APPENDIX G

FINANCIAL PLAN

LIST OF TABLES

Table 1 Personnel Plan for WSA Adiquala

Item	1997	2005	2010	2015
1. Total No. of Personnel				
1) Total production of water (cu. m/day)	151	443	658	1,102
2) Water production per worker (cu. m/day/worker)	13.7	20	25	30
3) Coefficient	1	1	1	1
4) No. of personnel	11	22	26	36
5) Additional personnel for sanitation	0	3	5	6
6) Final No. of personnel	11	25	31	42
2. Breakdown of Personnel by Position/Function				
1) Manager	1	1	1	1
2) Customer services	1	1	1	1
3) Internal audit	0	0	0	1
4) Administrative service				
(1) Head	0	1	1	1
(2) General administration section				
Secretaries/typists/clerks	0	0	0	1
Guards	1	2	2	3
Sweepers/janitors	0	0	0	0
Drivers	0	1	1	1
Sub-total	1	3	3	5
(3) Personnel section				
Recruitment/training/remuneration	0	0	0	0
(4) Storage section				
Store keepers	0	1	1	1
Purchase of materials/supplies	0	0	0	1
Sub-total	0	1	1	2
(5) Legal section	0	0	1	1
Total	1	5	6	9
5) Financial service				
(1) Head	0	1	1	1
(2) Budgeting section	0	0	0	1
(3) Accounting section				
Accountants	0	1	1	2
Cashiers/treasurers	1	1	1	2
Sub-total	1	2	2	4
(4) Financial management section				
Financial analysts	0	1	1	1
(5) Operation section				
Meter readers	0	1	1	2
Bill distributers/collectors	0	0	0	1
Water sellers	2	2(+6*)	2(+11*)	0
Sub-total	2	1	1	3
Total	3	5	5	10
6) Technical service				
(1) Head	0	1	1	1
(2) Technical records section	0	0	0	0
(3) Operation and maintenance section				
Mechanics	0	1	1	1
Electricians	0	0	0	1
Motor operators	2	3	5	6
Plumbers	3	3	4	5
Sub-total	5	7	10	13
(4) Inspection section				
Water meter technicians	0	0	0	0
Leakage detectors	0	0	0	0
Water quality analysts	0	0	0	0
Sub-total	0	0	0	0
(5) Workshop	0	0	0	0
(6) Works section				
Contracting	0	0	0	0
Designing/drafting	0	0	0	0
Sub-total	0	0	0	0
Total	5	8	11	14
7) Sanitary service				
(1) Head	0	1	1	1
(2) Loan service section	0	1	1	2
(3) Maintenance section				
Technicians	0	1	2	2
Drivers	0	0	1	1
Sub-total	0	1	3	3
Total	0	3	5	6
Grand total	11	23	29	42

Note: 1) Personnel in 1997 include those on temporary/contract basis. 2) *=temporary
3) As need arises, section (3) in 6) technical service may take charge of functions of sections (4) and (5).

Table 2 (1) Financial Statements for Water Supply Facilities in Adiquala

(Unit: Nfa thousand)

No.	1	2	3	4	5	6	7	8	9	10
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Income Statement										
Revenue	0	0	678	738	806	881	1086	1259	1475	1744
Operation and Maintenance	0	0	425	425	425	425	870	870	870	870
Depreciation	0	0	217	217	217	217	531	531	531	531
Payment of Interest	0	0	0	0	0	0	0	0	0	0
Expenditure	0	0	642	642	642	642	1401	1401	1401	1401
Profit before Tax	0	0	36	96	163	239	-315	-141	74	344
Tax	0	0	0	0	0	0	0	0	0	0
Profit after Tax	0	0	36	96	163	239	-315	-141	74	344
Funds Statement										
Profit after Tax	0	0	36	96	163	239	-315	-141	74	344
Loans	0	0	0	0	0	0	0	0	0	0
Government Budget	888	9053	0	0	1242	12665	0	0	0	758
Depreciation	0	0	217	217	217	217	531	531	531	531
Sources	888	9053	254	314	1623	13122	217	390	605	1633
Capital Works	888	9053	0	0	1242	12665	0	0	0	758
Payment of Principal	0	0	0	0	0	0	0	0	0	0
Working Capital	0	0	254	314	381	457	217	390	605	875
Applications	888	9053	254	314	1623	13122	217	390	605	1633
Balance Sheet										
Liabilities	0	0	0	0	0	0	0	0	0	0
Capital	888	9941	9977	10073	11478	24383	24068	23927	24001	25102
Liabilities and Capital	888	9941	9977	10073	11478	24383	24068	23927	24001	25102
Current Assets	0	0	254	567	948	1405	1621	2011	2616	3491
Fixed Assets	888	9941	9724	9506	10530	22978	22447	21915	21384	21611
Assets	888	9941	9977	10073	11478	24383	24068	23927	24001	25102

