Supporting Report for Chapter 4 "Municipal Water Network Rehabilitation"

	page
Annex to 4.6.2 Economic and Financial Analysis	SB4-1
Annex to 4.6.3 Financial Statements	SB4-15

ANNEX to 4.6.2

Economic and Financial Analysis

Table 4.5.2-1 Financial/Economic Analysis of South Ammun Water Networks Robabilitation Project

Hydraulic Analysis (m ³ /yr) litern	Allocation	Water Oty	2164	2005	2006	2007	3008	2019	2010	2011	3012	2013	2014	2015	2016	21177	2013	2019	2020
Water Produced		0	Ó	0	L	0	0	0	0	I	0	0	0	1	0	Ú	Ď	L	
Saue 4		440,400	0	0	1	a	388,283	413.521	440,410	440,411	440,400	441,400	441,400	440,411	440,400	448,400	443,400	440,411	440,40
Municipal Water	1.00	440,400	ii.	n		a	285.331	413,581	440,480	440,411	440,400	44L400	440,400	440,411	440,400	441,400	441,400	440,488	440,40
Physical Louges (94)	2,4,00	440,400	0.00	0.00	0.00	1.00	0.00	0.00	0.60	1.11	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.66	1.0
				0.00	0.11	0	0.00	0.00	0.00			0.00	0.00				0.00	0.00	
Physical Lonies			0			1.1.7.1.1	1111 C. C. C.				0				0	0			
Administrative(Managerial Lorses (%)			0.12	0.10	D.65	0.05	0.07	0.05	0.15	1.15	0.05	0.05	0.05	0.15	1.05	0.05	0.05	0.65	1.0
Administrative/Managerial Lorges			0	0	L	a	27,180	34,811	22,1120	22,028	22,020	22,020	22,020	22,828	22,020	31,020	22,000	22,828	22,03
Quartity Delivered			0	0	- U	0	188,283	411,521	440,410	440,411	440,400	441,400	440,400	440,488	440,400	448,400	441,400	440,411	440,40
Quantity Where Bills are Collected			0	0	1	σ	361,103	388,710	418,310	418,311	418,380	411,350	418,380	+10,308	418,380	418,380	418,380	+18,388	418,38
Industrial Water	D. 8.8	0	0	0	F	0	0	0	D	1	0	0	D	1	a	0	D	1	
Physical Longers (%)		1.0	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.11	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.68	1.0
Physical Losses			0	0		0	0		D		0	0	0	0.000	0		0	1000	
			0.12	0.10					0.05						1.05				1.0
Administrative(Managerial Lorges (%)					0.85	1.05	0.07	0.00		1.15	0.05	0.05	0.05	0.15		0.05	0.05	0.85	
Administrative/Managerial Lorger			0	0	1.5	0	0	.0	0		a	0	0		0	0	D	1.5	
Quantity Delivered			0	0	1	0	0	0	0	1	a	0	0	1	0	0	0	1	
Quantity Whose Bills are Collected			0	0	1	0	0	0	D	1	0	0	D	1	0	0	0	1	
migation Water	0.00	d	0	0	1	a	0	0	11	1	ш	0	D	- Cit	d	0	D	1	
Physical Lourses (%)			0.00	0.00	D.EE	6.00	0.00	0.00	0.ED	1.11	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.66	10
Physical Losses			0	0		0	0	0	0		0	0	0		0	0	0		
			0.000	× .	2002					12.00				100				2000	
Administrative/Managerial Lorses (%)			0.12	0.10	0.05	0.05	0.07	0.05	0.15	1.15	0.05	0.05	0.05	0.05	1.05	0.05	0.05	0.05	
Administrative/Managerial Lorenz			0	0	1	a	0	0	D		0	0	0	1	a	0	D	1	
Quantity Delivered			0	0	1.5	0	0	0	0	- E	0	0	0	1.1	0	0	0	- E	
Quantity Whase Bills are Collected			0	0	- E	0	0	0	D	1	0	0	0	1	0	0	0	- E	
Inancial Analysis (JD at 2001 Prices)																			
Item	Percent	taxoes.	2004	2005	2006	2007	2108	2089	2010	2011	2012	2013	2014	2015	2016	2837	2013	2019	2020
Dotte																			
Local Components	589%	1831,414	547,345	1,094,690	1,094,658	1.094,693	0	0	0	1	0	0	0		0	0	0	1	
Pareign Components	10%	411.985	58,855	117,710	113,738	117,710	0	.0	0		0	0	0	2.4	0	0	0		
	195	0	0	0	in a car	0	0	n	D		a	0	0		0	0	D		
Duty de Tenes	1.54				1000			9				0				0			
Total Capital Canto		4,345,399	111,200	1,212,400	1,212,411	1,212,400	0	-	D	10000000	0	0	D	100000	a	0	D	100000000	
Cumulative Costs			686,200	1,811,600	3,030,999	4,243,399	4,243,399	4,241,399	4,243,199	4,243,399	4,243,299	4,241,399	4,243,399	4,243,399	4,243,399	4,241,399	4,241,399	4,243,395	4,243,3
