SUPPORTING REPORT For

CHAPTER 2

Wadi Zarqa Treatment Plant Construction

Supporting Report for Chapter 2 "Wadi Zarqa Treatment Plant Construction"

	page
Annex to 2.2.4 Treatment Facilities	SB2-1
Annex to 2.5.4 Sewerage System	SB2-4
Annex to 2.7.2 Investment Costs	SB2-7
Annex to 2.8.2 Economic and Financial Analysis	SB2-9
Annex to 2.8.3 Financial Statements	SB2-12

ANNEX to 2.2.4

Treatment Facilities

BASIC DATA OF TREATMENT PLANT:

(Data of 1999, if not another year indicated)

Town: Governorate: Treatment plant: Date of visit: Responsible engineer: Contacted person: Telephone:		Amman Amman As-Samra 9.3.2000 Mohamed Saleh Mohamed Saleh 37/3811936
Population		
Tot.population living in towns with sewerage:	inhabitants	2.170.000
Population growth	%	3,6
Wastewater disposal		
Public system	%	90
Cesspools	%	10
Others	%	0
Wastewater collection		
Towns/villages connected (the most important)	-	Amman (part belonging to Wadi Zarqa Basin), Zarqa, Russeifa, Hashimiyya
Population connected (as coverage treatment)	С	1.951.000
Coverage	%	90
Important industries	-	37 industries (slaughterhouse etc.)
Number of stormwater overflows works	no.	-
Length of sewers	km	1.500,0
Length per connected capita	m/c	0,8
House connections	h.c.	105.883
Capita per house connection	c/h.c.	18,4
Return factor (acc. to Design Report)	-	0,87
Monthly peak factor	-	1,10
Employees for wastewater collection	E	133
Factor: Sewer length per connected capita/cover	age	0,9

As-Samra

3

BASIC DATA OF TREATMENT PLANT:

Wastewater treatment		
		MCD
Wastewater treatment technology		WSP
Wastewater treatment technology		Wastewater stabilisation ponds
In operation since		1985
Composed of treatment facilities		
Facility		Screen (in Ain Ghazal)
Number of units	_	2 (autom.)
Total dimension		2 (00.0)
Facility		Aerated grit cham. (in Ain Ghazal)
Number of units	-	2
Total dimension		
Facility		Anaerobic ponds
Number of units	-	3 x 2
Total dimension		
		Ecoultativo nondo
Facility		Facultative ponds
Number of units	-	3 x 4
Total dimension		
Facility		Maturation ponds
Number of units	-	3 x 4
Total dimension		
Facility		Chlorination unit
Number of units		1
	-	I
Total dimension		-
Facility		-
Number of units	-	-
Total dimension		-
Facility		-
Number of units	-	<u></u>
Total dimension		_
Facility		
-		-
Number of units	-	-
Total dimension		-
Facility		-
Number of units	-	-
Total dimension		-
Remarks:		Total ponds' area: 181ha
		p
		-
	3	
Installed capacity	m³/d	68.000
Population served (assuming 65 g/c/d)	с	1.951.000
Coverage (assuming 65 g/c/d)	%	90
Inflow treatment plant (average)	m ³ /d	166.855
Innow ireatment plant (average)		
	MCM/a	60,902
Estimated losses by seepage/evaporation	%	25
Estimated effluent of the treatment plant	m³/d	125.141
	MCM/a	45,677
BOD ₅ -load influent (according to WAJ data)	mg/l	760
DOD5-load initiacit (according to WAB data)	-	
	kg/d	126.810
	t/a	46.286
BOD ₅ -load effluent (according to WAJ data)	mg/l	118
_ ,	kg/đ	14.767
	t/a	5.390
	va	0.000
	4/400	140.000
Fecal coliforms at effluent (acc.to WAJ data)	1/100 ml	140,000
Helminth eggs	eggs/l	0
Spec.wastewater generation	l/c/d	86
Spec.BOD ₅ -load	g/c/d	65
Total dissolved solids (TDS) at effluent	mg/l	1.258
	mgn	1.200

Sludge management

As-Samra 3

_

BASIC DATA OF TREATMENT PLANT:

Cost of wastewater treatment		
Operation and maintenance cost	JD/a	629.620
Operation/maintenance cost related to influent	JD/m ³	0,010
Performance of wastewater collection		
Employees for wastewater collection	Е	133
Number of employees per 1,000 house conn.	E/1000 h.c.	1,3
Recommended number of employees	E/1000 h.c.	2-4
Number of employees per km sewer	E/10km	0,9
Average number of complaints per month	1/month	
Average number of complaints per km sewer	1/month/km	0,0
Performance of wastewater treatment		
Treatment efficiency (BOD ₅ acc.to WAJ data)	%	84
Expected efficiency (acc.to experience)	%	80 - 90
Used treatment capacity (hydraulic)	%	245
	70	
Odor problems	-	yes eventeeding of plant
Specific treatment problems		overloading of plant
Power-cuts		no problem
Operation/maintenance arrangement available	F	?
Employees for wastewater treatment	E	50
Recommended number of employees (WWTP)	E	57
Environmental impacts of effluent		
Discharge of effluent into		Wadi Dhuleil to Wadi Zarqa to King Talal Reservoir
Requirements acc. to JS 893/1995		not respected
(according to WAJ data)		-
Reuse of effluent for agricultural irrigation		-
		restricted in writer and a

Possible reuse (acc. to JS 893/1995) Practice of restricted irrigation Practice of unrestricted irrigation Irrigation near treatment plant restricted irrigation only at plant site and upstream of King Talal Reservoir downstream of King Talal Reservoir (after dilution)

donums 3.300

As-Samra

ANNEX to 2.5.4

Sewerage System

Area	Existing Diameter		Require	ed Diame	eter by Y	ears		Construction Year	Length	Dia- meter
		2000	2005	2010	2015	2020	2025	1		
Tariq	200	200	300	300	400	400	400	2005	320	400
Tariq	200	200	300	300	400	400	400	2005	50	400
Tariq	200	200	400	400	400	400	500	2025	59	500
Tariq	200	200	200	300	300	300	400	2010	35	400
Tariq	300	300	300	300	400	400	500	2015	102	500
Tariq	300	300	300	300	300	300	400	2025	51	400
Tariq	300	300	300	300	300	400	400	2020	103	400
Tariq	300	300	300	300	300	300	400	2025	229	400
Tariq	300	300	300	300	300	300	400	2025	573	400
Tariq	300	300	300	300	400	400	500	2015	70	500
Tariq	300	300	300	400	400	500	500	2010	70	500
Tariq	300	300	300	300	300	300	400	2025	148	400
Tariq	300	300	300	300	300	400	400	2020	210	400
Tariq	300	300	400	400	500	500	600	2025	204	600
Tariq	300	300	300	300	300	300	400	2025	210	400
Tariq	300	300	300	300	300	300	400	2025	259	400
Tariq	300	300	300	300	300	300	400	2025	395	400
Tariq	300	300	300	300	300	400	400	2020	40	400
Tariq	300	300	400	400	500	500	600	2025	49	600
Tariq	300	300	300	300	300	300	400	2025	108	400
Tariq	300	300	300	300	400	400	500	2015	384	500
Tariq	300	300	300	300	300	400	400	2020	270	400
Tariq	300	300	300	300	300	300	400	2025	310	400
Tariq	300	300	300	300	300	300	400	2025	111	400
Tariq	300	300	300	400	400	500	500	2010	123	500
Tariq	300	300	300	300	300	300	400	2025	75	400
Tariq	300	300	300	300	300	300	400	2020	463	400
Tariq	300	300	300	300	300	300	400	2025	245	400
Tariq	300	300	300	300	300	400	400	2020	1356	400
Tariq	300	300	300	300	300	300	400	2025	490	400

Table 1a: Tariq System Expansion Required in Different Years

Area	Existing		Requi	red Dian	neter by Y	lears		Construct.	Length	Dia-
	Diameter		_					Year		meter
		2000	2005	2010	2015	2020	2025			
Marka	300	300	300	300	400	400	400	2015	45	400
Marka	300	300	400	400	500	500	600	2015	45	600
Marka	300	300	400	400	500	500	600	2025	114	600
Marka	300	300	300	400	400	500	500	2010	55	500
Marka	300	300	300	300	400	400	400	2015	13	400
Marka	300	300	300	300	300	400	400	2020	330	400
Marka	300	300	300	300	400	400	400	2015	560	400
Marka	300	300	300	400	400	500	500	2010	816	500
Marka	300	300	400	400	500	500	600	2025	860	600
Marka	300	300	400	500	500	500	600	2025	788	600
Marka	300	300	300	400	400	500	500	2010	810	500
Marka	300	300	300	300	300	300	400	2025	201	400
Marka	300	300	300	300	300	400	400	2020	615	400
Marka	300	300	400	400	500	500	500	2005	221	500
Marka	300	300	400	400	500	500	500	2005	274	500
Marka	300	300	300	300	300	300	400	2025	496	400
Marka	300	300	300	400	400	400	500	2010	250	500
Marka	400	400	400	400	500	600	600	2015	60	600
Marka	400	400	600	600	700	700	700	2010	337	700
Marka	400	400	500	600	700	700	700	2010	260	700
Marka	400	400	400	400	500	600	600	2015	592	600
Marka	400	400	400	400	400	500	600	2015	805	600
Marka	400	600	700	700	800	800	900	2015	564	900
Marka	500	500	700	700	700	800	900	2020	1260	900
Marka	500	500	500	500	500	500	700	2025	220	700
Marka	1200	1200	1300	1300	1300	1300	1400	2005	70	1400
Marka	1200	1200	1200	1300	1300	1300	1300	2010	562	1300
Marka	1200	1200	1200	1300	1300	1300	1300	2010	595	1300
Marka	1200	1200	1200	1300	1300	1300	1300	2010	284	1300

