

Progress Report

1. Report Summary

- (1) **Title of the Project** : Construction of Sewage Treatment Plant and Main Pressure Line in Khan Younis (PAL10-00047395)
- (2) **Date of the approval** : Jan. 2006
- (3) **Project budget** : US\$14,830,000
- (4) **Scheme of the Project** : Emergency Grant
- (5) **Period covered by the report** : 1 April – 30 June 2010 (Progress Report No. 13)
- (6) **UNDP Officer in charge** : Husam Tubail, Programme Analyst, UNDP/PAPP
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Project Manager : Ashraf A. Shamala, UNDP/PAPP Gaza, Tel: 08-2863364 (ext. 141), Mobile: 059-9606792
- (7) **Name of PA counterpart:** Yousef Haj Yousef, Director of Water and Waste Water Department, Municipality of Khan Younis, mobile: 0599-815541, email: hajyousef@hotmail.com
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2. Contents

(1) Summary of the project:

Background:

Khan Younis City is the second largest city in the Gaza Strip with a total administrative area of 59 km² and is currently inhabited with a population of around 195,000 persons. The City has a rapidly growing population with an annual growth rate of 3.5%. At present, nearly 40% of the population of Khan Younis City is served by public sewerage collection system. However, due to the absence of a wastewater treatment plant, the collected wastewater is pumped without treatment to the existing main storm water box culvert, which in turn flows by gravity to a storm water infiltration pond located in the north-western side of Khan Younis City. The wastewater generated from the un-served areas is still being evacuated by tanker trucks and is disposed without any treatment.

This situation is posing serious risks on the Khan Younis residents' public health as well as contaminating the ground water aquifer. Nitrate levels in municipal supplied water are more than three times of the acceptable WHO level. Recent researches have concluded that such high level of Nitrate is one of the factors that can cause cancer in addition to causing the blue baby phenomenon. Therefore, this project comes as an emergency response aimed at improving the public health of Khan Younis residents as well as contributing to safeguard the environment.

The primary beneficiaries of the project are 195,000 residents of Khan Younis. Other beneficiaries include:

- The families of the unemployed workers who will have the opportunity to work on the project.
- The Khan Younis Municipality, the Coastal Municipal Water Utility and the Palestinian Authority as the project will ultimately contribute to enhancing the provision of water service.

Project Objective:

The project aims at improving the public health and environmental conditions of Khan Younis residents through constructing the first phase of an extendable Waste Water Treatment Plant in Khan Younis, KY WWTP.

Project execution modality:

The project is directly executed by UNDP/PAPP in coordination with the project counterparts: the Water Authority as sector regulator; the Coastal Municipal Water Utility as service provider and the Municipality of Khan Younis as the direct beneficiary.

(2) Project components:

Component	Budget US\$	Project site
a. Construction of the main pressure line	1,000,000	Khan Younis / Eastern Side
b. Carrying out detailed design for an extendable WWTP for Khan Younis Governorate	1,100,000	Khan Younis WWTP sites (east of Khan Younis)
c. Construction of KY WWTP, Phase 1	11,450,000	Khan Younis WWTP sites

(3) Project timeframe, schedule status, progress of activities, and tasks & measures

Indicated output	Activities	Timeframe								Schedule Status	Activities done in the reporting period	Remaining Work	Tasks & Measures
		2009				2010							
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
Output 1: Main Pressure line supplied and installed.	1.1 Installation of 996.3 LM of steel pressure pipes of 24 inches diameter.									Completed as scheduled			
	1.2 Installation of 1070.4 LM of reinforced concrete pipes of 1000 mm diameter.									Completed as scheduled			
	1.3 Construction of 15 reinforced concrete Manholes of 1.5mX1.5 m and 2mX2m dimensions.									Completed as scheduled			
Output 2: Detailed Design for the construction of KY WWTP conducted.	2.1 Issuing an Expression of Interest.									Completed as scheduled			
	2.2 Drafting and posting Request For Proposal (RFP) to the pre qualified consultants.									Completed as Scheduled.			
	2.3 Bidders submitting their technical and financial proposals.									Completed as scheduled with one week extension.			
	2.4 Performing the technical and financial evaluation, CAP report with awarding									Completed with 3 weeks delay.	Technical clarification was sent to the first rank bidder		Consultants' response on technical clarifications has been delayed by 3 weeks due to annual