0 & M. Costu			0	0	1	0	49,875	49,875	49,875	49,875	49,875	45,875	49,875	49,875	49,875	49,875	49,875	49,875	49,8
Total Corts			116,300	1.212,400	1.312,401	1_212,400	49,875	43.875	49,875	49,575	49,875	49,875	47,875	49,873	49,875	45,875	49,875	49,875	49.5
Barrace																			
Revenues																			
Masicipal Ucage Qty (m2)			0	D	1	0	361,103	301.710	418,310	410,300	418,380	411,380	418,380	+18,300	418,380	418,380	418,380	418,388	418,3
Municipal Tariff (JD/m ²)			0.411	0.425	0.436	1.449	0.463	0.476	0.491	1.481	0.491	0.491	0.491	0.491	8.4941	0.491	0.491	0.451	1.4
Manicipal Revenues (JD)			D	1	0	0	167,840	185,215	205,322	285,322	205,322	205,322	205,322	385,322	205,322	205,322	205,322	265,322	215,3
			122		23	0.235	1920	89	(2)	22	23	2.0	520	12	12	127	27	20	
Industrial Usings Qty (m ⁵)			0		0	0	0		0	0	D	0.000	a	0	0	100	σ	0	100
Industrial Tariff (JD/m ⁸)			1.000	1.000	1.000	1.000	1.000	1.000	1.860	1.088	1.000	1.000	1.000	1.000	1.003	1.000	1.000	1.000	1.0
industrial Revenues (JD)			0	1	0	0	D	1	0	0	0	1	0	0	0	1	0	0	
						2.22				- 18 A	195			19					
Impation Ucage Qty (m ³)			D	100 C	0	a.	10	1	u.	u.	D	100 B	a a	0	0	0.08	a	0	
Imigation Tariff (JD/m ⁴)			D.EID	1.011	0.010	0.010	0.810	0.011	0.010	0.010	0.010	0.01.0	1.010	0.010	0.010	0.010	1.010	0.010	0.0
Imigation Revenues (JD)			0	1	0	0	0	1	ŋ	0	0	- L	0	0	0	1	0	0	
Total Revenuer (JD)			D	1	03	0.	167,140	185,215	206,322	385,322	205,322	205,322	205,322	185,322	205,322	205,322	205,322	105,322	215,5
14 C. 4 E. (15)			101 200	1.000.000	1.115.488	1.11.1.444	11111.00	1.12 2.20	100.000	104 447	100.007	122.444	147.477	100.007	100 000	100.017	100.407	122.047	
			-606,700	-1,212,400	-1.112,400	-1,212,400	117,165	135,330	155,447	155,447	155,447	155,447	155,447	155,447	155,447	155,447	155,447	135,44T	155,4
			0.95238	0.90703	0.16314	1.82230	0.72353	0.74622	0.73168	1.67614	0.64461	0.61391	0.58468	1.55614	0.53032	0.50507	0.48102	E.45811	0.43
accounting (DB=9%)			0	0	1	Q	361,103	388,710	418,360	418,311	418,380	411,380	413,380	418,311	418,380	41L380	413,380	418,388	41B,
accounting (DR=9%)																			
hecounting (DR=96) Istal Qty Whese Bills are Collected (m ³)																			
Ancounting (DR=9%) Satal Qay Whese Bills are Collected (m ³) <u>URR</u>	-0.7%		100 111	1.000.000	40.000		A	1 2 2 2 2 2 2 2	110.000	100.010	ana ana	40.400	00.007	40.000	0.0.000		-		
Concenting (DR=9%) Said Qay Whese Bills are Collected (m ²) <u>TRR</u> IPV (ID)	-1,864,352		-577,333	-1,093,682	-1,047,318	-997,444	91,802	111,986	110,473	105,213	100,203	95,431	90,887	86,553	82,437	78,511	74,773	71,212	
Net Cahl Flow (ID) Decounting (DR=96) Total Qay Where Bills are Collected (m ²) <u>FIRE</u> <u>NPV (ID)</u> PV ocTotal Costs (ID)	-1,864,352 4,300,883		-977,333 977,333	-1,093,682 1,093,682	-1,047,318 1,047,316	-997,444 997,444	39,078	33,217	35,445	105,213 33,757	100,203 32,150	95,431 18,619	90,887 29,161	27,772	82,437 26,450	78,511 25,190	74,773 23,991	71,211 22,848	67,8 21,3
Daccasting (DR=9%) Tatal Qty Whear Bills are Collected (m ³) <u>FIRE</u> NPV (DD)	-1,864,352					10000													

Economic Analysis (JD at 2001 Prices)		70070535	10000	09.02	2022		- 2000		03223	539.0	27232	1000	2227.0	1.1.1.1.1.1			10000	1000	
ltem	Ferrent	Amount	2034	2115	2164	2117	2608	1009	2010	2011	2012	2013	2014	2015	2016	2017	201.8	211.5	2328
DOER																			
Local Ceste		3,679,485	513,041	1,051,281	1,151,281	1,031,281	525	525	525	525	525	525	525	525	525	525	585	525	525
Pareign Caste		411,985	58,855	117,710	117,710	117,710	п	a	1	1		D	EI.	D	D	D	0	σ	0
Duty & Tanes		0	0	0	0	ů.	a	0	1	1	1	D	0	D	0	0	0	0	0
Total Capital Costs		4,091,470	584,496	1,161,991	1,141,991	1,168,991	525	525	525	525	525	525	525	D	D	D	0	0	0
