

Supporting Report for Chapter 4

“Municipal Water Network Rehabilitation”

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Annex to 4.6.2 Economic and Financial Analysis ----- SB4-1

Annex to 4.6.3 Financial Statements ----- SB4-15

Table 4.5.2-4 Financial/Economic Analysis of Tafelah Water Networks Rehabilitation Project

Hydraulic Analysis (m ³ /yr)																			
Item	Allocation	Water Qty	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water Produced		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saved		256,200	0	42,400	184,187	280,027	217,230	235,912	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200
Municipal Water	1.00	256,200	0	42,400	184,187	280,027	217,230	235,912	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200
Physical Losses (%)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Physical Losses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative/Managerial Losses (%)			0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0	4,240	16,377	16,002	15,206	14,155	12,810	12,810	12,810	12,810	12,810	12,810	12,810	12,810	12,810	12,810	12,810
Quantity Delivered			0	42,400	184,187	280,027	217,230	235,912	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200	256,200
Quantity Whose Bills are Collected			0	38,160	147,610	184,025	202,024	221,757	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398
Industrial Water	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical Losses (%)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Physical Losses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative/Managerial Losses (%)			0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Delivered			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Whose Bills are Collected			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Water	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical Losses (%)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Physical Losses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative/Managerial Losses (%)			0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Delivered			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Whose Bills are Collected			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Financial Analysis (JD at 2011 Prices)																			
Item	Percent	Amount	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																			
Local Components	100%	1,051,491	428,196	836,295	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foreign Components	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Duty & Taxes	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Capital Costs		1,051,491	428,196	836,295	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Costs			428,196	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491	1,351,491
O & M Costs			0	1,038	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152
Total Costs			428,196	837,333	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152	4,152
Revenues																			
Municipal Usage Qty (m ³)			0	38,160	147,610	184,025	202,024	221,757	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398
Municipal Tariff (JD/m ³)	0.294		0.294	0.303	0.312	0.321	0.331	0.341	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351	0.351
Municipal Revenues (JD)			0	11,556	52,778	59,120	66,850	73,581	85,442	85,442	85,442	85,442	85,442	85,442	85,442	85,442	85,442	85,442	85,442
Industrial Usage Qty (m ³)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industrial Tariff (JD/m ³)	1.000		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Industrial Revenues (JD)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Usage Qty (m ³)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Tariff (JD/m ³)	0.818		0.818	0.810	0.810	0.810	0.810	0.810	0.810	0.810	0.810	0.810	0.810	0.810	0.810	0.810	0.810	0.810	0.810
Irrigation Revenues (JD)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Revenues (JD)			0	11,556	52,778	59,120	66,850	73,581	85,442	85,442	85,442	85,442	85,442	85,442	85,442	85,442	85,442	85,442	85,442
Net Cash Flow (JD)			-428,196	-619,777	-48,126	-54,968	-62,698	-71,429	-81,298	-81,298	-81,298	-81,298	-81,298	-81,298	-81,298	-81,298	-81,298	-81,298	-81,298
Discounting (DR=5%)			0.95238	0.90703	0.86384	0.82270	0.78353	0.74622	0.71061	0.67694	0.64461	0.61351	0.58468	0.55684	0.53032	0.50507	0.48102	0.45811	0.43630
Total Qty Whose Bills are Collected (m ³)			0	38,160	147,610	184,025	202,024	221,757	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398	243,398
EBR	5.4%																		
NPV (JD)	45,098		-488,187	-542,156	-41,573	-45,223	-49,125	-53,301	-57,772	-55,021	-52,481	-49,885	-47,529	-45,266	-43,110	-41,057	-38,102	-37,240	-35,467
PV of Total Costs (JD)	1,027,970		488,187	572,637	1,587	3,416	3,253	3,098	2,951	2,818	2,676	2,549	2,428	2,312	2,202	2,097	1,997	1,902	1,812
PV of Total Bills Collected Qty (m ³)	3,104,381		0	34,613	144,788	151,398	158,291	165,478	172,977	164,738	156,191	149,410	142,705	135,529	128,075	121,905	117,075	111,500	106,190
Unit Water Price (Ft/m ³)	331																		

Economic Analysis (JD at 2001 Prices)