recommendations.													holidays in the consultant's home office in France
2.5 conducting Pre contract negotiations with the first rank bidder and signing contract									Completed with 2 months delay	Contract was signed by UNDP on the 8 of Oct. 2008 and by the consultant on the 17 of October 2008. Commencing letter was issued by the 23 of October 2008			An online pre contract negotiation was conducted to overcome the difficulties of the physical attendance of the international consultant due to Gaza current security circumstances.
2.6 Preparing the detailed design Inception Report	X								Completed with 1.5 months delay due to the last Israeli military operation in Gaza.	The Draft Inception Report was delivered by the consultant on the 17 of Dec. 2008. Comments were performed on 31 Jan. 2009. The final copy was approved on 25 Feb. 2009. Payment no.1 was disbursed on 30 March 2009.			A video conference meeting was conducted on 23 Jan. 2009 to evaluate the project situation after the last military operation in Gaza. The consultant contract was extended by 1.5 months. The consultant contract amendment was signed on 16 March 2009.
2.7 Preparing the Initial Design Report	X	X	X						Completed, with 1.5 months delay due to last military operation in Gaza.	Issuing the Draft Initial Design Report. Reviewing the Draft Initial Design Report mutually with the counterparts. Approving the			Security coordination actions were mobilized with Israeli concerned authorities to grant permits to accomplish the required survey and geotechnical investigation works in

											Initial Design Report on 6 Sept. 2009. Payment No.2 was disbursed on 28 Sept. 2009.		KY WWTP eastern site. Different meetings were conducted between UNDP, counterparts and the JV consultant to mutually discuss, review and approve the Initial Design Report.
	2.8 Preparing the Environmental Impact Assessment Study Report	X	X	X	X	X	X	X		Completed, Rescheduled by 1.5 Months lag due to the last military operation in Gaza.	The draft report of the EIA study Performed. The EIA main public hearing workshop conducted on 30 Dec. 2009. EIA draft report sent to EQA for approval on 26 Jan 2010. Comments received on 30 May 2010 and rectified. Rectified final report sent again to EQA for final approval on 2 June 2010.	Awaiting the EQA final approval. As per Palestinian environmental assessment policy; copies of final approved report will be re-sent to EQA to present it to the national environmental assessment committee.	Preparation and coordination actions were mobilized with all concerned authorities, officials, NGOs, civil society organizations, community and localities leaders and residents to conduct the EIA main public hearing workshop, which was performed successfully.
	2.9 Preparing the Geotechnical Investigation Reports	X	X	X	X	X				Completed, Rescheduled by 4 Months lag due to the last military operation in	Detailed geotechnical in Al Fukhari infiltration site completed. Analysis of		Security coordination actions had been mobilized with Israeli concerned authorities to grant access for the project's eastern site.

										Gaza and the relevant delay resulted from the residents objections of Muraj and Al Fukhari infiltration areas to carry out the on-site geotechnical investigations.	results and relevant hydraulic modeling completed. Geotechnical investigation of the effluent and emergency pressure line completed. Final stage and surface geotechnical investigations of Al Fukhari infiltration basins completed.		Different community participation and public hearing meetings and workshops had been conducted with all concerned parties, Al Fukhari's municipal council and residents to explain the project and to discuss residents' objection concerning the infiltration basins.
	2.10 Preparing the Detailed Design Report		X	X	X	X	X	X		On going, Rescheduled by 7.5 months lag due to the last military operation in Gaza, the relevant delay resulted from the residents' objections of Muraj and Al Fukhari infiltration areas and the client and the consultant requirements to revise and rectify the detailed	The draft detailed design report performed. Comments have been sent to the JV consultant on 18 April 2010 and have been rectified. Rectified report re-checked and remaining non done comments re-sent again to the JV consultant on 14 June 2010. The rectified detailed design report is currently under final revision.	Final revision of the rectified detailed design report, and issuing the final detailed design report and the related final tender documents of four agreed upon packages.	Different meetings had been conducted with all concerned parties to discuss residents' objection relevant to Al Fukhari infiltration basins to avoid extra delay of on-site work. Different meetings and discussions had been conducted with the JV consultant to evaluate the delay of on-site geotechnical investigations resulted from residents' objections, to discuss the draft detailed design report and relevant technical