Cumulative Costr			514,496	1,753,487	2,922,478	4,151,470	4,891,995	4,092,530	4,093,045	4,093,578	4,094,895	4,094,620	4,095,145	4,095,145	4,095,345	4,095,145	4,095,145	4,195,145	4,895,145
C & M Costs			0	0	0	0	49,575	49,875	49,875	49,575	49,875	49,875	49,175	49,875	49,875	48,875	48,875	49,875	45,575
Total Costs			514,496	1,161,991	1,161,991	1,168,991	50,400	50,400	50,401	50,411	50,411	50,410	50,400	49,875	49,875	41,875	48,875	48,875	48,275
Receito																			
Municipal Usage Qty (nr)			0	0	0	σ	288,283	413,521	440,401	440,435	440,418	440,410	440,400	440,400	440,400	441,400	441,400	448,400	441,400
Unit Benefits of Mankinal Water (JD/m ²)			0.735	0.735	0.735	0.735	0.735	1.735	1.735	1.735	8,735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735
Municipal Benefitz (JD)			0	0	0	û	285,388	303,938	323,694	323,614	323,684	323,694	323,694	323,694	323,694	323,694	323,694	323,694	111,694
Industrial Usage Qty (m ²)			0	0	0	0	0	0	12	1	10	D	D	0	0	0	0	0	0
Unit Benefits of Industrial Water (JD/m ²)			2,740	2.740	2,740	2.740	2.740	2.740	2,748	2.748	2,748	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2,740
Industrial Benefits (JD)			0	0	0	0	σ	0	1	1	1	0	D	D	D	D	0	0	0
Impation Usage Qby (m ^b)			0	٥	0	0	0	0	1	1	1	D	0	0	0	0	0	G	0
Unit Benefits of Impation Water (JDAn3)			8.283	0.283	0.283	0.283	D.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	1.281	1.213	8.283	0.283	0.283
Imigation Bearfits (JD)			0	0	0	σ	a	0	1	1	1	0	D	D	0	0	0	0	O
Total Benefitz (JD)			0	0	0	a -	285,388	303,938	323,694	323,614	323,614	323,654	323,694	323,694	323,694	321,694	321,694	321,694	311,694
Net Cash Flaw (JD)			-584,496	-1,168,991	-1,168,991	-1.168.991	134,988	253,538	273,294	273,294	273,294	273,254	273,294	273,819	273,819	273,819	273,819	273,819	273,819
Discouring (DR=184)			0.90909	0.52645	0.75131	0.68301	0.62092	0.56447	0.51318	0.46651	8.4241.8	8.38554	8.35849	0.31563	0.28966	0.26333	0.23939	0.21763	0.19784
Total Qty Delivered (n ³)			0	0	0	u	188,383	413,521	440,401	440,411	440,411	440,400	440,400	440,400	440,400	448,400	441,400	441,400	441_400
EIRR	3.8%																		
NPV (JD)	-1,513,262		-531,360	-966,109	-878,281	198,437	345,909	143,116	140,243	127,494	115,983	105,347	95, 788	37,247	79,316	72,105	\$5,550	55,591	\$4,174
PV of Total Costs (ID)	3,485,143		531,360	966,109	155,171	198,437	31,294	28,449	25,863	23,512	21,375	19,433	17,665	15,892	14,447	13,134	11,940	10,854	5,868
PV of Total Qty Delawred (m ³)	2,652,235		0	0	0	a	341,093	255,422	225,995	205,458	126,773	169,78.5	154,358	140,325	127,565	115,971	1.85,425	\$5,844	87,131
Unit Water Price (Filsen ⁹)	1,299																		

Table 4.5.2.2 Financial Economic Analysis of Madaba Water Networks Robabilitation Project

Bydrealic Analysis (m ² /yr) Jem	Allocation	Water Oty	2014	2005	2166	2887	2006	2009	2010	2011	2012	2013	2014	2015	2018	3017	201.9	2015	2928
Yater Produced		0	0	0	0	a	1	a	1	1	1	D	11	D	0	D	0	0	
Sared		601,950	0	347,315	536,602	552,700	\$60,281	586,359	603,951	603,951	603,958	603,950	603,950	603,950	601,950	601,950	611,950	681,950	681.95
Auricipal Water	1.00	601,950	0	347,315	536,602	152,700	169,281	\$86,359	603,951	603,958	603,958	603,950	603,950	603,950	603,950	601,950	611,950	681,950	\$11.95
Physical Losses (%5)	1.00	001,000	0.00	0.00	0.00	0.00	1.00	1.00	1.01	1.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
			0.00	0.00	0.00	0.00	0.00	a	1	1.11	0.00	0.00	0.00	0.00	0.00	D.00	0.00	0.00	
Physical Losses			1									100 C							
Administrative/Managemal Lances (%)			0.12	0.10	0.09	0.08	1.07	0.06	1.05	1.15	0.15	0.15	0.05	0.05	0.05	0.05	0.05	0.05	ů û