Source: JICA

Table 2 (2) Financial Statements for Water Supply Facilities in Adiquala

(Unit: Nfa thousand)

No.	11	12	13	14	15	16	17	18	19	20
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Income Statement										
Revenue	2083	2161	2324	2523	2749	3004	2960	2960	2960	2960
Operation and Maintenance	870	1554	1554	1554	1554	1554	1554	1554	1554	1554
Depreciation	531	749	749	749	749	749	749	749	749	749
Payment of Interest	0	0	0	0	0	0	0	0	0	0
Expenditure	1401	2302	2302	2302	2302	2302	2302	2302	2302	2302
Profit before Tax	682	-141	22	220	447	702	658	658	658	658
Tax	0	0	0	0	0	0	0	0	0	0
Profit after Tax	682	-141	22	220	447	702	658	658	658	658
Funds Statement										
Profit after Tax	682	-141	22	220	447	702	658	658	658	658
Loans	0	0	0	0	0	0	0	0	0	0
Government Budget	7735	0	0	0	0	0	0	0	0	0
Depreciation	531	749	749	749	749	749	749	749	749	749
Sources	8948	607	771	969	1195	1450	1406	1406	1406	1406
Capital Works	7735	0	0	0	0	0	399	0	0	0
Payment of Principal	0	0	0	0	0	0	0	0	0	0
Working Capital	1213	607	771	969	1195	1450	1007	1406	1406	1406
Applications	8948	607	771	969	1195	1450	1406	1406	1406	1406
Balance Sheet										
Liabilities	0	0	0	0	0	0	0	0	0	0
Capital	33520	33378	33400	33621	34067	34769	35427	36085	36743	37401
Liabilities and Capital	33520	33378	33400	33621	34067	34769	35427	36085	36743	37401
Current Assets	4705	5312	6082	7051	8247	9697	10704	12111	13517	14924
Fixed Assets	28815	28066	27318	26569	25821	25072	24723	23974	23225	22477
Assets	33520	33378	33400	33621	34067	34769	35427	36085	36743	37401

Source: JICA

Table 2 (3) Financial Statements for Water Supply Facilities in Adiquala

(Unit: Nfa thousand)

No.	21	22	23	24	25	26	27	28	29	30
Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Income Statement										
Revenue	2960	2960	2960	2960	2960	2960	2960	2960	2960	2960
Operation and Maintenance	1554	1554	1554	1554	1554	1554	1554	1554	1554	1554
Depreciation	749	749	749	749	749	749	749	749	749	749
Payment of Interest	0	0	0	0	0	0	0	0	0	0
Expenditure	2302	2302	2302	2302	2302	2302	2302	2302	2302	2302
Profit before Tax	658	658	658	658	658	658	658	658	658	658
Tax	0	0	0	0	0	0	0	0	0	0
Profit after Tax	658	658	658	658	658	658	658	658	658	658
Funds Statement										
Profit after Tax	658	658	658	658	658	658	658	658	658	658
Loans	0	0	0	0	0	0	0	0	0	0
Government Budget	0	0	0	0	0	0	0	0	0	0
Depreciation	749	749	749	749	749	749	749	749	749	749
Sources	1406	1406	1406	1406	1406	1406	1406	1406	1406	1406
Capital Works	765	0	0	0	0	1016	0	0	0	0
Payment of Principal	0	0	0	0	0	0	0	0	0	0
Working Capital	641	1406	1406	1406	1406	390	1406	1406	1406	1406
Applications	1406	1406	1406	1406	1406	1406	1406	1406	1406	1406
Balance Sheet										
Liabilities	0	0	0	0	0	0	0	0	0	0
Capital	38058	38716	39374	40032	40690	41348	42006	42664	43322	43979
Liabilities and Capital	38058	38716	39374	40032	40690	41348	42006	42664	43322	43979
Current Assets	15565	16972	18378	19785	21191	21581	22988	24394	25800	27207
Fixed Assets	22493	21745	20996	20248	19499	19767	19018	18270	17521	16772
Assets	38058	38716	39374	40032	40690	41348	42006	42664	43322	43979