Item	Percent	Amount	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																			
Local Costs		1,015,195	486,078	695,117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foreign Costs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Duty & Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Capital Costs		1,015,195	486,078	695,117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Costs			486,078	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195
O & M Costs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Costs			486,078	695,117	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195	1,015,195
Benefits																			
Municipal Usage Qty (m ³)			0	42,400	184,187	280,027	217,230	235,912	256,208	256,208	256,208	256,208	256,208	256,208	256,208	256,208	256,208	256,208	256,208
Unit Benefits of Municipal Water (JD/m ³)			0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735
Municipal Benefits (JD)			0	31,164	135,378	207,020	159,664	175,305	188,307	188,307	188,307	188,307	188,307	188,307	188,307	188,307	188,307	188,307	188,307
Industrial Usage Qty (m ³)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unit Benefits of Industrial Water (JD/m ³)			2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740
Industrial Benefits (JD)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Usage Qty (m ³)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unit Benefits of Irrigation Water (JD/m ³)			8.283	8.283	8.283	8.283	8.283	8.283	8.283	8.283	8.283	8.283	8.283	8.283	8.283	8.283	8.283	8.283	8.283
Irrigation Benefits (JD)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Benefits (JD)			0	31,164	135,378	207,020	159,664	175,305	188,307	188,307	188,307	188,307	188,307	188,307	188,307	188,307	188,307	188,307	188,307
Net Cash Flow (JD)			-406,078	-578,990	-131,226	-142,868	-155,512	-169,243	-184,155	-184,155	-184,155	-184,155	-184,155	-184,155	-184,155	-184,155	-184,155	-184,155	-184,155
Discounting (DR=10%)			0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51318	0.46651	0.42418	0.38554	0.35049	0.31863	0.28966	0.26333	0.23939	0.21763	0.19784
Total Qty Delivered (m ³)			0	42,400	184,187	280,027	217,230	235,912	256,208	256,208	256,208	256,208	256,208	256,208	256,208	256,208	256,208	256,208	256,208
EBR																			
NPV (JD)	15.7%		-389,162	-478,504	-58,592	-72,581	-86,561	-95,533	-94,501	-83,918	-78,188	-71,880	-64,545	-58,677	-53,343	-48,494	-44,085	-40,077	-36,434
PV of Total Costs (JD)			389,162	594,260	1,119	2,836	2,578	2,344	2,131	1,937	1,761	1,611	1,455	1,323	1,203	1,093	994	904	821
PV of Total Qty Delivered (m ³)			1,362,770	0	35,042	138,383	116,621	134,883	155,168	151,471	119,519	105,454	98,776	89,787	81,635	74,212	67,465	61,552	56,757
Unit Water Price (FJD/m ³)			486																

Table 4.5.2-5 Financial/Economic Analysis of Ma'an Water Networks Rehabilitation Project