Administrative/Managerial Lauses			0	34,732	48,294	44,216	39,850	35,182	30,191	30,198	30,198	30,158	30,198	30,198	30,198	31,198	38,198	31,198	38,19
Quantity Delivered			.0	347,315	\$36,602	552,700	569,281	586,359	603,951	603,958	603,951	603,950	603,950	603,950	603,950	603,950	613,950	683,950	\$11,95
Quantity Whose Bills are Collected			0	312,584	411,308	508,484	529,431	223.178	\$73,753	573,753	573,753	573,753	\$73,753	573,753	573,753	577,753	573,753	573,753	571,75
ndustrial Water	0.00	0	0	0	0	0	σ	0	1	1	1	D	D	0	Ð	0	0	0	
Physical Learner (%6)			0.00	0.00	0.00	0.00	8.00	1.00	0.01	1.11	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Physical Leaner			0	0	0	Ű.	0	0	1	1	1	0	0	0	0	0	0	0	
Arincinistrative/Managerial Lusses (%)			0.12	0.10	0.09	0.03	1.07	1.05	1.05	1.15	0.85	0.15	0.05	0.05	0.05	0.05	0.05	0.05	0.0
Administrative/Managerial Lessee			0	n	0	п	g	0	1			D	n	D	0	0	0	0	199
Duantity Delivered				n.	n.	n	n.	n i				ñ		n	n	n	ň	n	
Quantity Where Bills are Callected			0	0	0	0	0	0	1			ő	0	0	0	0	0	0	
			5.7	U.	100	100			1.1		1.1	5		0		0		u a	
minatan Water	0.00	0	0	u	0	0	a	a	1.0		1.1	- 0	D	U	0	U.	0	u	
Physical Losses (%)			0.00	0.00	0.00	0.00	9.00	9.00	8.08	6.33	0.88	0.80	0.00	0.00	0.00	0.00	0.00	0,00	0.0
Phynical Losses			0	0	0	0	0	0	1 - E	1.		D	0	0	D	0	0	0	
Administrative/Managerial Lanses (%)			0.12	0.10	0.02	10.005	107	1.06	0.05	1.15	0.85	0.85	D.05	0.05	0.05	0.05	0.05	0.05	0.0
Administrative/Managerial Lenses			0	0	0	0	û	0	1	1		D	0	D	D	0	Û.	0.	
Quantity Delivered			0	0	0	0	0	0	10	1	1	0	D	D	D	0	0	0	
Quantity Whose Bills are Callected			.0	0	0	0	σ	0	12	1	1	D	D	D	0	D	0	0	
inancial Analysis (JD at 2001 Prices)				-86	80											15	100		
htm	Percent	Amount	2014	2115	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2326
logis	1	- Harrison									and the	20012							
Local Components	100%4	864,531	518,719	945,012	0	0	0.5	0.2	1.12	100		. n	i n		0	0	0.0		
	0%	007,001	0.0,07	11,012	0	n.	0	a	- 22			n	n	n	0	0	0	о Л	
Foreign Components	0%	0	1.00				· ·				1.1								
Duty & Tazes	075		0	0	0	a	0	0.2	1			0	0	D	0	0	0	ŭ	
Total Capital Costr		364,531	511,719	345,B12	0	û	û	a	1.0			0	0	D	0	0	0	0	
Cumulative Costr			511,719	164,531	164,531	164,531	\$64,531	864,531	864,531	864,531	864,531	864,533	864,533	864,531	864,531	864,531	364,531	184,531	164,53
C & M Costs			0	2,278	3,417	3,417	3,417	3,417	3,417	3,417	3.417	3,417	3,417	3,417	3,417	3,417	3,417	1,417	1,41
Total Costs			511,719	348,090	1417	3417	3.417	5,417	3,417	3,4(7	3.4LT	3,417	3,417	3,417	1.417	1,417	3,417	1,417	141
invinani																			
			0		48.8 1005		529,431	ALC: 1.17	A 10 10 1	ett. 2013	4.11.2012	1000		A 11. 19.	(T) (Y)	em 100	CTD 19/1	277.747	1000
Municipal Urage Qty (m ²)				312,584	411,308	588,484		551,178	573,753	\$73,753	573,753	573,753	573,753	573,753	573,753	573,753	573,753	572,753	573,75
Mankend Teriff (JD/m ²)			0.294	0.303	0.312	0.321	0.331	1.341	1.351	8.351	8,351	0.351	0.353	0.351	0.351	0.351	0.351	0.351	0.35
Municipal Revenuer (JD)			1	94,857	152,305	163,356	175,189	187,856	201,417	201,417	201,417	381,413	101,417	201,417	201,417	201,417	201,417	201,417	201,41
Industrial Usage Qty (m ³)			1	D	D	D	D	D	0	0	0	0	0	0	32	20	63	D	
							100 million (1997)								1.000	1.000			
Industrial Tariff (JD/m ²)			1.000	1.000	1.000	1.000	1.000	1.000	1.008	1.088	1.898	1.000	1.600	1.000	1.000	1.000	1.000	1.000	1.00
Industrial Revenues (JD)			1	D	D	D	0	0	0	0	0	0	0	0	1	- <u>1</u> 2		0	
					100	89	100	10	6-26	1.5	12	12	1.5	10			120	1.25	
Imigation Usage Qby (m ³)				0	D	D	0	0	0	0	0	Q	0	a		Conselling States	I.	0	