Table 1b: Marka System Expansion Required in Different Years

Table 2:	Zarqa System Expansion Required in Different Years
----------	--

	Existing	ľ.	Reg	uired Dia	meter by Y	(ears		Construction	T an adh	Discustor
Area	Diameter	2000	2005	2010	2015	2020	2025	Year	Length	Diameter
Zarqa	800	800	800	800	800	1000	1100	2020	260.6	1100
Zarqa	800	800	800	800	800	800	1000	2025	605.1	1000
Zarqa	800	800	800	800	800	800	1000	2025	483.4	1000
Zarqa	400	400	400	400	400	400	600	2025	244.3	600
Zarqa	500	500	500	500	600	600	700	2010	210.0	700
Zarqa	300	300	300	400	400	400	500	2010	400.4	500
Zarqa	500	700	700	800	900	900	1000	2000	1225.6	1000
Zarqa	400	400	400	400	400	400	600	2025	166.6	600
Zarqa	400	400	400	400	400	400	500	2025	184.4	500
Zarqa	300	300	300	300	300	300	400	2025	135.6	400
Zarqa	300	300	300	300	300	300	400	2025	377.5	400
Zarqa	800	800	800	800	800	800	1000	2025	406.8	1000
Zarqa	800	800	800	800	800	800	1000	2025	361.2	1000
Zarqa	1000	1000	1000	1200	1400	1400	1600	2010	327.3	1600
Zarqa	300	300	300	400	400	400	500	2010	156.9	500
Zarqa	1000	1000	1000	1000	1200	1300	1400	2015	110.0	1400
Zarqa	300	300	300	300	400	400	400	2015	210.1	400
Zarqa	400	400	400	400	500	500	600	2015	195.0	600
Zarqa	300	300	300	300	300	300	400	2025	126.2	400
Zarqa	300	300	300	300	300	300	400	2025	530.0	400
Zarqa	400	400	400	400	400	400	500	2025	272.6	500
Zarqa	1000	1000	1200	1400	1600	1600	1900	2005	546.7	1900
Zarqa	1000	1000	1000	1200	1400	1400	1600	2010	351.3	1600
Zarqa	800	800	1000	1200	1300	1400	1600	2005	352.5	1600
Zarqa	800	800	800	1000	1000	1100	1300	2010	372.1	1300
Zarqa	500	500	500	500	500	500	700	2025	519.2	700
Zarqa	500	500	500	500	500	600	700	2020	381.4	700
Zarqa	500	500	500	500	500	500	700	2025	386.2	700
Zarqa	600	600	600	600	600	600	700	2025	522.8	700
Zarqa	800	800	800	800	1000	1000	1400	2015	429.6	1400
Zarqa	400	400	400	600	600	700	700	2010	313.4	700
Zarqa	500	500	500	500	700	700	700	2015	251.3	700
Zarqa	800	1000	1100	1200	1400	1400	1600	2000	376.8	1600
Zarqa	800	800	800	800	1000	1100	1200	2015	218.4	1200
Zarqa	800	800	800	800	1000	1000	1200	2015	218.0	1200
Zarqa	300	300	300	400	400	500	500	2010	232.4	500
Zarqa	300	300	300	300	400	400	500	2015	433.9	500
Zarqa	500	700	700	800	900	1000	1000	2000	945.6	1000
Zarqa	300	300	300	300	400	400	400	2015	421.7	400
Zarqa	400	400	400	400	400	500	600	2020	350.4	600
Zarqa	500	500	700	700	700	800	900	2005	573.3	900
Zarqa	500	500	700	700	800	900	1000	2005	633.6	1000
Zarqa	500	500	700	700	700	800	900	2005	611.8	900
Zarqa	500	500	700	700	800	900	1000	2005	970.4 500.0	1000
Zarqa	1000	1000	1000	1300	1300	1400	1600	2010	500.0	1600
Zarqa	1000	1000	1000	1200	1400	1400	1600	2010	60.0	1600
Zarqa	500	500	700	700	800	800	900	2005	531.0	900 800
Zarqa	500	500	500	700	700	800	800	2010	560.0	800
Zarqa	500	500	700	700	700 500	800 500	900 700	2005	574.0	900 700
Zarqa	500	500	500	500	500	500	700	2025	56.0	700 700
Zarqa	400	500	500	600	600	600	700	2015	163.0	700
Zarqa	400	400	400	400	400	400	600	2025	526.0	600 500
Zarqa	300	300	300	400	400	500	500	2010	993.0	500
Zarqa	300	400	400	400	400	400	400	2000	561.0	400