										design report and the related tender documents.			comments deem to be rectified and the project work plan. Contract was extended by extra 3.5 months. A contract amendment No.3 was issued on March 2010, discussed and signed by consultant on 19 May 2010.
	2.11 Preparing the Tender and Contract Documents, per packages		X	X	X	X	X	X		On going, Rescheduled by 7.5 months lag due to the last military operation in Gaza, the relevant delay resulted from the residents' objections of Muraj and Al Fukhari infiltration areas and the client and the consultant requirements to revise and rectify the detailed design report and the related tender documents.	The draft tender documents were performed and submitted on 21 March 2010. The draft tender documents sent to PSO/LSO in NY for revision. Comments received from NY and sent to the JV consultant on 9 June 2010. The JV consultant response and the rectified tender documents re-submitted by JV consultant on 23 June 2010. The rectified tender documents are currently under revision.	Revising the Tender documents, rectifying the client's comments by the consultant and issuing the final tender documents of the four agreed upon packages. A VC meeting are planned to be conducted with the JV consultant on 19 July 2010 to mainstream the comments to finalize the tender documents.	The consultant contract was extended by extra 3.5 months. A contract amendment No.3 was issued on March 2010 and sent to the consultant for acceptance and signature. It has been discussed and signed by consultant on 19 May 2010.

	2.12 Preparing the Assignments Final Report					X	X	X		Started.	Mobilization work started by the consultant.	Preparing the Assignment final report.	
Output 3: KY WWTP, Phase 1 constructed.	3.1 Carrying out the construction supervision for KY WWTP.									Not yet started.			

Project Completion Date: June 2012 (19.5 months to finalize the detailed design (output 2, Dec. 2008 – September 2010) , and 24 months for the construction phase (output 3, 2010 – 2012)

3. Financial report

Budget items (according to the proposal)	A. Original budget (according to the proposal) US\$	B. Revised budget (if the original budget is revised) US\$ *	C. Disbursement US\$	D. Balance (B-C) US\$	E. Rate of disbursement (%) (C/B*100)
Construction of KY WWTP	12,550,000	11,450,000	0	11,450,000	0%
Supplying and installation of 24 inch main pressure line	1,000,000	1,000,000	527,303.15	472,696.85	53%
Carrying out the Detailed Design of KY WWTP.	0	1,100,000	665,129.81	434,870.19	60.5%
Project Engineer for 24 months	60,000	60,000	72,040	-12,040	120%
Civil Site Engineers for 20 months	60,000	60,000	0	60,000	0%
Electro mechanical 1 for 20 Months	30,000	30,000	0	30,000	0%
Contingencies and Miscellaneous	31,481	31,481	4,112.53	27,368.47	13%
Sub-total	13,731,481	13,731,481	1,268,585.49	12,462,895.51	9.2%
GMS (8%)	1,098,519	1,098,519	101,486.84	997,032.16	9.2%
Total	14,830,000	14,830,000	1,370,072.33	13,459,927.67	9.2%

* Project Budget was revised based on letter of clearance from the Government of Japan dated 24 July 2007

*It is important to highlight that the financial figures in this report are temporary figures, and may be corrected at a later stage due to exchange rate fluctuations, realized gain/loss or any other possible corrections. UNDP/PAPP's financial system operates in such a manner that the financial system closes in early December of each year and that final expenditure reports reflecting the disbursements and GMS of the previous year are only published in March of the following year.