Hydraulic Analysis (m³/yr)																				
Item	Allocation	Water Qty	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Water Produced		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saved		331,100	0	131,483	278,713	290,936	303,779	317,146	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100
Municipal Water	1.00	331,100	0	131,483	278,713	290,936	303,779	317,146	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100
Physical Losses (%)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Physical Losses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative/Managerial Losses (%)			0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0	13,348	25,084	23,278	21,265	19,029	16,555	16,555	16,555	16,555	16,555	16,555	16,555	16,555	16,555	16,555	16,555	16,555
Quantity Delivered			0	131,483	278,713	290,936	303,779	317,146	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100	331,100
Quantity Whose Bills are Collected			0	131,135	271,629	287,098	292,515	298,117	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545
Industrial Water	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical Losses (%)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Physical Losses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative/Managerial Losses (%)			0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Delivered			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Whose Bills are Collected			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Water	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical Losses (%)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Physical Losses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative/Managerial Losses (%)			0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Delivered			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Whose Bills are Collected			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Financial Analysis (JD at 2011 Prices)																				
Item	Percent	Amount	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Costs																				
Local Components	100%	952,416	476,208	476,208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foreign Components	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Duty & Taxes	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Capital Costs		952,416	476,208	476,208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Costs			476,208	952,416	952,416	952,416	952,416	952,416	952,416	952,416	952,416	952,416	952,416	952,416	952,416	952,416	952,416	952,416	952,416	952,416
O & M Costs			0	5,382	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764	10,764
Total Costs			476,208	481,590	963,180	963,180	963,180	963,180	963,180	963,180	963,180	963,180	963,180	963,180	963,180	963,180	963,180	963,180	963,180	963,180
Revenues																				
Municipal Usage Qty (m ³)			0	131,135	271,629	287,098	292,515	298,117	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545
Municipal Tariff (JD/m ³)			0.394	0.399	0.394	0.394	0.397	0.397	0.394	0.394	0.394	0.394	0.394	0.394	0.394	0.394	0.394	0.394	0.394	0.394
Municipal Revenues (JD)			0	57,886	107,210	113,109	116,969	118,861	124,927	124,927	124,927	124,927	124,927	124,927	124,927	124,927	124,927	124,927	124,927	124,927
Industrial Usage Qty (m ³)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industrial Tariff (JD/m ³)			1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Industrial Revenues (JD)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Usage Qty (m ³)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Tariff (JD/m ³)			0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Irrigation Revenues (JD)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Revenues (JD)			0	57,886	107,210	113,109	116,969	118,861	124,927	124,927	124,927	124,927	124,927	124,927	124,927	124,927	124,927	124,927	124,927	124,927
Net Cash Flow (JD)			-476,208	-444,504	-71,446	-80,345	-80,195	-101,097	-113,163	-113,163	-113,163	-113,163	-113,163	-113,163	-113,163	-113,163	-113,163	-113,163	-113,163	-113,163
Discounting (DR=5%)			0.95238	0.90703	0.86384	0.82270	0.78353	0.74632	0.71091	0.67804	0.64741	0.61881	0.59208	0.56708	0.54368	0.52173	0.50118	0.48191	0.46380	0.44680
Total Qty Whose Bills are Collected (m ³)			0	131,135	271,629	287,098	292,515	298,117	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545	314,545
IRR	9.8%																			
NPV (JD)		556,247	-451,531	-411,179	-17,718	66,100	70,670	75,440	80,423	85,593	90,944	96,472	102,164	108,013	114,013	120,164	126,463	132,909	139,501	146,235
PV of Total Costs (JD)		1,033,312	451,531	411,179	17,718	66,100	70,670	75,440	80,423	85,593	90,944	96,472	102,164	108,013	114,013	120,164	126,463	132,909	139,501	146,235
PV of Total Bills Collected Qty (m ³)		4,153,129	0	181,966	215,094	220,236	221,358	222,459	223,541	224,599	225,635	226,650	227,645	228,620	229,575	230,510	231,425	232,320	233,195	234,050
Unit Water Price (FJD/m ³)		249																		

Economic Analysis (JD at 2001 Prices)