ANNEX to 2.7.2

Investment Costs

Area	2005					_											
	DN400	DN500	DN600	DN700	DN800	DN900	DN1000	DN1100	DN1200	DN1300	DN1400	DN1500	DN1600	DN1700	DN1800	DN1900	Total
Marka & Tarìq	370	495					l				70		353			547	
Zarqa						2290	1604										
Ruseifa						811						2568	839				
Hashimiyya																	
Total	370	495	0	0	0	3101	1604	0	0	0	70	2568	1192	0	0	547	
Unit Cost JD/ m)	70	75	85	89	98	115	132	138	150	160	195	265	310	338	355	445	
Total Cost	25900	37125	0	0	0	356581	212241	0	0	_0	13650	680414	369458	0	0	243282	1938650
Area	2010																
	DN400	DN500	DN600	DN700	DN800	DN900	DN1000	DN1100	DN1200	DN1300	DN1400	DN1500	DN1600	DN1700	DN1800	DN1900	
Marka & Tariq	35	2124		597						1441							
Zarqa		1783		523	560					372			1239				
Ruseifa					663				509			558					
Hashimiyya	 							 		 	 		 	 	 		
Total	35	3907	0	1120	1223	0	0	0	509	1813	0	558	1239	0	0	0	
Unit Cost	70	75	85	89	98	115	132	138	150	160	195	265	310	338	355	445	
Total Cost	2450	293003	0	99716	119834	0	0	0	76335	290096	0	147817	383966	0	0	0	1413217
Area	2015											}					
	DN400	DN500	DN600	DN700	DN800	DN900	DN1000	DN1100	DN1200	DN1300	DN1400	DN1500	DN1600	DN1700	DN1800	DN1900	
Marka & Tariq	618	556	1502			564											
Zarqa	632	434	195	414					436		540						
Ruseifa				4286					510			194					
Hashimiyya									380								
Total	1250	990	1697	4700	0	564	0	0	1326	0	540	194	0	0	0	0	
Unit Cost	70	75	85	89	98	115	132	138	150	160	195	265	310	338	355	445	
Total Cost	87486	74243	144245	418282	0	64860	0	0	198885	0	105222	51304	0	0	0	0	1144527

Investment cost for sewerage network (Wadi Zarqa System)

Area	2020																
	DN400	DN500	DN600	DN700	DN800	DN900	DN1000	DN1100	DN1200	DN1300	DN1400	DN1500	DN1600	DN1700	DN1800	DN1900	
Marka & Tariq	3387					1260											
Zarqa			350	381					261								
Ruseifa	972						<u> </u>										
Hashimiyya									266								
Total	4359	0	350	381	0	1260	0	0	527	0	0	0	0	0	0	0	
Unit Cost	70	75	85	89	98	115	132	138	150	160	195	265	310	338	355	445	
Total Cost	305116	0	29784	33945	0	144900	0	0	79050	0	0		0	0	0	0	592795
Area	2025																
	DN400	DN500	DN600	DN700	DN800	DN900	DN1000	DN1100	DN1200	DN1300	DN1400	DN1500	DN1600	DN1700	DN1800	DN1900	
Marka & Tariq	3901	59	2015	220													
Zarqa	116 <u>9</u>	457	937	1484			1857										
Ruseifa	1153					1											
Hashimiyya	1205			[<u> </u>	1503										
Total	7428	516	2952	1704	0	0	3359	0	0	<u>0</u>	0	0	0	0	0	0	
Unit Cost	70	75	85	89	98	115	132	138	150	160	195	265	310	338	355	445	
Total Cost	519981	38700	250912	151674	0	0	444516	0	0	0	0	0	0	0	0	0	1405782
	1	ļ															6494970