Imigation Tariff (JD/m ²)			E.BLE	0.81D	0.610	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.01.0	8.01.8	1.11.1	0.010	0.11
Imigation Reveaues (JD)			1	D	D	0	0	0	0	0	0	0	0	a	1	1	1	0	
Total Revenues (ID)			30	94,657	152,305	163,356	175,189	137,856	.201,417	211,417	201,417	101,417	181,417	201,417	201,417	201,417	201,417	201,417	201,41
			-518,719	-253,434	148,388	159,939	171,772	184,439	198,001	198,010	198,111	198,880	198,600	198,000	198.000	191.000	198,000	198,000	152.00
RECENTREDUCED)			0.95238	0.90703	0.86384	0.82270	0.78353	0.74622	0.71061	0.67614	8.64461	8.61351	8.58468	0.55684	0.53032	0.50507	0.48102	0.45811	0.436
			η	31.2,584	411,508	518,454	129,431	551.178	575,753	575,753	575,752	573,753	\$73,753	573,753	573,753	571,753	571,753	571,755	\$T1.75
ascounting (DR=516)																			
iscouning (DR=5%) atal Qty Whore Bills are Collected (m ⁹)																			
iscouning (DR-5%) and Qay Whore Bills are Collected (m ⁸) IRB	20.4%		0.0000	100000	7/2013	13114-2	100047							1000					230
Siscoaning (DR=5%) Initial Qity Whore Bills are Collected (m ³) IRR <u>IPV (JD)</u>	1,801,469		-494,018	-225,872	128,615	111,583	134,588	137,631	140,71.5	134,014	127,632	121,555	115,766	110,254	105,003	101,003	95,241	\$1,706	1638
Net Cash Haw (D) Discouning (DR=9%) Total Qiy Whore Bills are Collected (m ⁹) RRB <u>PV (D)</u> PV of Total Casta (JD)	1,801,460 855,129		-494,018 494,018	31.5,728	121,615	111,583 2,811	134,588 2,677	137,691 2,550	2,421	134,014 2,313	127,692 2,283	121,555 2,858	115,766 1,998	110,254 1.903	105,003 1,812	L011,003 1,726	95,241 1,644	90,706 1,565	16,38
Siscoaning (DR=5%) Initial Qity Whore Bills are Collected (m ³) IRR <u>IPV (JD)</u>	1,801,469																		

tne stuay on water Kesources management of the Hasnemite Kingaom of Joraan Final Report/Supporting Report Part-B "Pre-Feasibility Study

Economic Analysis (JD at 2001 Prices)																			
ltem	Ferrent	Amount	2014	2115	2004	2117	2808	2009	2010	2011	2012	2013	2014	2015	2016	2017	201.8	211.5	2328
Doets																			
Local Casta		835,463	511,290	334,193	0	0	0	0.	- 10 C	1.1	2.8	0	D	0	D	0	0	0	0
Pareign Caste		D	0	.0	0	a	п	a	1	1		D	TI I	D	0	D.	0	0	0
Duty & Tanes		0	0	0	0	ů.	0	0.	1.1	1	1	D	0	0	0	0	0	û	0
Total Capital Costs		835,483	511,290	134,193	0	0	û	a	1	1		D	D	0	0	0	0	0	0
Cumulative Costs			511,290	\$35,483	\$35,483	\$35,483	\$35,483	\$35,483	835,483	\$35,413	835,403	835,413	835,483	835,483	835,483	835,483	335,483	835,483	\$35,483
C & M Costs			0	2,275	1.417	3,417	3,417	3,417	3,417	3,417	34LT	3,437	3,417	3,417	3,417	3,417	3,417	1,417	1,417
Total Costs			581,290	336,471	2,417	3,417	3,417	3,417	3,417	3,417	3,417	3,417	3,417	3,417	3,417	3,417	1,417	1,417	1,417
Benefix																			
Manicipal Usage Qty (m ²)			0	347,315	536,602	552,700	569,281	586,359	603,951	603,958	603,958	603,950	603,950	603,950	603,950	633,950	611,950	\$\$1,950	\$82,950
Unit Benefits of Manicipal Water (JD/m ⁵)			0.735	0.735	0.735	0.735	0.735	1.735	1.735	1.735	8,735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735
Municipal Benefitz (JD)			0	255,277	354,402	416,234	418,421	430,934	443,933	443,913	443,883	443,013	443,803	443,903	443,903	441,903	441,903	441,903	441,903
Industrial Usage Qty (m ²)			0	0	0	0	0	0	12	1	20	D	D	D	0	0	0	0	0
Unit Benefits of Industrial Water (JD/m ²)			2.740	2.740	2.740	2.740	2.740	2.740	2.748	2,748	2,748	2.740	2.740	2.740	2.740	2.740	2.740	2,740	2,740
Industrial Benefits (JD)			ņ	0	0	0	σ	0	1	1	1	0	D	D	D	D	0	0	0
Impation Usage Qty (m ²)			0	0	0	0	0	a	1	1	1	D	D	0	0	0	0	G	0
