

PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE

Report No.: AB6479

Project Name	GZ-West Bank Wastewater Management Project
Region	MIDDLE EAST AND NORTH AFRICA
Sector	General water, sanitation and flood protection sector (50%); Sanitation (50%)
Project ID	P117449
Borrower(s)	PALESTINIAN AUTHORITY
	Palestine Liberation Organization (for the benefit of the Palestinian Authority) West Bank and Gaza
Implementing Agency	
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Environment Category	[X] A [] B [] C [] FI [] TBD (to be determined)
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I. Key development issues and rationale for Bank involvement

A. Country Context

1. The economic climate in the West Bank and Gaza (WBG) has changed dramatically since the second intifada in 2000, from one driven by investment and private sector led growth, to one sustained mainly by government spending and significant inflows of donor aid, due to continuing restrictions on movement and access by the Government of Israel (GOI). Moreover, the political process has continued to stagnate and there has been little visible progress for a long-term peace settlement. As the economy continues to deteriorate with low investment, its productive base is hollowing out and per capita GDP is declining (by a cumulative 13 percent between 2000 and 2008). Between 1994 and 1999, before the second Intifada, the WBG economy was growing on average at about 6 percent per year. Had this growth trend continued, GDP per capita would be nearly 85 percent higher than it is currently. Although data on poverty are limited, there are clear indications that overall poverty in both the West Bank and Gaza has risen since 2000. The Palestinian Central Board of Statistics reports that poverty rates increased in Gaza from 37.2 percent in 2004 to 55.7 percent in 2007. The poverty rate in the West Bank rose from 19.8 percent to 23.6 percent during the same period. Although there is some evidence that private investment

is beginning to pick up in some sectors, sustainable economic growth remains absent in both the West Bank and Gaza, and the Palestinian Authority remains donor dependent¹.

B. Sectoral and Institutional Context

2. Water is a key economic development and humanitarian issue in West Bank and Gaza. Water is also a prize in the Israeli-Palestinian conflict. In this context, Palestinian water outcomes and rights to water are linked to a defunct Oslo process and to elusive Final Status negotiations. As a result of restrictions accompanying Israeli occupation and obsolescence of the 1995 Oslo II interim accord water provisions, Palestinians cope with one of the lowest per capita water resource availability in MNA². In the West Bank, development of water resources and infrastructure is subject to Israeli veto power under the Joint Water Committee (JWC). In Gaza, it is curtailed by a security blockade. These restrictions, along with weak Palestinian institutions and operators³ and fast demographic growth, perpetuate water supply and sanitation (WSS) infrastructure and service deficits as well as operational inefficiencies⁴. They result in heavy reliance on water trucking, makeshift desalination and other non-potable water supplies, while also increasing dependence on the Israeli bulk water utility Mekorot. The pervasive impacts of this situation are strongest in Gaza, in Area C⁵, and on the poor. The lack of wastewater treatment contributes to widespread aquifer contamination. All the while, planning and regulation of water resources is very weak, and the potential of the irrigation sector remains largely underdeveloped.

3. Key sector issues can be summarized as:

- *Lack of sovereign control over WBG water resources and water infrastructure development*, leading to (i) highly restricted access to water resources (and potential erosion of *Final Status* water rights), (ii) perpetuation of ad-hoc emergency planning as opposed to strategic planning, and (iii) uncertainty and delays in infrastructure project authorization and implementation.
- *Major WSS infrastructure deficits and inefficiencies in the West Bank and in Gaza*, with (i) inadequate and unreliable access to potable water, particularly in Gaza and Area C, (ii) lack of wastewater treatment and reuse, and (iii) uneven reliability, performance and sustainability of WSS operations.
- *Pending environmental and public-health collapse in Gaza*, with 95% of water resources unfit for potable treatment for 1.5m inhabitants, due to saline intrusions and untreated sewage infiltrations.
- *Governance and capacity weaknesses in the Palestinian water sector*, including Palestinian Water Authority (PWA) and municipal service providers, in need of institutional reform, towards clearer roles and accountability, reorganization and capacity building.

4. A pressing environmental and public health issue is that most of the sewage currently runs untreated from the main Palestinian centres of population through populated areas and environmentally sensitive zones. In the case of the Hebron Governorate, the environmental damage that the sewage of Hebron city causes to the eastern aquifer and the communities along the sewage stream in Wadi As-Samen, which runs from Hebron city south towards the green line with Israel, was identified as a serious

¹ *The Underpinnings of the Future Palestinian State: Sustainable Growth and Institutions*. Economic Monitoring Report to the Ad Hoc Liaison Committee, September 21, 2010, The World Bank.