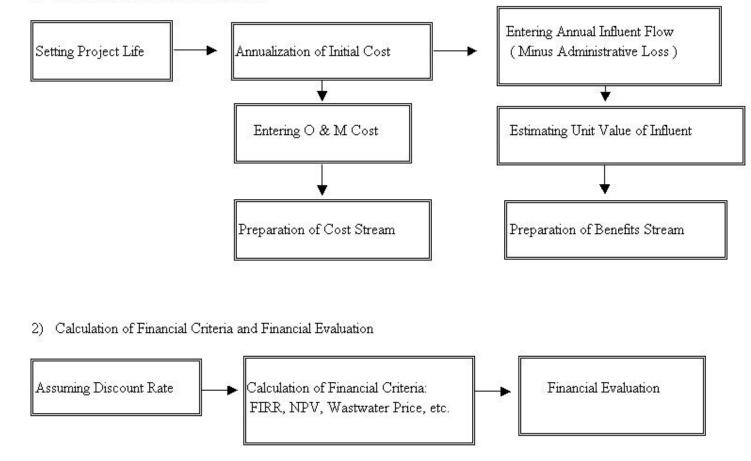
ANNEX to 2.8.2

Economic and Financial Analysis

Economic and Financial Analysis

1. Financial Analysis

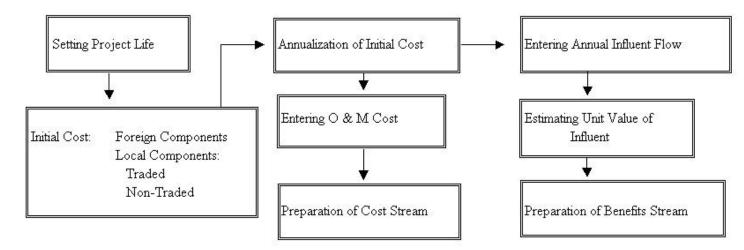
1) Preparation of Cost Benefits Streams



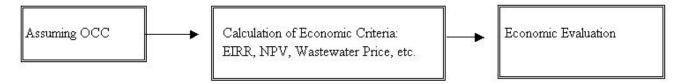
Methodology for Economic and Financial Analysis of Wadi Zarqa Wastewater Treatment Project

SB2-10

1) Preparation of Cost Benefits Streams



2) Calculation of Economic Criteria and Economic Evaluation



Methodology for Economic and Financial Analysis of Wadi Zarqa Wastewater Treatment Project

Table 2.6.2-1 Pinancial Economic Analysis of Wash Zarya Wastewater Treatment Project