Source: JICA

Table 3 Cost Benefit Streams, Adiquala (Economic Analysis)

CC=Capital Costs; OM=O/M Costs; CS=Costs; BF=Benefits
CF=Cash Flow (=BF - CS)

(Unit: Nfa thousand)

NO.	YEAR	CC	OM	CS	BF	CF
1	2000	846	-105	741	0	-741
2	2001	8612	-105	8507	609	-7898
3	2002	0	320	320	865	546
4	2003	0	320	320	1182	863
5	2004	1187	320	1507	1575	68
6	2005	12085	320	12404	2059	-10345
7	2006	0	765	765	2261	1496
8	2007	0	765	765	2480	1716
9	2008	0	765	765	2719	1954
10	2009	734	765	1498	2978	1480
11	2010	7470	765	8234	3260	-4974
12	2011	0	1449	1449	3674	2225
13	2012	0	1449	1449	4135	2686
14	2013	0	1449	1449	4648	3199
15	2014	0	1449	1449	5220	3771
16	2015	0	1449	1449	5856	4407
17	2016	397	1449	1846	5856	4011
18	2017	0	1449	1449	5856	4407
19	2018	0	1449	1449	5856	4407
20	2019	0	1449	1449	5856	4407
21	2020	761	1449	2210	5856	3646
22	2021	0	1449	1449	5856	4407
23	2022	0	1449	1449	5856	4407
24	2023	0	1449	1449	5856	4407
25	2024	0	1449	1449	5856	4407
26	2025	1012	1449	2461	5856	3395
27	2026	0	1449	1449	5856	4407
28	2027	0	1449	1449	5856	4407
29	2028	0	1449	1449	5856	4407
30	2029	0	1449	1449	5856	4407
31	2030	0	1449	1449	5856	4407
32	2031	397	1449	1846	5856	4011

Table 4 (1) Financial Statements for Water Supply Facilities in Adiquala

(Unit: Nfa thousand)

No.	1	2	3	4	5	6	7	8	9	10
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Income Statement										
Revenue	0	0	678	738	806	881	790	790	790	790
Operation and Maintenance	0	0	425	425	425	425	425	425	425	425
Depreciation	0	0	217	217	217	217	217	217	217	217
Payment of Interest	0	0	0	0	0	0	0	0	0	0
Expenditure	0	0	642	642	642	642	642	642	642	642
Profit before Tax	0	0	36	96	163	239	148	148	148	148
Tax	0	0	0	0	0	0	0	0	0	0
Profit after Tax	0	0	36	96	163	239	148	148	148	148
Funds Statement										
Profit after Tax	0	0	36	96	163	239	148	148	148	148
Loans	0	0	0	0	0	0	0	0	0	0
Government Budget	888	9053	0	0	0	0	0	0	0	0
Depreciation	0	0	217	217	217	217	217	217	217	217
Sources	888	9053	254	314	381	457	365	365	365	365
Capital Works	888	9053	0	0	0	0	0	0	0	0
Payment of Principal	0	0	0	0	0	0	0	0	0	0
Working Capital	0	0	254	314	381	457	365	365	365	365
Applications	888	9053	254	314	381	457	365	365	365	365
Balance Sheet										
Liabilities	0	0	0	0	0	0	0	0	0	0
Capital	888	9941	9977	10073	10237	10476	10624	10772	10920	11068
Liabilities and Capital	888	9941	9977	10073	10237	10476	10624	10772	10920	11068
Current Assets	0	0	254	567	948	1405	1770	2135	2501	2866
Fixed Assets	888	9941	9724	9506	9289	9071	8854	8636	8419	8201
Assets	888	9941	9977	10073	10237	10476	10624	10772	10920	11068

