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**Abstract:**

Water supply and sanitation in the Palestinian territories are characterized by severe water shortage and are highly influenced by the Israeli occupation. The water resources of Palestine are fully controlled by Israel and the division of groundwater is subject to provisions in the Oslo II Accord.

The West Bank's main resource of natural water is groundwater from the *Mountain Aquifer*, most of it derived from rainfall and snowmelt on the Palestinian side of the Green Line. Israel abstracts about 80% of it. (World Bank, 2009). In Gaza, the only source of natural fresh water is the *Coastal Aquifer*, which is heavily over-exploited and salinated as the result of seawater intrusion. The development of seawater desalination is hampered by the blockade of the Gaza Strip, which is attended with import restrictions on construction materials and fuel needed for desalination.

Generally, the water quality is considerably worse in the Gaza strip when compared to the West Bank. About a third to half of the delivered water in the Palestinian territories is lost in the distribution network. The lasting blockade of the Gaza Strip and the Gaza War have caused severe damage to the infrastructure in the Gaza Strip. (United Nations, 2009). Concerning wastewater, the existing treatment plants do not have the capacity to treat all of the produced wastewater, causing severe water pollution. The development of the sector highly depends on external financing.

The water sector in the West Bank and Gaza has remained undeveloped over the past forty seven

years of occupation. Since 1967 West Bank water resources have been controlled and managed by the Israeli Military Authority through a number of Military Orders. These orders have barred Palestinians from participating in the planning and management of water resources and prevented them from developing local water resources in concert with growing water needs.

During this time, management of public resources was completely within Israeli domain; decisions were made without Palestinian participation, and with little regard for Palestinian needs and interests. As a result, the Palestinians have developed a distrustful, often non friendly relationship with public authorities. Respect for public goods and public management decisions represented acceptance of our agreement with the Israeli occupation.(Rabi,2009).

The lack of investments in improving infrastructure (physical water losses reach 50% in some areas),(PWA,2011), the scattered nature of the water supply and management utilities with the absence of adequate rules and regulations and absence of stakeholder participation has resulted in the deterioration of the entire water system.