² 75 m³/per capita/year in the West Bank and 125 m³/pca/yr in Gaza (<500m³/pca/yr defines “water stress”).

³ World Bank (2009) *Assessment of Restrictions on Palestinian Water Sector Development*, report 47567-GZ (aka *Water Restrictions Study*)

⁴ Although 90% of the population and 64% of communities have access to a water network, service discontinuity results in average consumptions as low as 50 l/hab/day, dropping to a crippling 15 l/hab/day in some areas. All the while, water loss and bill collection rates hover around 35% and 50% respectively.

⁵ The Oslo Accords divided the West Bank into three administrative divisions. Area A is both controlled and administered by the Palestinian Authority. Area B is controlled by the Israeli Civil Administration, but administered by the PA. Area C is both controlled and administered by the Israeli Civil Administration.

issue as far back as the 1970s. At that time the first plans for a regional solution for the wastewater for Hebron city and the surrounding communities were developed, but not implemented because of lack of funding. More detailed plans for a regional solution for wastewater management in the Hebron Governorate were elaborated within the framework of the West Bank Water Resources Program, (WRP, 2001-2006) coordinated by the PWA and funded by the U.S. Agency for International Development (USAID).

5. Connections to piped sewerage in Hebron Governorate are low overall, at about 31% in 2004. Similarly, the connection rate to piped water networks was about 57% in Hebron and the connection rate continues to be low. The WRP noted that pollution of the eastern-aquifer as a result of untreated sewage was already occurring, and measured elevated nitrate concentrations in some potable water wells. Detailed aquifer modelling showed that the ongoing pollution of the aquifer would lead to serious detrimental effects on the potential of the eastern aquifer to provide safe potable water. Therefore, the WRP developed a plan for addressing regional wastewater management in phases, as part of the “Stormwater, Domestic Wastewater and Industrial Wastewater Masterplan for Hebron” (2001). The first phase would address the immediate needs of treatment and reuse of the sewage stream coming from Hebron city mainly from the existing sewer network, through construction of a Hebron regional WWTP and reuse scheme for reclaimed effluent and biosolids south of Hebron, and in subsequent phases additional communities would be sewered and the wastewater loads treated either in the first-phase Hebron regional wastewater treatment plant, with additional capacity, or in an adjacent plant further downstream, next to the village of Al-Dahriyyeh. Total costs for implementation of these phases would be in excess of US\$ 100 million. The plan and the first phase were approved by the PWA and the JWC, and the Civil Administration issued permits. The design concept for the first-phase regional WWTP was tendered in 2005, under design-build contracting, but as a result of changes in the project portfolio of USAID, the project was cancelled.

6. The treated wastewater from the WWTP is a valuable resource for agricultural reuse in irrigation. This reclaimed water can provide a reliable supply of water and beneficial nutrients for agricultural reuse throughout the year. In West Bank and Gaza, the use of reclaimed water to meet increasing agricultural water demands has been identified as one of the main objectives for the Palestinian water sector in the water sector strategies of the last decade. The total volume of treated wastewater from the main Palestinian cities is around 12.1 MCM/year, but with the exception of the treatment facilities at Al-Bireh, east of Ramallah, the existing treatment facilities of the main Palestinian cities are overloaded, rendering the treated water unsuitable for sustainable agricultural reuse. Therefore, the WRP stipulates that the key policy of the sector in order to make reclaimed water available for agricultural reuse is to concentrate wastewater treatment and collection in regional WWTPs that are located adjacent to agricultural areas. The proposed design and siting of the Hebron WWTP is in line with that policy.

7. In 2005, the Bedouin communities in Israel, in the north of the Negev along Wadi As-Samen, obtained a court order obliging the Israel Water Authority (IWA) to reduce the environmental pollution from the Hebron city sewage running in the wadi. Therefore, the IWA completed a WWTP at Shoket in 2009. This WWTP provides tertiary treatment and is designed in such a way that it would initially treat the wastewater from Wadi As-Samen, but after completion of the Hebron Regional WWTP, the Shoket WWTP would serve a number of currently unsewered communities in the northern Negev. The Government of Israel charged the Palestinian Authority for part of the construction costs of the WWTP, as well as for costs associated with the Management, Operation and Maintenance (MOM) of the sewage originating from Wadi As-Samen. As a result of high concentrations of sawdust from the Hebron marble-cutting industry in the wastewater, the IWA in early 2010 started construction of a pre-treatment facility to remove this sawdust, and it is expected that the Government of Israel will charge the Palestinian Authority also for costs associated with the construction and MOM of these pre-treatment facilities.