Source: JICA

Table 4 (2) Financial Statements for Water Supply Facilities in Adiquala

(Unit: Nfa thousand)

No.	11	12	13	14	15	16	17	18	19	20
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Income Statement										
Revenue	790	790	790	790	790	790	790	790	790	790
Operation and Maintenance	425	425	425	425	425	425	425	425	425	425
Depreciation	217	217	217	217	217	217	217	217	217	217
Payment of Interest	0	0	0	0	0	0	0	0	0	0
Expenditure	642	642	642	642	642	642	642	642	642	642
Profit before Tax	148	148	148	148	148	148	148	148	148	148
Tax	0	0	0	0	0	0	0	0	0	0
Profit after Tax	148	148	148	148	148	148	148	148	148	148
Funds Statement										
Profit after Tax	148	148	148	148	148	148	148	148	148	148
Loans	0	0	0	0	0	0	0	0	0	0
Government Budget	0	0	0	0	0	0	0	0	0	0
Depreciation	217	217	217	217	217	217	217	217	217	217
Sources	365	365	365	365	365	365	365	365	365	365
Capital Works	0	0	0	0	0	0	399	0	0	0
Payment of Principal	0	0	0	0	0	0	0	0	0	0
Working Capital	365	365	365	365	365	365	-34	365	365	365
Applications	365	365	365	365	365	365	365	365	365	365
Balance Sheet										
Liabilities	0	0	0	0	0	0	0	0	0	0
Capital	11216	11364	11512	11660	11808	11956	12104	12252	12399	12547
Liabilities and Capital	11216	11364	11512	11660	11808	11956	12104	12252	12399	12547
Current Assets	3232	3597	3963	4328	4693	5059	5025	5391	5756	6121
Fixed Assets	7984	7767	7549	7332	7114	6897	7078	6861	6644	6426
Assets	11216	11364	11512	11660	11808	11956	12104	12252	12399	12547

Source: JICA

Table 5 Cost Benefit Streams, Adiquala (Economic Analysis)

CC=Capital Costs; OM=O/M Costs; CS=Costs; BF=Benefits
CF=Cash Flow (=BF - CS)

(Unit: Nfa thousand)

NO.	YEAR	CC	OM	CS	BF	CF
1	2000	846	-105	741	0	-741
2	2001	8612	-105	8507	609	-7898
3	2002	0	320	320	865	546
4	2003	0	320	320	1182	863
5	2004	0	320	320	1575	1255
6	2005	0	320	320	2059	1740
7	2006	0	320	320	2059	1740
8	2007	0	320	320	2059	1740
9	2008	0	320	320	2059	1740
10	2009	0	320	320	2059	1740
11	2010	0	320	320	2059	1740
12	2011	0	320	320	2059	1740
13	2012	0	320	320	2059	1740
14	2013	0	320	320	2059	1740
15	2014	0	320	320	2059	1740
16	2015	0	320	320	2059	1740
17	2016	397	320	717	2059	1343
18	2017	0	320	320	2059	1740
19	2018	0	320	320	2059	1740
20	2019	0	320	320	2059	1740
21	2020	0	320	320	2059	1740
22	2021	0	320	320	2059	1740

APPENDIX H

ENVIRONMENT

List of Tables

Table H-1 Screening Check List (Adi Quala)