Item	Percent	Amount	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																			
Local Costs		928,415	468,207	468,207	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foreign Costs		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Duty & Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Capital Costs		928,415	468,207	468,207	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Costs		468,207	928,415	928,415	928,415	928,415	928,415	928,415	928,415	928,415	928,415	928,415	928,415	928,415	928,415	928,415	928,415	928,415	928,415
O & M Costs		0	5,382	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764
Total Costs		468,207	468,207	468,207	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764	18,764
Benefits																			
Municipal Usage Qty (m ³)		0	133,483	278,713	290,976	303,779	317,146	331,108	331,108	331,108	331,108	331,108	331,108	331,108	331,108	331,108	331,108	331,108	331,108
Unit Benefits of Municipal Water (JD/m ³)		0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735
Municipal Benefits (JD)		0	98,110	204,854	213,868	223,278	233,102	243,359	243,359	243,359	243,359	243,359	243,359	243,359	243,359	243,359	243,359	243,359	243,359
Industrial Usage Qty (m ³)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unit Benefits of Industrial Water (JD/m ³)		2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740
Industrial Benefits (JD)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Usage Qty (m ³)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unit Benefits of Irrigation 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	0.283	0.283	0.283	0.283	0.283	0.283
Irrigation Benefits (JD)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Benefits (JD)		0	98,110	204,854	213,868	223,278	233,102	243,359	243,359	243,359	243,359	243,359	243,359	243,359	243,359	243,359	243,359	243,359	243,359
Net Cash Flow (JD)		-468,207	-367,479	-194,090	-203,104	-212,514	-222,338	-232,595	-232,595	-232,595	-232,595	-232,595	-232,595	-232,595	-232,595	-232,595	-232,595	-232,595	-232,595
Discounting (DR=1.0%)		0.90909	0.82645	0.75131	0.68301	0.62092	0.56447	0.51318	0.46651	0.42418	0.38554	0.35049	0.31863	0.28966	0.26333	0.23939	0.21763	0.19784	0.17984
Total Qty Delivered (m ³)		0	133,483	278,713	290,976	303,779	317,146	331,108	331,108	331,108	331,108	331,108	331,108	331,108	331,108	331,108	331,108	331,108	331,108
EBR																			
NPV (JD)	23.2%	986,240	-418,370	-381,702	-145,823	-118,723	-131,954	-125,504	-119,358	-108,597	-98,443	-89,475	-81,523	-74,112	-67,374	-61,249	-55,681	-50,619	-46,018
PV of Total Costs (JD)		885,328	418,370	384,705	1,087	7,252	6,684	6,078	5,524	5,021	4,585	4,150	3,773	3,430	3,118	2,834	2,577	2,343	2,130
PV of Total Qty Delivered (m ³)		2,940,352	0	118,517	288,401	398,741	488,623	579,020	669,907	754,481	840,419	927,453	1,016,449	1,095,499	1,165,508	1,227,109	1,280,285	1,325,057	1,361,508
Unit Water Price (FJD/m ³)		348																	

Table 4.5.2-6 Financial/Economic Analysis of 5 Water Networks Rehabilitation Projects Combined

Hydraulic Analysis (m ³ /yr)																			
Item	Allocation	Water Qty	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Water Produced		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saved		1,952,800	0	759,813	1,251,023	1,311,071	1,762,784	1,855,054	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800
Municipal Water	1.00	1,952,800	0	759,813	1,251,023	1,311,071	1,762,784	1,855,054	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800
Physical Losses (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Physical Losses		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative/Managerial Losses (%)		0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses		0	75,981	112,582	104,886	123,295	111,303	97,648	97,648	97,648	97,648	97,648	97,648	97,648	97,648	97,648	97,648	97,648	97,648
Quantity Delivered		0	759,813	1,251,023	1,311,071	1,762,784	1,855,054	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800	1,952,800