C. Relationship to the Interim Strategy for the West Bank and Gaza

8. The proposed project fits well with the Bank's *Interim Strategy for the West Bank and Gaza for the Period FY08 – FY10*, which is still current. The project would directly support the PA's efforts to develop public infrastructure, the fourth pillar in the Interim Strategy. There is also scope for support to private sector development through private sector participation in waste water management and reuse.

II. Proposed objectives

The proposed project would aim to implement the first phase of the waste water management program for Hebron Governorate envisaged in the West Bank Water Resources Program. It has two overall objectives: (i) to reduce the environmental pollution from wastewater produced in the Hebron Governorate; and (ii) to provide a reliable supply of treated effluent and biosolids suitable for reuse in agriculture in the area.

III. Preliminary description

The Project objectives would be achieved through implementation of the first phase of the Hebron Wastewater Master Plan, including: (i) the design, construction and operation of a regional wastewater treatment plant (WWTP) for the Hebron governorate; (ii) the design and construction of facilities for reuse of WWTP effluents and biosolids in agriculture; (iii) capacity building of the organizations in charge of operation and maintenance of the WWTP and the waste water reuse scheme; (iv) establishment and capacity building of a water users association for reuse of treated effluents; (v) establishing a Project Implementation Unit. Beneficiaries would be communities affected by the uncontrolled disposal of raw sewage in the area of Wadi Hebron, the farming communities that would have access to treated waste water in the Hebron Governorate, the PWA and the organization or organizations that will manage the waste water treatment and reuse facilities.

The proposed project would achieve the following key results: (i) secondary treatment⁶ of the current wastewater stream discharged in Wadi As-Samen, and corresponding reduction of nutrient loads in the wadi and infiltrating in the aquifer; (ii) sustainably managed treatment capacity of projected additional wastewater loads; (iii) increase of water availability for irrigating farmers; (iv) a reduction in the annual wastewater treatment charges levied by the Government of Israel to the Palestinian Authority; and (v) increase organic matter on the lands benefiting from treated biosolids applications.

IV. Safeguard policies that might apply

Environmental Assessment (OP 4.01): As per OP 4.01 this project will not require an environmental assessment prior to Board presentation. An EA was carried out by USAID in 2004. This EA will be revised and updated to an Environmental and Social Impact Assessment (ESIA) before Appraisal. The ESIA will cover all project components and comply with the requirements of the Palestinian Authorities as well as the procedures of the World Bank, including Operational Policy 4.01, "Environmental Assessment" and Operational Policy 4.12 on Involuntary Resettlement. Major issues that will be evaluated in the ESIA include (i) construction impacts, (ii) performance standards to be applied for the treatment plant in accordance with the guidelines set forth in the Bank's Pollution Prevention and Abatement Handbook, (iii) re-use of the treated effluent and sludge for irrigation and soil conditioning, (iv) adverse environmental effects if the wastewater system does not perform as planned and designed, (v) existing industrial facilities, types of effluents generated, and potential impacts

⁶ To a standard deemed to be acceptable for wastewater reuse for the irrigation of food crops according to PA regulations.

on the performance of the treatment plant, (vi) quality of the aquifer and surface waters and possible changes as a result of discharges/recharge with treated effluent, (vii) monitoring and control of the operation of the treatment plant, and (viii) adequacy of guidelines for re-use of treated effluent and sludge and (ix) It will include a socio-economic survey to fully identify the scope and potential socio-economic impact of the project including any needs for additional land acquisitions and/or resettlement or related impacts that will require mitigation measures in accordance with op.4.12. on involuntary resettlement.

Involuntary Resettlement (OP 4.12): Op.4.12 applies to the project as it is expected to require the acquisition of land for the construction of the waste water treatment plant under Component 1, and for pipelines and pumping stations associated with the flow of sewage into the plant, and treated effluent for reuse out of the plant, under Component 2. Lands along the alignment of the pipeline may not need to be permanently taken, but construction activities will require owners' consent and may entail permanent or temporary disruption of economic activities and loss of access to assets. Land for the treatment plant was acquired by the Palestinian Authority several years ago. An appropriate resettlement instrument, most likely a Resettlement Action Plan (RAP) will be developed based on an examination of the extent of land acquisition and potential resettlement as identified in the updated ESIA.

V. Tentative financing

Source:	(\$million)
Borrower	0
FRANCE: Govt. of [MOFA and AFD (C2D)]	14 ⁷
Special Financing	10
Other co-financiers (to be identified)	20
Total	44

VI. Contact point

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⁷ Euro ten million equivalent