Environment Item		Contents	Evaluation	Remarks
Social Environment				
1	Resettlement	Exchange of land onwership and/or residential rights due to occupation of land	Yes (No) Not available	Small structure
2	Economic activity	Loss of productive land, change in economic structure	Yes (No) Not available	Small structure
3	Transportation, Living environment	Traffic congestion, accident and subsequent effect on school, hospital etc.	Yes (No) Not available	Small structure
4	Regional segregation	Due to transportation hinderance	Yes (No) Not available	Small structure
5	Historical ruins, cultural heritage	Damage to cultural heritage and its loss	Yes (No) Not available	Does not exist near the town
6	Water right, right of common	Effect on right of fishery, irrigation, water right	Yes (No) Not available	Use of underflow from downstream of dam
7	Sanitation	Deteriorated sanitation due to garbage and harmful insect outbreak	Yes (No) Not available	Not relevant
8	Industrial and Solid waste	Construction waste, waste dumps, mud, solid waste	Yes (No) Not available	No big construction
9	Disaster (Risk)	Increased hazardous land subsidence, landslides, accidents	Yes (No) Not available	Small construction in flat area
Natural Environment				
10	Topography, geology	Change in topography, geological features by digging, soil piling	Yes (No) Not available	No big construction
11	Soil erosion	Top soil erosion by rain after creating new land reclamation, cutting down trees	Yes (No) Not available	Not be a causative factor
12	Groundwater	Depletion of GW level and pollution due to excessive pumping	Yes (No) Not available	No GW extraction
13	Lake, river regime	Change in flow amount and quality due to reclamation and drainage	Yes (No) Not available	Not in the vicinity
14	Beach, coast	Shoreline erosion due to reclamation or change in tidal current	Yes (No) Not available	Activities in the inland
15	Fauna and Flora	Disturbance in breeding, extinction due to change in living condition	Yes (No) Not available	No report of Red book species
16	Meteorology	Change in temperature, rainfall, wind due to large scale construction or building	Yes (No) Not available	Not relevant
17	Landscape	Destruction of harmony due to changed topography or buildings	Yes (No) Not available	No big construction
Pollution				
18	Air pollution	Exhaust, poisonous gas from automobile, factory	Yes (No) Not available	Not relevant
19	Water pollution	Flow of muddy water, oil from boring activities	Yes (No) Not available	No boring activities
20	Soil contamination	Pollution due to flow of poinsonous meterial and drainage	Yes (No) Not available	Not relevant
21	Noise, vibration	Due to drilling and Water lifting	Yes (No) Not available	No house in vicinity
22	Landsubsidence	Lowering of WL due to over exstraction of water	Yes (No) Not available	Not relevant
23	Offensive odor	Exhaust, Odor substance	Yes (No) Not available	Not relevant
Total Evaluation:		Is EIA necessary for this project ?	Necessary (Unnecessary)	Influencial items are minimum

Note: W.R.Z. = Weathered Rock Zone

Table H-2 Scooping Check List (Adi Quala)

	Environment Item	Evaluation	Remarks
Social Environment			
1	Resettlement	D	Small structure
2	Economic activity	D	Small structure
3	Transpotation, Living environment	D	Small structure
4	Regional segregation	D	Small structure
5	Historical ruins, Cultural heritage	D	Small structure
6	Water right, Right of common	D	No complaint so far
7	Sanitation	D	The Project will improve the condition
8	Solid waste	D	No large scale construction
9	Disaster (Risk)	D	Small scale of construction in flat area
Natural Environment			
10	Topograpy, Geography	D	No large scale construction
11	Soil erosion	D	Not relevant
12	Groundwater	D	Withdrawal of underflow(from downstream of dam)
13	Lake, River regime	D	Not relevant
14	Beach, Coast	D	Not relevant
15	Fauna, Flora	D	No large scale construction activities
16	Meteorology	D	Not relevant
17	Landscape	D	No large scale construction activities
Pollution			
18	Air pollution	D	Not relevant
19	Water pollution	D	Not expected
20	Soil contamination	D	Not relevant
21	Noise,Vibration	D	Negligible(no houses close to the site)
22	Land subsidence	D	Not expected
23	Offensive odor	D	Not relevant

Note: Evaluation Level
A: Much impact
B: Some impact
C: Not known (Further investigation is necessary)
D: No impact

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