Quantity Whose Bills are Collected		0	881,832	1,138,431	1,286,185	1,439,389	1,743,751	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168
Industrial Water	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical Losses (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Physical Losses		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative/Managerial Losses (%)		0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Delivered		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Whose Bills are Collected		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Water	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical Losses (%)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Physical Losses		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative/Managerial Losses (%)		0.12	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Administrative/Managerial Losses		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Delivered		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Quantity Whose Bills are Collected		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Financial Analysis (JD at 2011 Prices)																			
Item	Percent	Amount	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																			
Local Components	94%	7,351,879	2,814,495	2,547,005	1,894,690	1,894,690	0	0	0	0	0	0	0	0	0	0	0	0	0
Foreign Components	6%	494,640	141,510	117,710	117,710	117,710	0	0	0	0	0	0	0	0	0	0	0	0	0
Duty & Taxes	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Capital Costs		7,846,519	2,956,005	2,664,715	2,012,400	2,012,400	0	0	0	0	0	0	0	0	0	0	0	0	0
Cumulative Costs		2,758,005	5,428,720	6,613,119	7,845,519	7,845,519	7,845,519	7,845,519	7,845,519	7,845,519	7,845,519	7,845,519	7,845,519	7,845,519	7,845,519	7,845,519	7,845,519	7,845,519	7,845,519
O & M Costs		0	11,522	21,157	21,157	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032
Total Costs		2,758,005	2,978,237	3,212,557	3,212,557	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032	71,032
Revenues																			
Municipal Usage Qty (m ³)		0	881,832	1,138,431	1,286,185	1,439,389	1,743,751	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168
Municipal Tariff (JD/m ³)	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320	0.320
Municipal Revenues (JD)	0	225,351	366,484	421,770	590,447	646,875	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851
Industrial Usage Qty (m ³)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industrial Tariff (JD/m ³)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Industrial Revenues (JD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Usage Qty (m ³)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Tariff (JD/m ³)	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818	0.818
Irrigation Revenues (JD)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Revenues (JD)	0	225,351	366,484	421,770	590,447	646,875	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851	708,851
Net Cash Flow (JD)		-2,756,005	-2,450,846	-347,073	-811,787	519,415	575,843	637,819	637,819	637,819	637,819	637,819	637,819	637,819	637,819	637,819	637,819	637,819	637,819
Discounting (DR=5%)		0.95238	0.90703	0.86394	0.82270	0.78353	0.74622	0.71061	0.67694	0.64461	0.61351	0.58368	0.55504	0.52657	0.49927	0.47312	0.44801	0.42393	0.40087
Total Qty Whose Bills are Collected (m ³)	0	881,832	1,138,431	1,286,185	1,439,389	1,743,751	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168	1,855,168
EBR	6.3%																		
NPV (JD)	1,009,217		-2,634,767	-2,212,989	-731,733	-467,829	406,975	429,703	453,288	431,791	411,144	391,545	372,919	355,161	338,249	322,142	306,802	292,192	278,278
PV of Total Costs (JD)	7,956,260		2,634,767	2,417,436	1,865,593	1,814,850	55,655	53,005	50,481	48,077	45,788	43,487	41,231	39,023	36,857	34,731	32,643	30,594	28,584
PV of Total Bills Collected (m ³)	23,894,615		0	881,832	881,832	881,832	881,832	881,832	881,832	881,832	881,832	881,832	881,832	881,832	881,832	881,832	881,832	881,832	881,832
Unit Water Price (JD/m ³)	334																		