Unit Benefits of Impation Water (JD/m ³)			8.283	0.283	0.283	0.283	D.283	0.283	0.253	0.283	0.283	0.283	0.283	0.283	1.231	1.213	8.283	0.283	0.283
Imigation Bearfits (JD)			0	0	0	σ	a	0	1	1	1	D	D	Ū	0	0	0	0	ŋ
Total Benefitz (JD)			0	255,277	3\$4,402	486,234	418,421	430,974	443,903	443,913	443,003	443,963	443,908	443,903	443,903	441,903	443,903	441,903	441,903
Net Cash Fling (TD)			-501,290	-31,195	390.985	402.817	415.004	427,557	440,481	440,415	440,414	440,416	440,486	440,486	441.486	441,485	441,486	441,436	441,486
Discounting (DR=1.0%)			0.90909	0.52645	0.75131	0.68301	0.62092	0.56447	0.51314	0.49551	8.4241.8	1.31554	8.35849	0.31863	0.28966	0.26333	0.23939	0.21763	0.19784
Total Qty Delivered (m ³)			η	347,315	536,602	552,700	569,281	586,359	603,951	603,951	503,958	603,830	603,950	603,950	603,950	601.950	011,930	111,950	111,950
urr.	49.5%																		
(PV (JD)	2,753,842		-455,718	-97,103	293,753	275,130	157,685	241,345	226,039	205,498	186,889	169,827	154,388	140,352	127,593	115,994	185,449	91,863	ET.148
W of Total Casts (JD)	759,879		455,718	271.075	2,567	2,334	2,122	1,929	1,751	1,594	1,445	1,337	1,198	1,069	990	900	818	74-4	676
V of Total Oty Delivered (m ³)	4,781,572		0	281,053	483,157	102,501	153,479	330,984	309,922	281,747	256,134	252,949	211,621	192,437	124,943	158,059	144,581	111,457	1.18,428
Unit Water Price (Filam)	159			1000000	20071000	20.000	19070675	12001202	10000000000	0.5-0405224	2000.00000	0.000000	20034263	2.817.286	1107.01	0.00000	1.200.01	1000000000	1.11-17.11-1

Table 4.5.2-3 Financial Economic Analysis of Karak Water Networks Robabilitation Project

Bydraulie Analysis (n²/yz) Jem	Allocation	Water Oty	2014	2005	2166	2887	2006	2009	2010	2011	2012	2013	2014	3015	2018	2017	201.9	201.5	2328
Water Produced		0	0	0	0	a	1	a	1	1	1	p	11	D	0	D	0	0	
Sared		321,150	0	236,615	251,521	167,367	284,211	302,117	321,151	321,151	321,158	321,150	321,150	321,150	321,150	321,150	321,150	121,150	321,19
Municipal Water	1.00	321,150	0	236,615	251,521	167.367	284,211	302,117	321,151	321,158	321,158	321,110	321,150	321,150	321,150	321,150	321,150	321,150	321,15
Physical Losses (%5)	1.00	361,330	0.00	0.00	0.00	0.00	1.00	1.00	1.01	1.11	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Physical Losses			0.00	0.00	0.00	0.00	0.00	a	1		0.00	D	0.00	0.00	0.00	D.00	0.00	0.00	
				0.10							6.86								
Administrative/Managertal Lances (%)			0.12	0.10	0.09	0.08	1.07	1.06	1.05	1.15	0.05	0.15	0.05	0.05	0.05	0.05	0.05	0.05	0.0
Administrative/Managerial Lanca			.0	23,661	22,637	21,389	19,895	18,127	16,051	16,058	16,858	16,058	16,158	16,058	16,058	16,058	L6,058	16,058	16,0.5
Quantity Delivered			0	236,615	251,521	267,367	284,211	302,117	321,151	321,151	321,158	321,150	321,150	321,150	321,150	321,150	321,150	321,150	321,15
Quantity Whose Bills are Callected			0	212,953	228,884	245,978	264,317	283,990	305,093	305,093	305,897	305,893	305,893	305,093	305,093	335,093	385,093	315,093	315,093
Industrial Water	0.00	0	0	0	0	0	α	0	1	1	1	D	0	0	0	0	0	0	
Physical Learner (%)			0.00	0.00	0.00	0.00	8.00	1.00	6.01	1.11	0.00	D.ED	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Physical Lours			0	0	0	0	0	0	1	1		D	D	D	D	0	0	0	10
Ariministrative/Managerial Lusses (%)			0.12	0.10	0.09	0.03	1.07	1.05	1.05	1.15	0.85	0.85	0.05	0.05	0.05	0.05	0.05	0.05	0.0
Administrative/Managerial Lessee			0		0	п	a	n				D	n	n	0	0	0	0	
Quantity Delivered			- č		0	n	a.		100			ñ	.0	n	n	n.	ň	0	
Quantity Where Bills are Callected				0	0	0	ő	20	1			ő	0	0	0	0	0	0	
	4.00		0	U C		0	a		1.1		1.1	0	D	0	0	0	0		
hriganan Water	0.00	0	.0	u	u		-		1.0							0		0	
Physical Losses (%)			0.00	0.00	0.00	0.00	9.00	F.00	8.08	1.33	0.81	0.80	0.00	0.00	0.00	0.00	0.00	0,00	0.0