hem	Alsoston		2003	2004	2008	2008	2017	2011	1 2089	2018	2001	201.2	2012	2014	2815	2516	2817	2018	2815	2 9 20
Fator Produced				2.000	1	34.314,918	18,855,689	TT 625,075	18,499,187	41,400,080	41,351,222	45,252,112	47,462,132	45,883,430	\$2,006,800	\$2,008,800	\$2,008,800	\$2,008,800	52,018,800	52,083,10
situatinal Water	0.01		0.6	0.0	0.1	0.8	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.0	10	8.0	E.0	1
	8.00 ·				1.08	1.01				0.80	0.00	0.90		0.00	0.00				0.00	0.0
Physical Lausse (%)			8.08	8.08			1.01	1.11	0.01				0.00			0.00	0.00	0.00		
Physical Lasses			0.6	0.0	0.8	0.8	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.0	8.0	0.0		_ R
Administrative/Managerial Longer (%)			8.14	0.12	1.11	1.17	1.02	1.17	0.81	0.85	0.85	0.85	0.85	0.85	0.05	0.05	D.05	0.05	0.05	0.0
Administrative/Managerial Loarer			0.0	0.0	0.8	0.1	0.8	0.1	0.1	0.0	0.0	0.0	0.0	0.0	8.0	1.0	1.0	0.0	8.0	- 9
Cauntity Deferenced			0.6	0.8	0.8	0.8	0.1	0.8	0.0	0.0	0.0	0.0	0.0	0.0	1.0	10	1.0	8.0	8.0	
Quantity Where Talls are Collected			0.6	0.6	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	E.D	¥.0	
tragedura Weltz	1.01					34,304,956	35,955,683	39,685,875	39,498,387	41,408,080	43.331.222	45.352.532	47,468,132	45.612,430	\$2,080,800	52,890,800	52,880,800	52,880,800	52,890,800	52,000,0
Physical Larner (%)			8.08	8.06	8.08	8.00	1.11	0.00	0.81	0.00	0.80	0.00	0.00	0.90	0.00	0.00	0.00	D.00	0.00	0.
Physical Lapses					1		1	1		0	0	0	0	0	0	0	0	0	0	
Advantative/Managered Logran (%)			1.14	8.12	8.18	1.12	111	1.17	0.85	0.85	0.85	0.85	0.85	0.85	0.05	0.05	0.05	0.05	0.05	D
Adenisistrative/Managerial Losses						3,087,446	2,876,456	5/638.011	2,3(8,951	1.078.080	1,166,561	1.007.027	1,373,497	2,484(.121	2,580,800	2,495,900	2,490,800	2,490,900	2,410,900	2,600,8
Quantity Delivered			1	- T.	- E.S.	34,304,994	55,955,683	57,683,875	38,498,387	41,408,080	43,331,222	45,382,992	47,463,132	49,5812,430	52,080,800	52,880,800	52,880,800	52,890,900	52,810,800	52,800,8
Quantity Where Bills are Collected				1	- E	31,212,510	33,079,243	35,047,864	37,128,341	39,338,080	41,164,661	43,084,316	45,084,736	47,181,199	48,480,800	49,480,800	48,480,800	49,480,800	49,410,800	49,400,8
Isomrial Analysis (JD at 2001 Prices)	11.2 11.11	956 255	100000	- 0-70-0 ¹¹	- HOARD - 111					1000		-		21220	1022	10.000	-0.00	1000		
hun	Percent	Accent	2003	2004	2008	2006	2017	2085	2013	2018	2014	201.2	2013	2814	2015	2816	2017	2010	2019	2820
	· · · · · · ·		and a	anner																
outs						1.1									100	62		á 192	121	
Local Companies	-42%	60,053,078	28,017,690	28,007,890	28,007,690	U	U	0	σ.	0	U	D	U.	1	1	1	1	1	1	
Fireign Compenents	\$2%	04,435,588	(1,478,537	21,478,527	21,478,527	0	.0	0	0	0	0	0	0	1	- T	- E	1	1	- TE	
Duty & Turer	0%		0	0	0	0	0	0	0	D	D	D	0		1	1		1	1	
Tittal Capital Costs		124,483,658	41,498,317	41,456,317	41,498,217	0	n	ñ.,	0	n	'n	ň.,	0		÷.	1.1			1	
		COLTRONO.			124,441,850	124,448,650	134,483,650	(34,483,650	134,418,650	134,418,650	134,418,650	134,438,650	134,488,650	134,488,656	134,435,654	124.488.458	124.488.458	124,481,658	124,453,653	124,481,6
Outsidate: Centr			41,486,317	81,992,433																
D & M Costs			0		0	4,371,703	1,410,221	4,590,582	6,702,541	8,817,800	8,925,989	7(152,155	7,145,000	7,251,135	T,359,008	T, 369,008	T,36P,00E	T, 368,008	7,368,013	7,528,0
Tetal Ciette			41,456,317	41,456,317	41,456,317	6,371,713	6,480,123	6,590,592	4,782,840	6,817,800	6,523,889	7,832,856	7,143,030	7,255,135	7,369,008	7,369,008	7,369,008	1,368,008	7,365,011	7,368.0
1.82.82																				