Economic Analysis (JD at 2001 Prices)

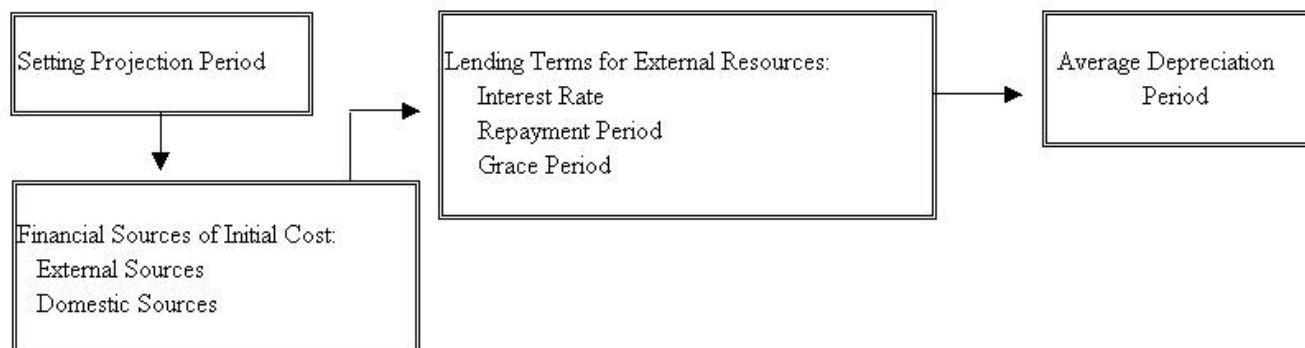
Item	Percent	Amount	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Costs																			
Local Costs		7,055,235	2,597,872	2,455,149	1,851,631	1,851,631	875	875	875	875	875	875	875	875	875	875	875	875	875
Foreign Costs		494,640	141,510	117,710	117,710	117,710	0	0	0	0	0	0	0	0	0	0	0	0	0
Duty & Taxes		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Capital Costs		7,559,875	2,649,382	2,572,859	1,969,341	1,969,341	875	875	875	875	875	875	875	875	875	875	875	875	875
Cumulative Costs			2,649,382	5,222,241	6,391,582	7,540,923	7,561,798	7,562,673	7,563,548	7,564,423	7,565,298	7,566,173	7,567,048	7,567,923	7,568,798	7,569,673	7,570,548	7,571,423	7,572,298
O & M Costs		0	11,532	21,157	21,157	21,157	21,032	21,032	21,032	21,032	21,032	21,032	21,032	21,032	21,032	21,032	21,032	21,032	21,032
Total Costs			2,649,382	2,584,381	1,990,498	1,990,498	71,907	71,907	71,907	71,907	71,907	71,907	71,907	71,907	71,907	71,907	71,907	71,907	71,907
Benefits																			
Municipal Usage Qty (m ³)		0	759,813	1,351,023	1,311,071	1,762,784	1,855,054	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808
Unit Benefits of Municipal Water (JD/m ³)		0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735	0.735
Municipal Benefits (JD)		0	558,463	988,502	963,637	1,295,646	1,365,465	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308
Industrial Usage Qty (m ³)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unit Benefits of Industrial Water (JD/m ³)		2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740	2.740
Industrial Benefits (JD)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Irrigation Usage Qty (m ³)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unit Benefits of Irrigation 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	0.283	0.283	0.283	0.283	0.283	0.283
Irrigation Benefits (JD)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Benefits (JD)		0	558,463	988,502	963,637	1,295,646	1,365,465	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308	1,435,308
Net Cash Flow (JD)			-2,649,382	-2,025,918	-270,998	-236,861	1,223,739	1,291,558	1,363,401	1,363,401	1,363,401	1,363,401	1,363,401	1,364,276	1,364,276	1,364,276	1,364,276	1,364,276	1,364,276
Discounting (DR=1.0%)			0.90909	0.82945	0.75131	0.68301	0.62092	0.56447	0.51318	0.46651	0.42418	0.38554	0.35049	0.31863	0.28966	0.26333	0.23939	0.21763	0.19784
Total Qty Delivered (m ³)		0	759,813	1,351,023	1,311,071	1,762,784	1,855,054	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808	1,952,808
EBR																			
NPV (JD)	17.2%		-2,481,529	-1,874,312	-281,603	-154,949	759,846	729,051	699,641	636,037	578,215	525,450	477,864	434,700	395,182	359,257	326,597	296,906	269,915
PV of Total Costs (JD)		6,095,236	2,481,529	2,135,852	1,944,439	1,713,126	1,446,449	1,200,000	1,000,000	833,545	697,723	583,400	488,633	402,633	324,575	254,705	194,004	144,559	105,053
PV of Total Qty Delivered (m ³)		14,397,030	0	877,945	838,912	895,479	1,094,550	1,047,130	1,000,000	910,994	828,178	752,889	684,444	622,222	565,657	514,235	467,485	424,906	384,551
Unit Water Price (Fishes)		465																	

ANNEX to 4.6.3

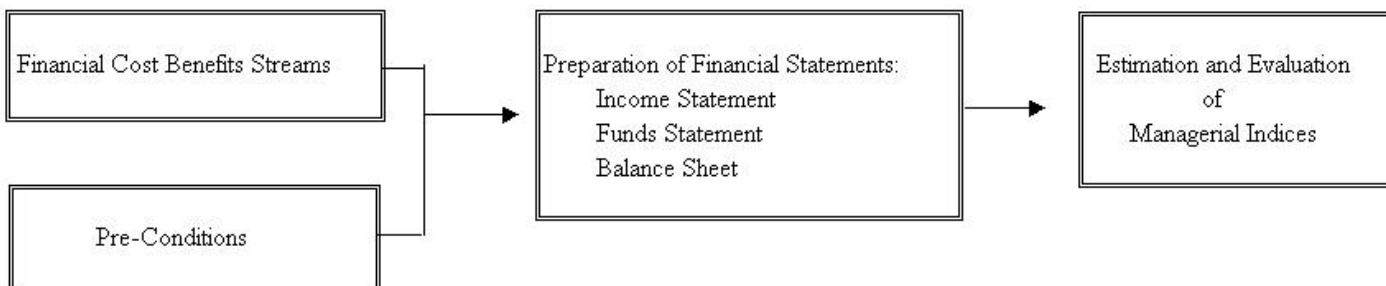
Financial Statements

Preparation of Projected Financial Statements

1. Setting Pre-Conditions



2. Preparation and Evaluation of Projected Financial Statements



Methodology for Preparation of Financial Statements for Municipal Water Network Rehabilitation Project