Phynical Losses			0	0	0	0	a	0	1 - E	1	1	D	0	D	0	0	0	0	<u></u>
Administrative/Managerial Lanses (%)			0.12	0.10	0.05	13 1026	1.03	1.04	0.05	1.15	0.11	0.85	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Munagerial Lennes			0	0	0	û	û	0	- E	1	1	D	0	0	0	D	0	0	01
Quantity Delivered			0	0	0	0	0	0	1	1	1	0	D	D	0	0	0	6	1.1
Quantity Whose Bills are Callected			.0	0	0	0	σ	0	12	1	1	D	D	0	0	D	0	0	
			- 101				19.	10					- 10						
Financial Analysis (JD at 2001 Prices) htm	Percent	Amount	2014	2115	2166	2017	2808	2009	2010	2011	2012	2013	2014	2015	2016	2017	201.8	2019	2026
Cons	Taxat	ALLOUR	2004	4112	2000		1900	2005	2010	2011	6012	2012	2014	3013	2010	2017	2018	411.7	
Local Components	89%	652,027	652,027	. 0			а÷		1.12				D		0	.0.5	0		1
				0	0	n.	a	a	- 22	1.000		n	D	D	0		0	0	
Foreign Components	11%	82,655	12,655							1.1			1.1		0	0	0	0	
Duty & Tazer	.0%	ũ	0	0	0	a	ű.	0.2	1		1.1	B	D	D	170	0	7.5	ŭ	1
Total Capital Costs		734,682	734,682	Q	0	Q	a	a		-		D	0	D	D	0	0	0	
Cumulative Costs			734,682	734,682	734,682	T34,682	734,682	734,682	734,682	734,612	734,682	734,682	734,682	734,682	734,682	734,682	734,682	734,682	734,68
C & M Costs			0	2,524	2,824	2,824	2,834	2,824	2,834	2,824	2,024	2,824	2,824	2,824	2,824	2,824	2,824	2,834	2,824
Total Costs			794,682	2,824	2,829	2,824	2,824	2,824	2,824	2,824	2,324	2,824	2,124	2,824	2,824	2,824	2,824	2,824	2.824
Revenues																			
				313.040	225.000	244 0755	Test State		200 002	204042	207 222	1000 88.5	207.822	204 682	704 000	700 000	787.000	386 003	184 007
Municipal Urage Qty (nr)			0	21.2,953	228,884	245,978	264,317	283,990	305,093	305,093	305,893	305,893	305,193	305,093	305,093	305,093	385,093	315,093	345,093
Manicipal Terriff (JD/m ²)			0.294	0.309	0.324	0.340	0.357	1.375	1.394	1.314	8,394	0.354	0.394	0.394	0.394	0.394	0.394	0.394	0.39
Municipal Revenuer (JD)			1	65,739	24,189	\$3,717	94,458	104,561	124,205	111,205	138,203	120,203	120,201	120,203	120,211	120,211	120,213	120,213	120,303
Industrial Usage Oty (m ³)			5 A	0	0	D	0	0	0	0	0	0	0	0	12	12	63	D	
Industrial Taniff (JD/m ³)			1.000	1.000	1.000	1.000	1.000	1.000	1.008	1.088	1.000	1.000	1.600	1.000	1.000	1.000	1.000	1.000	1.000
Industrial Revenues (JD)				D	D. 000	D	0	0	0	0	0	0	0	0	1	1	1	0	
inducatial Revenues (DD)			1	U	0	U.	<u> </u>	0	v,	Ų.	0	0	0	0	- A.			v	
Impation Usage Qby (m ³)				0	D	0	0	0	0	0	0	0	0	0		12	1	0	
			0.00	0.00070				10000			10.00	10.00				10.800			
Imigation Tariff (JD/m ²) Imigation Reveaues (JD)			INT	0.81D	0.01D	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	8.013	1.013	1.111	0.010	0.110
ungavu novinies (ic)			1		<i>w</i>		×.	80							- A.	1.)	2.0		1
Total Revenuer (JD)			3X	65,719	74,189	\$3,717	94,456	106,561	121,203	136,203	128,203	110,203	120,203	120,203	120,201	120,213	120,283	120,263	120,305
Net Cash Flow (JD)			-334,682	62,915	71,365	80,893	91,632	103,737	117,373	117,379	117,379	117,379	117,379	117,379	117,379	117,379	117,379	117,379	117,37
Discouring (DR=5%)			0.95238	0.90703	0.86384	0.82270	0.70353	0.74622	0.71061	0.67614	8.64461	8.61353	8.58468	0.55684	S0062.0	0.50507	0.48102	0.45811	0.4363
Total Qty Whore Bills are Collected (m ⁹)			ψ	21.2.953	228,3894	345.978	264,317	283,990	305,093	305,093	305,193	305,193	305,895	305,095	303.095	305,095	385,095	385,093	315.09
	12.00																		
	13.1%			10000	2022		20100	10000	10.00				an inc	and man		10000			2323
			-699,697	5T.065	\$1,648	16,550	71,795	77,410	83,418	79,447	75,693	72,040	68,829	65,361	62,248	59,284	56,461	52,773	51,21
NPV (JD)	\$16,235																		