Industrial Usage Oty En ²)			1.0	100	1.1	1.10	1.00	17	10	S0.	0	0.5	0	10	0	0	1	2	. 6	
																		A		
Industrial Tariff (JD/m ²)			1.008	1.008	1.008	3.018	1.001	1.000	1.001	1.080	L 000	1.000	1.8.00	1.630	1.000	1,800	1.000	1,800	1.900	- 10
ndestrial Revenses (JD)					- E -		1.1.1.1.1.1	- 1999 (M. 1998)	23503000	0	0	0	- 0	0	0	0	0	0	.0	
righten Unger Qty (m ²)				1.1	1000	31,217,518	33,079,243	35,041,864	37,128,341	39,338,000	41,164,661	43,084,536	45.084.736	47,155,199	48,410,000	48,480,800	48,480,800	48,480,800	49,410,000	49,400,1
migation Twiff ()Drin?)			3 147	8.373	1.715	0.342	0.315	0.336	TRE 0	0.460	0.455	0.462	0.465	0.461	0.468	0.468	0.468	1468	140	1.
krigatias Revenues (JD)					112040	7,538,831	9,427,385		14,734,265	11,416,849	18.275.956	20,175,139	21,118,265	21,101,195	10,102,374	13,132,274	13,132,274	23,132,274	23,132,274	23,132,
								11,786,610												
Total Revenues (JD)			1000000	- second K	- 0.000 MB	7,538,831	9,427,585	11,786,618	14,734,285	11,416,849	18,275,996	28,175,139	21,116,265	22,101,296	23,132,374	23,132,274	13,132,374	23,132,374	23,132,274	13,132,1
let Cash Flow (TD)			41,496,217	-41,496,217	41,494,217	1,160,110	2,947,373	5,191,010	8,031,345	11,508,840	11.351.968	13,143,482	13,973,137	14,840,161	15,763,374	15,743,274	15,743,874	15.7 (5, 274	15,763,374	15,763,2
incriming (DR.=5%)			1.95250	O.SETUS	0.26584	0.52278	0.78583	0.74622	0.71065	0. sT604	0.04481	0.61391	0.53465	0.55694	0.53832	8.505UT	0.40102	0.45511	8.43850	8.415
vital Oty Whose Bills are Callected (m ²)				10000		31,217,510	33,009,243	35,047,864	37,128,340	59,338,080	41,164,661	43,004,486	45,084,736	47,158,299	49,480,800	48 480 800	48,490,900	48,430,800	49,410,800	49,400,8
TER	2,4%					21.617.208	33407.233	2020412/064	37,102,318	30.358,580	21.18 COM	13706-0360	127912.00	10,120,420	17,180,800	10,190,000	11.190.800	12,180,800	10,100,000	10,000
PV (JD)	42,775,288		-39,520,208	~3T,656,293	-35,845,993	961,003	2,308,343	5,377,348	5,703,341	7,851,235	7,963,185	1,068,344	1,168,862	1,211,185	1,359,101	7,981,525	7,582,404	7,231,336	6,877,464	6,549,9
97 of Total Costs (ID)	202,542,837		39,520,206	37,638,292	35,845,993	5,242,016	5,077,434	4,918,001	4,763,582	4,614,014	4,443,265	4.317.44t	4,176,311	4.038,531	3,597,538	3,721,846	1544.615	3,375,824	3.315,870	3.861.8
W of Total Bills Collected Oty (av)	\$57,948,341		T	1	1	25,602,713	25,918,452	26,153,258	26,387,135	21,628,082	28,535,100	24,451,195	26,365,852	26,281,279	28,197,175	24,850,35T	21762.345	32,630,709	21.555,856	20.526.7
lat Water Price (Ris/m ²)	367		~						Sector Sec.			Sector electric C								
	- 201																			
(consume Analysis (3D at 2001 Prices)																				
keo	Perient	Ament	2003	2004	2005	2006	2007	2011	3069	-3018	2001	3013	2813	3114	281.5	3116	2017	2918	2815	2820
colg																				
Local Companyers		50,420,058	IK, REK, ERS	10,000,005	16,001,605	81,845	81,845	81,845	81,845	81,845	81,845	91,145	91,945	91,945	91,945	91,945	91,945	91,945	91,945	91,9
Pareign, Companients		64,435,588	21,438,537	21,478,527	21,478,527	0	0	0	0	0	0	0	0			10.00	S		0.000	0.00
Duby & Tigres		Street.	0	0	0	ő		0	0	ő	1	0	0					- C2	- C	
		0	100 million 100 million								D			200	1000	1.1.1.1	1000	5 2024	1000	- 2255
Tenal Capital Coins		1.14,855,635	34,215,312	34,285,212	36,285,212	\$1,545	11,545	H,MS	11,145	H, M5	11,145	91,145	91,945	91,945	91,945	91,945	91,945	91,945	91,945	R13