4. Any special notes or remarks:

1. The cost estimate for the construction of waste water treatment plant “WWTP”, phase1, has dramatically increased due to the following reasons:

- Reducing the construction budget allocated for the construction of WWTP by US\$ 1.1 million: in accordance with Project Document a total of USD 12.55 Million has been allocated for the construction of Khan Younis waste water treatment, phase1, based on a detailed design that will be provided by Khan Younis Municipality as per the project’s MOU. However, Khan Younis Municipality was not able to provide the detailed design for the construction phase due to lack of fund and capacity. A letter of clearance from the Government of Japan dated 24 July 2007 has been approved to utilize USD 1.1 Million from the WWTP construction budget line for carrying out the detailed design phase.
- Increasing the design capacity of WWTP, phase 1 by 10,000 cubic meter per day: based on the preliminary design carried out by Palestinian Water Authority “PWA”, the scope of work was identified to design an extendable waste water treatment plant to be implemented into two phases; with inflow capacity of 16,100 cubic meter per day and load estimates for the year 2018. In parallel, temporary treatment lagoons plant was proposed to be constructed at early stage; before the construction of the permanent waste water treatment plant, to handle 10,000 cubic meters per day of the collected waste water in emergency basis. However, this temporary treatment plant has not been constructed and accordingly the project target has been modified to design and construct an extendable WWTP to treat and dispose of the generated load of 26,100 cubic meter per day.
- Modifying the scope of work to ensure environmentally sound disposal of treated wastewater: The detailed design assignment’s TOR had been developed and approved by the projects counterparts where infiltration scheme comprises infiltration basins and emergency outflow has been proposed to maximize availability of groundwater and to utilize treated wastewater for irrigation. Thus the detailed design’s assignment included performing the design of the related components of ultimate disposal facilities (the infiltration basins and the effluent and emergency pressure pipelines); where no budget lines were allocated in the Project Document for the construction costs of these additional components

2. Revised cost estimate for the construction of WWTP, phase1, and budget shortfall

As generated from the cost estimate of the performed design report, it was clearly visible that the available fund of USD 11.45 millions is neither sufficient to construct the phase I of KY WWTP itself due to the increment of materials and equipment costs since 2005 and due to the increment of its capacity later on; nor to construct the additional necessary and vital components of the ultimate disposal facilities (infiltration basins and effluent and emergency pressure pipelines). Based on the above, and to ensure successful implementation of the project by having a functional waste water treatment plant in 2012, the following activities and their additional corresponding budget lines; are urgently needed over the forthcoming three years as presented here underneath:

- Constructing KY WWTP, Phase I,
- Constructing infiltration basins to recharge the treated water effluent into the ground water aquifer, and effluent and emergency main pressure pipeline
- Carrying out the required pre-contract services and construction supervision for the construction of KY WWTP, Phase I;
- Carry out the required one year operation after commissioning of KY WWTP, Phase I, to exchange knowledge and codes of proper practice.

Based on the draft detailed design report; around USD 55.6 Millions* are needed to construct and effectively manage and operate KY WWTP, Phase I. Hence, the total additional matching fund required to support undertaking the required key activities of the project is estimated at around USD 41 Millions*.

* The cost estimates will be adjusted according to the final Detailed Design Report.

5. Pictures of project indicating before the project and progress of the project:

- Photos of Installing the Main Pressure Line. (Completed)



- Photos of KY WWTP Eastern Site



- **Photos of Temporary Waste Water Disposal Lagoon (Storm Water Lagoon) at West of Khan Younis**



- **Photos of Geotechnical Investigations & International Consultant Mission (KY WWTP Eastern Site & Infiltration Areas)**



- **Photos of Geotechnical Investigations in Al Fuhhari Infiltration Areas, EIA On-Site Baseline Data Collection.**



- **Photos of Project's Site Visit of the UNDP SR & Head of UNDP/PAPP Gaza Office,**



▪ Photos of Public Hearing Meetings & EIA Public Hearing Workshop

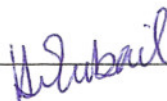


6. Report authorization by UNDP/PAPP

Reporting person, his/her title and belongings :
Ashraf Abu Shamala , Project Manager



Date of submission: 8 July 2010



Supervisor's name and his/her signature:
Rima Abu Middain , Natural Capital Team Leader