FIRE NPV (JD) PV of Total Costs (JD)	739,766		699,697	2,561	2,439	2,323	2,31,3	2,107	2,007	1,911	1,020	1,724	1,653	1,573	L498	1,425	1,358	1,294	1,23
NPV (JD)												1,724 187,300	1,653 (78,383	1,573 169,887	1.498 1.61,797	1,425 154,092		1,294	1,23

tne stuay on water Kesources management of the Hasnemite Kingaom of Joraan Final Report/Supporting Report Part-B "Pre-Feasibility Study

Economic Analysis (JD at 2001 Prices)					00000														
ltem	Ferrent	Amount	2014	2115	2164	2117	2808	1009	2010	2011	2012	2013	2014	2015	2016	2017	201.8	211.5	2328
Doets																			
Local Casta		614,656	614,056	3.50	3.50	350	350	350	351	358	358	350	350	350	350	350	350	3.50	350
Pareign Caste		\$2,655	\$2,655	.0	0	a	п	a	1	1		D	TI I	D	0	D.	0	0	0
Duty & Tanes		0	0	0	0	û.	0	0.	1.	1	1	0	0	0	0	0	0	û	0
Total Capital Costs		697,311	697,311	350	3:50	350	350	350	351	358	358	350	350	0	0	0	0	0	0
Cumulative Costs			697,311	897,061	691,011	198,361	698,711	699,061	699,411	699,711	700,111	700,461	700,111	700,811	700,811	701,811	791,811	701,811	70,811
C & M Costs			0	2,804	2,824	2,824	2,524	2,524	2,524	2,824	2,824	2,824	2,824	2,624	2,824	2,824	2,824	2,834	2,524
Total Costs			687,311	3,174	1,174	3,174	3,174	3,174	3,174	3,174	3,134	3,174	3,174	2,834	2,824	2,824	2,824	2,824	1,824
Benefix																			
Manacipal Usage Qty Inc)			0	236,615	251,521	267,367	284,211	302,117	321,151	321,158	321,158	321,150	321,150	321,150	321,150	321,150	321,150	321,150	321,150
Unit Benefits of Manicipal Water (JD/m ⁵)			0.735	0.735	0.735	0.735	0.735	1.735	1.735	1.735	8,735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735
Municipal Benefitz (JD)			0	171,912	184,969	156,515	108,895	222,056	236,045	236,045	236,145	236,145	236,845	236,045	236,045	236,045	236,045	236,045	336,045
Industrial Usage Qty (m ²)			0	0	0	0	à i	0	12	1	2.1	D	D	0	0	0	0	0	0
Unit Benefits of Industrial Water (JD/m ²)			2.740	2.740	2,740	2.740	2.740	2,740	2,748	2,748	2,748	2.740	2.740	2.740	2.740	2.740	2.740	2,740	2,740
Industrial Benefits (JD)			ņ	0	0	0	σ	0	1	1	1	D	D	D	D	D	0	0	0
Impation Usage Qty (m ²)			0	٥	0	0	0	a	1	1	1	D	D	0	0	0	0	G	0
Unit Benefits of Impation Water (JD/m ³)			8.283	0.283	0.283	0 283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	0.283	1.231	1.213	8.283	0.283	0.283
Imigation Bearfits (JD)			0	0	0	Ø	٥	٥	1	1	1	D	D	Ū	0	0	0	0	ŋ
Total Benefitz (JD)			0	172,912	134,868	156,515	208,895	222,056	236,045	236,045	236,845	236,845	236,845	236,D45	236,045	236,045	236,045	236,045	236,045
Net Cash Fline (JD)			-697,311	110,738	181,694	193.341	205,721	218,882	232,871	232,871	232,171	232,873	232,871	233,221	233,221	233,221	211,221	233,221	211,221
Discounting (DR=1.0%)			0.90909	0.83545	0.75131	0.68301	0.62092	0.56447	0.51314	0.46651	8.42418	8.38554	8.35849	0.31863	0.28966	0.26333	0.23939	0.21763	0.19784
Total Qty Delivered (m ³)			η	236,615	251,521	267,367	284,211	308.117	321.031	321,151	321,158	321,150	321,150	321,150	321,150	321,150	321_150	321,150	321,150
urr.	28.8%	6																	
(PV (JD)	1_195,343		-633.920	141,106	136,510	112,054	127,737	123,553	119,501	108,638	98,768	39,712	31,620	74,311	67,556	61,414	55,831	58,756	44,142
W of Total Casts (JD)	659,767		633,930	2,623	2,385	2.168	1.971	1,792	1,629	1,411	1,346	1,224	1,112	500	815	744	676	615	559
V of Total Oty Delivered (m ³)	2,524,505		0	181,549	121,972	112,615	176,473	170,537	164,301	149,818	136,195	123,817	112,561	10.2, 528	91.026	34,569	78,851	15,292	\$1,538
Unit Water Price (Filam)	261			10.000		10070005	0.000	200512516	2-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0	2010/07/07/07	2.0000000	NUSTON	0106110			13 (5/22)	2025203	035,0000	0.000