Sumulative Certr			38,215,312	76,578,423	114,235,#35	114,947,510	115,039,525	115,131,479	135,225,415	115,315,360	135,417,305	115,499,250	115,591,195	315,685,140	115,715,085	115,967,038	115,958,975	116,051,928	115,142,385	116,259,2
D & M Costs			0	1	0	(37),703	6.480.223	6.590,582	6,702,548	6,817,800	6,823,989	7,132,155	7(143)(30	1,258,195	T,369,000	T, 369,000	7,369,008	7,368,008	7,368,011	7,368.0
Tetal Casto			38,215,112	38,285,212	38,283,212	8,463,848	8.572.368	8,682,537	1,394,785	1,535,945	7,815,854	7,124,901	7.234.975	7.347,088	7,460,945	T.460,945	1,460,945	7,468,943	7,468,545	7,468.5
			A	- 10 AN A. A.L.	Same Share	8,482,840	Barr 42,000	and a second	E. M. 192	1,200,000	CHINAS	1,107,001	Cardina	0.0412008	11400.443	1000040	12400043	1,000,043	17000.043	1000
ea #Est			11010	CHARLES & CARLES	and the second	11111	10100	1000	1.1.1	100 M Core	22211	0.010	New York	1000	P. C. Children	1000	- 10 - S.L.	e dininger	1127 P. Law	
Indential Unage Qty (m ²)			0	0	0	0	0	0	0	0	0	0	0							
that Elements of Industrial Water (JDinz')			2.748	2.748	1.748	3 748	3.748	1,348	2.741	3 340	3 340	2,740	3 740	1 3 40	2,740	2.740	2.740	2740	2740	2
nduntial Benefits (7D)			0	0	0	0	0	0	0	0	.0	0	0							
righten Unge Qty (m ²)			ő			SUMPLIE	15,955,899	37,485,875	18.482.3UT	41,480,800	43,111,122	45,352,552	47,468,152	49,652,425	52,800,008	52,000,008	52,000,000	52,008,008	52,008,018	52,000,
				9																
Fast Breefsts of Imigation Water (JD/or)			1110	1.110	1.395	0,348	0.368	0.365	366.0	0.368	0.368	0.368	0.368	0.368	0.368	0.368	0.368	1.368	1.30	1
rigation Bractita (JD)			0	0	0	12,687,871	11,213,319	13,349,359	14,315,895	35,214,900	15,524,224	10,697,856	17,444,539	18,258,288	19,110,008	19,110,008	19,110,000	19,111,008	19,110,001	19,110
fetal Results (ID)			0	0	0	13,617,171	11,213,319	11,840,559	14,515,895	15, 114, 500	15,834,324	14,467,158	17,444,539	18,258,288	19,110,008	19,110,008	19,110,008	10,111,008	10,118,008	19,118,
et Cash Flow (ID)			-38,385,213	-38,285,213	-38,285.212	6,143,413	6,641,551	7,167,003	7,721,218	1,305,585	1.911.291	8.542.454	18.268.564	18,911,389	11.649.855	11,649,855	11:649,895	11.649.855	11,649,855	11.649
scenaring (DE+1955)			1.63908	0.83645	0.75131	0.61501	0.62083	0.56447	0.51316	0.46551	0.4241.0	0.38154	0.35849	0.31142	0.20856	1 26335	8.21839	1.21763	1.19704	E 17
			1	1000 B	200 B	34,304,956	35,955,688	37,685,875	39,499,387	41,408,080	43,331,222	45,352,532	47,468,132	45,582,420	51.000,000	53,890,800	\$2,890,800	52,880,800	52,810,800	52,800
nal Qty Delivered (a) ⁸)																				
nal Qty Delivered (a) ⁸)	6.5%				The three the st	4,196,041	4,123,281	4,045,587	3,961,382	1,674,683	3,177,595	3,678,129	3,578,390	3,476,645	1.394,316	1,197,500	2,710,491	2,535,174	2,314,703	2,895.
nal Qiy Delivered (m ³) B.B.			-34 BM T18																	
nii (19 Delversi (2 ⁸) 1835 197 (20)	-30.051,704		-34,804,738	-31.640.673	-28,764,244															
inal Qiy Delivered (a ³) 1818 1977 (201) 17 of Total Coata (20)	-30,053,306 144,283,411		34,884,738	31,841,871	28,784,346	4,434,759	4,080,799	1,772,118	3,430,799	3,325,874	2,875,441	2,346,142	2,535,814	2,341,008	2,161,178	1,164,708	1,788,091	1,023,738	1,478,108	1,341,5
nii (19 Delversi (2 ⁸) 1835 197 (20)	-30.051,704																			

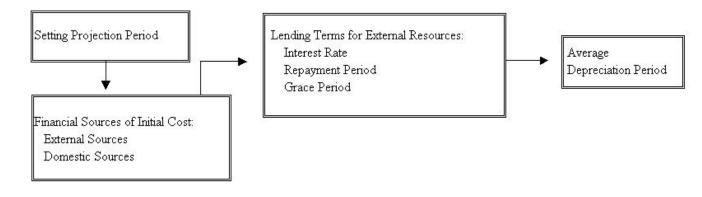
ANNEX to 2.8.3

Financial Statements

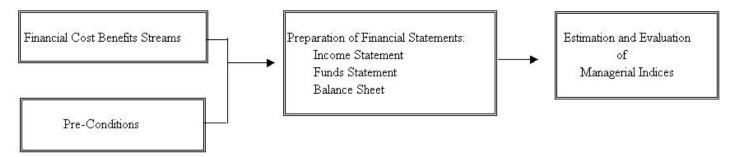
Preparation of Projected Financial Statements

1. Setting Pre-Conditions

SB2-12



2. Preparation and Evaluation of Projected Financial Statements



Methodology for Preparation of Financial Statements for Wadi Zarqa Wastewater Treatment Project